

# Nevada County Consolidated Fire District

640 Coyote Street  
Nevada City, CA 95959  
(530) 265-4431  
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## BOARD OF DIRECTORS

Keith Grueneberg, President  
Barry Dorland, Vice President  
Tom Carrington  
Spencer Garrett  
David Hanson  
Patricia Nelson  
Marianne Slade-Troutman

## STAFF

Jim Turner, Fire Chief  
Jerry Funk, Deputy Fire Chief  
Terry McMahan, Fire Marshal  
Patrick Mason, Deputy Fire Marshal  
Jeff Van Groningen, Finance Manager  
Amy Powers, Finance Assistant  
Nicole Long, Operations Support Manager

**BOARD OF DIRECTORS**  
**AGENDA - REGULAR MEETING**  
**THURSDAY, JANUARY 21, 2021 – 7:00 PM**  
**Held Remotely at Conference Caller**  
**1 (800) 444-2801**  
**Conference Code: 1665498**

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Governor Newsom has declared a State of Emergency to exist in California as a result of the threat of the Coronavirus (COVID-19). The Governor issued Executive Order N-25-20 and N-29-20, which directs Californians to follow the public health directives including canceling large gatherings. The Executive Order also allows local legislative bodies to hold meetings via conference calls while still satisfying state transparency requirements.

The Governor has also issued Executive Order N-33-20, prohibiting people from leaving their homes or places of residence except to access necessary supplies and services or to engage in specified critical infrastructure employment.

The Public's and Employees health and well-being are the top priority for the Board of Directors of the Nevada County Consolidated Fire District, and you are urged to take all the appropriate health safety precautions. To facilitate this process, the meeting of the Board will be available by:

Held Remotely at Conference Caller  
1 (800) 444-2801  
Conference Code: 1665498

Note: The meeting is being held only by telephonic means and will be made accessible to members of the public seeking to attend and to address the Board only through the phone number set forth above, except members of the public seeking to attend and address the Board who require reasonable accommodations to access the meeting, based on disability or other reasons, should contact the following person at least twelve (12) hours in advance of a Regular meeting to make arrangements for such reasonable accommodations:

Nicole Long, Board Secretary  
(530)265-4431  
[nicolelong@nccfire.com](mailto:nicolelong@nccfire.com)

The Board of Directors welcomes you to its meetings and your participation is encouraged and appreciated. All meetings are recorded. Any Member of the Audience desiring to address the Board on a matter appearing on the Agenda, before or during consideration of the item, may do so after receiving recognition from the presiding officer. In order that all interested parties have an opportunity to speak, please limit your comments to the specific item under discussion. For further rules on public comment and other matters, please see the last page of this agenda.

## NOTICE

If requested, this agenda can be made available in appropriate alternative formats to persons with a disability, as required by Section 202 of the Americans with Disabilities Act of 1990 and the Federal Rules and Regulations adopted in implementation thereof. Persons seeking an alternative format should contact the Clerk of the Board for further information.

All items posted on the agenda, including under correspondence, may be acted upon by the Board of Directors. However, matters under committee reports and department manager's reports may be briefly addressed by the Board or Staff but no action or discussion shall be undertaken on any item not appearing on the posted agenda. (GC 54954.2)

The Board of Directors may hold a Closed Session as the agenda schedule permits.

### **STANDING ORDERS:**



- 7:00 p.m. Call to Order
- Roll Call
- Pledge of Allegiance to the Flag
- Corrections and/or deletions to the agenda

### **\*PUBLIC COMMENT FOR ITEMS NOT ON THE AGENDA**

*Per CA Government Code 54954.3*

*This is the time for any member of the public to address the Board on any item not on this Agenda that is within the subject matter jurisdiction of the NCCFD Board. Please wait for recognition from the presiding officer. The Board generally cannot act on or discuss an item not on the agenda. However, the Board may "briefly respond" to comments or questions from the members of the public. Please see the rules for public comment at the end of this agenda.*

### **CONSENT CALENDAR**

*These items are considered to be routine and may be enacted by one motion by the Board of Directors. There will be no separate discussion of these items. If discussion is desired, any board or staff member or interested party may request that an item be removed from the Consent Calendar to be considered separately.*

1. Acceptance of Minutes – December 17, 2020
2. Fund Balances, Check History Report and Credit Card History Report – November 2020 and December 2020
3. County of Nevada Signature Sheet

### **COMMITTEE REPORTS**

#### **STANDING COMMITTEES**

**FINANCE/BUDGET: Dorland, Slade-Troutman**

**PERSONNEL: Carrington, Hanson, Nelson**

#### **AD HOC COMMITTEES**

**BOARD POLICY AND PROCEDURES: Grueneberg**

**WESTERN NEVADA COUNTY FIRE AGENCY: Grueneberg, Dorland, Hanson**

#### **LOCAL AGENCY ASSIGNMENTS**

**NEVADA COUNTY FIRE AGENCY (JPA): Garrett, Turner**

### **NEW BUSINESS**

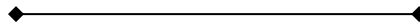
4. Discussion and possible action, Annual Review of Board Committee Assignments: Standing, Ad Hoc and Local Agency with Possible Changes in Assignments. **President Grueneberg**
5. Discussion and possible action, 2021 Committee Direction. **President Grueneberg**
6. Discussion and possible action, Local Area Formation Commission (LAFCo) Regular and Alternate Special District Members. **President Grueneberg**

7. Discussion and possible action, Resolution 21-01, Resolution Designating an Agent of the Board to sign documents on behalf of the District with Pierce Manufacturing, Inc. Deputy Chief Funk
8. Discussion and possible action, Resolution 21-02, Amending Participants for US Bank Cal-Card. Finance Manager Van Groningen
9. Discussion and possible action, Resolution 21-03, Purchasing Policy. Finance Manager Van Groningen
10. Discussion and possible action, Resolution 21-04, Electronic Signature Policy. Finance Manager Van Groningen
11. Discussion and possible action, Resolution 21-05, Transfer Funds from 734 to 722 in the amount of \$530,000.00 Finance Manager Van Groningen

## **CHIEF'S MONTHLY REPORT**

### **\*BOARD DISCUSSION**

## **ADJOURNMENT**



### ***Board Meeting Schedule***

All Regular Board Meetings will take place on the third Thursday of the month.

### ***Copies***

Copies of the agenda documents relative to an agenda item may be obtained at the Administrative Office, 640 Coyote Street, Nevada City, CA 95959, at a cost of \$1.00 dollar per page.

### ***Board Meeting Notices***

This Regular Meeting Agenda was posted 72 hours in advance of the meeting at the following locations: Nevada County Consolidated Fire District: Administration Office, 640 Coyote Street, Nevada City; Station 86, 12337 Banner Lava Cap Rd, Nevada City; Station 88, 14400 Golden Star, Grass Valley; Station 89, 11833 Tammy Way, Grass Valley; and on our website address at <http://www.nccfire.com>. Our e-mail address is [nccfire@nccfire.com](mailto:nccfire@nccfire.com).

### ***Rules Applying to Public Comments (as provided by CA Government Code Section 54954.)***

A. Members of the public wishing to address the Board upon any subject within the jurisdiction of the Nevada County Consolidated Fire District may do so upon receiving recognition from the presiding officer at the appropriate time. You may address the Board on any agenda item prior to Board Action. If you wish to address the Board on an item not on the agenda, you may do so during the General Public Comment period. Understand that no action may be taken on an item not on the agenda.

— Where necessary for the orderly operation of the meeting, the presiding officer may limit public comment during the public comment period or public hearing to no more than five minutes per individual.

B. After receiving recognition, please stand and state your name, as all meetings are being taped. Note that stating your name is a voluntary act and is not required.

C. Members of the public may submit written comments on any matter that is listed on the agenda or for general public comment. You may submit written comments on any matter by U.S. Mail addressed to 640 Coyote Street, Nevada City, CA 95959 or by e-mail to [nicolelong@nccfire.com](mailto:nicolelong@nccfire.com). For comments to be

read at the meeting and entered into the minutes they must be received no later than 8:00 a.m. on the morning of the noticed meeting.

**D. All documents to be presented to the Board of Directors shall be given to the Secretary of the Board for distribution (original and seven copies) prior to the Call of Order of meeting.**

E. Complaints against any individual District employee cannot be brought up in open meeting directly. The District will only consider such a complaint if submitted in writing.



**DRAFT**  
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**BOARD OF DIRECTORS MINUTES December 17, 2020**

Regular Meeting held remotely at  
1 (800) 444-2801  
Conference Code: 1665498

**NCCFD DIRECTORS**

**Present:** Grueneberg (President), Carrington, Dorland, Garrett, Hanson, Nelson, Slade-Troutman

**STAFF:**

**Present:** Fire Chief Turner, Deputy Chief Funk, Fire Marshal McMahan, Deputy Fire Marshal Mason, Finance Manager Van Groningen, Operations Support Long

**STANDING ORDERS:**

President Grueneberg called the meeting to order at 7:00 pm and took roll call, noting that all Directors were present. President Grueneberg led in the pledge of allegiance

**\*PUBLIC COMMENT FOR ITEMS NOT ON THE AGENDA**

*Per CA Government Code 54954.3*

No public comment.

**CONSENT CALENDAR**

1. Acceptance of Minutes – November 19, 2020

Director Hanson motioned to accept the consent calendar. Director Slade-Troutman seconded. **MOTION** passed unanimously following a roll call vote.

**COMMITTEE REPORTS**

**STANDING COMMITTEES**

**FINANCE/BUDGET:** Dorland, Slade-Troutman

**PERSONNEL:** Carrington, Hanson, Nelson

**AD HOC COMMITTEES**

**NEGOTIATIONS:** Carrington

**BOARD POLICY AND PROCEDURES:** Grueneberg

**LOCAL AGENCY ASSIGNMENTS**

**NEVADA COUNTY FIRE AGENCY (JPA):** Garrett, Turner

Finance – No report

Personnel – No report

Board Policy & Procedures – No report

JPA – No report.

**NEW BUSINESS**

2. **Discussion and possible action, alternate meeting location for in-person meetings.**

Fire Marshal McMahan reported that he spoke to Nevada Union and reported a few locations would be available. They are checking on costs and proof of insurability which would need to be shown.

3. **Discussion and possible action, Engagement Agreement with Boutin Jones Inc.**

Chief Turner reported that several years ago the District entered an agreement with Liebert Cassidy and Whitmore (LCW) and worked closely with Gage Dungy. Mr. Dungy has changed law firms to Boutin Jones and with the history of the District, Staff has brought an engagement letter to continue working with him. The engagement letter with Boutin Jones has no retainer and the hourly rates remain the same as they were with LCW. Director Hanson motioned to enter into the engagement agreement with Boutin Jones. Director Nelson seconded. **MOTION** passed unanimously following a roll call vote.

4. **Discussion and possible action, Election of New Board Officers for the term January 1, 2021 through December 31, 2021.**

President Gruenberg stated it is that time of year for nominations. Director Slade-Troutman nominates President Grueneberg to remain as President. After a brief discussion by the board, Director Nelson motioned to have the Officers remain the same. Keith Grueneberg as President and Barry Dorland as Vice President. Director Hanson seconded. **MOTION** passed unanimously following a roll call vote.

5. **Correspondence.**

President Grueneberg reported that the District received a letter from Sky Pines Road Association. Chief McMahan discussed the history in the area, and they were very happy to get hydrants in the area.

**CHIEF’S MONTHLY REPORT**

Deputy Chief Funk reported this was a busy month for structure fires, chimney fires with substantial damage. Rescue 84 has arrived, and the goal is to have it in service next week, the crews are very happy with it.

Fire Marshal McMahan reported that he met with met with Nevada County Contractors Association which was a very productive meeting regarding improving communications.

**\*BOARD DISCUSSION**

Director Hanson requested information on the sanitation of facilities and protocols due to COVID-19. Staff discussed the protocols that have been put into place and equipment purchased for sanitation, in addition to increasing the training for safety during these times.

**ADJOURNMENT**

President Grueneberg adjourned the meeting at 7:30 p.m.

Attest:

Approved by:

\_\_\_\_\_  
Nicole Long  
Board Secretary

\_\_\_\_\_  
Keith Grueneberg  
President of the Board

**Nevada County Consolidated Fire District  
Fund Recap & Cash Balances  
November 2020**


	Fund					Total
	722 Operating	723 Contingency	733 AB1600	734 Special Tax	758 Capital	
Beginning Cash <sup>1</sup>	(1,550,313)	1,245,140	97,437	2,947	442,513	237,724
Revenues	75,607	-	7,964	-	-	83,571
Expenditures	(454,992)	-	-	-	(2,913)	(457,905)
Other Inc/Expense	-	-	-	-	-	-
Other Activity <sup>2</sup>	(4,150)	-	-	(106)	-	(4,256)
Ending Cash <sup>1</sup>	(1,933,848)	1,245,140	105,401	2,841	439,600	(140,866)

<sup>1</sup> Includes Well Fargo

<sup>2</sup> Balance sheet cash activity not reported on fund report in the current month.

**Nevada County Consolidated Fire District**  
**Operating Fund 722**  
**November 2020**

	<b>Nov 20</b>	<b>Jul - Nov 20</b>	<b>Budget</b>	<b>% of Budget</b>
<b>Revenues</b>				
<b>4000 · Taxes &amp; Assessments</b>				
4010 · Current Secured		5,228	3,226,494	0%
4011 · Prior Secured		(120)		
4020 · Current Unsecured	49,767	49,789	50,459	99%
4030 · Prior Unsecured			1,390	
4040 · Supplemental Secured		10,156	39,205	26%
4050 · Supplemental Unsecured		63	1,315	5%
4060 · Supplemental Prior Unsecured		9	169	5%
4110 · Special Assessment		(2,502)	2,073,062	(0%)
4150 · Special Tax of 2012	1,107	1,107		
4151 · Special Tax 2012 (transfer in)		45,000	981,062	5%
4230 · State Homeowners			25,334	
4240 · State Public Safety Prop 172		85,830	415,869	21%
<b>Total 4000 · Taxes &amp; Assessments</b>	<b>50,874</b>	<b>194,560</b>	<b>6,814,359</b>	<b>3%</b>
<b>4500 · Reimbursements</b>				
4510 · Strike Team	44,120	45,880	150,000	31%
4522 · Strike Team Cost Offset	(26,113)	(27,874)		
4530 · Training		(621)		
4540 · Vehicle Repair		2,387	5,000	48%
4550 · Cost Recovery	1,541	2,464	18,500	13%
4690 · Other Reimbursements	3,353	28,790	65,960	44%
<b>Total 4500 · Reimbursements</b>	<b>22,901</b>	<b>51,026</b>	<b>239,460</b>	<b>21%</b>
<b>4800 · Other Revenue</b>				
4810 · Inspections & Permits	93	1,054	12,000	9%
4812 · Plan Reviews	264	3,478	10,000	35%
4820 · Interest & Finance Charges		8,767	31,481	28%
4830 · Rentals	1,450	6,050	28,740	21%
4870 · Other Revenue	25	681		
<b>Total 4800 · Other Revenue</b>	<b>1,832</b>	<b>20,030</b>	<b>82,221</b>	<b>24%</b>
<b>Total Revenues</b>	<b>75,607</b>	<b>265,616</b>	<b>7,136,040</b>	<b>4%</b>

Expense	Nov 20	Jul - Nov 20	Budget	% of Budget
<b>5000 · Wages &amp; Benefits</b>				
<b>5100 · Wages</b>				
5111 · Chief / Deputy Chief (2)	27,725	150,582	353,362	43%
5113 · Battalion Chief (2)	16,549	95,685	225,361	42%
5114 · Prevention (2)	16,163	87,402	207,881	42%
5121 · Captains (9)	63,956	371,680	844,810	44%
5122 · Lieutenants (6)	36,169	190,142	471,207	40%
5123 · Firefighter (12)	53,115	290,294	763,117	38%
5132 · PCF / Reserve FF			600	
5141 · Clerical (3)	17,206	82,355	226,807	36%
5145 · Fire Mechanic (1.5)	9,517	52,655	125,510	42%
5151 · Overtime	61,159	177,420	402,730	44%
5153 · Additional Overtime Staffing	2,096	17,272	41,225	42%
5155 · EPSL Overtime	12,090	12,690		
5161 · Strike Team	6,626	500,532		
5165 · Strike Team Backfill	2,154	169,894		
5167 · Strike Team Revenue Offset	(25,740)	(27,500)		
5171 · Holiday Stipend	7,076	29,346	75,196	39%
5173 · Vacation / CTO Buy Back	1,272	14,575	96,751	15%
5185 · Directors	300	1,575	4,500	35%
<b>Total 5100 · Wages</b>	<b>307,433</b>	<b>2,216,599</b>	<b>3,839,057</b>	<b>58%</b>
Footnote 				Strike Team Activity 17%
<b>5500 · Payroll Taxes</b>				
5511 · Medicare Employer Tax	4,324	29,490	55,921	53%
5512 · Soc Security Employer Tax	255	700	316	222%
5521 · SUI Employer Tax	87	237	5,693	4%
5526 · Strike Team Revenue Offset	(373)	(373)		
<b>Total 5500 · Payroll Taxes</b>	<b>4,293</b>	<b>30,054</b>	<b>61,930</b>	<b>49%</b>
<b>5700 · Benefits</b>				
5711 · Pension	48,503	619,219	1,009,523	61%
5731 · Health Insurance	48,587	268,258	772,464	35%
5735 · Life Insurance	3,897	7,189	15,000	48%
5751 · Workers Comp Insurance		190,494	190,964	100%
<b>Total 5700 · Benefits</b>	<b>100,987</b>	<b>1,085,160</b>	<b>1,987,951</b>	<b>55%</b>
<b>Total 5000 · Wages &amp; Benefits</b>	<b>412,713</b>	<b>3,331,813</b>	<b>5,888,938</b>	<b>57%</b>

	<b>Nov 20</b>	<b>Jul - Nov 20</b>	<b>Budget</b>	<b>% of Budget</b>
<b>6000 · Personnel Related</b>				
<b>6010 · Clothing / PPE</b>				
6011 · Uniforms	767	2,954	13,005	23%
6021 · Personal Protective Equip		318	35,000	1%
6031 · Safety & PPE (per MOU)	(64)	14,803	33,060	45%
<b>Total 6010 · Clothing / PPE</b>	<b>703</b>	<b>18,075</b>	<b>81,065</b>	<b>22%</b>
<b>6100 · Food / Meals</b>				
6111 · Meals - Administration	36	114	300	38%
6112 · Meals - Training		344		
6113 · Meals - Fire	35	561	500	112%
6114 · Meals - Interns	400	4,000	35,959	11%
<b>Total 6100 · Food / Meals</b>	<b>471</b>	<b>5,019</b>	<b>36,759</b>	<b>14%</b>
<b>6200 · Training / Fitness</b>				
6211 · Wellness Program		924	30,818	3%
6213 · Fitness Program			8,500	
6221 · Tuition - Safety Personnel	675	5,671	20,500	28%
6232 · Travel Expense	1,632	1,632	8,500	19%
6241 · Training Materials	630	925	2,000	46%
6246 · Public Safety Training Center		672	1,000	67%
6261 · Licenses & Certificates	450	844	2,500	34%
6271 · Training - Administration	150	150	7,500	2%
<b>Total 6200 · Training / Fitness</b>	<b>3,537</b>	<b>10,818</b>	<b>81,318</b>	<b>13%</b>
<b>Total 6000 · Personnel Related</b>	<b>4,711</b>	<b>33,912</b>	<b>199,142</b>	<b>17%</b>
<b>6500 · Facility &amp; Equipment Related</b>				
<b>6510 · Communications</b>				
6511 · Telephones	775	5,910	20,280	29%
6521 · Mobile Phones		3,033	9,000	34%
6510 · Communications - Other		(7)		
<b>Total 6510 · Communications</b>	<b>775</b>	<b>8,936</b>	<b>29,280</b>	<b>31%</b>
<b>6550 · Station</b>				
6551 · Supplies & Services - Stations	2,040	6,713	13,380	50%
6591 · Small Tools	175	595		
<b>Total 6550 · Station</b>	<b>2,215</b>	<b>7,308</b>	<b>13,380</b>	<b>55%</b>
<b>6610 · Insurance</b>				
6611 · Liability		15,011	15,052	100%
6621 · Property		18,383	17,322	106%
<b>Total 6610 · Insurance</b>		<b>33,394</b>	<b>32,374</b>	<b>103%</b>
<b>6650 · Maintenance</b>				
6681 · Facility Maint & Improvements	4,338	40,780	170,000	24%
<b>Total 6650 · Maintenance</b>	<b>4,338</b>	<b>40,780</b>	<b>170,000</b>	<b>24%</b>
<b>6700 · Medical Supplies</b>				
6716 · EMS Supplies	1,535	15,720	20,000	79%
<b>Total 6700 · Medical Supplies</b>	<b>1,535</b>	<b>15,720</b>	<b>20,000</b>	<b>79%</b>
<b>6750 · Apparatus Equipment</b>				

	<b>Nov 20</b>	<b>Jul - Nov 20</b>	<b>Budget</b>	<b>% of Budget</b>
6751 · Hose		6,771	16,000	42%
6756 · Ladders			1,500	
6761 · Suppression Equip		1,084	7,500	14%
6766 · Power Tools & Equipment			6,800	
6771 · Pump Testing			4,350	
6776 · Mobile Communications		740	4,800	15%
6781 · Technical Rescue Equip		5,513	10,000	55%
6786 · SCBA Repair & Maintenance			8,381	
6791 · Small Tools - Apparatus		95	3,100	3%
6796 · Drone		1,337	3,168	42%
<b>Total 6750 · Apparatus Equipment</b>		<b>15,540</b>	<b>65,599</b>	<b>24%</b>
<b>6800 · Utilities</b>				
6811 · Alarm		660	1,360	49%
6821 · Electricity / Gas	2,837	20,183	41,143	49%
6831 · Propane	1,084	1,307	13,136	10%
6841 · Trash	233	1,190	3,600	33%
6851 · Water / Sewer	3,577	5,344	8,549	63%
<b>Total 6800 · Utilities</b>	<b>7,731</b>	<b>28,684</b>	<b>67,788</b>	<b>42%</b>
<b>6900 · Capital Expenditures</b>				
6921 · Apparatus & Equipment			37,103	
6941 · Admin Office Equipm & Computers			24,550	
<b>Total 6900 · Capital Expenditures</b>			<b>61,653</b>	
<b>Total 6500 · Facility &amp; Equipment Related</b>	<b>16,594</b>	<b>150,362</b>	<b>460,074</b>	<b>33%</b>
<b>7000 · Vehicle Related</b>				
<b>7001 · Insurance</b>				
7005 · Vehicle Insurance		8,058	8,557	94%
<b>Total 7001 · Insurance</b>		<b>8,058</b>	<b>8,557</b>	<b>94%</b>
<b>7010 · Maintenance</b>				
7011 · Accessories	2,334	12,828		
7021 · Body		1,511		
7026 · Brakes	2,004	4,145		
7031 · Drive Train		14,133		
7036 · Pumps		3,207		
7041 · Tires	5,176	12,980		
7046 · Tools & Shop Related	1,785	5,618		
7048 · All Categories for Budget			105,820	
7049 · Outside Agency Vehicle Maint	12	1,529		
<b>Total 7010 · Maintenance</b>	<b>11,311</b>	<b>55,951</b>	<b>105,820</b>	<b>53%</b>
<b>7050 · Fuel</b>				
7051 · Fuel	4,580	22,397	67,253	33%
<b>Total 7050 · Fuel</b>	<b>4,580</b>	<b>22,397</b>	<b>67,253</b>	<b>33%</b>
<b>Total 7000 · Vehicle Related</b>	<b>15,891</b>	<b>86,406</b>	<b>181,630</b>	<b>48%</b>
<b>7500 · General &amp; Admin Related</b>				
7501 · Office Expense				

	<b>Nov 20</b>	<b>Jul - Nov 20</b>	<b>Budget</b>	<b>% of Budget</b>
7502 · Administration	90	760	5,200	15%
7506 · Board		80	1,200	7%
7508 · Computer & Software Expense	1,992	25,695	74,850	34%
7509 · Copier Expense	74	436	1,500	29%
7511 · Memberships	165	14,473	15,125	96%
7521 · Postage & Delivery	279	648	1,800	36%
7531 · Other		0		
<b>Total 7501 · Office Expense</b>	<b>2,600</b>	<b>42,092</b>	<b>99,675</b>	<b>42%</b>
<b>7550 · Professional Services</b>				
7551 · Accounting		11,157	16,400	68%
7556 · Computer & IT Support	374	3,444	10,080	34%
7561 · Consultants			8,000	
7563 · Hiring Expense		1,206	8,250	15%
7566 · Legal Expense	1,630	28,224	73,115	39%
7571 · Medical Director			3,600	
<b>Total 7550 · Professional Services</b>	<b>2,004</b>	<b>44,031</b>	<b>119,445</b>	<b>37%</b>
<b>7590 · Publications</b>				
7591 · Legal Notices		330	600	55%
7596 · Marketing / Advertising			500	
<b>Total 7590 · Publications</b>		<b>330</b>	<b>1,100</b>	<b>30%</b>
<b>7600 · Special District</b>				
7611 · Elections			30,000	
7621 · LAFCo		6,348	6,745	94%
7631 · Nevada County Fees			74,838	
<b>Total 7600 · Special District</b>		<b>6,348</b>	<b>111,583</b>	<b>6%</b>
<b>7650 · Prevention</b>				
7651 · Code Purchases		63	1,500	4%
7653 · Investigation Supplies	17	786	4,300	18%
7657 · Inspection Supplies	39	39	1,500	3%
7661 · Prof Svcs / Plan Checks	100	1,007	2,500	40%
7663 · Public Education Supplies		21	4,000	1%
7665 · Subscriptions / Memberships		2,387	3,000	80%
7667 · Training	10	919	5,000	18%
7669 · Other Prevention / Law Enforce		502	3,500	14%
<b>Total 7650 · Prevention</b>	<b>166</b>	<b>5,724</b>	<b>25,300</b>	<b>23%</b>
<b>7800 · JPA</b>				
7831 · Dispatch Charges			150,000	
7841 · Dues / Administration		4,316	9,064	48%
<b>Total 7800 · JPA</b>		<b>4,316</b>	<b>159,064</b>	<b>3%</b>
<b>Total 7500 · General &amp; Admin Related</b>	<b>4,770</b>	<b>102,841</b>	<b>516,167</b>	<b>20%</b>
<b>8500 · Strike Team Non Labor Expenses</b>		<b>7,324</b>		
<b>8510 · Reimbursables</b>				
8511 · COVID Lodging	208	208		
8513 · COVID Supplies	105	105		



	<b>Nov 20</b>	<b>Jul - Nov 20</b>	<b>Budget</b>	<b>% of Budget</b>
<b>Total 8510 · Reimbursables</b>	313	313		
<b>Total Expense</b>	454,992	3,712,971	7,245,951	51%
<b>Fund over / &lt;under&gt;</b>	(379,385)	(3,447,355)	(109,911)	
<b>Other Expense</b>				
<b>8901 · Interest Expense</b>		33		
<b>9101 · Grant Expense</b>		11		
<b>Total Other Expense</b>		44		
<b>Net Other</b>		(44)		
<b>Net Fund Activity</b>	<b>(379,385)</b>	<b>(3,447,399)</b>	<b>(109,911)</b>	

**Nevada County Consolidated Fire District**  
**AB 1600 Mitigation Fund 733**  
November 2020

	<b>Nov 20</b>	<b>Jul - Nov 20</b>	<b>Budget</b>	<b>% of Budget</b>
<b>Revenues</b>				
<b>4000 · Taxes &amp; Assessments</b>				
4160 · AB 1600 Mitigation Fees	7,964	99,234	120,000	83%
<b>Total 4000 · Taxes &amp; Assessments</b>	<b>7,964</b>	<b>99,234</b>	<b>120,000</b>	<b>83%</b>
<b>4800 · Other Revenue</b>				
4820 · Interest & Finance Charges		477		100%
<b>Total 4800 · Other Revenue</b>		<b>477</b>		<b>100%</b>
<b>Total Revenues</b>	<b>7,964</b>	<b>99,711</b>	<b>120,000</b>	<b>83%</b>
<b>Expense</b>				
<b>6500 · Facility &amp; Equipment Related</b>				
<b>6900 · Capital Expenditures</b>				
6911 · Stations			27,085	
6921 · Apparatus & Equipment		49,498	116,931	42%
<b>Total 6900 · Capital Expenditures</b>		<b>49,498</b>	<b>144,016</b>	<b>34%</b>
<b>Total 6500 · Facility &amp; Equipment Related</b>		<b>49,498</b>	<b>144,016</b>	<b>34%</b>
<b>Total Expense</b>		<b>49,498</b>	<b>144,016</b>	<b>34%</b>
<b>Fund over / &lt;under&gt;</b>	<b>7,964</b>	<b>50,213</b>	<b>(24,016)</b>	
<b>Net Fund Activity</b>	<b>7,964</b>	<b>50,213</b>	<b>(24,016)</b>	

**Nevada County Consolidated Fire District**  
**Special Tax Fund 734**  
November 2020

	<b>Nov 20</b>	<b>Jul - Nov 20</b>	<b>Budget</b>	<b>% of Budget</b>
<b>Revenues</b>				
<b>4000 · Taxes &amp; Assessments</b>				
4150 · Special Tax of 2012		(2,072)	988,182	(0%)
<b>Total 4000 · Taxes &amp; Assessments</b>		(2,072)	988,182	(0%)
<b>4800 · Other Revenue</b>				
4820 · Interest & Finance Charges		96	1,897	5%
<b>Total 4800 · Other Revenue</b>		96	1,897	5%
<b>Total Revenues</b>		(1,976)	990,079	(0%)
<b>Expense</b>				
<b>7500 · General &amp; Admin Related</b>				
<b>7600 · Special District</b>				
7631 · Nevada County Fees			9,018	
<b>Total 7600 · Special District</b>			9,018	
<b>Total 7500 · General &amp; Admin Related</b>			9,018	
<b>Total Expense</b>			9,018	
<b>Fund over / &lt;under&gt;</b>		(1,976)	981,061	(0%)
<b>Other Expense</b>				
<b>8700 · Transfers Out</b>				
8722 · Transfer to 722		45,000	981,575	5%
<b>Total 8700 · Transfers Out</b>		45,000	981,575	5%
<b>Total Other Expense</b>		45,000	981,575	5%
<b>Net Other</b>		(45,000)	(981,575)	5%
<b>Net Fund Activity</b>		<b>(46,976)</b>	<b>(514)</b>	<b>9,139%</b>

**Nevada County Consolidated Fire District**  
**Capital Fund 758**  
**November 2020**

	<b>Nov 20</b>	<b>Jul - Nov 20</b>	<b>Budget</b>	<b>% of Budget</b>
<b>Revenues</b>				
<b>4800 · Other Revenue</b>				
<b>4820 · Interest &amp; Finance Charges</b>		2,996		100%
<b>4855 · Sale of Real Property</b>			40,000	
<b>Total 4800 · Other Revenue</b>		2,996	40,000	7%
<b>Total Revenues</b>		2,996	40,000	7%
<b>Expense</b>				
<b>6500 · Facility &amp; Equipment Related</b>				
<b>6900 · Capital Expenditures</b>				
<b>6911 · Stations</b>		30,960		
<b>6921 · Apparatus &amp; Equipment</b>	2,913	2,913	35,000	8%
<b>6931 · Vehicles</b>		(921)	66,884	(1%)
<b>Total 6900 · Capital Expenditures</b>	2,913	32,952	101,884	32%
<b>Total 6500 · Facility &amp; Equipment Related</b>	2,913	32,952	101,884	32%
<b>Total Expense</b>	2,913	32,952	101,884	32%
<b>Fund over / &lt;under&gt;</b>	(2,913)	(29,956)	(61,884)	
<b>Net Fund Activity</b>	<b>(2,913)</b>	<b>(29,956)</b>	<b>(61,884)</b>	

# Nevada County Consolidated Fire District Check History Report

November 2020

Date	Num	Name	Paid Amount
Nov 20			
11/02/2020	227654	BEST BEST & KRIEGER	642.20
11/02/2020	V970583	CAPITOL CLUTCH AND BRAKE, INC.	1,265.52
11/02/2020	227617	L.N. CURTIS & SONS	174.68
11/02/2020	227631	MOULE PAINT & GLASS, INC.	381.37
11/02/2020	227622	NETWORK DESIGN ASSOCIATES	270.00
11/02/2020	227660	TOTAL ADMIN SVCS (TASC)	280.44
11/02/2020	V970597	WALKER'S OFFICE SUPPLY	50.27
11/02/2020	227658	AFLAC	982.00
11/02/2020	227620	BLUE SHIELD OF CALIFORNIA	26,060.50
11/02/2020	227668	FDAC Employee Benefits Authority	1,576.15
11/02/2020	V970613	KAISER FOUNDATION HEALTH PLAN	20,456.58
11/02/2020	V970585	SPECIAL DIST RISK MGMT AUTH.	4,701.43
11/02/2020	227672	STANDARD INSURANCE COMPANY	907.50
11/02/2020	V970594	RIVERVIEW INTERNATIONAL TRUCKS	218.55
11/02/2020	227629	LIFE ASSIST INC.	582.08
11/05/2020	909635	CalPERS (Retirement)	35,396.02
11/05/2020	227680	HSA BANK, DIV. OF WEBSTER BANK	178.21
11/05/2020	227681	CalPERS 457 Plan (Def. Comp)	1,250.00
11/05/2020	227682	AUSTIN SCHUYLER	100.00
11/05/2020	227683	Bennett, David	250.00
11/05/2020	970645	NCCFD - EFTPS (Fed & State Taxes)	28,730.19
11/05/2020	970660	NEVADA COUNTY PROF FF ASSN	1,085.00
11/05/2020	970666	NATIONWIDE RETIREMENT SOLUTION	5,933.28
11/06/2020	GJ 491	Net Payroll PPE 10.31.20	121,952.48
11/06/2020	GJ 491	Net Payroll PPE 10.31.20	234.19
11/09/2020	227891	AT&T (Carol Stream)	47.00
11/09/2020	227902	D'Arata Painting	475.00
11/09/2020	227859	ENGINEERED FIRE SYSTEMS, INC.	100.00
11/09/2020	227888	ESI	2,990.00
11/09/2020	227886	MEM ELECTRICAL INC	520.00
11/09/2020	V971238	MISSION LINEN SUPPLY, INC.	68.00
11/09/2020	227868	NEVADA COUNTY FIRE CHIEFS ASSN	100.00
11/09/2020	227858	PLAZA TIRE & AUTO SERVICE	5,176.28
11/09/2020	227862	RIEBES AUTO PARTS	940.03
11/09/2020	V971241	RIVERVIEW INTERNATIONAL TRUCKS	125.53
11/09/2020	V971268	ROBINSON ENTERPRISES, INC.	551.53
11/09/2020	227899	Titan Shred	40.00
11/09/2020	227748	NEVADA CO COMMUNITY DEVELOPMENT AGEN	2,953.92
11/09/2020	V970768	STREAMLINE	200.00
11/09/2020	227779	THE UPS STORE/DJE CONSULTANTS	73.50
11/09/2020	V970672	WALKER'S OFFICE SUPPLY	16.00

<u>Date</u>	<u>Num</u>	<u>Name</u>	<u>Paid Amount</u>
11/09/2020	227982	GOLDEN STATE EMERGENCY VEHICLE	1,117.67
11/09/2020	227913	NEVADA CITY, CITY OF	397.48
11/09/2020	V971309	PURCHASE POWER	279.34
11/09/2020	V971316	RIVERVIEW INTERNATIONAL TRUCKS	573.73
11/09/2020	V971317	WALKER'S OFFICE SUPPLY	104.79
11/09/2020	227998	CMC RESCUE, INC. (fund 758)	2,913.12
11/09/2020	V971308	MISSION LINEN SUPPLY, INC.	48.96
11/09/2020		B&C ACE HOME & GARDEN CENTER	0.00
11/09/2020	227909	B&C ACE HOME & GARDEN CENTER	77.88
11/12/2020	227956	ARCH'S AUTOMOTIVE SERVICE	113.50
11/12/2020	227981	AT&T CALNET 3	404.19
11/12/2020	227994	Empire Energy Inc.	643.76
11/12/2020	227982	GOLDEN STATE EMERGENCY VEHICLE	331.02
11/12/2020	V971321	HUNT & SONS, INC.	3,157.72
11/12/2020	227933	LIFE ASSIST INC.	277.26
11/12/2020	V971343	MOTOR ELECTRIC SERVICE CO.	120.05
11/12/2020	227937	NID	82.33
11/12/2020	227949	SUBURBAN PROPANE	545.92
11/12/2020	227920	WASTE MANAGEMENT OF NEV. CO.	233.06
11/12/2020	227923	NETWORK DESIGN ASSOCIATES	93.75
11/19/2020	228080	CalCARD (US BANK)	18,097.55
11/19/2020	909679	CalPERS (Retirement)	37,835.03
11/19/2020	228077	HSA BANK, DIV. OF WEBSTER BANK	178.21
11/19/2020	228078	CalPERS 457 Plan (Def. Comp)	1,250.00
11/19/2020	228079	Bennett, David	50.00
11/19/2020	971439	NEVADA COUNTY PROF FF ASSN	1,085.00
11/19/2020	971447	NATIONWIDE RETIREMENT SOLUTION	5,177.36
11/19/2020	971429	NCCFD - EFTPS (Fed & State Taxes)	26,517.70
11/20/2020	GJ 495	Net Payroll PPE 11.14.20	114,913.85
11/25/2020	971677	AIR EXCHANGE	933.76
11/25/2020	971678	AIRGAS, NCN	203.78
11/25/2020	228366	BEST BEST & KRIEGER	988.00
11/25/2020	971668	BUCKMASTER OFFICE SOLUTIONS	73.86
11/25/2020	228359	Gold Miners Inn (CAE68)	208.00
11/25/2020	228336	GRASS VALLEY FIRE DEPARTMENT	2,360.00
11/25/2020	971676	MISSION LINEN SUPPLY, INC.	68.00
11/25/2020	228331	NID	143.43
11/25/2020	228340	SUBURBAN PROPANE	272.03
11/25/2020	971683	WALKER'S OFFICE SUPPLY	475.57
11/30/2020	228471	AT&T CALNET 3	73.63
11/30/2020	971708	ECONOMY PEST CONTROL	97.00
11/30/2020	228457	GRASS VALLEY FIRE DEPARTMENT	2,654.54
11/30/2020	228442	GRASS VALLEY SIGN CO	58.75
11/30/2020	228452	LIFE ASSIST INC.	471.41
11/30/2020	971714	MISSION LINEN SUPPLY, INC.	116.96

<u>Date</u>	<u>Num</u>	<u>Name</u>	<u>Paid Amount</u>
11/30/2020	971735	ROBINSON ENTERPRISES, INC.	625.11
11/30/2020	228451	SACRAMENTO TRUCK CENTER	12.09
11/30/2020	228459	SUBURBAN PROPANE	266.33
11/30/2020	971723	WALKER'S OFFICE SUPPLY	277.86
			<b><u>495,035.77</u></b>

Nov 20

**Nevada County Consolidated Fire District**  
**Credit Card History**  
**As of November 30, 2020**

<b>Date</b>	<b>Employee</b>	<b>Name</b>	<b>Paid Amount</b>
11/06/2020	Payment	CalCARD (US BANK)	-18,097.55
11/05/2020	Finance Mgr	PACIFIC GAS & ELECTRIC CO.	2,836.85
11/06/2020	GREENE	MISC CAL CARD VENDOR	63.96
11/06/2020	GREENE	CORNWELL ANDERSON TOOL	78.97
11/06/2020	GREENE/MARG	CFMA	630.00
11/06/2020	GREENE	DAVID CLARK COMPANY INC.	110.04
11/06/2020	GREENE	MISC CAL CARD VENDOR	501.55
11/06/2020	GREENE	MISC CAL CARD VENDOR	31.81
11/06/2020	GREENE	DISH NETWORK	75.60
11/06/2020	GREENE	MISC CAL CARD VENDOR	280.07
11/06/2020	GREENE	CORNWELL ANDERSON TOOL	255.09
11/06/2020	SUNDE	IN & OUT BURGER	17.70
11/06/2020	SMITH	EMERGENCY MEDICAL SERVICE	275.00
11/06/2020	LONG	AMAZON MARKETPLACE	9.99
11/06/2020	LONG	Sierra Plumbing Supply, Inc.	6.45
11/06/2020	LONG	MICROSOFT OFFICE	890.00
11/06/2020	LONG	AMAZON MARKETPLACE	149.99
11/06/2020	LONG	TUFFBOOK	752.45
11/06/2020	LONG	MEMBERSHIP FEE	536.43
11/06/2020	LONG	MEMBERSHIP FEE	-536.43
11/06/2020	LONG	INK/STATION 86	69.32
11/06/2020	LONG	B2B MEMBERSHIP	192.43
11/06/2020	JVG	LIEBERT CASSIDY WHITMORE	75.00
11/06/2020	JVG	LIEBERT CASSIDY WHITMORE	75.00
11/06/2020	LONG	AMAZON MARKETPLACE	12.85
11/06/2020	NUNNINK	FUEL/CLASS LAS VEGAS	27.92
11/06/2020	NUNNINK	FUEL - LAS VEGAS CLASS	34.21
11/06/2020	NUNNINK	ROBINSON ENTERPRISES, INC.	62.53
11/06/2020	NUNNINK	PARKING SACRAMENTO/NEW R-84 INSPEC	40.00
11/06/2020	NUNNINK	HAMPTON INNS LAS VEGAS/CLASS	691.56
11/06/2020	NUNNINK	HAMPTON INNS LAS VEGAS/CLASS/TREVC	691.56
11/06/2020	MCKINLEY	RED HELMET TRAINING	300.00
11/06/2020	MCKINLEY	RED HELMET TRAINING	-300.00
11/06/2020	MCKINLEY	B&C ACE HOME & GARDEN CENTER	19.31
11/06/2020	MCKINLEY	STAPLES	54.77
11/06/2020	MCKINLEY	MISC CAL CARD VENDOR	300.00
11/06/2020	MENTH	SPD MARKET	16.26
11/06/2020	WITTER	FERRELLGAS	41.06
11/06/2020	WITTER	AMAZON MARKETPLACE	42.99
11/06/2020	WITTER	AMAZON MARKETPLACE	47.34



<u>Date</u>	<u>Employee</u>	<u>Name</u>	<u>Paid Amount</u>
11/06/2020	JOHNSEN	ENDICIA / BEING DISPUTED	17.99
11/06/2020	DAVISON	AMAZON MARKETPLACE	38.82
11/06/2020	DAVISON	US FLAG STORE.COM/REPLACEMENT FLA	479.06
11/06/2020	DAVISON	AMAZON MARKETPLACE	27.69
11/06/2020	DAVISON	AMAZON MARKETPLACE	25.75
11/06/2020	MENET	BEST BUY / TV FOR DAYROOM	808.22
11/06/2020	MCMAHAN	AMAZON MARKETPLACE	17.18
11/06/2020	MCMAHAN	MISC CAL CARD VENDOR	10.00
11/06/2020	MCMAHAN	AMAZON MARKETPLACE	38.68
11/06/2020	SERNA	MISC CAL CARD VENDOR	156.95
11/06/2020	SERNA	B&C ACE HOME & GARDEN CENTER	86.79
11/06/2020	SERNA	ELITE COMMAND TRAINING/CANCELLED P.	435.00
11/06/2020	SERNA	PROPANE	22.28
11/06/2020	SERNA	MISC CAL CARD VENDOR	-435.00
11/06/2020	SERNA	MISC CAL CARD VENDOR	52.57
11/06/2020	SERNA	MISC CAL CARD VENDOR	39.76
11/06/2020	UNASSIGNED	BEST WESTERN OAKDALE CA	209.32
11/06/2020	UNASSIGNED	FIRE INSTRUCTION	375.00
11/06/2020	FIN MGR	SUDDENLINK (CEQUEL)	138.45
11/06/2020	FIN MGR	AT&T (Carol Stream)	36.37
11/06/2020	TURNER	MISC CAL CARD VENDOR	35.52
11/06/2020	TURNER	SIERRA-SACRAMENTO VALLEY EMS	68.00
11/06/2020	TURNER	SUDS BROS	14.00
11/06/2020	TURNER	ADVANTAGE GEAR, INC.	-179.11
11/06/2020	TURNER	ADVANTAGE GEAR, INC.	610.26
11/06/2020	TURNER	AMAZON MARKETPLACE	115.30
11/06/2020	FUNK	SIERRA-SACRAMENTO VALLEY EMS	68.00
11/06/2020	SULLIVAN	IN & OUT BURGER	17.70
11/06/2020	SULLIVAN	FUEL	66.90
11/06/2020	SULLIVAN	FUEL	54.53
11/10/2020		MISC CAL CARD VENDOR	314.70
			<u>13,226.31</u>

**Nevada County Consolidated Fire District  
Fund Recap & Cash Balances  
December 2020**

	Fund					Total
	722 Operating	723 Contingency	733 AB1600	734 Special Tax	758 Capital	
Beginning Cash <sup>1</sup>	(1,933,848)	1,245,140	105,401	2,841	439,600	(140,866)
Revenues	3,111,703	-	29,494	539,587	1,243	3,682,027
Expenditures	(500,581)	-	(27,085)	(8,424)	(9,227)	(545,317)
Other Inc/Expense	(3,625)	-	-	-	-	(3,625)
Other Activity <sup>2</sup>	(116,706)	-	-	-	-	(116,706)
Ending Cash <sup>1</sup>	556,943	1,245,140	107,810	534,004	431,616	2,875,513

<sup>1</sup> Includes Well Fargo

<sup>2</sup> Balance sheet cash activity not reported on fund report in the current month.

**Nevada County Consolidated Fire District**  
**Operating Fund 722**  
December 2020

	<b>Dec 20</b>	<b>Jul - Dec 20</b>	<b>Budget</b>	<b>% of Budget</b>
<b>Revenues</b>				
<b>4000 · Taxes &amp; Assessments</b>				
4010 · Current Secured	1,776,734	1,781,961	3,226,494	55%
4011 · Prior Secured		(120)		
4020 · Current Unsecured		49,789	50,459	99%
4030 · Prior Unsecured	555	555	1,390	40%
4040 · Supplemental Secured	5,221	15,377	39,205	39%
4050 · Supplemental Unsecured	365	428	1,315	33%
4060 · Supplemental Prior Unsecured	30	40	169	24%
4110 · Special Assessment	1,141,513	1,139,010	2,073,062	55%
4150 · Special Tax of 2012	3,508	4,615		
4151 · Special Tax 2012 (transfer in)		45,000	981,062	5%
4160 · AB 1600 Mitigation Fees	16,578	16,578		
4230 · State Homeowners	13,689	13,689	25,334	54%
4240 · State Public Safety Prop 172	97,753	183,583	415,869	44%
4290 · Other	2	2		
<b>Total 4000 · Taxes &amp; Assessments</b>	<b>3,055,948</b>	<b>3,250,507</b>	<b>6,814,359</b>	<b>48%</b>
<b>4500 · Reimbursements</b>				
4510 · Strike Team	103,997	149,877	150,000	100%
4522 · Strike Team Cost Offset	(55,065)	(82,939)		
4530 · Training		(621)		
4540 · Vehicle Repair	285	2,672	5,000	53%
4550 · Cost Recovery	966	3,429	18,500	19%
4690 · Other Reimbursements		28,790	65,960	44%
<b>Total 4500 · Reimbursements</b>	<b>50,183</b>	<b>101,208</b>	<b>239,460</b>	<b>42%</b>
<b>4800 · Other Revenue</b>				
4810 · Inspections & Permits	1,220	2,274	12,000	19%
4812 · Plan Reviews	1,320	4,798	10,000	48%
4820 · Interest & Finance Charges	331	9,098	31,481	29%
4830 · Rentals	1,700	7,750	28,740	27%
4870 · Other Revenue	1,001	1,682		
<b>Total 4800 · Other Revenue</b>	<b>5,572</b>	<b>25,602</b>	<b>82,221</b>	<b>31%</b>
<b>Total Revenues</b>	<b>3,111,703</b>	<b>3,377,317</b>	<b>7,136,040</b>	<b>47%</b>

	<u>Dec 20</u>	<u>Jul - Dec 20</u>	<u>Budget</u>	<u>% of Budget</u>
<b>Expense</b>				
<b>5000 · Wages &amp; Benefits</b>				
<b>5100 · Wages</b>				
5111 · Chief / Deputy Chief (2)	27,725	178,307	353,362	50%
5113 · Battalion Chief (2)	17,691	113,376	225,361	50%
5114 · Prevention (2)	16,163	103,565	207,881	50%
5121 · Captains (9)	66,609	438,289	844,810	52%
5122 · Lieutenants (6)	34,932	225,074	471,207	48%
5123 · Firefighter (12)	53,793	344,087	763,117	45%
5132 · PCF / Reserve FF			600	
5141 · Clerical (3)	15,401	97,756	226,807	43%
5145 · Fire Mechanic (1.5)	6,993	59,648	125,510	48%
5151 · Overtime	35,613	213,033	402,730	53%
5153 · Additional Overtime Staffing		17,272	41,225	42%
5155 · EPSL Overtime	7,301	19,990		
5161 · Strike Team		500,532		
5165 · Strike Team Backfill		169,894		
5167 · Strike Team Revenue Offset	(54,278)	(81,779)		
5171 · Holiday Stipend	14,089	43,435	75,196	58%
5173 · Vacation / CTO Buy Back	17,271	31,846	96,751	33%
5185 · Directors	300	1,875	4,500	42%
<b>Total 5100 · Wages</b>	<b>259,603</b>	<b>2,476,200</b>	<b>3,839,057</b>	<b>65%</b>
Footnote →				Strike team activity 15%
<b>5500 · Payroll Taxes</b>				
5511 · Medicare Employer Tax	4,148	33,638	55,921	60%
5512 · Soc Security Employer Tax	215	915	316	290%
5521 · SUI Employer Tax	73	310	5,693	5%
5526 · Strike Team Revenue Offset	(787)	(1,160)		
<b>Total 5500 · Payroll Taxes</b>	<b>3,649</b>	<b>33,703</b>	<b>61,930</b>	<b>54%</b>
<b>5700 · Benefits</b>				
5711 · Pension	49,964	669,183	1,009,523	66%
5731 · Health Insurance	55,621	323,879	772,464	42%
5735 · Life Insurance	953	8,142	15,000	54%
5751 · Workers Comp Insurance		190,494	190,964	100%
<b>Total 5700 · Benefits</b>	<b>106,538</b>	<b>1,191,698</b>	<b>1,987,951</b>	<b>60%</b>
<b>Total 5000 · Wages &amp; Benefits</b>	<b>369,790</b>	<b>3,701,601</b>	<b>5,888,938</b>	<b>63%</b>

	<u>Dec 20</u>	<u>Jul - Dec 20</u>	<u>Budget</u>	<u>% of Budget</u>
<b>6000 · Personnel Related</b>				
<b>6010 · Clothing / PPE</b>				
6011 · Uniforms		2,954	13,005	23%
6021 · Personal Protective Equip		318	35,000	1%
6031 · Safety & PPE (per MOU)	607	15,410	33,060	47%
<b>Total 6010 · Clothing / PPE</b>	<u>607</u>	<u>18,682</u>	<u>81,065</u>	<u>23%</u>
<b>6100 · Food / Meals</b>				
6111 · Meals - Administration		114	300	38%
6112 · Meals - Training		344		
6113 · Meals - Fire		561	500	112%
6114 · Meals - Interns		4,000	35,959	11%
<b>Total 6100 · Food / Meals</b>		<u>5,019</u>	<u>36,759</u>	<u>14%</u>
<b>6200 · Training / Fitness</b>				
6211 · Wellness Program		924	30,818	3%
6213 · Fitness Program	4,700	4,700	8,500	55%
6221 · Tuition - Safety Personnel		5,671	20,500	28%
6232 · Travel Expense		1,632	8,500	19%
6241 · Training Materials		925	2,000	46%
6246 · Public Safety Training Center		672	1,000	67%
6261 · Licenses & Certificates	68	912	2,500	36%
6271 · Training - Administration	75	225	7,500	3%
<b>Total 6200 · Training / Fitness</b>	<u>4,843</u>	<u>15,661</u>	<u>81,318</u>	<u>19%</u>
<b>Total 6000 · Personnel Related</b>	<u>5,450</u>	<u>39,362</u>	<u>199,142</u>	<u>20%</u>
<b>6500 · Facility &amp; Equipment Related</b>				
<b>6510 · Communications</b>				
6511 · Telephones	1,588	7,498	20,280	37%
6521 · Mobile Phones	1,212	4,244	9,000	47%
6510 · Communications - Other		(7)		
<b>Total 6510 · Communications</b>	<u>2,800</u>	<u>11,735</u>	<u>29,280</u>	<u>40%</u>
<b>6550 · Station</b>				
6551 · Supplies & Services - Stations	960	7,673	13,380	57%
6591 · Small Tools	475	1,070		
<b>Total 6550 · Station</b>	<u>1,435</u>	<u>8,743</u>	<u>13,380</u>	<u>65%</u>
<b>6610 · Insurance</b>				
6611 · Liability		15,011	15,052	100%
6621 · Property		18,383	17,322	106%
<b>Total 6610 · Insurance</b>		<u>33,394</u>	<u>32,374</u>	<u>103%</u>
<b>6650 · Maintenance</b>				
6681 · Facility Maint & Improvements	1,819	42,598	170,000	25%
<b>Total 6650 · Maintenance</b>	<u>1,819</u>	<u>42,598</u>	<u>170,000</u>	<u>25%</u>
<b>6700 · Medical Supplies</b>				
6716 · EMS Supplies	436	16,156	20,000	81%
<b>Total 6700 · Medical Supplies</b>	<u>436</u>	<u>16,156</u>	<u>20,000</u>	<u>81%</u>
<b>6750 · Apparatus Equipment</b>				

	<b>Dec 20</b>	<b>Jul - Dec 20</b>	<b>Budget</b>	<b>% of Budget</b>
6751 · Hose		6,771	16,000	42%
6756 · Ladders			1,500	
6761 · Suppression Equip	1,201	2,285	7,500	30%
6766 · Power Tools & Equipment			6,800	
6771 · Pump Testing			4,350	
6776 · Mobile Communications	99	839	4,800	17%
6781 · Technical Rescue Equip		5,513	10,000	55%
6786 · SCBA Repair & Maintenance			8,381	
6791 · Small Tools - Apparatus		95	3,100	3%
6796 · Drone		1,337	3,168	42%
<b>Total 6750 · Apparatus Equipment</b>	<b>1,300</b>	<b>16,840</b>	<b>65,599</b>	<b>26%</b>
<b>6800 · Utilities</b>				
6811 · Alarm		660	1,360	49%
6821 · Electricity / Gas	2,668	22,851	41,143	56%
6831 · Propane	110	1,416	13,136	11%
6841 · Trash	233	1,423	3,600	40%
6851 · Water / Sewer	251	5,595	8,549	65%
<b>Total 6800 · Utilities</b>	<b>3,262</b>	<b>31,945</b>	<b>67,788</b>	<b>47%</b>
<b>6900 · Capital Expenditures</b>				
6921 · Apparatus & Equipment			37,103	
6941 · Admin Office Equipm & Computers			24,550	
<b>Total 6900 · Capital Expenditures</b>			<b>61,653</b>	
<b>Total 6500 · Facility &amp; Equipment Related</b>	<b>11,052</b>	<b>161,411</b>	<b>460,074</b>	<b>35%</b>
<b>7000 · Vehicle Related</b>				
<b>7001 · Insurance</b>				
7005 · Vehicle Insurance	423	8,481	8,557	99%
<b>Total 7001 · Insurance</b>	<b>423</b>	<b>8,481</b>	<b>8,557</b>	<b>99%</b>
<b>7010 · Maintenance</b>				
7011 · Accessories	3,682	16,510		
7016 · Batteries	713	713		
7021 · Body		1,511		
7026 · Brakes		4,145		
7031 · Drive Train		14,133		
7036 · Pumps		3,207		
7041 · Tires		12,980		
7046 · Tools & Shop Related	275	5,893		
7048 · All Categories for Budget			105,820	
7049 · Outside Agency Vehicle Maint	324	1,853		
<b>Total 7010 · Maintenance</b>	<b>4,994</b>	<b>60,945</b>	<b>105,820</b>	<b>58%</b>
<b>7050 · Fuel</b>				
7051 · Fuel	2,776	25,173	67,253	37%
<b>Total 7050 · Fuel</b>	<b>2,776</b>	<b>25,173</b>	<b>67,253</b>	<b>37%</b>
<b>Total 7000 · Vehicle Related</b>	<b>8,193</b>	<b>94,599</b>	<b>181,630</b>	<b>52%</b>
<b>7500 · General &amp; Admin Related</b>				

	<b>Dec 20</b>	<b>Jul - Dec 20</b>	<b>Budget</b>	<b>% of Budget</b>
<b>7501 · Office Expense</b>				
7502 · Administration	235	995	5,200	19%
7506 · Board		80	1,200	7%
7508 · Computer & Software Expense	5,522	31,217	74,850	42%
7509 · Copier Expense	59	495	1,500	33%
7511 · Memberships		14,473	15,125	96%
7521 · Postage & Delivery	61	710	1,800	39%
7531 · Other	424	424		
7501 · Office Expense - Other	0	0		
<b>Total 7501 · Office Expense</b>	<b>6,301</b>	<b>48,394</b>	<b>99,675</b>	<b>49%</b>
<b>7550 · Professional Services</b>				
7551 · Accounting		11,157	16,400	68%
7556 · Computer & IT Support	810	4,254	10,080	42%
7561 · Consultants	7,000	7,000	8,000	88%
7563 · Hiring Expense		1,206	8,250	15%
7566 · Legal Expense	5,246	33,470	73,115	46%
7571 · Medical Director			3,600	
7576 · Other	54	54		
<b>Total 7550 · Professional Services</b>	<b>13,110</b>	<b>57,141</b>	<b>119,445</b>	<b>48%</b>
<b>7590 · Publications</b>				
7591 · Legal Notices		330	600	55%
7596 · Marketing / Advertising			500	
<b>Total 7590 · Publications</b>		<b>330</b>	<b>1,100</b>	<b>30%</b>
<b>7600 · Special District</b>				
7611 · Elections			30,000	
7621 · LAFCo		6,348	6,745	94%
7631 · Nevada County Fees	81,403	81,403	74,838	109%
<b>Total 7600 · Special District</b>	<b>81,403</b>	<b>87,751</b>	<b>111,583</b>	<b>79%</b>
<b>7650 · Prevention</b>				
7651 · Code Purchases		63	1,500	4%
7653 · Investigation Supplies		786	4,300	18%
7657 · Inspection Supplies		39	1,500	3%
7661 · Prof Svcs / Plan Checks	100	1,107	2,500	44%
7663 · Public Education Supplies		21	4,000	1%
7665 · Subscriptions / Memberships	364	2,751	3,000	92%
7667 · Training	10	929	5,000	19%
7669 · Other Prevention / Law Enforce	328	830	3,500	24%
<b>Total 7650 · Prevention</b>	<b>802</b>	<b>6,526</b>	<b>25,300</b>	<b>26%</b>
<b>7800 · JPA</b>				
7831 · Dispatch Charges			150,000	
7841 · Dues / Administration		4,316	9,064	48%
<b>Total 7800 · JPA</b>		<b>4,316</b>	<b>159,064</b>	<b>3%</b>
<b>Total 7500 · General &amp; Admin Related</b>	<b>101,616</b>	<b>204,458</b>	<b>516,167</b>	<b>40%</b>
<b>8500 · Strike Team Non Labor Expenses</b>	<b>55</b>	<b>7,379</b>		

	<u>Dec 20</u>	<u>Jul - Dec 20</u>	<u>Budget</u>	<u>% of Budget</u>
<b>8510 · Reimbursables</b>				
<b>8511 · COVID Lodging</b>		208		
<b>8512 · COVID testing</b>	4,425	4,425		
<b>8513 · COVID Supplies</b>		105		
<b>Total 8510 · Reimbursables</b>	<u>4,425</u>	<u>4,738</u>		
<b>Total Expense</b>	<u>500,581</u>	<u>4,213,548</u>	<u>7,245,951</u>	<u>58%</u>
<b>Fund over / &lt;under&gt;</b>	2,611,122	(836,231)	(109,911)	
<b>Other Expense</b>				
<b>8901 · Interest Expense</b>		33		
<b>9101 · Grant Expense</b>	3,625	3,637		
<b>Total Other Expense</b>	<u>3,625</u>	<u>3,670</u>		
<b>Net Other</b>	<u>(3,625)</u>	<u>(3,670)</u>		
<b>Net Fund Activity</b>	<u><u>2,607,497</u></u>	<u><u>(839,901)</u></u>	<u><u>(109,911)</u></u>	



**Nevada County Consolidated Fire District**  
**AB 1600 Mitigation Fund 733**  
December 2020

	<b>Dec 20</b>	<b>Jul - Dec 20</b>	<b>Budget</b>	<b>% of Budget</b>
<b>Revenues</b>				
<b>4000 · Taxes &amp; Assessments</b>				
4160 · AB 1600 Mitigation Fees	29,233	128,467	120,000	107%
<b>Total 4000 · Taxes &amp; Assessments</b>	29,233	128,467	120,000	107%
<b>4800 · Other Revenue</b>				
4820 · Interest & Finance Charges	261	737		100%
<b>Total 4800 · Other Revenue</b>	261	737		100%
<b>Total Revenues</b>	29,494	129,204	120,000	108%
<b>Expense</b>				
<b>6500 · Facility &amp; Equipment Related</b>				
<b>6900 · Capital Expenditures</b>				
6911 · Stations	27,085	27,085	27,085	100%
6921 · Apparatus & Equipment		49,498	116,931	42%
<b>Total 6900 · Capital Expenditures</b>	27,085	76,583	144,016	53%
<b>Total 6500 · Facility &amp; Equipment Related</b>	27,085	76,583	144,016	53%
<b>Total Expense</b>	27,085	76,583	144,016	53%
<b>Fund over / &lt;uncer&gt;</b>	2,409	52,621	(24,016)	
<b>Net Fund Activity</b>	<b>2,409</b>	<b>52,621</b>	<b>(24,016)</b>	

**Nevada County Consolidated Fire District**  
**Special Tax Fund 734**  
December 2020

	<b>Dec 20</b>	<b>Jul - Dec 20</b>	<b>Budget</b>	<b>% of Budget</b>
<b>Revenues</b>				
<b>4000 · Taxes &amp; Assessments</b>				
4150 · Special Tax of 2012	539,274	537,201	988,182	54%
<b>Total 4000 · Taxes &amp; Assessments</b>	<b>539,274</b>	<b>537,201</b>	<b>988,182</b>	<b>54%</b>
<b>4800 · Other Revenue</b>				
4820 · Interest & Finance Charges	313	409	1,897	22%
<b>Total 4800 · Other Revenue</b>	<b>313</b>	<b>409</b>	<b>1,897</b>	<b>22%</b>
<b>Total Revenues</b>	<b>539,587</b>	<b>537,610</b>	<b>990,079</b>	<b>54%</b>
<b>Expense</b>				
<b>7500 · General &amp; Admin Related</b>				
<b>7600 · Special District</b>				
7631 · Nevada County Fees	8,424	8,424	9,018	93%
<b>Total 7600 · Special District</b>	<b>8,424</b>	<b>8,424</b>	<b>9,018</b>	<b>93%</b>
<b>Total 7500 · General &amp; Admin Related</b>	<b>8,424</b>	<b>8,424</b>	<b>9,018</b>	<b>93%</b>
<b>Total Expense</b>	<b>8,424</b>	<b>8,424</b>	<b>9,018</b>	<b>93%</b>
<b>Fund over / &lt;under&gt;</b>	<b>531,163</b>	<b>529,186</b>	<b>981,061</b>	<b>54%</b>
<b>Other Expense</b>				
<b>8700 · Transfers Out</b>				
8722 · Transfer to 722		45,000	981,575	5%
<b>Total 8700 · Transfers Out</b>		<b>45,000</b>	<b>981,575</b>	<b>5%</b>
<b>Total Other Expense</b>		<b>45,000</b>	<b>981,575</b>	<b>5%</b>
<b>Net Other</b>		<b>(45,000)</b>	<b>(981,575)</b>	<b>5%</b>
<b>Net Fund Activity</b>	<b>531,163</b>	<b>484,186</b>	<b>(514)</b>	

**Nevada County Consolidated Fire District**  
**Capital Fund 758**  
December 2020

	<b>Dec 20</b>	<b>Jul - Dec 20</b>	<b>Budget</b>	<b>% of Budget</b>
<b>Revenues</b>				
4800 · Other Revenue				
4820 · Interest & Finance Charges	1,243	4,239		100%
4855 · Sale of Real Property			40,000	
<b>Total 4800 · Other Revenue</b>	<b>1,243</b>	<b>4,239</b>	<b>40,000</b>	<b>11%</b>
<b>Total Revenues</b>	<b>1,243</b>	<b>4,239</b>	<b>40,000</b>	<b>11%</b>
<b>Expense</b>				
6500 · Facility & Equipment Related				
6750 · Apparatus Equipment				
6781 · Technical Rescue Equip	1,914	1,914		
<b>Total 6750 · Apparatus Equipment</b>	<b>1,914</b>	<b>1,914</b>		
6900 · Capital Expenditures				
6911 · Stations		30,960		
6921 · Apparatus & Equipment	6,894	9,807	35,000	28%
6931 · Vehicles		(921)	66,884	(1%)
<b>Total 6900 · Capital Expenditures</b>	<b>6,894</b>	<b>39,846</b>	<b>101,884</b>	<b>39%</b>
<b>Total 6500 · Facility &amp; Equipment Related</b>	<b>8,808</b>	<b>41,760</b>	<b>101,884</b>	<b>41%</b>
7000 · Vehicle Related				
7010 · Maintenance				
7011 · Accessories	419	419		
<b>Total 7010 · Maintenance</b>	<b>419</b>	<b>419</b>		
<b>Total 7000 · Vehicle Related</b>	<b>419</b>	<b>419</b>		
<b>Total Expense</b>	<b>9,227</b>	<b>42,179</b>	<b>101,884</b>	<b>41%</b>
<b>Fund over / &lt;under&gt;</b>	<b>(7,984)</b>	<b>(37,940)</b>	<b>(61,884)</b>	
<b>Net Fund Activity</b>	<b>(7,984)</b>	<b>(37,940)</b>	<b>(61,884)</b>	

**Nevada County Consolidated Fire District  
Check History Report  
December 2020**

Date	Num	Name	Paid Amount
Dec 20			
12/03/2020	228522	AFLAC	982.00
12/03/2020	228494	BLUE SHIELD OF CALIFORNIA	32,764.57
12/03/2020	228529	FDAC Employee Benefits Authority	1,622.15
12/03/2020	971820	KAISER FOUNDATION HEALTH PLAN	21,721.87
12/03/2020	971756	SPECIAL DIST RISK MGMT AUTH.	4,816.09
12/03/2020	228533	STANDARD INSURANCE COMPANY	907.50
12/04/2020	GJ 496	Net Payroll PPE 11.28.20	115,688.31
12/04/2020	228483	HSA BANK, DIV. OF WEBSTER BANK	178.21
12/04/2020	228484	CalPERS 457 Plan (Def. Comp)	1,250.00
12/04/2020	228485	NCCFD - EFTPS (Fed & State Taxes)	26,608.15
12/04/2020	971784	NATIONWIDE RETIREMENT SOLUTION	5,012.93
12/04/2020	909710	CalPERS (Retirement)	39,857.76
12/10/2020	228823	PORAC	93.00
12/10/2020	228824	PORAC - LEGAL DEFENSE FUND	126.00
12/10/2020	972421	PURCHASE POWER	50.00
12/10/2020	972443	REED'S LOCKSMITHING	45.00
12/10/2020	228726	RIEBES AUTO PARTS	619.73
12/10/2020	972427	RIVERVIEW INTERNATIONAL TRUCKS	843.53
12/10/2020	972458	ROBINSON ENTERPRISES, INC.	473.94
12/10/2020	228708	SACRAMENTO TRUCK CENTER	288.66
12/10/2020	228729	SUBURBAN PROPANE	109.82
12/10/2020	972432	WALKER'S OFFICE SUPPLY	32.50
12/10/2020	228746	WILLDAN FINANCIAL SERVICES	7,000.00
12/10/2020	228753	49er COMMUNICATION (fund 758)	3,315.79
12/10/2020	972416	A TO Z SUPPLY	8.79
12/10/2020	228683	B&C ACE HOME & GARDEN CENTER	96.52
12/10/2020	972457	BANNER COMMUNICATIONS	45.57
12/10/2020	228840	BC Tint & Graphics	225.00
12/10/2020	972437	BURTON'S FIRE APPARATUS	472.63
12/10/2020	228733	CDW GOVERNMENT INC	138.85
12/10/2020	972405	CITY OF GRASS VALLEY (vendor)	2,065.00
12/10/2020	228812	Cummins Pacific LLC	720.00
12/10/2020	228736	DAWN'S IN STITCHES	278.00
12/10/2020	972408	ECONOMY PEST CONTROL	97.00
12/10/2020	228688	GRASS VALLEY SIGN CO (fund 758)	141.98
12/10/2020	972436	HUNT & SONS, INC.	1,936.04
12/10/2020	228713	LIEBERT CASSIDY WHITMORE	5,096.80
12/10/2020	972420	MISSION LINEN SUPPLY, INC.	126.48
12/10/2020	972485	STREAMLINE	200.00
12/10/2020	228819	GOLDEN STATE EMERGENCY VEHICLE	236.70
12/10/2020	228698	NETWORK DESIGN ASSOCIATES	2,469.00

<u>Date</u>	<u>Num</u>	<u>Name</u>	<u>Paid Amount</u>
12/17/2020	228995	AT&T CALNET 3	425.69
12/17/2020	228914	BEAM "EASY LIVING" CENTER	216.99
12/17/2020	228932	ENGINEERED FIRE SYSTEMS, INC.	100.00
12/17/2020	228998	GOLDEN STATE EMERGENCY VEHICLE	108.98
12/17/2020	228935	LIFE ASSIST INC.	3,786.58
12/17/2020	228937	NID	80.04
12/17/2020	972632	SMARTER BROADBAND	40.00
12/17/2020	228948	THE UNION	234.27
12/17/2020	972585	WALKER'S OFFICE SUPPLY	210.21
12/17/2020	228923	WASTE MANAGEMENT OF NEV. CO.	233.06
12/17/2020	228956	WESTAMERICA BANK (fund 733)	27,085.03
12/17/2020	228959	CRITICAL REACH	50.00
12/17/2020		NID	0.03
12/17/2020	228961	RESCUE RESPONSE GEAR (fund 758)	1,914.32
12/18/2020	GJ 499	Net Payroll PPE 12.12.20	106,730.20
12/18/2020	228905	HSA BANK, DIV. OF WEBSTER BANK	178.21
12/18/2020	228906	CalPERS 457 Plan (Def. Comp)	1,250.00
12/18/2020	972578	NATIONWIDE RETIREMENT SOLUTION	4,871.14
12/18/2020	972562	NCCFD - EFTPS (Fed & State Taxes)	26,941.87
12/18/2020	909756	CalPERS (Retirement)	35,519.70
12/24/2020	229291	AT&T CALNET 3	23.74
12/24/2020	229277	AUBURN FORD (fund 758)	235.74
12/24/2020	229236	B&C ACE HOME & GARDEN CENTER	86.79
12/24/2020	972777	BUCKMASTER OFFICE SOLUTIONS	59.03
12/24/2020	972795	BURTON'S FIRE APPARATUS (fund 758)	183.41
12/24/2020	229293	GOLDEN STATE EMERGENCY VEHICLE	239.13
12/24/2020	972787	MISSION LINEN SUPPLY, INC.	126.48
12/24/2020	972813	MOTOR ELECTRIC SERVICE CO.	712.92
12/24/2020	229255	NID	134.55
12/24/2020	972818	OLON FIRE CONTROL (fund 758)	177.52
12/24/2020	229252	UPS	11.16
12/24/2020	972791	WALKER'S OFFICE SUPPLY	107.94
12/24/2020	229307	YATES GEAR INC. (fund 758)	553.82
12/28/2020	972835	A TO Z SUPPLY	1.26
12/28/2020	229389	ADVANTAGE GARAGE DOOR	150.00
12/28/2020	972860	BANNER COMMUNICATIONS	53.71
12/28/2020	229356	CDW GOVERNMENT INC	2,256.08
12/28/2020	229359	INTERNATIONAL CODE COUNCIL	145.00
12/28/2020	229340	LIFE ASSIST INC.	229.19
12/28/2020	972864	ROBINSON ENTERPRISES, INC.	365.56
12/28/2020	972857	SERNA, ROBIN	33.58
12/28/2020	229351	SPD SAW SHOP	474.86
12/28/2020	229384	Titan Shred	35.00
12/28/2020	229374	TYE TREVETHICK	241.00
12/28/2020	972845	WALKER'S OFFICE SUPPLY	165.97

<u>Date</u>	<u>Num</u>	<u>Name</u>	<u>Paid Amount</u>
12/28/2020	972855	WILSON, BRANDEN	21.81
12/28/2020	229332	NETWORK DESIGN ASSOCIATES	270.00
12/28/2020	229315	CalCARD (US BANK)	10,493.48
12/28/2020	101670	RESCUE RESPONSE GEAR (fund 758)	321.84
12/31/2020	972899	NCCFD - EFTPS (Fed & State Taxes)	30,102.85
12/31/2020	972904	A TO Z SUPPLY	13.96
12/31/2020	972914	AIR EXCHANGE	1,003.48
12/31/2020	229419	ATWOOD INSURANCE AGENCY	423.00
12/31/2020	972991	FOSTER & SON HOSE AND FITTINGS, INC.	50.28
12/31/2020	229434	ZEP MANUFACTURING CO.	58.07
12/31/2020	229436	LIFE FITNESS	4,699.81
12/31/2020	GJ 505	Direct Charges	8,574.00
12/31/2020	GJ 505	PTAF	72,829.00
12/31/2020	229392	HSA BANK, DIV. OF WEBSTER BANK	22,395.24
12/31/2020	229393	HSA BANK, DIV. OF WEBSTER BANK	258.26
12/31/2020	229394	CalPERS 457 Plan (Def. Comp)	1,300.00
12/31/2020	229445	WILDLAND FF FOUNDATION	156.00
12/31/2020	972911	NEVADA COUNTY PROF FF ASSN	1,085.00
12/31/2020	972918	NATIONWIDE RETIREMENT SOLUTION	5,139.21
12/31/2020	909790	CalPERS (Retirement)	40,381.92
			<b><u>695,118.84</u></b>

Dec 20

**Nevada County Consolidated Fire District**  
**Credit Card History**  
**As of December 31, 2020**

<u>Date</u>	<u>Num</u>	<u>Name</u>	<u>Paid Amount</u>
12/07/2020	12/07/2020	CalCARD (US BANK)	-10,493.48
12/07/2020	GREENE	TREVOR LAPHAM SNAP-ON TOOLS	106.48
12/07/2020	GREENE	TREVOR LAPHAM SNAP-ON TOOLS	168.24
12/07/2020	GREENE	RJ MARX	878.49
12/07/2020	GREENE	NorCal Kenworth	460.00
12/07/2020	GREENE	DISH NETWORK	75.60
12/07/2020	LONG	AMAZON MARKETPLACE	238.56
12/07/2020	LONG	Sam's Club	53.56
12/07/2020	LONG	AMAZON MARKETPLACE	71.46
12/07/2020	LONG	CONFERENCECALLER.COM	30.00
12/07/2020	LONG	MICROSOFT OFFICE	890.00
12/07/2020	LONG	AMAZON MARKETPLACE	10.63
12/07/2020	LONG	AMAZON MARKETPLACE	247.13
12/07/2020	LONG	AMAZON MARKETPLACE	17.73
12/07/2020	LONG	AMAZON MARKETPLACE	171.99
12/07/2020	LONG	CONFERENCECALLER.COM	300.00
12/07/2020	LONG	LIEBERT CASSIDY WHITMORE	149.00
12/07/2020	JVG	LIEBERT CASSIDY WHITMORE	75.00
12/07/2020	NUNNINK	CONSOLIDATED ELECTRICAL DISTRIBUTO	52.08
12/07/2020	MCKINLEY	CVS PHARMACY	45.55
12/07/2020	MENTH	SIERRA-SACRAMENTO VALLEY EMS	68.00
12/07/2020	WITTER	AMAZON MARKETPLACE	64.49
12/07/2020	DAVISON	AMAZON MARKETPLACE	6.69
12/07/2020	DAVISON	AMAZON MARKETPLACE	-6.69
12/07/2020	DAVISON	AMAZON MARKETPLACE	42.96
12/07/2020	MCPAHAN	MOUNTAIN UNIFORMS	158.50
12/07/2020	MCPAHAN	NORCAL FIRE CHIEF ASSOC	10.00
12/07/2020	MCPAHAN	ADVANTAGE GEAR, INC.	448.31
12/07/2020	FIN MGR	COMCAST	279.05
12/07/2020	FIN MGR	AT&T (Carol Stream)	37.34
12/07/2020	FIN MGR	COMCAST	128.84
12/07/2020	FIN MGR	SUDDENLINK (CEQUEL)	47.98
12/07/2020	FIN MGR	SUDDENLINK (CEQUEL)	138.45
12/07/2020	FIN MGR	COMCAST	128.96
12/07/2020	FIN MGR	VERIZON WIRELESS	1,211.58
12/07/2020	TURNER	SUDS BROS	17.00
12/07/2020	TURNER	SUDS BROS	17.00
12/07/2020	FUNK	AMAZON MARKETPLACE	962.05
12/07/2020	FUNK	TEAM WENDY	1,422.20
12/07/2020	SULLIVAN	TEAM WENDY	966.62

<u>Date</u>	<u>Num</u>	<u>Name</u>	<u>Paid Amount</u>
12/07/2020	SULLIVAN	YATES GEAR	211.39
12/07/2020	SULLIVAN	TEAM WENDY	109.25
12/07/2020	JOHNSEN	ENDICIA - FRAUDULENT CHARGE	-17.99
12/14/2020	12/01/2020	PACIFIC GAS & ELECTRIC CO.	2,667.83
			<u>13,161.31</u>



**COUNTY OF NEVADA**  
**Auditor-Controller's Office**  
**District and Commission Signature Authority**  
**Calendar Year 2021**

District/Commission: Nevada County Consolidated Fire District  
 Location: \_\_\_\_\_  
 Mailing Address: 640 Coyote Street  
Nevada City, CA 95959  
 Telephone #: (530)265-4431  
 Main Email Address: [nccfire@nccfire.com](mailto:nccfire@nccfire.com)

**DISTRICT / COMMISSION BOARD MEMBERS**

NAME & TITLE	ADDRESS	PHONE NUMBER & EMAIL ADDRESS
<u>Keith Grueneberg</u>	<u>640 Coyote Street</u>	<u>(530)265-4431</u>
<u>Board President</u>	<u>Nevada City, CA 95959</u>	<u><a href="mailto:keithgrueneberg@nccfire.com">keithgrueneberg@nccfire.com</a></u>
<u>Barry Dorland</u>	<u>640 Coyote Street</u>	<u>(530)265-4431</u>
<u>Board Vice President</u>	<u>Nevada City, CA 95959</u>	<u><a href="mailto:barrydorland@nccfire.com">barrydorland@nccfire.com</a></u>
<u>Spencer Garrett</u>	<u>640 Coyote Street</u>	<u>(530)265-4431</u>
<u>Director</u>	<u>Nevada City, CA 95959</u>	<u><a href="mailto:spencer Garrett@nccfire.com">spencer Garrett@nccfire.com</a></u>
<u>Tom Carrington</u>	<u>640 Coyote Street</u>	<u>(530)265-4431</u>
<u>Director</u>	<u>Nevada City, CA 95959</u>	<u><a href="mailto:tomcarrington@nccfire.com">tomcarrington@nccfire.com</a></u>
<u>David Hanson</u>	<u>640 Coyote Street</u>	<u>(530)265-4431</u>
<u>Director</u>	<u>Nevada City, CA 95959</u>	<u><a href="mailto:davidhanson@nccfire.com">davidhanson@nccfire.com</a></u>
<u>Patricia Nelson</u>	<u>640 Coyote Street</u>	<u>(530)265-4431</u>
<u>Director</u>	<u>Nevada City, CA 95959</u>	<u><a href="mailto:patricianelson@nccfire.com">patricianelson@nccfire.com</a></u>
<u>Marianne Slade-Troutman</u>	<u>640 Coyote Street</u>	<u>(530)265-4431</u>
<u>Director</u>	<u>Nevada City, CA 95959</u>	_____

**PERSONS AUTHORIZED TO REQUEST PAYMENTS**

NAME & TITLE	ADDRESS	PHONE NUMBER & EMAIL ADDRESS
<u>Keith Grueneberg, Board President</u>	<u>640 Coyote Street</u>	<u>(530)265-4431</u>
<u>Signature</u>	<u>Nevada City, CA 95959</u>	<u><a href="mailto:keithgrueneberg@nccfire.com">keithgrueneberg@nccfire.com</a></u>
<u>James Turner, Fire Chief</u>	<u>640 Coyote Street</u>	<u>(530)265-4431</u>
<u>Signature</u>	<u>Nevada City, CA 95959</u>	<u><a href="mailto:jimturner@nccfire.com">jimturner@nccfire.com</a></u>
<u>Gerald Funk, Deputy Chief</u>	<u>640 Coyote Street</u>	<u>(530)265-4431</u>
<u>Signature</u>	<u>Nevada City, CA 95959</u>	<u><a href="mailto:jerryfunk@nccfire.com">jerryfunk@nccfire.com</a></u>
<u>John (Jeff) Van Groningen</u>	<u>640 Coyote Street</u>	<u>(530)265-4431</u>
<u>Signature</u>	<u>Nevada City, CA 95959</u>	<u><a href="mailto:jeffvg@nccfire.com">jeffvg@nccfire.com</a></u>
<u>Nicole Long, Operations Support Manager</u>	<u>640 Coyote Street</u>	<u>(530)265-4431</u>
<u>Signature</u>	<u>Nevada City, CA 95959</u>	<u><a href="mailto:nicolelong@nccfire.com">nicolelong@nccfire.com</a></u>

The above information is correct and has been approved by the District Board/Commission meeting on

21-Jan-21 \_\_\_\_\_  
 Board Date Chairman Today's Date

***A minimum of two authorized signatures are required on all payment requests.  
 At least one signature shall be a Board/Commission Member  
 The District Board must approve all claims for payment prior to submittal.  
 Additional documentation may be required by law or restrictions placed by this office  
 Any changes must be reported within 10 days with an updated authorization  
 Current authorization expires January 31  
 Renewal must be received prior to January 31 to insure no delay in payments***



**4.**

**Board Committee Assignments.**



**5.**

**Committee Direction.**

Nevada County  
Local  
Agency  
Formation  
Commission

**LAFCo**  
**950 Maidu Avenue**  
**Nevada City, CA 95959**  
Phone: 530-265-7180  
E mail [lafco@co.nevada.ca.us](mailto:lafco@co.nevada.ca.us)  
<https://www.mynevadacounty.com/907>

Ben Aguilar, **Vice Chair**  
*Cities*

Hardy Bullock  
*County*

Kurt Grundel, **Chair**  
*Districts*

Anna Klovstad  
*Cities*

Dan Miller  
*County*

Josh Susman  
*Public*

Vacant  
*Districts*

Vacant  
*Districts Alternate*

Gloria Glenn  
*Public Alternate*

Sue Hoek  
*County Alternate*

Erin Ruark-Minett  
*Cities Alternate*

SR Jones  
*Executive Officer*

P. Scott Browne  
*Legal Counsel*

Deborah Gilcrest  
*Clerk/Analyst*

January 4, 2021

To: All Boards of Directors of Nevada County Independent Special Districts

From: Deborah Gilcrest, Clerk/Analyst

Subject: **Ballot Packet for Election of LAFCo's Regular and Alternate Special District Members**

Nominations have been received for the open Special District seats on the Nevada Local Agency Formation Commission (LAFCo). Enclosed is a ballot showing the names of the nominated candidates (one for the Regular Special District seat and another for the Alternate Special District seat). Their statements (and/or resumes) are also enclosed. Both nominations were made by resolution of the Nevada Irrigation District (Resolution #2020-31 and Resolution #2020-32).

Only the Chair of your Board of Directors or an appointed substitute may complete and sign the ballot. If a substitute is designated to sign the ballot, a copy of the resolution appointing him or her must be included with the returned ballot. Lack of this person's original signature on the ballot will invalidate that district's vote.

The ballot must be received in the LAFCo office no later than the date stated on the ballot: **Friday, February 12, 2021**. Ballots received after 5:00 p.m. on that date will be invalid and will not be counted. Please be sure this vote takes place at your next regularly scheduled meeting. Only ballots signed and returned by the deadline, either via email or by USPS, will be counted.

Per Section 56332 of LAFCo law, a quorum of at least 13 ballots must be received for the election to be valid. If a quorum of ballots is not received, Section 56332 (f)(6) stipulates the ballot deadline will be extended by 60 days and all districts will be notified of the extension.

Within seven days after the deadline for ballots, the votes will be tallied by LAFCo staff, in the presence of a witness not affiliated with LAFCo or either nominee. Should you wish to witness the tally please call the LAFCo office and a Zoom invitation will be created for observation of the tally.

Once again, ballots must be **RECEIVED NO LATER THAN 5:00 p.m., Friday, February 12, 2021.** Results of the election will be sent to all special districts and all nominees.  
Thank you for your participation in the voting process.

Should you have any questions regarding this Ballot process, please do not hesitate to contact any LAFCO staff member at 530-265-7180 or [lafco@co.nevada.ca.us](mailto:lafco@co.nevada.ca.us).

Attachments: Ballot for Regular Member  
Ballot for Alternate Member  
Resume and/or Candidate Statement

**LOCAL AGENCY FORMATION COMMISSION OF NEVADA  
COUNTY**

**Special District Regular Member**

(Term to expire in May 2024)

**Election Ballot 2021**

**NEVADA COUNTY CONSOLIDATED FIRE  
PROTECTION DISTRICT**

\_\_\_\_\_ **Ricki Heck**, Nevada Irrigation District Board Member  
*Nominated by:*  
Nevada Irrigation District

Chair of the Board of Directors

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name

**Must be received by LAFCo no later than  
February 12, 2021**

**Ricki Heck**  
**13641 Greenhorn Road ~ Grass Valley, Ca ~ 95945**  
**(530) 263-5433**  
[rickirheck@gmail.com](mailto:rickirheck@gmail.com)

**Knowledge & Capabilities:**

Knowledge of complex zoning/planning/development issues	Negotiation and Research
Commercial Real Estate Acquisitions / Dispositions	Value Creation /Investment Strategies
Due Diligence	Contract Analysis and Oversight
Strategic Planning / Budget Analysis	Local & Regional Political Mechanisms

**Professional Experience:**

**Nevada Irrigation District** Dec 2018 to Present  
**Elected Board of Directors (current President)**

- o Elected member representing Division 1 to NID's policy making and financial oversight Board.

**County of Nevada, Planning Commission** Dec 2016 to Dec. 2018

- o Appointed member serving District 1 on the County's Planning Commission.

**Industry Capital Advisors, LLC (Berkeley Funds)**

**Vice President of Real Estate Acquisitions / Dispositions**

Nov 2006 – Dec 2017

- o Responsible for the acquisition and disposition across four investment funds totaling approximately \$900 million dollars of assets purchased and under management.
- o Assist in underwriting assets, market research, sourcing acquisitions, completing due diligence and ensuring performance of the legal requirements for each transaction.
- o Design and implementation of the executive management strategy for creating value within each asset.
- o Purchases required travel and knowledge of target markets in California as well as the southern United States.

**Coldwell Banker Commercial Real Estate Brokerage**  
**Auburn, CA and Grass Valley, CA**

**Co-Owner**

August 1990 – Nov. 2008

- o Licensed California Real Estate Broker and Co-Owner of two Coldwell Banker Commercial Franchises
- o Sold and closed franchises as market forces dictated

**State of California, Office of the Lieutenant Governor**  
**Policy and Field Representative**

Aug. 1986 – Dec. 1988

**Office of State Assembly Member John Vasconcellos**

1984 - 1986

- o Provided policy support on local government, environmental, and agriculture issues for rural Northern California. Acted as liaison for the elected officials to boards of supervisors, cities and rural districts covering the first Congressional District.

**Sierra Committee Inc., a non-profit organization serving seniors of Nevada County**  
**Executive Director**

**Education:**

California State University Sacramento

- o Concentration on planning and environmental policy
- o California Environmental Quality Act (CEQA) regulations and analysis

**Licensing and Activities:**

CA DRE Broker's License # 01027191 - current through 2024

Board of Directors Community Services Center, assisted in founding the United Way of Nevada County. - 1980's

Field Representative for the veto referendum for Prop 9 (the Peripheral Canal Act) - 1982

Member, City of Roseville Planning Commission- Late 1970's

**LOCAL AGENCY FORMATION COMMISSION OF NEVADA  
COUNTY**

**Special District Alternate Member**

(Term to expire in May 2024)

**Election Ballot 2021**

**NEVADA COUNTY CONSOLIDATED FIRE DISTRICT**

\_\_\_\_\_ **Rich Johansen**, Nevada Irrigation District Board Member  
*Nominated by:*  
Nevada Irrigation District

Chair of the Board of Directors

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name

**Must be received by LAFCo no later than  
February 12, 2021**



Rich Johansen. Candidate for LAFCO

Local Certified Organic farmer and businessman. Since 1980.

Elected to NID's Board of Directors. 2020

Nevada County Planning Commissioner. 2019-2020.

Nevada County Agricultural Advisory Commissioner. 2003-2018. Chair for 5 years.

Nevada County Citizen's Academy. 2018.

Nevada County Community Advisory Group. 2017.

Nevada Land Trust (Bear Yuba Land Trust). President for 2 years.

Peace Corps Venezuela. 1972-1974.

Veteran. Army National Guard.

B.S. degree in Agricultural Economics and Business Management. UC Davis.

My experiences have taught me the importance of good planning and the conservation of our natural resources. By doing both well, we will have a better future.



## Nevada County Consolidated Fire District

640 Coyote Street  
(530) 265-4431 FAX (530) 265-4438  
[nccfire@nccfire.com](mailto:nccfire@nccfire.com) • [www.nccfire.com](http://www.nccfire.com)

To: Board of Directors  
From: Jerry Funk, Deputy Chief through Jim Turner, Fire Chief  
Date: January 13, 2021  
Re: Engine Purchase

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### Background:

Presented in the 2016 NCC Strategic Plan, the mobile equipment replacement plan identified a desired 12- year rotation for front-line engines. Once removed from frontline service, an engine would move to reserve status, remaining in service for 8 or more years. As engines are moved to reserve status, older reserve engines are declared surplus and removed from the fleet.

Unit # 140, a 2006 Pierce Saber Type I Fire Engine, has been identified as the next engine to go into reserve status. This engine is currently in front-line service at Station 88 in South County. Subsequently, this engine would replace reserve Unit # 105, a 2000 Freightliner FL-70 Fire Engine. This engine would be declared surplus at a future date and sold for fair market value.

An apparatus committee comprised of administrative, line staff and fleet maintenance personnel have spent several months researching and updating our current specification for a Type I fire engine.

### Recommendation:

The District utilized the services of the Houston-Galveston Area Council (HGAC) cooperative purchasing agreement to meet the requirements of the District purchasing policy.

Pending meeting the obligations of the purchasing policy the District designate an agent of the Board to sign documents with PNC Equipment Finance for the purchase a 2021 Pierce Enforcer Type I fire engine from Pierce Manufacturing Inc. Approximate delivery time is twelve (12) months.

### Fiscal Impact:

The total cost of this vehicle including fees for HGAC is \$635,335.50. The District intends to finance the vehicle through PNC Equipment Finance for a term of 5 years with 10 semi-annual payments of \$66,864.33 at an annual APR of 1.88%. The first semi-annual payment would be due August 1, 2021. **Note: Lender, interest and payment information are preliminary estimates provided by PNC and may change slightly. Finance information also received from CSDA 2.35% APR and Community Leasing Partners 2.47% APR. In the event of a substantial change in the APR, staff would seek the lender with the lowest APR.**



# Nevada County Consolidated Fire District

## Resolution 21-01

### RESOLUTION DESIGNATING AN AGENT OF THE BOARD TO SIGN DOCUMENTS ON BEHALF OF THE DISTRICT WITH PIERCE MANUFACTURING, INC.

**WHEREAS**, Staff is utilizing the HGACBuy Cooperative Purchasing Agreement to follow Nevada County Consolidated Fire Districts purchasing policy; and

**WHEREAS**, Staff recommends purchasing a Type I Engine from Pierce Manufacturing, Inc. with financing through the lowest APR lender; and,

**WHEREAS**, the proposal package, is included with this Resolution as "Exhibit A".

**THEREFORE, BE IT RESOLVED**, that the Board of Directors of the Nevada County Consolidated Fire District hereby appoints Deputy Chief Jerry Funk to be the authorized agent of the Board, and to sign the documents for the purchase of a Type I engine from Pierce Manufacturing, Inc. and financing documents from the lowest APR lender.

**BE IT FURTHER RESOLVED**, that, should Deputy Chief Funk not be available, the Board of Directors of the Nevada County Consolidated Fire District hereby appoints Chief Jim Turner as the alternate authorized agent of the Board to sign the above-mentioned documents

The foregoing Resolution was duly passed at an official meeting of the Nevada County Consolidated Fire District held on January 21, 2021, by the following roll call vote:

- Ayes:
- Noes:
- Absent:
- Abstain:

---

Keith Grueneberg, President of the Board  
Nevada County Consolidated Fire District

Attest:

---

Nicole Long, Secretary of the Board



**GOLDEN  
STATE**  
FIRE APPARATUS

**PROPOSAL PREPARED FOR**  
Nevada County Consolidated FD  
Pierce Manufacturing, Inc.  
Enforcer Pumper  
HGAC FS12-19, Code FS19VC07  
December 21, 2020

**SALES CONSULTANT**  
*Mark Paulsen*  
**Golden State Fire Apparatus, Inc.**  
7400 Reese Road  
Sacramento, CA 95828  
209.996.8830 Cell  
[mark@goldenstatefire.com](mailto:mark@goldenstatefire.com)

**PARTS, SERVICE & SUPPORT**  
**Golden State Emergency Vehicle Service, Inc.**  
7400 Reese Road  
Sacramento, CA 95828  
916.330.1638 Office  
[parts@goldenstatefire.com](mailto:parts@goldenstatefire.com)

**PROPOSAL PREPARED FOR:**

**Nevada County Consolidated Fire District**  
11329 McCourtney Road  
Grass Valley, CA 95949

<b>Submitted Date:</b>	December 21, 2020
<b>Proposal Number:</b>	61221-20
<b>Expiration Date:</b>	<b>January 31, 2021</b>
<b>Sales Consultant:</b>	Mark Paulsen

Pursuant to this proposal (the "Proposal"), Golden State Fire Apparatus, Inc. ("GSFA") hereby proposes to furnish NEVADA COUNTY CONSOLIDATED FIRE DISTRICT ("Customer"), the following fire apparatus and equipment, hereinafter called the "Product":

#	Description	Unit Price
<b>A</b>	One (1) Pierce Manufacturing, Inc. Enforcer Pumper	644,634.00
<b>B</b>	Discount for HGAC contract FS12-19, Product Code FS19VC07	(32,396.00)
<b>C</b>	Pre-Payment Discount for 100% Payment at Time of Order	(21,238.00)
<b>D</b>	SUBTOTAL	591,000.00
<b>E</b>	7.50% State Sales Tax	44,325.00
<b>F</b>	California Tire Fee	10.50
<b>G</b>	<b>GRAND TOTAL</b>	<b>635,335.50</b>

**PROPOSAL SUMMARY**

This Proposal includes the following items in accordance with the specifications hereto attached:

- Fire apparatus and equipment
- 100% performance bond
- Pre-delivery inspection/services by GSFA
- Delivery to GSFA service center in Sacramento
- Final delivery from service center to Customer
- Demonstration and familiarization of the Product

**PRODUCT COMPLETION**

The Product shall be built in accordance with the specifications hereto attached within approximately **335 to 365** calendar days after Customer's acceptance of this Proposal, subject to the force majeure provisions contained in the Purchase Agreement (defined below). The Purchase Agreement shall further describe the delivery schedule for the Product.

**DELIVERY LOCATION**

Product shall be shipped in accordance with the specifications hereto attached and be delivered to you at **GRASS VALLEY, CALIFORNIA**. Prior to final delivery of the Product to Customer, Customer agrees to provide proof of liability and physical damage insurance to GSFA. GSFA shall not deliver the Product until such proof of insurance is provided.

**ACCEPTING THIS PROPOSAL**

In the event Customer wishes to purchase the Product described in this Proposal and the attached specifications, then, prior to the expiration date listed on page 2 of this Proposal, Customer shall sign and return this Proposal. Thereafter, GSFA and Customer will endeavor to enter into a purchase agreement incorporating this Proposal and including additional terms (a "Purchase Agreement"). If Customer returns a signed copy of this Proposal alone, GSFA will send Customer its form of Purchase Agreement for Customer's review and signature. **If Customer desires to use its standard form of purchase order as the Purchase Agreement, then Customer should return a signed copy of this Proposal along with a copy of such purchase order. All purchase orders shall be made out to GSFA.** GSFA will review such purchase order and contact the Customer regarding any required revisions. Only upon a full execution of a Purchase Agreement shall GSFA and Customer be obligated to purchase and sell the Product set forth in this Proposal.

**TERMS AND CONDITIONS**

The following Terms and Conditions are hereby made part of this Proposal:

**1. Payment Terms, 100% Pre-Payment at Time of Order –** Customer shall pay the amount listed on page 2 of this Proposal, which includes: (i) the total price for the Product (the "Purchase Price") less the Pre-Payment discount, (ii) the estimated state sales tax on the Product, and (iii) the California tire fee (together with the Purchase Price and estimated state sales tax, the "Grand Total") within fifteen (15) calendar days from the date on which the Purchase Agreement is fully executed. In the event Customer does not pay GSFA the Grand Total in the timeframe set forth in this Section 1, Customer shall not receive the Pre-Payment discount shown on page 2 of this Proposal and GSFA may, in its sole discretion cancel the Purchase Agreement entered into between the parties.

**2. Multiple Unit Purchase –** If the Purchase Price includes pricing for multiple units, the price stated on this Proposal shall only be valid if the quantity of Products being proposed are purchased at the same time, pursuant to the same Purchase Agreement.

**3. Stock / Demo Units –** If applicable, any stock/demo units, including those identified by this Proposal, are available for sale on an as-is, first-come and first served-basis. Regardless of this Proposal, the first Customer to enter into a Purchase Agreement identifying any such stock/demo unites shall obtain said units.

**4. Order Changes –** The Customer may request that GSFA incorporate a change to the Product or the Specifications for the Product by delivering a written change order to GSFA, which shall include a description of the proposed change sufficient to permit GSFA to evaluate the feasibility of such change (a "Change Order"). GSFA will provide Customer a written response (a "Response") stating (i) whether GSFA will accommodate such Change Order (which GSFA may decide in its sole and absolute discretion) and (ii) the terms of the modification to the order, including any increase or decrease in the Purchase Price resulting from such Change Order, and any effect on production scheduling or Delivery resulting from such Change Order. Customer shall have seven (7) days after receipt of the Response to notify GSFA as to whether Customer desires to make the changes GSFA has approved in the Response. In the event Customer counter-signs GSFA's Response, Customer shall pay the increase (or be refunded the decrease) in the Purchase Price prior to final delivery to Customer location.

**5. Force Majeure –** GSFA shall not be responsible nor deemed to be in default on account of delays in performance due to causes which are beyond GSFA's and manufacturer's control and which make GSFA's performance impracticable, including but not limited to wars, insurrections, strikes, riots, fires, storms, floods, other acts of nature, explosions, earthquakes, accidents, any act of government, delays in transportation, inability to obtain necessary labor supplies or manufacturing facilities, allocation regulations or orders affecting materials, equipment, facilities or completed products, failure to obtain any required license or certificates, acts of God or the public enemy or terrorism, failure of transportation, epidemics, quarantine restrictions, failure of vendors (due to causes similar to those within the scope of this clause) to perform their contracts or labor troubles causing cessation, slowdown, or interruption of work.

**6. Cancellation/Termination –** In the event Customer and GSFA enter into a Purchase Agreement and Customer thereafter cancels or terminates the Purchase Agreement, GSFA will charge a cancellation fee as follows: (a) 10% of the Purchase Price after order is accepted and entered by GSFA; (b) 20% of the Purchase Price after completion of the pre-construction phase of the order process; and (c) 50% of the Purchase Price after the requisition of any materials or commencement of any manufacturing or assembly of the Product by either GSFA or the manufacturer of the Product. The tier of cancellation fee applicable to any cancellation shall be in the sole and absolute discretion of GSFA.

**7. State Sales Tax –** Customer shall be responsible for the cost of state sales tax associated with, or attributable to the Product. The taxes owed by Customer for the Product is subject to adjustment for the applicable state sales tax rate in effect when the Product is delivered to the Customer. Therefore, the sales tax will be increased or decreased at the time of delivery if a change in the sales tax rate has occurred, in which case Customer shall pay GSFA (or be refunded by GSFA) the applicable change in sales tax.

**8. Proposal Expiration –** After the Expiration Date shown on page one of this Proposal, Customer shall require GSFA's written consent to accept this Proposal.

**9. Governing Law –** This Proposal is to be governed by and under the laws of the state of California.

Thank you for providing Golden State Fire Apparatus, Inc. with the opportunity to provide this proposal. If you have any questions regarding the options presented or need additional options, please contact me.

Sincerely,

I, \_\_\_\_\_ authorized representative of NEVADA COUNTY CONSOLIDATED FIRE DISTRICT agrees to purchase the proposed Product(s) and agree to the terms and conditions of this proposal and the specifications hereto attached.

Mark Paulsen  
Golden State Fire Apparatus, Inc.

SIGNATURE: \_\_\_\_\_

TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_



# Proposal Details Report

12/21/2020

**Customer:** Nevada County Consolidated Fire Dist. **Bid Number:** 883  
**Representative:** Paulsen, Mark **Job Number:**  
**Requirements Manager:** **Organization:** Golden State Fire Apparatus, Inc  
**Description:** 13" Frame Enforcer 28553 Dupli  
**Chassis:** Enforcer Chassis  
**Body:** Pumper, Short, Galvanneal, 2nd Gen

OptionCode	Type	Option	ProposalText
0010012		No Boiler Plates requested	
0661794		Single Source Compliance	<p><b>SINGLE SOURCE MANUFACTURER</b>  Pierce Manufacturing, Inc. provides an integrated approach to the design and manufacture of our products that delivers superior apparatus and a dedicated support team. From our facilities, the chassis, cab weldment, cab, pumphouse (including the sheet metal enclosure, valve controls, piping and operators panel) and body will be entirely designed, tested, and hand assembled to the customer's exact specifications. The electrical system either hardwired or multiplexed, will be both designed and integrated by Pierce Manufacturing. The warranties relative to these major components (excluding component warranties such as engine, transmission, axles, pump, etc.) will be provided by Pierce as a single source manufacturer. Pierce's single source solution adds value by providing a fully engineered product that offers durability, reliability, maintainability, performance, and a high level of quality.</p>
0584456		Manufacture Location, Appleton, Wisconsin	Your apparatus will be manufactured in Appleton, Wisconsin.
0584452		RFP Location: Appleton, Wisconsin	
0588609		Vehicle Destination, US	
0610784		Comply NFPA 1901 Changes Effective Jan 1, 2016, With Exceptions	<p><b>NFPA 2016 STANDARDS</b>  This unit will comply with the NFPA standards effective January 1, 2016, except for fire department directed exceptions. These exceptions will be set forth in the Statement of Exceptions.  Certification of slip resistance of all stepping, standing and walking surfaces will be supplied with delivery of the apparatus.  All horizontal surfaces designated as a standing or walking surface that are greater than 48.00" above the ground must be defined by a 1.00" wide line along its outside perimeter. Perimeter markings and designated access paths to destination points will be identified on the customer approval print and are shown as approximate. Actual location(s) will be determined based on materials used and actual conditions at final build. Access paths may pass through hose storage areas and opening or removal of covers or restraints may be required. Access paths may require the operation of devices and equipment such as the aerial device or ladder rack.  A plate that is highly visible to the driver while seated will be provided. This plate will show the overall height, length, and gross vehicle weight rating.  The manufacturer will have programs in place for training, proficiency testing and performance for any staff involved with certifications.  An official of the company will designate, in writing, who is qualified to witness and certify test results.</p>
0533347		Pumper/Pumper with Aerial Device Fire Apparatus	
0588611		Vehicle Certification, Pumper	

**NFPA COMPLIANCY**

Apparatus proposed by the bidder will meet the applicable requirements of the National Fire Protection Association (NFPA) as stated in current edition at time of contract execution. Fire department's specifications that differ from NFPA specifications will be indicated in the proposal as "non-NFPA".

**VEHICLE INSPECTION PROGRAM CERTIFICATION**

To assure the vehicle is built to current NFPA standards, the apparatus, in its entirety, will be third party, audit-certified through Underwriters Laboratory (UL) that it is built and complies to all applicable standards in the current edition of NFPA 1901. The certification will include: all design, production, operational, and performance testing of not only the apparatus, but those components that are installed on the apparatus.

A placard will be affixed in the driver's side area stating the third party agency, the date, the standard and the certificate number of the whole vehicle audit.

**PUMP TEST**

Underwriters Laboratory (UL) will test, approved, and certify the pump. The test results and the pump manufacturer's certification of hydrostatic test; the engine manufacturer's certified brake horsepower curve; and the pump manufacturer's record of pump construction details will be forwarded to the Fire Department.

**GENERATOR TEST**

If the unit has a generator, Underwriters Laboratory (UL) will test, approved, and certify the generator. The test results will be provided to the Fire Department at the time of delivery.

**BREATHING AIR TEST**

If the unit has breathing air, Pierce Manufacturing will draw an air sample from the air system and have the sample certified that the air quality meets the requirements of NFPA 1989, *Standard on Breathing Air Quality for Fire and Emergency Services Respiratory Protection*.

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STF GSFA, Pre-Construction, ATW  
Factory, Major Airport, 4 Days and 3  
nights

**PRE-CONSTRUCTION, FACTORY TRIP**

A pre-construction trip to the manufacturing facility will be provided for three (3) Customer representative(s). The intent of this trip is to review and finalize, in detail, the specifications prior to the start of production. The pre-construction trip will have a duration of four (4) days and three (3) nights and be scheduled at times mutually agreed upon between Golden State Fire Apparatus (GSFA), and the Customer. Costs for airfare, lodging, meals and ground transportation while at the manufacturers location will be the responsibility of GSFA. Air travel will be from one of the following airports: Sacramento, San Francisco or San Jose.

Costs such as Customer ground transportation in California, Customer airport parking, Customer luggage fees and Customer incidentals while traveling to the factory will be the responsibility of the Customer. Flight reservations are non-refundable and in the event of a cancellation after booking, the Customer will be responsible for all costs associated with this cancellation, which may include not only the original ticket cost but also any change or cancellation fees imposed by the airline and/ or travel agency. Flight reservations are also non-transferable.

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STF GSFA, Final Insp, ATW Factory,  
Major Airport, 4 Days and 3 nights

**FINAL INSPECTION FACTORY TRIP**

A final inspection trip to the manufacturing facility will be provided for three (3) Customer representative(s). The intent of this trip is to ensure that the apparatus is built to specification and to detect any deficiencies that require correction. The final inspection trip will have a duration of four (4) days and three (3) nights and be scheduled at times mutually agreed upon between Golden State Fire Apparatus (GSFA), and the Customer. Costs for airfare, lodging, meals and ground transportation while at the manufacturers location will be the responsibility of GSFA. Air travel will be from one of the following airports: Sacramento, San Francisco or San Jose.

Costs such as Customer ground transportation in California, Customer airport parking, Customer luggage fees and Customer incidentals while traveling to the factory will be the responsibility of the Customer. Flight reservations are non-refundable and in the event of a cancellation after booking, the Customer will be responsible for all costs associated with this cancellation, which may include not only the original ticket cost but also any change or cancellation fees imposed by the airline and/ or travel agency. Flight reservations are also non-transferable.



**AFTERMARKET SUPPORT WEBSITE**

Pierceparts.com will provide Pierce authorized dealer access to comprehensive information pertaining to the maintenance and service of their customer's apparatus. This tool will provide the Pierce authorized dealer the ability to service and support their customers to the best of their ability with factory support at their fingertips. Pierceparts.com is also accessible to the end user through the guest login. Limited access is available and vehicle specific parts information accessible by entering a specific VIN number. All end users should see their local authorized Pierce dealer for additional support and service. The website will consist of the following screens at the dealer level:

**My Fleet Screen**

The My Fleet screen will provide access to truck detail information on the major components of the vehicle, warranty information, available vehicle photographs, vehicle drawings, sales options, applicable vehicle software downloads, etc.

**Parts Screens**

The Parts screens will provide parts look-up capability of Pierce Manufacturing sourced items, with the aid of digital photographs, part drawings and assembly drawings. The parts search application will permit the searching of parts by item description or function group (major system category). The parts application will provide the ability to submit electronically a parts order, parts quote, or parts return request directly to Pierce Manufacturing for processing.

**Warranty Screen**

The Warranty screens will provide dealers the ability to submit electronically warranty claims directly to Pierce Manufacturing for reimbursement.

**My Reports Screens**

The My Reports screens will provide access to multiple dealer reports to allow the dealership to maintain communication with the customer on the status of orders, claims, and phone contacts.

**Technical Support Screens**

The Technical Support screens will provide access to all currently published Operation and Maintenance and Service Publications. Access to Pierce Manufacturing Service Bulletins and Work Instructions, containing information on current service topics and recommendations will be provided.

**Training**

The Training screens will provide access to upcoming training classes offered by Pierce Manufacturing along with interactive electronic learning modules (Operators Guides) covering the operation of major vehicle components will be provided. Access to training manuals used in Pierce Manufacturing training classes will be provided.

**About Pierce**

Access to customer service articles, corporate news, quarterly newsletters, and key contacts within the Customer Service Department will be provided. The current Customer Service Policy and Procedure Manual, detailing the operation of the Customer Service group will also be accessible.

0620362 Consortium, HGAC

0537375 Unit of Measure, US Gallons

0030006 Bid Bond Not Requested

**BID BOND NOT REQUESTED**

A bid bond will not be included. If requested, the following will apply:  
 All bidders will provide a bid bond as security for the bid in the form of a 5% bid bond to accompany their bid. This bid bond will be issued by a Surety Company who is listed on the U.S. Treasury Departments list of acceptable sureties as published in Department Circular 570. The bid bond will be issued by an authorized representative of the Surety Company and will be accompanied by a certified power of attorney dated on or before the date of bid. The bid bond will include language, which assures that the bidder/principal will give a bond or bonds as may be specified in the bidding or contract documents, with good and sufficient surety for the faithful performance of the contract, including the Basic One (1) Year Limited Warranty, and for the prompt payment of labor and material furnished in the prosecution of the contract.  
 Notwithstanding any document or assertion to the contrary, any surety bond related to the sale of a vehicle will apply only to the Basic One (1) Year Limited Warranty for such vehicle. Any surety bond related to the sale of a vehicle will not apply to any other warranties that are included within this bid (OEM or otherwise) or to the warranties (if any) of any third party of any part, component, attachment or accessory that is incorporated into or attached to the vehicle. In the event of any contradiction or inconsistency between this provision and any other document or assertion, this provision will prevail.

0582800 Performance Bond, 100 Percent w/25 Percent Warranty Bond, 1 Yr, and Payment Bond

**PERFORMANCE BOND, 1 YEAR**

The successful bidder will furnish a Performance and Payment bond (Bond) equal to 100 percent of the total contract amount within 30 days of the notice of award. Such Bond will be in a form acceptable to the Owner and issued by a surety company included within the Department of Treasury's Listing of Approved Sureties (Department Circular 570) with a minimum A.M. Best Financial Strength Rating of A and Size Category of XV. In the event of a bond issued by a surety of a lesser Size Category, a minimum Financial Strength rating of A+ is required. Bidder and Bidder's surety agree that the Bond issued hereunder, whether expressly stated or not, also includes the surety's guarantee of the vehicle manufacturer's Basic One (1) Year Limited Warranty period included within this proposal. Owner agrees that the penal amount of this bond will be simultaneously amended to 25 percent of the total contract amount upon satisfactory acceptance and delivery of the vehicle(s) included herein. Notwithstanding anything contained within this contract to the contrary, the surety's liability for any warranties of any type will not exceed one (1) year from the date of such satisfactory acceptance and delivery, or the actual Basic One (1) Year Limited Warranty period, whichever is shorter.

0000007	Approval Drawing	<p><b>APPROVAL DRAWING</b>  A drawing of the proposed apparatus will be prepared and provided to the purchaser for approval before construction begins. The Pierce sales representative will also be provided with a copy of the same drawing. The finalized and approved drawing will become part of the contract documents. This drawing will indicate the chassis make and model, location of the lights, siren, horns, compartments, major components, etc.  A "revised" approval drawing of the apparatus will be prepared and submitted by Pierce to the purchaser showing any changes made to the approval drawing.</p>
0002928	Electrical Diagrams	<p><b>ELECTRICAL WIRING DIAGRAMS</b>  Two (2) electrical wiring diagrams, prepared for the model of chassis and body, will be provided.</p>
0649754	Enforcer Chassis	<p><b>ENFORCER CHASSIS</b>  The Pierce Enforcer™ is the custom chassis developed exclusively for the fire service. Chassis provided will be a new, tilt-type custom fire apparatus. The chassis will be manufactured in the apparatus body builder's facility eliminating any split responsibility. The chassis will be designed and manufactured for heavy-duty service, with adequate strength, capacity for the intended load to be sustained, and the type of service required. The chassis will be the manufacturer's first line tilt cab.</p>
0523786	Angle of Approach	<p><b>ANGLE OF APPROACH</b>  The angle of approach will be please show on drawing degrees. This will be effective with the truck in a loaded state.</p>
0523787	Angle of Departure	<p><b>ANGLE OF DEPARTURE</b>  The angle of departure will be please show on drawing degrees. This will be effective with the truck in a loaded state.</p>
0000110	Wheelbase	<p><b>WHEELBASE</b>  The wheelbase of the vehicle will be 176.5".</p>
0000070	GVW Rating	<p><b>GVW RATING</b>  The gross vehicle weight rating will be 45,000.</p>
0729280	Frame Rails, 13.38 x 3.50 x .375, Enforcer	<p><b>FRAME</b>  The chassis frame will be built with two (2) steel channels bolted to five (5) cross members or more, depending on other options of the apparatus. The side rails will have a 13.38" tall web over the front and mid sections of the chassis, with a continuous smooth taper to 10.75" over the rear axle. Each rail will have a section modulus of 25.992 cubic inches and a resisting bending moment (rbm) of 3,119,040 in-lb over the critical regions of the frame assembly, with a section modulus of 18.96 cubic inches with an rbm of 2,275,200 in-lb over the rear axle. The frame rails will be constructed of 120,000 psi yield strength heat-treated 0.38" thick steel with 3.50" wide flanges.</p>
0020018	Frame Liner Not Req'd	
0729174	Axle, Front, Meritor FL-943, 18,000 lb, Saber FR/Enforcer	<p><b>FRONT AXLE</b>  The front axle will be a reverse "I" beam type with inclined king pins. It will be a Meritor™ axle, Model FL-943, with a rated capacity of 18,000 lb.</p>
0637879	Suspension, Front, Standens, Taper Leaf, 18,000 lb, Saber FR/Enforcer	<p><b>FRONT SUSPENSION</b>  The front springs will be a Standens, three (3)-leaf, taper leaf design, 54.00" long x 4.00" wide, with a ground rating of 18,000 lb.  The two (2) top leaves will wrap the forward spring hanger pin. The top leaf will also wrap the rear spring hanger pin. Both the front and rear eyes will be Berlin style wraps that will place the eyes in the horizontal plane within the main leaf. This will reduce bending stress from acceleration and braking.  A steel encased rubber bushing will be used in the spring eye. The steel encased rubber bushing will be maintenance free and require no lubrication.</p>
0000321	Shock Absorbers on Front Axle, Monroe Magnum 65, Saber/Enforcer	<p><b>SHOCK ABSORBERS</b>  To provide a smoother ride, the front axle will be furnished with heavy-duty telescoping shock absorbers.</p>
0000322	Oil Seals, Front Axle	<p><b>FRONT OIL SEALS</b>  Oil seals with viewing window will be provided on the front axle.</p>

0011637	Tires, Front, Goodyear, G291, 315/80R22.50, 20 ply	<b>FRONT TIRES</b> Front tires will be Goodyear® 315/80R22.50 radials, 20 ply G291 tread, rated for 18,180 lb maximum axle load and 68 mph maximum speed.
0019575	Wheels, Front, Alcoa, 22.50" x 9.00", Aluminum, Hub Pilot	The tires will be mounted on Alcoa 22.50" x 9.00" polished aluminum disc wheels with a ten (10) stud, 11.25" bolt circle.
0530459	Axle, Rear, Meritor RS25-160, 27,000 lb, Saber/Enforcer	<b>REAR AXLE</b> The rear axle will be a Meritor™, Model RS-25-160, with a capacity of 27,000 lb.
0544253	Top Speed of Vehicle, 68 MPH	<b>TOP SPEED OF VEHICLE</b> A rear axle ratio will be furnished to allow the vehicle to reach a top speed of 68 mph.
0565380	Suspen, Rear, Single Slipper Spring, 27,000 lb, Saber/Enforcer	<b>REAR SUSPENSION</b> The rear suspension will be Standens, semi-elliptical, 3.00" wide x 53.00" long, 12-leaf pack with a ground rating of 27,000 lb. The spring hangers will be castings. The two (2) top leaves will wrap the forward spring hanger pin, and the rear of the spring will be a slipper style end that will ride in a rear slipper hanger. To reduce bending stress due to acceleration and braking, the front eye will be a berlin eye that will place the front spring pin in the horizontal plane within the main leaf. A steel encased rubber bushing will be used in the spring eye. The steel encased rubber bushing will be maintenance free and require no lubrication.
0000485	Oil Seals, Rear Axle	<b>REAR OIL SEALS</b> Oil seals will be provided on the rear axle(s).
0000482	Driver Controlled Differential Lock, Single Axle	<b>DRIVER CONTROL DIFFERENTIAL LOCK (DCDL)</b> A rear axle will be equipped with a driver controlled differential lock (DCDL). The control will be located within easy reach of the driver. An indicator light will be provided next to the control switch.
0617970	SP Switch, Momentary Rocker, Differential Lock, 2 Sec Delay, Red Outline, MUX	<b>DIFFERENTIAL LOCK CONTROL</b> A rocker style switch will be provided to engage or disengage the axle differential lock. The switch will be momentary with a two (2) second delay for engagement and a two (2) second delay for disengagement. A red outline will be provided around the switch.
0539392	Plug, Rear Axle Drain, Magnetic	<b>REAR AXLE DRAIN PLUG</b> The rear axle drain plug will be magnetic.
0587216	Tires, Rear, Goodyear, G622 RSD, 12R22.50, 16 ply, Single	<b>REAR TIRES</b> Rear tires will be four (4) Goodyear® 12R22.50 radials, 16 ply all season G622 RSD tread, rated for 27,120 lb maximum axle load and 75 mph maximum speed.
0019625	Wheels, Rear, Alcoa, 22.50" x 8.25", Aluminum, Hub Pilot, Single	The tires will be mounted on Alcoa 22.50" x 8.25" polished aluminum disc wheels with a ten (10) stud 11.25" bolt circle.
0568081	Tire Balancing, Counteract Beads	<b>TIRE BALANCE</b> All tires will be balanced with Counteract balancing beads. The beads will be inserted into the tire and eliminate the need for wheel weights.
0620570	Tire Pressure Monitoring, RealWheels, AirSecure, Valve Cap, Single Axle	<b>TIRE PRESSURE MANAGEMENT</b> There will be a RealWheels LED AirSecure™ tire alert pressure management system provided, that will monitor each tire's pressure. A sensor will be provided on the valve stem of each tire for a total of six (6) tires. The sensor will calibrate to the tire pressure when installed on the valve stem for pressures between 10 and 200 psi. The sensor will activate an integral battery operated LED when the pressure of that tire drops 5 to 8 psi. Removing the cap from the sensor will indicate the functionality of the sensor and battery. If the sensor and battery are in working condition, the LED will immediately start to flash.
0003245	Axle Hub Covers w/center hole, S/S, Front Axle	<b>FRONT HUB COVERS</b> Stainless steel hub covers will be provided on the front axle. An oil level viewing window will be provided.

0001960	Axle Hub Covers, Rear, S/S, High Hat (Pair)	<b>REAR HUB COVERS</b> A pair of stainless steel high hat hub covers will be provided on rear axle hubs.
0057936	Covers, Lug Nut, Chrome	<b>CHROME LUG NUT COVERS</b> Chrome lug nut covers will be supplied on front and rear wheels.
0002045	Mud Flap, Front and Rear, Pierce Logo	<b>MUD FLAPS</b> Mud flaps with a Pierce logo will be installed behind the front and rear wheels.
0734863	SP Chains, Onspot, Automatic Tire, Short Body, Approval Req	<b>AUTOMATIC TIRE CHAINS</b> One (1) pair of ONSPOT automatic tire chains will be provided at the rear. System will be electric over air operated with switch on cab instrument panel. System may be engaged at speeds up to 25 mph and operated at speeds up to 35 mph.
0602478	Chocks, Wheel, Pumper, NFPA, Provided by Fire Department, NFPA 2016	<b>WHEEL CHOCKS PROVIDED BY FIRE DEPARTMENT</b> NFPA 1901, 2016 edition, section 5.9.4 requires two (2) or more wheel chocks mounted in readily accessible locations, that together will hold the apparatus, when loaded to its GVWR or GCWR, on a hard surface with a 20 percent grade with the transmission in neutral and the parking brake released. The wheel chocks are not on the apparatus as manufactured. The fire department will provide and install these wheel chocks.
0544690	Mounting Brackets, Chocks, Provided by Fire Department	<b>WHEEL CHOCK BRACKETS PROVIDED BY FIRE DEPARTMENT</b> The wheel chock brackets are not on the apparatus as manufactured. The fire department will provide and install the wheel chock brackets.
0010670	ABS Wabco Brake System, Single rear axle	<b>ANTI-LOCK BRAKE SYSTEM</b> The vehicle will be equipped with a Meritor WABCO 4S4M, anti-lock braking system. The ABS will provide a 4-channel anti-lock braking control on both the front and rear wheels. A digitally controlled system that utilizes microprocessor technology will control the anti-lock braking system. Each wheel will be monitored by the system. When any particular wheel begins to lockup, a signal will be sent to the control unit. This control unit then will reduce the braking of that wheel for a fraction of a second and then reapply the brake. This anti-lock brake system will eliminate the lockup of any wheel thus helping to prevent the apparatus from skidding out of control.
0508676	Brakes, Meritor, EX225, 17", Disc Plus, Front	<b>BRAKES</b> The service brake system will be full air type by Meritor™. Front brakes will be Model EX225 Disc Plus, disc type with automatic pad wear adjustment and 17.00" ventilated rotors for improved stopping distance.
0000730	Brakes, Meritor, Cam, Rear, 16.50 x 7.00"	The rear brakes will be Meritor™ 16.50" x 7.00" cam operated with automatic slack adjusters. Dust shields will be provided.
0020784	Air Compressor, Brake, Cummins/Wabco 18.7 CFM	<b>BRAKE SYSTEM AIR COMPRESSOR</b> The air compressor will be a Cummins/WABCO with 18.7 cubic feet per minute output.
0644232	Brake Reservoirs, 4,272 Cubic Inch Minimum Capacity, Saber FR/Enforcer	<b>BRAKE SYSTEM</b> The brake system will include: Brake treadle valve Heated automatic moisture ejector on air dryer Total air system minimum capacity of 4,272 cubic inches Two (2) air pressure gauges with a red warning light and an audible alarm, that activates when air pressure falls below 60 psi Spring set parking brake system Parking brake operated by a push-pull style control valve A parking "brake on" indicator light on instrument panel Park brake relay/inversion and anti-compounding valve, in conjunction with a double check valve system, with an automatic spring brake application at 40 psi A pressure protection valve to prevent all air operated accessories from drawing air from the air system when the system pressure drops below 80 psi (550 kPa) 1/4 turn drain valves on each air tank The air tank will be primed and painted to meet a minimum 750 hour salt spray test. To reduce the effects of corrosion, the air tank will be mounted with stainless steel brackets.
0644228	Air Dryer, Wabco System Saver 1200 IWT, Heated, Saber FR/Enforcer	<b>BRAKE SYSTEM AIR DRYER</b> The air dryer will be a WABCO System Saver 1200 IWT, with internal wet tank, spin-on coalescing filter cartridge and 100 watt heater.

0000790	Brake Lines, Nylon	<p><b>BRAKE LINES</b> Color-coded nylon brake lines will be provided. The lines will be wrapped in a heat protective loom in the chassis areas that are subject to excessive heat.</p>
0000858	Inlet/Outlet, Air, w/Disconnect Fitting	<p><b>AIR INLET/OUTLET</b> One (1) air inlet/outlet will be installed with the female coupling located on the driver side pump panel. This system will tie into the "wet" tank of the brake system and include a check valve in the inlet line and an 85 psi pressure protection valve in the outlet line. The air outlet will be controlled by a needle valve. A mating male fitting will be provided with the loose equipment. The air inlet will allow a shoreline air hose to be connected to the vehicle. This will allow station air to be supplied to the brake system of the vehicle to insure constant air pressure.</p>
0692319	All Wheel Lock-up, Locking Deactivation Switch	<p><b>ALL WHEEL LOCK-UP</b> An all wheel lock-up system will be installed which will apply air to the front brakes and use the spring brake at the rear. Front brakes will apply when standard parking brake control valve is activated. There will be a locking switch located in the cab instrument panel to de-activate the all wheel lock-up system.</p>
0011835	Guard, U-Bolt over "Prk Brk" Knob	<p><b>U-BOLT GUARD OVER PARKING BRAKE KNOB</b> There will be two (2) U-bolt type protective guard(s) installed over the "Parking Brake" knob to prevent accidental activation of the brake. The guard will be located on the driver's and passenger's side.</p>
0630456	Valve, 2nd Prk Brk Control, Officer side, Saber FR/Enforcer	<p><b>PARK BRAKE CONTROL (additional)</b> A second park brake control valve will be installed on the officer side of the instrument panel. This valve will only activate the brakes if manually pulled out; low air pressure will not activate this valve.</p>
0736437	Engine, Cummins L9, 450 hp, 1250 lb-ft, W/OBD, EPA 2021, Saber FR/Enforcer	<p><b>ENGINE</b> The chassis will be powered by an electronically controlled engine as described below: Make: Cummins Model: L9 Power: 450 hp at 2100 rpm Torque: 1250 lb-ft at 1400 rpm Governed Speed: 2200 rpm Emissions Level: EPA 2021 Fuel: Diesel Cylinders: Six (6) Displacement: 543 cubic inches (8.9L) Starter: Delco 39MT™ Fuel Filters: Spin-on style primary filter with water separator and water-in-fuel sensor. Secondary spin-on style filter. The engine will include On-board diagnostics (OBD), which provides self diagnostic and reporting. The system will give the owner or repair technician access to state of health information for various vehicle sub systems. The system will monitor vehicle systems, engine and after treatment. The system will illuminate a malfunction indicator light on the dash console if a problem is detected.</p>
0001244	High Idle w/Electronic Engine, Custom	<p><b>HIGH IDLE</b> A high idle switch will be provided, inside the cab, on the instrument panel, that will automatically maintain a preset engine rpm. A switch will be installed, at the cab instrument panel, for activation/deactivation. The high idle will be operational only when the parking brake is on and the truck transmission is in neutral. A green indicator light will be provided, adjacent to the switch. The light will illuminate when the above conditions are met. The light will be labeled "OK to Engage High Idle."</p>

0687994	Engine Brake, Jacobs Compression Brake, Cummins Engine	<p><b>ENGINE BRAKE</b>  A Jacobs® engine brake is to be installed with the controls located on the instrument panel within easy reach of the driver.  The driver will be able to turn the engine brake system on/off and have a high, medium and low setting.  The engine brake will activate when the system is on and the throttle is released.  The high setting of the brake application will activate and work simultaneously with the variable geometry turbo (VGT) provided on the engine.  The engine brake will be installed in such a manner that when the engine brake is slowing the vehicle the brake lights are activated.  The ABS system will automatically disengage the auxiliary braking device, when required.</p>
0644227	Clutch, Fan, Air Actuated, Saber FR/Enforcer	<p><b>CLUTCH FAN</b>  A fan clutch will be provided. The fan clutch will be automatic when the pump transmission is in "Road" position, and constantly engaged when in "Pump" position.</p>
0640477	Air Intake, Metal Screen, Saber FR/Enforcer	<p><b>ENGINE AIR INTAKE</b>  The engine air intake will be located above the engine cooling package. It will draw fresh air from the front of the apparatus through the radiator grille.  A stainless steel metal screen will be installed at the inlet of the air intake system that will meet NFPA 1901 requirements.  The air cleaner and stainless steel screen will be easily accessible by tilting the cab.</p>
0794761	Exhaust System, 4", 2017 L9 Engine, Horizontal, Right Side	<p><b>EXHAUST SYSTEM</b>  The exhaust system will be stainless steel from the turbo to the engine's aftertreatment device, and will be 4.00" in diameter. The exhaust system will include a single module aftertreatment device to meet current EPA standards. An insulation wrap will be provided on all exhaust pipes between the turbo and aftertreatment device to minimize the heat loss to the aftertreatment device. The exhaust will terminate horizontally ahead of the right side rear wheels. A tailpipe diffuser will be provided to reduce the temperature of the exhaust as it exits. Heat deflector shields will be provided to isolate chassis and body components from the heat of the tailpipe diffuser.</p>
0788765	Radiator, Saber FR/Enforcer	<p><b>RADIATOR</b>  The radiator and the complete cooling system will meet or exceed NFPA and engine manufacturer cooling system standards.  For maximum corrosion resistance and cooling performance, the entire radiator core will be constructed using long life aluminum alloy. The radiator core will consist of aluminum fins, having a serpentine design, brazed to aluminum tubes.  The radiator core will have a minimum front area of 1060 square inches.  Supply tank will be made of heavy duty glass-reinforced nylon and the return tank will be made of aluminum. Both tanks will be crimped onto the core assembly using header tabs and a compression gasket to complete the radiator core assembly. There will be a full steel frame around the inserts to enhance cooling system durability and reliability.  The radiator will be compatible with commercial antifreeze solutions.  The radiator assembly will be isolated from the chassis frame rails with rubber isolators to prevent the development of leaks caused by twisting or straining when the apparatus operates over uneven terrain.  The radiator will include a de-aeration/expansion tank. For visual coolant level inspection, the radiator will have a built-in sight glass. The radiator will be equipped with a 15 psi pressure relief cap.  A drain port will be located at the lowest point of the cooling system and/or the bottom of the radiator to permit complete flushing of the coolant from the system.  Shields or baffles will be provided to prevent recirculation of hot air to the inlet side of the radiator.</p>
0001090	Cooling Hoses, Rubber	<p><b>COOLANT LINES</b>  Gates, or Goodyear, rubber hose will be used for all engine coolant lines installed by Pierce Manufacturing.  Hose clamps will be stainless steel constant torque type to prevent coolant leakage. They will expand and contract according to coolant system temperature thereby keeping a constant clamping pressure on the hose.</p>
0001125	Fuel Tank, 65 Gallon, Left Side Fill	<p><b>FUEL TANK</b>  A 65 gallon fuel tank will be provided and mounted at the rear of the chassis. The tank will be constructed of 12-gauge, hot rolled steel. It will be equipped with swash partitions and a vent. To eliminate the effects of corrosion, the fuel tank will be mounted with stainless steel straps.  A 0.75" drain plug will be located in a low point of the tank for drainage.  A fill inlet will be located on the left hand side of the body and is covered with a hinged, spring loaded, stainless steel door that is marked "Ultra Low Sulfur - Diesel Fuel Only."  A 0.50" diameter vent will be installed from tank top to just below fuel fill inlet.  The fuel tank will meet all FHWA 393.67 requirements including a fill capacity of 95 percent of tank volume.</p>
0001129	Lines, Fuel	<p>All fuel lines will be provided as recommended by the engine manufacturer.</p>

0618791	DEF Tank, 4.5 Gallon, DS Fill, Forward of Axle, Common Air Bottle Door	<p><b>DIESEL EXHAUST FLUID TANK</b></p> <p>A 4.5 gallon diesel exhaust fluid (DEF) tank will be provided and mounted in the driver's side body forward of the rear axle.</p> <p>A 0.50" drain plug will be provided in a low point of the tank for drainage.</p> <p>A fill inlet will be provided and marked "Diesel Exhaust Fluid Only". The fill inlet will be located below the air bottle storage behind a common door on the driver side of the vehicle.</p> <p>The tank will meet the engine manufacturers requirement for 10 percent expansion space in the event of tank freezing.</p> <p>The tank will include an integrated heater unit that utilizes engine coolant to thaw the DEF in the event of freezing.</p>
0552793	Not Required, Fuel Priming Pump	
0552712	Not Required, Shutoff Valve, Fuel Line	
0699437	Cooler, Chassis Fuel, Not Req'd.	
0690880	No Selection Required From This Category	
0642572	Trans, Allison 5th Gen, 3000 EVS P, w/Prognostics, Imp/Vel/DCF/SFR/Enf	<p><b>TRANSMISSION</b></p> <p>An Allison 5th generation, Model EVS 3000P, electronic torque converting automatic transmission will be provided.</p> <p>The transmission will be equipped with prognostics to monitor oil life, filter life, and transmission health. A wrench icon on the shift selector's digital display will indicate when service is due.</p> <p>Two (2) PTO openings will be located on both sides of converter housing (positions 4 o'clock and 8 o'clock) as viewed from the rear.</p> <p>A transmission temperature gauge with red light and audible alarm will be installed on the cab dash.</p>
0625329	Transmission, Shifter, 5-Spd, Push Button, 3000 EVS	<p><b>TRANSMISSION SHIFTER</b></p> <p>A five (5)-speed push button shift module will be mounted to right of driver on console. Shift position indicator will be indirectly lit for after dark operation.</p> <p>The transmission ratio will be:</p> <p>1st 3.49 to 1.00</p> <p>2nd 1.86 to 1.00</p> <p>3rd 1.41 to 1.00</p> <p>4th 1.00 to 1.00</p> <p>5th 0.75 to 1.00</p> <p>R 5.03 to 1.00</p>
0684459	Transmission Oil Cooler, Modine, External	<p><b>TRANSMISSION COOLER</b></p> <p>A Modine plate and fin transmission oil cooler will be provided using engine coolant to control the transmission oil temperature.</p>
0090176	Mode, Downshift, Aggressive downshift to 3rd, w/engine brake, 5 speed	<p><b>DOWNSHIFT MODE (w/engine brake)</b></p> <p>The transmission will be provided with an aggressive downshift mode.</p> <p>This will provide earlier transmission downshifts to 3rd gear, resulting in improved engine braking performance.</p>
0001370	Driveline, Spicer 1710	<p><b>DRIVELINE</b></p> <p>Drivelines will be a heavy-duty metal tube and be equipped with Spicer® 1710 universal joints. The shafts will be dynamically balanced before installation.</p> <p>A splined slip joint will be provided in each driveshaft where the driveline design requires it. The slip joint will be coated with Glidecoat® or equivalent.</p>
0522058	Shields, U-Joint/Slip Joint Grease, At Each Joint	<p><b>UNIVERSAL JOINT GREASE SHIELDS</b></p> <p>Each universal joint and slip joint in the driveline will have a shield to prevent grease from being thrown against the underside of the body, chassis and components.</p>

0635294	Steering, Single Gear, TRW TAS-85, w/tilt, Pump w/ Cooler, Saber FR/Enforcer	<p><b>STEERING</b> Steering gear will be provided with integral heavy-duty power steering. For reduced system temperatures, the power steering will incorporate an air to oil cooler and Vickers® V20NF hydraulic pump with integral pressure and flow control. All power steering lines will have wire braided lines with crimped fittings. A tilt and telescopic steering column will be provided to improve fit for a broader range of driver configurations.</p>
0605356	Steering Wheel, 4 Spoke without Controls, Saber FR/Enforcer	<p><b>STEERING WHEEL</b> The steering wheel will be 18.00" in diameter, have tilting and telescoping capabilities, and a 4-spoke design.</p>
0690274	Logo/Emblem, on Dash	<p><b>LOGO AND CUSTOMER DESIGNATION ON DASH</b> The dash panel will have an emblem containing the Pierce logo and customer name. The emblem will have three (3) rows of text for the customer's department name. There will be a maximum of eight (8) characters in the first row, 11 characters in the second row and 11 characters in the third row. The first row of text will be: NEVADA The second row of text will be: COUNTY The third row of text will be: FIRE</p>
0071211	Skid Plate, Fuel Tank, Custom Chassis	<p><b>SKID PLATE</b> A skid plate will be provided on the under side of the unit to protect the fuel tank from off-road damage. The plate will be bolted on for easy removal and general maintenance. The plate will wrap around the rear of the fuel tank to prevent tank damage from an object collision.</p>
0624298	Bumper, 16" Extended, Saber FR/Enforcer	<p><b>BUMPER</b> A one (1) piece, ten (10) gauge, 304-2B type polished stainless steel bumper, minimum of 10.00" high, will be attached to a bolted modular extension frame constructed of 50,000 psi tensile steel "C" channel mounted directly behind it to provide adequate support strength. The bumper will be extended 16.00" from front face of cab. <b>Gravel Pan</b> A gravel pan, constructed of bright aluminum treadplate, will be furnished between the bumper and cab face. The gravel pan will be properly supported from the underside to prevent flexing and vibration of the aluminum treadplate.</p>
0640199	Tray, Hose, Center, 16" Bumper, Outside Air Horns	<p><b>CENTER HOSE TRAY</b> A hose tray, constructed of aluminum, will be placed in the center of the bumper extension. The tray will have a capacity of 100' of 1.75" double jacket cotton-polyester hose. Black rubber grating will be provided at the bottom of the tray. Drain holes are also provided.</p>
0630809	Cover, Aluminum Treadplate, One (1) D-Ring Latch, Hose Tray, Notched	<p><b>Center Hose Tray Cover</b> A bright aluminum treadplate cover will be provided over the center hose tray. The cover will be "notched" allowing the hose to be pre connected to hose connection. The cover will be attached with a stainless steel hinge. A D-ring latch will secure the cover in the closed position and a pneumatic stay arm will hold the cover in the open position. The arm will be on the opposite side of the notch.</p>
0778092	Lift & Tow Package, Enforcer	<p><b>LIFT AND TOW MOUNTS</b> Mounted to the frame extension will be lift and tow mounts. The lift and tow mounts will be designed and positioned to adapt to certain tow truck lift systems. The lift and tow mounts with eyes will be painted the same color as the frame.</p>
0002270	Tow Hooks, Chrome	<p><b>TOW HOOKS</b> Two (2) chromed steel tow hooks will be installed under the bumper and attached to the front frame members. The tow hooks will be designed and positioned to allow up to a 6,000 lb straight horizontal pull in line with the centerline of the vehicle. The tow hooks will not be used for lifting of the apparatus.</p>
0543824	Angle Tray Flooring, 45 deg, Increase Angle of Approach, Reduce Capacity	<p><b>SPECIAL TRAY FLOORING</b> The bottom of the front bumper trays will be angled at 45 degrees to ensure that they will not decrease the trucks angle of approach.</p>



**CAB**

The Enforcer cab will be designed specifically for the fire service and manufactured by the chassis builder.

The cab will be built by the apparatus manufacturer in a facility located on the manufacturer's premises.

For reasons of structural integrity and enhanced occupant protection, the cab will be a heavy duty design, constructed to the following minimal standards.

The cab will have 12 main vertical structural members located in the A-pillar (front cab corner posts), B-pillar (side center posts), C-pillar (rear corner posts), and rear wall areas. The A-pillar will be constructed of solid A356-T5 aluminum castings. The B-pillar and C-pillar will be constructed from 0.13" wall extrusions. The rear wall will be constructed of two (2) 2.00" x 2.00" outer aluminum extrusions and two (2) 2.00" x 1.00" inner aluminum extrusions. All main vertical structural members will run from the floor to 4.625" x 3.864" x 0.090" thick roof extrusions to provide a cage-like structure with the A-pillar and roof extrusions being welded into a 0.25" thick corner casting at each of the front corners of the roof assembly.

The front of the cab will be constructed of a 0.13" firewall plate, covered with a 0.090" front skin (for a total thickness of 0.22"), and reinforced with a full width x 0.50" thick cross-cab support located just below the windshield and fully welded to the engine tunnel. The cross-cab support will run the full width of the cab and weld to each A-pillar, the 0.13" firewall plate, and the front skin.

The cab floors will be constructed of 0.125" thick aluminum plate and reinforced at the firewall with an additional 0.25" thick cross-floor support providing a total thickness of 0.375" of structural material at the front floor area. The front floor area will also be supported with two (2) triangular 0.30" wall extrusions that also provides the mounting point for the cab lift. This tubing will run from the floor wireway of the cab to the engine tunnel side plates, creating the structure to support the forces created when lifting the cab.

The cab will be 96.00" wide (outside door skin to outside door skin) to maintain maximum maneuverability.

The overall height (from the cab roof to the ground) of approximately 99.00". The overall height listed will be calculated based on a truck configuration with the lowest suspension weight rating, the smallest diameter tires for the suspension, no water weight, no loose equipment weight, and no personnel weight. Larger tires, wheels, and suspension will increase the overall height listed. The floor to ceiling height inside the crew cab will be 54.50" in the center and outboard positions. The crew cab floor will measure 46.00" from the rear wall to the back side of the rear facing seat risers.

The medium block engine tunnel, at the rearward highest point (knee level), will measure 61.50" to the rear wall. The big block engine tunnel will measure 51.50" to the rear wall.

The crew cab will be a totally enclosed design with the interior area completely open to improve visibility and verbal communication between the occupants.

The cab will be a full tilt cab style.

A 3-point cab mount system with rubber isolators will improve ride quality by isolating chassis vibrations from the cab.

**CAB ROOF DRIP RAIL**

For enhanced protection from inclement weather, a drip rail will be furnished on the sides of the cab. The drip rail will be painted to match the cab roof, and bonded to the sides of the cab. The drip rail will extend the full length of the cab roof.

**INTERIOR CAB INSULATION**

The cab will include 1.00" insulation in the ceiling, 1.50" insulation in the side walls, and 2.00" insulation in the rear wall to maximize acoustic absorption and thermal insulation.

**FENDER LINERS**

Full circular inner fender liners in the wheel wells will be provided.

**PANORAMIC WINDSHIELD**

A one (1)-piece safety glass windshield will be provided with over 2,775 square inches of clear viewing area. The windshield will be full width and will provide the occupants with a panoramic view. The windshield will consist of three (3) layers: outer light, middle safety laminate, and inner light. The outer light layer will provide superior chip resistance. The middle safety laminate layer will prevent the windshield glass pieces from detaching in the event of breakage. The inner light will provide yet another chip resistant layer. The cab windshield will be bonded to the aluminum windshield frame using a urethane adhesive. A custom frit pattern will be applied on the outside perimeter of the windshield for a finished automotive appearance.

**WINDSHIELD WIPERS**

Three (3) electric windshield wipers with washer will be provided that meet FMVSS and SAE requirements.

The washer reservoir will be able to be filled without raising the cab.

0647919

Engine Tunnel, ISL, Saber  
FR/Enforcer**ENGINE TUNNEL**

Engine hood side walls will be constructed of 0.375" aluminum. The top will be constructed of 0.125" aluminum and will be tapered at the top to allow for more driver and passenger elbow room.

The engine hood will be insulated for protection from heat and sound. The noise insulation keeps the dBA level within the limits stated in the current NFPA 1901 standards.

The engine tunnel will be no higher than 17.00" off the crew cab floor.

0633594

Rear Wall, Interior, Adjustable  
Seating**INTERIOR CREW CAB REAR WALL ADJUSTABLE SEATING (PATENT PENDING)**

The interior rear wall of the crew cab will have mounting holes every 2.75" to allow for adjustability of the forward facing crew cab seating along the rear wall. Seats will be adjustable with use of simple hand tools allowing departments flexibility of their seating arrangement should their department needs change.

0632103

Rear Wall, Exterior, Cab, Saber  
FR/Enforcer**CAB REAR WALL EXTERIOR COVERING**

The exterior surface of the rear wall of the cab will be overlaid with bright aluminum treadplate except for areas that are not typically visible when the cab is lowered.

0639727	Cab Lift, Elec/Hyd, Manual Override, Saber FR/Enforcer	<p><b>CAB LIFT</b>  A hydraulic cab lift system will be provided consisting of an electric powered hydraulic pump, dual lift cylinders, and necessary hoses and valves.  Hydraulic pump will have a manual override for backup in the event of electrical failure.  Lift controls will be located on the right side pump panel or front area of the body in a convenient location.  The cab will be capable of tilting 43 degrees to accommodate engine maintenance and removal. The cab will be locked down by a 2-point normally closed spring loaded hook type latch that fully engages after the cab has been lowered. The system will be hydraulically actuated to release the normally closed locks when the cab lift control is in the raised position and cab lift system is under pressure. When the cab is completely lowered and system pressure has been relieved, the spring loaded latch mechanisms will return to the normally closed and locked position.  The hydraulic cylinders will be equipped with a velocity fuse that protects the cab from accidentally descending when the control is located in the tilt position.  For increased safety, a redundant mechanical stay arm will be provided that must be manually put in place on the left side between the chassis and cab frame when the cab is in the raised position. This device will be manually stowed to its original position before the cab can be lowered.</p> <p><b>Cab Lift Interlock</b>  The cab lift system will be interlocked to the parking brake. The cab tilt mechanism will be active only when the parking brake is set and the ignition switch is in the on position. If the parking brake is released, the cab tilt mechanism will be disabled.</p>
0695930	Grille, Bright Finished, Front of Cab, Dash CF/Enforcer	<p><b>GRILLE</b>  A bright finished aluminum mesh grille screen, inserted behind a bright finished grille surround, will be provided on the front center of the cab.</p>
0002224	Scuffplates, S/S At Cab Door Jambs, 4-Door Cab	<p><b>DOOR JAMB SCUFFPLATES</b>  All cab door jambs will be furnished with a polished stainless steel scuffplate, mounted on the striker side of the jamb.</p>
0647932	Not Required, Trim, S/S Band, Across Cab Face, AXT/Dash CF/Saber/Enforcer	
0087357	Molding, Chrome on Side of Cab	<p><b>SIDE OF CAB MOLDING</b>  Chrome molding will be provided on both sides of cab.</p>
0521669	Mirrors, Retrac, West Coast Style, Htd/Rmt, w/Htd/Rmt Convex	<p><b>MIRRORS</b>  A Retrac, Model 613423, dual vision, motorized, west coast style mirror, with chrome finish, will be mounted on each side of the front cab door with spring loaded retractable arms. The flat glass and convex glass will be heated and adjustable with remote control within reach of the driver.</p>
0648171	Door, Half-Height, Saber FR/Enforcer 4-Door Cab, Level Roof	<p><b>DOORS</b>  To enhance entry and egress to the cab, the forward cab door openings will be a minimum of 37.50" wide x 63.37" high. The crew cab doors will be located on the sides of the cab and will be constructed in the same manner as the forward cab doors. The crew cab door openings will be a minimum of 34.30" wide x 63.37" high.  The forward cab and crew cab doors will be constructed of extruded aluminum with a nominal material thickness of 0.093". The exterior door skins will be constructed from 0.090" aluminum. A customized, vertical, pull-down type door handle will be provided on the exterior of each cab door. The exterior handle will be designed specifically for the fire service to prevent accidental activation, and will provide 4.00" wide x 2.00" deep hand clearance for ease of use with heavy gloved hands.  Each door will also be provided with an interior flush, open style paddle handle that will be readily operable from fore and aft positions, and be designed to prevent accidental activation. The interior handles will provide 4.00" wide x 1.25" deep hand clearance for ease of use with heavy gloved hands.  The cab doors will be provided with both interior (rotary knob) and exterior (keyed) locks exceeding FMVSS standards. The keys will be Model 751. The locks will be capable of activating when the doors are open or closed. The doors will remain locked if locks are activated when the doors are opened, then closed.  A full length, heavy duty, stainless steel, piano-type hinge with a 0.38" pin and 11 gauge leaf will be provided on all cab doors. There will be double automotive-type rubber seals around the perimeter of the door framing and door edges to ensure a weather-tight fit.  A chrome handle will be provided on the inside of each cab door for ease of entry.  A red webbed grab handle will be installed on the crew cab door stop strap. The grab handles will be securely mounted.  The bottom cab step at each cab door location will be located below the cab doors and will be exposed to the exterior of the cab.</p>
0655543	Door Panel, Brushed Stainless Steel, Saber/Enforcer 4-Door Cab	<p><b>Door Panels</b>  The inner cab door panels will be constructed out of brushed stainless steel.</p>

0630636	Controls, Electric Roll-Up Windows, 4dr, 4 Driver Controls, Saber FR/Enforcer	<p><b>ELECTRIC OPERATED CAB DOOR WINDOWS</b>  All four (4) cab doors will be equipped with electric operated windows with one (1) flush mounted automotive style switch on each door. The driver's door will have four (4) switches, one (1) to control each door window.  Each switch will allow intermittent or auto down operation for ease of use. Auto down operation will be actuated by holding the window down switch for approximately 1 second.</p>
0638310	Steps, 4-Door Cab, Saber FR/Enforcer	<p><b>CAB STEPS</b>  The forward cab and crew cab access steps will be a full size two (2) step design to provide largest possible stepping surfaces for safe ingress and egress. The bottom steps will be designed with a grip pattern punched into bright aluminum treadplate material to provide support, slip resistance, and drainage. The bottom steps will be a bolt-in design to minimize repair costs should they need to be replaced. The forward cab steps will be a minimum 25.00" wide, and the crew cab steps will be 21.65" wide with a 10.00" minimum depth. The inside cab steps will not exceed 16.50" in height.  The vertical surfaces of the step well will be aluminum treadplate.</p>
0770194	Handrail, Exterior, Knurled, Alum, 4-Door Cab	<p><b>CAB EXTERIOR HANDRAILS</b>  A 1.25" diameter slip-resistant, knurled aluminum handrail will be provided adjacent to each cab and crew cab door opening to assist during cab ingress and egress.</p>
0634786	Lights, Cab & Crw Cab Acs Stps, P25, LED w/Bezel, 1Lt Per Step 6lts	<p><b>STEP LIGHTS</b>  There will be six (6) white LED step lights installed for cab and crew cab access steps.  One (1) light for the driver's access steps.  Two (2) lights for the driver's side crew cab access steps.  Two (2) lights for the passenger's side crew cab access steps.  One (1) light for the passenger's side access step.  In order to ensure exceptional illumination, each light will provide a minimum of 25 foot-candles (fc) covering an entire 15" x 15" square placed ten (10) inches below the light and a minimum of 1.5 fc covering an entire 30" x 30" square at the same ten (10) inch distance below the light.  The lights will be activated when the battery switch is on and the adjacent door is opened.</p>
0002141	Fenders, s/s on cab - Saber/Enforcer	<p><b>FENDER CROWNS</b>  Stainless steel fender crowns will be installed at the cab wheel openings.</p>
0042105	No Windows, Side of Crew Cab	
0621136	Compt, Storage, 12.75 W x 24 H x 15 D, (1) Ea Side C/C, Dbl Pan, 70" SFR/Enf	<p><b>STORAGE COMPARTMENTS</b>  Provided on each side of the cab, to the rear of the crew cab access doors, will be a storage compartment. The compartments will be approximately 12.75" wide x 24.00" high x 15.00" deep. There will be two (2) double pan doors painted to match the cab exterior with a non-locking D-Ring latch, one (1) on each side of the cab. A pneumatic stay arm for each exterior door will be used as a doorstep. The clear door opening will be 10.50" wide x 22.50" high.  The compartment interior will be painted spatter gray.  <b>Compartment Lights</b>  There will be two (2) white Amdor, LED strip lights provided, one (1) each hinged side of compartment door openings.</p>
0553057	Holder, Cup, Cab/Crewcab, Each	<p><b>CUP HOLDER</b>  There will be four (4) cup holder(s) provided. Each cup holder will have self-adjusting fingers that automatically grip beverage containers of various sizes. A recess in the cup holder will allow it to hold beverage containers with handles.  The cup holder(s) will be located at customer pick-up.</p>
0607217	Mounting Provisions, 3/16" Alum, Full Engine Tunnel, Saber FR/Enforcer	<p><b>MOUNTING PLATE ON ENGINE TUNNEL</b>  Equipment installation provisions will be installed on the engine tunnel.  A 0.188" smooth aluminum plate will be bolted to the top surface of the engine tunnel. The plate will follow the contour of the engine tunnel and will run the entire length of the engine tunnel. The plate will be spaced off the engine tunnel .25" to allow for wire routing below the plate.  The mounting surface will be painted to match the cab interior.</p>

0750824	Cab Interior, Vinyl Headliner, Saber FR/Enforcer, CARE	<p><b>CAB INTERIOR</b>  The cab interior will be constructed of primarily metal (painted aluminum) to withstand the severe duty cycles of the fire service.  The officer side dash will be a flat faced design to provide easy maintenance and will be constructed out of painted aluminum.  The instrument cluster will be surrounded with a high impact ABS plastic contoured to the same shape of the instrument cluster.  The engine tunnel will be painted aluminum to match the cab interior.  For durability and ease of maintenance, the cab interior side walls will be painted aluminum. The rear wall will be painted aluminum.  The headliner will be installed in both forward and rear cab sections. Headliner material will be vinyl. A sound barrier will be part of its composition. Material will be installed on an aluminum sheet and securely fastened to interior cab ceiling.  The forward portion of the cab headliner will permit easy access for service of electrical wiring or other maintenance needs.  All wiring will be placed in metal raceways.</p> <p><b>CAB INTERIOR UPHOLSTERY</b>  The cab interior upholstery will be 36 oz dark silver gray vinyl.</p>
0753903	Cab Interior, Paint Color, Saber FR/Enforcer	<p><b>CAB INTERIOR PAINT</b>  The cab interior metal surfaces, excluding the rear heater panels, will be painted fire smoke gray, vinyl texture paint.  The rear heater panels will be painted black, vinyl textured paint.</p>
0052100	Floor, Rubber Padded, Cab & Crew Cab, Saber/Enforcer	<p><b>CAB FLOOR</b>  The cab and crew cab floor areas will be covered with Polydamp™ acoustical floor mat consisting of a black pyramid rubber facing and closed cell foam decoupler.  The top surface of the material has a series of raised pyramid shapes evenly spaced, which offer a superior grip surface. Additionally, the material has a 0.25" thick closed cell foam (no water absorption) which offers a sound dampening material for reducing sound levels.</p>

**DEFROST/AIR CONDITIONING SYSTEM**

A ceiling mounted combination heater, defroster and air conditioning system will be installed in the cab above the engine tunnel area.

**Cab Defroster**

A 54,000 BTU heater-defroster unit with 690 SCFM of air flow will be provided inside the cab. The heater-defrost will be installed in the forward portion of the cab ceiling. Air outlets will be strategically located in the cab header extrusion per the following:

One (1) adjustable will be directed towards the left side cab window

One (1) adjustable will be directed towards the right side cab window

Six (6) fixed outlets will be directed at the windshield

The defroster will be capable of clearing 98 percent of the windshield and side glass when tested under conditions where the cab has been cold soaked at 0 degrees Fahrenheit for 10 hours, and a 2 ounce per square inch layer of frost/ice has been able to build up on the exterior windshield. The defroster system will meet or exceed SAE J382 requirements.

**Cab/Crew Auxiliary Heater**

There will be one (1) 31,000 BTU auxiliary heater with 560 SCFM of air flow provided in each outboard rear facing seat risers with a dual scroll blower. An aluminum plenum incorporated into the cab structure used to transfer heat to the forward positions.

**Air Conditioning**

A condenser will be a 59,644 BTU output that meets and exceeds the performance specification will be mounted on the radiator.

The air conditioning system will be capable of cooling the average cab temperature from 100 degrees Fahrenheit to 75 degrees Fahrenheit at 50 percent relative humidity within 30 minutes.

The cooling performance test will be run only after the cab has been heat soaked at 100 degrees Fahrenheit for a minimum of 4 hours.

The evaporator unit will be installed in the rear portion of the cab ceiling over the engine tunnel.

The evaporator will include one (1) high performance heating core, one (1) high performance cooling core with (1) plenum directed to the front and one (1) plenum directed to the rear of the cab.

The evaporator unit will have a 52,000 BTU at 690 SCFM rating that meets and exceeds the performance specifications.

Adjustable air outlets will be strategically located on the forward plenum cover per the following:

Four (4) will be directed towards the seating position on the left side of the cab

Four (4) will be directed towards the seating position on the right side of the cab

Adjustable air outlets will be strategically located on the evaporator cover per the following:

Five (5) will be directed towards crew cab area

A high efficiency particulate air (HEPA) filter will be included for the system. Access to the filter cover will be secured with four (4) screws.

The air conditioner refrigerant will be R-134A and will be installed by a certified technician.

**Climate Control**

An automotive style controller will be provided to control the heat and air conditioning system within the cab. The controller will have three (3) functional knobs for fan speed, temperature, and air flow distribution (front to rear) control.

The system will control the temperature of the cab and crew cab automatically by pushing the center of the fan speed control knob. Rotate the center temperature control knob to set the cab and crew cab temperature.

The AC system will be manually activated by pushing the center of the temperature control knob. Pushing the center of the air flow distribution knob will engage the AC for max defrost, setting the fan speeds to 100 percent and directing all air flow to the overhead forward position.

The system controller will be located within panel position #12.

**Gravity Drain Tubes**

Two (2) condensate drain tubes will be provided for the air conditioning evaporator. The drip pan will have two (2) drain tubes plumbed separately to allow for the condensate to exit the drip pan. No pumps will be provided.

0624005

Sun Visor, Vinyl/Fabric, AXT, Dash CF, Qtm, Saber FR/Enforcer

**SUN VISORS**

There will be two (2) vinyl covered sun visors provided. The sun visors will be located above the windshield with one (1) mounted on each side of the cab.

There will be a polished stainless steel bracket provided to help secure each sun visor in the stowed position.

0634328

Grab Handles, Driver and Officer Door Posts, Saber FR/Enforcer

**GRAB HANDLES**

A black rubber covered grab handle will be mounted on the door post of the driver and officer's side cab door to assist in entering the cab. The grab handles will be securely mounted to the post area between the door and windshield.

0583938

Lights, Engine Compmt, Custom, Auto Sw, WIn 3SC0CDCR, 3" LED, Trim

**ENGINE COMPARTMENT LIGHTS**

There will be one (1) Whelen, Model 3SC0CDCR, 12 volt DC, 3.00" white LED light(s) with Whelen, Model 3FLANGEC, chrome flange kit(s) installed under the cab to be used as engine compartment illumination.

These light(s) will be activated automatically when the cab is raised.

0631830

Fluid Check Access, Saber FR/Enforcer, Arrow XT

**ACCESS TO ENGINE DIPSTICKS**

For access to the engine oil and transmission fluid dipsticks, there will be a door on the engine tunnel, inside the crew cab. The door will be on the rear wall of the engine tunnel, on the vertical surface.

The engine oil dipstick will allow for checking only. The transmission dipstick will allow for both checking and filling.

The door will have a rubber seal for thermal and acoustic insulation. One (1) flush latch will be provided on the access door.

0599959	Straps, Velcro, Map Box, Custom Chassis	<p><b>VELCRO STRAP(S) FOR MAP BOX</b> There will be one (1) Velcro® strap(s) installed on the map box.</p>
0002501	Map box, 4 bin/30 Deg Slant, Custom Chassis	<p><b>MAP BOX</b> A map box with four (4) bins, open from top, will be installed customer to locate at pick up.. The map box will be divided into four (4) bins, each being 12.50" wide x 2.25" high x 12.00" deep. Each bin will slant 30 degrees from horizontal. The map box will be constructed of .125" aluminum and will be painted to match the cab interior.</p>
0583042	Side Roll and Frontal Impact Protection	<p><b>CAB SAFETY SYSTEM</b> The cab will be provided with a safety system designed to protect occupants in the event of a side roll or frontal impact, and will include the following: A supplemental restraint system (SRS) sensor will be installed on a structural cab member behind the instrument panel. The SRS sensor will perform real time diagnostics of all critical subsystems and will record sensory inputs immediately before and during a side roll or frontal impact event. A slave SRS sensor will be installed in the cab to provide capacity for eight (8) crew cab seating positions. A fault-indicating light will be provided on the vehicle's instrument panel allowing the driver to monitor the operational status of the SRS system. A driver side front air bag will be mounted in the steering wheel and will be designed to protect the head and upper torso of the occupant, when used in combination with the 3-point seat belt. A passenger side knee bolster air bag will be mounted in the modesty panel below the dash panel and will be designed to protect the legs of the occupant, when used in combination with the 3-point seat belt. Air curtains will be provided in the outboard bolster of outboard seat backs to provide a cushion between occupant and the cab wall. Suspension seats will be provided with devices to retract them to the lowest travel position during a side roll or frontal impact event. Seat belts will be provided with pre-tensioners to remove slack from the seat belt during a side roll or frontal impact event.</p> <p><b>FRONTAL IMPACT PROTECTION</b> The SRS system will provide protection during a frontal or oblique impact event. The system will activate when the vehicle decelerates at a predetermined G force known to cause injury to the occupants. The cab and chassis will have been subjected, via third party test facility, to a crash impact during frontal and oblique impact testing. Testing included all major chassis and cab components such as mounting straps for fuel and air tanks, suspension mounts, front suspension components, rear suspensions components, frame rail cross members, engine and transmission and their mounts, pump house and mounts, frame extensions and body mounts. The testing provided configuration specific information used to optimize the timing for firing the safety restraint system. The sensor will activate the pyrotechnic devices when the correct crash algorithm, wave form, is detected. The SRS system will deploy the following components in the event of a frontal or oblique impact event: Driver side front air bag Passenger side knee bolster air bag Air curtains mounted in the outboard bolster of outboard seat backs Suspension seats will be retracted to the lowest travel position Seat belts will be pre-tensioned to firmly hold the occupant in place</p> <p><b>SIDE ROLL PROTECTION</b> The SRS system will provide protection during a fast or slow 90 degree roll to the side, in which the vehicle comes to rest on its side. The system will analyze the vehicle's angle and rate of roll to determine the optimal activation of the advanced occupant restraints. The SRS system will deploy the following components in the event of a side roll: Air curtains mounted in the outboard bolster of outboard seat backs Suspension seats will be retracted to the lowest travel position Seat belts will be pre-tensioned to firmly hold the occupant in place</p>
0622619	Seating Capacity, 4 Seats	<p><b>SEATING CAPACITY</b> The seating capacity in the cab will be four (4).</p>
0636955	Seat, Driver, Pierce PSV, Air Ride, High Back, Safety, Saber FR/Enforcer	<p><b>DRIVER SEAT</b> A seat will be provided in the cab for the driver. The seat design will be a cam action type, with air suspension. For increased convenience, the seat will include a manual control to adjust the horizontal position (6.00" travel). The manual horizontal control will be a towel-bar style located below the forward part of the seat cushion. To provide flexibility for multiple driver configurations, the seat will have an adjustable reclining back. The seat back will be a high back style with side bolster pads for maximum support. For optimal comfort, the seat will be provided with 17.00" deep foam cushions designed with EVC (elastomeric vibration control). The seat will include the following features incorporated into the side roll protection system: Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position. A suspension seat safety system will be included. When activated in the event of a side roll, this system will pretension the seat belt and retract the seat to its lowest travel position. The seat will be furnished with a 3-point, shoulder type seat belt.</p>

0621633	Seat, Officer, Pierce PSV, Air Ride, SCBA, Safety, Slides, Saber FR/Enforcer	<p><b>OFFICER SEAT</b>  A seat will be provided in the cab for the passenger. The seat will be a cam action type, with air suspension. For increased convenience, the seat will be provided with 6.00" double locking fore/aft slide adjustment. For optimal comfort, the seat will be provided with 17.00" deep foam cushions designed with EVC (elastomeric vibration control).  The seat back will be an SCBA back style with 5 degree fixed recline angle. The SCBA cavity will be adjustable from front to rear in 1.00" increments, to accommodate different sized SCBA cylinders. Moving the SCBA cavity will be accomplished by unbolting, relocating, and re-bolting it in the desired location.  The seat will include the following features incorporated into the side roll protection system: Side air curtain will be mounted integral to the outboard bolster of the seat back. The air curtain will be covered by a decorative panel when in the stowed position.  A suspension seat safety system will be included. When activated, this system will pretension the seat belt and then retract the seat to its lowest travel position.  The seat will be furnished with a 3-point, shoulder type seat belt.</p>
0002517	Not Required, Radio Compartment	
0757990	Cabinet, Rear Facing, LS, 23 W x 40.25 H x 26.75 D, Roll, Ext Acc, SFR/Enf	<p><b>REAR FACING LEFT SIDE CABINET</b>  A rear facing cabinet will be provided in the crew cab at the left side outboard position. The cabinet will be 23.00" wide x 40.25" high x 26.75" deep with one (1) Amdor rollup door with anodized finish, non-locking. The frame to frame opening will be 16.00" wide x 35.00" high. The minimum clear door opening of the cabinet will be 13.25" wide x 29.12" high.  The cabinet will also provide access from outside the cab with one (1) double pan door painted to match the cab exterior with a non-locking D-ring latch. A pneumatic stay arm will be provided as a door stop. The door will be located on the side of the cab over the wheelwell. The clear door opening will be 17.00" wide x 34.00" high.  The cabinet will include one (1) infinitely adjustable shelf with a 0.75" up-turned lipped to match the cab interior.  The cabinet will include no louvers.  The exterior access will be provided with a polished stainless steel scuffplate on the lower door frame.  The cabinet will be constructed of smooth aluminum and painted to match the cab interior.  <b>Cabinet Light</b>  There will be one (1) white Amdor LED strip light installed on the left side of the exterior cabinet door opening and one (1) Amdor H2O LED strip light installed on the left side of the exterior cabinet door opening. The lights will be controlled by an automatic door switch.</p>
0102783	Not Required, Seat, Rr Facing C/C, Center	
0757962	Cabinet, Rear Facing, RS, 22 W x 40.25 H x 26.75 D, Roll, Ext Acc, SFR/Enf	<p><b>REAR FACING RIGHT SIDE CABINET</b>  A rear facing cabinet will be provided in the crew cab at the right side outboard position. The cabinet will be 22.00" wide x 40.25" high x 26.75" deep with one (1) Amdor rollup door with anodized finish, locking with #1250 key. The frame to frame opening will be 15.00" wide x 35.00" high. The minimum clear door opening of the cabinet will be 12.25" wide x 29.12" high.  The cabinet will include one (1) infinitely adjustable shelf with a 0.75" up-turned lipped to match the cab interior.  The cabinet will include no louvers.  The cabinet will also provide access from outside the cab with one (1) double pan door painted to match the cab exterior with a non-locking D-ring latch. A pneumatic stay arm will be provided as a door stop. The exterior clear door opening will be 17.00" wide x 34.00" high.  The exterior access will be provided with a brushed stainless steel scuffplate on the lower door frame.  The cabinet will be constructed of smooth aluminum, and painted to match the cab interior.  <b>Cabinet Light</b>  There will be one (1) Amdor H2O LED strip light installed on the left side of the exterior cabinet door opening and one (1) Amdor H2O LED strip light installed on the right side of the exterior cabinet door opening. The lights will be controlled by an automatic door switch.</p>
0108189	Not Required, Seat, Forward Facing C/C, DS Outboard	
0635957	Seat, Forward Facing C/C, Center, (2) Pierce PSV, SCBA, Safety, Saber FR/Enf	<p><b>FORWARD FACING CENTER SEATS</b>  There will be two (2) forward facing seats provided at the center position in the crew cab. For optimal comfort, the seats will be provided with 15.00" deep foam cushions designed with EVC (elastomeric vibration control).  The seat backs will be an SCBA style with 90 degree back. The SCBA cavity will be adjustable from front to rear in 1.00" increments to accommodate different sized SCBA cylinders. Moving the SCBA cavity will be accomplished by unbolting, relocating, and re-bolting it in the desired location.  The seat will include the following features incorporated into the side roll protection system:  A seat safety system will be included. When activated, this system will pretension the seat belt.  The seats will be furnished with a 3-point, shoulder type seat belt.</p>
0108190	Not Required, Seat, Forward Facing C/C, PS Outboard	

0059419	Guard, S/S, Roll-up Door, EMS Compartment	<p><b>GUARD</b> There will be one (1) stainless steel guard, designed to protect the roll-up door from damage when in the retracted position, provided on each EMS compartment located LS and RS Interior roll up doors. There will be a total of two (2) guard(s) provided.</p>
0566653	Upholstery, Seats In Cab, Turnout Tuff	<p><b>SEAT UPHOLSTERY</b> All seat upholstery will be gray Turnout Tuff material.</p>
0543991	Bracket, Air Bottle, Hands-Free II, Cab Seats	<p><b>AIR BOTTLE HOLDERS</b> All SCBA type seats in the cab will have a "Hands-Free" auto clamp style bracket in its backrest. For efficiency and convenience, the bracket will include an automatic spring clamp that allows the occupant to store the SCBA bottle by simply pushing it into the seat back. For protection of all occupants in the cab, in the event of an accident, the inertial components within the clamp will constrain the SCBA bottle in the seat and will exceed the NFPA standard of 9G. There will be a quantity of three (3) SCBA brackets.</p>
0603866	Seat Belt, Dual Retractor, ReadyReach, Saber FR/Enforcer	<p><b>SEAT BELTS</b> All cab and tiller cab (if applicable) seating positions will have red seat belts. To provide quick, easy use for occupants wearing bunker gear, the female buckle and seat belt webbing length will meet or exceed the current edition of NFPA 1901 and CAN/ULC - S515 standards. The 3-point shoulder type seat belts will include height adjustment. This adjustment will optimize the belts effectiveness and comfort for the seated firefighter. The 3-point shoulder type seat belts will be furnished with dual automatic retractors that will provide ease of operation in the normal seating position. The 3-point shoulder type belts will also include the ReadyReach D-loop assembly to the shoulder belt system. The ReadyReach feature adds an extender arm to the D-loop location placing the D-loop in a closer, easier to reach location. Any flip up seats will include a 3-point shoulder type belts only. To ensure safe operation, the seats will be equipped with seat belt sensors in the seat cushion and belt receptacle that will activate an alarm indicating a seat is occupied but not buckled.</p>
0602464	Helmet Storage, Provided by Fire Department, NFPA 2016	<p><b>HELMET STORAGE PROVIDED BY FIRE DEPARTMENT</b> NFPA 1901, 2016 edition, section 14.1.7.4.1 requires a location for helmet storage be provided. There is no helmet storage on the apparatus as manufactured. The fire department will provide a location for storage of helmets.</p>
0647647	Lights, Dome, FRP Dual LED 4 Lts	<p><b>CAB DOME LIGHTS</b> There will be four (4) dual LED dome lights with grey bezels provided. Two (2) lights will be mounted above the inside shoulder of the driver and officer and two (2) lights will be installed and located, one (1) on each side of the crew cab. The color of the LED's will be red and white. The white LED's will be controlled by the door switches and the lens switch. The color LED's will be controlled by the lens switch. In order to ensure exceptional illumination, each white LED dome light will provide a minimum of 10.1 foot-candles (fc) covering an entire 20.00" x 20.00" square seating position when mounted 40.00" above the seat.</p>
0602637	Portable Hand Light, Provided by Fire Dept, Pumper NFPA 2016 Classification	<p><b>PORTABLE HAND LIGHTS, PROVIDED BY FIRE DEPARTMENT</b> NFPA 1901, 2016 edition, section 5.9.4 requires two portable hand lights mounted in brackets fastened to the apparatus. The hand lights are not on the apparatus as manufactured. The fire department will provide and mount these hand lights.</p>
0622803	Cab Instruments, Black Gauges, Black Bezels, Enforcer MUX	<p><b>CAB INSTRUMENTATION</b> The cab instrument panel will be a molded ABS panel and include gauges, an LCD display, telltale indicator lamps, control switches, alarms, and a diagnostic panel. The function of the instrument panel controls and switches will be identified by a label adjacent to each item. Actuation of the headlight switch will illuminate the labels in low light conditions. Telltale indicator lamps will not be illuminated unless necessary. The cab instruments and controls will be conveniently located within the forward cab section, forward of the driver. The gauge assembly and switch panels are designed to be removable for ease of service and low cost of ownership.</p> <p><b>Gauges</b> The gauge panel will include the following ten (10) black faced gauges with black bezels to monitor vehicle performance: Voltmeter gauge (volts): Low volts (11.8 VDC) Amber caution indicator on the information center with intermittent alarm Amber caution light on gauge assembly High volts (15.5 VDC) Amber caution indicator on the information center with intermittent alarm Amber caution light on gauge assembly Very low volts (11.3 VDC) Red warning indicator on the information center with a steady alarm Amber caution light on gauge assembly Very high volts (16.0 VDC) Red warning indicator on the information center with a steady alarm Amber caution light on gauge assembly</p>



Engine Tachometer (RPM)  
Speedometer MPH (Major Scale), KM/H (Minor Scale)  
Fuel level gauge (Empty - Full in fractions):  
Low fuel (1/8 full)  
Amber caution indicator on the information center with intermittent alarm  
Amber caution light on gauge assembly  
Very low fuel (1/32 full)  
Red caution indicator on the information center with steady alarm  
Amber caution light on gauge assembly  
Engine Oil pressure Gauge (PSI):  
Low oil pressure to activate engine warning lights and alarms  
Red caution indicator on the information center with steady alarm  
Amber caution light on gauge assembly  
Front Air Pressure Gauges (PSI):  
Low air pressure to activate warning lights and alarm  
Red warning indicator on the information center with a steady alarm  
Amber caution light on gauge assembly  
Rear Air Pressure Gauges (PSI):  
Low air pressure to activate warning lights and alarm  
Red warning indicator on the information center with a steady alarm  
Amber caution light on gauge assembly  
Transmission Oil Temperature Gauge (Fahrenheit):  
High transmission oil temperature activates warning lights and alarm  
Amber caution indicator on the information center with intermittent alarm  
Amber caution light on gauge assembly  
Engine Coolant Temperature Gauge (Fahrenheit):  
High engine temperature activates an engine warning light and alarms  
Amber caution indicator on the information center with intermittent alarm  
Amber caution light on gauge assembly  
Diesel Exhaust Fluid Level Gauge (Empty - Full in fractions):  
Low fluid (1/8 full)  
Amber indicator light in gauge dial  
All gauges will perform prove out at initial power-up to ensure proper performance.

#### **Indicator Lamps**

To promote safety, the following telltale indicator lamps will be located on the instrument panel in clear view of the driver. The indicator lamps will be "dead-front" design that is only visible when active. The colored indicator lights will have descriptive text or symbols.

The following amber telltale lamps will be present:

Low coolant  
Trac cntl (traction control) (where applicable)  
Check engine  
Check trans (check transmission)  
Aux brake overheat (Auxiliary brake overheat)  
Air rest (air restriction)  
Caution (triangle symbol)  
Water in fuel  
DPF (engine diesel particulate filter regeneration)  
Trailer ABS (where applicable)  
Wait to start (where applicable)  
HET (engine high exhaust temperature) (where applicable)  
ABS (antilock brake system)  
MIL (engine emissions system malfunction indicator lamp) (where applicable)  
Side roll fault (where applicable)  
Front air bag fault (where applicable)

The following red telltale lamps will be present:

Warning (stop sign symbol)  
Seat belt  
Parking brake  
Stop engine  
Rack down

The following green telltale lamps will be provided:

Left turn  
Right turn  
Battery on

The following blue telltale lamp will be provided:

High beam

#### **Alarms**

Audible steady tone warning alarm: A steady audible tone alarm will be provided whenever a warning message is present.

Audible pulsing tone caution alarm: A pulsing audible tone alarm (chime/chirp) will be provided whenever a caution message is present without a warning message being present.

Alarm silence: Any active audible alarm will be able to be silenced by holding the ignition switch at the top position for three (3) to five (5) seconds. For improved safety, silenced audible alarms will intermittently chirp every 30 seconds until the alarm condition no longer exists. The intermittent chirp will act as a reminder to the operator that a caution or warning condition still exists. Any new warning or caution condition will enable the steady or pulsing tones respectively.

#### **Indicator Lamp and Alarm Prove-Out**

**A system will be provided which automatically tests telltale indicator lights and alarms located on the cab instrument panel. Telltale indicators and alarms will perform prove-out at initial power-up to ensure proper performance.**

#### **Control Switches**

For ease of use, the following controls will be provided immediately adjacent to the cab instrument panel within easy reach of the driver. All switches will have backlit labels for low light applications.

**Headlight/Parking light switch: A three (3)-position maintained rocker switch will be provided. The first switch position will deactivate all parking and headlights. The second switch position will activate the parking lights. The third switch will activate the headlights.**

Panel back lighting intensity control switch: A three (3)-position momentary rocker switch will be provided. Pressing the top half of the switch, "Panel Up" increases the panel back lighting intensity and pressing the bottom half of the switch, "Panel Down" decreases the panel back lighting intensity. Pressing the half or bottom half of the switch several times will allow back lighting intensity to be gradually varied from minimum to maximum intensity level for ease of use.

Ignition switch: A three (3)-position maintained/momentary rocker switch will be provided. The first switch position will turn off and deactivate vehicle ignition. The second switch position will activate vehicle ignition and will perform prove-out on the telltale indicators and alarms for 3 to 5 seconds after the switch is turned on. A green indicator lamp is activated with vehicle ignition. The third momentary position will temporarily silence all active cab alarms. An alarm "chirp" may continue as long as alarm condition exists. Switching ignition to off position will terminate the alarm silence feature and reset function of cab alarm system.

Engine start switch: A two (2)-position momentary rocker switch will be provided. The first switch position is the default switch position. The second switch position will activate the vehicle's engine. The switch actuator is designed to prevent accidental activation.

Hazard switch will be provided on the instrument panel or on the steering column. Heater, defroster, and optional air conditioning control panel: A control panel with membrane switches will be provided to control heater/defroster temperature and heater, defroster, and air conditioning fan speeds. A green LED status bar will indicate the relative temperature and fan speed settings.

Turn signal arm: A self-canceling turn signal with high beam headlight and windshield wiper/washer controls will be provided. The windshield wiper control will have high, low, and intermittent modes.

Parking brake control: An air actuated push/pull park brake control valve will be provided. Chassis horn control: Activation of the chassis horn control will be provided through the center of the steering wheel.

High idle engagement switch: A momentary rocker switch with integral indicator lamp will be provided. The switch will activate and deactivate the high idle function. The "OK To Engage High Idle" indicator lamp must be active for the high idle function to engage. A green indicator lamp integral to the high idle engagement switch will indicate when the high idle function is engaged.

"OK To Engage High Idle" indicator lamp: A green indicator light will be provided next to the high idle activation switch to indicate that the interlocks have been met to allow high idle engagement.

Emergency switching will be controlled by multiple individual warning light switches for various groups or areas of emergency warning lights. An Emergency Master switch provided on the instrument panel that enables or disables all individual warning light switches is included.

An additional "Emergency Master" button will be provided on the lower left hand corner of the gauge panel to allow convenient control of the "Emergency Master" system from inside the driver's door when standing on the ground.

#### Custom Switch Panels

The design of cab instrumentation will allow for emergency lighting and other switches to be placed within easy reach of the operator thus improving safety. There will be positions for up to four (4) switch panels in the lower instrument console and up to six (6) switch panels in the overhead visor console. All switches have backlit labels for low light conditions.

#### Diagnostic Panel

A diagnostic panel will be accessible while standing on the ground and located inside the driver's side door left of the steering column. The diagnostic panel will allow diagnostic tools such as computers to connect to various vehicle systems for improved troubleshooting providing a lower cost of ownership. Diagnostic switches will allow ABS systems to provide blink codes should a problem exist.

The diagnostic panel will include the following:

Engine diagnostic port

Transmission diagnostic port

ABS diagnostic port

Roll sensor diagnostic port

Command Zone USB diagnostic port

ABS diagnostic switch (blink codes flashed on ABS telltale indicator)

Diesel particulate filter regeneration switch (where applicable)

Diesel particulate filter regeneration inhibit switch (where applicable)

#### Cab LCD Display

A digital four (4)-row by 20-character dot matrix display will be integral to the gauge panel.

The display will be capable of showing simple graphical images as well as text. The display will be split into three (3) sections. Each section will have a dedicated function.

The upper left section will display the outside ambient temperature.

The upper right section will display the following, along with other configuration specific information:

Odometer

Trip mileage

PTO hours

Fuel consumption

Engine hours

The bottom section will display INFO, CAUTION, and WARNING messages. Text messages will automatically activate to describe the cause of an audible caution or warning alarm.

The LCD will be capable of displaying multiple text messages should more than one caution or warning condition exist.

#### AIR RESTRICTION INDICATOR

A high air restriction warning indicator light LCD message with amber warning indicator and audible alarm will be provided.

0543751	Light, Do Not Move Apparatus	<p><b>"DO NOT MOVE APPARATUS" INDICATOR</b>  A flashing red indicator light, located in the driving compartment, will be illuminated automatically per the current NFPA requirements. The light will be labeled "Do Not Move Apparatus If Light Is On."  The same circuit that activates the Do Not Move Apparatus indicator will activate a pulsing alarm when the parking brake is released.</p>
0509042	Messages, Open Door/Do Not Move Truck, MUX w/Color Display	<p><b>DO NOT MOVE TRUCK MESSAGES</b>  Messages will be displayed on the Command Zone™, color display located within sight of the driver whenever the Do Not Move Truck light is active. The messages will designate the item or items not in the stowed for vehicle travel position (parking brake disengaged).  The following messages will be displayed (where applicable):  Do Not Move Truck  DS Cab Door Open (Driver Side Cab Door Open)  PS Cab Door Open (Passenger's Side Cab Door Open)  DS Crew Cab Door Open (Driver Side Crew Cab Door Open)  PS Crew Cab Door Open (Passenger's Side Crew Cab Door Open)  DS Body Door Open (Driver Side Body Door Open)  PS Body Door Open (Passenger's Side Body Door Open)  Rear Body Door Open  DS Ladder Rack Down (Driver Side Ladder Rack Down)  PS Ladder Rack Down (Passenger Side Ladder Rack Down)  Deck Gun Not Stowed  Lt Tower Not Stowed (Light Tower Not Stowed)  Fold Tank Not Stowed (Fold-A-Tank Not Stowed)  Aerial Not Stowed (Aerial Device Not Stowed)  Stabilizer Not Stowed  Steps Not Stowed  Handrail Not Stowed  Any other device that is opened, extended, or deployed that creates a hazard or is likely to cause major damage to the apparatus if the apparatus is moved will be displayed as a caution message after the parking brake is disengaged.</p>
0622798	Switching, Cab Instrument Lower Console & Overhead, Rocker MUX, Enforcer	<p><b>SWITCH PANELS</b>  The built-in switch panels will be located in the lower console or overhead console of the cab. The switches will be rocker-type and include an integral indicator light. For quick, visual indication the switch will be illuminated whenever the switch is active. A 2-ply, scratch resistant laser engraved Gravoply label indicating the use of each switch will be placed below the switches. The label will allow light to pass through the letters for improved visibility in low light conditions. Switches and light source are integral to the switch panel assembly.</p>
0644179	Wiper Control, 2-Speed with Intermittent, Saber FR/Enforcer	<p><b>WIPER CONTROL</b>  Wiper control will consist of a two (2)-speed windshield wiper control with intermittent feature and windshield washer controls.</p>
0547478	Wiring, Spare, 7.5A 12V DC 1st	<p><b>SPARE CIRCUIT</b>  There will be one (1) pair of wires, including a positive and a negative, installed on the apparatus. The above wires will have the following features:  The positive wire will be connected directly to the battery switched power.  The negative wire will be connected to ground.  Wires will be protected to 7.5 amps at 12 volts DC.  Power and ground will terminate 4' of coiled wire behind the officer seat.  Termination will be with heat shrinkable butt splicing.  Wires will be sized to 125% of the protection.  This circuit(s) may be load managed when the parking brake is set.</p>
0548004	Wiring, Spare, 15 A 12V DC 1st	<p><b>SPARE CIRCUIT</b>  There will be two (2) pair of wires, including a positive and a negative, installed on the apparatus. The above wires will have the following features:  The positive wire will be connected directly to the battery power  The negative wire will be connected to ground  Wires will be protected to 15 amps at 12 volts DC  Power and ground will terminate officer side dash area and inside of the glove compartment, on the side next to the engine, best possible location  Termination will be with 15 amp, power point plug with rubber cover  Wires will be sized to 125 percent of the protection  The circuit(s) may be load managed when the parking brake is set.</p>

0548006	Wiring, Spare, 15 A 12V DC 2nd	<p><b>SPARE CIRCUIT</b>  There will be one (1) pair of wires, including a positive and a negative, installed on the apparatus. The above wires will have the following features:  The positive wire will be connected directly to the battery switched power.  The negative wire will be connected to ground.  Wires will be protected to 15 amps at 12 volts DC.  Power and ground will terminate driver side rear of the doghouse, facing the forward facing seats..</p> <p>Termination will be with 15 amp, power point plug with rubber cover.  Wires will be sized to 125 percent of the protection.  This circuit(s) may be load managed when the parking brake is set.</p>
0548009	Wiring, Spare, 20 A 12V DC 1st	<p><b>SPARE CIRCUIT</b>  There will be one (1) pair of wires, including a positive and a negative, installed on the apparatus. The above wires will have the following features:  The positive wire will be connected directly to the battery power  The negative wire will be connected to ground  Wires will be protected to 20 amps at 12 volts DC  Power and ground will terminate behind driver's seat  Termination will be with a 10-place bus bar with screws and removable cover  Wires will be sized to 125% of the protection  This circuit(s) may be load managed when the parking brake is set.</p>
0548015	Wiring, Spare, 30 A 12V DC 1st	<p><b>SPARE CIRCUIT</b>  There will be one (1) pair of wires, including a positive and a negative, installed on the apparatus. The above wires will have the following features:  The positive wire will be connected directly to the battery power  The negative wire will be connected to ground  Wires will be protected to 30 amps at 12 volts DC  Power and ground will terminate behind officer seat  Termination will be with heat shrinkable butt splicing  Wires will be sized to 125% of the protection  This circuit(s) may be load managed when the parking brake is set.</p>
0655679	Remote Control, Wired, Programmable 3 Button	<p><b>PROGRAMMABLE REMOTE CONTROL</b>  There will be a wired remote control integrated into the switch panel terminate the wire in the drivers overhead switch panel. Customer would like to locate the remote at the final inspection, can we run the power wires and leave them loose behind the overhead switch panel? . The remote will have three (3) individually programmable buttons for most garage door openers, and gate operators as well as the capability of controlling many lighting and security systems.</p>
0594194	Radio, AM/FM/CD/WB/Aux in, Panasonic	<p><b>RADIO WITH CD PLAYER</b>  There will be a Panasonic™, AM/FM/Weather Band stereo radio with compact disc player and auxiliary input jack installed.  The compact disc stereo radio will be mounted within reach of the officer.  The quantity and location of the speakers will be one (1) pair of 5.25" speakers in the cab and one (1) pair of 5.25" speakers in the crew cab.  The type and location of the antenna will be a roof-mounted rubber antenna located in an open space, on the cab roof.</p>
0615386	Vehicle Information Center, 7" Color Display, Touchscreen, MUX	<p><b>INFORMATION CENTER</b>  An information center employing a 7.00" diagonal touch screen color LCD display will be encased in an ABS plastic housing.  The information center will have the following specifications:  Operate in temperatures from -40 to 185 degrees Fahrenheit  An Optical Gel will be placed between the LCD and protective lens  Five weather resistant user interface switches  Grey with black accents  Sunlight Readable  Linux operating system  Minimum of 1000nits rated display  Display can be changed to an available foreign language  A LCD display integral to the cab gauge panel will be included as outlined in the cab instrumentation area.  Programmed to read US Customary</p> <p><b>General Screen Design</b>  Where possible, background colors will be used to provide "At a Glance" vehicle information. If information provided on a screen is within acceptable limits, a green background will be used. If a caution or warning situation arises the following will occur:  An amber background/text color will indicate a caution condition  A red background/text color will indicate a warning condition  The information center will utilize an "Alert Center" to display text messages for audible alarm tones. The text messages will be written to identify the item(s) causing the audible alarm to sound. If more than one (1) text message occurs, the messages will cycle every second until the problem(s) have been resolved. The background color for the "Alert Center" will change to indicate the severity of the "warning" message. If a warning and a caution condition occur simultaneously, the red background color will be shown for all alert center messages.  A label for each button will exist. The label will indicate the function for each active button for each screen. Buttons that are not utilized on specific screens will have a button label with no text or symbol.</p>

### **Home/Transit Screen**

This screen will display the following:

Vehicle Mitigation (if equipped)

Water Level (if the water level system includes compatible communications to the information center)

Foam Level (if the foam level system includes compatible communications to the information center)

Seat Belt Monitoring Screen

Tire Pressure Monitoring (if equipped)

Digital Speedometer

Active Alarms

### **On Scene Screen**

This screen will display the following and will be auto activated with pump engaged (if equipped):

Battery Voltage

Fuel

Oil Pressure

Coolant Temperature

RPM

Water Level (if equipped)

Foam Level (if equipped)

Foam Concentration (if equipped)

Water Flow Rate (if equipped)

Water Used (if equipped)

Active Alarms

### **Virtual Buttons**

There will be four (4) virtual switch panel screens that match the overhead and lower lighting and HVAC switch panels.

### **Page Screen**

The page screen will display the following and allow the user to progress into other screens for further functionality:

Diagnostics

Faults

Listed by order of occurrence

Allows to sort by system

Interlock

Throttle Interlocks

Pump Interlocks (if equipped)

Aerial Interlocks (if equipped)

PTO Interlocks (if equipped)

Load Manager

A list of items to be load managed will be provided. The list will provide a description of the load. The lower the priority numbers the earlier the device will be shed should a low voltage condition occur.

The screen will indicate if a load has been shed (disabled) or not shed.

"At a glance" color features are utilized on this screen.

Systems

Command Zone

Module type and ID number

Module Version

Input or output number

Circuit number connected to that input or output

Status of the input or output

Power and Constant Current module diagnostic information

Foam (if equipped)

Pressure Controller (if equipped)

Generator Frequency (if equipped)

Live Data

General Truck Data

Maintenance

Engine oil and filter

Transmission oil and filter

Pump oil (if equipped)

Foam (if equipped)

Aerial (if equipped)

Setup

Clock Setup

Date & Time

12 or 24 hour format

Set time and date

Backlight

Daytime

Night time

Sensitivity

Unit Selection

Home Screen

Virtual Button Setup

On Scene Screen Setup

Configure Video Mode

Set Video Contrast

Set Video Color

Set Video Tint

Do Not Move

The screen will indicate the approximate location and type of item that is open or is not stowed for travel. The actual status of the following devices will be indicated

Driver Side Cab Door

Passenger's Side Cab Door

Driver Side Crew Cab Door

Passenger's Side Crew Cab Door

Driver Side Body Doors  
 Passenger's Side Body Doors  
 Rear Body Door(s)  
 Ladder Rack (if applicable)  
 Deck Gun (if applicable)  
 Light Tower (if applicable)  
 Hatch Door (if applicable)  
 Stabilizers (if applicable)  
 Steps (if applicable)  
 Notifications  
 View Active Alarms  
 Shows a list of all active alarms including date and time of the occurrence is shown with each alarm  
 Silence Alarms - All alarms are silenced  
 Timer Screen  
 HVAC (if equipped)  
 Tire Information (if equipped)  
 Ascendant Set Up Confirmation (if equipped)  
 Button functions and button labels may change with each screen.

0734857 Collision Mitigation, HAAS Alert (R2V), HA5

**COLLISION MITIGATION**

There will be a HAAS Alert®, Model HA5 Responder-to-Vehicle (R2V) collision avoidance system provided on the apparatus. The HA5 cellular transponder module will be installed behind the cab windshield, as high and near to the center as practical, to allow clear visibility to the sky. The module dimensions are 5.40" long x 2.70" wide x 1.30" high, and operating temperature range is -40 degree C to 85 degree C.  
 The transponder will be connected to the vehicle's emergency master circuit and battery direct power and ground.  
 While responding with emergency lights on, the HA5 transponder sends alert messages via cellular network to motorists in the vicinity of the responding truck that are equipped with the WAZE app.  
 While on scene with emergency lights on, the HA5 transponder sends road hazard alerts to motorists in the vicinity of the truck that are equipped with the WAZE app.  
 The HA5 Responder-to-Vehicle (R2V) collision avoidance system will include the transponder and a 5 year cellular plan subscription.  
 Activation of the HAAS Alert system requires a representative of the customer to accept the End User License Agreement (EULA) via an on-line portal.

0606249 Vehicle Data Recorder w/CZ and Overhead Display Seat Belt Monitor

**VEHICLE DATA RECORDER**

There will be a vehicle data recorder (VDR) capable of reading and storing vehicle information provided.  
 The information stored on the VDR can be downloaded through a USB port mounted in a convenient location determined by cab model. A USB cable can be used to connect the VDR to a laptop to retrieve required information. The program to download the information from the VDR will be available to download on-line.  
 The vehicle data recorder will be capable of recording the following data via hardwired and/or CAN inputs:  
 Vehicle Speed - MPH  
 Acceleration - MPH/sec  
 Deceleration - MPH/sec  
 Engine Speed - RPM  
 Engine Throttle Position - % of Full Throttle  
 ABS Event - On/Off  
 Seat Occupied Status - Yes/No by Position  
 Seat Belt Buckled Status - Yes/No by Position  
 Master Optical Warning Device Switch - On/Off  
 Time - 24 Hour Time  
 Date - Year/Month/Day

**Seat Belt Monitoring System**

A seat belt monitoring system (SBMS) will be provided on the Command Zone™ color display and in the center overhead of the cab instrument panel. The SBMS will be capable of monitoring up to 10 seating positions indicating the status of each seat position per the following:  
 Seat Occupied & Buckled = Green LED indicator illuminated  
 Seat Occupied & Unbuckled = Red LED indicator with audible alarm  
 No Occupant & Buckled = Red LED indicator with audible alarm  
 No Occupant & Unbuckled = No indicator and no alarm  
 The seat belt monitoring screen will become active on the Command Zone color display when:  
 The home screen is active:  
 and there is any occupant seated but not buckled or any belt buckled with an occupant.  
 and there are no other Do Not Move Apparatus conditions present. As soon as all Do Not Move Apparatus conditions are cleared, the SBMS will be activated.  
 The SBMS will include an audible alarm that will warn that an unbuckled occupant condition exists and the parking brake is released, or the transmission is not in park.

0735005	Intercom, David Clark, 4-Pos, 2-Radio, (D,O,RPTT),2ibC, U3805	<p><b>INTERCOM SYSTEM</b></p> <p>A four (4) position David Clark, Model U3800, intercom system with single radio interface at the driver and officer positions with remote radio push-to-talk buttons located per IP layout, see 28553 will be provided. Two (2) crew cab inboard seating positions will have intercom only. The following components will be supplied with this system,</p> <p>One (1) U3805 Radio Cord Junction Module</p> <p>Two (2) U3815 Radio Interface Modules (Driver, Officer)</p> <p>Two (2) Remote Radio Push To Talk</p> <p>One (1) U3800 Intercom Unit (2 Crew)</p> <p>One (1) C3820 Power Cable</p> <p>All necessary cables and connectors</p>
0637058	David Clark Universal Radio Interfaces Included with Single/Dual System	<p><b>RADIO / INTERCOM INTERFACE INCLUDED</b></p> <p>All radio interfaced stations will have universal radio interfaces installed. The interface wiring will be routed within the cab to behind the officers seat .</p>
0589947	Headset, David Clark, H3432 Over The Head, Flex Mic, Push On Push Off	<p><b>OVER THE HEAD HEADSET</b></p> <p>There will be four (4) over the head, headset(s) provided shipped loose. Each David Clark, Model H3432, headset will feature:</p> <p>5' Coiled cord</p> <p>Noise cancelling electric microphone</p> <p>Flexible microphone boom rotates 200 degrees for left or right dress</p> <p>Microphone on/off button</p> <p>Comfort Gel Earseals</p> <p>23 dB noise reduction</p>
0681408	Hangers For Headsets, NFPA, Each	<p><b>HEADSET HANGERS</b></p> <p>There will be four (4) headset hanger(s) installed driver's side inboard forward facing seat and passenger's side inboard forward facing seat. The hanger(s) will meet NFPA 1901, Section 14.1.11, requirement for equipment mounting.</p>
0517372	Switch, AM/FM Radio, Location and Power Feature	<p><b>REMOTE ON/OFF SWITCH FOR AM/FM RADIO</b></p> <p>A remote, radio on/off switch will be located on the divers side membrane switch . The switch power will be directly to the battery switched power .</p>
0687904	Antenna Mount, Custom Chassis, Cable Routed to Behind Officer Seat	<p><b>RADIO ANTENNA MOUNT</b></p> <p>There will be one (1) standard 1.125", 18 thread antenna-mounting base(s) installed behind the officer side seat, on the EMS compartment wall on the cab roof with high efficiency, low loss, coaxial cable(s) routed to behind the officer seat. A weatherproof cap will be installed on the mount.</p>
0653526	Camera, Pierce, Driver Mux, Rear Camera Only	<p><b>VEHICLE CAMERA SYSTEM</b></p> <p>There will be a color vehicle camera system provided with the following:</p> <p>One (1) camera located at the rear of the apparatus, pointing rearward, displayed automatically with the vehicle in reverse</p> <p>The camera images will be displayed on the driver's vehicle information center display. Audio from the microphone on the active camera will be emitted by an amplified speaker with volume control located behind the driver seat.</p> <p>The following components will be included:</p> <p>One (1) SV-CW134639CAI, camera</p> <p>One (1) amplified speaker (if applicable)</p> <p>All necessary cables</p>
0523921	Recess, Rear Vision Camera	<p><b>RECESS REAR CAMERA</b></p> <p>A rear camera recess will be provided in the center at the rear .</p>
0615112	Pierce Command Zone, Advanced Electronics & Control System, Enforcer, WiFi	<p><b>ELECTRICAL POWER CONTROL SYSTEM</b></p> <p>The primary power distribution will be located forward of the officer's seating position and be easily accessible while standing on the ground for simplified maintenance and troubleshooting. Additional electrical distribution centers will be provided throughout the vehicle to house the vehicle's electrical power, circuit protection, and control components. The electrical distribution centers will be located strategically throughout the vehicle to minimize wire length. For ease of maintenance, all electrical distribution centers will be easily accessible. All distribution centers containing fuses, circuit breakers and/or relays will be easily accessible.</p> <p>Distribution centers located throughout the vehicle will contain battery powered studs for supplying customer installed equipment thus providing a lower cost of ownership.</p> <p>Circuit protection devices, which conform to SAE standards, will be utilized to protect electrical circuits. All circuit protection devices will be rated per NFPA requirements to prevent wire and component damage when subjected to extreme current overload. General protection circuit breakers will be Type-I automatic reset (continuously resetting). When required, automotive type fuses will be utilized to protect electronic equipment. Control relays and solenoid will have a direct current rating of 125 percent of the maximum current for which the circuit is protected per NFPA.</p> <p><b>Solid-State Control System</b></p> <p>A solid-state electronics based control system will be utilized to achieve advanced operation and control of the vehicle components. A fully computerized vehicle network will consist of electronic</p>

modules located near their point of use to reduce harness lengths and improve reliability. The control system will comply with SAE J1939-11 recommended practices.

The control system will operate as a master-slave system whereas the main control module instructs all other system components. The system will contain patented Mission Critical software that maintains critical vehicle operations in the unlikely event of a main controller error. The system will utilize a Real Time Operating System (RTOS) fully compliant with OSEK/VDX™ specifications providing a lower cost of ownership.

For increased reliability and simplified use the control system modules will include the following attributes:

Green LED indicator light for module power

Red LED indicator light for network communication stability status

Control system self test at activation and continually throughout vehicle operation

No moving parts due to transistor logic

Software logic control for NFPA mandated safety interlocks and indicators

Integrated electrical system load management without additional components

Integrated electrical load sequencing system without additional components

Customized control software to the vehicle's configuration

Factory and field re-programmable to accommodate changes to the vehicle's operating parameters

Complete operating and troubleshooting manuals

USB connection to the main control module for advanced troubleshooting

To assure long life and operation in a broad range of environmental conditions, the solid-state control system modules will meet the following specifications:

Module circuit board will meet SAE J771 specifications

Operating temperature from -40C to +70C

Storage temperature from -40C to +70C

Vibration to 50g

IP67 rated enclosure (Totally protected against dust and also protected against the effect of temporary immersion between 15 centimeters and one (1) meter)

Operating voltage from eight (8) volts to 16 volts DC

The main controller will activate status indicators and audible alarms designed to provide warning of problems before they become critical.

#### **Circuit Protection and Control Diagram**

Copies of all job-specific, computer network input and output (I/O) connections will be provided with each chassis. The sheets will indicate the function of each module connection point, circuit protection information (where applicable), wire numbers, wire colors and load management information.

#### **On-Board Electrical System Diagnostics**

Advanced on-board diagnostic messages will be provided to support rapid troubleshooting of the electrical power and control system. The diagnostic messages will be displayed on the information center located at the driver's position.

The on-board information center will include the following diagnostic information:

Text description of active warning or caution alarms

Simplified warning indicators

Amber caution indication with intermittent alarm

Red warning indication with steady tone alarm

#### **Prognostics**

A software based vehicle tool will be provided to predict remaining life of the vehicles critical fluid and events.

The system will send automatic indications to the Command Zone, color display and/or wireless enabled device to proactively alert of upcoming service intervals.

Prognostics will include:

Engine oil and filter

Transmission oil and filter

Pump oil (if equipped)

Foam oil (if equipped)

Aerial oil and filter (if equipped)

#### **Advanced Diagnostics**

An advanced, Windows-based, diagnostic software program will be provided for this control system. The software will provide troubleshooting tools to service technicians equipped with a Windows-based computer or wireless enabled device.

The service and maintenance software will be easy to understand and use and have the ability to view system input/output (I/O) information.

#### **Tech Module With WiFi**

An in cab module will provide WiFi wireless interface and data logging capability. The WiFi interface will comply with IEEE 802.11 b/g/n capabilities while communicating at 2.4 Gigahertz.

The module will provide an external antenna connection allowing a line of site communication range of up to 300 feet with a roof mounted antenna.

The module will transmit a password protected web page to a WiFi enabled device (i.e. most smart phones, tablets or laptops) allowing two levels of user interaction. The firefighter level will allow vehicle monitoring of the vehicle and firefighting systems on the apparatus. The technician level will allow diagnostic access to inputs and outputs installed on the Command Zone, control and information system.

The data logging capability will record faults from the engine, transmission, ABS and Command Zone, control and information systems as they occur. No other data will be recorded at the time the fault occurs. The data logger will provide up to 2 Gigabytes of data storage.

A USB connection will be provided on the Tech Module. It will provide a means to download data logger information and update software in the device.

#### **Indicator Light and Alarm Prove-Out System**

A system will be provided which automatically tests basic indicator lights and alarms located on the cab instrument panel.

#### **Voltage Monitor System**

A voltage monitoring system will be provided to indicate the status of the battery system connected to the vehicle's electrical load. The system will provide visual and audible warning when the system voltage is below or above optimum levels.

The alarm will activate if the system falls below 11.8 volts DC for more than two (2) minutes.

#### **Power and Ground Studs**



Spare circuits will be provided in the primary distribution center for two-way radio equipment.

The spare circuits will consist of the following:

One (1) 12-volt DC, 30 amp battery direct spare

One (1) 12-volt DC ground and un-fused switched battery stud located in or adjacent to the power distribution center

#### **Enhanced Software**

The solid-state control system will include the following software enhancements:

All perimeter lights and scene lights (where applicable) will be deactivated when the parking brake is released.

Cab and crew cab dome lights will remain on for 10 seconds for improved visibility after the doors close. The dome lights will dim after 10 seconds or immediately if the vehicle is put into gear.

Cab and crew cab perimeter lights will remain on for 10 seconds for improved visibility after the doors close. The dome lights will dim after 10 seconds or immediately if the vehicle is put into gear.

#### **EMI/RFI Protection**

To prevent erroneous signals from crosstalk contamination and interference, the electrical system will meet, at a minimum, SAE J551/2, thus reducing undesired electromagnetic and radio frequency emissions. An advanced electrical system will be used to ensure radiated and conducted electromagnetic interference (EMI) or radio frequency interference (RFI) emissions are suppressed at their source.

The apparatus will have the ability to operate in the electromagnetic environment typically found in fire ground operations to ensure clean operations. The electrical system will meet electromagnetic susceptibility conforming to SAE J1113/25 Region 1, Class C EMR for 10Khz-1GHz to 100 Volts/Meter. The vehicle OEM, upon request, will provide EMC testing reports from testing conducted on an entire apparatus and will certify that the vehicle meets SAE J551/2 and SAE J1113/25 Region 1, Class C EMR for 10Khz-1GHz to 100 Volts/Meter requirements.

EMI/RFI susceptibility will be controlled by applying appropriate circuit designs and shielding. The electrical system will be designed for full compatibility with low-level control signals and high-powered two-way radio communication systems. Harness and cable routing will be given careful attention to minimize the potential for conducting and radiated EMI/RFI susceptibility.

0624253

Electrical System, Enforcer MUX

#### **ELECTRICAL**

All 12-volt electrical equipment installed by the apparatus manufacturer will conform to modern automotive practices. All wiring will be high temperature crosslink type. Wiring will be run, in loom or conduit, where exposed and have grommets where wire passes through sheet metal.

Automatic reset circuit breakers will be provided which conform to SAE Standards. Wiring will be color, function and number coded. Function and number codes will be continuously imprinted on all wiring harness conductors at 2.00" intervals. Exterior exposed wire connectors will be positive locking, and environmentally sealed to withstand elements such as temperature extremes, moisture and automotive fluids.

Electrical wiring and equipment will be installed utilizing the following guidelines:

All holes made in the roof will be caulked with silicon. Large fender washers, liberally caulked, will be used when fastening equipment to the underside of the cab roof.

Any electrical component that is installed in an exposed area will be mounted in a manner that will not allow moisture to accumulate in it. Exposed area will be defined as any location outside of the cab or body.

Electrical components designed to be removed for maintenance will not be fastened with nuts and bolts. Metal screws will be used in mounting these devices. Also a coil of wire will be provided behind the appliance to allow them to be pulled away from mounting area for inspection and service work.

Corrosion preventative compound will be applied to all terminal plugs located outside of the cab or body. All non-waterproof connections will require this compound in the plug to prevent corrosion and for easy separation (of the plug).

All lights that have their sockets in a weather exposed area will have corrosion preventative compound added to the socket terminal area.

All electrical terminals in exposed areas will have silicon (1890) applied completely over the metal portion of the terminal.

All lights and reflectors, required to comply with Federal Motor Vehicle Safety Standard #108, will be furnished. Rear identification lights will be recessed mounted for protection. Lights and wiring mounted in the rear bulkheads will be protected from damage by installing a false bulkhead inside the rear compartments.

An operational test will be conducted to ensure that any equipment that is permanently attached to the electrical system is properly connected and in working order.

The results of the tests will be recorded and provided to the purchaser at time of delivery.

0079166

Batteries, (4) Exide Grp 31, 950 CCA ea, Threaded Stud

#### **BATTERY SYSTEM**

There will be four (4) 12 volt Exide®, Model 31S950X3W, batteries that include the following features will be provided:

950 CCA, cold cranking amps

190 amp reserve capacity

High cycle

Group 31

Rating of 3800 CCA at 0 degrees Fahrenheit

760 minutes of reserve capacity

Threaded stainless steel studs

Each battery case will be a black polypropylene material with a vertically ribbed container for increased vibration resistance. The cover will be manifold vented with a central venting location to allow a 45 degree tilt capacity.

The inside of each battery will consist of a "maintenance free" grid construction with poly wrapped separators and a flooded epoxy bottom anchoring for maximum vibration resistance.

0008621	Battery System, Single Start, All Custom Chassis	<p><b>BATTERY SYSTEM</b> There will be a single starting system with an ignition switch and starter button provided and located on the cab instrument panel.</p> <p><b>MASTER BATTERY SWITCH</b> There will be a master battery switch provided within the cab within easy reach of the driver to activate the battery system. An indicator light will be provided on the instrument panel to notify the driver of the status of the battery system.</p>
0002698	Battery Compartment, Saber/Enforcer	<p><b>BATTERY COMPARTMENTS</b> Batteries will be placed on non-corrosive mats and stored in well ventilated compartments located under the cab. Heavy-duty, 2/0 gauge, color coded battery cables will be provided. Battery terminal connections will be coated with anti-corrosion compound. Battery solenoid terminal connections will be encapsulated with semi-permanent rubberized compound.</p> <p><b>JUMPER STUDS</b> One (1) set of battery jumper studs with plastic color-coded covers will be included on the battery compartments.</p>
0531325	Charger, Sngl Sys, Kussmaul, 35/10, 091-35/10	<p><b>BATTERY CHARGER</b> A Kussmaul Autocharge 35/10, Model 091-35-10, single battery charger will be provided. A bar graph display indicating the state of charge will be provided. The battery saver circuit will be capable of supplying up to 10 amps for external loads such as hand light or auxiliary radio batteries. The battery charger will be wired to the 120-volt shoreline to activate automatically when power is connected.</p>
0779452	Location, Charger, Cab EMS Compt, Back Wall	The battery charger will be located on the back wall of the EMS compartment, located Drivers side EMS compartment.
0530949	Location, Bat Chrg Ind, Driver's Seat Riser	The battery charger indicator will be located on the driver's seat riser.
0016857	Shoreline, 20A 120V, Kussmaul Auto Eject, 091-55-20-120, Super	<p><b>AUTO EJECT FOR SHORELINE</b> There will be one (1) Kussmaul™, Model 091-55-20-120, 20 amp 120 volt AC shoreline inlet(s) provided to operate the dedicated 120 volt AC circuits on the apparatus. The shoreline inlet(s) will include red weatherproof flip up cover(s). There will be a release solenoid wired to the vehicle's starter to eject the AC connector when the engine is starting. The shoreline(s) will be connected to the battery charger. There will be a mating connector body supplied with the loose equipment. There will be a label installed near the inlet(s) that state the following: Line Voltage Current Rating (amps) Phase Frequency</p>
0026800	Shoreline Location	The shoreline receptacle will be located on the driver side of cab, above wheel.
0625793	Alternator, 350 amp, Leece-Neville BLP4004H	<p><b>ALTERNATOR</b> A Leece-Neville, Model BLP4004H, alternator will be provided. It will have a rated output current of 350 amp as measured by SAE method J56. The alternator will feature an integral, self diagnostic regulator and rectifier. The alternator will be connected to the power and ground distribution system with heavy-duty cables sized to carry the full rated alternator output.</p>

**ELECTRONIC LOAD MANAGER**

An electronic load management (ELM) system will be provided that monitors the vehicles 12-volt electrical system, automatically reducing the electrical load in the event of a low voltage condition, and automatically restoring the shed electrical loads when a low voltage condition expires. This ensures the integrity of the electrical system.

For improved reliability and ease of use, the load manager system will be an integral part of the vehicle's solid state control system requiring no additional components to perform load management tasks. Load management systems which require additional components will not be allowed.

The system will include the following features:

System voltage monitoring.

A shed load will remain inactive for a minimum of five minutes to prevent the load from cycling on and off.

Sixteen available electronic load shedding levels.

Priority levels can be set for individual outputs.

High Idle to activate before any electric loads are shed and deactivate with the service brake.

If enabled:

"Load Man Hi-Idle On" will display on the information center.

Hi-Idle will not activate until 30 seconds after engine start up.

Individual switch "on" indicator to flash when the particular load has been shed.

The information center indicates system voltage.

The information center, where applicable, includes a "Load Manager" screen indicating the following:

Load managed items list, with priority levels and item condition.

Individual load managed item condition:

ON = not shed

SHED = shed

**SEQUENCER**

A sequencer will be provided that automatically activates and deactivates vehicle loads in a preset sequence thereby protecting the alternator from power surges. This sequencer operation will allow a gradual increase or decrease in alternator output, rather than loading or dumping the entire 12 volt load to prolong the life of the alternator.

For improved reliability and ease of use, the load sequencing system will be an integral part of the vehicle's solid state control system requiring no additional components to perform load sequencing tasks. Load sequencing systems which require additional components will not be allowed.

Emergency light sequencing will operate in conjunction with the emergency master light switch. When the emergency master switch is activated, the emergency lights will be activated one by one at half-second intervals. Sequenced emergency light switch indicators will flash while waiting for activation.

When the emergency master switch is deactivated, the sequencer will deactivate the warning light loads in the reverse order.

Sequencing of the following items will also occur, in conjunction with the ignition switch, at half-second intervals:

Cab Heater and Air Conditioning

Crew Cab Heater (if applicable)

Crew Cab Air Conditioning (if applicable)

Exhaust Fans (if applicable)

Third Evaporator (if applicable)

0783153

Headlights, Rect LED, JW Spkr Evo 2, AXT/DCF/Enf/Imp/Sab/Vel

**HEADLIGHTS**

There will be four (4) JW Speaker®, Model 8800, 4" x 6" rectangular LED lights mounted in the front quad style, chrome housing on each side of the cab grille:

the outside light on each side will contain a part number 055\*\*\*1 low beam module

the inside light on each side will contain a part number 055\*\*\*1 high beam module

the headlight to include chrome bezels

The low beam lights will be activated when the headlight switch is on.

The high beam and low beam lights will be activated when the headlight switch and the high beam switch is activated.

0625953

Light, Directional, Wln 600 Cmb, Cab Crn, Wrp Bzl Out HD Lts, Enf, Sab FR

**DIRECTIONAL LIGHTS**

There will be two (2) Whelen 600 series, LED combination directional/marker lights provided. The lights will be located on the outside cab corners, next to the headlights.

The color of the lenses will be clear.

0620054

Light, Directional/Marker, Intermediate, Weldon 9186-8580-29 LED 2lts

**INTERMEDIATE LIGHT**

There will be two (2) Weldon, Model 9186-8580-29, amber LED turn signal marker lights furnished, one (1) each side, in the rear fender panel. The light will double as a turn signal and marker light.

0735474

Lights, Clearance/Marker/ID, Front, P25 LED 7 Lts, Saber FR/Enforcer

**CAB CLEARANCE/MARKER/ID LIGHTS**

There will be seven (7) amber LED lights provided per the following:

Three (3) amber LED identification lights will be installed in the center of the cab above the windshield.

Two (2) amber LED clearance lights will be installed, one (1) on each outboard side of the cab above the windshield as close to the outside of the apparatus as practical.

Two (2) amber LED clearance lights will be installed, one (1) on each side of the cab as high and far forward as practical.

0563675	Lights, Clearance/Marker/ID, Rear, Truck-Lite 33050R LED 7Lts	<p><b>REAR CLEARANCE/MARKER/ID LIGHTING</b>  There will be three (3) Truck-Lite®, Model 33050R, LED lights used as identification lights recessed and located at the rear of the apparatus per the following:  As close as practical to the vertical centerline  Centers spaced not less than 6.00" or more than 12.00" apart  Red in color  All at the same height  There will be two (2) Truck-Lite, Model 33050R, LED lights recessed at the rear of the apparatus used as clearance lights located at the rear of the apparatus per the following:  To indicate the overall width of the vehicle  One (1) each side of the vertical centerline  As near the top as practical  Red in color  To be visible from the rear  All at the same height  There will be two (2) Truck-Lite, Model 33050R, LED lights recessed on the side of the apparatus as marker lights as close to the rear as practical per the following:  To indicate the overall length of the vehicle  One (1) each side of the vertical centerline  As near the top as practical  Red in color  To be visible from the side  All at the same height  There will be two (2) red reflectors located on the rear of the truck facing to the rear. One (1) each side, as far to the outside as practical, at a minimum of 15.00", but no more than 60.00", above the ground.  There will be two (2) red reflectors located on the side of the truck facing to the side. One (1) each side, as far to the rear as practical, at a minimum of 15.00", but no more than 60.00", above the ground.</p> <p>Per FMVSS 108 and CMVSS 108 requirements.</p>
0796064	Lights, Directional/Marker, Cab Front Side, Truck-Lite 19036YLED, Saber FR	<p><b>FRONT CAB SIDE DIRECTIONAL/MARKER LIGHTS</b>  There will be two (2) Truck-Lite®, Model 19036Y, amber LED lights installed to the outside of the chrome wrap around bezel, one (1) on each side of the cab.  The lights will activate as marker lights with the headlight switch and directional lights with the corresponding directional circuit.</p>
0564683	Lights, Tail, WIn M6BTT* Red LED Stop/Tail & M6T* Amber LED Dir Arw For Hsg	<p><b>REAR FMVSS LIGHTING</b>  The rear stop/tail and directional LED lighting will consist of the following:  Two (2) Whelen®, Model M6BTT, red LED stop/tail lights  Two (2) Whelen, Model M6T, amber LED arrow turn lights  The lights will be provided with clear lenses.  The lights will be mounted in a polished combination housing.</p>
0561471	Lights, Backup, WIn M6BUW, LED, For Tail Lt Housing	<p>There will be two (2) Whelen Model M6BUW, LED backup lights provided in the tail light housing.</p>
0664481	Bracket, License Plate & Light, P25 LED	<p><b>LICENSE PLATE BRACKET</b>  There will be one (1) license plate bracket mounted on the rear of the body.  A white LED light will illuminate the license plate. A stainless steel light shield will be provided over the light that will direct illumination downward, preventing white light to the rear.</p>
0556842	Bezels, WIn, (2) M6 Chrome Pierce, For mtg (4) WIn M6 lights	<p><b>LIGHTING BEZEL</b>  There will be two (2) Whelen, Model M6FCV4P, four (4) place chromed ABS housings with Pierce logos provided for the rear M6 series stop/tail, directional, back up, scene lights or warning lights.</p>
0589905	Alarm, Back-up Warning, PRECO 1040	<p><b>BACK-UP ALARM</b>  A PRECO, Model 1040, solid-state electronic audible back-up alarm that actuates when the truck is shifted into reverse will be provided. The device will sound at 60 pulses per minute and automatically adjust its volume to maintain a minimum ten (10) dBA above surrounding environmental noise levels.</p>
0769420	Lights, Perimeter Cab, Amdor AY-LB-12HW020 LED 4Dr	<p><b>CAB PERIMETER SCENE LIGHTS</b>  There will be four (4) Amdor, Model AY-LB12HW020, 350 lumens each, 20.00" white LED strip lights provided, one (1) for each cab door.  These lights will be activated automatically when the battery switch is on and the exit doors are opened or by the same means as the body perimeter scene lights.</p>
0769559	Lights, Perimeter Pump House, Amdor AY-LB-12HW012 LED 2lts	<p><b>PUMP HOUSE PERIMETER LIGHTS</b>  There will be two (2) Amdor, Model AY-LB12HW012, 190 lumens each, 12.00" LED weatherproof strip lights with brackets provided under the pump panel running boards, centered front to rear as much as possible, one (1) each side.  The lights will be activated when the battery switch is on, and controlled by the same means as the body perimeter lights.</p>

0769560	Lights, Perimeter Body, Amdor AY-LB-12HW012 LED 2lts, Rear Step	<p><b>BODY PERIMETER SCENE LIGHTS</b></p> <p>There will be two (2) Amdor, Model AY-LB12HW012, 190 lumens each, 12.00" 12 volt DC LED strip lights provided at the rear step area of the body, one (1) each side shining to the rear. The perimeter scene lights will be activated when the parking brake is applied and the ignition switch activates the side facing lights.</p>
0556360	Lights, Step, P25 LED 4lts, Pump Pnl Sw	<p><b>STEP LIGHTS</b></p> <p>Four (4) white LED step lights will be provided. One (1) step light will be provided on each side, on the front compartment face and two (2) step lights at the rear to illuminate the tailboard. In order to ensure exceptional illumination, each light will provide a minimum of 25 foot-candles (fc) covering an entire 15.00" x 15.00" square placed 10.00" below the light and a minimum of 1.5 fc covering an entire 30.00" x 30.00" square at the same 10.00" distance below the light. These step lights will be actuated with the pump panel light switch. All other steps on the apparatus will be illuminated per the current edition of NFPA 1901.</p>
0532358	Not Required, Deck Lights, Other Hose Bed & Rear Lighting	
0645877	Lights, Hose Bed, Sides, Dual LED Light Strips	<p><b>HOSE BED LIGHTS</b></p> <p>There will be white 12 volt DC LED light strips with stainless steel protective cover, provided to light the hose bed area. Hose Bed lights will meet the photometric levels listed in NFPA 1901 for Hose Bed lighting requirements. Light strip(s) will be installed along the upper edge of the left side of the hose bed. Light strip(s) will be installed along the upper edge of the right side of the hose bed. The lights will be activated when the hosebed cover is raised.</p>
0645677	Lights, Not Required, Rear Work, Alt. 12 Volt Lights At Rear Body	
0640627	Light, Wln, 12V PCPSM1* Pioneer LED Fld/Spt, Surface Mount 2nd	<p><b>12 VOLT LIGHTING</b></p> <p>There will be one (1) Whelen, Model PCPSM1*, 12 volt surface mounted LED combination spot/flood light(s) located Drivers side cab high above the EMS compartment. The lights will be mounted with chrome flange(s). The light(s) selected above will be controlled by the following:  a switch at the driver's side switch panel  a switch at the passenger's side switch panel  a switch at the pump operator's panel  no additional switch location  These light(s) may be load managed when the parking brake is set.</p>
0640629	Light, Wln, 12V PCPSM1* Pioneer LED Fld/Spt, Surface Mount 1st	<p><b>12 VOLT LIGHTING</b></p> <p>There will be two (2) Whelen, Model PCPSM1*, 12 volt surface mounted LED combination spot/flood light(s) located rear of the body, DS PS high. The lights will be mounted with chrome flange(s). The light(s) selected above will be controlled by the following:  a switch at the driver's side switch panel  a switch at the passenger's side switch panel  a switch at the driver's side pump panel  a switch in a stainless steel cup located at the rear no more than 62.00" from the ground  These light(s) may be load managed when the parking brake is set.</p>
0640941	Light, Wln, 12V PCPSM2* Pioneer LED Fld/Spt, Surface Mnt 2nd	<p><b>12 VOLT LIGHTING</b></p> <p>There will be one (1) Whelen, Model PCPSM2*, 12 volt surface mounted LED combination spot/flood light(s) located Rear of the hatch compartment on the passenger side next to the M9 code 3 light. The lights will be mounted with chrome flange(s). The light(s) selected above will be controlled by the following:  from the passenger's side cab scene light option control  no additional switch location  no additional switch location  no additional switch location  These light(s) may be load managed when the parking brake is set.</p>
0640991	Light, Wln, 12V PCPSM2* Pioneer LED Fld/Spt, Surface Mnt 1st	<p><b>12 VOLT LIGHTING</b></p> <p>There will be one (1) Whelen, Model PCPSM2*, 12 volt surface mounted LED combination spot/flood light(s) located Rear of the hatch compartment on the drivers side next to the M9 code 3 light. The lights will be mounted with chrome flange(s). The light(s) selected above will be controlled by the following:  from the passenger's side cab scene light option control  no additional switch location  no additional switch location  no additional switch location  These light(s) may be load managed when the parking brake is set.</p>

0632401	Light, WIn, 12V PCPSM1* Pioneer LED Fld/Spt, Surface Mount 3rd	<p><b>12 VOLT LIGHTING</b></p> <p>There will be one (1) Whelen, Model PCPSM1*, 12 volt surface mounted LED combination spot/flood light(s) located Passenger side cab high above the EMS compartment. The lights will be mounted with chrome flange(s).</p> <p>The light(s) selected above will be controlled by the following:</p> <ul style="list-style-type: none"> <li>a switch at the driver's side switch panel</li> <li>a switch at the passenger's side switch panel</li> <li>a switch at the pump operator's panel</li> <li>no additional switch location</li> </ul> <p>These light(s) may be load managed when the parking brake is set.</p>
0776357	Light, Visor, WIn, 12V P*H2* Pioneer, Cnt Feature, 1st	<p><b>12 VOLT LIGHTING</b></p> <p>There will be one (1) Whelen® Model P*H2*, 17,750 lumens 12 volt DC light(s) with a combination of flood and spot optics provided on the front visor, centered.</p> <p>The housing(s) painted parts of this light assembly to be white.</p> <p>The light(s) will be controlled by a switch at the driver's side switch panel and by a switch at the passenger's side switch panel.</p> <p>These light(s) may be load managed when the parking brake is applied.</p>
0794961	Lights, Walk Surf, 8-P25 LED, Hose Bed Cover, Overall Height Restrictions	<p><b>WALKING SURFACE LIGHT</b></p> <p>There will be eight (8) 12 volt DC LED lights provided on the hose bed cover to illuminate the walking surface. The lights will be located near the hose bed cover hinges evenly spaced four (4) on each side. The lights will be activated when the body step lights are on.</p>
0060100	Pumper, Short, Galvanneal, 2nd Gen	
0554271	Body Skirt Height, 20"	
0028294	Tank, Water, 500 Gallon, Poly, Short	<p><b>WATER TANK</b></p> <p>Booster tank will have a capacity of 500 gallons and be constructed of polypropylene plastic by United Plastic Fabricating, Incorporated.</p> <p>Tank joints and seams will be nitrogen welded inside and out.</p> <p>Tank will be baffled in accordance with NFPA bulletin 1901 requirements.</p> <p>Baffles will have vent openings at both the top and bottom to permit movement of air and water between compartments.</p> <p>Longitudinal partitions will be constructed of .38" polypropylene plastic and will extend from the bottom of the tank through the top cover to allow for positive welding.</p> <p>Transverse partitions will extend from 4.00" off the bottom of the tank to the underside of the top cover.</p> <p>All partitions will interlock and will be welded to the tank bottom and sides.</p> <p>Tank top will be constructed of .50" polypropylene. It will be recessed .38" and will be welded to the tank sides and the longitudinal partitions.</p> <p>Tank top will be sufficiently supported to keep it rigid during fast filling conditions.</p> <p>Construction will include 2.00" polypropylene dowels spaced no more than 30.00" apart and welded to the transverse partitions. Two (2) of the dowels will be drilled and tapped (.50" diameter, 13.00" deep) to accommodate lifting eyes.</p> <p>A sump that will be sized dependent on the tank to pump plumbing will be provided at the bottom of the water tank.</p> <p>Sump will include a drain plug and the tank outlet.</p> <p>Tank will be installed in a fabricated cradle assembly constructed of structural steel.</p> <p>Sufficient crossmembers will be provided to properly support bottom of tank. Crossmembers will be constructed of steel bar channel or rectangular tubing.</p> <p>Tank will "float" in cradle to avoid torsional stress caused by chassis frame flexing. Rubber cushions, .50" thick x 3.00" wide, will be placed on all horizontal surfaces that the tank rests on.</p> <p>Stops or other provision will be provided to prevent an empty tank from bouncing excessively while moving vehicle.</p> <p>Mounting system will be approved by the tank manufacturer.</p>
0003405	Overflow, 4.00" Water Tank, Poly	<p>Fill tower will be constructed of .50" polypropylene and will be a minimum of 8.00" wide x 14.00" long.</p> <p>Fill tower will be furnished with a .25" thick polypropylene screen and a hinged cover.</p> <p>An overflow pipe, constructed of 4.00" schedule 40 polypropylene, will be installed approximately halfway down the fill tower and extend through the water tank and exit to the rear of the rear axle.</p>
0028104	Foam Cell Required	
0034425	Modified Poly Tank for Folding Tank, Ladder Storage or Backboards	
0633066	Sleeve, Through Tank	<p><b>SLEEVE, PLUMBING, THROUGH TANK</b></p> <p>One (1) sleeve will be provided in the water tank for a 3.00" pipe to the rear.</p>

0553729	Not Required, Restraint, Water Tank, Heavy Duty	
0013416	Tank Fill, 2.50", Manual, Pump Panel	<p><b>DIRECT TANK FILL</b></p> <p>There will be one (1) - 2.50" gated tank fill(s) installed and properly labeled at the left side pump panel.</p> <p>Piping, for the fill, will be routed through the front wall of the tank and include a flow deflector to break up the stream of water entering the water tank.</p> <p>A 2.50" full flow ball valve with 2.50" piping and a 2.50" (F)NST chrome swivel will be located at the inlet.</p> <p>The valve for the inlet will be recessed behind the pump panel.</p> <p>A chrome plated plug and chain will be provided for the tank fill.</p>
0003424	Not Required, Dump Valve	
0048710	Not Required, Jet Assist	
0030007	Not Required, Dump Valve Chute	
0514778	Not Required, Switch, Tank Dump Master	
0126632	Hose Bed, Galv, Pumper	<p><b>HOSE BED</b></p> <p>The hose bed will be fabricated of 12-gauge galvanneal steel.</p> <p>The sides will not form any portion of the fender compartments.</p> <p>Upper and rear edges of side panels will have a double break for rigidity.</p> <p>The upper inside area of the beavertails will be covered with brushed stainless steel to prevent damage to painted surface when hose is removed.</p> <p>Flooring of the hose bed will be removable aluminum grating with the top surface corrugated to aid in hose aeration. The grating slats will be a minimum of 0.50" x 4.50" with spacing between slats for hose ventilation.</p>
0003481	Hose Bed Capacity, Special	Hose bed will accommodate Drivers side - 300' of 3" double jacket hose, 150' of 2.5" double jacket, Middle - Hotel packs, (2) 100' 1.75" packs, Passenger side, 1000' of 5" double jacket LDH with storz fittings.
0003488	Divider, Hose Bed, Unpainted	<p><b>HOSE BED DIVIDER</b></p> <p>Three (3) adjustable hosebed dividers will be furnished for separating hose.</p> <p>Each divider will be constructed of a .125" brushed aluminum sheet fitted and fastened into a slotted, 1.50" diameter radiused extrusion along the top, bottom, and rear edge.</p> <p>Divider will be fully adjustable by sliding in tracks, located at the front and rear of the hose bed.</p> <p>Divider will be held in place by tightening bolts, at each end.</p> <p>Acorn nuts will be installed on all bolts in the hose bed which have exposed threads.</p>
0048556	Cross Divider, Front of Hose Bed, w/Floor	A cross-divider will be provided just behind the fill tower. The divider will be bolted to the side sheets. A reinforced aluminum treadplate floor will be provided between the front of the hose bed and the cross-divider. Cross structure will be provided below the hose bed floor.
0727587	SP Cover, Hose Bed, Alum Treadplate, Bolted T-Bar, Full Width Over Hatch Compts	<p><b>HOSE BED COVER</b></p> <p>A two (2) section hose bed cover, constructed of .125" bright aluminum treadplate will be furnished. The cover will be hinged with full length stainless steel piano hinge. The sides will be slanted down with the center of the cover supported by a stationary modular bridgework support.</p> <p>The cover will be constructed full width so that they additionally cover the hatch compartments on both the left and right side</p> <p>The cover will be reinforced so that it can support the weight of a man walking on the cover.</p> <p>The cover is designed with the left cover opening first.</p> <p>If access to water tank fill tower is blocked by the hose bed cover, then a hinged door will be provided in it so that tank may be filled without raising cover doors.</p> <p>Chrome grab handles and gas filled cylinders will be provided to assist in opening and closing the cover. A handrail is to be provided at the rear, in the center of the support, to assist in opening the cover.</p>
0665193	Flap, Rear of Alum Hose Bed Cover, One Piece, Vinyl	<p><b>HOSEBED END FLAP</b></p> <p>There will be a red vinyl flap installed at the rear of the hosebed.</p> <p>The vinyl flap will have nylon tie down straps, with quick release thumb spring buckles. Fasnep model 207668 stainless steel buckles will be attached to the flaps. The vinyl end skirt will be installed directly to the hosebed frame.</p> <p>Rubber coated hooks and stainless steel footman loops will secure the end skirt/bed cover to the main body.</p>

0013512	Running Boards, 12.75" Deep	<p><b>RUNNING BOARDS</b>  Running boards will be fabricated of .125" bright aluminum treadplate. Each running board will be supported by a welded 2.00" square tubing and channel assembly, which will be bolted to the pump compartment substructure. Running boards will be 12.75" deep and spaced .50" away from the pump panel. A splash guard will be provided above the running board treadplate.</p>
0689621	Tailboard, 16" Deep	<p><b>TAILBOARD</b>  The tailboard will also be constructed of .125" bright aluminum treadplate and spaced .50" from the body, as well as supported by a structural steel assembly. The tailboard area will be 16.00" deep. The exterior side will be flanged down and in for increased rigidity of tailboard structure.</p>
0690037	Wall, Rear, Smooth Aluminum/Body Material	<p><b>REAR WALL, SMOOTH ALUMINUM/BODY MATERIAL</b>  The rear facing surfaces of the center rear wall will be smooth aluminum. The bulkheads, the surface to the rear of the side body compartments, will be smooth and the same material as the body. Any inboard facing surfaces below the height of the hosebed will be aluminum diamondplate.</p>
0003531	Tow Bar, Under Tailboard	<p><b>TOW BAR</b>  A tow bar will be installed under the tailboard at center of truck. Tow bar will be fabricated of 1.00" CRS bar rolled into a 3.00" radius. Tow bar assembly will be constructed of .38" structural angle. When force is applied to the bar, it will be transmitted to the frame rail. Tow bar assembly will be designed and positioned to allow up to a 30-degree upward angled pull of 17,000 lb, or a 20,000 lb straight horizontal pull in line with the centerline of the vehicle. Tow bar design will have been fully tested and evaluated using strain gauge testing and finite element analysis techniques.</p>



**COMPARTMENTATION**

Body and compartments will be fabricated of galvaneal steel.

Side compartments will be an integral assembly with the rear fenders.

Circular fender liners will be provided for prevention of rust pockets and ease of maintenance.

Side compartment flooring will be 12 gauge and of the sweep out design, with the floor higher than the compartment door lip.

The side compartment door opening will be framed by flanging the edges in 1.75" and bending out again 0.75" to form an angle.

Drip protection will be provided above the doors by means of bright aluminum extrusion, formed bright aluminum treadplate, or polished stainless steel.

The top of the compartment will be covered with bright aluminum treadplate rolled over the edges on the front, rear, and outward side. These covers will have the corners TIG welded.

Side compartment covers will be separate from the compartment tops.

Front facing compartment walls will be covered with bright aluminum treadplate.

All screws and bolts which protrude into a compartment will have acorn nuts on the ends to prevent injury.

**UNDERBODY SUPPORT SYSTEM**

Due to the severe loading requirements of this pumper, a method of body and compartment support suitable for the intended load will be provided.

The backbone of the support system will be the chassis frame rails, which is the strongest component of the chassis and designed for sustaining maximum loads.

The support system will include 0.375" thick steel vertical angle supports bolted to the chassis frame rails with 0.625" diameter bolts.

Attached to the bottom of the steel vertical angles will be horizontal angles, with gussets welded to the vertical members, which extend to the outside edge of the body.

A steel frame will be mounted on the top of these supports to create a floating substructure, which results in a 500 lb equipment support rating per lower compartment.

The floating substructure will be separated from the horizontal members with neoprene elastomer isolators. These isolators will reduce the natural flex stress of the chassis from being transmitted to the body.

The isolators will have a broad load range, proven viability in vehicular applications, be of a fail safe design and allow for all necessary movement in three (3) transitional and rotational modes.

The neoprene isolators will be installed in a modified V three (3)-point mounting pattern to reduce the natural flex of the chassis being transmitted to the body.

**AGGRESSIVE WALKING SURFACE**

All exterior surfaces designated as stepping, standing, and walking areas will comply with the required average slip resistance of the current NFPA standards.

**LOUVERS**

Louvers will be stamped into compartment walls to provide the proper airflow inside the body compartments and to prevent water from dripping into the compartment. Where these louvers are provided, they will be formed into the metal and not added to the compartment as a separate plate.

**TESTING OF BODY DESIGN**

Body structural analysis has been fully tested. Proven engineering and test techniques such as finite element analysis, model analysis, stress coating and strain gauging have been performed with special attention given to fatigue, life and structural integrity of the cab, body and substructure.

The body will be tested while loaded to its greatest in-service weight.

The criteria used during the testing procedure will include:

Raising opposite corners of the vehicle tires 9.00", simulating the twisting a truck may experience when driving over a curb.

Making a 90 degree turn while at 20 mph, simulating aggressive driving conditions.

Driving the vehicle at 35 mph on a washboard road.

Driving the vehicle at 55 mph on a smooth road.

Accelerating the vehicle fully, until reaching the approximate speed of 45 mph, on rough pavement.

Evidence of actual testing techniques will be made available upon request.

0763598

SP

LS 140" Lap, Full Height & Depth  
Front & Rear, Raised Rear 6"

**COMPARTMENTATION, LEFT SIDE**

A full height, vertically hinged, single door compartment ahead of the rear wheels will be provided. The interior dimensions of this compartment will be 22.50" wide x 67.63" high x 25.88" deep. The depth of the compartment will be calculated with the compartment door closed. The compartment interior will be fully open from the compartment ceiling to the compartment floor and designed so that no permanent dividers are required between the upper and lower sections. The clear door opening of this compartment will be 18.00" wide x 63.00" high.

A positive door holder will be furnished with this compartment.

A horizontally hinged, single lift-up door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 66.50" wide x 32.88" high x 25.88" deep. The depth of the compartment will be calculated with the compartment door closed. The clear door opening of this compartment will be 59.50" wide x 28.25" high.

The lift-up door will be furnished with two (2) gas-charged cylinders to assist in the opening of the door and to maintain the door in an open position. There will be a field adjustable, three-position bracket mounted on the vertical side door opening that will allow the door to be held open at 87°, 90°, or 93°.

A full height, vertically hinged, double door compartment behind the rear wheels will be provided. **The interior dimensions of this compartment will be 47.50" wide x 61.63" high x 25.88" deep. The depth of the compartment will be calculated with the compartment door closed. The compartment interior will be fully open from the compartment ceiling to the compartment floor and designed so that no permanent dividers are required between the upper and lower sections. The clear door opening of this compartment will be 46.00" wide x 57.00" high.**

**Positive door holders will be furnished with this compartment.**

0551418	RS 140" Lap, Full Height Front & Rear, FDLER, Raised Rear 6"	<p><b>RIGHT SIDE COMPARTMENTATION</b></p> <p>The right side compartmentation will consist of three lap door compartments.</p> <p>A full height, vertically hinged, single door compartment ahead of the rear wheels will be provided. The interior dimensions of this compartment will be 22.50" wide x 66.63" high x 25.88" deep in the lower 25.00" of the compartment and 12.00" deep in the remaining upper portion. The clear door opening will be a minimum of 16.63" wide x 61.88" high.</p> <p>A horizontally hinged, single lift-up door compartment over the rear wheels will be provided. The interior dimensions of this compartment will be 66.50" wide x 32.88" high x 12.00" deep. The clear door opening will be a minimum of 59.25" wide x 27.00" high.</p> <p>A full height, vertically hinged, double door compartment behind the rear wheels will be provided. <b>The interior dimensions of this compartment will be 47.75" wide x 61.63" high x 25.88" deep in the lower 20.00" of the compartment and 12.00" deep in the remaining upper portion. The clear door opening will be a minimum of 43.50" wide x 56.88" high. The interior height of the compartments will be measured from the compartment floor to the ceiling. The depth of the compartments will be measured from the back wall to the inside of the door frame.</b></p> <p><b>Closing of the doors will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.</b></p> <p><b>The vertically hinged doors will be furnished with a positive door holder.</b></p> <p><b>The lift-up door will be furnished with two gas-charged cylinders to assist in the opening of the door and to maintain the door in an open position. There will be a field adjustable, three-position bracket mounted on the vertical side door opening that will allow the door to be held open at 87°, 90°, or 93°.</b></p>
0063911	Doors, Lap w/ "D" Handles - Side Compartments	<p><b>SIDE COMPARTMENT DOORS</b></p> <p>All hinged compartment doors will be lap style with double panel construction and will be a minimum of 1.50" thick. To provide additional door strength a "C" section reinforcement will be installed between the outer and interior panels.</p> <p>Doors will be provided with a closed cell rubber gasket around the surface that laps onto the body. A second heavy-duty automotive rubber molding with a hollow core will be installed on the door framing that seals onto the interior panel, to ensure a weather resisting compartment.</p> <p>All compartment doors will have polished stainless steel continuous hinge with a pin diameter of .25" that is bolted or screwed on with stainless steel fasteners.</p> <p>All door locking mechanisms will be fully enclosed within the door panels to prevent fouling of the lock in the event equipment inside shifts into the lock area.</p> <p>Doors will be latched with recessed, polished stainless steel "D" ring handles and FMVSS approved door locking mechanisms.</p> <p>To prevent corrosion caused by dissimilar metals, compartment door handles will not be attached to outer door panel with screws. A rubber gasket will be provided between the "D" ring handle and the door.</p>
0083700	Compt, Rear, Rollup, 37.75" FF, 25.88" D	<p><b>REAR COMPARTMENTATION</b></p> <p>A roll-up door compartment above the rear tailboard will be provided.</p> <p>The interior dimensions of this compartment will be 40.00" wide x 40.63" high x 25.88" deep. The spool of the rollup door at the top of the compartment takes up some usable space. The depth of the compartment will be calculated with the compartment door closed.</p> <p>A louvered, removable access panel will be furnished on the back wall of the compartment.</p> <p>The rear compartment will be open into the rear side compartments.</p> <p>The clear door opening of this compartment will be a minimum of 33.25" wide x 30.88" high.</p> <p>Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.</p>
0594003	Door, Amdor, Rollup, Rear Compartment	<p><b>ROLLUP REAR COMPARTMENT DOOR</b></p> <p>The rear compartment will have a rollup door.</p> <p>The door will be double faced, aluminum construction, satin aluminum and manufactured by AMDOR™ brand rollup doors.</p> <p>The door will be constructed using 1.00" extruded double wall aluminum slats which will feature a flat smooth interior surface to provide maximum protection against equipment hang-up. The slats will be connected with a structural driven ball and socket hinge designed to provide maximum curtain diaphragm strength. Mounting and adjusting the curtain will be done with a clip system that connects the curtain to the balancer drum allowing for easy tension adjustment without tools.</p> <p>The slats will be mounted in reusable slat shoes with positive snap-lock securement.</p> <p>Each slat will incorporate weather tight recessed dual durometer seals. One (1) fin will be designed to locate the seal within the extrusion. The second will serve as a wiping seal which will also allow for compression to prevent water ingress.</p> <p>The door will be mounted in a one (1)-piece aluminum side frame with recessed side seals to minimize seal damage during equipment deployment. All seals including side frames, top gutters and bottom panel are to be manufactured utilizing non-marring materials.</p> <p>Bottom panel flange of rollup door will be equipped with two (2) cut-outs to allow for easier access with gloved hands.</p> <p>A polished stainless steel lift bar with locking key latches to be provided for each roll-up door. The keys to be Model 751 to match all compartment and cab doors. The lift bar will be located at the bottom of door with striker latches installed at the base of the side frames. Side frame mounted door strikers will include support beneath the stainless steel lift bar to prevent door curtain bounce, improve bottom seal life expectancy and to avoid false door ajar signals.</p> <p>All injection molded rollup door wear components will be constructed of Type 6 Nylon.</p> <p>The door will have a 3.00 inch diameter balancer/tensioner drum to assist in lifting the door.</p> <p>The header for the rollup door assembly will not exceed 4.00".</p> <p>A heavy-duty magnetic switch will be used for control of open compartment door warning lights.</p>

0554995	No Body Modification Required	
0625184	Guard, Drip Pan, S/S, Rollup Door, Pumper	<b>DOOR GUARD</b> There will be one (1) compartment door that will include a guard/drip pan designed to protect the rollup door from damage when in the retracted position and contain any water spray. The guard will be fabricated from stainless steel and installed rear compartment.
0003915	Keyed Locks for Latches, Lap Doors (#751 Lock to Match Cab)	<b>KEYED LOCK(S)</b> A keyed lock will be furnished for six (6) compartment doors. The compartmentation, to have a keyed lock, will be on each compartment door.
0732709	Pull Strap for Rollup Doors	<b>ROLLUP DOOR PULL STRAPS</b> two (2) compartment doors will be provided with pull straps. The pull straps will be 22.00" long and black in color. The straps will be installed directly to the inside of the rollup door. The rollup door compartments to have these straps will be LS2, DS2.
0003919	Reverse Hinge Compartment Door	<b>REVERSE HINGED DOOR</b> The two (2) compartment doors, located D3 & P3., will have the hinge at the rear of the door.
0004012	Scuffplate, S/S, Inside Each Compt Door	<b>SCUFFPLATE ON INTERIOR OF COMPARTMENT DOOR(S)</b> The four (4) compartment doors will include a polished stainless steel scuffplate to cover the entire width and height on the inside panel of each door pan. Scuffplate will be located D1, D3, P1, P3.
0659353	Lights, Compt, Amdor AY-9220 LED, Dual Light Strip	<b>COMPARTMENT LIGHTING</b> There will be seven (7) compartments with Amdor, Model AY9220, white 12 volt DC LED compartment light strips. The lights will be mounted with mechanical fasteners. There will be two (2) strip lights installed vertically in each compartment opening per the latest NFPA requirements. The lights will be activated when the battery switch is on and the respective compartment door is opened.
0731881	SP Hatch, No Doors, Covered By Hose Bed Cover, Pumper	<b>HATCH COMPARTMENT</b> Two (2) hatch compartments will be provided above the left and right side compartments. Each hatch compartment will extend the full length of the side body compartmentation x 13.75" wide. The height of each hatch compartment will match the side sheet height. Sides of the compartment will be constructed of the same material as the body and painted job color. A 2.00" tall formed aluminum painted to match the upper body color will be provided to cover the seam between the top of the body panel and the bottom of the hatch compartment. The vertical outboard seam at the center of the compartment will be smooth weld finished and painted. The top of the compartment will be constructed of bright aluminum treadplate. Each hatch compartment will be covered via the hosebed cover that runs full width of the body. Compartment will drain to an area below the hose bed. Ribbed rubber matting will be provided on the compartment floor to stop wet equipment from sitting in water pools.
0733219	Lights, Hatch Compt, 42", LED, Light Strips, 2-Sides 4 Dr	<b>COMPARTMENT LIGHTING</b> There will be a 42.00" 12 volt DC strip light with white LEDs mounted on the interior, hinged side of each door. The lights will be mounted with mechanical fasteners. The lights will be activated when the battery switch is on and the door is opened.
0687146	Shelf Tracks, Painted	<b>MOUNTING TRACKS</b> There will be seven (7) sets of tracks for mounting shelf(s) in LS1, LS2, LS3, RS1, RS2, RS3 and B1. These tracks will be installed vertically to support the adjustable shelf(s), and will be full height of the compartment. The tracks will be painted to match the compartment interior.
0687112	Shelves, Adjustable, 500 lb Capacity, Full Width/Depth, Painted	<b>ADJUSTABLE SHELVES</b> There will be nine (9) shelves with a capacity of 500 lb provided. The shelf construction will consist of .188" aluminum with 2.00" sides. Each shelf will be painted spatter gray. Each shelf will be infinitely adjustable by means of a threaded fastener, which slides in a track. The shelves will be held in place by .12" thick stamped plated brackets and bolts. The location will be D3 upper and lower, (2) in D1 upper, (2) in P1 upper, R1 upper., D2, P2 .

0647045	Tray, Floor Mounted, Slide-Out, Full Width/Full Depth, 500lb, 2.00" Sides, 2G	<p><b>SLIDE-OUT FLOOR MOUNTED TRAY</b></p> <p>There will be three (3) floor mounted slide-out tray(s) with 2.00" sides provided LS1, LS3, B1. Each tray will be rated for up to 500lb in the extended position. The tray(s) will be constructed of a minimum .13" aluminum. The finish will be painted spatter gray.</p> <p>The trays will be designed for maximum compartment width and depth.</p> <p>There will be two undermount-roller bearing type slides rated at 250lb each provided. The pair of slides will have a safety factor rating of 2.</p> <p>To ensure years of dependable service, the slides will be coated with a finish that is tested to withstand a minimum of 1,000 hours of salt spray per ASTM B117.</p> <p>To ensure years of easy operation, the slides will require no more than a 50lb force for push-in or pull-out movement when fully loaded after having been subjected to a 40 hour vibration (shaker) test under full load. The vibration drive file will have been generated from accelerometer data collected from a heavy truck chassis driven over rough gravel roads in an unloaded condition. Proof of compliance will be provided upon request.</p> <p>Automatic locks will be provided for both the "in" and "out" positions. The trip mechanism for the locks will be located at the front of the tray for ease of use with a gloved hand.</p>
0709346	Toolboard, Slide-out, Alum, .188", Peg Board, Predefined Locations	<p><b>SLIDE-OUT TOOLBOARD</b></p> <p>There will be one (1) slide-out toolboard(s) provided.</p> <p>The toolboard will be a minimum of 0.188" thick with .203" diameter holes in a pegboard pattern with 1.00" centers between holes.</p> <p>A 1.00" x 1.00" aluminum tube frame will be welded to the edge of the pegboard.</p> <p>The board will be mounted on an under-mount roller bearing type slide rated at 250 lb with a factor of safety of 2.</p> <p>To ensure years of dependable service the slides will be coated with a finish that is tested to withstand a minimum of 1,000 hours of salt spray per ASTM B117.</p> <p>To ensure years of easy operation, the slides will require no more than a 50 pound force for push-in or pull-out movement when fully loaded after having been subjected to a 40 hour vibration (shaker) test under full load. The vibration drive file will have been generated from accelerometer data collected from a heavy truck chassis driven over rough gravel roads in an unloaded condition. Proof of compliance will be provided upon request.</p> <p>The slide will be mounted on adjustable tracks side to side within the compartment.</p> <p>The board will have positive lock in the stowed and extended position.</p> <p>The toolboard(s) will be spatter gray painted and installed in RS3, centered from left to right in the door frame.</p>
0635915	Mounting Plate, 3/16" Alum	<p><b>MOUNTING PLATE</b></p> <p>A quantity of two (2) 3/16" thick aluminum mounting plate(s) will be provided. The aluminum plate (s) will be painted spatter gray to match compartment interior. The plate(s) will be cover the entire rear wall in size and mounted p2 and d2, rear wall, mounted to the horizontal shelf tracks .</p>
0003908	Partition, Trans Rear Compt	<p><b>PARTITION, TRANSVERSE REAR COMPARTMENT</b></p> <p>Two (2) partitions will be bolted in place to separate left and right side rear compartments from the rear tailboard compartment.</p>
0027090	Tracks, Equipment Mounting, Horizontal	<p><b>MOUNTING TRACKS</b></p> <p>There will be two (2) sets of tracks for mounting equipment. These tracks will be installed horizontally on the back wall of the compartment(s).</p> <p>The compartment(s) with mounting tracks will be D2 and P2.</p>
0004016	Rub Rail, Aluminum Extruded, Side of Body	<p><b>RUB RAIL</b></p> <p>Bottom edge of the side compartments will be trimmed with a bright aluminum extruded rub rail. Trim will be 2.12" high with 1.38" flanges turned outward for rigidity.</p> <p>The rub rails will not be an integral part of the body construction, which allows replacement in the event of damage.</p>
0784811	Fender Crowns, Rear, Stainless, w/Removable Liner	<p><b>BODY FENDER CROWNS</b></p> <p>Polished stainless steel fender crowns will be provided around the rear wheel openings with a dielectric barrier will be provided between the fender crown and the fender sheet metal to prevent corrosion.</p> <p>The fender crowns will be held in place with stainless steel screws that thread directly into a composite nut and not directly into the parent body sheet metal to eliminate dissimilar metals contact and greatly reduce the chance for corrosion. Rubber welting will be provided between the body and crown.</p> <p><b>BODY FENDER LINER</b></p> <p>A painted fender liner will be provided. The liners will be removable to aid in the maintenance of rear suspension components.</p>
0602347	Hose, Hard Suction, Provided by Fire Department, Pumper NFA 2016 Classification	<p><b>HARD SUCTION HOSE</b></p> <p>NFPA 1901, 2016 edition, section 5.8.2 requires a minimum of 20 ft of suction hose or 15 ft of supply hose.</p> <p>Hose is not on the apparatus as manufactured. The fire department will provide suction or supply hose.</p> <p>There will be Two (2) lengths of 10' long x 6.00" diameter hose provided and equipped with long handle couplings provided on the ends.</p>

0004095		Troughs, H.S.H., (1) Each Side, Steel	<b>HOSE TROUGHS</b> Hard suction hose will be carried in two (2) V-shaped troughs, one (1) each side, and held in place by chrome plated, quarter turn, spring loaded clamps. Troughs will be constructed of steel and painted job color.
0626229		Handrails, Side Pump Panels, Per Print	<b>HANDRAILS</b> The handrails will be 1.25" diameter anodized aluminum extrusion, with a ribbed design, to provide a positive gripping surface. Chrome plated end stanchions will support the handrail. Plastic gaskets will be used between end stanchions and any painted surfaces. Drain holes will be provided in the bottom of all vertically mounted handrails. Handrails will be provided to meet NFPA 1901 section 15.8 requirements. The handrails will be installed as noted on the sales drawing.
0012161		Handrail, Beavertail, LS	One (1) vertical handrail will be located on the left side rear beavertail.
0082756		Handrail, Rear, Below Hose Bed	One (1) handrail will be installed below the hose bed.
0648325		Compt, Air Bottle, Double, Common Triple Door, Fender Panel	<b>AIR BOTTLE STORAGE (Double)</b> A quantity of one (1) air bottle compartment, 15.25" wide x 7.75" tall x 26.00" deep, will be provided on the left side forward of the rear wheels. The triangular door shall cover the double air bottle opening and the DEF tank access.. A polished stainless steel door with a chrome plated flush lift & turn latch will be provided to contain the air bottle. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal. Inside the compartment, "W" shaped insert formed of composite materials will be provided. <b>AIR BOTTLE COMPARTMENT STRAP</b> A strap will be provided in the air bottle compartment to help contain the air bottle when the vehicle is parked on an incline. The strap will wrap around the neck and attach to the wall of the compartment.
0657651		Compt, Air Bottle, Double, Full Width Door, Fender Panel	<b>AIR BOTTLE STORAGE (Double)</b> A quantity of two (2) air bottle compartments, 15.25" wide x 7.75" tall x 26.00" deep, will be provided on the right side forward of the rear wheels and on the right side rearward of the rear wheels . A polished stainless steel door with a Southco raised trigger C2 chrome lever latch will be provided to contain the air bottle. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal. Inside the compartment, "W" shaped insert formed of composite materials will be provided.
0004225		Ladder, 24' Duo-Safety 900A 2-Section	<b>EXTENSION LADDER</b> There will be a 24' two-section aluminum Duo-Safety Series 900-A extension ladder provided.
0004230		Ladder, 14' Duo-Safety 775A Roof	<b>ROOF LADDER</b> There will be a 14' aluminum Duo-Safety Series 775-A roof ladder provided.
0066290	SP	Ladders Btwn Tank & S.Sht, RS, RPH, Short Ladders in Short Body	<b>LADDER STORAGE</b> The ladders will be stored between the water tank and the right side compartments. The ladders will extend into the pump compartment just to the rear of the water pump discharges. Each ladder will be stored vertically in a separate stainless steel storage trough. Rear of ladder storage area will have a vertically hinged bright aluminum treadplate door.
0014245		Ladder, 10' Duo-Safety Folding 585A, w/Mounting	<b>FOLDING LADDER</b> One (1) 10.00' aluminum, Series 585-A, Duo-Safety folding ladder will be installed in the pike pole/folding ladder compartment .
0540260	SP	Trough, for Backboard Storage, In Ladder Compt	<b>BACKBOARD STORAGE</b> Provisions will be made for storage of one (1) backboard in the ladder storage area. The size of the backboard will be 75"L , 20" w, 4"T.
0557255		Pike Pole, 6' Fire Hooks Unlimited, New York Roof Hook, Steel, Pry End, RH-6	<b>6' PIKE POLE</b> One (1) pike pole, Fire Hooks Unlimited, Model RH6, 6' long roof hook, with a steel handle and pry end will be provided and located in the rear compartment below the tee on the drivers side.
0611963	SP	Trash Hook, 6' Fire Hooks Unlimited, Steel, TRST-6, w/D Handle	<b>6' PIKE POLE</b> One (1) pike pole, 6' long trash hook(s), Fire Hooks Unlimited, Model TRH-6 with steel shaft and D-handle will be provided and located in the rear compartment below the tank tee on the drivers side.

0554061		Pike Pole, 10' DUO Safety, Fiberglass, Pumper NFPA Classification	<b>10' PIKE POLE</b> One (1) pike pole 10' long DUO Safety with a fiberglass handle will be provided.
0733370		Pike Pole, 6' DUO Safety, Fiberglass	<b>PIKE POLE, 6'</b> One (1) pike pole, 6' long Duo Safety with a fiberglass handle, will be provided.
0528640	SP	Compt, (3) Pike, (1) D-Handle & (1) Foldg Ladder, Below Tee, S/S Door, LS	<b>PIKE POLES/FOLDING LADDER COMPARTMENT</b> A compartment will be provided, recessed below the water tank tee at the rear of body, on the left side. The compartment will be equipped with three (3) tubes for storage of three (3) straight handled pike poles, one (1) stainless steel trough for storage of one (1) D-handle pike pole and one (1) stainless steel trough for one (1) folding ladder. The folding ladder and D-handle pike pole will be located on the bottom of the compartment with the three (3) straight handled pike poles located above. A stainless steel door will be provided at the rear with a lift and turn latch.
0583624		Labels and Tags, Misc. ID	<b>LABELS AND TAGS</b> four (4) ID label/tag will be provided. The label/tag will be black colored with contrasting lettering. The label/tag will be located TBD at precon and sized appropriately for the specified location(s). The label/tag will state the following "Tbd at Precon".
0632024	SP	Labels, Color, Each	<b>Special Colored Label(S)</b> There will be four (4) colored label(s) provided and installed TBD. The color scheme on the label (s) will be TBD.
0785102		Steps, Folding, Front of Body, Cargo Bed Access, w/LED, Trident	<b>FOLDING STEPS FRONT OF BODY</b> Folding steps will be provided full height on the left side body compartments to provide access to the cargo bed. Steps will be spaced evenly on the sales drawing. Actual quantity may vary due to pump panel interferences but will meet the NFPA required maximum stepping height. The Trident steps will be bright finished, non-skid with a black coating. The step will incorporate an LED light to illuminate the stepping surface. The steps can be used as a hand hold with two openings wide enough for a gloved hand.
0592995		Steps, Combo Folding Trident w/LED & Corner, Rear Body	<b>REAR STEPS</b> Aluminum treadplate corner steps and bright finished, non-skid folding steps will be provided at the rear. The folding steps will have a black coating. Each folding step will incorporate an LED light to illuminate the stepping surface. The folding steps can be used as a hand hold with two openings wide enough for a gloved hand. All steps will provide adequate surface for stepping.
0650261		I Zone Bracket, Pair, Folding Style	<b>I-ZONE BRACKETS</b> Two (2) flip-out I-Zone brackets will be provided and mounted at the rear of the apparatus, on the rear of the body, both sides, as high as possible. The brackets will be designed with adequate reinforcement to eliminate flexing of the body (oil canning).
0010500		Step, Rung, Camper Style, Pull-out & Drop Down, 20" Wide	<b>STEP, PULL-OUT/DROP DOWN</b> One (1) pull-out step will be provided. Each step will be 20" wide and will pull out and drop down to provide easy access. The step will be located on the rear tailboard.

0004425	Pump, Waterous, CSU, 1500 GPM, Single Stage	<p><b>PUMP</b></p> <p>Pump will be a Waterous CSU, 1500 gpm single (1) stage midship mounted centrifugal type. Pump will be the class "A" type. Pump will deliver the percentage of rated discharge at pressures indicated below:</p> <ul style="list-style-type: none"> <li>- 100% of rated capacity at 150 psi net pump pressure.</li> <li>- 70% of rated capacity at 200 psi net pump pressure.</li> <li>- 50% of rated capacity at 250 psi net pump pressure.</li> </ul> <p>Pump body will be close-grained gray iron, bronze fitted, and horizontally split in two (2) sections for easy removal of the entire impeller shaft assembly (including wear rings). Pump will be designed for complete servicing from the bottom of the truck, without disturbing the pump setting or apparatus piping. Pump case halves will be bolted together on a single horizontal face to minimize chance of leakage and facilitate ease of reassembly. No end flanges will be used. Discharge manifold of the pump will be cast as an integral part of the pump body assembly and will provide a minimum of three (3) 3.50" openings for flexibility in providing various discharge outlets for maximum efficiency. The three (3) 3.50" openings will be located as follows: one (1) outlet to the right of the pump, one (1) outlet to the left of the pump, and one (1) outlet directly on top of the discharge manifold. Impeller shaft will be stainless steel, accurately ground to size. It will be supported at each end by sealed, anti-friction ball bearings for rigid precise support. Impeller will have flame plated hubs assuring maximum pump life and efficiency despite any presence of abrasive matter in the water supply. Bearings will be protected from water and sediment by suitable stuffing boxes, flinger rings, and oil seals. No special or sleeve type bearings will be used.</p>
0004482	Seal, Mechanical, Waterous	<p>Pump will be equipped with a self-adjusting, maintenance-free, mechanical shaft seal. The mechanical seal will consist of a flat, highly polished, spring fed carbon ring that rotates with the impeller shaft. The carbon ring will press against a highly polished stainless steel stationary ring that is sealed within the pump body. In addition, a throttling ring will be pressed into the steel chamber cover, providing a very small clearance around the rotating shaft in the event of a mechanical seal failure. The pump performance will not deteriorate, nor will the pump lose prime, while drafting if the seal fails during pump operation. Wear rings will be bronze and easily replaceable to restore original pump efficiency and eliminate the need to replace the entire pump casing due to wear.</p>
0559769	Trans, Pump, Waterous C20 Series	<p><b>PUMP TRANSMISSION</b></p> <p>The pump transmission will be made of a three (3) piece, aluminum, horizontally split casing. Power transfer to pump will be through a high strength Morse HY-VO silent drive chain. By the use of a chain rather than gears, 50% of the sprocket will be accepting or transmitting torque, compared to two (2) or three (3) teeth doing all the work. Drive shafts will be 2.35" diameter hardened and ground alloy steel and supported by ball bearings. The case will be designed to eliminate the need for water cooling.</p>
0635600	Pumping Mode, Stationary Only	<p><b>PUMPING MODE</b></p> <p>An interlock system will be provided to ensure that the pump drive system components are properly engaged so that the apparatus can be safely operated. The interlock system will be designed to allow stationary pumping only.</p>
0605126	Pump Shift, Air Mnl Override, Split Shaft, Interlocked, Waterous	<p><b>AIR PUMP SHIFT</b></p> <p>Pump shift engagement will be made by a two (2) position sliding collar, actuated pneumatically (by air pressure), with a three (3) position air control switch located in the cab. A manual back-up shift control will also be located on the left side pump panel. Two (2) indicator lights will be provided adjacent to the pump shift inside the cab. One (1) green light will indicate the pump shift has been completed and be labeled "pump engaged". The second green light will indicate when the pump has been engaged, and that the chassis transmission is in pump gear. This indicator light will be labeled "OK to pump". The pump shift will be interlocked to prevent the pump from being shifted out of gear when the chassis transmission is in gear to meet NFPA requirements. The pump shift control in the cab will be illuminated to meet NFPA requirements.</p>
0003148	Transmission Lock-up, EVS	<p><b>TRANSMISSION LOCK-UP</b></p> <p>The direct gear transmission lock-up for the fire pump operation will engage automatically when the pump shift control in the cab is activated.</p>
0004547	Auxiliary Cooling System	<p><b>AUXILIARY COOLING SYSTEM</b></p> <p>A supplementary heat exchange cooling system will be provided to allow the use of water from the discharge side of the pump for cooling the engine water. The heat exchanger will be a separate unit. The heat exchanger will be installed in the pump or engine compartment with the control located on the pump operator's control panel. Exchanger will be plumbed to the master drain valve.</p>
0014486	Not Required, Transfer Valve, Stage Pump	

0746508	Valve(s), Relief Intake, Trident Air Max, Control Location	<p><b>INTAKE RELIEF VALVE</b></p> <p>One (1) Trident Air Max intake relief valve(s) will be installed on the suction side of the pump preset at 125 psig.</p> <p>The relief valve will have a working range of 50 PSI to 350 PSI.</p> <p>The outlet will terminate below the frame rails with a 2.50" National Standard hose thread adapter and will have a "do not cap" warning tag.</p> <p>One (1) adjustable air regulator and pressure indicating gauge will be located on a common bezel on the left side pump panel to control the intake valve(s).</p>
0546803	Controller, Pressure, Class 1 Total Pressure Governor (TPG)	<p><b>PRESSURE GOVERNOR</b></p> <p>This apparatus will be equipped with a Class1 "Total Pressure Governor" engine/pump governor/throttle system that is connected directly to the Electronic Control Module (ECM) mounted on the engine. The "Total Pressure Governor" is to operate as a pressure sensor (regulating) governor (PSG).</p> <p>A special preset feature will permit a predetermined pressure of RPM to be set. The preset pressure or RPM will be displayed on the message display of the "Total Pressure Governor". The preset will be easily adjustable by the operator</p> <p>The pressure sensor governor system will be operable only after the vehicle parking brake has been set, the transmission is the pumping mode, and the fire pump has been engaged.</p> <p>The pressure sensor governor system will have two (2) modes of operation: pressure mode or rpm mode.</p> <p>When in the pressure mode, the PSG system will automatically maintain the discharge pressure set by the operator regardless of flow (within engine/pump operating capabilities).</p> <p>In the rpm mode, the PSG system will automatically maintain a set engine speed, regardless of engine load (within engine operation capabilities).</p> <p>A pump cavitation protection feature will be provided which will return the engine to idle should the pump cavitate.</p> <p>The pressure controller will incorporate monitoring for engine coolant temperature, oil pressure, and battery voltage.</p>
0072153	Primer, Trident, Air Prime, Air Operated	<p><b>PRIMING PUMP</b></p> <p>The priming pump will be a Trident Emergency Products compressed air powered, high efficiency, multistage venturi based AirPrime System, conforming to standards outlined in the current edition of NFPA 1901.</p> <p>All wetted metallic parts of the priming system are to be of brass and stainless steel construction.</p> <p>One (1) priming control will open the priming valve and start the pump primer.</p>
0658361	Thermal Relief Valve, OPM, w/Red Warning Light and Audible Alarm, Waterous Pump	<p><b>THERMAL RELIEF VALVE</b></p> <p>A Waterous Overheat Protection Manager (OPM) will be included on the pump that monitors pump water temperature and opens to relieve water to cool the pump when the temperature of the pump water exceeds 140 Degrees F (60 C) and a red warning light that is triggered when the water in the pump reaches 180 F (82 C).</p> <p>The warning light will act as an additional protection device if the temperature in the pump keeps rising after the valve opens. The warning light and audible alarm with a test switch will be mounted on the pump operator panel.</p> <p>The discharge line will be plumbed to ground.</p>
0780364	Manuals, Pump, (2) Total, Electronic Copies	<p><b>PUMP MANUALS</b></p> <p>There will be a total of two (2) pump manuals provided by the pump manufacturer and furnished with the apparatus. The manuals will be provided by the pump manufacturer in the form of two (2) electronic copies. Each manual will cover pump operation, maintenance, and parts.</p>
0602512	Plumbing, Stainless Steel and Hose, Single Stage Pump, Control Zone	<p><b>PLUMBING, STAINLESS STEEL AND HOSE</b></p> <p>All inlet and outlet lines will be plumbed with either stainless steel pipe, flexible polypropylene tubing or synthetic rubber hose reinforced with hi-tensile polyester braid. All hose's will be equipped with brass or stainless steel couplings. All stainless steel hard plumbing will be a minimum of a schedule 10 wall thickness.</p> <p>Where vibration or chassis flexing may damage or loosen piping or where a coupling is required for servicing, the piping will be equipped with victaulic or rubber couplings.</p> <p>Plumbing manifold bodies will be ductile cast iron or stainless steel.</p> <p>All piping lines are to be drained through a master drain valve or will be equipped with individual drain valves. All drain lines will be extended with a hose to drain below the chassis frame.</p> <p>All water carrying gauge lines will be of flexible polypropylene tubing.</p> <p>All piping, hose and fittings will have a minimum of a 500 PSI hydrodynamic pressure rating.</p>
0795135	Plumbing, Stainless Steel, w/Foam System	<p><b>FOAM SYSTEM PLUMBING</b></p> <p>All piping that is in contact with the foam concentrate or foam/water solution will be stainless steel. The fittings will be stainless steel or brass. Cast iron pump manifolds will be allowed.</p>
0004645	Inlets, 6.00" - 1250 GPM or Larger Pump	<p><b>MAIN PUMP INLETS</b></p> <p>A 6.00" pump manifold inlet will be provided on each side of the vehicle. The suction inlets will include removable die cast zinc screens that are designed to provide cathodic protection for the pump, thus reducing corrosion in the pump.</p>



0004646	Cap, Main Pump Inlet, Long Handle, NST, VLH	<b>MAIN PUMP INLET CAP</b> The main pump inlets will have National Standard Threads with a long handle chrome cap. The cap will be the Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.
0550696	Valve, Waterous Monarch w/Relief, LS Side Inlet, 6", Waterous Handwheel Control	<b>INLET BUTTERFLY VALVE</b> One (1) Waterous Monarch inline butterfly valve will be provided on the left side main pump inlet. The 6.00" inlet valve will be partially recessed behind the pump panel with a "key hole" shaped stainless steel trim ring around the opening. A built-in, adjustable pressure relief valve and a 3/4" bleeder valve will be provided on the inlet side of the valve. A chrome plated handwheel control will be provided on the side pump panel adjacent to the inlet valve. A valve position indicator will be provided, next to the valve control.
0084610	Valves, Akron 8000 series- All	<b>VALVES</b> All ball valves will be Akron® Brass. The Akron valves will be the 8000 series heavy-duty style with a stainless steel ball and a simple two-seat design. No lubrication or regular maintenance is required on the valve. Valves will have a <b>ten (10) year</b> warranty.
0004660	Inlet, Left Side, 2.50"	<b>LEFT SIDE INLET</b> There will be one (1) auxiliary inlet with a 2.50" valve at the left side pump panel, terminating with a 2.50" (F) National Standard hose thread adapter. The auxiliary inlet will be provided with a strainer, chrome swivel and plug.
0004680	Inlet, Right Side, 2.50"	<b>RIGHT SIDE INLET</b> There will be one (1) auxiliary inlet with a 2.50" valve at the right side pump panel, terminating with a 2.50" (F) National Standard hose thread adapter. The auxiliary inlet will be provided with a strainer, chrome swivel and plug.
0016158	Valve, Inlet(s) Recessed, Side Cntrl, "Control Zone"	The location of the valve for the two (2) inlets will be recessed behind the pump panel.
0034720	Anode, Zinc, Pair, Pump Inlets	<b>ANODE, INLET</b> A pair of sacrificial zinc anodes will be provided in the water pump inlets to protect the pump from corrosion.
0004700	Control, Inlet, at Valve	<b>INLET CONTROL</b> The side auxiliary inlet(s) will incorporate a quarter-turn ball valve with the control located at the inlet valve. The valve operating mechanism will indicate the position of the valve.
0092569	No Rear Inlet (Large Dia) Requested	
0092696	Not Required, Cap, Rear Inlet	
0064116	No Rear Inlet Actuation Required	
0009648	No Rear Intake Relief Valve Required on Rear Inlet	
0092568	No Rear Auxiliary Inlet Requested	
0563738	Valve, .75" Bleeder, Aux. Side Inlet, Swing Handle	<b>INLET BLEEDER VALVE</b> A 0.75" bleeder valve will be provided for each side gated inlet. The valves will be located behind the panel with a swing style handle control extended to the outside of the panel. The handles will be chrome plated and provide a visual indication of valve position. The swing handle will provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. The water discharged by the bleeders will be routed below the chassis frame rails.

0014751	Tank to Pump, (1) 3.00" Valve, 3.00" Plumbing, Reverse Linkage	<p><b>TANK TO PUMP</b>  The booster tank will be connected to the intake side of the pump with heavy duty piping and a quarter turn 3.00" full flow line valve with the control remotely located at the operator's panel. The tank to pump line will run straight (no elbows) from the pump into the front face of the water tank and down into the tank sump. A rubber coupling will be included in this line to prevent damage from vibration or chassis flexing.  The control on the pump panel will be "in" when the valve is open and "out" when the valve is closed.  A check valve will be provided in the tank to pump supply line to prevent the possibility of "back filling" the water tank.</p>
0004905	Outlet, Tank Fill, 1.50"	<p><b>TANK REFILL</b>  A 1.50" combination tank refill and pump re-circulation line will be provided, using a quarter-turn full flow ball valve controlled from the pump operator's panel.</p>
0004940	Outlet, Left Side, 2.50"	<p><b>LEFT SIDE DISCHARGE OUTLETS</b>  There will be Two (2) discharge outlets with a 2.50" valve on the left side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.</p>
0092570	Not Required, Outlets, Left Side Additional	
0004945	Outlet, Right Side, 2.50"	<p><b>RIGHT SIDE DISCHARGE OUTLETS</b>  There will be One (1) discharge outlet with a 2.50" valve on the right side of the apparatus, terminating with a 2.50" (M) National Standard hose thread adapter.</p>
0092571	Not Required, Outlets, Right Side Additional	
0779666	SP Outlet, 4" w/3.50" Waterous Valve, Right, Small Handwheel	<p><b>LARGE DIAMETER DISCHARGE OUTLET</b>  There will be a 4.00" discharge outlet with a 3.50" Waterous valve installed on the right side of the apparatus, terminating with a 4.00" (M) National Standard hose thread adapter. This discharge outlet will be actuated with a small handwheel control at the pump operator's control panel. An indicator will be provided to show when the valve is in the closed position.</p>
0649939	Outlet, Front, 1.50" w/2" Plumbing	<p><b>FRONT DISCHARGE OUTLET</b>  There will be one (1) 1.50" discharge outlet piped to the front of the apparatus and located on the top of the left side of the front bumper.  Plumbing will consist of 2.00" piping and flexible hose with a 2.00" ball valve with control at the pump operator's panel. A fabricated weldment made of stainless steel pipe will be used in the plumbing where appropriate. The piping will terminate with a 1.50" NST with 90 degree stainless steel swivel.  There will be Class 1 quarter turn round handle drains provided at all low points of the piping.</p>
0647702	Additional Valve, Front Outlet, 2"	<p><b>FRONT OUTLET ADDITIONAL VALVE</b>  A second 2.00" full flow ball valve will be provided at the front bumper extension. The valve will have an integral chrome swing style handle.</p>
0649318	Reverse Linkage, Front Outlet	<p><b>REVERSE LINKAGE ON FRONT OUTLET(S)</b>  The valve control for the front outlet(s) on the pump panel will be "in" when the valve is open and "out" when the valve is closed. The reverse linkage will be provided for one (1) front outlet(s) located drivers side.</p>
0004995	Outlet, Rear, 2.50"	<p><b>REAR DISCHARGE OUTLET</b>  There will be One (1) discharge outlet piped to the rear of the hose bed, left side, installed so proper clearance is provided for spanner wrenches or adapters. Plumbing will consist of 2.50" piping along with a 2.50" full flow ball valve with the control from the pump operator's panel.</p>
0092574	Not Required, Outlet, Rear, Additional	
0092573	Not Required, Outlet, Hose Bed/Running Board Tray	

0752097	Caps/Plugs for 1.00" to 3.00" Discharges/Inlets, Chain	<p><b>DISCHARGE CAPS/ INLET PLUGS</b>  Chrome plated, rocker lug, caps with chain will be furnished for all discharge outlets 1.00" thru 3.00" in size, besides the pre-connected hose outlets.  Chrome plated, rocker lug, plugs with chain will be furnished for all auxiliary inlets 1.00" thru 3.00" in size.  The caps and plugs will incorporate a thread design to automatically relieve stored pressure in the line when disconnected.</p>
0563739	Valve, 0.75" Bleeder, Discharges, Swing Handle	<p><b>OUTLET BLEEDER VALVE</b>  A 0.75" bleeder valve will be provided for each outlet 1.50" or larger. Automatic drain valves are acceptable with some outlets if deemed appropriate with the application.  The valves will be located behind the panel with a swing style handle control extended to the outside of the side pump panel. The handles will be chrome plated and provide a visual indication of valve position. The swing handle will provide an ergonomic position for operating the valve without twisting the wrist and provides excellent leverage. Bleeders will be located at the bottom of the pump panel. They will be properly labeled identifying the discharge they are plumbed in to. The water discharged by the bleeders will be routed below the chassis frame rails.</p>
0005091	Elbow, Left Side Outlets, 45 Degree, 2.50" FNST x 2.50" MNST, VLH	<p><b>LEFT SIDE OUTLET ELBOWS</b>  The 2.50" discharge outlets located on the left side pump panel will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow.  The elbow will be Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.</p>
0035094	Not Required, Elbow, Left Side Outlets, Additional	
0025091	Elbow, Right Side Outlets, 45 Degree, 2.50" FNST x 2.50" MNST, VLH	<p><b>RIGHT SIDE OUTLET ELBOWS</b>  The 2.50" discharge outlets located on the right side pump panel will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow.  The elbow will be Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.</p>
0089584	Not Required, Elbow, Right Side Outlets, Additional	
0045091	Elbow, Rear Outlets, 45 Degree, 2.50" FNST x 2.50" MNST, VLH	<p><b>REAR OUTLET ELBOWS</b>  The 2.50" discharge outlets located at the rear of the apparatus will be furnished with a 2.50" (F) National Standard hose thread x 2.50" (M) National Standard hose thread, chrome plated, 45 degree elbow.  The elbow will be Pierce VLH, which incorporates an exclusive thread design to automatically relieve stored pressure in the line when disconnected.</p>
0085695	Not Required, Elbow, Rear Outlets, Large, Additional	
0005097	Elbow, Large Dia Outlet, 30 Deg, 4.00" FNST x 5.00" Storz	<p><b>LARGE DIAMETER OUTLET ELBOWS</b>  The 4.00" outlet(s) will be furnished with one (1) 4.00" (F) National Standard hose thread x 5.00" Storz elbow adapter with Storz cap.</p>
0062133	Control, Outlets, Manual, Pierce HW if applicable	<p><b>DISCHARGE OUTLET CONTROLS</b>  The discharge outlets will incorporate a quarter-turn ball valve with the control located at the pump operator's panel. The valve operating mechanism will indicate the position of the valve. If a handwheel control valve is used, the control will be a minimum of a 3.9" diameter stainless steel handwheel with a dial position indicator built in to the center of the handwheel.  Any 3.00 inch or larger discharge valve will be a slow-operating valve in accordance with NFPA 16.7.5.3.</p>
0746006	SP Outlet, 3.00" Deluge w/Dual Ctrl, Akron SMALL HW's, Akron Valve	<p><b>DELUGE RISER, w/DUAL CONTROL</b>  Three (3) inch deluge riser plumbing shall be installed and routed above the pump in such a manner that a monitor can be mounted and used effectively.  The riser plumbing shall be gated and controlled at the pump operator's panel by an Akron small handwheel control with position indicator.  A second Akron small handwheel control without position indicator shall be provided above the pump adjacent to the outlet.  Plumbing shall consist of 3.00" piping and a 3.00" valve.  Piping shall be installed securely so no movement develops when the line is charged.</p>
0029302	No Monitor Requested	

0029304	No Nozzle Req'd	
0026604	Deluge Mount, Bolt Flange, Reinforced for Hi-Riser/DeckMaster	The deluge riser will have a 3.00" four (4)-bolt flange for mounting the monitor.
0029210	Crosslays Sngl Sheet, (2+) 1.50", Spl. Cap/Arrangement	<p><b>CROSSLAY HOSE BEDS, 1.50"</b></p> <p>Two (2) crosslays with 1.50" outlets will be provided. Each bed to be capable of carrying 200' 1.75" double stacked. and will be plumbed with 2.00" i.d. pipe and gated with a 2.00" quarter turn ball valve.</p> <p>Outlets to be equipped with a 1.50" National Standard hose thread 90 degree swivel located in the hose bed so that hose may be removed from either side of apparatus.</p> <p>The crosslay controls will be at the pump operator's panel.</p> <p>The center crosslay dividers will be fabricated of .25" aluminum and will provide adjustment from side to side. The divider will be unpainted with a brushed finish.</p> <p>Vertical scuffplates, constructed of stainless steel, will be provided at the front and rear ends of the bed on each side of vehicle.</p> <p>Crosslay bed flooring will consist of removable perforated brushed aluminum.</p>
0029196	Not Required, 2.50" Crosslay	
0029260	Not Required, Speedlays	
0687205	Hose Restraint, Crosslay/Deadlay, Vinyl, Fasteners, Each Side, Ends	<p><b>CROSSLAY/DEADLAY HOSE RESTRAINT</b></p> <p>There will be red vinyl end flap provided across each end of two (2) crosslay/deadlay opening(s) to secure the hose during travel. Each vinyl end flap will be attached with quarter-turn fasteners at the top of the crosslay/deadlay opening(s). They will be attached with quarter turn fasteners at the bottom of the crosslay/deadlay opening(s).</p>
0750536	Hose Restr, Spdly, Not Required, No Spdly	
0590877	Hose Restraint, Crosslay/Deadlay, Aluminum Treadplate, Top Only	<p><b>CROSSLAY/DEADLAY HOSE RESTRAINT</b></p> <p>An aluminum treadplate cover, hinged at the front will be installed over the top of the crosslay/deadlay(s). It will include a latch at each end of the cover to hold it securely in place, a chrome grab handle at each end for opening and closing the cover and a foam rubber gasket where the cover comes into contact to a painted surface. The cover will be provided with rubber latch hold open device.</p>
0019853	Crosslays, 8.00" Lower Than Standard - Control Zone w/9.00" Raised PH	<p><b>CROSSLAY 8.00" LOWER THAN STANDARD</b></p> <p>The crosslays will be lowered 8.00" from standard.</p>
0525125	SP Reel, Booster - Over Pump, Left Side, NPSH	<p><b>BOOSTER HOSE REEL</b></p> <p>A Hannay electric rewind booster hose reel will be installed over the pump in a recessed open compartment on the left side of the apparatus.</p> <p>The exterior finish of the reel will be painted #269 gray from the reel manufacturer..</p> <p>A polished stainless steel roller and guide assembly will be mounted on the reel side of the apparatus.</p> <p>Discharge control will be provided at the pump operator's panel. Plumbing to the reel will consist of 1.50" Aeroquip hose and a 1.50" valve.</p> <p>NPSH thread will be provided to connect the hose to the reel.</p>
0011060	Switch, Reel Rewind - One at Pump Panel	Reel motor will be protected from overload with a circuit breaker rated to match the motor. An electric rewind control switch will be installed on the reel side pump panel.
0018394	Hose, Booster - 150' of 1.00"/800 PSI, 1" NPSH Coupling	Booster hose, 1.00" diameter and 150 feet, with chrome plated Barway, or equal couplings will be provided. The couplings will have 1" NPSH threads. Working pressure of the booster hose will be a minimum of 800 psi.
0017858	Capacity, Hose Reel 150' of 1"	Capacity of the hose reel will be 150 feet of 1.00" booster hose.
0007428	Nozzle for Booster Reel Not Req'd	

**HUSKY 3 FOAM PROPORTIONER**

A Pierce Husky® 3 foam proportioning system will be provided. The Husky 3 is an on demand, automatic proportioning, single point, direct injection system suitable for all types of Class A and B foam concentrates, including the high viscosity (6000 cps), alcohol resistant Class B foams. Operation will be based on direct measurement of water flow, and remain consistent within the specified flows and pressures. The system will automatically proportion foam solution at rates from .1 percent to 3.0 percent regardless of variations in water pressure and flow, up to the maximum rated capacity of the foam concentrate pump.

The design of the system will allow operation from draft, hydrant, or relay operation.

**System Capacity**

The system will have the ability to deliver the following minimum foam solution flow rates at accuracies that meet or exceed NFPA requirements at a pump rating of 150 psi.

100 gpm @ 3 percent

300 gpm @ 1 percent

600 gpm @ 0.5 percent

Class A foam setting in .1 percent increments from .1 percent to 1 percent. Typical settings of 1 percent, .5 percent and .3 percent (maximum capacity will be limited to the plumbing and water pump capacity).

**Control System**

The system will be equipped with a digital electronic control display located on the pump operators panel. Push button controls will be integrated into the panel to turn the system on/off, control the foam percentage, and to set the operation modes.

The percent of injection will have a preset. This preset can be changed at the fire department as desired. The percent of injection will be able to be easily changed at the scene to adjust to changing demands.

Three (3) .50 tall LEDs will display the foam percentage in numeric characters. Three (3) indicator LEDs will also be included, one (1) green, one (1) red, and one (1) yellow. The LEDs will indicate various system operation or error states.

The indications will be:

Solid Green - System On

Solid Red - Valve Position Error

Solid Yellow - Priming System

Flashing Green - Injecting Foam

Flashing Red - Low Tank Level

Flashing Yellow - Refilling Tank

The control display will house a microprocessor, which receives input from the systems water flow meter while also monitoring the position of the foam concentrate pump. The microprocessor will compare the values of the water flow versus the position/rate of the foam pump, to ensure the proportion rate is accurate. One (1) check valve will be installed in the plumbing to prevent foam from contaminating the water pump.

**Hydraulic Drive System**

The foam concentrate pump will be powered by an electric over hydraulic drive system. The hydraulic system and motor will be integrated into one (1) unit.

**Foam Concentrate Pump**

The foam concentrate pump will be of positive displacement, self-priming; linear actuated design, driven by the hydraulic system. The pump will be constructed of brass body; chrome plated stainless steel shaft, with a stainless steel piston. In order to increase longevity of the pump, no aluminum will be present in its construction.

A relief system will be provided which is designed to protect the drive system components and prevent over pressuring the foam concentrate pump

The foam concentrate pump will have minimum capacity for 3 gpm with all types of foam concentrates with a viscosity at or below 6000 cps including protein, fluoroprotein, AFFF, FFFP, or AR-AFFF. The system will deliver only the amount of foam concentrate flow required, without recirculating foam back to the storage tank. Recirculating foam concentrate back to the storage tank can cause agitation and premature foaming of the concentrate, which can result in system failure. The foam concentrate pump will be self-priming and have the ability to draw foam concentrate from external supplies such as drums or pails.

**External Foam Concentrate Connection**

An external foam pick-up will be provided to enable use of a foam agent that is not stored on the vehicle. The external foam pick-up will be designed to allow continued operation after the on-board foam tank is empty, or the use of foam different than the foam in the foam tank.

**Panel Mounted External Pick-Up Connection / Valve**

A bronze three (3)-way valve will be provided. The unit will be mounted to the pump panel. The valve unit will function as the foam system tank to pump valve and external suction valve. The external foam pick-up will be one (1) .75" male connection GHT (garden hose thread) with a cap.

**Pick-Up Hose**

A .75" flexible hose with an end for insertion into foam containers will be provided. The hose will be supplied with a .75" female swivel GHT (garden hose thread) swivel connector. The hose will be shipped loose.

**Discharges**

The foam system will be plumbed to four (4) discharges. The discharges capable of dispensing foam will be front bumper, 2 crosslays, reel line.

**System Electrical Load**

The maximum current draw of the electric motor and system will be no more than 55 amperes at 12 VDC.

0592527	Refill, Foam Tank, Integral, Husky 3	<p><b>SINGLE FOAM TANK REFILL</b>  The foam system's proportioning pump will be used to fill the foam tank. This will allow use of the auxiliary foam pick-up to pump the foam from pails or a drum on the ground into the foam tank. A foam shut-off switch will be installed in the fill dome of the tank to shut the system down when the tank is full. The fill operation will be controlled by a mode in the foam system controller. While the proportioner pump is filling the tank, the controller will display a flashing yellow LED to indicate that the tank is filling. When the tank is full, as determined by the float switch in the tank dome, the pump will stop and the controller will shut the yellow LED off. If it attempted to use tank fill and the refill valve and suction valve are in the wrong position(s), then a red LED will illuminate to indicate the improper valve position(s). When the valves are positioned properly, then filling will commence.</p>
0031896	Demonstration, Foam System, Dealer Provided	
0020148	Foam Cell, 30 Gallon, Reduce Water	<p><b>FOAM TANK</b>  The foam tank will be an integral portion of the polypropylene water tank. The cell will have a capacity of 30 gallons of foam with the intended use of Class A foam. The brand of foam stored in this tank will be silvex. The foam cell will reduce the capacity of the water tank. The foam cell will have a screen in the fill dome and a breather in the lid.</p>
0697589	Drain, 1.00", Foam Tank #1, Husky 3 Foam System, Quarter Turn	<p><b>FOAM TANK DRAIN</b>  The foam tank drain will be a 1.00" quarter turn drain valve located inside the pump/plumbing compartment.</p>
0091079	Not Required, Foam Tank #2	
0091112	Not Required, Foam Tank #2 Drain	
0746445	Approval Dwg, Pump Operator's Panel, Includes Color And Label Tags	<p>The following drawing(s) will be provided for approval by the customer. The drawing(s) will be made for up One (01) Truck apparatus and/or similar Pierce job number.</p> <p><b>PUMP OPERATOR'S PANEL DRAWING</b>  A detailed drawing to scale of the pump operator's panel will be provided for the customer to review. The drawing will include all of the gauges, controls, switching, etc., located on the pump operator's panel. The customer will be allowed to make changes and/or mark-ups to this approval drawing. The fire apparatus manufacturer will make revisions (If needed) to the drawing per the customer changes and/or mark-ups as long as the changes are physically possible within a specific product line.  The finalized and signed customer approved pump operator's panel drawing will become part of the contract documents.</p> <p>Due to the way drain(s), bleeder(s), operational/maintenance tag(s) and NFPA required warning tag(s) are placed on pump panel(s), these items will NOT be shown on any pump panel approval drawing(s). These item(s) will be placed on pump panel(s) at the fire apparatus manufacturer discretion.</p> <p><b>COLOR CODED TAGS</b>  A detailed drawing/chart of the colors used on all of the inlet(s) and outlet(s) will be provided for the customer to review. The customer will be allowed to make changes and/or mark-ups to this approval drawing/chart. The fire apparatus manufacturer will make revisions (If needed) to the drawing per the customer changes and/or mark-ups as long as the changes are physically possible within a specific product line.  The finalized and signed customer approved drawing/chart of the colors will become part of the contract documents.</p> <p><b>SPECIAL TEXT/VERBIAGE TAGS</b>  A detailed drawing/chart of the text/verbiage used on all of the inlet(s) and outlet(s) will be provided for the customer to review. The customer will be allowed to make changes and/or mark-ups to this approval drawing/chart. The fire apparatus manufacturer will make revisions (If needed) to the drawing per the customer changes and/or mark-ups as long as the changes are physically possible within a specific product line.  The finalized and signed customer approved drawing/chart of the text/verbiage will become part of the contract documents.</p>

0007590	Pump House, Side Control, 52", Control Zone	<p><b>PUMP COMPARTMENT</b> The pump compartment will be separate from the hose body and compartments so that each may flex independently of the other. It will be a fabricated assembly of steel tubing, angles and channels which supports both the fire pump and the side running boards. The pump compartment will be mounted on the chassis frame rails with rubber biscuits in a four point pattern to allow for chassis frame twist. Pump compartment, pump, plumbing and gauge panels will be removable from the chassis in a single assembly.</p> <p><b>PUMP MOUNTING</b> Pump will be mounted to a substructure which will be mounted to the chassis frame rail using rubber isolators. The mounting will allow chassis frame rails to flex independently without damage to the fire pump.</p> <p><b>LEFT SIDE PUMP CONTROL PANELS</b> All pump controls and gauges will be located at the left side of the apparatus and properly identified. Layout of the pump control panel will be ergonomically efficient and systematically organized. The pump operator's control panel will be removable in two (2) main sections for ease of maintenance: The upper section will contain sub panels for the mounting of the pump pressure control device, engine monitoring gauges, electrical switches, and foam controls (if applicable). Sub panels will be removable from the face of the pump panel for ease of maintenance. Below the sub panels will be located all valve controls and line pressure gauges. The lower section of the panel will contain all inlets, outlets, and drains. All push/pull valve controls will have 1/4 turn locking control rods with polished chrome plated zinc tee handles. Guides for the push/pull control rods will be chrome plated zinc castings securely mounted to the pump panel. Push/pull valve controls will be capable of locking in any position. The control rods will pull straight out of the panel and will be equipped with universal joints to eliminate binding.</p> <p><b>IDENTIFICATION TAGS</b> The identification tag for each valve control will be recessed in the face of the tee handle. All discharge outlets will have color coded identification tags, with each discharge having its own unique color. Color coding will include the labeling of the outlet and the drain for each corresponding discharge. All line pressure gauges will be mounted directly above the corresponding discharge control tee handles and recessed within the same chrome plated casting as the rod guide for quick identification. The gauge and rod guide casting will be removable from the face of the pump panel for ease of maintenance. The casting will be color coded to correspond with the discharge identification tag. All remaining identification tags will be mounted on the pump panel in chrome plated bezels. The pump panel on the right side will be removable with lift and turn type fasteners. Trim rings will be installed around all inlets and outlets. The trim rings for the side discharge outlets will be color coded and labeled to correspond with the discharge identification tag.</p>
0032479	Pump Panel Configuration, Control Zone	<p><b>PUMP PANEL CONFIGURATION</b> The pump panel configuration will be arranged and installed in an organized manner that will provide user-friendly operation.</p>
0635355	Material, Pump Panels, Side Control Painted FormCoat Black	<p><b>PUMP AND GAUGE PANEL</b> The pump and gauge panels will be constructed of aluminum with a painted FormCoat black finish. A polished aluminum trim molding will be provided around each panel.</p>
0005578	Panel, Pump Access - Right Side Only	<p>The right side pump panel will be removable and fastened with swell type fasteners.</p>
0037731	Pump House Structure, Raised, Included with Ladder Storage	
0005945	Light, Pump Compt	<p><b>PUMP COMPARTMENT LIGHT</b> A pump compartment light will be provided inside the right side pump enclosure and accessible through a door on the pump panel. A .125" weep hole will be provided in each light lens, preventing moisture retention.</p>
0586438	Gauges, Engine - Pump Panel, IAT Pressure Controller	<p><b>PUMP PANEL GAUGES AND CONTROLS</b> The following will be provided on the pump and gauge panels in a neat and orderly fashion. These gauges will be in addition to what is provided with the pressure controller. - Engine Oil Pressure Gauge: With visual and audible warning - Engine Water Temperature Gauge: With visual and audible warning - Tachometer: Electric - Master Pump Drain Control - Voltmeter - Fuel</p>
0005601	Throttle, Engine, Incl'd w/Press Controller	

0739224	Indicator Light @ Pump Panel, Throttle Ready, Incl w/Pressure Gov/Throttle,Green	<b>THROTTLE READY GREEN INDICATOR LIGHT</b> There will be a green indicator light integrated with the pressure governor and/or engine throttle installed on the pump operators panel that is activated when the pump is in throttle ready mode.
0549333	Indicators, Engine, Included with Pressure Controller	
0745568	Indicator Light, Pump Panel, Ok To Pump, Green	<b>OK TO PUMP INDICATOR LIGHT</b> There will be a green indicator light installed on the pump operators panel that is activated when the pump is in Ok To Pump mode.
0553643	Control, Air Horn at Pump Panel w/Red Switch	<b>AIR HORN SWITCH</b> An air horn control switch will be provided at the pump operator's control panel. This switch will be red and properly labeled. The switch will be located within easy reach of the operator in the electrical switch panel.
0747583	SP Drain/Bleeder Lines, Location	<b>DRAIN/BLEEDER LINES</b> The drains/bleeder lines for any drains will be located not underneath the running board.
0007518	Drains, Above Running Boards, LS & RS	<b>DRAINS, ABOVE RUNNING BOARDS, LS &amp; RS</b> Both the left side and right side drains will be installed above the running boards, on the pump panels.
0025637	Pump Panel Trim Rings, Oversized for Valve Removal	<b>OUTLET TRIM RINGS</b> The side discharges and auxiliary inlet valves will be recessed behind the panel and have larger holes provided in the pump panel to facilitate removal of the valves without removing the complete pump panel. Stainless steel trim plates will be provided to trim the holes.
0008940	Gauges, 4.50" Master, Class 1, Special	<b>VACUUM AND PRESSURE GAUGES</b> The pump vacuum and pressure gauges will be liquid filled and manufactured by Class 1 Incorporated ©. The gauges will be a minimum of 4.50" in diameter and will have white faces with black markings, with a pressure range of 30.00" 0-400 psi. The pump pressure and vacuum gauges will be installed adjacent to each other at the pump operator's control panel. Test port connections will be provided at the pump operator's panel. One (1) will be connected to the intake side of the pump, and the other to the discharge manifold of the pump. They will have 0.25 in. standard pipe thread connections and non-corrosive polished stainless steel or brass plugs. They will be marked with a label.
0511105	Gauge, 3.00" Pressure, Class 1, Special	<b>PRESSURE GAUGES</b> The individual "line" pressure gauges for the discharges will be intertube filled and manufactured by Class 1©. The gauges will be a minimum of 3.00" in diameter and will have white faces with black markings. Gauge construction will include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut. Gauges will have a pressure rating of 0-400 psi. The individual pressure gauge will be installed as close to the outlet control as practical. This gauge will include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.
0032297	Gauge, Flowmeter, Class 1, IAT	<b>FLOWMETER GAUGE</b> There will be one (1) Class 1© Flowminder flowmeter provided, in addition to the pressure gauge, for the this flowmeter will be used to monitor the total flow of the foam manifold. Customer has foam pro 2001's on their units at home and want to read total flow off the Husky manifold. The flowmeter will have a range appropriately suited for the diameter of the discharge and will have the "totalizer" feature provided, so the total flow can be checked at any time. The flowmeter will be calibrated with the valve fully open.
0683969	Gauge, Water Level, IC, 14-LED, PN 3030385-01	<b>WATER LEVEL GAUGE</b> There will be an Innovative Controls part number 3030385-01,14-LED water level display provided on the pump operators gauge panel. This water level display will indicate the following: Full with four (4) green horizontal LED lights on top. 3/4 full with three (3) amber horizontal LED lights in the second position from the top. 1/2 full with two (2) amber horizontal LED lights in the third position from the top. 1/4 full with one (1) amber LED light in the fourth position from the top. Empty with four (4) red horizontal LED lights in the bottom position.



0682953	Gauge, Foam Level, Innovative Controls, 10 LED PN 3030393-01, Class A Foam	<p><b>FOAM LEVEL GAUGE</b></p> <p>An Innovative Controls electric foam level indicator will be provided on the gauge panel that registers by means of ten (10) brightly colored LED lights. This level monitor will indicate the following:</p> <ul style="list-style-type: none"> <li>- Full</li> <li>- 3/4</li> <li>- 1/2</li> <li>- 1/4</li> <li>- Refill</li> </ul> <p>To further alert the pump operator, the refill light will start flashing when the foam level drops below the 1/4 mark.</p>
0682503	Light Shield/Step 8" LED, P25 LED Stp Lt	<p><b>STEP/LIGHT SHIELD</b></p> <p>There will be an aluminum treadplate stepping surface no less than 8.00" deep and properly reinforced to support a man's weight, installed over the pump operators panel.</p> <p>There will be 12 volt DC white LED lights installed under the step to illuminate the controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus. These lights will be activated by the pump panel light switch. Additional lights will be included every 18.00" depending on the size of the pump house.</p> <p>One (1) pump panel light will come on when the pump is in ok to pump mode.</p> <p>There will be a light activated above the pump panel light switch when the parking brake is applied. This is to afford the operator some illumination when first approaching the control panel.</p> <p>There will be one (1) white LED, step light provided above this step. In order to ensure exceptional illumination, each step light will provide a minimum of 25 foot-candles (fc) covering an entire 15.00" x 15.00" square placed 10.00" below the light and a minimum of 1.5 fc covering an entire 30.00" x 30.00" square at the same 10.00" distance below the light. The step light will be activated by the pump panel light switch.</p>
0682498	Light Shield/Step 8", PS LED, P25 LED Stp Lt	<p><b>ADDITIONAL STEP/LIGHT SHIELD</b></p> <p>There will be an additional aluminum treadplate stepping surface no less than 8.00" deep and properly reinforced to support a man's weight, installed over the passenger's side pump panel.</p> <p>There will be 12 volt DC white LED lights installed under the step to illuminate the controls, switches, essential instructions, gauges, and instruments necessary for the operation of the apparatus. These lights will be activated by the pump panel light switch. Additional lights will be included every 18.00" depending on the size of the pump house.</p> <p>There will be one (1) white LED, step light provided above the step. In order to ensure exceptional illumination, each step light will provide a minimum of 25 foot-candles (fc) covering an entire 15.00" x 15.00" square placed 10.00" below the light and a minimum of 1.5 fc covering an entire 30.00" x 30.00" square at the same 10.00" distance below the light. The step light will be activated by the pump panel light switch.</p>
0006051	Air Horn, (1) Grover, In Bumper	<p><b>AIR HORN SYSTEM</b></p> <p>One (1) Grover air horn will be recessed in the front bumper. The air horn system will be piped to the air brake system wet tank utilizing 0.38" tubing. A pressure protection valve will be installed to prevent the loss of air, in the brake system.</p>
0606842	Location, Air Horn, Bumper, Right Side, Outside Frame, Inboard (Pos #2)	<p><b>Air Horn Location</b></p> <p>The air horn will be located on the right side of the bumper, just outside of the frame rail.</p>
0757092	Control, Air Horn, Multi Select	<p><b>AIR HORN CONTROL</b></p> <p>The air horn(s) will be activated by the following:</p>
0757071	Control, Air Horn, Push Button Sw, Red Cover, LS	Left side push button switch with red cover
0757078	Control, Air Horn, Push Button Sw, RS	Right side push button switch
0550598	Siren, WIn 295HFS2 Remote, Single Amp	<p><b>ELECTRONIC SIREN</b></p> <p>A Whelen, Model 295HFS2, electronic remote siren with noise canceling microphone will be provided.</p> <p>This siren to be active when the battery switch is on and that emergency master switch is on.</p>
0510206	Location, Elect Siren, Recessed Overhead In Console	Electronic siren head will be recessed in the driver side inside switch panel.
0076156	Control, Elec Siren, Head Only	The electronic siren will be controlled on the siren head only. No horn button or foot switches will be provided.

0601306	Speaker, (1) Wln, SA315P, w/Pierce Polished Stainless Steel Grille, 100 watt	<b>SPEAKER</b> There will be one (1) Whelen®, Model SA315P, black nylon composite, 100-watt, speaker with through bumper mounting brackets and polished stainless steel grille provided. The speaker will be connected to the siren amplifier.
0601551	Location, Speaker, Frt Bumper, Recessed, Right Side, Outside Frame, Outbrd(Pos 1)	The speaker will be recessed in the right side of the front bumper, towards the outside.
0779165	Siren, Federal Q2B, Bat Dir	<b>AUXILIARY MECHANICAL SIREN</b> There will be a Federal Signal Model Q2B mechanical siren furnished on the front of the apparatus. The siren will be energized from a battery direct circuit through a 2-gauge cable to a solenoid that is energized from the emergency master switch. Additional customer selectable controls will be included for the momentary activation of this siren.
0006097	Location of Siren, Recessed in Bumper	The mechanical siren will be recessed in the front bumper on the left side. The siren will be properly supported using the bumper framework.
0511550	Control, Mech Siren, DS & PS Foot Sw, Location Feature	<b>FOOT SWITCHES</b> The mechanical siren will be actuated by two (2) foot switches, one (1) located on the officer's side and one (1) on the driver's side. The specific mounting locations will be customer to pin point locations at pick up..
0740391	Sw, Siren Brake, Momentary Chrome Push Button, RS	A momentary chrome push button switch will be included in the right side dash panel to activate the siren brake.
0736165	Sw, Siren Brake, Momentary, RS Overhead Sw Pnl	A momentary switch will be included in the right side overhead switch panel to activate the siren brake.
0604784	Lightbar, Wln, Freedom IV-Q, 81", RRRRWRsrROptRsrRWRRRR	<b>FRONT ZONE UPPER WARNING LIGHTS</b> There will be one (1) 81.00" Whelen® Freedom IV™ lightbar mounted on the cab roof. The lightbar will include the following: One (1) red flashing LED module in the driver's side end position. One (1) red flashing LED module in the driver's side front corner position. One (1) red flashing LED module in the driver's side first front position. One (1) red flashing LED module in the driver's side second front position. One (1) white flashing LED module in the driver's side third front position. One (1) red flashing LED module in the driver's side fourth front position. One (1) red steady burning LED module in the driver's side fifth front position. One (1) red flashing LED module in the driver's side sixth front position. One (1) 795 LED traffic light controller set to national standard high priority in the center positions.  One (1) red flashing LED module in the passenger's side sixth front position. One (1) red steady burning LED module in the passenger's side fifth front position. One (1) red flashing LED module in the passenger's side fourth front position. One (1) white flashing LED module in the passenger's side third front position. One (1) red flashing LED module in the passenger's side second front position. One (1) red flashing LED module in the passenger's side first front position. One (1) red flashing LED module in the passenger's side front corner position. One (1) red flashing LED module in the passenger's side end position. There will be clear lenses included on the lightbar. The following switches may be a installed in the cab on the switch panel to control the lightbar: a switch to control the flashing LED modules. the traffic light controller by a cab switch with emergency master control. a driver's side momentary cab switch with no emergency master control to activate the traffic light controller. The white flashing LED modules and the traffic light controller will be disabled when the parking brake is applied. The eight (8) red flashing LED modules in the front positions may be load managed when the parking brake is applied.
0655256	Light, GTT, Opticom, 76-1000-1155-0, GPS, Priority Control System	<b>OPTICOM GPS PRIORITY CONTROL DEVICE</b> There will be a Global Traffic Technologies, Model 76-1000-1155-0, GPS preemption vehicle kit provided. This GPS preemption vehicle kit is set for high priority. This system is designed to use satellite communications with a receiver board at an intersection to control the traffic lights. The system will be activated when the battery switch is on and the emergency master switch is on. The system will be deactivated when the parking brake is applied. The kit will include: Radio/GPS unit containing a GPS receiver and transceiver Radio/GPS antenna on the cab roof. A controller, which also provides an interface point between the radio/GPS unit the vehicle wiring, and an external PC used for configuration, diagnostics, and downloading log information. The location of this controller will be behind the driver's side seat.

0650605	Lights, Front Zone, WIn M6** LED, Q Bzl, 4lts	<p><b>LIGHTS, FRONT ZONE LOWER</b></p> <p>There will be four (4) Whelen Model M6* 4.32" high x 6.75" wide LED flashing warning lights installed on the cab face above the headlights in a common bezel.</p> <p>The driver's side front outside warning light to be red.</p> <p>The driver's side front inside warning light to be red.</p> <p>The passenger's side front inside warning light to be red.</p> <p>The passenger's side front outside warning light to be red.</p> <p>Both lights will include a lens that is clear.</p> <p>Both lights will be controlled by a lighted switch on the cab instrument panel.</p> <p>The inside lights will be disabled if the color white is selected when the parking brake is applied.</p>
0540679	Lights, Side Zone Lower, WIn M6*C LED, Clear Lens 2pr	<p><b>SIDE ZONE LOWER LIGHTING</b></p> <p>There will be four (4) Whelen®, Model M6*C, flashing LED warning lights with chrome trim installed per the following:</p> <p>Two (2) lights, one (1) each side on the bumper extension. The side front lights to be red.</p> <p>Two (2) lights, one (1) each side above rear wheels. The side rear lights to be red.</p> <p>The lights will include a clear lenses.</p> <p>There will be a switch in the cab on the switch panel to control the lights.</p>
0564655	Lights, Rear Zone Lower, WIn M6*C LED, Clear Lens, For Tail Lt Housing	<p><b>REAR ZONE LOWER LIGHTING</b></p> <p>There will be two (2) Whelen®, Model M6*C, LED flashing warning lights located at the rear of the apparatus.</p> <p>The driver's side rear light to be red</p> <p>The passenger's side rear light to be red</p> <p>Both lights will include a lens that is clear.</p> <p>There will be a switch located in the cab on the switch panel to control the lights.</p>
0088745	Light, Rear Zone Upper, WIn L31HRFN LED Beacon, Red LED	<p><b>REAR/SIDE ZONE UPPER WARNING LIGHTS</b></p> <p>There will be two (2) Whelen®, Model L31H*FN, LED warning beacons provided at the rear of the truck, located one (1) each side. There will be a switch located in the cab on the switch panel to control the beacons.</p> <p>The color of the lights will be red LEDs with both domes clear.</p>
0006551	Not Required, Lights, Rear Upper Zone Blocking	
0016610	Mtg, Rear Warn Lts, Std Mount, S/S Brkts	<p>The rear warning lights will be mounted on stainless steel brackets with all wiring totally enclosed.</p> <p>These brackets will also support the clearance/marker lights.</p>
0791493	Light, Traffic Directing, WIn TAM65 36" Long LED	<p><b>TRAFFIC DIRECTING LIGHT</b></p> <p>There will be one (1) Whelen® Model TAM65, 36.00" long x 2.87" high x 2.25" deep, amber LED traffic directing light installed at the rear of the apparatus.</p> <p>The Whelen Model TACTL5 control head will be included with this installation.</p> <p>The control head will be energized when the battery switch is on.</p> <p>The auxiliary flash to be activated when the emergency master switch is on.</p>
0580621	Location, Traf Dir Lt, Recessed Into Rear Wall	<p>This traffic directing light will be recessed at the rear of the apparatus as high as practical.</p>
0530282	Location, Traf Dir Lt Controller, Overhead Switch Panel DS Right End	<p>The traffic directing light control head will be located in the driver side overhead switch panel in the right panel position.</p>
0006790	Receptacle, 20A 120V 3-Pr 3-Wr TL, L5-20R Wtrprf	<p><b>120 VOLT RECEPTACLE</b></p> <p>There will be four (4), 20 amp 120 volt AC three (3) wire twist lock receptacle(s) with waterproof flip up cover(s) installed on the driver and passenger side pump panel, near the bottom, as far forward as possible, one on the drivers side cab face, best possible location, and one on the rear body bulkhead, drivers side low. The NEMA configuration for the receptacles will be L5-20R.</p> <p>The receptacle(s) will be powered from the on board generator.</p> <p>There will be a label installed near the receptacle(s) that state the following:</p> <p>Line Voltage</p> <p>Current Rating (amps)</p> <p>Phase</p> <p>Frequency</p>
0519934	Not Required, Brand, Hydraulic Tool System	
0649736	Not Required, Hydraulic Tools	

0007150	Bag of Nuts and Bolts	<b>LOOSE EQUIPMENT</b>
		The following equipment will be furnished with the completed unit: Two (2) bags of chrome, stainless steel, or cadmium plated screws, nuts, bolts and washers, as used in the construction of the unit.
0602516	NFPA Required Loose Equipment, Pumper, NFPA 2016, Provided by Fire Department	<p><b>NFPA REQUIRED LOOSE EQUIPMENT PROVIDED BY FIRE DEPARTMENT</b></p> <p>The following loose equipment as outlined in NFPA 1901, 2016 edition, section 5.9.3 and 5.9.4 will be provided by the fire department.</p> <p>800 ft (60 m) of 2.50" (65 mm) or larger fire hose. 400 ft (120 m) of 1.50" (38 mm), 1.75" (45 mm), or 2.00" (52 mm) fire hose. One (1) handline nozzle, 200 gpm (750 L/min) minimum. Two (2) handline nozzles, 95 gpm (360 L/min) minimum. One (1) smoothbore of combination nozzle with 2.50" shutoff that flows a minimum of 250 gpm. One (1) SCBA complying with NFPA 1981 for each assigned seating position, but not fewer than four (4), mounted in brackets fastened to the apparatus or stored in containers supplied by the SCBA manufacturer. One (1) spare SCBA cylinder for each SCBA carried, each mounted in a bracket fastened to the apparatus or stored in a specially designed storage space(s). One (1) first aid kit. Four (4) combination spanner wrenches. Two (2) hydrant wrenches. One (1) double female 2.50" (65 mm) adapter with National Hose threads. One (1) double male 2.50" (65 mm) adapter with National Hose threads. One (1) rubber mallet, for use on suction hose connections. Two (2) salvage covers each a minimum size of 12 ft x 14 ft (3.7 m x 4.3 m). One (1) traffic vest for each seating position, each vest to comply with ANSI/ISEA 207, <i>Standard for High Visibility Public Safety Vests</i>, and have a five-point breakaway feature that includes two (2) at the shoulders, two (2) at the sides, and one (1) at the front. Five (5) fluorescent orange traffic cones not less than 28.00" (711 mm) in height, each equipped with a 6.00" (152 mm) retro-reflective white band no more than 4.00" (102 mm) from the top of the cone, and an additional 4.00" (102 mm) retro-reflective white band 2.00" (51 mm) below the 6.00" (152 mm) band. Five (5) illuminated warning devices such as highway flares, unless the five (5) fluorescent orange traffic cones have illuminating capabilities. One (1) automatic external defibrillator (AED). Four (4) ladder belts meeting the requirements of NFPA 1983, <i>Standard on Fire Service Life Safety Rope and System Components</i> (if equipped with an aerial device). If the supply hose carried does not use sexless couplings, an additional double female adapter and double male adapter, sized to fit the supply hose carried, will be carried mounted in brackets fastened to the apparatus. If none of the pump intakes are valved, a hose appliance that is equipped with one or more gated intakes with female swivel connection(s) compatible with the supply hose used on one side and a swivel connection with pump intake threads on the other side will be carried. Any intake connection larger than 3.00" (75 mm) will include a pressure relief device that meets the requirements of 16.6.6. If the apparatus does not have a 2.50" National Hose (NH) intake, an adapter from 2.50" NH female to a pump intake will be carried, mounted in a bracket fastened to the apparatus if not already mounted directly to the intake. If the supply hose carried has other than 2.50" National Hose (NH) threads, adapters will be carried to allow feeding the supply hose from a 2.50" NH thread male discharge and to allow the hose to connect to a 2.50" NH female intake, mounted in brackets fastened to the apparatus if not already mounted directly to the discharge or intake.</p>
0602407	Soft Suction Hose, Provided by Fire Department, Pumper NFPA 2016 Classification	<p><b>SOFT SUCTION HOSE PROVIDED BY FIRE DEPARTMENT</b></p> <p>NFPA 1901, 2016 edition, section 5.8.2.1 requires a minimum of 20' of suction hose or 15' of supply hose will be carried. Hose is not on the apparatus as manufactured. The fire department will provide suction or supply hose.</p>
0602390	Strainer, Provided by Fire Department, Pumper NFPA 2016 Classification	<p><b>STRAINER PROVIDED BY FIRE DEPARTMENT</b></p> <p>NFPA 1901, 2016 edition, section 5.8.2.1.1 requires a suction strainer when suction hose is provided. The strainer is not on the apparatus as manufactured. The fire department will provide the suction strainer.</p>
0602538	Extinguisher, Dry Chemical, Pumper NFPA 2016 Class, Provided by Fire Department	<p><b>DRY CHEMICAL EXTINGUISHER PROVIDED BY FIRE DEPARTMENT</b></p> <p>NFPA 1901, 2016 edition, section 5.9.4 requires one (1) approved dry chemical portable fire extinguisher with a minimum 80-B:C rating mounted in a bracket fastened to the apparatus. The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.</p>
0602360	Extinguisher, 2.5 Gal. Pressurized Water, Pumper NFPA 2016, Provided by Fire Dept	<p><b>WATER EXTINGUISHER PROVIDED BY FIRE DEPARTMENT</b></p> <p>NFPA 1901, 2016 edition, section 5.9.4 requires one (1) 2.5 gallon or larger water extinguisher mounted in a bracket fastened to the apparatus. The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.</p>

0602678	Axe, Flathead, Pumper, Provided by Dealer, NFPA 2016	<p><b>FLATHEAD AXE PROVIDED BY DEALER</b>  NFPA 1901, 2016 edition, Section 5.9.4 requires one (1) flathead axe mounted in a bracket fastened to the apparatus.  The axe is not on the apparatus as manufactured. The dealer will provide and mount the axe.</p>
0602667	Axe, Pickhead, Pumper NFPA 2016 Classification, Provided by Fire Department	<p><b>PICKHEAD AXE PROVIDED BY FIRE DEPARTMENT</b>  NFPA 1901, 2016 edition, Section 5.9.4 requires one (1) pickhead axe mounted in a bracket fastened to the apparatus.  The axe is not on the apparatus as manufactured. The fire department will provide and mount the axe.</p>
0559682	Paint, Two Tone, Cab, w/Shield, Custom Cab	<p><b>PAINT</b>  The exterior custom cab and body painting procedure will consist of a seven (7) step finishing process as follows:  <u>Manual Surface Preparation</u> - All exposed metal surfaces on the custom cab and body will be thoroughly cleaned and prepared for painting. Imperfections on the exterior surfaces will be removed and sanded to a smooth finish. Exterior seams will be sealed before painting. Exterior surfaces that will not be painted include: chrome plating, polished stainless steel, anodized aluminum and bright aluminum treadplate.  <u>Chemical Cleaning and Pretreatment</u> - All surfaces will be chemically cleaned to remove dirt, oil, grease, and metal oxides to ensure the subsequent coatings bond well. The aluminum surfaces will be properly cleaned and treated using a high pressure, high temperature 4 step Acid Etch process. The steel and stainless surfaces will be properly cleaned and treated using a high temperature 3 step process specifically designed for steel or stainless. The chemical treatment converts the metal surface to a passive condition to help prevent corrosion. A final pure water rinse will be applied to all metal surfaces.  <u>Surfacer Primer</u> - The Surfacer Primer will be applied to a chemically treated metal surface to provide a strong corrosion protective basecoat. A minimum thickness of 2 mils of Surfacer Primer is applied to surfaces that require a Critical aesthetic finish. The Surfacer Primer is a two-component high solids urethane that has excellent sanding properties and an extra smooth finish when sanded.  <u>Finish Sanding</u> - The Surfacer Primer will be sanded with a fine grit abrasive to achieve an ultra-smooth finish. This sanding process is critical to produce the smooth mirror like finish in the topcoat.  <u>Sealer Primer</u> - The Sealer Primer is applied prior to the Basecoat in all areas that have not been previously primed with the Surfacer Primer. The Sealer Primer is a two-component high solids urethane that goes on smooth and provides excellent gloss hold out when topcoated.  <u>Basecoat Paint</u> - Two coats of a high performance, two component high solids polyurethane basecoat will be applied. The Basecoat will be applied to a thickness that will achieve the proper color match. The Basecoat will be used in conjunction with a urethane clear coat to provide protection from the environment.  <u>Clear Coat</u> - Two (2) coats of Clear Coat will be applied over the Basecoat color. The Clear Coat is a two-component high solids urethane that provides superior gloss and durability to the exterior surfaces. Lap style and roll-up doors will be Clear Coated to match the body. Paint warranty for the roll-up doors will be provided by the roll-up door manufacture.  Each batch of basecoat color is checked for a proper match before painting of the cab and the body. After the cab and body are painted, the color is verified again to make sure that it matches the color standard. Electronic color measuring equipment is used to compare the color sample to the color standard entered into the computer. Color specifications are used to determine the color match. A Delta E reading is used to determine a good color match within each family color.  All removable items such as brackets, compartment doors, door hinges, and trim will be removed and separately if required, to ensure paint behind all mounted items. Body assemblies that cannot be finish painted after assembly will be finish painted before assembly.  Pierce Manufacturing paint finish quality levels for critical areas of the apparatus (cab front and sides, body sides and doors, and boom lettering panels) meet or exceed the Cadillac/General Motors GMW15777 global paint requirements. Orange peel levels meet or exceed the #6 A.C.T. standard in critical areas. These requirements are met in order for the exterior paint finish to be considered acceptable. The Pierce Manufacturing written paint standards will be available upon request.  The cab will be two-tone, with the upper section painted #10 white along with a shield design on the cab face and lower section of the cab and body painted #90 red.  <b>PAINT - ENVIRONMENTAL IMPACT</b>  Contractor will meet or exceed all current State regulations concerning paint operations. Pollution control will include measures to protect the atmosphere, water and soil. Controls will include the following conditions:  Topcoats and primers will be chrome and lead free.  Metal treatment chemicals will be chrome free. The wastewater generated in the metal treatment process will be treated on-site to remove any other heavy metals.  Particulate emission collection from sanding operations will have a 99.99% efficiency factor.  Particulate emissions from painting operations will be collected by a dry filter or water wash process. If the dry filter is used, it will have an efficiency rating of 98.00%. Water wash systems will be 99.97% efficient  Water from water wash booths will be reused. Solids will be removed on a continual basis to keep the water clean.  Paint wastes are disposed of in an environmentally safe manner.  Empty metal paint containers will be to recover the metal.  Solvents used in clean-up operations will be recycled on-site or sent off-site for distillation and returned for reuse.  Additionally, the finished apparatus will not be manufactured with or contain products that have ozone depleting substances. Contractor will, upon demand, present evidence that the manufacturing facility meets the above conditions and that it is in compliance with his State EPA rules and regulations.</p>

0646897	Paint Chassis Frame Assy, E-Coat, Standard	<p><b>PAINT CHASSIS FRAME ASSEMBLY</b>  The chassis frame assembly will be finished with a single system black top coat before the installation of the cab and body, and before installation of the engine and transmission assembly, air brake lines, electrical wire harnesses, etc.  Components treated with epoxy E-coat protection prior to paint:  Two (2) C-channel frame rails  Components that are included with the chassis frame assembly that will be painted not e-coated are:  Cross members  Axles  Suspensions  Steering gear  Battery boxes  Bumper extension weldment  Frame extensions  Body mounting angles  Rear Body support substructure (front and rear)  Pump house substructure  Air tanks  Steel fuel tank  Castings  Individual piece parts used in chassis and body assembly  The E-coat process will meet the technical properties shown.</p>
0693797	No Paint Required, Aluminum Front Wheels	
0693792	No Paint Required, Aluminum Rear Wheels	
0733739	Paint, Axle Hubs	<p><b>AXLE HUB PAINT</b>  All axle hubs will be painted black #101.</p>
0007230	Compartment, Painted, Spatter Gray	<p><b>COMPARTMENT INTERIOR PAINT</b>  The interior of all compartments will be painted with a gray spatter finish for ease of cleaning and to make it easier to touch up scratches and nicks.</p>
0544124	Reflective Band, 1"-4"-1"	<p><b>REFLECTIVE STRIPES</b>  Three (3) reflective stripes will be provided across the front of the vehicle and along the sides of the body. The reflective band will consist of a 1.00" white stripe at the top with a 1.00" gap then a 4.00" white stripe with a 1.00" gap and a 1.00" white stripe on the bottom.</p>
0007356	Reflective across Cab Face	The reflective band provided on the cab face will be at the headlight level.
0536954	Stripe, Chevron, Rear, Diamond Grade, Pumper	<p><b>REAR CHEVRON STRIPING</b>  There will be alternating chevron striping located on the rear-facing vertical surface of the apparatus. The rear surface, excluding the rear compartment door, will be covered. The colors will be red and yellow diamond grade. Each stripe will be 6.00" in width. This will meet the requirements of the current edition of NFPA 1901, which states that 50% of the rear surface will be covered with chevron striping.</p>
0027341	Jog, In Reflective Stripe, Single or Multiple	<p><b>JOG(S) IN REFLECTIVE BAND</b>  The reflective band located on each side of the apparatus body will contain one (1) jog(s) and will be angled at approximately a 45 degrees when installed.</p>
0017359	Stripe, Black Outline, Vinyl on Reflective Band	<p><b>REFLECTIVE STRIPE OUTLINE</b>  A black outline will be applied on the top and the bottom of the reflective band. There will be three (3) set of outline stripes required.</p>
0567374	Stripe, Black Outline each Chevron Stripe @ Rear (Not Warranted)	<p><b>REFLECTIVE STRIPE OUTLINE</b>  A black vinyl outline will be provided for each chevron stripe at the rear of the truck.</p>
0065687	Stripe, Reflective, Cab Doors Interior	<p><b>CAB DOOR REFLECTIVE STRIPE</b>  A 6.00" x 16.00" white reflective stripe will be provided across the interior of each cab door. The stripe will be located approximately 1.00" up from the bottom, on the door panel. This stripe will meet the NFPA 1901 requirement.</p>

0027372	Lettering Specifications, (GOLD STAR Process)	<b>LETTERING</b> The lettering will be totally encapsulated between two (2) layers of clear vinyl.
0685688	Lettering, Printed Effect Gold Leaf, 3.00", (61-80)	<b>LETTERING</b> Sixty-one (61) to eighty (80) printed effect gold leaf lettering, 3.00" high, with outline and shade will be provided.
0685993	Lettering, Reflective, 10.00", Each	<b>LETTERING</b> There will be reflective lettering, 10.00" high, with outline and shade provided. There will be two (2) letters provided.
0686018	Lettering, Reflective, 5.00", Each	<b>LETTERING</b> There will be reflective lettering, 5.00" high, with outline and shade provided. There will be two (2) letters provided.
0686026	Lettering, Reflective, 4.00", (41-60)	<b>LETTERING</b> Forty-one (41) to sixty (60) reflective lettering, 4.00" high, with outline and shade will be provided.
0686082	Lettering, Reflective, 3.00", (1-20)	<b>LETTERING</b> One (1) to twenty (20) reflective lettering, 3.00" high, with outline and shade will be provided.
0685554	Lettering, Printed Effect Gold Leaf, 6.00", Each	<b>LETTERING</b> There will be printed effect gold leaf lettering, 6.00" high, with outline and shade provided. There will be ten (10) letters provided.
0685568	Lettering, Printed Effect Gold Leaf, 2.00", Each	<b>LETTERING</b> There will be printed effect gold leaf lettering, 2.00" high, with outline and shade provided. There will be 12 letters provided.
0685576	Lettering, Printed Effect Gold Leaf, 1.00", Each	<b>LETTERING</b> There will be printed effect gold leaf lettering, 1.00" high, with outline and shade provided. There will be 14 letters provided.
0685605	Lettering, Printed Effect Gold Leaf, 3.00", Each	<b>LETTERING</b> There will be printed effect gold leaf lettering, 3.00" high, with outline and shade provided. There will be two (2) letters provided.
0755303	Artwork File, Provided on Custom USB Drive	<b>ARTWORK ON CUSTOM USB DRIVE</b> There will be a custom USB drive with department specific artwork files provided to the Fire Department. Stock artwork, or artwork developed exclusively by Pierce Manufacturing, and proprietary fonts will not be included on the USB drive.
0772003	Manual, Fire Apparatus Parts, USB Flash Drive, Custom	<b>FIRE APPARATUS PARTS MANUAL</b> There will be one (1) custom parts manual(s) in USB flash drive format for the complete fire apparatus provided. The manual(s) will contain the following: Job number Part numbers with full descriptions Table of contents Parts section sorted in functional groups reflecting a major system, component, or assembly Parts section sorted in alphabetical order Instructions on how to locate parts Each manual will be specifically written for the chassis and body model being purchased. It will not be a generic manual for a multitude of different chassis and bodies. <b>Service Parts Internet Site</b> The service parts information included in these manuals are also available on the Pierce website. The website offers additional functions and features not contained in this manual, such as digital photographs and line drawings of select items. The website also features electronic search tools to assist in locating parts quickly.

0772037	Manual, Chassis Service, USB Flash Drive, Custom	<b>CHASSIS SERVICE MANUALS</b> There will be one (1) chassis service manuals on USB flash drives containing parts and service information on major components provided with the completed unit. The manual will contain the following sections: Job number Table of contents Troubleshooting Front Axle/Suspension Brakes Engine Tires Wheels Cab Electrical, DC Air Systems Plumbing Appendix The manual will be specifically written for the chassis model being purchased. It will not be a generic manual for a multitude of different chassis and bodies.
0773381	Manual, Chassis Operation, (1) USB Flash Drive, Custom	<b>CHASSIS OPERATION MANUAL</b> The chassis operation manual will be provided on one (1) USB flash drive.
0030008	Warranty, Basic, 1 Year, Apparatus, WA0008	<b>ONE (1) YEAR MATERIAL AND WORKMANSHIP</b> A Pierce basic apparatus limited warranty certificate, WA0008, is included with this proposal.
0696698	Warranty, Engine, Cummins, 5 Year, WA0181	<b>ENGINE WARRANTY</b> A Cummins <b>five (5) year</b> limited engine warranty will be provided. A limited warranty certificate, WA0181, is included with this proposal.
0684952	Warranty, Steering Gear, TRW Ross TAS, 1 Year WA0202	<b>STEERING GEAR WARRANTY</b> A TRW <b>one (1) year</b> limited steering gear warranty will be provided. A copy of the warranty certificate will be submitted with the bid package.
0596017	Warranty, Frame, 50 Year, Custom Chassis, WA0013	<b>FIFTY (50) YEAR STRUCTURAL INTEGRITY</b> The Pierce custom chassis frame limited warranty certificate, WA0013, is included with this proposal.
0733309	Warranty, Axle, 5 Year, Meritor, General Service, WA0384	<b>FRONT AXLE FIVE (5) YEAR MATERIAL AND WORKMANSHIP WARRANTY</b> A Meritor™ Axle 5 year limited warranty will be provided.
0733306	Warranty, Single Axle, 5 Year, Meritor General Service, WA0384	<b>SINGLE REAR AXLE FIVE (5) YEAR MATERIAL AND WORKMANSHIP WARRANTY</b> A Meritor™ Axle 5 year limited warranty will be provided.
0652758	Warranty, ABS Brake System, 3 Year, Meritor Wabco, WA0232	<b>ABS BRAKE SYSTEM THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY</b> A Meritor Wabco™ ABS brake system limited warranty certificate, WA0232, is included with this proposal.
0019914	Warranty, Structure, 10 Year, Custom Cab, WA0012	<b>TEN (10) YEAR STRUCTURAL INTEGRITY</b> The Pierce custom cab limited warranty certificate, WA0012, is included with this proposal.
0595813	Warranty, Paint, 10 Year, Cab, Pro-Rate, WA0055	<b>TEN (10) YEAR PRO-RATED PAINT AND CORROSION</b> A Pierce cab limited pro-rated paint warranty certificate, WA0055, is included with this proposal.
0524627	Warranty, Electronics, 5 Year, MUX, WA0014	<b>FIVE (5) YEAR MATERIAL AND WORKMANSHIP</b> The Pierce Command Zone electronics limited warranty certificate, WA0014, is included with this proposal.
0695416	Warranty, Pierce Camera System, WA0188	<b>CAMERA SYSTEM WARRANTY</b> A Pierce fifty four (54) monthwarranty will be provided for the camera system.
0708760	Warranty, Not Applicable, LED Strip Lights	<b>COMPARTMENT LIGHT WARRANTY</b> The compartment lights will not offer an extended warranty.



0046369	Warranty, 5-year EVS Transmission, Standard Custom, WA0187	<b>TRANSMISSION WARRANTY</b> The transmission will have a <b>five (5) year/unlimited mileage</b> warranty covering 100 percent parts and labor. The warranty will be provided by Allison Transmission. Note: The transmission cooler is not covered under any extended warranty you may be getting on your Allison Transmission. Please review your Allison Transmission warranty for coverage limitations.
0685945	Warranty, Transmission Cooler, WA0216	<b>TRANSMISSION COOLER WARRANTY</b> The transmission cooler will carry a five (5) year parts and labor warranty (exclusive to the transmission cooler). In addition, a collateral damage warranty will also be in effect for the first three (3) years of the warranty coverage and will not exceed \$10,000 per occurrence. A copy of the warranty certificate will be submitted with the bid package.
0688798	Warranty, Water Tank, Lifetime, UPF, Poly Tank, WA0195	<b>WATER TANK WARRANTY</b> A UPF poly water tank limited warranty certificate, WA0195, is included with this proposal.
0596025	Warranty, Structure, 10 Year, Body, WA0009	<b>TEN (10) YEAR STRUCTURAL INTEGRITY</b> The Pierce apparatus body limited warranty certificate, WA0009, is included with this proposal.
0693126	Warranty, AMDOR, Roll-up Door, 10 Year/5 Year Painted, WA0185	<b>ROLL UP DOOR MATERIAL AND WORKMANSHIP WARRANTY</b> An AMDOR roll-up door limited warranty will be provided. The roll-up door will be warranted against manufacturing defects for a period of <b>ten (10) years</b> . A <b>five (5) year</b> limited warranty will be provided on painted roll up doors. The limited warranty certificate, WA0185, is included with this proposal.
0734463	Warranty, Pump, Waterous, 7 Year Parts, WA0382	<b>PUMP WARRANTY</b> The Waterous pump will be provided with a Seven (7) year <b>material and workmanship limited warranty</b> . <b>A copy of the warranty certificate will be submitted with the bid package (no exception).</b>
0648675	Warranty, 10 Year S/S Pumping, WA0035	<b>TEN (10) YEAR PUMP PLUMBING WARRANTY</b> The Pierce apparatus plumbing limited warranty certificate, WA0035, is included with this proposal.
0657990	Warranty, Foam System, Husky 3, WA0231	<b>FOAM SYSTEM WARRANTY</b> The Husky 3 foam system limited warranty certificate, WA0231, is included with this proposal.
0595820	Warranty, Paint, 10 Year, Body, Pro-Rate, WA0057	<b>TEN (10) YEAR PRO-RATED PAINT AND CORROSION</b> A Pierce body limited pro-rated paint warranty certificate, WA0057, is included with this proposal.
0595421	Warranty, Goldstar, 3 Year, Apparatus, WA0018	<b>THREE (3) YEAR MATERIAL AND WORKMANSHIP</b> The Pierce Goldstar gold leaf lamination limited warranty limited warranty certificate, WA0018, is included with this proposal.
0683627	Certification, Vehicle Stability, CD0156	<b>VEHICLE STABILITY CERTIFICATION</b> The fire apparatus manufacturer will provide a certification stating the apparatus complies with NFPA 1901, current edition, section 4.13, Vehicle Stability. The certification will be provided at the time of bid.
0736238	Certification, Engine Installation, Saber FR/Enf, Cummins L9, 2021	<b>ENGINE INSTALLATION CERTIFICATION</b> The fire apparatus manufacturer will provide a certification, along with a letter from the engine manufacturer stating they approve of the engine installation in the bidder's chassis. The certification will be provided at the time of delivery.
0686786	Certification, Power Steering, CD0098	<b>POWER STEERING CERTIFICATION</b> The fire apparatus manufacturer will provide a certification stating the power steering system as installed meets the requirements of the component supplier. The certification will be provided at the time of bid.

0631980	Certification, Cab Integrity, Saber FR/Enforcer, CD0130	<p><b>CAB INTEGRITY CERTIFICATION</b></p> <p>The fire apparatus manufacturer will provide a cab crash test certification with this proposal. The certification will state that a specimen representing the substantial structural configuration of the cab has been tested and certified by an independent third party test facility. Testing events will be documented with photographs, real-time and high-speed video, vehicle accelerometers, cart accelerometers, and a laser speed trap. The fire apparatus manufacturer will provide a state licensed professional engineer to witness and certify all testing events. Testing will meet or exceed the requirements below:</p> <p>European Occupant Protection Standard ECE Regulation No.29. SAE J2422 Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks. SAE J2420 COE Frontal Strength Evaluation - Dynamic Loading Heavy Trucks.</p> <p><b>Roof Crush</b></p> <p>The cab will be subjected to a roof crush force of 22,500 lb. This value meets the ECE 29 criteria, and is equivalent to the front axle rating up to a maximum of ten (10) metric tons.</p> <p><b>Side Impact</b></p> <p>The same cab will be subjected to dynamic preload where a 13,275-lb moving barrier is slammed into the side of the cab at 5.50 mph, striking with an impact of 13,000 ft-lb of force. This test is part of the SAE J2422 test procedure and more closely represents the forces a cab will see in a rollover incident.</p> <p><b>Frontal Impact</b></p> <p>The same cab will withstand a frontal impact of 32,600 ft-lb of force using a moving barrier in accordance with SAE J2420.</p> <p><b>Additional Frontal Impact</b></p> <p>The same cab will withstand a frontal impact of 65,200 ft-lb of force using a moving barrier. (Twice the force required by SAE J2420)</p> <p>The same cab will withstand all tests without any measurable intrusion into the survival space of the occupant area.</p>
0631973	Certification, Cab Door Durability, Saber FR/Enforcer, CD0137	<p><b>CAB DOOR DURABILITY CERTIFICATION</b></p> <p>Robust cab doors help protect occupants. Cab doors will survive a 200,000 cycle door slam test where the slamming force exceeds 20 G's of deceleration. The bidder will certify that the sample doors similar to those provided on the apparatus have been tested and have met these criteria without structural damage, latch malfunction, or significant component wear.</p>
0631978	Certification, Windshield Wiper Durability, Saber FR/Enforcer, CD0132	<p><b>WINDSHIELD WIPER DURABILITY CERTIFICATION</b></p> <p>Visibility during inclement weather is essential to safe apparatus performance. Windshield wipers will survive a 3 million cycle durability test in accordance with section 6.2 of SAE J198 <i>Windshield Wiper Systems - Trucks, Buses and Multipurpose Vehicles</i>. The bidder will certify that the wiper system design has been tested and that the wiper system has met these criteria.</p>
0631974	Certification, Electric Window Durability, Saber FR/Enforcer, CD0133	<p><b>ELECTRIC WINDOW DURABILITY CERTIFICATION</b></p> <p>Cab window roll-up systems can cause maintenance problems if not designed for long service life. The window regulator design will complete 30,000 complete up-down cycles and still function normally when finished. The bidder will certify that sample doors and windows similar to those provided on the apparatus have been tested and have met these criteria without malfunction or significant component wear.</p>
0631977	Certification, Seat Belt Anchors and Mounting, Saber FR/Enforcer, CD0134	<p><b>SEAT BELT ANCHOR STRENGTH</b></p> <p>Seat belt attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat belt anchor design will withstand 3000 lb of pull on both the lap and shoulder belt in accordance with FMVSS 571.210 Seat Belt Assembly Anchorages. The bidder will certify that each anchor design was pull tested to the required force and met the appropriate criteria.</p> <p><b>SEAT MOUNTING STRENGTH</b></p> <p>Seat attachment strength is regulated by Federal Motor Vehicle Safety Standards and should be validated through testing. Each seat mounting design will be tested to withstand 20 G's of force in accordance with FMVSS 571.207 Seating Systems. The bidder will certify, at time of delivery, that each seat mount and cab structure design was pull tested to the required force and met the appropriate criteria.</p>

0735949 Certification, Cab HVAC System Performance, SFR/Enf, CD0165/CD0167/CD0174/CD0175

**PERFORMANCE CERTIFICATIONS**

**Cab Air Conditioning**

Good cab air conditioning temperature and air flow performance keeps occupants comfortable, reduces humidity, and provides a climate for recuperation while at the scene. The cab air conditioning system will cool the cab from a heat-soaked condition at 100 degrees Fahrenheit to an average of 78 degrees Fahrenheit in 30 minutes. The bidder will certify that a substantially similar cab has been tested and has met these criteria.

**Cab Defroster**

Visibility during inclement weather is essential to safe apparatus performance. The defroster system will clear the required windshield zones in accordance with SAE J381 Windshield Defrosting Systems Test Procedure And Performance Requirements - Trucks, Buses, And Multipurpose Vehicles. *The bidder will certify that the defrost system design has been tested in a cold chamber and passes the SAE J381 criteria.*

**Cab Auxiliary Heater**

*Good cab heat performance and regulation provides a more effective working environment for personnel, whether in-transit, or at a scene. An auxiliary cab heater will warm the cab 77 degrees Fahrenheit from a cold-soak, within 30 minutes when tested using the coolant supply methods found in SAE J381. The bidder will certify, at time of delivery, that a substantially similar cab has been tested and has met these criteria.*

0545073 Amp Draw Report, NFPA Current Edition

**AMP DRAW REPORT**

The bidder will provide, at the time of bid and delivery, an itemized print out of the expected amp draw of the entire vehicle's electrical system.

The manufacturer of the apparatus will provide the following:

Documentation of the electrical system performance tests.

A written load analysis, which will include the following:

The nameplate rating of the alternator.

The alternator rating under the conditions specified per:

Applicable NFPA 1901 or 1906 (Current Edition).

The minimum continuous load of each component that is specified per:

Applicable NFPA 1901 or 1906 (Current Edition).

Additional loads that, when added to the minimum continuous load, determine the total connected load.

Each individual intermittent load.

All of the above listed items will be provided by the bidder per the applicable NFPA 1901 or 1906 (Current Edition).

0002758 Amp Draw, NFPA/ULC Radio Allowance

0799248 Appleton/Florida BTO

0000018 PUMPER, 2ND GEN

0000012 PIERCE CHASSIS

0004713 ENGINE, OTHER

0046395 EVS 3000 Series TRANSMISSION

0020011 WATEROUS PUMP

0020009 POLY TANK

0028048 FOAM SYSTEM

0020006 SIDE CONTROL

0020007 AKRON VALVES

0020015 ABS SYSTEM

0658751 PUMPER BASE



# Turning Performance Analysis

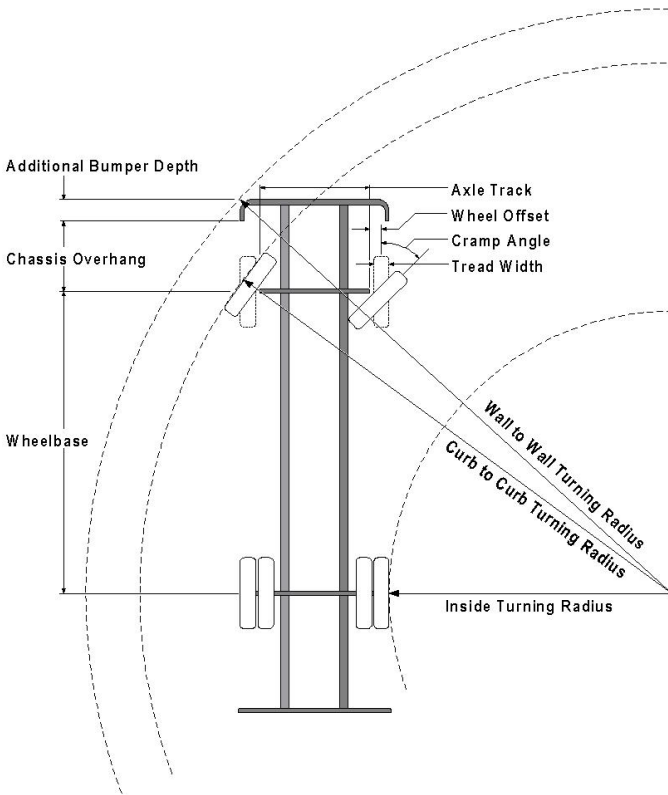
12/21/2020

**Bid Number:** 883

**Chassis:** Enforcer Chassis

**Department:** Nevada County Consolidated Fire Dist.

**Body:** Pumper, Short, Galvanneal, 2nd Gen



**Parameters:**

*Inside Cramp Angle:	45°
Axle Track:	85.86 in.
Wheel Offset:	3.12 in.
Tread Width:	13.5 in.
Chassis Overhang:	65.95 in.
Additional Bumper Depth:	16 in.
Front Overhang:	81.95 in.
Wheelbase:	179.5 in.

**Calculated Turning Radii:**

Inside Turn:	14 ft. 2 in.
Curb to curb:	27 ft. 6 in.
Wall to wall:	31 ft. 8 in.

Category	Option	Description
Axle, Front, Custom	0729174	Axle, Front, Meritor FL-943, 18,000 lb, Saber FR/Enforcer
Wheels, Front	0019575	Wheels, Front, Alcoa, 22.50" x 9.00", Aluminum, Hub Pilot
Tires, Front	0011637	Tires, Front, Goodyear, G291, 315/80R22.50, 20 ply
Bumpers	0624298	Bumper, 16" Extended, Saber FR/Enforcer

**Notes:**

\*Actual Inside cramp angle may be less than shown.

Curb to Curb turning radius calculated for 9.00 inch curb.

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**Definitions:**

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Inside CrampAngle	Maximum turning angle of the front inside fire.
Axle Track	King-pin to King-pin distance of front axle.
Wheel Offset	Offset from the center line of the wheel to the King-pin.
Tread Width	Width of the tire tread.
Chassis Overhang	Distance of the center line of the front axle to the front edge of the cab. This does not include the bumper depth.
Additional Bumper Wheel	Depth that the bumper assembly adds to the front overhang.
Wheelbase	Distance between the center lines of the vehicles front and rear axles.
Inside Turning Radius	Radius of the smallest circle around which the vehicle can turn.
Curb to Curb Turning Radius	Radius of the smallest circle around which the vehicle's tires can turn. This measures assumes a curb height of 9 inches.
Wall to Wall Turning Radius	Radius of the smallest circle around which the vehicle's tires can turn. This measures takes into account any front overhang due to chassis , bumper extensions and or aerial devices.



# Electrical Analysis

12/21/2020

**Bid #:** 883  
**Desc:** 13" Frame Enforcer 28553 Duplicate  
**Customer:** Nevada County Consolidated Fire Dist.

**Job #:**  
**Sales Rep:** Paulsen, Mark  
**Organization:** Golden State Fire Apparatus, Inc

Option	Description	Type*	Minimum Load	Intermittent Load	Total Connected
0001244	High Idle w/Electronic Engine, Custom		0.00	1.20	0.00
0005945	Light, Pump Compt		0.00	1.80	0.00
0010670	ABS Wabco Brake System, Single rear axle		0.00	6.00	0.00
0072153	Primer, Trident, Air Prime, Air Operated		0.00	0.01	0.00
0079166	Batteries, (4) Exide Grp 31, 950 CCA ea, Threaded Stud		0.00	3.00	0.00
0525125	Reel, Booster - Over Pump, Left Side, NPSH		0.00	36.00	0.00
0543751	Light, Do Not Move Apparatus		0.00	0.80	0.00
0547478	Wiring, Spare, 7.5A 12V DC 1st		0.00	0.00	7.50
0548009	Wiring, Spare, 20 A 12V DC 1st		0.00	0.00	20.00
0548015	Wiring, Spare, 30 A 12V DC 1st		0.00	0.00	30.00
0549333	Indicators, Engine, Included with Pressure Controller		0.00	0.35	0.00
0553643	Control, Air Horn at Pump Panel w/Red Switch		0.00	0.16	0.00
0561471	Lights, Backup, WIn M6BUW, LED, For Tail Lt Housing		0.00	3.20	0.00
0583938	Lights, Engine Compt, Custom, Auto Sw, WIn 3SC0CDCR, 3" LED,		0.00	0.30	0.00
0589905	Alarm, Back-up Warning, PRECO 1040		0.00	0.50	0.00
0592633	Foam Sys, Husky 3, Single Agent		0.00	55.00	0.00
0594194	Radio, AM/FM/CD/WB/Aux in, Panasonic		0.00	0.00	4.00
0602637	Portable Hand Light, Provided by Fire Dept, Pumper NFPA 2016		0.00	0.50	0.00
0630636	Controls, Electric Roll-Up Windows, 4dr, 4 Driver Controls, Saber		0.00	26.00	0.00
0632401	Light, WIn, 12V PCPSM1* Pioneer LED Fld/Spt, Surface Mount 3rd		0.00	0.00	6.00
0639727	Cab Lift, Elec/Hyd, Manual Override, Saber FR/Enforcer		0.00	180.00	0.00
0640627	Light, WIn, 12V PCPSM1* Pioneer LED Fld/Spt, Surface Mount 2nd		0.00	0.00	6.00
0640629	Light, WIn, 12V PCPSM1* Pioneer LED Fld/Spt, Surface Mount 1st		0.00	0.00	12.00
0640941	Light, WIn, 12V PCPSM2* Pioneer LED Fld/Spt, Surface Mnt 2nd		0.00	0.00	12.00
0640991	Light, WIn, 12V PCPSM2* Pioneer LED Fld/Spt, Surface Mnt 1st		0.00	0.00	12.00
0653526	Camera, Pierce, Driver Mux, Rear Camera Only		0.00	1.20	0.00
0655256	Light, GTT, Opticom, 76-1000-1155-0, GPS, Priority Control System		0.00	1.00	0.00
0687994	Engine Brake, Jacobs Compression Brake, Cummins Engine		0.00	0.42	0.00
0735005	Intercom, David Clark, 4-Pos, 2-Radio, (D,O,RPTT),2ibC, U3805		0.00	0.00	0.50
0776357	Light, Visor, WIn, 12V P*H2* Pioneer, Cnt Feature, 1st		0.00	0.00	13.00
0779165	Siren, Federal Q2B, Bat Dir		0.00	100.00	0.00
0548004	Wiring, Spare, 15 A 12V DC 1st	LM	0.00	0.00	30.00
0548006	Wiring, Spare, 15 A 12V DC 2nd	LM	0.00	0.00	15.00
0741237	HVAC, Saber/Enforcer, CARE	LM	0.00	0.00	100.00
0002758	Amp Draw, NFPA/ULC Radio Allowance	NFPA	5.00	0.00	0.00
0083700	Compt, Rear, Rollup, 37.75" FF, 25.88" D	NFPA	0.90	0.00	0.90
0088745	Light, Rear Zone Upper, WIn L31HRFN LED Beacon, Red LED	NFPA	3.20	4.80	0.00
0092582	Load Manager/Sequencer, MUX	NFPA	0.56	0.56	0.00
0540679	Lights, Side Zone Lower, WIn M6*C LED, Clear Lens 2pr	NFPA	3.60	5.40	0.00
0546803	Controller, Pressure, Class 1 Total Pressure Governor (TPG)	NFPA	1.70	0.00	0.00
0550598	Siren, WIn 295HFS2 Remote, Single Amp	NFPA	1.40	12.60	0.00
0551418	RS 140" Lap, Full Height Front & Rear, FDLER, Raised Rear 6"	NFPA	4.50	0.00	4.50
0556360	Lights, Step, P25 LED 4lts, Pump Pnl Sw	NFPA	1.00	0.00	0.00
0563675	Lights, Clearance/Marker/ID, Rear, Truck-Lite 33050R LED 7Lts	NFPA	0.35	0.00	0.00
0564655	Lights, Rear Zone Lower, WIn M6*C LED, Clear Lens, For Tail Lt	NFPA	1.80	2.70	0.00
0564683	Lights, Tail, WIn M6BTT* Red LED Stop/Tail & M6T* Amber LED Dir	NFPA	0.83	2.49	0.00
0586438	Gauges, Engine - Pump Panel, IAT Pressure Controller	NFPA	0.30	0.00	0.00
0604784	Lightbar, WIn, Freedom IV-Q, 81", RRRRWRsrROptRsrRWRRRR	NFPA	8.96	2.68	9.92
0605126	Pump Shift, Air Mnl Override, Split Shaft, Interlocked, Waterous	NFPA	1.00	0.00	0.00
0615386	Vehicle Information Center, 7" Color Display, Touchscreen, MUX	NFPA	1.20	0.00	0.00

\* UDMC = User Defined Mission Critical, LM = User Defined Load Managed, S = Electrical Amperage Supply



# Electrical Analysis

12/21/2020

**Bid #:** 883  
**Desc:** 13" Frame Enforcer 28553 Duplicate  
**Customer:** Nevada County Consolidated Fire Dist.

**Job #:**  
**Sales Rep:** Paulsen, Mark  
**Organization:** Golden State Fire Apparatus, Inc

Option	Description	Type*	Minimum Load	Intermittent Load	Total Connected
0618791	DEF Tank, 4.5 Gallon, DS Fill, Forward of Axle, Common Air Bottle	NFPA	0.60	11.40	0.00
0620054	Light, Directional/Marker, Intermediate, Weldon 9186-8580-29 LED 2lts	NFPA	0.10	0.90	0.00
0622803	Cab Instruments, Black Gauges, Black Bezels, Enforcer MUX	NFPA	1.26	0.00	0.00
0625650	Cab, Enforcer, 7000	NFPA	6.80	10.20	0.00
0625953	Light, Directional, WIn 600 Cmb, Cab Crn, Wrp Bzl Out HD Lts, Enf,	NFPA	0.70	0.70	0.00
0634786	Lights, Cab & Crw Cab Acs Stps, P25, LED w/Bezel, 1Lt Per Step 6lts	NFPA	1.00	0.00	0.00
0639295	Gauge, Foam Level, Innovative Controls, 10 LED PN 3030393-01,	NFPA	0.15	0.00	0.00
0642572	Trans, Allison 5th Gen, 3000 EVS P, w/Prognostics,	NFPA	2.00	2.00	0.00
0644179	Wiper Control, 2-Speed with Intermittent, Saber FR/Enforcer	NFPA	1.20	4.80	0.00
0644228	Air Dryer, Wabco System Saver 1200 IWT, Heated, Saber FR/Enforcer	NFPA	7.81	0.00	0.00
0645877	Lights, Hose Bed, Sides, Dual LED Light Strips	NFPA	2.52	0.00	0.00
0647647	Lights, Dome, FRP Dual LED 4 Lts	NFPA	0.80	0.80	0.00
0650605	Lights, Front Zone, WIn M6** LED, Q Bzl, 4lts	NFPA	3.60	5.40	0.00
0664481	Bracket, License Plate & Light, P25 LED	NFPA	0.07	0.00	0.00
0682498	Light Shield/Step 8", PS LED, P25 LED Stp Lt	NFPA	3.85	0.00	0.00
0682503	Light Shield/Step 8" LED, P25 LED Stp Lt	NFPA	4.00	0.00	0.00
0683969	Gauge, Water Level, IC, 14-LED, PN 3030385-01	NFPA	0.15	0.00	0.00
0731881	Hatch, No Doors, Covered By Hose Bed Cover, Pumper	NFPA	1.80	0.00	1.80
0733219	Lights, Hatch Compt, 42", LED, Light Strips, 2-Sides 4 Dr	NFPA	0.84	0.84	0.00
0735474	Lights, Clearance/Marker/ID, Front, P25 LED 7 Lts, Saber FR/Enforcer	NFPA	0.35	0.00	0.00
0736437	Engine, Cummins L9, 450 hp, 1250 lb-ft, W/OBD, EPA 2021, Saber	NFPA	1.00	0.00	0.00
0739224	Indicator Light @ Pump Panel, Throttle Ready, Incl w/Pressure	NFPA	0.10	0.00	0.00
0745568	Indicator Light, Pump Panel, Ok To Pump, Green	NFPA	0.10	0.00	0.00
0757962	Cabinet, Rear Facing, RS, 22 W x 40.25 H x 26.75 D, Roll, Ext Acc,	NFPA	0.30	0.30	0.00
0757990	Cabinet, Rear Facing, LS, 23 W x 40.25 H x 26.75 D, Roll, Ext Acc,	NFPA	0.78	0.78	0.00
0763598	LS 140" Lap, Full Height & Depth Front & Rear, Raised Rear 6"	NFPA	4.50	0.00	4.50
0769420	Lights, Perimeter Cab, Amdor AY-LB-12HW020 LED 4Dr	NFPA	1.20	0.00	0.00
0769559	Lights, Perimeter Pump House, Amdor AY-LB-12HW012 LED 2lts	NFPA	0.36	0.00	0.00
0769560	Lights, Perimeter Body, Amdor AY-LB-12HW012 LED 2lts, Rear Step	NFPA	0.36	0.00	0.00
0783153	Headlights, Rect LED, JW Spkr Evo 2, AXT/DCF/Enf/Imp/Sab/Vel	NFPA	4.20	4.20	0.00
0791493	Light, Traffic Directing, WIn TAM65 36" Long LED	NFPA	1.26	2.52	0.00
0794961	Lights, Walk Surf, 8-P25 LED, Hose Bed Cover, Overall Height	NFPA	0.56	0.00	0.00
0796064	Lights, Directional/Marker, Cab Front Side, Truck-Lite 19036YLED,	NFPA	0.12	0.00	0.00
0625793	Alternator, 350 amp, Leece-Neville BLP4004H	S	0.00	0.00	0.00
<b>Load Totals:</b>			<b>90.74</b>	<b>493.51</b>	<b>289.62</b>

Note: Minimum Continuous Load is in "Blocking Right of Way" mode. (Reference current edition of NFPA 1901)

Note: Intermittent Load items are not factored in on any alternator load comparisons. These items are included on the report for reference only and should be looked at as amp draw exclusion items. (Reference current edition of NFPA 1901)

Note: Total Connected Load "Demand" represents Total Connected Load minus any Load Managed items

**Alternator Output at Idle: 212.00**

Minimum Continuous Load	
Supply:	212.00
Demand:	90.74
Variance:	121.26

**Alternator Output at Governed Speed: 296.00**

Total Connected Load	
Supply:	296.00
Demand:	235.36
Variance:	60.64

\* UDMC = User Defined Mission Critical, LM = User Defined Load Managed, S = Electrical Amperage Supply



# Fire and Rescue Apparatus

## Ten (10) Year Structural Integrity

### Custom Cab

# Limited Warranty

#### 1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

<b>Coverage:</b>	<b>The Pierce Custom Cab shall be free from structural failures caused by defects in material and workmanship</b>
<b>Warranty Begins:</b>	<b>The date of the original purchase invoice (issued when the product ships from the factory).</b>
<b>Warranty Period Ends After:</b>	<b>Ten (10) Years - or - 100,000 Miles</b>
<b>Conditions and Exclusions:</b>  <b>See Also Paragraphs 2 thru 4</b>	<b>This warranty applies only to the cab tubular support and mounting structures and other structural components of the cab of the vehicle model, as identified in the Pierce specifications for the Fire and Rescue Apparatus.</b>  <b>This warranty does not apply to damage caused by corrosion.</b>

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

#### 2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

#### 3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

#### 4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

*Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.*





# Fire and Rescue Apparatus

## One (1) Year Material and Workmanship Basic Apparatus

# Limited Warranty

### 1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	Portions of the apparatus manufactured by Pierce shall be free from defects in material and workmanship
Warranty Begins:	The date the apparatus is placed in service, or 60 days from the original buyer invoice date, whichever comes first.
Warranty Period Ends After:	Twelve (12) months.
Conditions and Exclusions:  See Also Paragraphs 2 thru 4	No specific exclusions apply

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

### 2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

### 3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

### 4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

## NEW PRODUCT WARRANTY



**PARTICIPATING OEM SALES  
DISTRIBUTOR SALES**

### LIMITED WARRANTY ON NEW ALLISON AUTOMATIC TRANSMISSIONS USED IN EMERGENCY VEHICLE APPLICATIONS

Allison Transmission will provide for repairs or replacement, at its option, during the warranty period of each new Allison transmission listed below that is installed in an Emergency Vehicle in accordance with the following terms, conditions, and limitations.

#### WHAT IS COVERED

- **WARRANTY APPLIES** — This warranty is for new Allison transmission models listed below installed in an Emergency Vehicle and is provided to the original and any subsequent owner(s) of the vehicle during the warranty period.
- **REPAIRS COVERED** — The warranty covers repairs or replacement, at Allison Transmission’s option, to correct any transmission malfunction resulting from defects in material or workmanship occurring during the warranty period. Needed repairs or replacements will be performed using the method Allison Transmission determines most appropriate under the circumstances.
- **TOWING** — Towing is covered to the nearest Allison Transmission Distributor or authorized Dealer only when necessary to prevent further damage to your transmission.
- **PAYMENT TERMS** — Warranty repairs, including parts and labor, will be covered per the schedule shown in the chart contained in section “APPLICABLE MODELS, WARRANTY LIMITATIONS, AND ADJUSTMENT SCHEDULE.”
- **OBTAINING REPAIRS** — To obtain warranty repairs, take the vehicle to any Allison Transmission Distributor or authorized Dealer within a reasonable amount of time and request the needed repairs. A reasonable amount of time must be allowed for the Distributor or Dealer to perform necessary repairs.
- **TRANSMISSION REMOVAL AND REINSTALLATION** — Labor costs for the removal and re-installation of the transmission, when necessary to make a warranty repair, are covered by this warranty.
- **WARRANTY PERIOD** — The warranty period for all coverages shall begin on the date the transmission is delivered to the first retail purchaser, with the following exception:

**Demonstration Service** - A transmission in a new truck or bus may be demonstrated to a total of 5000 miles (8000 kilometers). If the vehicle is within this limit when sold to a retail purchaser, the warranty start date is the date of purchase. Normal warranty services are applicable to the demonstrating Dealer. Should the truck or bus be sold to a retail purchaser after these limits are reached, the warranty period will begin on the date the vehicle was first placed in demonstration service and the purchaser will be entitled to the remaining warranty.

#### APPLICABLE MODELS, WARRANTY LIMITATIONS, AND ADJUSTMENT SCHEDULE

APPLICABLE MODELS	WARRANTY LIMITATIONS (Whichever occurs first)		ADJUSTMENT CHARGE TO BE PAID BY THE CUSTOMER	
	Months	Transmission Miles Or Kilometers	Parts	Labor
MT, MD 3000, 3200, 3500, 3700	0-24	No Limit	No Charge	No Charge
HT with Hydraulic Controls	0-24	No Limit	No Charge	No Charge
AT, 1000 Series™, 2000 Series™, 2400 Series™	0-36	No Limit	No Charge	No Charge
HT with Electronic Controls	0-60	No Limit	No Charge	No Charge
HD 1000 EVS, 2100 EVS, 2200 EVS 2350 EVS, 2500 EVS, 2550 EVS, 3000 EVS, 3500 EVS, 4000, 4000 EVS, 4500, 4500 EVS, 4700, 4700 EVS, 4800, 4800 EVS	0-60	No Limit	No Charge	No Charge

## WHAT IS NOT COVERED

- **DAMAGE DUE TO ACCIDENT, MISUSE, or ALTERATION** — Defects and damage caused as the result of any of the following are not covered:
  - Flood, collision, fire, theft, freezing, vandalism, riot, explosion, or objects striking the vehicle;
  - Misuse of the vehicle;
  - Installation into unapproved applications and installations;
  - Alterations or modification of the transmission or the vehicle, and
  - Damage resulting from improper storage (refer to long-term storage procedure outlined in the applicable Allison Service Manual)
  - Anything other than defects in Allison Transmission material or workmanship

**NOTE:** This warranty is void on transmissions used in vehicles currently or previously titled as salvaged, scrapped, junked, or totaled.

- **CHASSIS, BODY, and COMPONENTS** — The chassis and body company (assemblers) and other component and equipment manufacturers are solely responsible for warranties on the chassis, body, component(s), and equipment they provide. Any transmission repair caused by an alteration(s) made to the Allison transmission or the vehicle which allows the transmission to be installed or operated outside of the limits defined in the appropriate Allison Installation Guideline is solely the responsibility of the entity making the alteration(s).
- **DAMAGE CAUSED by LACK of MAINTENANCE or by the USE of TRANSMISSION FLUIDS NOT RECOMMENDED in the OPERATOR'S MANUAL** — Defects and damage caused by any of the following are not covered:
  - Failure to follow the recommendations of the maintenance schedule intervals applicable to the transmission;
  - Failure to use transmission fluids or maintain transmission fluid levels recommended in the Operator's Manual.
- **MAINTENANCE** — Normal maintenance (such as replacement of filters, screens, and transmission fluid) is not covered and is the owner's responsibility.
- **REPAIRS by UNAUTHORIZED DEALERS** — Defects and damage caused by a service outlet that is not an authorized Allison Transmission Distributor or Dealer are not covered.
- **USE of OTHER THAN GENUINE ALLISON TRANSMISSION PARTS** — Defects and damage caused by the use of parts that are not genuine Allison Transmission parts are not covered.
- **EXTRA EXPENSES** — Economic loss and extra expenses are not covered. Examples include but are not limited to: loss of vehicle use; inconvenience; storage; payment for loss of time or pay; vehicle rental expense; lodging; meals; or other travel costs.
- **"DENIED PARTY" OWNERSHIP** — Warranty repair parts and labor costs are not reimbursed to any participating or non-participating OEMs, dealers or distributors who perform warranty work for, or on behalf of, end users identified by the United States as being a "denied party" or who are citizens of sanctioned or embargoed countries as defined by the U.S. Department of Treasury Office of Foreign Assets Control. Furthermore, warranty reimbursements are not guaranteed if the reimbursement would be contrary to any United States export control laws or regulations as defined by the U.S. Department of Commerce, the U.S. Department of State, or the U.S. Department of Treasury.

## OTHER TERMS APPLICABLE TO CONSUMERS AS DEFINED by the MAGNUSON-MOSS WARRANTY ACT

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Allison Transmission does not authorize any person to create for it any other obligation or liability in connection with these transmissions.

**ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE APPLICABLE TO THESE TRANSMISSIONS IS LIMITED IN DURATION TO THE DURATION OF THIS WRITTEN WARRANTY. PERFORMANCE OF REPAIRS AND NEEDED ADJUSTMENTS IS THE EXCLUSIVE REMEDY UNDER THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY. ALLISON TRANSMISSION SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES (SUCH AS, BUT NOT LIMITED TO, LOST WAGES OR VEHICLE RENTAL EXPENSES) RESULTING FROM BREACH OF THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY.\*\***

\*\* Some states do not allow limitations on how long an implied warranty will last or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

## OTHER TERMS APPLICABLE TO OTHER END-USERS

**THIS WARRANTY IS THE ONLY WARRANTY APPLICABLE TO THE ALLISON TRANSMISSION MODELS LISTED ABOVE AND IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ALLISON TRANSMISSION DOES NOT AUTHORIZE ANY PERSON TO CREATE FOR IT ANY OTHER OBLIGATION OR LIABILITY IN CONNECTION WITH SUCH TRANSMISSIONS. ALLISON TRANSMISSION SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM BREACH OF THIS WARRANTY OR ANY IMPLIED WARRANTY.**

## QUESTIONS

If you have any questions regarding this warranty or the performance of warranty obligations, you may contact any Allison Transmission Distributor or Dealer or write to:

Allison Transmission, Inc.  
P.O. Box 894  
Indianapolis, IN 46206-0894  
Attention: Warranty Administration PF-9



# Fire and Rescue Apparatus

## Five (5) Year Material and Workmanship

### Command Zone Electronics

# Limited Warranty

#### 1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	Command Zone control modules shall be free from failures caused by defects in material and workmanship
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Five (5) Years
Conditions and Exclusions:  See Also Paragraphs 2 thru 4	This limited warranty applies to all of the control modules for the Command Zone system, including the full color graphic displays. Related wire harnesses, cables and connectors are not covered under this limited warranty and are instead covered under the Pierce One Year Basic Apparatus Limited Warranty.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

#### 2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

#### 3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

#### 4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



# Fire and Rescue Apparatus

## Three (3) Year Material and Workmanship

### Goldstar® Gold Leaf Lamination

### Limited Warranty

#### 1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	Each Goldstar® gold leaf lamination shall be free from defects in material and workmanship.
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Three (3) Years
Conditions and Exclusions:  See Also Paragraphs 2 thru 4	This warranty does not cover damage from lack of maintenance and cleaning (proper cleaning and maintenance procedures are detailed in the Pierce operation and maintenance manual).

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

#### 2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

#### 3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

#### 4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



# Fire and Rescue Apparatus

## Ten (10) Year Pro-Rated Paint and Corrosion

### Cab

## Limited Warranty

### 1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	Exterior surfaces of the cab painted by Pierce shall be free from blistering, peeling, corrosion or any other adhesion defect caused by defective manufacturing methods or paint material selection.
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Ten (10) Years
Conditions and Exclusions:  See Also Paragraphs 2 thru 4	<p>This limited warranty is applicable to the vehicle in the following percentage costs of warranty repair, if any:</p> <p><b>Topcoat Durability &amp; Appearance: Gloss, Color Retention &amp; Cracking</b>  0-72 months 100%  73-96 months 50%  97-120 months 25%</p> <p><b>Integrity of Coating System: Adhesion, Blistering/Bubbling</b>  0-36 months 100%  37-84 months 50%  85-120 months 25%</p> <p><b>Corrosion: Dissimilar Metal and Crevice</b>  0-36 months 100%  37-48 months 50%  49-72 months 25%  73-120 months 10%</p> <p><b>Corrosion Perforation</b>  0-120 months 100%</p> <p>This limited warranty applies only to exterior paint. Paint on the vehicle's interior is warranted only under the Pierce Basic One Year Limited Warranty.</p> <p>Items not covered by this warranty include:  (a) Damage from lack of maintenance and cleaning (proper cleaning and maintenance procedures are detailed in the Pierce operation and maintenance manual).  (b) UV paint fade.  (c) Any cab not manufactured by Pierce.</p>

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

### 2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

### 3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

### 4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.





# Fire and Rescue Apparatus

## Ten (10) Year Pro-Rated Paint and Corrosion

### Custom Body

# Limited Warranty

#### 1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

<b>Coverage:</b>	<b>Exterior surfaces of the body shall be free from blistering, peeling, corrosion or any other adhesion defect caused by defective manufacturing methods or paint material selection.</b>
<b>Warranty Begins:</b>	<b>The date of the original purchase invoice (issued when the product ships from the factory).</b>
<b>Warranty Period Ends After:</b>	<b>Ten (10) Years</b>
<b>Conditions and Exclusions:</b>  <b>See Also Paragraphs 2 thru 4</b>	<p><b>This limited warranty is applicable to the vehicle in the following percentage costs of warranty repair, if any:</b></p> <p><b>Topcoat Durability &amp; Appearance: Gloss, Color Retention &amp; Cracking</b>  0-72 months 100%  73-96 months 50%  97-120 months 25%</p> <p><b>Integrity of Coating System: Adhesion, Blistering/Bubbling</b>  0-36 months 100%  37-84 months 50%  85-120 months 25%</p> <p><b>Corrosion: Dissimilar Metal and Crevice</b>  0-36 months 100%  37-48 months 50%  49-72 months 25%  73-120 months 10%</p> <p><b>Corrosion Perforation</b>  0-120 months 100%</p> <p><b>This limited warranty applies only to exterior paint. Paint on the vehicle's interior is warranted only under the Pierce Basic One Year Limited Warranty.</b></p> <p><b>Items not covered by this warranty include:</b>  (a) Damage from lack of maintenance and cleaning (proper cleaning and maintenance procedures are detailed in the Pierce operation and maintenance manual).  (b) UV paint fade.  (c) Any cab not manufactured by Pierce.</p>

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

#### 2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

#### 3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

#### 4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

*Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.*



# Fire and Rescue Apparatus

## Lifetime Fifty (50) Year Structural Integrity Custom Chassis Frame Limited Warranty

### 1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

<b>Coverage:</b>	<b>Custom chassis frame rail manufactured by Pierce shall be free from defects in material and workmanship</b>
<b>Warranty Begins:</b>	<b>The date of the original purchase invoice (issued when the product ships from the factory).</b>
<b>Warranty Period Ends After:</b>	<b>Fifty (50) Years (Expected Life of Apparatus)</b>
<b>Conditions and Exclusions:</b>  <b>See Also Paragraphs 2 thru 4</b>	<b>This warranty does not apply to damage caused by corrosion.</b>

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

### 2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

### 3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

### 4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

*Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.*





# Fire and Rescue Apparatus

## Ten (10) Year Structural Integrity Apparatus Body

### Limited Warranty

#### 1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

<b>Coverage:</b>	<b>The apparatus body shall be free from structural failures caused by defects in material and workmanship</b>
<b>Warranty Begins:</b>	<b>The date of the original purchase invoice (issued when the product ships from the factory).</b>
<b>Warranty Period Ends After:</b>	<b>Ten (10) Years - or - 100,000 Miles</b>
<b>Conditions and Exclusions:</b>  <b>See Also Paragraphs 2 thru 4</b>	<b>This warranty applies only to the body tubular support and mounting structures and other structural components of the body of the vehicle model, as identified in the Pierce specifications for the Fire and Rescue Apparatus.</b>  <b>This warranty does not apply to damage caused by corrosion.</b>

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

#### 2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

#### 3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

#### 4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

*Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.*



Ten (10) Year Material and Workmanship
Stainless Steel Piping
Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Table with 2 columns: Label (Coverage, Warranty Begins, Warranty Period Ends After, Conditions and Exclusions) and Description (Stainless steel piping shall be free from structural failures... The date of the original purchase invoice... Ten (10) Years - or - 100,000 Miles... Pierce's obligation under this warranty is limited to repairing or replacing without charge... This warranty does not cover the use of fluoroprotein (FP) type foam...)

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

- (a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce...
(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions...
(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce...
(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period...

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use.



# Fire and Rescue Apparatus

## Three (3) Year Material and Workmanship Meritor Wabco ABS Brake System Limited Warranty

### 1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

<b>Coverage:</b>	The Meritor Wabco ABS brake system shall be covered by Meritor Wabco as indicated in the attached Meritor Wabco warranty coverage description
<b>Warranty Begins:</b>	The date of the original purchase invoice (issued when the product ships from the factory).
<b>Warranty Period Ends After:</b>	Three (3) Year
<b>Conditions and Exclusions:</b>  See Also Paragraphs 2 thru 4	The exclusions listed in the attached Meritor Wabco warranty description shall apply.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

### 2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

### 3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

### 4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

*Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.*

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.



# **MERITOR WABCO**

*Safety Strong. Efficiency Smart.*

**Warranty**  
**Model Year 2018 Vehicles**



## SIMPLER IS BETTER

Warranty coverage is essential to protecting your investment. But understanding the full details of your coverage can be challenging. This straightforward approach allows you, our valued customer, to better understand how your specific vehicle applications will be covered in your region. Our component warranty coverage is provided according to vocation/usage categories listed below.

- Linehaul covers high mileage operation (over 60,000 miles/year) on well maintained major highways of concrete or asphalt construction.
- General Service covers moderate mileage operations (less than 60,000 miles/year) on well maintained public roads (less than 10 percent off-road) typically with less than three (3) stops per mile.
- Heavy Service (Vocational) covers vehicles with more than 10 percent off-road OR moderate to frequent starts/stops typically with more than three (3) stops per mile.
- Off-Highway Service covers lower mileage operations. Vehicles are not typically licensed for highway use.

# CONTENTS

- Linehaul Service..... 4
- General Service..... 4
- Heavy Service ..... 5
- Industrial/Off-Highway Service ..... 6
- Terms and Conditions ..... 7

## How to Read Warranty Coverage (Example)

Number of Years	Mileage (in thousands) Unl=Unlimited	P=Parts Only P&L=Parts & Labor
3	300	P

# HEAVY SERVICE (VOCATIONAL) WARRANTY INFORMATION

## Heavy Service Vehicles

- Airport Rescue Fire (ARF)
- Airport Shuttle
- Asphalt Truck
- Block Truck
- Bottom Dump Trailer Combination
- Cementing Vehicle
- City Bus
- Commercial Pick-Up
- Concrete Pumper
- Construction Material Hauler
- Crash Fire Rescue (CFR)
- Mixer
- Demolition
- Drill Rig
- Dump
- Emergency Service
- Equipment Hauling
- Flatbed Trailer Hauler
- Flatbed Truck
- Fracturing Truck
- Front Loader
- Geophysical Exploration
- Hopper Trailer Combinations
- Landscaping Truck
- Liquid Waste Hauler
- Log Hauling
- Lowboy
- Michigan Special Gravel Trains
- Michigan Special Log Hauler
- Michigan Special Steel Hauler
- Michigan Special Waste Vehicle
- Municipal Dump
- Newspaper Delivery
- Package Delivery
- Pick-up and Delivery
- Rapid Intervention Vehicle (RIV)
- Rear Loader
- Recycling Truck
- Residential Pick-Up/Waste
- Rigging Truck
- Roll-Off
- Scrap Truck
- Semi-End Dump
- Sewer/Septic Vacuum
- Shuttle Bus
- Side Loader
- Snowplow/Snowblower
- Steel Hauling
- Tanker
- Tank Truck
- Tractors with Pole Trailers
- Tractor/Trailer with Jeeps
- Transfer Dump
- Transfer Vehicle
- Transit Bus
- Trolley
- Utility Truck
- Winch Truck

## Heavy Service Typically Is

- On/Off road vocations (10% or more off-road) OR
- Moderate to frequent starts/stops typically more than three (3) stops per mile

## Meritor WABCO Components<sup>1</sup>

ABS (Anti-Lock Braking System) Air	3/300/P&L
ABS (Anti-Lock Braking System) Hydraulic	2/200/P&L
Electronic Braking System (EBS)	3/300/P&L
Electronic Stability Control (ESC)	3/300/P&L
Roll Stability Control (RSC)	3/300/P&L
Air Dryers (ALL)	1/100/P&L
Leveling Valves	1/100/P&L
Air Brake Valves	1/100/P&L
Emission Valves (SCR)	2/200/P&L
Clutch Controls	2/200/P&L
Air Compressors (ALL) <sup>2</sup>	1/100/P&L
OnGuard™	3/300/P&L
OnGuardACTIVE™	3/300/P&L
OnLane™ Lane Departure Warning	3/300/P&L
Blind Spot Detection	3/300/P&L
OptiRide™	2/200/P&L
Trailer Roll Stability Support (RSS)	3/300/P&L
Trailer Control Line Filter <sup>3</sup>	1/100/P&L
Trailer ABS Valve <sup>3</sup>	3/300/P&L

<sup>1</sup> WABCO and Meritor WABCO branded components.

<sup>2</sup> WABCO compressors installed on Cummins, Mercedes, and DDC engines are not warranted or serviced by Meritor WABCO. Please contact your respective dealer/distributor of those engines for warranty and servicing.

<sup>3</sup> An extended warranty of 4/400/P will be applied when a Meritor WABCO Trailer Control Line Filter is used in combination with a Meritor WABCO Trailer ABS valve.



# TERMS AND CONDITIONS

## Coverage Exclusions

### Product Description

#### All

The cost of any repairs, replacements or adjustments to a covered product due to the following: (1) damage to the product or its component parts caused by incorrect use, installation, maintenance or repair, including without limitation (a) improper fit of mating components or brackets, (b) damaged threads, (c) cut, broken, chafed, pinched or otherwise damaged wiring (sensors, harnesses and connectors), (d) damaged sensors from removal when seized in block, or associated with sensor adjustments/alignments, and (e) damage resulting from the use or installation of non-genuine Meritor WABCO components or materials; (2) damage to the product, its component parts, or diminished product or component part performance due to incorrect operation, deviation from approved conditions or misapplication; (3) any unauthorized disassembly of the product or its component parts including without limitation (a) obliterated, defaced or missing WABCO or Meritor WABCO name plate, serial numbers or label identifying the device as a Meritor WABCO product or WABCO component, (b) changes to sealed adjusting screws, and (c) opening or attempted repair of non-serviceable components; (4) malfunction of the component due to internal contamination out of the vehicle system including without limitation (a) water and other contamination damage that is due to the use of a non-genuine air dryer cartridge or (b) valve failures due to contamination in air system, (5) complaints associated with noise, (6) damage resulting from corrosion (including oxidation of electrical devices and connections).

#### Air Dryers

Mounting brackets (see vehicle OEM). Desiccant cartridge housing only.

#### Air System Components

Normal wear items; Gladhand seals, dash valve knobs, valve actuation handles, treadles, pedals.

#### ABS, Electronic Stability Control (ESC), Roll Stability Control (RSC), OptiRide™, OnGuard™ and OnLane™, collectively “Electronics”

Failure of electronic components due to overvoltage condition, improper grounding, electrostatic discharge (ESD), improper shielding, electromagnetic interference (EMI), or other wiring or installation issues.

Malfunctions and failure codes caused by other electronic subsystem failures (data bus, engine, transmission, dashboard, etc.)

#### Hydraulic Components

For certain components, brake fluid DOT3 or DOT4 is used as the operating medium. Use of any other fluid will void all warranties associated with that component. For hydraulic braking applications the brake fluid is considered a maintenance item. Maintenance intervals are listed in TB-1367.

## Coverage Limitations

### Product Description

#### All

Any claim beyond 60 days from date of repair will not be accepted or honored under this warranty program.

Products purchased on an incomplete vehicle (glider) are limited to one year, 1/Unl/P.

For vehicles that operate full- or part-time outside of the United States and Canada, a 1-Year/Unlimited Miles parts only (1/Unl/P) will apply.

#### TOOLBOX™ Software

Proper diagnostics of Meritor WABCO Electronics may require the latest version of TOOLBOX™. Additional labor due to use of an outdated version of TOOLBOX™. TOOLBOX™ software, and/or the time to purchase or install latest version of TOOLBOX™ are not covered under product warranty.



## TERMS AND CONDITIONS

### (1) What is Covered by this Commercial Warranty?

Meritor WABCO Vehicle Control Systems warrants to the owner ("Owner") that the components listed in this publication, which have been installed by an Original Equipment Manufacturer ("OEM") as original equipment will be free from defects in material and workmanship. This warranty coverage begins from the original in-service date to the limits provided and runs concurrently with any warranties provided by OEMs and/or any service contracts that cover the components listed in this publication, if any. If the components listed in this publication are covered by an OEM warranty and/or service contract, then the OEM's warranty and/or service contract shall supersede Meritor WABCO's warranty and Owner shall comply with all OEM's warranty and/or service contract requirements for claims under such OEM's warranty and/or service contract until those agreements expire. Once those agreements expire and provided the Meritor WABCO warranty has not expired under the terms stated above, the Meritor WABCO warranty would be in effect until its expiration date.

Warranty coverage ends at the expiration of the applicable time period from the date of vehicle purchase by the first Owner, or, the applicable mileage limitation, whichever occurs first. Duration of coverage varies by component and vocation as detailed previously in this publication. Some components are warranted for parts only and the Owner must pay any labor costs associated with the repair or replacement of the component. Other components are warranted for both parts and reasonable labor to repair or replace the subject component. Additional diagnostic time due to use of an outdated version of TOOLBOX™, time to purchase or install latest version of TOOLBOX™ are the responsibility of the authorized Meritor WABCO service location and are not covered under product warranty. Components installed as replacements under this warranty are warranted only for the remainder of the original period of time or mileage under the original warranty.

### (2) Designation of Vocational Use Required.

To obtain warranty coverage, each Owner must notify Meritor WABCO through the OEM new truck and/or trailer dealer of the intended vocational use of the vehicle into which the Meritor WABCO components have been incorporated prior to the vehicle in-service date. This notification may be accomplished by registering the vehicle through your OEM new truck and/or trailer dealer or with Meritor WABCO directly. Failure to notify Meritor WABCO of (I) the intended vocational use of the vehicle or (II) a change in vocational use from that which was originally designated, will result in the application of a one year, unlimited mileage, parts only warranty (1/Unl/P) from the initial in-service date.

A second Owner and each subsequent Owner must also notify Meritor WABCO as to the intended vocational use of the vehicle. This notification can be sent directly to Meritor WABCO or through the OEM new truck and/or trailer dealer. The duration and mileage coverage of this warranty cannot exceed the coverage extended to the first Owner after his or her initial designation of vocational use.

Coverage under Meritor WABCO's warranty requires that the application of products be properly approved pursuant to OEM and Meritor WABCO, approvals.

### (3) What is the Cost of this Warranty?

There is no charge to the Owner for this warranty.

### (4) What is not Covered by this Warranty?

In addition to the items listed on page 7, this warranty does not cover normal wear and tear, or service items; nor does it cover a component that fails, malfunctions or is damaged as a result of

(a) improper handling, storage, installation, adjustment, repair or modification including the use of unauthorized attachments or changes or modification in the vehicle's configuration, usage, or vocation from that which was originally approved by Meritor WABCO, (b) accident, fire or other casualty, natural disaster, road debris, negligence, misuse, abuse, or improper use (including loading beyond the specified maximum vehicle weight or altering engine power settings to exceed the brake system capacity), or (c) improper or insufficient maintenance (including deviation from maintenance intervals, approved lubricants, or lube levels). This warranty does not cover any component or part that is not sold by Meritor WABCO.

### (5) Remedy.

The exclusive remedy under this warranty shall be the repair or replacement of the defective component at Meritor WABCO's option. Meritor WABCO reserves the right to require that all applicable covered components are available and/or returned to Meritor WABCO for review and evaluation.

### (6) DISCLAIMER OF WARRANTY.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS, IMPLIED OR STATUTORY INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE. SOME STATES LIMIT OR DO NOT ALLOW THE DISCLAIMER OF IMPLIED OR OTHER WARRANTIES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO THE EXTENT SUCH STATE'S LAW IS APPLICABLE TO THESE TERMS.

### (7) LIMITATION OF REMEDIES.

IN NO EVENT SHALL MERITOR WABCO BE LIABLE FOR SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES OF ANY KIND OR UNDER ANY LEGAL THEORY, INCLUDING, BUT NOT LIMITED TO, TOWING, DOWNTIME, LOST PRODUCTIVITY, CARGO DAMAGE, TAXES, LOST PROFITS, COSTS OF PROCUREMENT OF A SUBSTITUTE COMPONENT OR ANY OTHER LOSSES OR COSTS RESULTING FROM A COVERED COMPONENT. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO THE EXTENT SUCH STATE'S LAW IS APPLICABLE TO THESE TERMS.

### (8) TIME LIMIT ON COMMENCING LEGAL ACTION.

ANY LEGAL ACTION OR CLAIM ARISING FROM OR RELATED TO THIS WARRANTY, IN CONTRACT OR OTHERWISE, MUST BE COMMENCED WITHIN ONE YEAR FROM THE ACCRUAL OF THAT CAUSE OF ACTION, OR BE BARRED FOREVER.

### (9) To Obtain Service.

If the Owner discovers within the applicable coverage period a defect in material or workmanship, the Owner must promptly give notice to either Meritor WABCO or the dealer from which the vehicle was purchased. To obtain service, the vehicle must be taken to any participating OEM new truck and/or trailer dealer or authorized Meritor WABCO service location. The dealer will inspect the vehicle and contact Meritor WABCO for an evaluation of the claim. When authorized by Meritor WABCO, the dealer will repair or replace during the term of this warranty any defective Meritor WABCO component covered by this warranty.

### (10) Entire Agreement.

This is the entire agreement between Meritor WABCO and the Owner about warranty and no Meritor, Meritor WABCO employee, or dealer is authorized to make any additional warranty on behalf of Meritor WABCO unless in writing and signed by an authorized representative of Meritor WABCO.

For more information on  
Meritor WABCO Warranty, call  
our OnTrac Customer Service team  
at 866-OnTrac1 (866-668-7221)  
or visit [meritorwabco.com](http://meritorwabco.com).



One (1) Year Material and Workmanship Foam System & Five (5) Year Material and Workmanship Control Head

Limited Warranty

1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	Limited warranty 1 year parts and labor for the foam system and 5 years parts and labor for the control head.
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	One (1) Year & Five (5) Year
Conditions and Exclusions:  See Also Paragraphs 2 thru 4	<p>This warranty does not cover repair due to accidents, misuse, and excessive vibration, flying debris, storage damage (freezing), negligence or modification. This warranty is void if any modification or repairs are performed without authorization. This also voids any future warranty.</p> <p>This warranty does not cover cost of maintenance or repairs due to lack of required maintenance services as recommended. Performance of the required maintenance and use of proper fluids are the responsibility of the owner.</p>

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

**TRW COMMERCIAL STEERING SYSTEMS**  
800 HEATH STREET  
LAFAYETTE, INDIANA 47904



## **PRODUCT WARRANTY**

- I. WARRANTY:** The Commercial Steering Systems group of TRW, Inc., hereinafter referred to as "CSS", warrants that each new product supplied by CSS to its customer, when properly installed, used and maintained, shall be free from defect in material and workmanship for the period specified below:
- (A) CSS Product installed in **New On-highway Motor Vehicle:**
- Within twelve (12) months after date of delivery of such vehicle to the original retail purchaser, or before such vehicle has been driven one hundred thousand (100,000) miles, whichever event shall first occur.
- (B) CSS Product installed in **New Agricultural, Turf, Industrial, or Construction Vehicles and Related Equipment**
- Within twelve (12) months after date of delivery of such vehicle/equipment to the original retail purchaser or before such vehicle/equipment has been operated for two thousand (2000) hours or fifty thousand (50,000) miles, whichever occurs first.
- (C) CSS Product installed in **New End Product, Not Specifically Mentioned in Classifications (A) or (B) Above and All Other Off-Highway/Severe Applications:**
- Within six (6) months after date of delivery of the original equipment manufacturer's end product to the original retail purchaser.
- II. REMEDY:** Customer's sole remedy under the foregoing warranty is limited to correction by means of repair, replacement or issuance of credit, at the option of CSS, of any product which is:
- (A) Returned to CSS within the specified warranty time period, with prior notice to, and the written consent of, CSS, with transportation and handling charges prepaid, together with a statement describing the alleged defect, the part number, model number and application, and mileage or hours of use of such product; and
- (B) Upon examination, determined by CSS not to conform to the warranty.
- III.** Any product which is repaired or replaced under this warranty will be returned to customer prepaid. Disposition of any product determined not to be covered by this warranty will be at the customer's expense.
- IV.** CSS will not be liable for any repairs, replacements, or adjustments to any product or any cost of labor performed by or at the request of customer without the express prior written consent of CSS.
- V. EXCEPTIONS:** The provision of this warranty shall not apply to any CSS product which is used for a purpose for which it is not designed, or which shall have been repaired or altered in any way, or which has been subject to misuse, negligence or accident, neglect of normal maintenance services, so as, in the judgement of CSS to adversely affect its performance and reliability. In no case will the CSS warranty exceed the standard published warranty of its customer in terms of time and/or distance. In all events, the CSS warranty will expire thirty (30) months after the date of manufacture as stamped on the Product. In the case of hydraulic equipment, operation with unapproved fluid or temperatures voids this warranty.
- VI. EXCLUSION OF ALL OTHER REMEDIES AND LIMITATION OF LIABILITY:** Customer's sole and exclusive remedy under the foregoing warranty shall be for the repair, replacement or issuance of credit with respect to a defective product, as set forth and described above. Other provisions hereof notwithstanding, CSS shall not be liable to Customer, or any successor in interest, beneficiary or assignee of Customer, based upon any claim against CSS, whether in contract, warranty, negligence, strict liability, indemnity or otherwise, for any special, consequential, incidental or other damages relating in any way to the design, manufacture, sale, installation or other use of any product purchased from CSS.
- VII. EXCLUSION OF ALL OTHER WARRANTIES: THE FOREGOING WARRANTY IS THE EXCLUSIVE WARRANTY BY CSS AND IS IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES AND REPRESENTATIONS, WHETHER ORAL, WRITTEN, EXPRESSED, IMPLIED OR STATUTORY, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

**TRW COMMERCIAL STEERING SYSTEMS**

Revised November 2001



# Fire and Rescue Apparatus

## Five (5) Year Material and Workmanship - Transmission Oil Cooler Three (3) Year Collateral Damage Coverage

### Limited Warranty

#### 1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

<b>Coverage:</b>	<b>The transmission cooler shall be free from component or structural failures caused by defects in material and/or workmanship. Collateral damage up to \$10,000 per occurrence is available for the first three (3) years.</b>
<b>Warranty Begins:</b>	<b>The date of delivery to the first retail purchaser.</b>
<b>Warranty Period Ends After:</b>	<b>Five (5) Years on Oil Cooler and three (3) years on collateral damage coverage</b>
<b>Conditions and Exclusions:</b>  <b>See Also Paragraphs 2 thru 4</b>	<p>This warranty does not cover repair due to accidents, misuse, and excessive vibration, flying debris, storage damage (freezing), negligence or modification. This warranty is void if any modification or repairs are performed without authorization. This also voids any future warranty.</p> <p>This warranty does not cover cost of maintenance or repairs due to lack of required maintenance services as recommended. Performance of the required maintenance and use of proper fluids are the responsibility of the owner.</p> <p>Towing is covered to the nearest distributor or authorized dealer only when necessary to prevent further damage to your transmission.</p> <p>Labor costs for the removal and reinstallation of goods may be covered when necessary to make repairs. Please contact your OEM for authorization.</p> <p>Replacement of cooler during the warranty period is limited to 100% of reasonable labor costs up to a maximum of \$700 to remove, replace, or repair the oil cooler.</p>

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

#### 2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

#### 3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

#### 4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



 **UNITED PLASTIC FABRICATING, INC.**  
**WARRANTY**  
**FOR: POLY-TANK®, POLYSIDE®, INTEGRATOR™, ELLIPSE™, ELLIP-T-TANK™ & DEFENDER™**

## LIFETIME SERVICE WARRANTY

United Plastic Fabricating, Inc. (hereinafter called "UPF") warrants each POLY-TANK®, Booster/Foam Tank POLYSIDE® Wetside Tank, Integrator Tank/Body, ELLIPSE™ Elliptical Tank, Ellip-T-Tank Tank and DEFENDER™ Skid Tank to be free from defects in material and workmanship for the service life of the original vehicle (vehicle must be actively used in an emergency response for fire suppression). All UPF Tanks must be installed and operated in accordance with the UPF Installation and Operating Guidelines. Failure to do so can void the warranty.

Every UPF Tank is inspected and tested before leaving our facility. Should your UPF Tank require service, please notify UPF via email, fax, in writing or by calling UPF at 1-978-975-4520. Please provide the serial number, a description of the service request, the location along with the phone number and name of the contact person. Our goal is to have scheduled work completed within a reasonable time period.

Under a valid warranty claim, UPF will cover the cost to repair the UPF Tank including the customary and reasonable costs to make the tank accessible such as the removal and reinstallation of the tank if authorized in advance (pre-approved) by UPF. The warranty will not cover tanks that have been improperly installed, operated, misused, abused, or modified from its intended or designed use. Serial number must not have been altered, defaced or removed. Tanks that are not stored or installed properly which results in the tank suffering UV damage will not be covered by this agreement.

Should UPF determine that the service claim is valid under this warranty for a tank located outside of the United States and Canada, UPF will assume the costs for labor and material for the warranty repair as described above plus all travel costs to the U.S. port of embarkation. Costs for airline travel outside of the U.S. and Canada will not be the responsibility of UPF.

In the event the tank shall become stationed in an area of the world that is considered to be a war zone or where unsafe conditions exist for the safe passage of United States Nationals, as reported by the United States Department of State, (<http://www.state.gov>), and a request to perform service or warranty repairs, UPF reserves the right to refuse to honor such requests. It is the purchaser's responsibility to relocate the tank to an area where such repairs can be performed without undue risk to UPF employees or their designee. UPF will make every reasonable effort to support our products through alternative means.

For Ellipse™ elliptical tanks, a separate five year warranty provided by the subcontractor is applied to the sub-frames, chute linings (rubber isolation strips) and metal components. The stainless steel wrap provided by UPF shall be warranted by the subcontractor performing the wrap installation in accordance with their warranty in place at the time of the installation. UPF will not be liable for any warranty costs associated with the wrap, sub-frames, chute linings (rubber isolation strips) and metal components but will assist with all claims on behalf of its customer.

For PolySide® wetsided tanks and Integrator™ Tank/Body units, all polypropylene components related to the tank shall carry the standard UPF lifetime



**UNITED PLASTIC FABRICATING, INC.**

# **WARRANTY**

**FOR: POLY-TANK®, POLYSIDE®, INTEGRATOR™, ELLIPSE™, ELLIP-T-TANK™ & DEFENDER™**

service warranty. Other polypropylene components, including but not limited to compartments, wheel wells, fenders and other body related components shall be warranted by UPF for a period of ten years. The warranty for the PolySide® and Integrator™ units excludes paint or hardware, which shall be covered by the manufacturer of the paint/hardware.

All UPF tanks 50 gallons or less utilized for non-fire applications and installed on specialty vehicles such as ATVs, trailers, boats, etc. are covered under a separate warranty policy available from UPF. Further, UPF Protector™ foam and water trailers are warranted under a separate warranty policy available from UPF.

This UPF warranty is transferable within the United States only with prior written approval by UPF (except an original apparatus manufacturer may assign this warranty to the first titled owner/lessee of the apparatus).

**UPF will NOT reimburse any unnecessary work and/or work that has not been pre-approved. Any and all third party charges must be pre-authorized and approved in writing by UPF prior to commencing the work. Any unauthorized third party repairs, alterations, actions or modifications will not be covered and can void the warranty. UPF will be the sole determining authority as to whether a service claim will be valid and covered under this warranty.**

In no event will UPF be liable for an amount in excess of the purchase price of the booster/foam tank at the time of manufacture or for any loss or damage, whether direct, indirect, incidental, consequential, or otherwise arising out of failure of its product. Loss of contents (water, foam, etc.) shall not be the responsibility of UPF. Further, UPF is not responsible for costs associated with service repairs to chassis, sub-frames, bodies, valves, dumps, hoses, pressure vacuum vents, and other components (i.e. liquid level transducers, etc.). Further, UPF will not cover the cost for travel of the vehicle to and from a repair facility.

This warranty contains the entire warranty. It is the sole warranty and price agreements or representation, whether oral or written, are either merged herein or expressly cancelled. UPF neither assumes, nor authorizes any person supposing to act on its behalf to change, nor assume for it, any warranty or liability concerning its product.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow exclusion or limitation or incidental or consequential damage, so the above limitation or exclusion may not apply to you. Since some states do not allow limitations on the length of an implied warranty, the above limitation may not apply to you.

**THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION OF THE FACE HEREOF. THERE IS NO EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. ADDITIONALLY, THIS WARRANTY IS IN LIEU OF ALL OTHER OBLIGATION OR LIABILITIES ON THE PART OF UPF.**



# BULLETIN

**TO: All Dealer Service Representatives**  
**From: Kevin Hanegraaf**  
**DATE: January 4, 2010**  
**RE: UPF Tank Warranty Policy – Truck in Accident**  
**Service Topic #292**



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To keep the UPF tank warranty valid on trucks that have been involved in a vehicular accident, it is UPF's policy that the customer must remove the tank from the truck and send it back to one of UPF's facilities for inspection. In the event that this does not take place, the warranty will be considered null and void.

The customer must remove and send the tank back to UPF for inspection in order to maintain the original warranty coverage, at which time it will be:

- Filled with water
- Visually inspected
- Ultraviolet spark tested on articulating test stand in the dark
- Recommendation for repairs if necessary provided by UPF
- Fully evaluated and repaired by UPF

If your customer chooses to leave the tank on the truck and wants a technician to inspect and/or repair the tank in the field, then **the warranty is no longer in effect.** This direction is upheld by UPF because the technician cannot inspect the entire tank when it is still installed on the truck.

**Note:** This memo is intended to relay the information Pierce has received on UPF's tank warranty for trucks that are in a vehicular accident. In the event of an actual claim, we direct you to consult with UPF's service Manager Maura Watts (800-638-8265 x253)





## **AMDOR Inc. TERMS OF BUSINESS AND GENERAL INFORMATION**

### **Warranty:**

All AMDOR Inc. roll-up door products are warranted for a period of 10 years from the date of delivery (with the exception of wet paint adhesion - please see below). AMDOR Inc. liability covers the replacement or repair of any component that fails due to defects in material and / or workmanship during the coverage period. We accept no liability for claims made for damages to any part (or parts) of a vehicle and / or machine (of any type) or injury claims by a person or persons assumed or alleged to have been brought about by the use or misuse of any product supplied by AMDOR Inc. Warranty coverage does not extend to door attachments including (but not limited to) decals, emblems, stripes and adhesives.

In order to initiate the claims process please contact your authorized representative of AMDOR Inc. Warranty claims must be accompanied by a written description providing full and reasonable details as to the nature of the defect. Upon receipt of your claim arrangements will be made to inspect the defective product (if necessary). Justified warranty claims will be repaired, exchanged, or credited to the customer's account at AMDOR Inc.'s discretion. All warranty claims must be approved in writing by the Customer Service Manager for AMDOR Inc. There are no exceptions to this clause.

Limited warranty coverage includes the labor associated with the disassembly and assembly of products deemed to be defective by AMDOR Inc. Labor allowances are based on a set time schedule as determined by AMDOR Inc. The maximum allowable hourly labor rate is \$ 50. All warranty labor claims must be approved in writing by an authorized representative of AMDOR Inc. prior to commencement of work. Allowances for removal and installation:

Curtain replacement:	3/4 hour
Balancer replacement:	1 hour
Door ajar switch	3/4 hour
Bottom Panel Assembly:	1/2 hour
Slat replacement:	3/4 hour
Door removal and replacement	1 1/2 hours

Items authorized for return must be accompanied by a Return Goods Authorization (RGA) number. We will accept collect shipments of items deemed to be defective provided that they are returned via the most economical carrier. Should items be

returned by means other than the most economical carrier the difference will be charged back to the sender.

AMDOR Inc. reserves the right to reject any claim when a product has been opened, interfered with or modified. Claims may also be rejected when damage to the product (or any sub-assembly) has been brought about by accident, misuse, abuse, vandalism, incorrect installation, temperature extremes, chemical exposure or any factor other than regular operating conditions.

### **Limited Wet Paint Match Adhesion Warranty**

AMDOR Inc. warrants wet paint finishes applied by AMDOR utilizing our approved factory paint specification. All wet paint match colors must be approved in writing by an authorized OEM representative. AMDOR Inc. will provide a color spray out for this purpose. The time required for shipping and consideration of initial color spray outs will be considered over and above stated lead times. Warranty coverage will extend for a period of not less than 5 years from the date of delivery as determined by AMDOR Inc.'s Packing Slip. AMDOR reserves the right to determine whether individual units will be replaced and / or repaired by an AMDOR approved vendor. An allowance will be made for labor associated with the disassembly and assembly of individual units at the prescribed hourly rate of \$ 50 per hour. Compensation for labor will not exceed the maximum time allowance permitted for door removal and replacement. Written approval including specified allowance for time must be obtained from AMDOR prior to initiating work. Warranty coverage will extend to the following visible paint system defects:

- 1./ Loss of mechanical adhesion as evidenced by peeling, cracking or blistering which exposes the substrate material.
- 2./ Corrosion of the substrate due to paint system failure.
- 3./ Fading which results in a substantial departure from the primary AMDOR approved body color.

Wet paint adhesion limited warranty coverage will be excluded when damages to the system are determined by AMDOR Inc. to be a result of the following:

- 1./ Damage caused through the use of attachments including (but not limited to) decals, labels, adhesives, non factory approved coatings.
- 2./ Loss of gloss, discoloration or damage due to improper maintenance (including but not limited to) mechanical wash systems, pressure washers, steam cleaners, non approved wash or polishing agents.
- 3./ Abuse, acts of nature, excessive heat / cold, chemical exposure, vandalism and / or accidents.
- 4./ Scratches, chips, abrasions, or dents from any source.

**This document supercedes all previous written and / or verbal warranties provided by AMDOR Inc. and / or it's affiliates.**



# Fire and Rescue Apparatus

## 54 Months Material and Workmanship

### Camera System

# Limited Warranty

#### 1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the Buyer:

Coverage:	This limited warranty covers repairs to correct any defect related to materials or workmanship of the Sharpvision camera system installed on the apparatus occurring during the warranty period.
Warranty Begins:	The date of delivery.
Warranty Period Ends After:	Fifty - Four (54) months
Conditions and Exclusions:  See Also Paragraphs 2 thru 4	This limited warranty does not apply to related wire harnesses, cables, and connectors, which are covered by the Pierce one (1) year basic apparatus limited warranty.

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

#### 2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

#### 3. BUYER'S EXCLUSIVE REMEDY

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

#### 4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

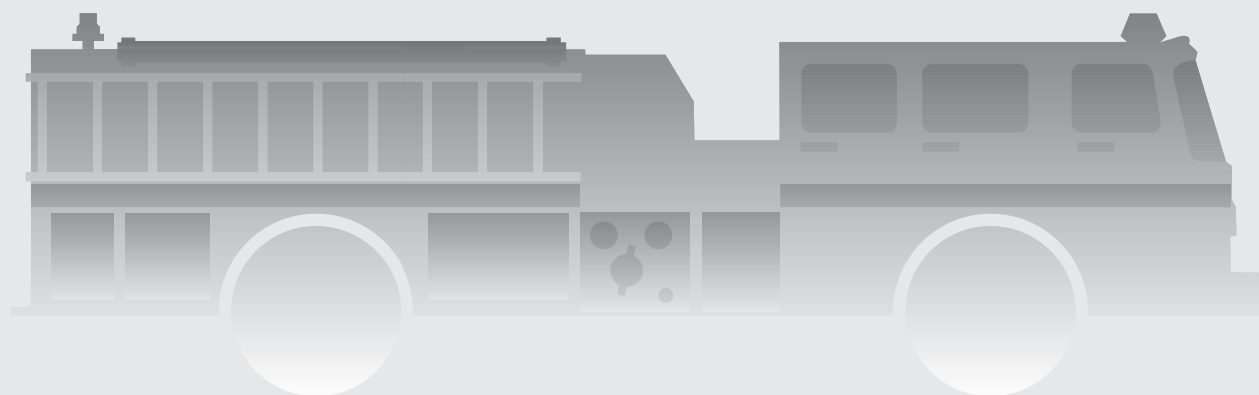
Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.



# Cummins Warranty

Worldwide

Fire Apparatus/Crash Trucks



# Coverage

## Products Warranted

This Warranty applies to new diesel Engines sold by Cummins and delivered to the first user on or after April 1, 2007, that are used in fire apparatus truck and crash truck\* applications Worldwide.

## Base Engine Warranty

The Base Engine Warranty covers any failures of the Engine which result, under normal use and service, from a defect in material or factory workmanship (Warrantable Failure). This Coverage begins with the sale of the Engine by Cummins and ends five years or 100,000 miles (160,935 kilometers), whichever occurs first, after the date of delivery of the Engine to the first user.

Engine aftertreatment components included in the Cummins Critical Parts List (CPL) and marked with a Cummins part number are covered under Base Engine Warranty.

Additional Coverage is outlined in the Emission Warranty section.

**These Warranties are made to all Owners in the chain of distribution and Coverage continues to all subsequent Owners until the end of the periods of Coverage.**

# Cummins Responsibilities

Cummins will pay for all parts and labor needed to repair the damage to the Engine resulting from a Warrantable Failure.

Cummins will pay for the lubricating oil, antifreeze, filter elements, belts, hoses and other maintenance items that are not reusable due to the Warrantable Failure.

Cummins will pay for reasonable labor costs for Engine removal and reinstallation when necessary to repair a Warrantable Failure.

Cummins will pay reasonable costs for towing a vehicle disabled by a Warrantable Failure to the nearest authorized repair location. In lieu of the towing expense, Cummins will pay reasonable costs for mechanics to travel to and from the location of the vehicle, including meals, mileage and lodging when the repair is performed at the site of the failure.

# Owner Responsibilities

Owner is responsible for the operation and maintenance of the Engine as specified in Cummins Operation and Maintenance Manuals. Owner is also responsible for providing proof that all recommended maintenance has been performed.

Before the expiration of the applicable Warranty, Owner must notify a Cummins distributor, authorized dealer or other repair location approved by Cummins of any Warrantable Failure and make the Engine available for repair by such facility. Except for Engines disabled by a Warrantable Failure, Owner must also deliver the Engine to the repair facility.

Service locations are listed on the Cummins Worldwide Service Locator at [cummins.com](http://cummins.com).

Owner is responsible for the cost of lubricating oil, antifreeze, filter elements and other maintenance items provided during Warranty repairs unless such items are not reusable due to the Warrantable Failure.

Owner is responsible for communication expenses, meals, lodging and similar costs incurred as a result of a Warrantable Failure.

Owner is responsible for non-Engine repairs and for “downtime” expenses, cargo damage, fines, all applicable taxes, all business costs and other losses resulting from a Warrantable Failure.

Owner is responsible for a \$100 (U.S. Dollars) deductible per each service visit under this plan in the 3rd, 4th and 5th years of Base Engine Warranty. The deductible will not be charged during the first 2 years of the Base Engine Warranty.

# Limitations

Cummins is not responsible for failures or damage resulting from what Cummins determines to be abuse or neglect, including, but not limited to: operation without adequate coolants or lubricants; overfueling; overspeeding; lack of maintenance of lubricating, cooling or intake systems; improper storage, starting, warm-up, run-in or shutdown practices; unauthorized modifications of the Engine.

Any unauthorized modifications to the aftertreatment could negatively effect emissions certification and void Warranty.

Cummins is also not responsible for failures caused by incorrect oil, fuel or diesel exhaust fluid or by water, dirt or other contaminants in the fuel, oil or diesel



exhaust fluid.

This Warranty does not apply to accessories supplied by Cummins which bear the name of another company. Such non-warranted accessories include, but are not limited to: alternators, starters, fans, air conditioning compressors, clutches, filters, transmissions, torque converters, vacuum pumps, power steering pumps, fan drives and air compressors. Cummins branded alternators and starters are covered for the first two years from the date of delivery of the Engine to the first user, or the expiration of the Base Engine Warranty, whichever occurs first.

Failures resulting in excessive oil consumption are not covered beyond the duration of the Coverage or 100,000 miles (160,935 kilometers) or 7,000 hours from the date of delivery of the Engine to the first user, whichever of the three occurs first. Before a claim for excessive oil consumption will be considered, Owner must submit adequate documentation to show that consumption exceeds Cummins published standards.

Failures of belts and hoses supplied by Cummins are not covered beyond the first year from the date of delivery of the Engine to the first user or the duration of the Warranty, whichever occurs first.

Parts used to repair a Warrantable Failure may be new Cummins parts, Cummins approved rebuilt parts or repaired parts. Cummins is not responsible for failures resulting from the use of parts not approved by Cummins.

A new Cummins or Cummins approved rebuilt part used to repair a Warrantable Failure assumes the identity of the part it replaced and is entitled to the remaining Coverage hereunder.

Cummins Inc. reserves the right to interrogate Electronic Control Module (ECM) data for purposes of failure analysis.

**CUMMINS DOES NOT COVER WEAR OR WEAROUT OF COVERED PARTS.**

**CUMMINS IS NOT RESPONSIBLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

**THIS WARRANTY AND THE EMISSION WARRANTY SET FORTH HEREINAFTER ARE THE SOLE WARRANTIES MADE BY CUMMINS IN REGARD TO THESE ENGINES. CUMMINS MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OR OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

# Emission Warranty

## Products Warranted

This Emission Warranty applies to new Engines marketed by Cummins that are used in the United States\*\* in vehicles designed for transporting persons or property on a street or highway. This Warranty applies to Engines delivered to the first user on or after September 1, 1992.

## Coverage

Cummins warrants to the first user and each subsequent purchaser that the Engine is designed, built and equipped so as to conform at the time of sale by Cummins with all U.S. federal emission regulations applicable at the time of manufacture and that it is free from defects in material or factory workmanship which would cause it not to meet these regulations within the longer of the following periods: (A) Five years or 100,000 miles (160,935 kilometers) of operation, whichever occurs first, as measured from the date of delivery of the Engine to the first user or (B) The Base Engine Warranty.

If the vehicle in which the Engine is installed is registered in the state of California, a separate California Emission Warranty also applies.

## Limitations

Failures, other than those resulting from defects in material or factory workmanship, are not covered by this Warranty.

Cummins is not responsible for failures or damage resulting from what Cummins determines to be abuse or neglect, including, but not limited to: operation without adequate coolants or lubricants; overfueling; overspeeding; lack of maintenance of lubricating, cooling or intake systems; improper storage, starting, warm-up, run-in or shutdown practices; unauthorized modifications of the Engine.

Any unauthorized modifications to the aftertreatment could negatively effect emissions certification and void Warranty.

Cummins is also not responsible for failures caused by incorrect oil, fuel or diesel exhaust fluid or by water, dirt or other contaminants in the fuel, oil or diesel exhaust fluid.

Cummins is not responsible for non-Engine repairs, "downtime" expenses, cargo damage, fines, all applicable taxes, all business costs or other losses resulting from a Warrantable Failure.

**CUMMINS IS NOT RESPONSIBLE FOR INCIDENTAL  
OR CONSEQUENTIAL DAMAGES.**

\* Airport operated crash trucks and fire department operated trucks employed to respond to fires, hazardous material releases, rescue and other emergency-type situations.

\*\* United States includes American Samoa, the Commonwealth of Northern Mariana Islands, Guam, Puerto Rico and the U.S. Virgin Islands.



**Cummins Inc.**  
**Box 3005**  
**Columbus, IN 47202-3005**  
**U.S.A.**

Bulletin 3381161  
Printed in U.S.A. Rev. 08/09  
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# Fire and Rescue Apparatus



## SUPPLIER

### Limited Warranty

#### 1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the purchaser who first puts the product in service ("Buyer"):

<b>Coverage:</b>	<b>The Meritor axle shall be covered by Meritor as indicated in the attached Meritor warranty coverage description</b>
<b>Warranty Begins:</b>	<b>The date of the original purchase invoice (issued when the product ships from the factory).</b>
<b>Warranty Period Ends After:</b>	<b>Five (5) Years</b>
<b>Conditions and Exclusions:</b>  <b>See Also Paragraphs 2 thru 4</b>	<b>The exclusions listed in the attached Meritor warranty description shall apply.</b>

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

#### 2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

#### 3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

#### 4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

6/29/2020 WA0384



# MERITOR® COMMERCIAL VEHICLE SYSTEMS

WARRANTY/MODEL YEAR 2020 VEHICLES



**MERITOR**





# WARRANTY INFORMATION CONTENTS

Effective Model Year 2020 Vehicles

Linehaul .....	3-4
General Service .....	5-6
Heavy Service/Specialty Vehicle .....	7-8
Fire and Emergency .....	9
Transit Bus .....	10
Off-Highway Service.....	11
Terms and Conditions.....	12

## How to Read Warranty Coverage

Number of Years	Mileage (in thousands) Unl=Unlimited	P=Parts Only P&L=Parts & Labor
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### Notice:

Models or components that are approved for use by Meritor’s vocational guidelines contained in Meritor Publication TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, which are not specifically listed, are warranted for one year, unlimited miles, parts only (1/Unl/P).

Products purchased on an incomplete vehicle (glider) are limited to one year, unlimited miles parts only (1/Unl/P).

### Advantage Program

Purchasing additional coverage on select components will continue to safeguard your investment against major repair costs after the initial base coverage expires. You can find out more about the Advantage Program by visiting [www.meritor.com](http://www.meritor.com) or by contacting Meritor at 866-OnTrac1 (866-668-7221).



# LINEHAUL WARRANTY INFORMATION

## Linehaul Vehicles

- Bulk Hauler
- Chip Hauler (Truck)\*
- Doubles
- Flatbed
- General Freight
- Grain Hauler
- Livestock Hauler
- Moving Van
- Pipe Hauler
- Refrigerated Freight
- Tanker
- Triples

\* Chip Hauler vehicles require specific axle models listed below and Linehaul condition to be eligible for Linehaul warranty consideration.

## Linehaul Typically Is

- High mileage operation (over 60,000 miles/year)
- Well maintained major highways of concrete or asphalt construction
- Greater than 30 miles between starting and stopping

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

## Front Non-Drive Steer Axles – 5/750/P&L

FD-965	FF-967	MFS-12-122B-N	MFS-12-132C-N	MFS-13-122B-N	MFS-13B-122C-N
FF-941	FG-941	MFS-12-122C-N	MFS-12E-132B-N	MFS-13-122C-N	MFS-13B-132B-N
FF-942	FG-943	MFS-12E-122A-N	MFS-12E-132C-N	MFS-13-132B-N	MFS-13B-132C-N
FF-943	MFS-10-122A	MFS-12E-122B-N	MFS-12-143A-N	MFS-13-132C-N	MFS-14-122A-N
FF-944	MFS-10-143A-N	MFS-12E-122C-N	MFS-12E-143A-N	MFS-13-143A-N	MFS-14-124A-N
FF-961	MFS-10-144A-N	MFS-12-124A-N	MFS-12-144A-N	MFS-13-144A-N	MFS-14-143A-N
FF-966	MFS-12-122A-N	MFS-12-132B-N	MFS-13-122A-N	MFS-13B-122B-N	MFS-14-144A-N

## Rear Drive Single Axles – 5/750/P&L

RS-19-144/145/A	RS-21-145	RS-23-160
MS-19-14X	RS-21-160	RS-23-161
MS-21-144	MS-23-17X	RS-23-186

## Rear Drive Tandem/Tridem Axles – 5/750/P&L

RT-34-144/P/A	MA-40-165	MT-40-14XHE
RT-40-145/A	MA-40-175	MT-40-144/P
RT-40-160/P <sup>1,2</sup>	MT-34-14X/P	MT-40-943
RT-46-160/P <sup>1,2</sup>	MT-40-14T/P	MT-40-943-SP
RT-46-164EH/P <sup>1,2</sup>	MT-40-14X/P	RZ-166 <sup>2</sup>
RT-50-160/P <sup>1,2</sup>	MT-40-14X/P	RZ-188

## Drivelines

RPL	5/500/P, 1/Unl/P&L
MXL	3/350/P, 1/Unl/P&L
155N	1/Unl/P
92N	1/Unl/P

<sup>1</sup> These models required for Chip Hauler and Linehaul warranty consideration.  
<sup>2</sup> Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.



# LINEHAUL WARRANTY INFORMATION

## Brake Components

Cam Q Series Trailer Brakes	5/500/P, 1/100/L
Q+ Drum Brake™	5/500/P, 1/Unl/P&L
ASA	5/500/P, 1/Unl/P&L
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
STEELite X30 Drum Brake™ <sup>2</sup>	12-Years or Wearable Life/P
EX+ Air Disc Brake™	5/500/P, 1/Unl/L
EX+ Air Disc Brake Extended Standard Warranty <sup>3</sup>	5/500/P&L

<sup>1</sup> Includes: bushing, seal, cam, ASA lubrication and wear coverage of 3/500/P&L.

<sup>2</sup> Based on stamped wear diameter max.

<sup>3</sup> Applies only to MA761 friction material code CD brake assembly i.e. EX225LXXXCDXXX

## Trailer Axles

Beam and Brackets	5/500/P, 1/100/L
Wheel End Systems <sup>1</sup>	
Standard System <sup>2</sup>	1/100/P&L
PreSet by Meritor <sup>3</sup>	5/500/P&L
AxlePak5 <sup>4</sup>	5P/L
AxlePak7 <sup>5</sup>	7P/L

<sup>1</sup> Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.

<sup>2</sup> When installed by Meritor.

<sup>3</sup> Requires approved hubcap stating PreSet by Meritor on hubcap face.

<sup>4</sup> When specified with AxlePak5 wheel end system, coverage on MTIS thru-tee and stator is 5/Unl/P, 1/Unl/L.

<sup>5</sup> When specified with AxlePak7 wheel end system, coverage on MTIS thru-tee and stator is 7/Unl/P, 1/Unl/L.

(For brake components and ABS coverage, refer to appropriate product warranties.)

## TAG/Pusher Axles<sup>1</sup>

TQ, TQD, TR, TRD Beam and Brackets	5/750/P&L
------------------------------------	-----------

<sup>1</sup> For brake components and ABS Coverage, refer to appropriate product warranties.

## Meritor Tire Inflation System

MTIS Components	5/Unl/P, 1/Unl/L
-----------------	------------------

## Trailer Air Suspension Systems

MPA38/40 (Tandem Axle Parallelogram) <sup>1</sup>	
Major Structural Components	5/500/P, 1/100/L
Curbing Damage Warranty <sup>2</sup>	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Shock Absorbers	2/200/P&L
Air Springs	2/200/P, 1/100/L
Bushings	5/P, 3/L
PinLoc Air Controls	1/100/P&L
PinLoc Actuator	3/300/P&L
MPA20 (Single Axle Parallelogram)	
Major Structural Components	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Shock Absorbers	2/200/P&L
Air Springs	2/200/P, 1/100/L
Bushings	5/P, 3/L
MTA (Trailing Arm)	
Major Structural Components	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Shock Absorbers	2/200/P&L
Air Springs & Rebound Straps	2/200/P, 1/100/L
Bushings	5/500/P, 3/300/L

<sup>1</sup> Fastener torque coverage is limited to 2/Unl/P&L when torqued by Meritor (For axle and ABS coverage, refer to appropriate product warranties.)

<sup>2</sup> “Curbing damage” is defined as deformation (bending, buckling, or breakage), caused by sudden impact with a curb or similar fixed object. Damage to the RideSentry slider box (the suspension sliding subframe, consisting of the frame rails, crossmembers, and central A-frame assembly), caused by accidental trailer impact with a curb or similar fixed object, is eligible for warranty coverage. Damage to other components or damage resulting from collision with another vehicle, rollover or fire is not covered under this provision. Warranty is not transferrable to another trailer VIN, and coverage does not apply if the trailer is deemed to be a total loss, scrapped, or otherwise not salvageable.





# GENERAL SERVICE WARRANTY INFORMATION

## General Service Vehicles

- Auto Hauler
- Beverage Truck
- Chip Hauler
- Cross Country Coach
- Flatbed
- Front Engine Commercial Chassis
- Front Engine Integral Coach
- General Freight
- Intercity Coach
- Intermodal Chassis
- Livestock Hauler
- Meat Packer
- Moving Van
- Municipal Truck
- Newspaper Delivery
- Pick-Up and Delivery
- Pipe Hauler
- Platform Auto Hauler
- Rear Engine Integral Coach
- Recreational Vehicles
- Refrigerated Freight
- School Bus
- Stake Truck
- Tanker
- Tanker Trailer
- Tour Bus
- Wrecker

## General Service Typically Is

- Lower mileage operations (less than 60,000 miles/year)
- Generally, on-road service (less than 10% off-road)
- An average of three (3) miles between starting and stopping

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

## Front Non-Drive Steer Axles – 2/Uni/P&L

FD-965	FL-943	MFS-8-163B-N	MFS-12E-132B-N	MFS-13-132C-N	MFS-16-143A-N
FF-941	MFS-6-151A-N	MFS-10-122A	MFS-12-132C-N	MFS-13B-132B-N	MFS-18-133A-N
FF-942	MFS-6-153B-N	MFS-10-143A-N	MFS-12E-132C-N	MFS-13B-132C-N	MFS-18-135A-N
FF-943	MFS-6-162B-N	MFS-10-144A-N	MFS-12-143A-N	MFS-13-143A-N	MFS-18-193A-N
FF-944	MFS-6-153C-N	MFS-12-122A-N	MFS-12-144A-N	MFS-13-144A-N	MFS-20-133A-N
FF-946	MFS-6-162C-N	MFS-12E-122A-N	MFS-12E-143A-N	MFS-14-122A-N	MFS-20-135A-N
FF-961	MFS-7-113C-N	MFS-12-122B-N	MFS-13-122A-N	MFS-14-124A-N	MFS-20-192A-N
FF-966	MFS-7-153C-N	MFS-12E-122B-N	MFS-13-122B-N	MFS-14-143A-N	MFS-20-193A-N
FG-967	MFS-7-163C-N	MFS-12-122C-N	MFS-13B-122B-N	MFS-14-144A-N	MFS-22-135A-N
FG-941	MFS-8-113B-N	MFS-12E-122C-N	MFS-13-122C-N	MFS-16-122A-N	MFS-22H-135A-N
FH-941	MFS-8-143A-N	MFS-12-124A-N	MFS-13B-122C-N	MFS-16-133A-N	MFS-22-193A-N
FH-946 <sup>1</sup>	MFS-8-153B-N	MFS-12-132B-N	MFS-13-132B-N	MFS-16-135A-N	MFS-22H-193A-N
FL-941					

<sup>1</sup> Can also be used with reduced steer angles in tag position in Coach Applications.

## Front Drive/Non-Drive Steer Axles – 1/Uni/P&L

MX-08-130-FV (FSD-08A)	MX-16-130-FV (FSD-16A)	MX-21-130-SD (SDA-2100)
MX-10-130-FV (FSD-10A)	MX-18-130-FV (FSD-18A)	MX-23-130-FV (FSD-23A)
MX-12-130-FV (FSD-12A)	MX-18-130-SD (SDA-1800)	MX-23-130-SD (SDA-2300)
MX-13-130-FV (FSD-13A)	MX-20-130-FV (FSD-20A)	MX-29-130-FV (FSD-29A)
MX-14-130-FV (FSD-14A)	MX-21-130-FV (FSD-21A)	

## Rear Drive Tandem/Tridem - 3/Uni/P&L

RT-40-160/P	RT-50-160/P
RT-46-160/P	RZ-166
RT-46-164EH/P	

## Rear Drive Axles – 1/Uni/P&L

11170	RND-14H
523	RND-16A

## Drivelines

RPL	4/400/P, 1/Uni/P&L
MXL	3/350/P, 1/Uni/P&L
155N	1/Uni/P
92N	1/Uni/P

## Rear Drive Single Axles – 2/Uni/P&L

MS-17-13X	MS-21-14X	RC-23-160	RS-24-160	MS-30-616-SP
MS-17-14X	MS-21-144	RC-23-161	RC-25-160	RS-35-380
MS-19-13X	MS-23-17X	RC-23-162 <sup>1</sup>	RS-26-185	71162
MS-19-14X	RS-21-145/A	RC-23-165 <sup>1</sup>	MS-26-616	71163
RS-17-144/145/A	RS-21-160	RS-23-160	MS-26-616-SP	79163
RS-19-144/145/A	RC-22-145	RS-23-161	RS-30-185	
MS-21-13X	RC-22-145/A	RS-23-186	MS-30-616	

<sup>1</sup> 3/Uni/P&L if PreSet by Meritor.

## Rear Drive Tandem/Tridem Axles – 2/Uni/P&L

MT-34-14X/P	MT-40-14XHE	RT-44-145/P	MT-58-616
RT-34-144/P/A	MT-40-144/P	RT-46-169	RT-58-185 <sup>1</sup>
MT-40-14T/P	RT-40-145/A	MT-52-616	MT-70-380
MT-40-14X/P	MT-44-14X/P	RT-52-185 <sup>1</sup>	RZ-188

## Transmission – 1/Uni/P&L

516	FAT 30
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## PTO – 1/Uni/P&L

MPT-318	MPT-526	MPT-1702
MPT-500	MPT-531	MPT-175
MPT-510	MPT-543	MPT-185
MPT-518	MPT-170	MPT-190

<sup>1</sup> Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.



# GENERAL SERVICE WARRANTY INFORMATION

## Brake Components

Cam Q Series Trailer Brakes	3/Unl/P, 1/Unl/L
Cam P <sup>3</sup>	2/200/P
Cam	3/Unl/P
Q+ Drum Brake™	3/Unl/P&L
Q+ Drum Brake™ <sup>3</sup>	2/200/P&L
ASA	3/Unl/P
ASA <sup>3</sup>	2/200/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
STEELite X30 Drum Brake™ <sup>2</sup>	12-Years or Wearable Life/P
EX+ Air Disc Brake™	2/Unl/P&L

<sup>1</sup> Includes: bushing, seal, cam, ASA lubrication and wear coverage of 1/Unl/P.

<sup>2</sup> Based on stamped wear diameter max.

<sup>3</sup> Applies to Tour Bus and Cross Country Coach only.

## Trailer Axles

Beam and Brackets <sup>1</sup>	5/Unl/P, 1/Unl/L
Wheel End Systems <sup>2</sup>	
Standard System <sup>3</sup>	1/Unl/P&L
AxlePak <sup>4</sup>	5/P&L
AxlePak <sup>5</sup>	7/P&L

<sup>1</sup> 9000 Series is 3/Unl/P, 1/Unl/L

<sup>2</sup> Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.

<sup>3</sup> When installed by Meritor.

<sup>4</sup> When specified with AxlePak5 wheel end system, coverage on MTIS thru-tee and stator is 5/Unl/P, 1/Unl/L.

<sup>5</sup> When specified with AxlePak7 wheel end system, coverage on MTIS thru-tee and stator is 7/Unl/P, 1/Unl/L.

(For brake components and ABS coverage, refer to appropriate product warranties.)

## Chassis Axles (2000 Series/ChassiPak)

Beam & Brackets	6/Unl/P, 1/Unl/L
Wheel End Systems <sup>1</sup>	
Standard System	1/Unl/P&L
AxlePak7	7/P&L
Beam and Brackets	7/P, 1/L

<sup>1</sup> Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.

## Trailer Air Suspension Systems

MPA38/40 (Tandem Axle Parallelogram) <sup>1</sup>	
Major Structural Components	5/Unl/P, 1/Unl/L
Curbing Damage Warranty <sup>2</sup>	5/500/P, 1/100/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs	2/Unl/P, 1/Unl/L
Bushings	5/P, 3/L
PinLoc Air Controls	1/Unl/P&L
PinLoc Air Actuator	3/Unl/P&L
MPA20 (Single Axle Parallelogram)	
Major Structural Components	5/Unl/P, 1/Unl/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs	2/Unl/P, 1/Unl/L
Bushings	5/P, 3/L
MTA (Trailing Arm)	
Major Structural Components	5/Unl/P, 1/Unl/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs and Rebound Straps	2/Unl/P, 1/Unl/L
Bushings <sup>3</sup>	5/Unl/P, 3/Unl/L

(For axle and ABS coverage, refer to appropriate product warranties.)

<sup>1</sup> Fastener torque coverage is limited to 2/Unl/P&L when torqued by Meritor

<sup>2</sup> "Curbing damage" is defined as deformation (bending, buckling, or breakage), caused by sudden impact with a curb or similar fixed object. Damage to the RideSentry slider box (the suspension sliding subframe, consisting of the frame rails, crossmembers, and central A-frame assembly), caused by accidental trailer impact with a curb or similar fixed object, is eligible for warranty coverage. Damage to other components or damage resulting from collision with another vehicle, rollover or fire is not covered under this provision. Warranty is not transferrable to another trailer VIN, and coverage does not apply if the trailer is deemed to be a total loss, scrapped, or otherwise not salvageable.

<sup>3</sup> Raw wood applications 3/Unl/P, 1/Unl/L

## TAG/Pusher Axles

TQ, TQD, TR, TRD Beam and Brackets <sup>1</sup>	3/Unl/P, 1/Unl/L
MC14002, MC16003, FH946	2/Unl/P&L

(For brake components and ABS coverage, refer to appropriate product warranties.)

<sup>1</sup> 3/Unl/P&L if sold with PreSet by Meritor.

## Meritor® Tire Inflation System

MTIS Components	5/Unl/P, 1/Unl/L
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# HEAVY SERVICE/SPECIALTY VEHICLE WARRANTY INFORMATION

## Heavy Service/Specialty Vehicle

- Airport Rescue Fire Fighting (ARFF)
- Airport Shuttle\*
- Asphalt Truck
- Block Truck
- Bottom Dump Trailer Combination
- Cementing Vehicle
- Commercial Pick-Up
- Concrete Pumper
- Construction Material Hauler
- Mixer
- Demolition
- Drill Rig
- Dump
- Equipment Hauling
- Flatbed Trailer Hauler
- Flatbed Truck
- Fracturing Truck
- Front Loader
- Geophysical Exploration
- Hopper Trailer Combinations
- Landscaping Truck
- Liquid Waste Hauler
- Log Hauling
- Lowboy
- Michigan Special Gravel Trains
- Michigan Special Log Hauler
- Michigan Special Steel Hauler
- Michigan Special Waste Vehicle
- Municipal Dump
- Rear Loader (Refuse)
- Recycling Truck
- Residential Pick-Up (Refuse)
- Rigging Truck
- Roll-Off
- Scrap Truck
- Semi-End Dump
- Sewer/Septic Vacuum
- Shuttle Bus\*
- Side Loader
- Snowplow/Snowblower
- Steel Hauling
- Tanker
- Tank Truck
- Tractors with Pole Trailers
- Tractor/Trailer with Jeeps
- Transfer Dump
- Transfer Vehicle
- Utility Truck
- Winch Truck

\*Commercial chassis only

### Heavy Service/Specialty Vehicle Typically Is

- Moderate mileage operation (less than 60,000 miles per year)
- On/Off road vocations (10% or more off-road)
- Moderate to frequent stops/starts (up to 10 stops per mile)

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

### Front Drive/Non-Drive Steer Axles – 2/Unl/P&L

FD-965	FL-941	MFS-10-143A-N	MFS-12-143A-N	MFS-13-144A-N	MFS-18-193A-N	MX-12-120
FF-941	FL-943	MFS-10-144A-N	MFS-12-144A-N	MFS-13-155	MFS-20-133A-N	MX-12-120 EVO
FF-942	MFS-6-151A-N	MFS-12-122	MFS-12-155	MFS-14-122	MFS-20-135A-N	MX-14-120
FF-943	MFS-6-153B	MFS-12E-122	MFS-13-122	MFS-14-124A-N	MFS-20-192A-N	MX-16-120
FF-944	MFS-6-162B	MFS-12-122B-N	MFS-13-122B-N	MFS-14-143A-N	MFS-20-193A-N	MX-18-120
FF-946	MFS-6-162C	MFS-12E-122B-N	MFS-13B-122B-N	MFS-14-144A-N	MFS-22-135A-N	MX-17-140
FF-961	MFS-7-113C-N	MFS-12-122C-N	MFS-13-122C-N	MFS-16-122A-N	MFS-22H-135A-N	MX-19-140
FF-966	MFS-7-153C-N	MFS-12E-122C-N	MFS-13B-122C-N	MFS-16-133A-N	MFS-22-193A-N	MX-21-140
FF-967	MFS-7-163C-N	MFS-12-124A-N	MFS-13-132B-N	MFS-16-135A-N	MFS-22H-193A-N	MX-21-160
FG-941	MFS-8-113B-N	MFS-12-132B-N	MFS-13B-132B-N	MFS-16-143A-N	RF-16-145	MX-23-160
FG-943	MFS-8-153B-N	MFS-12E-132B-N	MFS-13-132C-N	MFS-18-133A-N	RF-21-160	MX-810
FH-941	MFS-8-163B-N	MFS-12-132C-N	MFS-13B-132C-N	MFS-18-135A-N	MX-10-120	
FH-946	MFS-10-122A	MFS-12E-132C-N	MFS-13-143A-N	MFS-18-192A-N	MX-10-120 EVO	

### Front Drive/Non-Drive Steer Axles – 1/Unl/P&L

MX-08-130-FV (FSD-08A)	MX-16-130-FV (FSD-16A)	MX-21-130-SD (SDA-2100)
MX-10-130-FV (FSD-10A)	MX-18-130-FV (FSD-18A)	MX-23-130-FV (FSD-23A)
MX-12-130-FV (FSD-12A)	MX-18-130-SD (SDA-1800)	MX-23-130-SD (SDA-2300)
MX-13-130-FV (FSD-13A)	MX-20-130-FV (FSD-20A)	MX-29-130-FV (FSD-29A)
MX-14-130-FV (FSD-14A)	MX-21-130-FV (FSD-21A)	

### Rear Drive Axles – 1/Unl/P&L

11170	RND-14H
523	RND-16A

### Drivelines

RPL	3/Unl/P, 1/Unl/P&L
92N	1/Unl/P&L
MXL	1/Unl/P&L

### Rear Drive Single Axles – 2/Unl/P&L

MS-17-14X	RS-21-160	RS-24-160	MS-35-380
RS-17-144/145/A	RC-22-145	RS-25-160	RS-38-380
MS-19-14X	RC-23-160	MS-26-616	RC-25-160
RS-19-144	RH-23-160	MS-26-616-SP	RC-26-633
MS-21-114	RS-23-160	RS-26-185/380	MT-58-616
MS-21-14X	RC-23-161	MS-30-616	MT-58-616-SP
RS-21-145	RS-23-161	MS-30-616-SP	
RS-21-145/A	RS-23-186/380	RS-30-185/380	

### Transmission – 1/Unl/P&L

516  
FAT 30

### PTO – 1/Unl/P&L

MPT-318	MPT-526	MPT-1702
MPT-500	MPT-531	MPT-175
MPT-510	MPT-543	MPT-185
MPT-518	MPT-170	MPT-190



# HEAVY SERVICE/SPECIALTY VEHICLE WARRANTY INFORMATION

## Rear Drive Tandem/Tridem Axles – 2/Unl/P&L

MT-34-14X/P	RT-44-145/P	RT-52-185/380 <sup>1,2</sup>	MT-70-380
RT-34-144/P/A	RT-46-169	MT-58-616	RZ-188
MT-40-14X/P	RT-58-160	MT-58-616-SP	
RT-40-145/A	MT-52-616	RT-58-185/380 <sup>1,2</sup>	
MT-44-14X/P	MT-52-616-SP	RT-70-380	

<sup>1</sup> Axle model designated will vary according to options and variations specified on these axles. Contact Meritor Axle Applications Engineering for details.

<sup>2</sup> Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

## Brake Components

Cam P	3/Unl/P
Cam P <sup>3</sup>	2/100/P
Cam Cast Plus™	2/100/P&L
Q+ Drum Brake™	3/Unl/P&L
Q+ Drum Brake™ <sup>2</sup>	2/100/P&L
ASA	3/Unl/P
ASA <sup>2</sup>	2/100/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
EX+ Air Disc Brake	2/100/P&L

<sup>1</sup> Based on stamped wear diameter max.

<sup>2</sup> Applies to City Bus, Trolley, Shuttle Bus and Airport Shuttle only.

<sup>3</sup> Warranty for all non-Meritor ASAs supplied by Meritor for all Heavy Service vocations is 1/100/P.

## Rear Drive Tandem/Tridem - 3/Unl/P&L

RT-40-160/P/A <sup>3</sup>
RT-46-160/P/A <sup>1,3</sup>
RT-46-164EH/P/A <sup>2,3</sup>
RT-50-160/P/A <sup>3</sup>
RZ-166

<sup>1</sup> U.S. only. Canadian warranty = 1/Unl/P for combination vehicles only.

<sup>2</sup> Axle model designated will vary according to options and variations specified on these axles. Contact Meritor Axle Applications Engineering for details.

<sup>3</sup> Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

## Meritor Tire Inflation System

MTIS Components	5/Unl/P, 1/Unl/L
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## Trailer Air Suspension Systems

MTA (Trailing Arm)	
Major Structural Components <sup>1</sup>	5/Unl/P, 1/Unl/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs	2/Unl/P, 1/Unl/L
Bushings <sup>1</sup>	5/Unl/P, 3/Unl/L

<sup>1</sup> Raw wood applications 3/Unl/P, 1/Unl/L

(For axle and ABS coverage, refer to appropriate product warranties.)

## Trailer Axles

Beam and Brackets <sup>1</sup>	5/Unl/P, 1/Unl/L
Wheel End Systems <sup>2</sup>	
Standard System <sup>3</sup>	1/Unl/P&L

<sup>1</sup> 9000 Series is 3/Unl/P, 1/Unl/L.

<sup>2</sup> Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.

<sup>3</sup> When installed by Meritor.

(For brake components and ABS coverage, refer to appropriate product warranties.)

## Gearboxes – 1/Unl/P&L

MGX-240	MGX-376	MGX-448	MGX-506	MGX-528	MGX-546
MGX-279	MGX-377	MGX-456	MGX-514	MGX-533	MGX-550
MGX-279D	MGX-378	MGX-478	MGX-519	MGX-534	
MGX-280	MGX-380	MGX-480	MGX-520	MGX-536	
MGX-285	MGX-384	MGX-487	MGX-522	MGX-537	
MGX-292	MGX-402	MGX-488	MGX-524	MGX-541	
MGX-314	MGX-413	MGX-505	MGX-527	MGX-545	

## Transfer Cases – 1/Unl/P

MTC-4213	MTC-3118-CV (358)	MTC-3209-GV (RTC-60/420)
MTC-4210	MTC-3120-FV (TC-143)	MTC-3209-GV (RTC-60/380)
MTC-4208	MTC-3124 (T-2119)	MTC-3209-GV (MTC-60/420)
MTC-4206-FV (TC-38)	MTC-3205-GV (MTC-25/247)	MTC-3209-GV (MTC-60/380)
MTC-3106-FV (TC-137)	MTC-3205-GV (MTC-25/350)	MTC-3212-CV (315 & 548B)
MTC-3111 (T-2111)	MTC-3205-GV (RTC-25/350)	MTC-3312-FV (TC-270)
MTC-3112-CV (529 & 548C)	MTC-3206-FV (TC-237)	MTC-3220-FC (TC-142)
MTC-3116 (T-2111)	MTC-3206-CS (544)	MTC-2212-CV (306)
MTC-3118-FV (TC-180 & TC-180-23)	MTC-3208-GV (RTC-50)	





# FIRE AND EMERGENCY WARRANTY INFORMATION

## Fire and Emergency Vehicles

- Aerial Ladder Truck
- Aerial Platform
- Ambulance
- Command Vehicle
- Crash Fire Rescue (CFR)
- Pumper
- Rapid Intervention Vehicle (RIV)
- Tanker

## Fire and Emergency Typically Is

- Lower mileage operations (less than 20,000 miles/year)
- Generally, on-road service (less than 10% off-road)
- An average of three (3) miles between starting and stopping

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

## Front Non-Drive Steer Axles – 5/Unl/P&L

FL-941	MFS-18-193A-N	MFS-22-135A-N
FL-943	MFS-20-133A-N	MFS-22H-135A-N
MFS-18-133A-N	MFS-20-135A-N	MFS-22-193A-N
MFS-18-135A-N	MFS-20-193A-N	MFS-22H-193A-N

## Front Drive Steer Axles – 2/Unl/P&L

MX-19140	MX-21160	MX-23810
MX-21140	MX-23160	

## Rear Drive Single Axles – 5/Unl/P&L

RC-23-160	RS-23-186	RS-26-185	RS-25-160
RS-23-160	RS-24-160	RS-30-185	
RS-23-161	RC-25-160	RS-35-380	

<sup>1</sup> 3/Unl/P&L if PreSet by Meritor.

## Rear Drive Tandem/Tridem Axles – 5/Unl/P&L

MT-40-14X/P	RT-44-145/P	MT-52-616
MT-40-144/P	RT-46-160/P	RT-52-185 <sup>1</sup>
RT-40-145/A	RT-46-164EH/P	MT-58-616
RT-40-160/P	RT-46-169	RT-58-185 <sup>1</sup>
MT-44-14X/P	RT-50-160/P	MT-70-380

<sup>1</sup> Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

## Brake Components

Cam	3/Unl/P
Q+ Drum Brake™	3/Unl/P&L
ASA	3/Unl/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
EX+ Air Disc Brake™	2/Unl/P&L

<sup>1</sup> Includes: bushing, seal, cam, ASA lubrication and wear coverage of 1/Unl/P.

## Drivelines

RPL	4/400/P, 1/Unl/L
MXL	3/350/P, 1/Unl/L
155N	1/Unl/P
92N	1/Unl/P

## Transfer Cases – 1/Unl/P

MTC-4208	MTC-3111 (T-2111)
MTC-4210	MTC-3116 (T-2111)
MTC-4213	MTC-3124 (T-2119)



# TRANSIT BUS WARRANTY INFORMATION

## Transit Bus Vehicles

- Airport Shuttle
- City Bus
- Commuter Coach
- Shuttle Bus
- Transit Bus
- Trolley

## Transit Bus Typically Is

- Moderate mileage operation (less than 50,000 miles per year)
- Moderate to frequent stops/starts (up to 10 stops per mile)

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

## Front Drive/Non-Drive Steer Axles – 5/300/P&L

FH-946                      MFS-12-155  
 FH-941<sup>1</sup>                     MFS-13-155

<sup>1</sup> Commuter coach only – 2/Unl/P&L

## Drivelines

RPL                              3/Unl/P, 1/Unl/L  
 92N                              1/Unl/P&L  
 MXL                              1/Unl/P&L

## Rear Drive Single Axles – 5/300/P&L

RS-23-160                    79163                      RS-21-160  
 RC-23-161                    RC-23-162<sup>1</sup>  
 71163                          RC-23-165<sup>1</sup>

<sup>1</sup> Commuter coach only – 2/Unl/P&L

## Tag Axles – 2/Unl/P&L

MC-14002  
 MC-16003  
 FH-946

## Brake Components

Cam Cast Plus™                      2/100/P&L  
 Q+ Drum Brake™<sup>1</sup>                    2/100/P&L  
 ASA<sup>1</sup>                                      2/100/P  
 Hubs/Cast Drums and  
 Other Wheel-end  
 Components                              1/Unl/P  
 All Other Brakes                        1/Unl/P  
 EX+ Air Disc Brake                    2/100/P&L

<sup>1</sup> Applies to City Bus, Trolley, Shuttle Bus and Airport Shuttle only.

## Center Non-drive Axles – 5/300/P&L

MC-26000  
 71063  
 79063



# OFF-HIGHWAY SERVICE WARRANTY INFORMATION

## Industrial And Off-Highway Service Vehicles

- |                       |                          |                       |                    |
|-----------------------|--------------------------|-----------------------|--------------------|
| ■ Load-On/Load-Off    | ■ Yard Jockey            | ■ Specialized Mining  | ■ Rail Car Mover   |
| ■ Port Tractor        | ■ All-Terrain Crane      | ■ Excavator           | ■ Loader           |
| ■ Rail Yard Spotter   | ■ Rough Terrain Crane    | ■ Compactor           | ■ Tow Tractor      |
| ■ Roll-On/Roll-Off    | ■ Forestry               | ■ Fertilizer Spreader | ■ Pushback Tractor |
| ■ Stevedoring Tractor | ■ Material Handling      | ■ Snow Blower         |                    |
| ■ Trailer Spotter     | ■ Specialized Heavy Haul | ■ Mining              |                    |

## Industrial And Off-Highway Service Typically Is

- Low mileage operation
- Low speed vehicle speed restriction
- Vehicles are **not** typically licensed for highway use
- Six (6) starts/stops per mile (typical)

Coverage under Meritor’s warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Contact Meritor regarding specific application approval questions on any product line.

## Drivelines – 1/Unl/P

RPL                                      MXL

## Front Non-Drive Steer Axles – 1/Unl/P

FF - 941	MFS-12-144A-N	MFS-18-193A-N
FF - 943	MFS-13-143A-N	MFS-20-133A-N
FF - 961	MFS-13-144A-N	MFS-20-135A-N
FF - 966	MFS-14-143A-N	MFS-20-192A-N
FG - 941	MFS-16-122A-N	MFS-20-193A-N
FG - 943	MFS-16-133A-N	MFS-22-135A-N
FL - 941	MFS-16-135A-N	MFS-22H-135A-N
FL - 943	MFS-16-143A-N	MFS-22-193A-N
FN - 951	MFS-18-133A-N	MFS-22H-193A-N
MFS-12-143A-N	MFS-18-135A-N	MON-ZO FAMILY

## Brake Components

Cam P	3/Unl/P
Q+ Drum Brake™	3/Unl/P&L
ASA	3/Unl/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P

## Planetary Axles – 1/Unl/P

MOB	MOF	MOS	MOZ
MOC	MOG	MOT	
MOD	MOH	MOX	
MOE	MOR	MOY	

## Gearboxes – 1/Unl/P&L

MGX-240	MGX-376	MGX-448	MGX-506	MGX-528	MGX-546
MGX-279	MGX-377	MGX-456	MGX-514	MGX-533	MGX-550
MGX-279D	MGX-378	MGX-478	MGX-519	MGX-534	
MGX-280	MGX-380	MGX-480	MGX-520	MGX-536	
MGX-285	MGX-384	MGX-487	MGX-522	MGX-537	
MGX-292	MGX-402	MGX-488	MGX-524	MGX-541	
MGX-314	MGX-413	MGX-505	MGX-527	MGX-545	

## Transfer Cases – 1/Unl/P

MTC-4213	MTC-3116 (T-2111)	MTC-3205-GV (RTC-25/350)	MTC-3209-GV (MTC-60/380)
MTC-4210	MTC-3118-FV (TC-180 & TC-180-23)	MTC-3206-FV (TC-237)	MTC-3212-CV (315 & 548B)
MTC-4208	MTC-3118-CV (358)	MTC-3206-CS (544)	MTC-3312-FV (TC-270)
MTC-4206-FV (TC-38)	MTC-3120-FV (TC-143)	MTC-3208-GV (RTC-50)	MTC-3220-FC (TC-142)
MTC-3106-FV (TC-137)	MTC-3124 (T-2119)	MTC-3209-GV (RTC-60/420)	MTC-2212-CV (306)
MTC-3111 (T-2111)	MTC-3205-GV (MTC-25/247)	MTC-3209-GV (RTC-60/380)	
MTC-3112-CV (529 & 548C)	MTC-3205-GV (MTC-25/350)	MTC-3209-GV (MTC-60/420)	



# TERMS AND CONDITIONS

## Coverage Exclusions

### Product Description

#### All

The cost of any repairs, replacements or adjustments to a covered component (1) associated with noise; (2) resulting from the use or installation of non-genuine Meritor components or materials; (3) due to vibration associated with improper operation or misapplication of drivetrain components; and (4) damage resulting from corrosion.

For axle assemblies supplied by Meritor with suspension and interface brackets designed and/or attached by non-Meritor parties, Meritor warranty coverage does not apply to the brackets, bracket attachment methods, and field issues caused by brackets or bracket attachments to any covered component unless specified in a separate OEM agreement.

#### Front Axles

King Pin Bushings.

#### Rear Axles

Self-contained traction equalizers and oil filters. The use of NoSPIN differentials will result in the exclusion of axle shafts from warranty considerations. NoSPIN is a product of Eaton.

#### ASA

Boot and bushing. Bent, broken, over-torqued, missing or otherwise damaged pawl assemblies.

#### Cam Brake

Brake lining wear and brake shoe “rust-jacking.”

#### Disc Brake

Pad wear, rotor wear.

## Coverage Limitations

### Product Description

#### All

Any claim beyond 60 days from date of repair will not be accepted or honored under this warranty program. Products purchased on an incomplete vehicle (glider) are limited to one year, unlimited miles parts only (1/Unl/P).

#### Front Axles

Tie rod and tie rod ends limited to 3-year/300,000-mile or published vocational coverage, whichever is less. Wheel seals, gaskets and wheel bearings are covered for 1 year/unlimited miles if the wheel end equipment is supplied and assembled by Meritor.

#### Rear Axles

Pinion and through shaft seals limited to 3-year/300,000-mile or published vocational coverage, whichever is less, if yoke is installed by Meritor. If yoke is not installed by Meritor, then Meritor does not warrant pinion seals. Wheel seals, gaskets and wheel bearings are covered for 1 year/unlimited miles if the wheel end equipment is supplied and assembled by Meritor.

#### Rear Axles

The Meritor® breather part number A-2297-C-8765 with A-3196-J-1336 hose must be used for eligibility of any potential warranty consideration relating to contamination and/or loss of lube in axles.

#### Cam Brake

Limited to bracket, brake spider and camshaft structural integrity.

#### STEELite X30

Wearable life is up to the discard diameter of the drum.

#### Disc Brake

Warranty coverage for boots, seals, bushings and pins is 2/200/P. Warranty coverage for pads is 1/100/P.

Warranty coverage on vehicles with 1,850 lb-ft engine torque and over may be reduced on individual drivetrain components. Contact your Meritor representative for specific details.

# TERMS AND CONDITIONS

## (1) What is Covered by this Commercial Warranty?

Meritor Heavy Vehicle Systems, LLC warrants to the owner ("Owner") that the components listed in this publication, which have been installed by an Original Equipment Manufacturer ("OEM") as original equipment in vehicles licensed for on-highway use, will be free from defects in material and workmanship. This warranty coverage begins only after the expiration of the OEM's vehicle warranty for the applicable covered components. Warranty coverage ends at the expiration of the applicable time period from the date of vehicle purchase by the first Owner, or, the applicable mileage limitation, whichever occurs first. Duration of coverage varies by component and vocation as detailed elsewhere in this warranty statement.

Some components are warranted for parts only and the Owner must pay any labor costs associated with the repair or replacement of the component. Other components are warranted for both parts and reasonable labor to repair or replace the subject component. Components (whether new, used or remanufactured) installed as replacements under this warranty are warranted only for the remainder of the original period of time or mileage under the original warranty.

For certain components, coverage requires the use of specific extended drain interval or synthetic lubricants. For further information about lubrication and maintenance, see Meritor publication Maintenance Manual Number 1 and the applicable Meritor maintenance manual for the product in question. Other conditions and limitations applicable to this warranty are detailed below.

## (2) Designation of Vocational Use Required.

To obtain warranty coverage, each Owner must notify Meritor through the OEM new truck and/or trailer dealer of the intended vocational use of the vehicle into which the Meritor components have been incorporated prior to the vehicle in-service date. This notification may be accomplished by registering the vehicle through your OEM new truck and/or trailer dealer or with Meritor directly. Failure to notify Meritor of (I) the intended vocational use of the vehicle or (II) a change in vocational use from that which was originally designated, will result in the application of a one year, unlimited mileage, parts only warranty (1/Unl/P) from the initial in-service date.

A second Owner and each subsequent Owner must also notify Meritor as to the intended vocational use of the vehicle. This notification can be sent directly to Meritor or through the OEM new truck and/or trailer dealer. The duration and mileage coverage of this warranty cannot exceed the coverage extended to the first Owner after his or her initial designation of vocational use.

Coverage under Meritor's warranty requires that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

## (3) What is the Cost of this Warranty?

There is no charge to the Owner for this warranty.

## (4) What is not Covered by this Warranty?

This warranty does not cover normal wear and tear; nor does it cover a component that fails, malfunctions or is damaged as a result of (I) improper installation, adjustment, repair or modification (including the use of unauthorized attachments or changes or modification in the vehicle's configuration, usage, or vocation from that which was originally approved by Meritor), (II) accident, natural disaster, abuse, or improper use (including loading beyond the specified maximum vehicle weight or altering engine power settings to exceed the axle and/or driveline capacity), or (III) improper or insufficient maintenance (including deviation from approved lubricants, change intervals, or lube levels). This warranty does not cover any component or part that is not branded by Meritor. For vehicles that operate full or part time outside of the United States and Canada, a one year, unlimited mileage, parts only warranty (1/Unl/P) will apply.

## (5) Remedy.

The exclusive remedy under this warranty shall be the repair or replacement of the defective component at Meritor's option. Meritor reserves the right to require that all applicable failed materials are available and/or returned to Meritor for review and evaluation.

## (6) Disclaimer of Warranty.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESSED, IMPLIED OR STATUTORY INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE.

## (7) Limitation of Remedies.

In no event shall Meritor be liable for special, incidental, indirect, or consequential damages of any kind or under any legal theory, including, but not limited to, towing, downtime, lost productivity, cargo damage, taxes, or any other losses or costs resulting from a defective covered component.

## (8) To Obtain Service.

If the Owner discovers within the applicable coverage period a defect in material or workmanship, the Owner must promptly give notice to either Meritor or the dealer from which the vehicle was purchased. To obtain service, the vehicle must be taken to any participating OEM new truck and/or trailer dealer or authorized Meritor service location. The dealer will inspect the vehicle and contact Meritor for an evaluation of the claim. When authorized by Meritor, the dealer will repair or replace during the term of this warranty any defective Meritor component covered by this warranty.

## (9) Entire Agreement.

This is the entire agreement between Meritor and the Owner about warranty and no Meritor employee or dealer is authorized to make any additional warranty on behalf of Meritor. This agreement allocates the responsibilities for component failure between Meritor and the Owner.

Product models, brands, names and trademarks depicted herein are the property of their respective owners and, except where otherwise indicated, are not in any way associated with Meritor Heavy Vehicle Systems, LLC, or any parent or affiliate, thereof.



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Litho in USA, SP-95155  
Revised 1-19 (47865/11900)



# Fire and Rescue Apparatus



## SUPPLIER

### Limited Warranty

#### 1. LIMITED WARRANTY

Subject to the limitations and exclusions set forth below, Pierce Manufacturing provides the following warranty to the purchaser who first puts the product in service ("Buyer"):

<b>Coverage:</b>	<b>The Meritor axle shall be covered by Meritor as indicated in the attached Meritor warranty coverage description</b>
<b>Warranty Begins:</b>	<b>The date of the original purchase invoice (issued when the product ships from the factory).</b>
<b>Warranty Period Ends After:</b>	<b>Five (5) Years</b>
<b>Conditions and Exclusions:</b>  <b>See Also Paragraphs 2 thru 4</b>	<b>The exclusions listed in the attached Meritor warranty description shall apply.</b>

This limited warranty shall apply only if the product is properly maintained in accordance with Pierce's maintenance instructions and manuals and is used in service which is normal to the particular model. Normal service means service which does not subject the product to stresses or impacts greater than normally result from careful use. If the Buyer discovers a defect or nonconformity, it must notify Pierce in writing within thirty (30) days after the date of discovery, but in any event prior to the expiration of the warranty period. THIS LIMITED WARRANTY MAY NOT BE ASSIGNED OR OTHERWISE TRANSFERRED BY THE BUYER TO ANY SUBSEQUENT USER OR PURCHASER OR TO ANY OTHER PERSON OR ENTITY.

Notwithstanding anything to the contrary herein, Pierce makes no warranty whatsoever as to:

(a) any integral parts, components, attachments or trade accessories of or to the product that are not manufactured by Pierce, including but not limited to engines, transmissions, drivelines, axles, water pumps and generators; with respect to all such parts, components, attachments and accessories, Pierce shall assign to Buyer the applicable warranties, if any, made by the respective manufacturers thereof;

(b) any vehicle, chassis, or component, part, attachment or accessory damaged by misuse, neglect, fire, exposure to severe environmental or chemical conditions, acidic environment, improper maintenance, accident, crash, or force majeure such as natural disaster, lightning, earthquake, windstorm, hail, flood, war or riot;

(c) any vehicle, chassis or component, part, attachment or accessory that has been repaired, altered or assembled in any way by any person or entity other than Pierce which, in the sole judgment of Pierce, adversely affects the performance, stability or purpose for which it was manufactured; or

(d) products or parts which may in the ordinary course wear out and have to be replaced during the warranty period, including, but not limited to, tires, fluids, gaskets and light bulbs. Pierce assumes no responsibility for the assembly of its parts or subassemblies into finishing products or vehicles unless the assembly is performed by Pierce.

The original purchaser may void this warranty in part or in its entirety if the product is repaired or replaced (a) without prior written approval of the Pierce Customer Service Department; or (b) at a facility which has not been approved by Pierce as to technical capability. Any repairs, modifications, alterations or aftermarket parts added after manufacture without the authorization of Pierce may void this warranty.

#### 2. DISCLAIMERS OF WARRANTIES

THE WARRANTY SET FORTH IN PARAGRAPH 1 IS THE SOLE AND EXCLUSIVE WARRANTY GIVEN BY PIERCE. PIERCE HEREBY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY, ANY WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE.

#### 3. BUYER'S EXCLUSIVE REMEDY.

If the product fails to conform to the warranty set forth in paragraph 1 during the warranty period, and such nonconformity is not due to misuse, neglect, accident or improper maintenance, Buyer must notify Pierce within the time period specified in paragraph 1, and shall make the product available for inspection by Pierce or its designated agent. At the request of Pierce, any allegedly defective product shall be returned to Pierce by Buyer for examination and/or repair. Buyer shall be responsible for the cost of such transportation, and for risk of loss of or damage to the product during transportation. Within a reasonable time, Pierce shall repair or replace (at Pierce's option and expense) any nonconforming or defective parts. Repair or replacement shall be made only by a facility approved in advance in writing by Pierce. THIS REMEDY SHALL BE THE EXCLUSIVE AND SOLE REMEDY FOR ANY BREACH OF WARRANTY.

#### 4. EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES.

Notwithstanding anything to the contrary herein or in any agreement between Pierce and Buyer, IN NO EVENT SHALL PIERCE BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES WHATSOEVER, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORY OF LAW OR EQUITY, WITH RESPECT TO VEHICLES OR OTHER PRODUCTS SOLD BY PIERCE, OR THEIR OPERATION OR FAILURE TO OPERATE, OR ANY DEFECTS THEREIN, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATED THERETO, REGARDLESS OF WHETHER PIERCE HAS BEEN INFORMED OF THE POSSIBILITY OF ANY SUCH DAMAGES. Without limiting the generality of the foregoing, Pierce specifically disclaims any liability for property or personal injury damages, penalties, damages for lost profits or revenues, loss of vehicles or products or any associated equipment, cost of substitute vehicles or products, down-time, delay damages, any other types of economic loss, or for any claims by any third party for any such damages.

Note: Any Surety Bond, if a part of the sale of the vehicle as to which this limited warranty is provided, applies only to this Pierce Basic One Year Limited Warranty for such vehicle, and not to other warranties made by Pierce in a separate document (if any) or to the warranties (if any) made by any manufacturer (other than Pierce) of any part, component, attachment or accessory that is incorporated into or attached to the vehicle.

6/29/2020 WA0384



# MERITOR® COMMERCIAL VEHICLE SYSTEMS

WARRANTY/MODEL YEAR 2020 VEHICLES



**MERITOR**





# WARRANTY INFORMATION CONTENTS

Effective Model Year 2020 Vehicles

Linehaul .....	3-4
General Service .....	5-6
Heavy Service/Specialty Vehicle .....	7-8
Fire and Emergency .....	9
Transit Bus .....	10
Off-Highway Service.....	11
Terms and Conditions.....	12

## How to Read Warranty Coverage

Number of Years	Mileage (in thousands) Unl=Unlimited	P=Parts Only P&L=Parts & Labor
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**Notice:**

Models or components that are approved for use by Meritor’s vocational guidelines contained in Meritor Publication TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, which are not specifically listed, are warranted for one year, unlimited miles, parts only (1/Unl/P).

Products purchased on an incomplete vehicle (glider) are limited to one year, unlimited miles parts only (1/Unl/P).

### Advantage Program

Purchasing additional coverage on select components will continue to safeguard your investment against major repair costs after the initial base coverage expires. You can find out more about the Advantage Program by visiting [www.meritor.com](http://www.meritor.com) or by contacting Meritor at 866-OnTrac1 (866-668-7221).





# LINEHAUL WARRANTY INFORMATION

## Linehaul Vehicles

- Bulk Hauler
- Chip Hauler (Truck)\*
- Doubles
- Flatbed
- General Freight
- Grain Hauler
- Livestock Hauler
- Moving Van
- Pipe Hauler
- Refrigerated Freight
- Tanker
- Triples

\* Chip Hauler vehicles require specific axle models listed below and Linehaul condition to be eligible for Linehaul warranty consideration.

## Linehaul Typically Is

- High mileage operation (over 60,000 miles/year)
- Well maintained major highways of concrete or asphalt construction
- Greater than 30 miles between starting and stopping

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

## Front Non-Drive Steer Axles – 5/750/P&L

FD-965	FF-967	MFS-12-122B-N	MFS-12-132C-N	MFS-13-122B-N	MFS-13B-122C-N
FF-941	FG-941	MFS-12-122C-N	MFS-12E-132B-N	MFS-13-122C-N	MFS-13B-132B-N
FF-942	FG-943	MFS-12E-122A-N	MFS-12E-132C-N	MFS-13-132B-N	MFS-13B-132C-N
FF-943	MFS-10-122A	MFS-12E-122B-N	MFS-12-143A-N	MFS-13-132C-N	MFS-14-122A-N
FF-944	MFS-10-143A-N	MFS-12E-122C-N	MFS-12E-143A-N	MFS-13-143A-N	MFS-14-124A-N
FF-961	MFS-10-144A-N	MFS-12-124A-N	MFS-12-144A-N	MFS-13-144A-N	MFS-14-143A-N
FF-966	MFS-12-122A-N	MFS-12-132B-N	MFS-13-122A-N	MFS-13B-122B-N	MFS-14-144A-N

## Rear Drive Single Axles – 5/750/P&L

RS-19-144/145/A	RS-21-145	RS-23-160
MS-19-14X	RS-21-160	RS-23-161
MS-21-144	MS-23-17X	RS-23-186

## Rear Drive Tandem/Tridem Axles – 5/750/P&L

RT-34-144/P/A	MA-40-165	MT-40-14XHE
RT-40-145/A	MA-40-175	MT-40-144/P
RT-40-160/P <sup>1,2</sup>	MT-34-14X/P	MT-40-943
RT-46-160/P <sup>1,2</sup>	MT-40-14T/P	MT-40-943-SP
RT-46-164EH/P <sup>1,2</sup>	MT-40-14X/P	RZ-166 <sup>2</sup>
RT-50-160/P <sup>1,2</sup>	MT-40-14X/P	RZ-188

## Drivelines

RPL	5/500/P, 1/Unl/P&L
MXL	3/350/P, 1/Unl/P&L
155N	1/Unl/P
92N	1/Unl/P

<sup>1</sup> These models required for Chip Hauler and Linehaul warranty consideration.  
<sup>2</sup> Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.



# LINEHAUL WARRANTY INFORMATION

## Brake Components

Cam Q Series Trailer Brakes	5/500/P, 1/100/L
Q+ Drum Brake™	5/500/P, 1/Unl/P&L
ASA	5/500/P, 1/Unl/P&L
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
STEELite X30 Drum Brake™ <sup>2</sup>	12-Years or Wearable Life/P
EX+ Air Disc Brake™	5/500/P, 1/Unl/L
EX+ Air Disc Brake Extended Standard Warranty <sup>3</sup>	5/500/P&L

<sup>1</sup> Includes: bushing, seal, cam, ASA lubrication and wear coverage of 3/500/P&L.

<sup>2</sup> Based on stamped wear diameter max.

<sup>3</sup> Applies only to MA761 friction material code CD brake assembly i.e. EX225LXXXCDXXX

## Trailer Axles

Beam and Brackets	5/500/P, 1/100/L
Wheel End Systems <sup>1</sup>	
Standard System <sup>2</sup>	1/100/P&L
PreSet by Meritor <sup>3</sup>	5/500/P&L
AxlePak5 <sup>4</sup>	5P/L
AxlePak7 <sup>5</sup>	7P/L

<sup>1</sup> Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.

<sup>2</sup> When installed by Meritor.

<sup>3</sup> Requires approved hubcap stating PreSet by Meritor on hubcap face.

<sup>4</sup> When specified with AxlePak5 wheel end system, coverage on MTIS thru-tee and stator is 5/Unl/P, 1/Unl/L.

<sup>5</sup> When specified with AxlePak7 wheel end system, coverage on MTIS thru-tee and stator is 7/Unl/P, 1/Unl/L.

(For brake components and ABS coverage, refer to appropriate product warranties.)

## TAG/Pusher Axles<sup>1</sup>

TQ, TQD, TR, TRD Beam and Brackets	5/750/P&L
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<sup>1</sup> For brake components and ABS Coverage, refer to appropriate product warranties.

## Meritor Tire Inflation System

MTIS Components	5/Unl/P, 1/Unl/L
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## Trailer Air Suspension Systems

MPA38/40 (Tandem Axle Parallelogram) <sup>1</sup>	
Major Structural Components	5/500/P, 1/100/L
Curbing Damage Warranty <sup>2</sup>	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Shock Absorbers	2/200/P&L
Air Springs	2/200/P, 1/100/L
Bushings	5/P, 3/L
PinLoc Air Controls	1/100/P&L
PinLoc Actuator	3/300/P&L
MPA20 (Single Axle Parallelogram)	
Major Structural Components	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Shock Absorbers	2/200/P&L
Air Springs	2/200/P, 1/100/L
Bushings	5/P, 3/L
MTA (Trailing Arm)	
Major Structural Components	5/500/P, 1/100/L
Height Control Valve	1/100/P&L
Shock Absorbers	2/200/P&L
Air Springs & Rebound Straps	2/200/P, 1/100/L
Bushings	5/500/P, 3/300/L

<sup>1</sup> Fastener torque coverage is limited to 2/Unl/P&L when torqued by Meritor (For axle and ABS coverage, refer to appropriate product warranties.)

<sup>2</sup> “Curbing damage” is defined as deformation (bending, buckling, or breakage), caused by sudden impact with a curb or similar fixed object. Damage to the RideSentry slider box (the suspension sliding subframe, consisting of the frame rails, crossmembers, and central A-frame assembly), caused by accidental trailer impact with a curb or similar fixed object, is eligible for warranty coverage. Damage to other components or damage resulting from collision with another vehicle, rollover or fire is not covered under this provision. Warranty is not transferrable to another trailer VIN, and coverage does not apply if the trailer is deemed to be a total loss, scrapped, or otherwise not salvageable.



# GENERAL SERVICE WARRANTY INFORMATION

## General Service Vehicles

- Auto Hauler
- Beverage Truck
- Chip Hauler
- Cross Country Coach
- Flatbed
- Front Engine Commercial Chassis
- Front Engine Integral Coach
- General Freight
- Intercity Coach
- Intermodal Chassis
- Livestock Hauler
- Meat Packer
- Moving Van
- Municipal Truck
- Newspaper Delivery
- Pick-Up and Delivery
- Pipe Hauler
- Platform Auto Hauler
- Rear Engine Integral Coach
- Recreational Vehicles
- Refrigerated Freight
- School Bus
- Stake Truck
- Tanker
- Tanker Trailer
- Tour Bus
- Wrecker

## General Service Typically Is

- Lower mileage operations (less than 60,000 miles/year)
- Generally, on-road service (less than 10% off-road)
- An average of three (3) miles between starting and stopping

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

## Front Non-Drive Steer Axles – 2/Uni/P&L

FD-965	FL-943	MFS-8-163B-N	MFS-12E-132B-N	MFS-13-132C-N	MFS-16-143A-N
FF-941	MFS-6-151A-N	MFS-10-122A	MFS-12-132C-N	MFS-13B-132B-N	MFS-18-133A-N
FF-942	MFS-6-153B-N	MFS-10-143A-N	MFS-12E-132C-N	MFS-13B-132C-N	MFS-18-135A-N
FF-943	MFS-6-162B-N	MFS-10-144A-N	MFS-12-143A-N	MFS-13-143A-N	MFS-18-193A-N
FF-944	MFS-6-153C-N	MFS-12-122A-N	MFS-12-144A-N	MFS-13-144A-N	MFS-20-133A-N
FF-946	MFS-6-162C-N	MFS-12E-122A-N	MFS-12E-143A-N	MFS-14-122A-N	MFS-20-135A-N
FF-961	MFS-7-113C-N	MFS-12-122B-N	MFS-13-122A-N	MFS-14-124A-N	MFS-20-192A-N
FF-966	MFS-7-153C-N	MFS-12E-122B-N	MFS-13-122B-N	MFS-14-143A-N	MFS-20-193A-N
FG-967	MFS-7-163C-N	MFS-12-122C-N	MFS-13B-122B-N	MFS-14-144A-N	MFS-22-135A-N
FG-941	MFS-8-113B-N	MFS-12E-122C-N	MFS-13-122C-N	MFS-16-122A-N	MFS-22H-135A-N
FH-941	MFS-8-143A-N	MFS-12-124A-N	MFS-13B-122C-N	MFS-16-133A-N	MFS-22-193A-N
FH-946 <sup>1</sup>	MFS-8-153B-N	MFS-12-132B-N	MFS-13-132B-N	MFS-16-135A-N	MFS-22H-193A-N
FL-941					

<sup>1</sup> Can also be used with reduced steer angles in tag position in Coach Applications.

## Front Drive/Non-Drive Steer Axles – 1/Uni/P&L

MX-08-130-FV (FSD-08A)	MX-16-130-FV (FSD-16A)	MX-21-130-SD (SDA-2100)
MX-10-130-FV (FSD-10A)	MX-18-130-FV (FSD-18A)	MX-23-130-FV (FSD-23A)
MX-12-130-FV (FSD-12A)	MX-18-130-SD (SDA-1800)	MX-23-130-SD (SDA-2300)
MX-13-130-FV (FSD-13A)	MX-20-130-FV (FSD-20A)	MX-29-130-FV (FSD-29A)
MX-14-130-FV (FSD-14A)	MX-21-130-FV (FSD-21A)	

## Rear Drive Tandem/Tridem - 3/Uni/P&L

RT-40-160/P	RT-50-160/P
RT-46-160/P	RZ-166
RT-46-164EH/P	

## Rear Drive Axles – 1/Uni/P&L

11170	RND-14H
523	RND-16A

## Drivelines

RPL	4/400/P, 1/Uni/P&L
MXL	3/350/P, 1/Uni/P&L
155N	1/Uni/P
92N	1/Uni/P

## Rear Drive Single Axles – 2/Uni/P&L

MS-17-13X	MS-21-14X	RC-23-160	RS-24-160	MS-30-616-SP
MS-17-14X	MS-21-144	RC-23-161	RC-25-160	RS-35-380
MS-19-13X	MS-23-17X	RC-23-162 <sup>1</sup>	RS-26-185	71162
MS-19-14X	RS-21-145/A	RC-23-165 <sup>1</sup>	MS-26-616	71163
RS-17-144/145/A	RS-21-160	RS-23-160	MS-26-616-SP	79163
RS-19-144/145/A	RC-22-145	RS-23-161	RS-30-185	
MS-21-13X	RC-22-145/A	RS-23-186	MS-30-616	

<sup>1</sup> 3/Uni/P&L if PreSet by Meritor.

## Rear Drive Tandem/Tridem Axles – 2/Uni/P&L

MT-34-14X/P	MT-40-14XHE	RT-44-145/P	MT-58-616
RT-34-144/P/A	MT-40-144/P	RT-46-169	RT-58-185 <sup>1</sup>
MT-40-14T/P	RT-40-145/A	MT-52-616	MT-70-380
MT-40-14X/P	MT-44-14X/P	RT-52-185 <sup>1</sup>	RZ-188

## Transmission – 1/Uni/P&L

516	FAT 30
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## PTO – 1/Uni/P&L

MPT-318	MPT-526	MPT-1702
MPT-500	MPT-531	MPT-175
MPT-510	MPT-543	MPT-185
MPT-518	MPT-170	MPT-190

<sup>1</sup> Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.



# GENERAL SERVICE WARRANTY INFORMATION

## Brake Components

Cam Q Series Trailer Brakes	3/Unl/P, 1/Unl/L
Cam P <sup>3</sup>	2/200/P
Cam	3/Unl/P
Q+ Drum Brake™	3/Unl/P&L
Q+ Drum Brake™ <sup>3</sup>	2/200/P&L
ASA	3/Unl/P
ASA <sup>3</sup>	2/200/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
STEELite X30 Drum Brake™ <sup>2</sup>	12-Years or Wearable Life/P
EX+ Air Disc Brake™	2/Unl/P&L

<sup>1</sup> Includes: bushing, seal, cam, ASA lubrication and wear coverage of 1/Unl/P.

<sup>2</sup> Based on stamped wear diameter max.

<sup>3</sup> Applies to Tour Bus and Cross Country Coach only.

## Trailer Axles

Beam and Brackets <sup>1</sup>	5/Unl/P, 1/Unl/L
Wheel End Systems <sup>2</sup>	
Standard System <sup>3</sup>	1/Unl/P&L
AxlePak <sup>4</sup>	5/P&L
AxlePak <sup>5</sup>	7/P&L

<sup>1</sup> 9000 Series is 3/Unl/P, 1/Unl/L

<sup>2</sup> Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.

<sup>3</sup> When installed by Meritor.

<sup>4</sup> When specified with AxlePak5 wheel end system, coverage on MTIS thru-tee and stator is 5/Unl/P, 1/Unl/L.

<sup>5</sup> When specified with AxlePak7 wheel end system, coverage on MTIS thru-tee and stator is 7/Unl/P, 1/Unl/L.

(For brake components and ABS coverage, refer to appropriate product warranties.)

## Chassis Axles (2000 Series/ChassiPak)

Beam & Brackets	6/Unl/P, 1/Unl/L
Wheel End Systems <sup>1</sup>	
Standard System	1/Unl/P&L
AxlePak7	7/P&L
Beam and Brackets	7/P, 1/L

<sup>1</sup> Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.

## Trailer Air Suspension Systems

MPA38/40 (Tandem Axle Parallelogram) <sup>1</sup>	
Major Structural Components	5/Unl/P, 1/Unl/L
Curbing Damage Warranty <sup>2</sup>	5/500/P, 1/100/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs	2/Unl/P, 1/Unl/L
Bushings	5/P, 3/L
PinLoc Air Controls	1/Unl/P&L
PinLoc Air Actuator	3/Unl/P&L
MPA20 (Single Axle Parallelogram)	
Major Structural Components	5/Unl/P, 1/Unl/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs	2/Unl/P, 1/Unl/L
Bushings	5/P, 3/L
MTA (Trailing Arm)	
Major Structural Components	5/Unl/P, 1/Unl/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs and Rebound Straps	2/Unl/P, 1/Unl/L
Bushings <sup>3</sup>	5/Unl/P, 3/Unl/L

(For axle and ABS coverage, refer to appropriate product warranties.)

<sup>1</sup> Fastener torque coverage is limited to 2/Unl/P&L when torqued by Meritor

<sup>2</sup> "Curbing damage" is defined as deformation (bending, buckling, or breakage), caused by sudden impact with a curb or similar fixed object. Damage to the RideSentry slider box (the suspension sliding subframe, consisting of the frame rails, crossmembers, and central A-frame assembly), caused by accidental trailer impact with a curb or similar fixed object, is eligible for warranty coverage. Damage to other components or damage resulting from collision with another vehicle, rollover or fire is not covered under this provision. Warranty is not transferrable to another trailer VIN, and coverage does not apply if the trailer is deemed to be a total loss, scrapped, or otherwise not salvageable.

<sup>3</sup> Raw wood applications 3/Unl/P, 1/Unl/L

## TAG/Pusher Axles

TQ, TQD, TR, TRD Beam and Brackets <sup>1</sup>	3/Unl/P, 1/Unl/L
MC14002, MC16003, FH946	2/Unl/P&L

(For brake components and ABS coverage, refer to appropriate product warranties.)

<sup>1</sup> 3/Unl/P&L if sold with PreSet by Meritor.

## Meritor® Tire Inflation System

MTIS Components	5/Unl/P, 1/Unl/L
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# HEAVY SERVICE/SPECIALTY VEHICLE WARRANTY INFORMATION

## Heavy Service/Specialty Vehicle

- Airport Rescue Fire Fighting (ARFF)
- Airport Shuttle\*
- Asphalt Truck
- Block Truck
- Bottom Dump Trailer Combination
- Cementing Vehicle
- Commercial Pick-Up
- Concrete Pumper
- Construction Material Hauler
- Mixer
- Demolition
- Drill Rig
- Dump
- Equipment Hauling
- Flatbed Trailer Hauler
- Flatbed Truck
- Fracturing Truck
- Front Loader
- Geophysical Exploration
- Hopper Trailer Combinations
- Landscaping Truck
- Liquid Waste Hauler
- Log Hauling
- Lowboy
- Michigan Special Gravel Trains
- Michigan Special Log Hauler
- Michigan Special Steel Hauler
- Michigan Special Waste Vehicle
- Municipal Dump
- Rear Loader (Refuse)
- Recycling Truck
- Residential Pick-Up (Refuse)
- Rigging Truck
- Roll-Off
- Scrap Truck
- Semi-End Dump
- Sewer/Septic Vacuum
- Shuttle Bus\*
- Side Loader
- Snowplow/Snowblower
- Steel Hauling
- Tanker
- Tank Truck
- Tractors with Pole Trailers
- Tractor/Trailer with Jeeps
- Transfer Dump
- Transfer Vehicle
- Utility Truck
- Winch Truck

\*Commercial chassis only

### Heavy Service/Specialty Vehicle Typically Is

- Moderate mileage operation (less than 60,000 miles per year)
- On/Off road vocations (10% or more off-road)
- Moderate to frequent stops/starts (up to 10 stops per mile)

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

### Front Drive/Non-Drive Steer Axles – 2/Unl/P&L

FD-965	FL-941	MFS-10-143A-N	MFS-12-143A-N	MFS-13-144A-N	MFS-18-193A-N	MX-12-120
FF-941	FL-943	MFS-10-144A-N	MFS-12-144A-N	MFS-13-155	MFS-20-133A-N	MX-12-120 EVO
FF-942	MFS-6-151A-N	MFS-12-122	MFS-12-155	MFS-14-122	MFS-20-135A-N	MX-14-120
FF-943	MFS-6-153B	MFS-12E-122	MFS-13-122	MFS-14-124A-N	MFS-20-192A-N	MX-16-120
FF-944	MFS-6-162B	MFS-12-122B-N	MFS-13-122B-N	MFS-14-143A-N	MFS-20-193A-N	MX-18-120
FF-946	MFS-6-162C	MFS-12E-122B-N	MFS-13B-122B-N	MFS-14-144A-N	MFS-22-135A-N	MX-17-140
FF-961	MFS-7-113C-N	MFS-12-122C-N	MFS-13-122C-N	MFS-16-122A-N	MFS-22H-135A-N	MX-19-140
FF-966	MFS-7-153C-N	MFS-12E-122C-N	MFS-13B-122C-N	MFS-16-133A-N	MFS-22-193A-N	MX-21-140
FF-967	MFS-7-163C-N	MFS-12-124A-N	MFS-13-132B-N	MFS-16-135A-N	MFS-22H-193A-N	MX-21-160
FG-941	MFS-8-113B-N	MFS-12-132B-N	MFS-13B-132B-N	MFS-16-143A-N	RF-16-145	MX-23-160
FG-943	MFS-8-153B-N	MFS-12E-132B-N	MFS-13-132C-N	MFS-18-133A-N	RF-21-160	MX-810
FH-941	MFS-8-163B-N	MFS-12-132C-N	MFS-13B-132C-N	MFS-18-135A-N	MX-10-120	
FH-946	MFS-10-122A	MFS-12E-132C-N	MFS-13-143A-N	MFS-18-192A-N	MX-10-120 EVO	

### Front Drive/Non-Drive Steer Axles – 1/Unl/P&L

MX-08-130-FV (FSD-08A)	MX-16-130-FV (FSD-16A)	MX-21-130-SD (SDA-2100)
MX-10-130-FV (FSD-10A)	MX-18-130-FV (FSD-18A)	MX-23-130-FV (FSD-23A)
MX-12-130-FV (FSD-12A)	MX-18-130-SD (SDA-1800)	MX-23-130-SD (SDA-2300)
MX-13-130-FV (FSD-13A)	MX-20-130-FV (FSD-20A)	MX-29-130-FV (FSD-29A)
MX-14-130-FV (FSD-14A)	MX-21-130-FV (FSD-21A)	

### Rear Drive Axles – 1/Unl/P&L

11170	RND-14H
523	RND-16A

### Drivelines

RPL	3/Unl/P, 1/Unl/P&L
92N	1/Unl/P&L
MXL	1/Unl/P&L

### Rear Drive Single Axles – 2/Unl/P&L

MS-17-14X	RS-21-160	RS-24-160	MS-35-380
RS-17-144/145/A	RC-22-145	RS-25-160	RS-38-380
MS-19-14X	RC-23-160	MS-26-616	RC-25-160
RS-19-144	RH-23-160	MS-26-616-SP	RC-26-633
MS-21-114	RS-23-160	RS-26-185/380	MT-58-616
MS-21-14X	RC-23-161	MS-30-616	MT-58-616-SP
RS-21-145	RS-23-161	MS-30-616-SP	
RS-21-145/A	RS-23-186/380	RS-30-185/380	

### Transmission – 1/Unl/P&L

516		
FAT 30		
<b>PTO – 1/Unl/P&amp;L</b>		
MPT-318	MPT-526	MPT-1702
MPT-500	MPT-531	MPT-175
MPT-510	MPT-543	MPT-185
MPT-518	MPT-170	MPT-190



# HEAVY SERVICE/SPECIALTY VEHICLE WARRANTY INFORMATION

## Rear Drive Tandem/Tridem Axles – 2/Unl/P&L

MT-34-14X/P	RT-44-145/P	RT-52-185/380 <sup>1,2</sup>	MT-70-380
RT-34-144/P/A	RT-46-169	MT-58-616	RZ-188
MT-40-14X/P	RT-58-160	MT-58-616-SP	
RT-40-145/A	MT-52-616	RT-58-185/380 <sup>1,2</sup>	
MT-44-14X/P	MT-52-616-SP	RT-70-380	

<sup>1</sup> Axle model designated will vary according to options and variations specified on these axles. Contact Meritor Axle Applications Engineering for details.

<sup>2</sup> Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

## Brake Components

Cam P	3/Unl/P
Cam P <sup>3</sup>	2/100/P
Cam Cast Plus™	2/100/P&L
Q+ Drum Brake™	3/Unl/P&L
Q+ Drum Brake™ <sup>2</sup>	2/100/P&L
ASA	3/Unl/P
ASA <sup>2</sup>	2/100/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
EX+ Air Disc Brake	2/100/P&L

<sup>1</sup> Based on stamped wear diameter max.

<sup>2</sup> Applies to City Bus, Trolley, Shuttle Bus and Airport Shuttle only.

<sup>3</sup> Warranty for all non-Meritor ASAs supplied by Meritor for all Heavy Service vocations is 1/100/P.

## Rear Drive Tandem/Tridem - 3/Unl/P&L

RT-40-160/P/A <sup>3</sup>
RT-46-160/P/A <sup>1,3</sup>
RT-46-164EH/P/A <sup>2,3</sup>
RT-50-160/P/A <sup>3</sup>
RZ-166

<sup>1</sup> U.S. only. Canadian warranty = 1/Unl/P for combination vehicles only.

<sup>2</sup> Axle model designated will vary according to options and variations specified on these axles. Contact Meritor Axle Applications Engineering for details.

<sup>3</sup> Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

## Meritor Tire Inflation System

MTIS Components	5/Unl/P, 1/Unl/L
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## Trailer Air Suspension Systems

MTA (Trailing Arm)	
Major Structural Components <sup>1</sup>	5/Unl/P, 1/Unl/L
Height Control Valve	1/Unl/P&L
Shock Absorbers	2/Unl/P&L
Air Springs	2/Unl/P, 1/Unl/L
Bushings <sup>1</sup>	5/Unl/P, 3/Unl/L

<sup>1</sup> Raw wood applications 3/Unl/P, 1/Unl/L

(For axle and ABS coverage, refer to appropriate product warranties.)

## Trailer Axles

Beam and Brackets <sup>1</sup>	5/Unl/P, 1/Unl/L
Wheel End Systems <sup>2</sup>	
Standard System <sup>3</sup>	1/Unl/P&L

<sup>1</sup> 9000 Series is 3/Unl/P, 1/Unl/L.

<sup>2</sup> Includes hub, wheel seals and wheel bearings—all systems require annual inspections and proper documentation to ensure full coverage.

<sup>3</sup> When installed by Meritor.

(For brake components and ABS coverage, refer to appropriate product warranties.)

## Gearboxes – 1/Unl/P&L

MGX-240	MGX-376	MGX-448	MGX-506	MGX-528	MGX-546
MGX-279	MGX-377	MGX-456	MGX-514	MGX-533	MGX-550
MGX-279D	MGX-378	MGX-478	MGX-519	MGX-534	
MGX-280	MGX-380	MGX-480	MGX-520	MGX-536	
MGX-285	MGX-384	MGX-487	MGX-522	MGX-537	
MGX-292	MGX-402	MGX-488	MGX-524	MGX-541	
MGX-314	MGX-413	MGX-505	MGX-527	MGX-545	

## Transfer Cases – 1/Unl/P

MTC-4213	MTC-3118-CV (358)	MTC-3209-GV (RTC-60/420)
MTC-4210	MTC-3120-FV (TC-143)	MTC-3209-GV (RTC-60/380)
MTC-4208	MTC-3124 (T-2119)	MTC-3209-GV (MTC-60/420)
MTC-4206-FV (TC-38)	MTC-3205-GV (MTC-25/247)	MTC-3209-GV (MTC-60/380)
MTC-3106-FV (TC-137)	MTC-3205-GV (MTC-25/350)	MTC-3212-CV (315 & 548B)
MTC-3111 (T-2111)	MTC-3205-GV (RTC-25/350)	MTC-3312-FV (TC-270)
MTC-3112-CV (529 & 548C)	MTC-3206-FV (TC-237)	MTC-3220-FC (TC-142)
MTC-3116 (T-2111)	MTC-3206-CS (544)	MTC-2212-CV (306)
MTC-3118-FV (TC-180 & TC-180-23)	MTC-3208-GV (RTC-50)	



# FIRE AND EMERGENCY WARRANTY INFORMATION

## Fire and Emergency Vehicles

- Aerial Ladder Truck
- Aerial Platform
- Ambulance
- Command Vehicle
- Crash Fire Rescue (CFR)
- Pumper
- Rapid Intervention Vehicle (RIV)
- Tanker

## Fire and Emergency Typically Is

- Lower mileage operations (less than 20,000 miles/year)
- Generally, on-road service (less than 10% off-road)
- An average of three (3) miles between starting and stopping

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

## Front Non-Drive Steer Axles – 5/Unl/P&L

FL-941	MFS-18-193A-N	MFS-22-135A-N
FL-943	MFS-20-133A-N	MFS-22H-135A-N
MFS-18-133A-N	MFS-20-135A-N	MFS-22-193A-N
MFS-18-135A-N	MFS-20-193A-N	MFS-22H-193A-N

## Front Drive Steer Axles – 2/Unl/P&L

MX-19140	MX-21160	MX-23810
MX-21140	MX-23160	

## Rear Drive Single Axles – 5/Unl/P&L

RC-23-160	RS-23-186	RS-26-185	RS-25-160
RS-23-160	RS-24-160	RS-30-185	
RS-23-161	RC-25-160	RS-35-380	

<sup>1</sup> 3/Unl/P&L if PreSet by Meritor.

## Rear Drive Tandem/Tridem Axles – 5/Unl/P&L

MT-40-14X/P	RT-44-145/P	MT-52-616
MT-40-144/P	RT-46-160/P	RT-52-185 <sup>1</sup>
RT-40-145/A	RT-46-164EH/P	MT-58-616
RT-40-160/P	RT-46-169	RT-58-185 <sup>1</sup>
MT-44-14X/P	RT-50-160/P	MT-70-380

<sup>1</sup> Each vehicle must have a Request for Application Recommendation (RAR) approved by Meritor prior to vehicle build. All RARs must identify the chassis number or VIN. Refer to Product Information Letter #303 and #396 for further details.

## Brake Components

Cam	3/Unl/P
Q+ Drum Brake™	3/Unl/P&L
ASA	3/Unl/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P
EX+ Air Disc Brake™	2/Unl/P&L

<sup>1</sup> Includes: bushing, seal, cam, ASA lubrication and wear coverage of 1/Unl/P.

## Drivelines

RPL	4/400/P, 1/Unl/L
MXL	3/350/P, 1/Unl/L
155N	1/Unl/P
92N	1/Unl/P

## Transfer Cases – 1/Unl/P

MTC-4208	MTC-3111 (T-2111)
MTC-4210	MTC-3116 (T-2111)
MTC-4213	MTC-3124 (T-2119)





# TRANSIT BUS WARRANTY INFORMATION

## Transit Bus Vehicles

- Airport Shuttle
- City Bus
- Commuter Coach
- Shuttle Bus
- Transit Bus
- Trolley

## Transit Bus Typically Is

- Moderate mileage operation (less than 50,000 miles per year)
- Moderate to frequent stops/starts (up to 10 stops per mile)

Coverage under Meritor's warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

## Front Drive/Non-Drive Steer Axles – 5/300/P&L

FH-946                      MFS-12-155  
 FH-941<sup>1</sup>                     MFS-13-155

<sup>1</sup> Commuter coach only – 2/Unl/P&L

## Drivelines

RPL                              3/Unl/P, 1/Unl/L  
 92N                              1/Unl/P&L  
 MXL                              1/Unl/P&L

## Rear Drive Single Axles – 5/300/P&L

RS-23-160                    79163                      RS-21-160  
 RC-23-161                    RC-23-162<sup>1</sup>  
 71163                          RC-23-165<sup>1</sup>

<sup>1</sup> Commuter coach only – 2/Unl/P&L

## Tag Axles – 2/Unl/P&L

MC-14002  
 MC-16003  
 FH-946

## Brake Components

Cam Cast Plus™                    2/100/P&L  
 Q+ Drum Brake™<sup>1</sup>                2/100/P&L  
 ASA<sup>1</sup>                                2/100/P  
 Hubs/Cast Drums and  
 Other Wheel-end  
 Components                        1/Unl/P  
 All Other Brakes                    1/Unl/P  
 EX+ Air Disc Brake                2/100/P&L

<sup>1</sup> Applies to City Bus, Trolley, Shuttle Bus and Airport Shuttle only.

## Center Non-drive Axles – 5/300/P&L

MC-26000  
 71063  
 79063





# OFF-HIGHWAY SERVICE WARRANTY INFORMATION

## Industrial And Off-Highway Service Vehicles

- |                       |                          |                       |                    |
|-----------------------|--------------------------|-----------------------|--------------------|
| ■ Load-On/Load-Off    | ■ Yard Jockey            | ■ Specialized Mining  | ■ Rail Car Mover   |
| ■ Port Tractor        | ■ All-Terrain Crane      | ■ Excavator           | ■ Loader           |
| ■ Rail Yard Spotter   | ■ Rough Terrain Crane    | ■ Compactor           | ■ Tow Tractor      |
| ■ Roll-On/Roll-Off    | ■ Forestry               | ■ Fertilizer Spreader | ■ Pushback Tractor |
| ■ Stevedoring Tractor | ■ Material Handling      | ■ Snow Blower         |                    |
| ■ Trailer Spotter     | ■ Specialized Heavy Haul | ■ Mining              |                    |

## Industrial And Off-Highway Service Typically Is

- Low mileage operation
- Low speed vehicle speed restriction
- Vehicles are **not** typically licensed for highway use
- Six (6) starts/stops per mile (typical)

**Coverage under Meritor’s warranty require that the application of products be properly approved pursuant to OEM and Meritor approvals. Contact Meritor regarding specific application approval questions on any product line.**

### Drivelines – 1/Unl/P

- RPL                          MXL

### Front Non-Drive Steer Axles – 1/Unl/P

FF - 941	MFS-12-144A-N	MFS-18-193A-N
FF - 943	MFS-13-143A-N	MFS-20-133A-N
FF - 961	MFS-13-144A-N	MFS-20-135A-N
FF - 966	MFS-14-143A-N	MFS-20-192A-N
FG - 941	MFS-16-122A-N	MFS-20-193A-N
FG - 943	MFS-16-133A-N	MFS-22-135A-N
FL - 941	MFS-16-135A-N	MFS-22H-135A-N
FL - 943	MFS-16-143A-N	MFS-22-193A-N
FN - 951	MFS-18-133A-N	MFS-22H-193A-N
MFS-12-143A-N	MFS-18-135A-N	MON-Z0 FAMILY

### Brake Components

Cam P	3/Unl/P
Q+ Drum Brake™	3/Unl/P&L
ASA	3/Unl/P
Hubs/Cast Drums and Other Wheel-end Components	1/Unl/P
Hydraulic Disc Brakes	1/Unl/P
All Other Brakes	1/Unl/P

### Planetary Axles – 1/Unl/P

MOB	MOF	MOS	MOZ
MOC	MOG	MOT	
MOD	MOH	MOX	
MOE	MOR	MOY	

### Gearboxes – 1/Unl/P&L

MGX-240	MGX-376	MGX-448	MGX-506	MGX-528	MGX-546
MGX-279	MGX-377	MGX-456	MGX-514	MGX-533	MGX-550
MGX-279D	MGX-378	MGX-478	MGX-519	MGX-534	
MGX-280	MGX-380	MGX-480	MGX-520	MGX-536	
MGX-285	MGX-384	MGX-487	MGX-522	MGX-537	
MGX-292	MGX-402	MGX-488	MGX-524	MGX-541	
MGX-314	MGX-413	MGX-505	MGX-527	MGX-545	

### Transfer Cases – 1/Unl/P

MTC-4213	MTC-3116 (T-2111)	MTC-3205-GV (RTC-25/350)	MTC-3209-GV (MTC-60/380)
MTC-4210	MTC-3118-FV (TC-180 & TC-180-23)	MTC-3206-FV (TC-237)	MTC-3212-CV (315 & 548B)
MTC-4208	MTC-3118-CV (358)	MTC-3206-CS (544)	MTC-3312-FV (TC-270)
MTC-4206-FV (TC-38)	MTC-3120-FV (TC-143)	MTC-3208-GV (RTC-50)	MTC-3220-FC (TC-142)
MTC-3106-FV (TC-137)	MTC-3124 (T-2119)	MTC-3209-GV (RTC-60/420)	MTC-2212-CV (306)
MTC-3111 (T-2111)	MTC-3205-GV (MTC-25/247)	MTC-3209-GV (RTC-60/380)	
MTC-3112-CV (529 & 548C)	MTC-3205-GV (MTC-25/350)	MTC-3209-GV (MTC-60/420)	



# TERMS AND CONDITIONS

## Coverage Exclusions

### Product Description

#### All

The cost of any repairs, replacements or adjustments to a covered component (1) associated with noise; (2) resulting from the use or installation of non-genuine Meritor components or materials; (3) due to vibration associated with improper operation or misapplication of drivetrain components; and (4) damage resulting from corrosion.

For axle assemblies supplied by Meritor with suspension and interface brackets designed and/or attached by non-Meritor parties, Meritor warranty coverage does not apply to the brackets, bracket attachment methods, and field issues caused by brackets or bracket attachments to any covered component unless specified in a separate OEM agreement.

#### Front Axles

King Pin Bushings.

#### Rear Axles

Self-contained traction equalizers and oil filters. The use of NoSPIN differentials will result in the exclusion of axle shafts from warranty considerations. NoSPIN is a product of Eaton.

#### ASA

Boot and bushing. Bent, broken, over-torqued, missing or otherwise damaged pawl assemblies.

#### Cam Brake

Brake lining wear and brake shoe “rust-jacking.”

#### Disc Brake

Pad wear, rotor wear.

## Coverage Limitations

### Product Description

#### All

Any claim beyond 60 days from date of repair will not be accepted or honored under this warranty program. Products purchased on an incomplete vehicle (glider) are limited to one year, unlimited miles parts only (1/Unl/P).

#### Front Axles

Tie rod and tie rod ends limited to 3-year/300,000-mile or published vocational coverage, whichever is less. Wheel seals, gaskets and wheel bearings are covered for 1 year/unlimited miles if the wheel end equipment is supplied and assembled by Meritor.

#### Rear Axles

Pinion and through shaft seals limited to 3-year/300,000-mile or published vocational coverage, whichever is less, if yoke is installed by Meritor. If yoke is not installed by Meritor, then Meritor does not warrant pinion seals. Wheel seals, gaskets and wheel bearings are covered for 1 year/unlimited miles if the wheel end equipment is supplied and assembled by Meritor.

#### Rear Axles

The Meritor® breather part number A-2297-C-8765 with A-3196-J-1336 hose must be used for eligibility of any potential warranty consideration relating to contamination and/or loss of lube in axles.

#### Cam Brake

Limited to bracket, brake spider and camshaft structural integrity.

#### STEELite X30

Wearable life is up to the discard diameter of the drum.

#### Disc Brake

Warranty coverage for boots, seals, bushings and pins is 2/200/P. Warranty coverage for pads is 1/100/P.

Warranty coverage on vehicles with 1,850 lb-ft engine torque and over may be reduced on individual drivetrain components. Contact your Meritor representative for specific details.

# TERMS AND CONDITIONS

## (1) What is Covered by this Commercial Warranty?

Meritor Heavy Vehicle Systems, LLC warrants to the owner ("Owner") that the components listed in this publication, which have been installed by an Original Equipment Manufacturer ("OEM") as original equipment in vehicles licensed for on-highway use, will be free from defects in material and workmanship. This warranty coverage begins only after the expiration of the OEM's vehicle warranty for the applicable covered components. Warranty coverage ends at the expiration of the applicable time period from the date of vehicle purchase by the first Owner, or, the applicable mileage limitation, whichever occurs first. Duration of coverage varies by component and vocation as detailed elsewhere in this warranty statement.

Some components are warranted for parts only and the Owner must pay any labor costs associated with the repair or replacement of the component. Other components are warranted for both parts and reasonable labor to repair or replace the subject component. Components (whether new, used or remanufactured) installed as replacements under this warranty are warranted only for the remainder of the original period of time or mileage under the original warranty.

For certain components, coverage requires the use of specific extended drain interval or synthetic lubricants. For further information about lubrication and maintenance, see Meritor publication Maintenance Manual Number 1 and the applicable Meritor maintenance manual for the product in question. Other conditions and limitations applicable to this warranty are detailed below.

## (2) Designation of Vocational Use Required.

To obtain warranty coverage, each Owner must notify Meritor through the OEM new truck and/or trailer dealer of the intended vocational use of the vehicle into which the Meritor components have been incorporated prior to the vehicle in-service date. This notification may be accomplished by registering the vehicle through your OEM new truck and/or trailer dealer or with Meritor directly. Failure to notify Meritor of (I) the intended vocational use of the vehicle or (II) a change in vocational use from that which was originally designated, will result in the application of a one year, unlimited mileage, parts only warranty (1/Unl/P) from the initial in-service date.

A second Owner and each subsequent Owner must also notify Meritor as to the intended vocational use of the vehicle. This notification can be sent directly to Meritor or through the OEM new truck and/or trailer dealer. The duration and mileage coverage of this warranty cannot exceed the coverage extended to the first Owner after his or her initial designation of vocational use.

Coverage under Meritor's warranty requires that the application of products be properly approved pursuant to OEM and Meritor approvals. Refer to TP-9441 for axles, SP-8320 for trailer axles, TP-12126 for drivelines, and/or contact Meritor regarding specific application approval questions on any product line.

## (3) What is the Cost of this Warranty?

There is no charge to the Owner for this warranty.

## (4) What is not Covered by this Warranty?

This warranty does not cover normal wear and tear; nor does it cover a component that fails, malfunctions or is damaged as a result of (I) improper installation, adjustment, repair or modification (including the use of unauthorized attachments or changes or modification in the vehicle's configuration, usage, or vocation from that which was originally approved by Meritor), (II) accident, natural disaster, abuse, or improper use (including loading beyond the specified maximum vehicle weight or altering engine power settings to exceed the axle and/or driveline capacity), or (III) improper or insufficient maintenance (including deviation from approved lubricants, change intervals, or lube levels). This warranty does not cover any component or part that is not branded by Meritor. For vehicles that operate full or part time outside of the United States and Canada, a one year, unlimited mileage, parts only warranty (1/Unl/P) will apply.

## (5) Remedy.

The exclusive remedy under this warranty shall be the repair or replacement of the defective component at Meritor's option. Meritor reserves the right to require that all applicable failed materials are available and/or returned to Meritor for review and evaluation.

## (6) Disclaimer of Warranty.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESSED, IMPLIED OR STATUTORY INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE.

## (7) Limitation of Remedies.

In no event shall Meritor be liable for special, incidental, indirect, or consequential damages of any kind or under any legal theory, including, but not limited to, towing, downtime, lost productivity, cargo damage, taxes, or any other losses or costs resulting from a defective covered component.

## (8) To Obtain Service.

If the Owner discovers within the applicable coverage period a defect in material or workmanship, the Owner must promptly give notice to either Meritor or the dealer from which the vehicle was purchased. To obtain service, the vehicle must be taken to any participating OEM new truck and/or trailer dealer or authorized Meritor service location. The dealer will inspect the vehicle and contact Meritor for an evaluation of the claim. When authorized by Meritor, the dealer will repair or replace during the term of this warranty any defective Meritor component covered by this warranty.

## (9) Entire Agreement.

This is the entire agreement between Meritor and the Owner about warranty and no Meritor employee or dealer is authorized to make any additional warranty on behalf of Meritor. This agreement allocates the responsibilities for component failure between Meritor and the Owner.

Product models, brands, names and trademarks depicted herein are the property of their respective owners and, except where otherwise indicated, are not in any way associated with Meritor Heavy Vehicle Systems, LLC, or any parent or affiliate, thereof.



Meritor Heavy Vehicle Systems, LLC  
2135 West Maple Road  
Troy, Michigan 48084 USA30

For more information:  
call Ontrac at 866-668-7221  
or visit meritor.com

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Revised 1-19 (47865/11900)

# Waterous Seven-Year Limited Warranty

WATEROUS warrants, to the original Buyer only, that products manufactured by WATEROUS will be free from defects in material and workmanship under normal use and service for a period of seven (7) years from the date the product is first placed in service, or seven and one-half (7-1/2) years from the date of shipment by WATEROUS, whichever period shall be the first to expire; provided the Buyer notifies WATEROUS, in writing, of the defect in said product within the warranty period, and said product is found by WATEROUS to be nonconforming with the aforesaid warranty. When required in writing by WATEROUS, defective products must be promptly returned by Buyer to WATEROUS at WATEROUS' plant at South St. Paul, Minnesota, or at such other place as may be specified by WATEROUS, with transportation and other charges prepaid. A Returned Material Authorization (RMA) is required for all products and parts and may be requested by phone, fax, email, or mail. The aforesaid warranty excludes any responsibility or liability of WATEROUS for:

- (a) damages or defects due to accident, abuse, misuse, abnormal operating conditions, negligence, accidental causes, use in non-firefighting applications, or improper maintenance, or attributable to written specifications or instructions furnished by Buyer;
- (b) defects in products manufactured by others and furnished by WATEROUS hereunder, it being understood and agreed by the parties that the only warranty provided for such products shall be the warranty provided by the manufacturer thereof which, if assignable, WATEROUS will assign to Buyer, if requested by Buyer;
- (c) any product or part, altered, modified, serviced or repaired other than by WATEROUS, without its prior written consent;
- (d) the cost of dismantling, removing, transporting, storing, or insuring the defective product or part and the cost of reinstallation; and
- (e) normal wear items (packing, strainers, filters, light bulbs, anodes, intake screens, mechanical seals, etc.).

**ALL OTHER WARRANTIES ARE EXCLUDED, WHETHER EXPRESS OR IMPLIED BY OPERATION OF LAW OR OTHERWISE, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT, WHETHER AS A RESULT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY, OR ANY OTHER CAUSE OF ACTION, SHALL WATEROUS BE LIABLE FOR ANY PUNITIVE, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR FOR PERSONAL INJURY OR PROPERTY DAMAGES.**

The exclusive remedy of Buyer and the sole liability of WATEROUS, whether based on contract, warranty, tort or any other basis of recovery whatsoever, is expressly limited at the election of WATEROUS to:

- (a) the replacement at the agreed point of delivery of any product or part, which upon inspection by WATEROUS or its duly authorized representative, is found not to conform to the limited warranty set forth above, or
- (b) the repair of such product or part, or
- (c) the refund or crediting to Buyer of the net sales price of the defective product or part.

**BUYER'S REMEDIES CONTAINED HEREIN ARE EXCLUSIVE OF ANY OTHER REMEDY OTHERWISE AVAILABLE TO BUYER.**

**Waterous Company**  
125 Hardman Avenue South  
South St. Paul, MN 55075 USA  
[www.waterousco.com](http://www.waterousco.com)





# Nevada County Consolidated Fire District

## Resolution 21-02

### Amending Participants for The US Bank Cal-Card Purchasing Program

**WHEREAS**, the Nevada County Consolidated Fire District (“NCCFD” or “District”) uses the US Bank CAL-Card Purchasing Program for the purpose of allowing more flexibility in the organization in paying bills and meeting the needs of NCCFD personnel during emergencies and regular operations; and

**WHEREAS**, on February 21, 2019, the NCCFD Board of Directors adopted Resolution R19-07, Amending Participants and Purchasing Limits for the US Bank Cal-Card Purchasing Program, a copy of which is attached hereto as “Exhibit A”; and

**WHEREAS**, Staff has recognized the need for the position of Service Technician to be issued a Cal-Card to utilize when needed; and

**WHEREAS**, Staff requests the Board approve the changes as listed in “Exhibit B”,

**NOW, THEREFORE, BE IT RESOLVED** that the Board of Directors of the Nevada County Consolidated Fire District, the Board approves the addition of a Captain, with purchasing limits listed in “Exhibit B”.

**PASSED AND ADOPTED** by the Board of Directors as Resolution of the Nevada County Consolidated Fire District at the Regular Board Meeting held on the 21<sup>st</sup> day of January, by the following roll call:

Ayes:  
Noes:  
Absent:  
Abstain:

---

Keith Grueneberg, President of the Board  
Nevada County Consolidated Fire District

Attest:

---

Nicole Long, Secretary of the Board



# Nevada County Consolidated Fire District

## Resolution 20-20

### Amending Participants for The US Bank Cal-Card Purchasing Program

**WHEREAS**, the Nevada County Consolidated Fire District (NCCFD) uses the US Bank CAL-Card Purchasing Program for the purpose of allowing more flexibility in the organization in paying bills and meeting the needs of NCCFD personnel during emergencies and regular operations; and

**WHEREAS**, on February 21, 2019, the NCCFD Board of Directors adopted Resolution R19-07, Amending Participants and Purchasing Limits for the US Bank Cal-Card Purchasing Program, a copy of which is attached hereto as "Exhibit A"; and

**WHEREAS**, Staff has recognized the need for a finance assigned Cal-Card to utilize when needed; and

**WHEREAS**, Staff requests the Board approve the changes as listed in "Exhibit B",

**NOW, THEREFORE, BE IT RESOLVED** that the Board of Directors of the Nevada County Consolidated Fire District, the Board approves the addition of one (1) unassigned card, with purchasing limits listed in "Exhibit B".

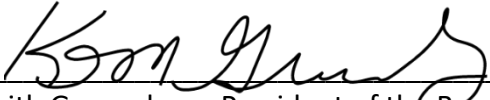
**PASSED AND ADOPTED** by the Board of Directors as Resolution of the Nevada County Consolidated Fire District at the Regular Board Meeting held on the 18<sup>th</sup> day of June 2020, by the following roll call:

Ayes: Carrington, Dorland, Garrett, Grueneberg Hanson, Nelson, Slade-Troutman


Noes:

Absent:

Abstain:

  
\_\_\_\_\_  
Keith Grueneberg, President of the Board  
Nevada County Consolidated Fire District

Attest:

  
\_\_\_\_\_  
Nicole Long, Secretary of the Board

**NCCFD Purchasing Limits**

Limit	Position
\$20,000	Finance Department
\$5,000	Chief
\$5,000	Deputy Fire Chief
\$5,000	Fire Marshal
\$3,000	Battalion Chief
\$3,000	Battalion Chief
\$3,000	Finance Manager
\$3,000	Dep. Fire Marshal
\$2,000	Captain
\$2,000	Captain
\$2,000	Captain
\$2,000	Captain
\$2,000	Captain
\$2,000	Captain
\$2,000	Captain
\$2,000	Captain
\$2,000	Captain
\$2,000	Captain
\$5,000	Mechanic
\$3,000	Operational Support Manager
\$1,000	Lieutenant
\$1,000	Lieutenant
\$1,000	Lieutenant
\$1,000	Lieutenant
\$1,000	Lieutenant
\$1,000	Lieutenant
\$1,000	Unassigned
\$1,000	Unassigned

**NCCFD Purchasing Limits**

<b>Limit</b>	<b>Position</b>
\$20,000	Finance Department
\$5,000	Chief
\$5,000	Deputy Fire Chief
\$5,000	Fire Marshal
\$3,000	Battalion Chief
\$3,000	Battalion Chief
\$3,000	Finance Manager
\$3,000	Dep. Fire Marshal
\$2,000	Captain
\$2,000	Captain
\$2,000	Captain
\$2,000	Captain
\$2,000	Captain
\$2,000	Captain
\$2,000	Captain
\$2,000	Captain
\$2,000	Captain
\$2,000	Captain
\$2,000	Service Technician
\$5,000	Mechanic
\$3,000	Operational Support Manager
\$1,000	Lieutenant
\$1,000	Lieutenant
\$1,000	Lieutenant
\$1,000	Lieutenant
\$1,000	Lieutenant
\$1,000	Lieutenant
\$1,000	Unassigned





# Nevada County Consolidated Fire District

## Resolution 21-03

### Purchasing Policy

**WHEREAS**, the Nevada County Consolidated Fire District Board of Directors has the requirement to follow purchasing and related guidelines set as forth by the following California codes; Civil Code, Government Code, Health and Safety Code, and Public Contract Code; and

**WHEREAS**, the existing District Purchasing Policy requires updating to meet current District operational needs; and

**WHEREAS**, the purchasing policy submitted herewith, replaces the prior purchasing policy authorized by Resolution R19-08.

**NOW, THEREFORE, BE IT RESOLVED** by the Nevada County Consolidated Fire District Board of Directors, the attached Policy 209 Purchasing is approved and effective immediately.

**PASSED AND ADOPTED** by the Board of Directors as Resolution of the Nevada County Consolidated Fire District at the Regular Board Meeting held on the 21<sup>st</sup> day of January, 2021 by the following roll call:

Ayes:  
Noes:  
Absent:  
Abstain:

---

Keith Grueneberg, President of the Board  
Nevada County Consolidated Fire District

Attest:

---

Nicole Long, Secretary of the Board

## **Policy 209**

### **Purchasing**

#### Table of Contents

- 209.1 Purpose and Scope
  - 209.2 Purchasing Officer
  - 209.3 Purchasing Authority
    - 209.3.1 Budgeted and non-Budgeted Purchases
    - 209.3.2 Purchasing Limits
    - 209.3.3 Purchase Orders
    - 209.3.4 Obtaining a Purchase Order No.
    - 209.3.5 Credit Card Purchases
  - 209.4 Bidding Quotation Procedures: Informal and Formal
    - 209.4.1 Competitive Written Bid and/or Oral Quotation
    - 209.4.2 Informal Quotation
    - 209.4.3 Formal Bidding
    - 209.4.4 Special Services and Equipment – Requests for Proposals (RFP)
    - 209.4.5 Bidding Documents
    - 209.4.6 Report Results of Bidding to Board
  - 209.5 Requirements on Facility Construction, Maintenance and Related Services
  - 209.6 The Purchase
  - 209.7 Authorization for Payment
- Exhibits
1. Collateral Duties
  2. Purchase Order template
  3. Credit Card Monthly Limits
  4. Public Works Contract template

## **209.1 Purpose and Scope**

The purpose and scope of this policy is two-fold:

1. To establish efficient procedures for the purchase of supplies and equipment and for obtaining construction and other services by Nevada County Consolidated Fire District (hereafter referred to as District) which will assure the lowest cost commensurate with sound quality and in accordance with appropriate standards and specifications; to provide for positive financial control over purchases; to provide for competitive bidding; and to provide a uniform procedure and notice thereof to prospective suppliers.
2. Meet the requirements of *Ca Government codes §54202 and 54204*.

This policy is written in accordance with the following California governmental codes. Items not specifically addressed in this policy will be governed by the same.

- *CA Civil Code*
- *CA Government Code*
- *CA Health and Safety Code*
- *CA Public Contract Code*

## **209.2 Purchasing Officer**

The Fire Chief is designated as the purchasing officer. The Fire Chief may delegate portions of the purchasing officer authority to subordinates. During times of leave of the Fire Chief, the Deputy Fire Chief assumes the purchasing authority of the Fire Chief.

The purchasing officer, or designated agent, shall have the authority, in accordance with purchasing procedures required by this policy, to:

1. Purchase or contract for work, services, supplies, and equipment;
2. Negotiate, recommend, and execute contracts for the purchase of supplies, equipment, and services;
3. Act to procure for the District optimum quality in supplies, services, and equipment to meet the needs of the district at the least expense to the district;
4. Seek to obtain as full and open competition as possible on all purchases commensurate with the needs of the district; and,
5. Supervise and inspect all supplies and equipment purchased to ensure conformance with specifications.

## **209.3 Purchasing Authority**

### **209.3.1 Budgeted and non-Budgeted Purchases**

1. Board of Directors (BOD) approval of the annual district budget shall constitute authorization for the purchase of equipment, goods and services specifically listed and described in such budget
2. The purchasing officer may, without bids, quotes or prior BOD approval, make single non-budgeted purchases not to exceed Five Thousand Dollars (\$5,000.00).

3. The purchasing officer may exceed the single purchase limit (\$5,000.00) for maintenance of structures and equipment which cannot be postponed until action can be taken by the board. The purchasing officer or his/her designee shall submit a report of these transactions and present such at the next regular BOD meeting (*reference CA Public Contract Code §22050*)

### 209.3.2 Purchasing Limits

Purchasing limits, within the confines of §209.3.1, are as follows:

- |                               |   |
|-------------------------------|---|
| 1. Company Officer            | Up to \$ <del>100.00</del> <b>\$250</b>   |
| 2. Battalion Chief            | Up to \$1,000.00                          |
| 3. Deputy Fire Marshal        | Up to \$1,000.00                          |
| 4. Collateral Duty Officer    | Up to \$1,000.00                          |
| 5. Operations Support Manager | Up to \$1,000.00                          |
| 6. Mechanic                   | Up to \$2,500.00                          |
| 7. Finance Manager            | Up to \$2,500.00                          |
| 8. Deputy Fire Chief          | Up to \$5,000.00                          |
| 9. Fire Chief                 | In accordance with this purchasing policy |

Refer to *Exhibit 1* for Collateral Duty listing.

### 209.3.3 Purchase Orders

Purchase order requirements are dependent on dollar amount purchased. Purchasing limits per §209.3.2 apply to the following:

1. Purchases of ~~\$100.00~~ **\$250** or less do not require a purchase order or purchase order #.
2. **Purchases of \$500 or less by the Fire Mechanic for the purpose of vehicle repair do not require a purchase order #.**
3. Purchases of ~~\$100.01~~ **\$250.01** to \$2,500.00 requires obtaining a purchase order # from admin.
4. Purchases of \$2,500.01 to \$5,000.00 requires
  - a. Obtaining a purchase order # from admin,
  - b. Preparation and submittal of a purchase order form, and
  - c. Approval from the Fire Chief, Deputy Fire Chief or Finance Manager, prior to purchase.
5. Purchases of \$5,000.01 to \$10,000.00 requires
  - a. Bid from 3 or more vendors, if three bids can be obtained. Reference § 209.4.2 *Informal Bids*
  - b. Obtaining a purchase order # from admin,
  - c. Preparation and submittal of a purchase order form, and
  - d. Approval from the Fire Chief, Deputy Fire Chief and Finance Manager, prior to purchase.
6. Purchases of \$10,000.01 and over – see §209.4 – *Bidding and Quotations*

Refer to *Exhibit 2* for the Purchase Order template.

### 209.3.4 Obtaining a Purchase Order No.

Purchase order #'s are numerically controlled and are assigned as needed. The following information is required to obtain a purchase order #. The purchase order number # is required prior to the purchase being finalized.

1. Date

2. Vendor
3. Nature of purchase and account classification.
4. Vehicle ID, Station ID or Employee Name, if applicable.
5. Appropriate level of authorization
6. Estimated Amount

#### 209.3.5 Credit Card Purchases

The District provides credit cards to employees of designated classification for the primary purposes of emergency, travel, necessity and expediency. Purchasing activity, as outlined in §209.3.1 through 209.3.4, pertain to credit card purchasing.

*Exhibit 3* outlines the monthly credit card purchasing limits of each designated employee classification.

### **209.4 Bidding and Quotation Procedures: Informal and Formal**

#### 209.4.1 Competitive Written Bid and/or Oral Quotation

Except as otherwise provided in this policy, hiring of work, construction, and other services, and purchases of supplies and equipment shall be by competitive bidding (the written submission of prices by individuals or firms competing for a contract, privilege, or right to do work or supply merchandise or services), or solicited oral quotation pursuant to the procedures established by this policy. Bidding shall not be required in any of the following instances:

1. Emergencies: Although exempt from competitive bidding, emergency purchases are subject to provisions of § 209.3 *Purchasing Authority*,
2. When the commodity can be obtained from only one vendor (sole source vendors),
3. When the total amount involved is five thousand dollars (\$5,000.00) or less, subject to the provisions in § 209.3, and
4. Purchases from other public agencies or joint purchasing authority.

#### 209.4.2 Informal Quotation

1. Except as provided in §209.4.4 below work, services, and purchases of an estimated value of between five thousand dollars (\$5,000.00) and ten thousand dollars (\$10,000.00), shall be made by the purchasing officer pursuant to the procedure prescribed in this section.
2. Costs of work, services, and purchases shall, whenever possible, be based upon at least three (3) independent quotations, if three quotations can be obtained, and shall be awarded to the lowest responsible party as determined by the purchasing officer.
3. The purchasing officer shall solicit bids or quotations by written requests, by telephone, by fax, advertising, or by notice posted on a public bulletin board at the administrative office or by any combination of these methods. Formal contracts shall be executed as needed.

#### 209.4.3 Formal Bidding

Except as otherwise provided in this policy, work, services and purchases, and obtaining construction and other services, of an estimated value of ten thousand dollars (\$10,000.00) or more

shall be by written contract with the lowest responsible bidder pursuant to the procedures prescribed in the following manner. Reference *Ca Public Contract Codes §20810 to 20813*.

1. Notice Inviting Bids:

- a. Notices inviting sealed bids shall include a general description of the article(s) or service(s) to be purchased or supplied, shall state where bid forms and specifications may be obtained, and the time and place for opening bids. The notice shall specify the amount and form of bidder's security if required. The notice shall state that bids shall be submitted and contracts awarded pursuant to the provisions of this policy and any resolution setting forth other applicable rules and regulations. The notice shall state that the board may reject any and all bids.
- b. Notices inviting bids shall be published at least once in a newspaper of general circulation printed and published in the County of Nevada. A notice shall also be posted on a public bulletin board at the administrative office. This does not preclude, when deemed advantageous, the additional use of metropolitan newspapers and trade publications.

2. Bidder List/Security:

- a. In all transactions where sealed bids are required, the purchasing officer may require bidder's security and specify the amount and form thereof in the call for bids. District counsel may review any such security requirements.
- b. The deposit of the successful bidder shall be held to secure the capacity, readiness, and willingness of the successful bidder to execute the contract. The deposits of the unsuccessful bidders shall be mailed back within ten (10) days following the bid award. The successful bidder shall forfeit the deposit of bid security upon refusal or failure to execute the contract within ten (10) day notice of award of contract.
- c. The board may, on refusal or failure of the successful bidder to execute the contract, award the contract to the next lowest responsible bidder, the amount of the said successful bidder's security shall be applied by the district to the difference between the successful bid and the next lowest responsible bid; and the surplus, if any, shall be forfeited as the reasonable cost to the District of delay and/or administrative cost involved in re-letting the contract.

3. Bid Opening:

Sealed bids shall be submitted as set forth in the published notice and shall be identified as "bids" on the envelope and opened by the purchasing officer or a designated representative at a time and place stated in the published notice. Sealed bids shall be reviewed by the purchasing officer or a designated representative and a recommendation submitted to the board for approval within thirty (30) days of its next regularly scheduled meeting after the date on which the bids are opened. A tabulation of all bids received shall be open for public inspection. Bids received after the closing date and time shall be returned unopened to the bidder.

4. Bid Rejection, Re-advertisement:

The Board may, in its discretion, reject any and all bids and may re-advertise for bids pursuant to the procedures contained in this section.

5. Tie Bids:

If two or more bids are received for the same total amount or unit price and all other applicable considerations are equal, the board may, in its discretion, accept either bid.

6. Performance Bond:

The district shall require bidders to submit a performance bond in such amount as it may find reasonably necessary, and as per *Ca Civil Code §9550*, to protect the interests of the District, and the form and amount of such bond shall be specified in the notice inviting bids.

7. Award:

Except as otherwise provided herein, a contract shall be awarded by resolution of the board of directors to the lowest responsible bidder as determined by the board.

209.4.4 Special Services and Equipment – Requests for Proposals (RFP)

1. Recognizing that acquisition of some goods and services, such as computer and/or telecommunications equipment or professional services, are of such a unique or complex nature that a structured competitive bid process based solely on lowest price would detract from the district's ability to acquire the most appropriate goods or services, the purchasing officer and/or the District Board may determine that it is in the best interest of the District to purchase such goods and services based on criteria other than lowest cost. In such cases, notwithstanding any other provision of this Policy, the purchasing officer may prepare RFP's which shall establish the criteria that the District will use in selecting a provider and in purchasing the goods and services.
2. In structuring an RFP, the RFP should include, but not be limited to, the following:
  - a. Company or individual background;
  - b. Details of products or services;
  - c. Cost;
  - d. Time of delivery;
  - e. Dollar limits of performance bond, and/or liability insurance requested, if required;
  - f. References;
  - g. Products, service capabilities, and warranties;
  - h. Other information or requirements appropriate to the types of products or services; and,
  - i. Any other consideration that may aid the Board or purchasing officer in evaluating the proposal.
3. Proposals may be accepted, rejected, or negotiated prior to final contract approval by the board.
4. Purchase of district utility vehicles - The district has a Federal Identification Number (FIN) with General Motors and Ford which allows the District to purchase utility vehicles from these two

manufacturers at a government wholesale price. All dealerships receive the same pricing from the above manufacturers, which eliminates the competitive pricing between dealerships. In an effort to provide warranty service, the district may contact the closest authorized dealer who participates in the government wholesale purchase program for its purchase of utility vehicles provided that the closest authorized dealers add-on charge does not exceed 3% over the manufacturer's government wholesale price.

#### 209.4.5 Report Results of Bidding to Board:

The purchasing officer shall submit a written report on all bidding, formal or informal, setting forth results, conclusions, and recommendations.

### **209.5 Requirements on Facility Construction, Maintenance and Related Services**

Facility construction, maintenance and related services procured by a public entity in the State of California may have requirements per *SB 854*

1. The following conditions are governed by *SB 854*. If these conditions are not met, *§209.5* does not apply.
  - a. Services procured through a contractor for construction and maintenance services, which utilizes labor for the completion of such services, whether the labor is provided by the contractor or their sub-contractors.
  - b. The project or service contract is \$1,000 or more.
2. Contractor requirements are:
  - a. Registered as a Public Works Contractor with the Department of Industrial Relations (DIR) during the performance of the project and/or contract.
  - b. Maintain an active contractor license with the California Contractor State License Board during the performance of the project and/or contract.
  - c. Pay laborers used on the project/contract prevailing labor wage rates.
  - d. Deliver Certified Payroll reports to the DIR via the eCPR on-line portal. Insure sub-contractors do the same.
  - e. Be vigilant in prevailing wage compliance.
  - f. Provide certificates of insurance with the following limits and the district named as additionally insured.
    1. General liability – \$1,000,000.00.
    2. Property insurance – value of equipment and goods stored on project site.
    3. Commercial automobile - \$300,000.



- g. Understand and agree to terms of the Nevada County Consolidated Fire District Public Works Contract. See *exhibit 4*.
3. District requirements are:
  - a. Utilize Public Works Contractors for projects/contracts that apply.
  - b. Insure contractor is aware of DIR requirements, via the contract and/or purchase order .
  - c. File PWC-100 for each subject project/contract on the DIR website.
  - d. Review submitted Certified Payroll reports to insure contractor and sub-contractor(s) compliance.
  - e. File a notice of completion with DIR when the terms of the project/contract are complete.
  - f. All other purchasing and bid requirements remain in force.

### **209.6 The Purchase**

When finalizing the purchase with the vendor, pertinent purchasing information is given to the vendor. Information given to the vendor would include

1. Purchase order # - to be included on all vendor documentation, including the receiving document(s) and invoice(s).
2. Shipping or service address.
3. Receipt date – delivery date of the goods or services.
4. Payment terms – when the vendor will be paid.
5. Total amount of purchase, including sales tax and freight.

### **209.7 Authorization for Payment**

Vendor payment procurement requires verification the goods or services have been received, and within the parameters of the purchase order. The method of verification is provided to the finance assistant. Valid verifications are as follows:

1. Purchases up to \$100.00 – verbal communication, or signed receipt (i.e. receiver, packing slip, credit card receipt, invoice).
2. All other purchases – signed receipt, or signed as received on the purchase order.

Vendor payment will be procured when the purchase order, receipt verification and invoice are verified against each other.

## **Exhibit 1 - Collateral Duties**

Air Compressor / SCBA

Annual Pump Testing

Apparatus Maintenance / Repair

Asset / Inventory Control

Communications Equipment / Command 1

District Website / Social Media

Driver Training Coordinator

EMS C.E Coordinator

Facilities Maintenance

Fire Extinguisher Maintenance

Hose Repair & Testing

Hydrant Program

Mapping Information System

EMS Supplies

Personal Protective Equipment

Public Education

Small Tools / Equipment

Uniforms

**Exhibit 2 – Purchase Order**

Attach in PDF.

### Exhibit 3 – Credit Cards Monthly Limit by Designated Classification

Fire Chief	\$5,000.00
Deputy Fire Chief	\$5,000.00
Battalion Chief	\$3,000.00
Finance Manager	<del>\$3,000.00</del> \$20,000.00
Deputy Fire Marshal	\$3,000.00
Mechanic	<del>\$3,000.00</del> \$5,000.00
Ops Support Mgr.	\$3,000.00
Captain	\$2,000.00
Lieutenant	\$1,000.00
Unassigned	\$1,000.00
Service Technician	\$2,000.00

## Exhibit 4 – Public Works Contract template

### PARTIES

THIS CONTRACT, made on this (DD) day of (MONTH), 20YY, by and between the NEVADA COUNTY CONSOLIDATED FIRE DISTRICT, a fire protection district located in the State of California, hereinafter referred to as the "**District**" and (Name of Contractor), hereinafter referred to as the "**Contractor**".

This contract is for the following project: {project description}

**NOW, THEREFORE**, in consideration of the mutual covenants and agreements contained herein, it is hereby agreed as follows:

### TERMS & CONDITIONS

#### 1. SCOPE OF WORK:

Contractor agrees to furnish all permits (as required), tools, equipment, apparatus, facilities, labor and materials necessary to perform and complete in a good and workmanlike manner, and in strict accordance with the Contract Documents as defined in the RFP, bid, proposal or similar supporting documents.

#### CONTRACT TIME:

##### 2.1 COMMENCEMENT AND COMPLETION

The Work shall be commenced on the date specified in the District's "Notice of Award to Contractor" and shall be fully completed no later than \_\_\_ calendar days thereafter, or in such additional time as may have been provided by Change Order, pursuant to the Contract Documents.

##### 2.2 TIME IS OF THE ESSENCE

Time is of the essence. If the work is not completed in the time specified, including such extensions of time as may have been granted for unavoidable delays, the Contractor will be assessed damages for delay in accordance with the liquidated damages provision herein.

A determination of whether delays were avoidable or not shall be made by District.

#### 3. CONTRACT PRICE:

District shall pay Contractor for the full and complete performance of this Contract in the sum of \_\_\_\_\_ dollars \_\_\_ cents (\$ \_\_\_\_\_.)

The contract price may be adjusted only as provided in the Contract Documents and only upon the express written approval of the District, and in the event of any such adjustment, the Contractor agrees that the maximum adjustment to be attributable to his overhead and profit shall not exceed

fifteen percent (15%) of the actual costs to Contractor for any additional work encompassed by any such adjustment, in accordance with the General Conditions.

### **3.1 MONTHLY PROGRESS PAYMENTS**

Monthly progress payments shall be made in accordance with the General Conditions of these Contract Documents, subject to a five (5%) percent retention withholding as specified therein.

### **3.2 FINAL PAYMENT**

Final payment shall be made in accordance with the General Conditions of these Contract Documents. Final payment to include the payment of all retention withheld.

## **4. PAYMENTS:**

### **4.1 PROGRESS PAYMENTS**

Where the work is anticipated to require more than forty-five (45) days to complete, Contractor may apply for progress payments on a monthly basis. Contractor shall submit an invoice or application for payment covering the work completed to that date and accompanied by supporting documentation to District's satisfaction. Progress payments will be in an amount equal to ninety percent (95%) of the work completed.

### **4.2 FINAL PAYMENT**

Payment in full for the completed project will not be due until at least thirty-five (35) days after recording of the Notice of Completion with the County Recorder (if required). Acceptance of final payment will be deemed as a waiver of all claims except those which were timely made pursuant to the claims provisions of this contract.

### **4.3 INVOICE CONTENT**

Invoices or applications for payment to the District shall be detailed and shall contain full documentation of all work performed and all reimbursable expenses incurred. Where the scope of work on the contract is divided into various tasks, invoices shall detail the related expenditures accordingly. Labor expenditures need documentation to support time, subsistence, travel and field expenses. No expense will be reimbursed without adequate documentation. This documentation will include, but not be limited to, receipts for material purchases, rental equipment and subcontractor work.

### **4.4 ACCEPTANCE OF FINAL PAYMENT AS RELEASE**

The acceptance by the Contractor of final payment shall be and shall operate as a release to the District of any and all claims and all liability to the Contractor for all things done or furnished in connection with this work and for every act and/or neglect of the District or others relating to or arising from the work, to the full extent authorized by Public Contracts Code Section 7100. No payment, however, final or otherwise, shall operate to release the Contractor or his sureties from

any obligations under this Contract or the Performance and Payment Bonds required by this Contract, or the guarantees and warranties required by the Contract Documents, or the bond securing the same.

## **5. CONTRACT DOCUMENTS:**

The contract documents comprise the entire agreement between the parties and may be amended only by writing signed by both parties or by written Change Order signed by both parties. The contract documents shall include this contract, plans and specifications, RFP and or bidding documents, addenda thereto dated: MM/DD/YY all proposals submitted by Contractor, the general conditions attached hereto and special, and/or supplementary conditions issued by the District dated MM/DD/YY.

**In the case of ambiguity or conflict, the documents shall be given the following priority:**

- This Agreement
- Request for Proposal
- Contract Drawings
- Technical Specifications
- Duly issued Addenda
- General and/or Special Conditions
- Supplementary conditions, if any
- Duly issued Clarifications and Field Orders
- Duly issued Work Authorizations
- Duly issued Change Orders
- Supplemental Drawings issued pursuant to Article 4 of the General Conditions
- Initial Submittals approved pursuant to Article 3 and all submittals approved pursuant to the General Conditions
- Contractor's Bid Proposal
- Contractors Guarantee and Bond Designation of Subcontractors
- Performance Bond
- Payment Bond

Such documents, collectively referred to herein as the "Contract Documents", are incorporated herein by this reference and made a part hereof.

## **6. PERFORMANCE AND LABOR & MATERIAL BONDS**

Pursuant to the provisions of the California Civil Code Section 9550, the Contractor shall, prior to the performance of any work covered by this Contract, provide to District in such form as may be acceptable to District, a performance bond guaranteeing the faithful and timely performance of the work to be performed under this Contract and guaranteeing the work for a period of one (1) full year from the date of the completion of the work (which shall be evidenced by the filing of a notice of completion by District) and a separate labor and material bond guaranteeing payment to any laborer, subcontractor and/or material supplier for the work under this Contract. The amount of each of these bonds shall be in accordance with the General Conditions to the Contract.

## **7. REPRESENTATIONS BY CONTRACTOR**

The Contractor hereby represents that before bidding it carefully examined the Request for proposal, drawings and project manual [if applicable], visited the project site of the location of work and fully informed itself as to all existing conditions at the site and limitations of information provided by the District regarding the site.

The Contractor further represents that it has satisfied itself as to the nature and location of the work, the general and local conditions, conditions of the write, availability of labor, materials on the site, the kind of equipment needed, the requirements of various trades or crafts needed to perform the work and all other matters which in any way affect the work or cost of the project. The Contractor agrees that its failure to acquaint itself with all available information concerning conditions shall not relieve it from its bid or its responsibility for estimating properly the difficulties or cost of the work, or the requirements for any trade, craft or portion of the work.

The Contractor further represents that the contract price shall include everything necessary for the completion of work and of fulfillment of this agreement for construction within the time specified herein, including, but not limited to, furnishing all permits (as required) materials, equipment, tools, plant and other facilities, and all management, superintendence, labor, and services. The contract price includes allowance for all Federal, State and local taxes and payment of the prevailing wages as required by applicable state and or federal law as set forth by the Department of Industrial Relations (CA) or the Davis Bacon Act (Federal) and/or the General Conditions of this agreement.

## **8. DELAY**

The Contractor specifically acknowledges and agrees that a time extension is its sole remedy for delays caused by the District, and agrees to make no claim for additional damages for such delay.

Contractor shall be entitled to a price adjustment with such time extension Change Order, but such price adjustment shall be limited to its direct additional costs to perform the Contract, subject to the General Conditions, and subject to verification by the District.

Processing of Submittals, Clarifications and other information by the District within the time specified in the Contract Documents shall in no event constitute a District-caused delay.

## **9. NOTICES**

Any notice, demand, request, consent, approval or communication that any party desires or is required to give any other party shall be in writing and either served via E-mail, personally or sent by pre-paid first-class mail. Any such writing shall be addressed as follows:

**Nevada County Consolidated Fire District**  
**Attn: Deputy Fire Chief**  
11329 McCourtney Road  
Grass Valley, CA 95949

**Contractor**



Address  
City, State, Zip

**Engineer and/or Architect**

Address  
City, State, Zip

**10. LIQUIDATED DAMAGES**

If the work is not completed by Contractor in the time specified in Section 2 of this Agreement, or within any period of extension authorized pursuant to a duly issued Change Order, Contractor acknowledges and admits that the District will suffer damage, and that it is impracticable and infeasible to fix the amount of actual damages. Therefore, it is agreed by and between the Contractor and the District that the Contractor shall pay to the District as fixed and liquidated damages, and not as a penalty, the sum of (\$\_\_\_\_\_ ) each calendar day of delay until the work is completed and accepted, and that both Contractor and Contractor's surety shall be liable for the total amount thereof, and that the District may deduct said sums from any monies due or that may become due to Contractor, prior to determining the final amount due to Contractor. This liquidated damages provision shall apply to all delays of any nature whatsoever, save and except only delays found by the District Board to be unavoidable pursuant to the General Conditions, or time extensions granted in writing by the District.

**IN WITNESS WHEREOF**, the parties hereto executed this Agreement the day and year first above written.

**Nevada County Consolidated Fire District**

By: \_\_\_\_\_ Date: MM / DD / YYYY  
Jerry Funk, Deputy Fire Chief

**Contractor:**

(Insert Name of Contractor)

By: \_\_\_\_\_ Date: \_\_\_\_\_

Name/Title: \_\_\_\_\_

State Contractor's License Number: \_\_\_\_\_

**CORPORATE CERTIFICATE**

I, \_\_\_\_\_, certify that I am the Secretary of the Corporation named as CONTRACTOR in the foregoing Contract; that \_\_\_\_\_, who signed said Contract on behalf of said Corporation is authorized to fully bind the corporation to this Agreement; that said contract was duly signed for and on behalf of said corporation by authority of its governing body and is within the scope of its corporate powers.

(CORPORATE SEAL)

## **GENERAL CONDITIONS**

### **1. CHANGES IN THE WORK:**

District may order additions, deletions or revisions in the work which shall be authorized by written Change Order. Circumstances may occur where Contractor may need to apply for a change in the contract. Such changes must be applied for in writing in advance by Contractor and approved prior to doing of the additional work. Changes in contract price due to change orders shall be established either by (1) unit price (where bidding was done by unit price), (2) based on the actual cost of the work (including but not limited to all labor and materials) plus an amount not to exceed fifteen percent (15%) for overhead and profit together, or (3) by mutual acceptance of a lump sum.

### **2. BONDS:**

A. Contractor shall furnish two (2) bonds each in the amount of one hundred percent (100%) of the contract price, one as security for the faithful performance of the work, and the other as security for the faithful payment and satisfaction of all persons furnishing materials and performing labor for the project. The labor and materials bonds shall remain in effect until the recording of a Notice of Completion. The performance bond shall remain in effect until the running of the warranty period. The bonds shall be issued by a corporation duly licensed to transact surety business in the state of California. The bonds must be executed by a duly licensed surety company and accompanied by a certified copy of the authority to act and shall be on the form provided by District.

B. For projects involving less than \$50,000, Contractor shall furnish bonds in the amount of fifty percent (50%) of the contract price, or may post negotiable securities in accordance with the following procedures:

Negotiable securities shall be endorsed over to the District and shall be held by District under a surety deposit agreement until Contractor has fully complied with all applicable laws and provisions of the District's public works contract prerequisite to the release thereof. An administrative fee shall be charged by District for the execution of the surety deposit agreement in the amount of \$100.00. The Contract Administrator shall be authorized to execute all security deposit agreements, the form of which shall be as approved by District Counsel.

C. In the event of a default by Contractor, District shall notify Contractor of the specifics of the default and shall extend a reasonable time for Contractor to cure same or to pay such damages as District may reasonably assess under the terms of the Public Works Contract. District shall not

release the bonds or security until Contractor has fully performed under the contract. If Contractor fails to promptly cure any breach or to pay such damages as may have been reasonably assessed after notification of the breach and/or of the assessment of damages, District shall proceed to sell the securities and/or make demand on the bonds.

D. District reserves the right to accept or to reject the tender of any bond or security as being sufficient to protect the interest of the District.

### **3. CONTRACTOR LIABILITY AND INSURANCE(S):**

Contractor shall be liable for all damages and injury which shall be caused to District or any other property on or in the vicinity of the work or which shall occur to any person or persons or property whatsoever arising out of the performance of this contract. Contractor shall purchase and maintain such commercial general liability and other insurance as is appropriate and/or as may be required in the special conditions, for the work being performed and furnished and which will provide complete protection to District. Said policies shall be payable on a "per occurrence" basis unless District specifically consents to a "claims made" basis. At a minimum Contractor shall provide and maintain a policy of commercial general liability insurance in a combined single limit of One Million Dollars (\$1,000,000.00) and Worker's Compensation Insurance.

Where the services to be provided under this contract involve or require the use of any type of vehicle by Contractor in order to perform said services, Contractor shall also provide comprehensive business or commercial automobile liability coverage including non-owned and hired automobile liability in the amount of \$300,000.

District shall be a named insured and a certificate of insurance and endorsements shall be provided by Contractor prior to commencement of work. Contractor shall also purchase and maintain property insurance upon the work or equipment and supplies stored at the site, if any, to the full insurable value thereof. All policies of insurance shall contain a provision that the coverage will not be canceled, materially changed, or renewal refused until at least thirty (30) days' prior written notice has been given to District. If a loss occurs, the above insurance shall be primary.

### **4. RISK OF LOSS:**

Liability for loss or damage to equipment, materials, work completed or services occurring on or off the site shall be the responsibility of Contractor. Liability for completed work shall not be assumed by District until both the work has been completed and District has accepted the work as complete.

### **5. MATERIALS AND EQUIPMENT:**

All material and equipment shall be of good quality and new unless the contract provides otherwise. Whenever materials or equipment are specified or described in the contract documents by using the name of a proprietary item or a particular supplier, it is intended to establish the type,

function and quality required. Any substitutions must be expressly consented to by District in advance of installation or use.

Where applicable, Contractor shall deliver all manufacturers' operating and maintenance instructions to District prior to receipt of final payment.

**6. WARRANTY AND CORRECTION PERIOD:**

If within one (1) year after the date of completion of the work or such longer period of time as may be prescribed by law or regulations or by the terms of any applicable special guarantee required by the contract documents any work is found to be defective, Contractor shall promptly, without cost to District and in accordance with District's written instruction, either correct such defective work, or, if it has been rejected by District, remove it from the site and replace it with non-defective work. If Contractor is unable to promptly and properly correct any defective work, District may at its option have the work corrected by such other means as District deems appropriate and hold Contractor liable for all direct, indirect and consequential costs caused by such defective work. Said warranty shall apply to all work found to be "defective" which is attributable to the quality or quantity of the materials used, the quality of the workmanship or for performance of the contract.

**7. PERMITS AND TAXES:**

Unless otherwise provided in the special contract provisions, Contractor shall obtain and pay for all construction permits, licenses or other permits necessary to complete the work and shall be liable for all governmental charges, inspection fees, utility connection charges, sales, consumer, use and other taxes.

**8. INDEMNIFICATION:**

Contractor shall fully indemnify, hold harmless and defend District and its consultants, agents, officers and employees from and against all claims, damages, losses and expenses, direct, indirect or consequential arising out of or resulting from the negligent performance of the work herein or willful misconduct by Contractor.

**9. SUSPENSION OF WORK:**

District may, at any time and without cause, suspend the work or any portion thereof for a reasonable period of time by notice in writing to Contractor.

**10. TERMINATION:**

Except as limited by law or regulation, District may terminate this contract upon the occurrence of any one or more of the following events.

A. If Contractor commences a voluntary case under any chapter of the Bankruptcy Code (Title 11, United States Code), as now or hereafter in effect, or if Contractor takes any equivalent or similar action by filing a petition or otherwise under any other federal or state law in effect at such time relating to the bankruptcy or insolvency;

B. If a petition is filed against Contractor under any chapter of the Bankruptcy Code as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against Contractor under any other federal or state law in effect at the time relating to bankruptcy or insolvency;

C. If Contractor makes a general assignment for the benefit of creditors;

D. If a trustee, receiver, custodian or agent of Contractor is appointed under applicable law or under contract, whose appointment or authority to take charge of property of Contractor is for the purpose of enforcing a lien against such property or for the purpose of general administration of such property for the benefit of Contractor's creditors;

E. If Contractor admits in writing an inability to pay its debts generally as they become due;

F. If Contractor persistently fails to perform the work in accordance with the contract documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the time schedule);

G. If Contractor disregards ordinances, laws or regulations of any public body having jurisdiction;

H. If Contractor disregards the authority of District's supervisory staff, and, in particular, the Contract Administrator;

I. If Contractor otherwise violates in any substantial way any provisions of the contract documents.

District may, after giving Contractor seven (7) days' written notice, terminate the services of Contractor, exclude Contractor from the site and take possession of the work, incorporate in the work all materials and equipment stored at the site or for which District has paid Contractor but which are stored elsewhere, and finish the work as District may deem expedient. In such case Contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the contract price exceeds the direct, indirect and consequential costs of completing the work (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court costs) such excess will be paid to Contractor. If such costs exceed such unpaid balance, Contractor shall pay the difference to District. When exercising any rights or remedies under this paragraph, District shall not be required to obtain the lowest price for the work performed. Where Contractor's services have been so terminated by District, the termination will not affect any rights or remedies of District against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by District will not release Contractor from liability.

Upon seven (7) days' written notice to Contractor, District may, without cause and without prejudice to any other right or remedy, elect to abandon the work and terminate the Contract. In such case, Contractor shall be paid for all work executed and any actual expense sustained.

## **11. SUPERVISION AND CLAIMS DETERMINATIONS:**

### **11.1 CONTRACT ADMINISTRATOR**

District may appoint staff or hire professional services for supervision and administration, at its election. Said person is hereinafter referred to as "Contract Administrator". The Contract Administrator is the delegated authority to determine the amount, quality, acceptability and fitness of the work, materials and equipment to be paid for under this contract, to decide for District all questions relative to contract interpretation, to reject or condemn all work or material which does not conform to the terms of this contract and to review and make a final determination on all claims submitted to District.

### **11.2 WRITTEN CLARIFICATION**

If there is an ambiguity in the contract documents, Contractor shall request an interpretation from the Contract Administrator. Contractor Administrator shall issue a written clarification or interpretation. If Contractor believes that a written clarification or interpretation justifies an increase in the contract price or an extension of the contract time and the parties are unable to agree on the amount or extent thereof, Contractor may make a claim therefor.

### **11.3 CHANGE ORDER**

The Contract Administrator may authorize or require variations in the work from the requirements of the contract documents so long as it is in writing. Contractor shall perform the work involved promptly. If Contractor believes that such a Change Order justifies an increase in the contract price or an extension of the contract time and the District and Contractor are unable to agree as to the amount or extent thereof, Contractor may make a claim therefor.

### **11.4 UNIT PRICING**

If the contract was based on unit pricing, the Contract Administrator will determine the actual quantities and classifications of unit price work. The Contract Administrator's written decisions thereon will be final and binding upon Contractor unless Contractor delivers to Contract Administrator written notice that Contractor disputes said decision and the reasons therefor as required below.

### **11.5 CLAIM PROCEDURE**

For purposes of this paragraph, "claim" shall be defined as set forth in Public Contracts Code Section 201 04(b)(2). Claims shall be presented in writing and include the documents necessary to substantiate the claim. Claims must be filed with the Contract Administrator no later than thirty (30) days after the occurrence of the event giving rise thereto or denial of the change order, whichever occurs last. The form of said claims shall be the same as is required by Government Code Section 910 and 910.2.

### **11.6 CLAIMS UNDER \$50,000**

If the claim is under \$50,000, District shall respond in writing to Contractor within forty-five (45) days of receipt of Contractor's claim or may request, in writing, within thirty

(30) Days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims the District may have against the Contractor. If additional information is

thereafter required, it shall be requested and provided pursuant to Public Contracts Code Section 20104.2, upon mutual agreement of the District and the Contractor. The District's written response to the claim, as further documented, shall be submitted to the Contractor within fifteen (15) days after receipt of the further documentation or within a period of time no greater than that taken by the Contractor in producing the additional information, whichever is greater.

#### **11.7 CLAIMS OVER \$50,000**

For claims over \$50,000 and less than or equal to \$375,000, District shall respond in writing to all written claims within sixty (60) days of receipt of the claim, or may request, in writing within thirty (30) days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims the District may have against Contractor. If additional information is thereafter required, it shall be requested and provided pursuant to Public Contracts Code Section 20104.2, upon mutual agreement of District and Contractor. The District's written response to the claim, as further documented, shall be submitted to Contractor within thirty (30) days after receipt of the further documentation, or within a period of time no greater than that taken by Contractor in producing the additional information or requested documentation, whichever is greater.

#### **11.8 MEET AND CONFER**

If Contractor disputes District's written response, or District fails to respond within the time prescribed above, Contractor may so notify District, in writing, either within fifteen

(15) Days of receipt of District's response or within fifteen (15) days of District's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer with such District representatives as the Contract Administrator or the District Board directs for settlement of the issues in dispute. Upon such demand, District shall schedule a meet and confer conference within thirty (30) days for settlement of the dispute.

#### **11.9 APPEAL TO DISTRICT BOARD**

If following the meet and confer conference the claim or any portion thereof remains in dispute, Contractor may file a claim with the District Board pursuant to Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. Pursuant to authority granted by Government Code Section 930.2, all claims filed with the District Board pursuant to the Government Code shall be filed within ninety (90) days of the denial of the original claim by the District representative. The running of the period of time within which a claim under the Government Code must be filed shall be tolled by any period of time utilized by the meet and confer conference. Any lawsuit which Contractor intends to bring with respect to any claim filed pursuant to the Government Code which claim has been denied by District must be commenced not later than six (6) months after the recording of the notice of completion or not later than six (6) months after the date final payment is deposited in the mail or personally delivered, whichever date comes first.

#### **11.10 DOCUMENTATION**



For every claim that Contractor makes, it shall provide the following documentation upon request of District as a condition precedent to consideration of the claim: Contractor's bidding calculation forms, cost estimates, time sheets, trend reports, job cost analysis records, labor records, as-built documents, any other records used by Contractor in arriving at its bid price, and any other documents or records kept by Contractor during the course of construction. In the event that claims are made, Contractor agrees that District shall have the right to conduct a complete audit of the books and records of Contractor relating to this project and any books and records relating to overhead, profit or general office expenses charged to this project.

#### **11.11 CONTRACT ADMINISTRATOR NOT RESPONSIBLE**

Notwithstanding the above, Contract Administrator shall not be responsible for Contractor's means, methods, techniques, sequences or procedures of construction or the safety precautions and programs incident thereto and will not be responsible for Contractor's failure to perform or furnish the work in accordance with the contract documents. Contract Administrator shall also not be responsible for the acts or omissions of Contractor-or of any subcontractor, any supplier, or any other person or organization performing or furnishing any of the work.

#### **12. ARBITRATION:**

For claims under \$375,000, District shall have the option of electing arbitration pursuant to Public Contracts Code Sections 10240, et seq. If District does not so elect, the provisions of Public Contracts Code Section 20104 shall apply. For claims which are above \$375,000, the arbitration provisions of this contract are voluntary. Neither District nor Contractor shall be required to enter into arbitration for amounts above \$375,000. Written consent of both parties to arbitrate such claims shall be a prerequisite to such arbitration. If the parties agree to arbitrate claims above \$375,000, the provisions of Public Contracts Code Sections 10240, et seq. shall be utilized.

#### **13. WORKER'S COMPENSATION CERTIFICATION:**

Contractor hereby certifies that Contractor is aware of the provisions of Section 3700 of the Labor Code which requires every employer to be insured against liability for Worker's Compensation or to undertake self-insurance in accordance with the provisions of that Code, and will comply with such provisions before commencing the performance of the work of this contract.

#### **14. PREVAILING WAGE RATES:**

In accordance with the provisions of Section 1770 and 1773 of the Labor Code, the District has determined the general prevailing rate of wages applicable to the work to be done. These rates are on file with the Department of Industrial Relations. The Contractor shall post a copy of the wage rates on the job site. Pursuant to California Labor Code Section 1775, Contractor shall forfeit not more than Two Hundred Dollars (\$200) for each calendar day, or portion thereof, for each worker paid less than the prevailing rates for such work or craft, and said amounts shall be distributed pursuant to the requirements of said Section 1775. Any employee whose type of work is not covered by any of the classified wage rates shall be paid not less than the rate of wage listed for the classification which most nearly corresponds to the type of work to be performed.

**15. EMPLOYMENT OF APPRENTICE LABOR:**

Reference is hereby made to Section 1777.5 of the Labor Code of the State of California, which regulations shall govern the employment of apprentices on the work. Compliance with said Section shall be the responsibility of the Contractor.

**16. COLLECTIVE BARGAINING AGREEMENTS:**

Pursuant to California Labor Code Section 1773.8, Contractor shall pay travel and subsistence payments to any workers covered by applicable collective bargaining agreements which provide for such payments.

**17. PAYROLL RECORDS:**

Contractor shall be responsible for keeping accurate payroll records as required by California Labor Code Section 1776. Contractor is aware that a penalty of one hundred dollars (\$100.00) per day or portion thereof for each worker may be assessed for noncompliance with said section. Contractor shall forward to District a certified copy of each payroll record within ten (10) days after close of each payroll period. An additional five percent (5%) retention may be withheld from any payment due for failure to provide same. Payroll records can also be uploaded to the CA DIR Certified Payroll Report website.

**18. EQUAL EMPLOYMENT OPPORTUNITY AND NONDISCRIMINATION:**

During the performance of this contract, the Contractor agrees to abide by all provisions of Section 1735 of the California Labor Code, as amended, regarding nondiscrimination practices.

**19. ASSIGNMENT:**

No assignment by a party hereto of any rights under or interests in the contract documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the contract documents.

**20. CONFLICT OF INTEREST RESTRICTIONS:**

No official of the District who is authorized in such capacity and on behalf of the District to negotiate, make, accept or approve, or to take part in negotiating, making, accepting, or approving any architectural, engineering, inspecting, construction or material supply contract or any subcontract in connection with the construction of the project, shall become directly or indirectly interested personally in this contract or in any part thereof. No officer, employee, architect, attorney, engineer, or inspector of or for the District who is authorized in such capacity and on behalf of the District who is in any legislative, executive, supervisor, or other similar function in connection with the construction of the project, shall become directly or indirectly interested

personally in this contract or in any part thereof, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the project.

**21. WAIVER OF RIGHTS:**

No action or lack of action on the part of District at any time to exercise any right or remedy conferred upon it under this contract shall be deemed to be a waiver on the part of the District of any of District's other rights or remedies.

**22. SUCCESSORS IN INTEREST:**

District and Contractor each bind themselves, their partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns and legal representatives in respect to all covenants, agreements, and obligations contained in the contract documents.

**23. SEVERABILITY:**

If any provision to this contract is declared or found to be illegal, unenforceable or void, then both parties shall be relieved of all obligations arising under such provisions, and the remainder of this contract shall not be affected by such declaration or finding and each provision not so affected shall be enforced to the fullest extent permitted by law.

**24. BOOKS OF RECORD AND AUDIT PROVISION:**

Contractor shall maintain on a current basis complete books and records relating to this contract. Such records shall include, but not be limited to, documents supporting all bids, all income and all expenditures. The books and records shall be original entry books with a general ledger itemizing all debits and credits for the work on this contract. In addition, Contractor shall maintain detailed payroll records including all subsistence, travel and field expenses, and cancelled checks, receipts and invoices for all items. These documents and records shall be retained for at least five (5) years from the completion of this contract. Contractor will permit District to audit all books, accounts or records relating to this contract or all books, accounts or records of any business entities controlled by Contractor who participated in this contract in any way. Any audit may be conducted on Contractor's premises or, at District's option Contractor shall provide all books and records within a maximum of fifteen (15) days upon receipt of written notice from District. Contractor shall refund any moneys erroneously charged. If District ascertains that it has been billed erroneously by Contractor for an amount equaling five percent (5%) or more of the original bid, Contractor shall be liable for the costs of the audit in addition to any other penalty to be imposed.

**25. NOTICE:**

Notices shall be given to District at the following location:

If to "DISTRICT"

**Nevada County Consolidated Fire District**

**Attn: Deputy Fire Chief**

11329 McCourtney Road

Grass Valley, CA 95949

If to "CONTRACTOR"

**Contractor**

Address

City, State, Zip

**26. JURISDICTION AND VENUE:**

This Contract shall be construed in accordance with the laws of the State of California and the parties hereto agree that venue shall be Nevada County, California.

Contractor's Acknowledgement of General Conditions: \_\_\_\_\_ (Initials)



# Nevada County Consolidated Fire District

## Resolution 21-04

### Electronic and Facsimile Signature Policy

**WHEREAS**, the Nevada County Consolidated Fire District Board wishes to allow electronic and facsimile signatures on certain official documents as allowed by California Government Code section 16.5 and AB 2296; and

**WHEREAS**, the use of electronic and facsimile signatures will support the increasing need for remote execution of documents; and

**WHEREAS**, the use of electronic and facsimile signatures will support the District's goal of reducing the storage of paper documents.

**NOW, THEREFORE, BE IT RESOLVED** by the Nevada County Consolidated Fire District Board of Directors, authorizes the use of electronic and facsimile signatures in certain official documents as set forth in the attached policy.

**PASSED AND ADOPTED** by the Board of Directors as Resolution of the Nevada County Consolidated Fire District at the Regular Board Meeting held on the 21<sup>st</sup> day of January, 2021 by the following roll call:

Ayes:  
Noes:  
Absent:  
Abstain:

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Keith Grueneberg, President of the Board  
Nevada County Consolidated Fire District

Attest:

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Nicole Long, Secretary to the Board

# POLICY 104 ELECTRONIC SIGNATURE POLICY

## Purpose

The Nevada County Consolidated Fire District eSignature Policy shall be used by District Employees, and Elected Officials to increase productivity and ensure convenient, timely and appropriate access to District information by using electronic signature technology to collect and preserve signatures on documents quickly, securely, and efficiently. In addition to increasing productivity and efficiency, this Policy furthers the District's Sustainable Initiative goals by reducing the consumption and storage of paper documents and the maintenance and supply of printers.

This Policy establishes when electronic signature technology may replace a hand-written signature, with the goal of encouraging the use of paperless, electronic documents whenever appropriate and allowed by law. This Policy applies to all signatures used in processing various District documents as allowed by law and excluding those documents listed in Attachment A.

While the use of electronic signatures is suggested and encouraged, this Policy does not require the use of electronic signatures, nor can the District mandate that any third party signing a document use electronic signature.

## Background/Discussion

Electronic Signature is the broad umbrella category under which all electronic signatures fall.

The legality and use of Electronic Signatures are governed by federal and state law. (See 15 United States Code §§ 7001, *et seq.* [U.S. Federal Electronic Signatures in Global and National Commerce Act]; California Government Code §16.5; California Civil Code §§ 1633.1, *et seq.*)

## Policy

This Policy applies to documents requiring a signature of any person where the signature is intended to show authorship, approval, authorization, or certification, as allowed by law. It is the Policy of the District to encourage the use of electronic signatures in all internal and external activities, documents, and transactions where it is operationally feasible to do so, where existing technology permits, where it is otherwise appropriate based on the District's preferences, and where allowed by law. In such situations, affixing an electronic signature to the document in a manner consistent with this Policy shall satisfy the District's requirements for signing a document.

1. **COMMON TYPES OF DOCUMENTS:** This Policy is intended to broadly permit the use of electronic signatures. Examples of common types of documents are listed in the following table, with notes on each type of document.

Document Type Examples	Is Use of an Electronic Signature Acceptable?	Notes
Memos, Forms, Board Letters, and Other Correspondence	Yes	Electronic Signature is recommended.
Contracts, Memorandum of Understanding (MOU)	Yes	Electronic Signature is recommended.
Certificates, Permits	Yes, if allowed by law	Electronic Signature is recommended, where applicable laws permit an electronic signature to be used.
Board/Committee Minutes, Resolutions, Ordinances	Yes, if allowed by law	Electronic Signature is recommended, where applicable laws permit an electronic signature to be used.
Finance Documents, including but not limited to warrant requests for the County of Nevada, purchase orders and invoices	Yes, if allowed by law	Electronic Signature is recommended, where applicable laws permit an electronic signature to be used.

2. **USE OF FACSIMILE SIGNATURE:** The use of a facsimile signatures of District Employees and Elected Officials is authorized for use on all documents when allowed by law.

3. **DIGITAL OR ELECTRONIC SIGNATURES:**

3.1 DEFINITIONS

- a. **Electronic signature** means an electronic sound, symbol, or process attached to, or logically associated with, an electronic record and executed or adopted by a person with the intent to sign the electronic record. The Uniform Electronic Transaction Act (UETA) authorizes use of an electronic signature for transactions and contracts among parties in California, including a government agency. (Cal. Civ. Code §1633.1-1633.17)
- b. **Digital signature** means an electronic identifier, created by computer, intended by the party using it to have the same force and effect as the use of a manual signature. For purposes of this section, a digital signature is a type of "electronic signature" as defined in subdivision (i) of §§1633.2 of the California Civil Code.
- c. **Proxy Signatures** are when Person-A authorizes Person-B to sign Person-A's signature on his/her behalf. (This is prohibited for eSignatures by this policy.)

### 3.2 ELECTRONIC SIGNATURE

The Uniform Electronic Transaction Act (UETA) authorizes use of an electronic signature for transactions and contracts among parties in California, including a government agency, when both parties agree to its use. (Cal. Civ. Code §§1633.1 – 1633.17). The electronic signature must be supported by evidence that the signature is the act of the intended person. An agreement executed with an electronic signature has the same legal enforceability as a wet signature, excluding documents that are exempt.

### 3.3 DIGITAL SIGNATURES

A digital signature is a type of electronic signature with strict security requirements that may be used to execute certain written communications and agreements with the District if it satisfies the requirements found in Cal. Gov. Code §16.5, et. seq. and Title 2, division 7 Chapter 10 of the California Code of Regulations. (2 CCR §§22000- 22005) The signatures must be:

1. Unique to the person using it;
2. Capable of verification;
3. Under the sole control of the person using it; and must be linked to the data in such a way that if the data is changed the signature will be invalidated.
  - a. Email notifications requesting electronic signatures must not be forwarded.
  - b. These requirements prohibit the use of proxy signatures.

### 4. PROCEDURES FOR USE OF ELECTRONIC OR DIGITAL SIGNATURES:

**4.1 System Approval** The system used for the creation of the electronic signature must be approved by the District and in accordance with state law.

**4.2 Retention** The executed electronic agreement must be maintained pursuant to the District Records Retention Policy. The secure method of retention of the final agreement must lock the document, preventing any changes to the final executed agreement. Such as un-editable PDF.

**5. CHANGE OR ERROR IN ELECTRONIC RECORD** If a change is needed or an error is being corrected within the electronic record of the fully executed agreement, those actions will comply with the requirements of Cal. Civ. Code § 1633.10 or will be addressed through a contract amendment.

**6. EXEMPTIONS** Electronic signatures may not be used in all situations. Documents that may not be completed using electronic signature include, but are not limited to:

- a. Laws governing the creation and execution of wills, codicils, or testamentary trusts;
- b. Certain transactions governed by the Uniform Commercial Code; laws requiring specifically that identifiable text or disclosures in a record or portion of a record be separately signed, including initialed, from the record; and
- c. Certain transactions governed by the Business and Professions Code. (Cal. Civ. Code § 1633.3)

An example of some documents that may not be signed with an electronic or digital signature pursuant to statute is incorporated herein as Attachment A.

**7. eSIGNATURE SOLUTION PROVIDERS** The Fire Chief and/or Designee will be responsible for determining acceptable technologies and eSignature providers consistent with current state legal requirements and industry best practices to ensure the security and integrity of the data and the signature.



# ATTACHMENT A

## EXAMPLE OF EXCLUDED DOCUMENTS<sup>1</sup>

1. Civil Code
  - a. Creation and execution of wills, codicils, or testamentary trusts (Civil Code § 1633.3(b)(1).)
  - b. Documentation required for the foreclosure of a mortgage or deed of trust (Civil Code, §§ 2924b, 2924c, 2924f, 2924i, 2924j, 2924.3, and 2937.)
  - c. When a law requires that specifically identifiable text or disclosures must be signed or initialed separately. (Civil Code § 1633.3(b)(4).)
  - d. Requests to obtain medical information (Civil Code § 56.11.)
  - e. Genetic test results (Civil Code § 56.17.)
  - f. Notices related to the Mobile home Residency Law (Civil Code § 798.14.)
  - g. Notice of Blanket Encumbrance on Real Property (Civil Code § 1133.)
  - h. Statement of Defects in a transfer of real property (Civil Code § 1134.)
  - i. Cancellation or Rescission of a home solicitation contract or offer (Civil Code §§ 1689.6, 1689.7, 1689.13.)
  - j. Home Equity Sales Contracts (Civil Code § 1695.)
  - l. Debit or credit obligations (Civil Code § 1720.)
  - m. Consumer Credit Reporting Agencies documents (Civil Code §§ 1785.15, 1789.14, 1789.16, or 1793.23.)
  - n. Retail Installment Contracts (Civil Code § 1801 et seq.)
  - o. Notices for sales from non-payment of judgement or unclaimed property (Civil Code §§ 1861.24, 1862.5.)
  - p. Loans (Civil Code §§ 1917.712, 1917.713.)
  - q. Rental applications with credit reports and notices (Civil Code §§ 1950.6, 1983.)
  - r. Liens on Vehicles (Civil Code § 3017.5.)
  - s. Common Interest Developments (Civil Code § 4000.)
  - t. Commercial and Industrial Common Interest Developments (Civil Code § 6500.)
2. Uniform Commercial Code: Documents described in Division 1, 3, 4, 5, 8, 9, and 11 of the Uniform Commercial Code.
  - a. Transactions subject the General Provisions, Division 1 of the UCC commencing with § 1101
  - b. Negotiable Instruments subject to Division 3 of the UCC commencing with § 3101
  - c. Bank Deposits and Collections subject to Division 4 of the UCC commencing with § 4101
  - d. Letters of Credit subject to Division 5 of the UCC commencing with § 5101
  - e. Investment Securities subject to Division 8 of the UCC commencing with § 8101
  - f. Secured Transactions subject to Division 9 of the UCC commencing with § 9101
  - g. Funds Transfers subject to Division 11 of the UCC commencing with § 11101
3. Telephone solicitation (Business and Professions Code § 17511.5.)
4. Financial Code
  - a. Certain Provisions of Premium Finance Agreements/ right to cancel (Financial Code § 18608 (b).)
  - b. Liens on moto vehicles and disposition of repossessed vehicles (Financial Code § 22328.)
5. Health Care Service Plan documents (Health and Safety Code §§ 1358.15, 1365, 1368.01, 1368.1,

1371, 18035.5.)

6. Individual and group disability policies (Insurance Code §786.)
7. Termination of utility service for nonpayment. (Public Utilities Code §§ 779.1, 10009.1, 10010.1, 12823.1, 16482.1.)
8. Brokering agreements for manufacturers, transporters and dealers of vehicles (Vehicle Code §11738.)

Any notice that is required to be sent when obtaining possession of Real Property (Code of Civil Procedure §1162

<sup>1</sup> This list is not all inclusive and may change.



# Nevada County Consolidated Fire District

## Resolution 21-05

### 2012 Special Tax Fund Transfer

**WHEREAS**, the 2012 Special Tax was passed by voters to provide additional operating funds to Nevada County Consolidated Fire District (“District” or “NCCFD”), and

**WHEREAS**, the tax measure contained the stipulation it would be established as a separate fund in the Nevada County treasury, and

**WHEREAS**, Nevada County has provided the December 2020 installment of this tax, and fund has a balance of \$533,690.63 as of the writing of this resolution, and

**WHEREAS**, the Nevada County Auditor-Controller requires the NCCFD Board of Directors to authorize and approve the transfer from the special fund to operating funds.

**NOW, THEREFORE, BE IT RESOLVED** that the NCCFD Board of Directors, by adoption of this resolution, approves the transfer of \$530,000.00 from the 2012 Special Tax Fund (6734) to operating funds (6722) to cover operating expenses.

**PASSED AND ADOPTED** by the Board of Directors as Resolution of the Nevada County Consolidated Fire District at the Regular Board Meeting held on the 21<sup>st</sup> day of January 2021 by the following roll call:

Ayes:  
Noes:  
Absent:  
Abstain:

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Keith Grueneberg, President of the Board  
Nevada County Consolidated Fire District

Attest:

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Nicole Long, Secretary of the Board



# NCCFD CHIEFS' MONTHLY REPORT

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**To:** NCCFD Board of Directors  
**From:** Jim Turner, Fire Chief  
Jerry Funk, Deputy Chief  
**Date:** January 13, 2021

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## OPERATIONS

### **Calls for service January 1, 2020 thru December 31, 2020.**

- 3452 calls for service.
- 56% of calls EMS related.

### **Statistical data for the period of December 1 thru December 31, 2020.**

- 391 calls for service. (257 emergency, 134 non-emergency)
  - Average response time urban – 3 minutes 48 seconds
  - Average response time rural – 9 minutes 50 seconds
  - Average response time overall - 7 minutes 39 seconds
- \*Averages based on emergency responses only.

### **Significant Incidents:**

- Residential structure fire Empire Street area. Fire contained to the exterior of the structure. Cause under investigation.
- Numerous local vegetation fires. The largest being 4 acres in the Penn Valley area.
- Off-highway motorcycle accident in the rural Chalk Bluff area. One patient was transported to a local trauma center for serious injuries.
- Numerous serious vehicle accidents.

### **Training:**

- 298 hours of documented training for the month of December.

## ADMINISTRATION

- Chief Turner, Deputy Chief Funk, Fire Marshal McMahan and B/C Sunde participated in the virtual meeting of the Nevada County Fire Chiefs Association.
- Deputy Chief Funk and Fire Marshal McMahan attended the virtual monthly Community Agencies United for Safe Schools and Safe Streets (CAUSSS) Meeting.
- Chief Turner and Deputy Chief Funk attended the virtual Law Enforcement and Fire Protection Council Meeting.



## NCCFD CHIEFS' MONTHLY REPORT

- Deputy Chief Funk & Operations Support Long attended a virtual meeting regarding the implementation of a COVID Protection Plan. This plan is a recent mandate set forth by Cal-OSHA.
- Chief Turner and Deputy Chief Funk conducted Chiefs Interviews for a firefighter vacancy. A conditional offer of employment has been made.
- The District completed its annual NFPA 1582 - Firefighter Health Assessment Physicals.
- The new Rescue 84 has been in service for close to a month. Crews have adapted well to the change. Initial data shows reduced response times and lower operating costs.
- The District received draft plans for the installation of the new stand-by generator at Station 84. They have been returned to the electrical engineer for minor corrections. It is anticipated to solicit bids for the project in the next couple of weeks.
- Construction for the replacement of the deck at Station 84 is on hold until the completion of the generator project. A new conduit for the generator needs to be in place prior to pouring concrete for the deck project. The project is shovel ready and should go to bid shortly.
- Staff continues to explore options for the remodel of Fire Station 86. The initial estimates are cost prohibitive.

### **FIRE PREVENTION**

#### **Meetings and Training attended by Fire Marshal McMahan:**

- Virtual Sacramento Sierra Arson Task Force with DFM Mason, where he was elected Secretary.
- Virtual Nevada County Wildfire Prevention Stakeholder meeting.
- Virtual California Fire Sprinkler Coalition.
- Virtual Ready Nevada County – Extreme Climate Event Mobility and Adaption Plan kick off.

#### **Comments:**

Discussions with the schools as a meeting place have continued. Hoping once the shelter in place is lifted, President Grueneberg and I can visit some of the locations.

There has been some review of Fire Prevention options to be more efficient and consistent throughout Western Nevada County. There have been preliminary discussions to see if there is any interest at the County level. An education piece that was put together was the services we offer it is included as an attachment to this report.



## NCCFD CHIEFS' MONTHLY REPORT

### FINANCE

#### **Financial Highlights - as of 12/31/2020 unless otherwise noted.**

- Cash balances
  - Fund 722     \$ 556,943     (12/31/2019 balance was \$1,245,456)
  - Fund 723     \$1,245,140
  - Fund 733     \$ 107,810
  - Fund 734     \$ 534,004
  - Fund 758     \$ 431,616
- Strike Team
  - Invoicing     \$1,242,670
  - Still Due     \$1,094,544
- Liabilities
  - PNC – Engine 86             \$191,980 – 6 payments made, 4 left
  - West America - Rescue 84 \$253,721 – 1 payment made, 9 left
  - Proposed – Engine 88             \$635,336
  - CalPERS Unfunded Accrued Liability (6/30/2019) - \$5,310,927
    - 2020-21 payment was \$356,859
    - 2021-22 payment will be \$457,129
    - 2022-23 payment estimated as \$515,900
  - Compensated Absence (6/30/2020) - \$271,801
- Revenues
  - Fund 722 has received 55% of budget.
  - Fund 733 has received 107% of budget.
- Wages
  - 65% of budget of which 15% is strike team labor not yet reimbursed.
- Total Cost is 50% of budget (excludes unreimbursed strike team costs) with 50% of the year complete.

# ABOUT THE NEVADA COUNTY CONSOLIDATED FIRE DISTRICT DEPARTMENT OF FIRE PREVENTION

The goal of the Department of Fire Prevention is to provide a reasonable level of safety, by reducing the probability of injury and loss of life from the effects of fire and other emergencies or events.

There have been several notable fires that have occurred throughout history that gave way to further insight and knowledge for the field of fire technology and life safety. For example, The [Great Chicago Fire](#) in 1871 destroyed over 3.3 square miles, killed roughly 300 people, and burned the majority of the city of Chicago over the course of several days. This fire is significant because it established the need for Fire Prevention.

The [Triangle Shirtwaist Factory Fire](#) of 1911, New York, destroyed a clothing manufacturing factory, and killed over 150 people. In the midst of this horrific event, this was the beginning of work occupancy loads and highlighted the importance of protected stair wells in high-rise buildings.

The [Cocoanut Grove Fire](#), Boston, 1942, is the deadliest night club fire in history that killed over 492 people. The origin of the fire was determined by a candle igniting the interior curtains on the club walls. Fire Retardant Protection became a requirement for decoration.

[Our Lady of Angels Fire](#) 1958, in Chicago, was an elementary school that had a basement fire, which led to egress corridors and stair wells being blocked by smoke, heat, and fire. This led to major improvement in school's design in regards to fire safety.

The [MGM Grand Fire](#) occurred in 1980 in Las Vegas. A fire broke out in a restaurant and spread across the casino floor with no sprinklers. Do to the finishes, toxic fumes and smoke spread through the hotel tower. Out of the 85 people that perished, 75 perished from smoke inhalation and carbon monoxide poisoning.

The [Station Nightclub Fire](#) occurred in West Warwick, Rhode Island in 2003. Over 100 concert-goers perished in the club due to an indoor pyrotechnics prop igniting the interior walls of the venue. This tragic event made it illegal to use pyrotechnics indoors, promoted the use of better exit signage, and brought forth the demand for initial annual inspections on places of entertainment.

In more recent history, the Ghost Ship Warehouse Fire in Oakland, CA, 2016, killed 36 people due to the incorrect use of occupancy. At the time the fire broke out, the warehouse played host to a concert, and individuals were unable to escape because the building was not permitted for use of an event. This reiterated the importance of annual fire inspections.

The best way to protect life and property from fire is to prevent that fire from happening in the first place.

# WHAT WE DO

## Code Complaints

The Department of Fire Prevention investigates complaints in multi-family residential buildings for violations of fire and building codes, along with the Nevada County Land Use Development Code. Violations may include unsafe buildings, vehicle, trash, weeds, debris storage or substandard living conditions which is also reported to the County's Code Compliance Division.

## Fire Investigations

Our primary role as Fire Investigators is to determine origin and cause for all types of fires (kitchen, garage, barbeque, and arson fires). We are certified by the California State Fire Marshal as Investigators. We work closely with the Building Departments, PG&E, private investigators representing the property owner and/or insurance companies and a myriad of other agencies. After the fire we write a comprehensive Fire Investigation Report and potentially testify in court. If we determine the cause of the fire to be arson or a violation of the law, we forward our report to the District Attorney's Office for prosecution. Currently all three of our investigators are sworn peace officers however we are working on a shift investigator program where as certain individuals will be able to conduct the initial origin and cause investigation and if found to be suspicious one of the three sworn investigators would be called in to complete a criminal investigation. We assist the Cal Fire Investigators when requested on State Responsibility Area fires which are typically vegetation fires.

## Inspections

The Department of Fire Prevention performs a myriad of different types of inspections. This includes but is not limited to, state mandated inspections, construction inspections, commercial business inspections, multi-residential exterior inspections, hotels and motels, new business inspections, operational permit fire inspections including cannabis operations.

## Plan Review & Code Consultation

Before any commercial construction takes place, plans are submitted for review. We complete Fire Life Safety Plan Reviews, which include but are not limited to; automatic fire sprinklers, fire alarm systems, underground piping that supplies the automatic fire sprinklers, hood and duct systems, fire and building plan reviews. We work with the building department to ensure optimum public safety and satisfaction.



## **Wildland Urban Interface (WUI)**

Wildfires have always been a concern in wild land urban interface areas and Nevada County is no different. The Department of Fire Prevention works with Nevada County Office of Emergency Service Defensible Space Inspection Program, Fire Safe Council of Nevada County and Cal Fire who are all responsible for insuring the maintenance of vegetation and defensible space within these areas. Inspections and enforcement in the wild land urban interface areas including the County's Vegetation Management Ordinance and PRC 4291.

## **Unmanned Aerial Vehicles (UAV) or Drone Program**

This program is the newest project supervised by our Deputy Fire Marshal. Several Fire District staff members are licensed to fly our drones. We have used them to quickly locate a injured victims at the river, campfires in areas that would take the firefighters hours to hike, vacant parcel inspections so absentee property owners can get a look at their parcel and most recently on the Jones Fire to assist in locating the fire and to assist investigators to the origin. Also, OES asked us to fly over the damaged properties on order to assist those property owners in assessing the damage prior to being let back on the property.

## **Public Education**

We feel Public Education is extremely important and we provide information for all ages. We have a Fire Safety Mobile Classroom that we use to teach younger children fire safety in the home. We speak to numerous groups, organizations, neighborhood associations and town hall type meetings working with our partners to get the fire safety message out.

## **Staffing**

The Department of Fire Prevention is currently staffed by a Fire Marshal/Battalion Chief and a Deputy Fire Marshal/Captain. Other positions are identified in the Fire District's Staffing plan however are not staffed due to funding. Our Operations Specialist assists with the administrative tasks such as the intake of plans, billing for services and routing of questions and messages to the appropriate person.