



SCOTTS VALLEY FIRE PROTECTION DISTRICT

7 Erba Lane, Scotts Valley, California 95066 (831) 438-0211 Fax (831) 438-0383

Board of Directors

Agenda

Wednesday, August 10, 2022, 6:00 P.M.

Scotts Valley City Hall

One Civic Center Drive, Scotts Valley CA 95066

Agendas and Board Packets are available on the Scotts Valley Fire Protection District (SVFPD) website at www.scottsvalleyfire.com.

Any person who requires a disability related modification or accommodation in order to participate in a public meeting should make such a request to Ron Whittle, Board Secretary, for immediate consideration.

Teleconference Notice

Director Harmon will be joining the meeting via teleconference from the following location:
5315 D Street, Sacramento, CA 95819.

1. Call to Order

1.1 Pledge of Allegiance and Moment of Silence

1.2 Roll Call

2. Public Comment (GC §54954.3)

This portion of the meeting is reserved for persons wishing to address the Board on any matter not on the agenda. Any matter that requires Board action will be referred to staff for a report and action at a subsequent Board meeting.

3. Agenda Amendments (GC §54954.2) – Discussion/Action

4. Consent Calendar

(Consent calendar items will be enacted upon by one motion. There will be no separate discussion unless a Board Member, Staff, or member of the public requests removal of the item for separate action.)

4.1 Minutes: Approve Regular Board Meeting Minutes of July 13, 2022

4.2 Approve SVFPD Claims Disbursements for the Month of July 1, 2022 through July 31, 2022 in the Amount of:

Payroll and Benefits:	\$1,821,331.25
General Fund:	\$ 109,545.28
Capital Outlay:	\$ 3480.00
SCHMIT:	\$ 7797.42
TOTAL:	\$1,942,153.95

5. Discussion Items

5.1 Scotts Valley / Branciforte Annexation Update

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6. Public Hearing/Action Items – Discussion/Action

6.1 Scheduled Public Hearing for the SVFPD Final Budget for Fiscal Year 2022/2023:

685010	General Fund:	\$ 12,210,153
685030	Capital Outlay Zone A:	\$ 2,303,881
685040	SCHMIT:	\$ 429,223

Public Hearing Process: SVFPD staff will make a summary of the proposed budget. The Board President will ask for public comment. Each speaker should raise their hand, state their name and address. Each speaker will be allowed three (3) minutes in an effort to have as much public input as possible. Upon completion of the public hearing, the matter will be brought before the Board.

6.2 Receive Public Comment and Adopt Resolution 2022-8: Resolution Adopting Final Budget for Fiscal Year 2022/2023

7. Action Items – Discussion/Action

7.1 New Type 1 Fire Engine Purchase

7.1.1 Approve the Specifications for a Type 1 Fire Engine.

7.1.2 Approve Pierce Manufacturing as a “Sole Source” Vendor for the required All Wheel Steering Functionality.

7.1.3 Execute a Contract with Golden State Fire Apparatus for the Purchase of a Pierce Type 1 Fire Engine Pursuant to the Specifications and for a Total Price not to Exceed \$805,000.

7.1.4 Approve Payment in Full at Time of Contract Execution to Achieve the Savings of \$42,572, which is Factored into the Identified Price .

8. Board of Directors and Administrative Reports – Information/Discussion

(No action will be taken on any questions raised by the Board at this time.)

8.1 Board of Directors Report – *Directors*

8.2 Administrative Report – *Chief Officers*

9. Correspondence

9.1 None

10. Closed Session: Government Code §54957.7

10.1 Conference with Labor Negotiators: Government Code §54957.6

Agency Designated Representatives: Joe Parker and Robert Campbell

Employee Organization: All Bargaining Groups

11. Open Session – Discussion/Action

11.1 Report on Closed Session: Government Code §54957.1

12. Request for Future Agenda Items

13. Adjournment

Next Regularly Scheduled Board Meeting:
Wednesday, September 14, 2022 at 6:00 p.m.



SCOTTS VALLEY FIRE PROTECTION DISTRICT

7 Erba Lane, Scotts Valley, California 95066 (831) 438-0211 Fax (831) 438-0383

Ron Whittle
Fire Chief

MINUTES OF THE SCOTTS VALLEY FIRE PROTECTION DISTRICT BOARD OF DIRECTORS REGULAR MEETING OF July 13, 2022

1. Call to Order

The Regular Meeting of the Board of Directors of the Scotts Valley Fire Protection District (SVFPD) was held on Wednesday, July 13, 2022 at the City of Scotts Valley Council Chambers. President Patterson called the meeting to order at 6:00 p.m.

1.1 Pledge of Allegiance and Moment of Silence

President Patterson called for the Pledge of Allegiance and a Moment of Silence to follow.

1.2 Roll Call

A. Directors Present:	Directors Campbell, Parker, Patterson and Pisciotta
B. Directors Absent:	Director Harmon
C. Fire District Staff:	Chief Whittle, Battalion Chief Stubendorff and Administrative Services Manager Walton

2. Public Comment (GC §54954.3)

None

3. Agenda Amendments (GC §54954.2) – Discussion/Action

None

4. Consent Calendar

4.1 Minutes: Approve Regular Board Meeting Minutes of June 8, 2022

4.2 Approve SVFPD Claims Disbursements for the Month of June 1, 2022 through June 30, 2022 in the Amount of:

Payroll and Benefits:	\$764,513.49
General Fund:	\$ 25,815.33
Capital Outlay:	\$ 11,150.00
SCHMIT:	<u>\$ 1,811.86</u>
TOTAL:	\$803,290.68

4.3 Authorize Payment to Santa Cruz County Fire Agencies Insurance Group in the Amount of \$378,692.00 for Workers Compensation Insurance for the 2022/2023 Fiscal Year

4.4 Approve Policy 2000: Conflict of Interest Code

4.5 Adopt Resolution 2022-7: Resolution Ordering an Election, Requesting County Elections to Conduct the Election, and Requesting Consolidation of the Election

On motion of Director Parker seconded by Director Campbell to Approve Consent Calendar Items 4.1, 4.2, 4.3, 4.4, and 4.5 was approved by the following vote:

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AYES: Campbell, Parker, Patterson and Pisciotta
NOES: None
ABSENT: Harmon
ABSTAIN: None

5. Discussion Items

5.1 None

6. Action Items – Discussion/Action

6.1 Consider Fee Waiver Request from the City of Scotts Valley for the Fireworks Event 7/3/2022

Chief Whittle stated that the letter from the City of Scotts Valley requested waiving the fire permit fee in the amount of \$4,592.48, which is the actual cost for the fireworks inspection and overtime to staff the event. In the past, the City of Scotts Valley has not been cooperative waiving fees so documenting the cost will be beneficial if the SVFPD requests the City of Scotts Valley waiver fees in the future.

On motion of Director Pisciotta seconded by Director Parker to *Approve the City of Scotts Valley Fee Waiver for the 4th of July Event on July 3, 2022* was approved by the following vote:

AYES: Campbell, Parker, Patterson and Pisciotta
NOES: None
ABSENT: Harmon
ABSTAIN: None

7. Board of Directors and Administrative Reports – Information/Discussion

(No action will be taken on any questions raised by the Board at this time.)

7.1 Board of Directors Report – Directors

Director Campbell reported that the Ad Hoc Committee met with LAFCO and the Branciforte Committee to focus on the process and public notification. A draft public notice was presented and revisions were made. Once the benefit assessment is completed, the Ad Hoc Committee will establish talking points and public meetings will be scheduled.

Chief Whittle stated that Branciforte Fire hired a consultant to complete a benefit assessment to determine the cost to staff the station. Once the benefit assessment is completed, the property owners will receive a mail in ballot, which requires a 50% plus 1 vote of the ballots received to pass. The residents are concerned that if the station closes, their fire insurance will be cancelled. If that is the case, it might cost less to pay the benefit assessment amount then purchasing expensive insurance through the California Fair Plan. Chief Whittle will research if annexing the Branciforte Fire District will have an impact on the SVFPD ISO rating or meeting the ALS Contract response times.

President Patterson stated that if the SVFPD goes to the voters to build the La Madrona Station, Branciforte Fire could be excluded if their benefit assessment passes. This way Branciforte property owners would not be paying twice or have negative voting impact for the SVFPD measure.

Director Parker stated that since SVFPD paid contributions to the VEBA are no longer being made, the Union has requested a meeting to discuss changing the MOU wording to allow employee paid VEBA contributions, which will be no cost to the SVFPD. Chief Whittle stated that he will schedule an Organization and Personnel Committee Meeting.

Director Pisciotta reported that he toured the new Santa Clara Redwood Fire Station with Director Patterson, Battalion Chief McNeil and Chief Whittle, which is currently halfway through construction. The Facility Manager discussed the facility design, building process and change orders. After the Redwood Fire Station tour, the SVFPD La Madrona property was toured as well.

7.2 Administrative Report – Chief Officers

The Administrative Report was included in the board packet and Chief Whittle reported on the following:

- The furnace and air conditioning (HVAC for downstairs living quarters) was replaced at station one.

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- The SVFPD up-staffed for the July 3rd Parade and Fireworks Show. E2538, WT2550, and Cal Fire E1760 provided additional resources along with PCFs staffing the medical booth at the event. The event was attended by approximately 6,500 people inside Skypark. There were no significant events related to the fireworks gathering.
- The trial of the LUCAS device has completed. The device was used several times and crews reported positive results. We are budgeting to purchase 1 LUCAS Device for each lead engine.
- Chief Whittle, BC McNeil, BC LoFranco, Captain Petteys, and Engineer Green attended X CZ STEN and overhead refresher training at Zayante Fire Station.
- E2538 participated in the Cal Fire extended attack drill. E2538 was part of an in-county strike team that responded to a simulated wildland fire in Aptos. The strike team conducted structure triage in a few neighborhoods.
- Engineer Laine and Bridges attended a chain saw class (S-212) in a remote area of King's County.
- All crews completed the annual RT-130 wildland refresher training.
- All shifts participated the Active Shooter training held at Scotts Valley High School.
- BC LoFranco initiated 3 Acting Captain task books, and 7 Engine Boss task books.
- The Spring Lakes Mobile Home park hydrant upgrade project has been completed. The crews tested the system and found issues with the pressure. We met with Spring Lakes and the Engineer and they are working on the issues.
- Deputy Fire Marshal Collins started on June 27th and has been working closely with Captain Vandervoort to ensure a smooth transition.
- On June 2nd, I attended a Resource Utilization committee meeting. This committee is examining our EMS response system, and looking for ways to improve efficiency and lower response times and on-scene times. The first recommended changes will take effect on July 12th.
- I attended two SCCFAIG Board Meetings in June. The Board voted to change how the agency cost allocation is calculated to be more in-line with industry standards. The new formula will be phased in over the next two fiscal years to eliminate large increases to a couple of agencies.
- I filled the role of Operational Area Fire Coordinator for 10 days while the primary Op Area Fire Coordinator was on vacation. I also provided a 24-hour battalion coverage on Saturday June 18th due to BC's vacation and sick leave.
- I will be meeting with Environmental Health tomorrow and the County next month to discuss the SCHMIT program.
- There is a Finance and Planning Committee Meeting next week to discuss the final budget.

Director Campbell offered to review the Spring Lakes hydrant project. Director Parker stated that the Rotary Club made a donation for the LUCAS Device in Santa Clara so maybe check with the Scotts Valley Rotary Club for a possible donation.

8. Correspondence – Information

8.1 None

9. Request for Future Agenda Items

None

10. Adjournment

The meeting was adjourned at 6:41 p.m.

ATTEST _____
Russ Patterson
Board President

Ron Whittle
Board Secretary

Expenditure Actual Transactions

Client: Position = 7/1/2022, 7/31/2022, EntryDate = 7/1/2022, 7/31/2022, GL Key = 685010, 685020, 685030, 685040; Summarize by = GLKey, Character, Object

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GL Key	FM	Posted	Document	Doc Ref	GL Key	Fund	Organization	GL Obj	Amount	Description	Vendor No	Vendor Name
GL Key 685010 - SCOTT'S VALLEY FIRE PROT SVC												
Character: 50 - SALARIES AND EMPLOYEE BENEF												
Object 51000 - REGULAR PAY-PERMANENT												
2023	01	7/27/2022	PAYPERIOD		685010	76585	68500000	51000	139,271.84	PAYPERIOD 15PAYDATE 07/29/2022		
2023	01	7/13/2022	PAYPERIOD		685010	76585	68500000	51000	139,652.00	PAYPERIOD 14PAYDATE 07/15/2022		
2023	01	7/1/2022	SA0220001R		685010	76585	68500000	51000	(63,090.59)	REVERSE SA0220001		
Total Object 51000										225,833.28		
Object 51005 - OVERTIME PAY-PERMANENT												
2023	01	7/27/2022	PAYPERIOD		685010	76585	68500000	51005	18,631.73	PAYPERIOD 15PAYDATE 07/29/2022		
2023	01	7/15/2022	DU89020	DU89020	685010	76585	68500000	51005	(2,712.62)	WComp 6/25-7/8/22, CK#999970	C99999	DEP
2023	01	7/13/2022	PAYPERIOD		685010	76585	68500000	51005	19,963.31	PAYPERIOD 14PAYDATE 07/15/2022		
2023	01	7/1/2022	SA0220001R		685010	76585	68500000	51005	(9,867.64)	REVERSE SA0220001		
Total Object 51005										26,014.78		
Object 51010 - REGULAR PAY-EXTRA HELP												
2023	01	7/1/2022	SA0220001R		685010	76585	68500000	51010	(789.26)	REVERSE SA0220001		
2023	01	7/13/2022	PAYPERIOD		685010	76585	68500000	51010	2,700.00	PAYPERIOD 14PAYDATE 07/15/2022		
Total Object 51010										1,930.74		
Object 51035 - HOLIDAY PAY												
2023	01	7/13/2022	PAYPERIOD		685010	76585	68500000	51035	10,555.76	PAYPERIOD 14PAYDATE 07/15/2022		
2023	01	7/1/2022	SA0220001R		685010	76585	68500000	51035	(2,106.97)	REVERSE SA0220001		
2023	01	7/27/2022	PAYPERIOD		685010	76585	68500000	51035	11,100.08	PAYPERIOD 15PAYDATE 07/29/2022		
Total Object 51035										19,548.87		
Object 51040 - DIFFERENTIAL PAY												
2023	01	7/13/2022	PAYPERIOD		685010	76585	68500000	51040	8,336.35	PAYPERIOD 14PAYDATE 07/15/2022		
2023	01	7/1/2022	SA0220001R		685010	76585	68500000	51040	(3,230.69)	REVERSE SA0220001		
2023	01	7/27/2022	PAYPERIOD		685010	76585	68500000	51040	8,336.35	PAYPERIOD 15PAYDATE 07/29/2022		
Total Object 51040										13,446.04		
Object 52010 - OASDI-SOCIAL SECURITY												
2023	01	7/28/2022	DU89306	DU89306	685010	76585	68500000	52010	(2,712.62)	4850 TD 7/9-7/22/22 Ronzano	C99999	DEP
2023	01	7/1/2022	SA0220001R		685010	76585	68500000	52010	(965.86)	REVERSE SA0220001		
2023	01	7/1/2022	DU89154	DU89154	685010	76585	68500000	52010	(32.44)	Medicare Overpayment Net	C99999	DEP
2023	01	7/27/2022	PAYPERIOD		685010	76585	68500000	52010	2,385.75	PAYPERIOD 15PAYDATE 07/29/2022		
2023	01	7/1/2022	PAYPERIOD		685010	76585	68500000	52010	2,706.87	PAYPERIOD 14PAYDATE 07/15/2022		
Total Object 52010										1,381.70		
Object 52015 - PERS												
2023	01	7/27/2022	PAYPERIOD		685010	76585	68500000	52015	26,510.18	PAYPERIOD 15PAYDATE 07/29/2022		
2023	01	7/13/2022	PAYPERIOD		685010	76585	68500000	52015	28,724.79	PAYPERIOD 14PAYDATE 07/15/2022		
2023	01	7/28/2022	2022-23UAL		685010	76585	68500000	52015	1,036,755.00	SV FIRE 2021/2022 UAL	V116512	US BANK
2023	01	7/1/2022	SA0220001R		685010	76585	68500000	52015	(10,308.42)	REVERSE SA0220001		
Total Object 52015										1,083,681.53		

Run: 8/1/2022 7:16 AM Includes transactions posted through: 7/29/2022

Expenditure Actual Transactions

Criteria: Position = 711/2022, 7/31/2022; EntryDate = 7/1/2022, 7/31/2022; GLKey = 685010, 685030, 685040; Summarize by = GLKey, Character, Object

GL Key	FM	Posted	Document	Doc Ref	GL Key	Fund	Organization	GL Obj	Amount	Description	Vendor No	Vendor Name
GL Key 685010 - SCOTT'S VALLEY FIRE PROT SVC												
Character 50 - SALARIES AND EMPLOYEE BENEF												
Object 53010 - EMPLOYEE INSURANCE & BENEFITS												
2023	01	7/1/2022	072022SVFP		685010	76585	68500000	53010	4,294.81	HEALTH CARE EMP SVFD Group 367	V108670	HEALTH CARE EMPLOYEES/EMPLOYER
2023	01	7/26/2022	0822SVFD		685010	76585	68500000	53010	1,289.95	MC MURRY, MICHAEL SVFD Health In	V105430	MC MURRY, MICHAEL
2023	01	7/1/2022	SA0220001R		685010	76585	68500000	53010	(440.60)	REVERSE SA0220001		
2023	01	7/8/2022	JUL22HLTH		685010	76585	68500000	53010	54,408.28	SV FIRE JUL 2022	V118512	US BANK
2023	01	7/15/2022	DU89020		685010	76585	68500000	53010	(48.56)	S. Downey July22 Dental CK#2323	C99998	DEP
2023	01	7/15/2022	DU89020		685010	76585	68500000	53010	(275.55)	D. Grebl July22 Dental CK#5009	C99999	DEP
2023	01	7/15/2022	DU89020		685010	76585	68500000	53010	688.71	THEILEN, LOT HAR SVFD Health In	V117701	THEILEN, LOT HAR
2023	01	7/15/2022	DU89020		685010	76585	68500000	53010	1,225.52	FDAC EBA SVFD Health In	V33857	FIRE DISTRICTS ASSOC OF CA
2023	01	7/15/2022	DU89020		685010	76585	68500000	53010	357.88	PHINN, MIKE SVFD Health Ins. 7	V103782	PHINN, MIKE
2023	01	7/15/2022	DU89020		685010	76585	68500000	53010	(137.94)	S. Kovacs Jul22 Dental CK#5784	C99999	DEP
2023	01	7/15/2022	DU89020		685010	76585	68500000	53010	(1,143.79)	PAYPERIOD 14PAYDATE 07/15/2022		
2023	01	7/15/2022	DU89020		685010	76585	68500000	53010	584.32	LOFRANCO, SAL SVFD Health Ins.	V105221	LOFRANCO, SAL
2023	01	7/15/2022	DU89020		685010	76585	68500000	53010	(91.85)	H. Busatch Aug22Dental, CK#3987	C99999	DEP
2023	01	7/15/2022	DU89020		685010	76585	68500000	53010	688.71	THEILEN, LOT HAR SVFD Health In	V117701	THEILEN, LOT HAR
2023	01	7/15/2022	DU89020		685010	76585	68500000	53010	(48.56)	M. Pasquini Jul22 Dental CK#946	C99999	DEP
2023	01	7/15/2022	DU89020		685010	76585	68500000	53010	(551.10)	A. Knox Jul-Dec22Dental CK#5932	C99999	DEP
2023	01	7/15/2022	DU89020		685010	76585	68500000	53010	1,186.30	BIDDLE, MIKE SVFD Health Ins.	V105980	BIDDLE, MIKE
2023	01	7/15/2022	DU89020		685010	76585	68500000	53010	(137.94)	S. Kovacs Jul22 Dental	C99999	DEP
2023	01	7/15/2022	DU89020		685010	76585	68500000	53010	1,285.18	FDAC EBA SVFD	V33857	FIRE DISTRICTS ASSOC OF CA
2023	01	7/15/2022	DU89020		685010	76585	68500000	53010	(48.58)	M. Marsano Jul22 Dental CK#122	C99999	DEP
2023	01	7/15/2022	DU89020		685010	76585	68500000	53010	(300.00)	REVERSE SA0220001		
2023	01	7/15/2022	DU89020		685010	76585	68500000	53010	750.00	PAYPERIOD 14PAYDATE 07/15/2022		
2023	01	7/15/2022	DU89020		685010	76585	68500000	53010	357.88	PHINN, MIKE SVFD Health Ins. 8	V103782	PHINN, MIKE
2023	01	7/15/2022	DU89020		685010	76585	68500000	53010	440.60	REVERSE SA0220001		
2023	01	7/15/2022	DU89020		685010	76585	68500000	53010	1,289.95	MC MURRY, MICHAEL SVFD Health In	V105430	MC MURRY, MICHAEL
2023	01	7/15/2022	DU89020		685010	76585	68500000	53010	584.32	LOFRANCO, SAL SVFD Health Ins.	V105221	LOFRANCO, SAL
2023	01	7/15/2022	DU89020		685010	76585	68500000	53010	(91.85)	H. Busatch Jul22Dental, CK#3978	C99999	DEP
2023	01	7/15/2022	DU89020		685010	76585	68500000	53010	1,186.30	BIDDLE, MIKE SVFD Health Ins.	V105980	BIDDLE, MIKE
2023	01	7/15/2022	DU89020		685010	76585	68500000	53010	67,302.51			
Total Object 53010												
Object 53015 - UNEMPLOYMENT INSURANCE												
2023	01	7/15/2022	PAYPERIOD		685010	76585	68500000	53015	133.77	PAYPERIOD 14PAYDATE 07/15/2022		
2023	01	7/15/2022	SA0220001R		685010	76585	68500000	53015	(12.31)	REVERSE SA0220001		
2023	01	7/15/2022	PAYPERIOD		685010	76585	68500000	53015	21.43	PAYPERIOD 15PAYDATE 07/29/2022		
2023	01	7/15/2022	PAYPERIOD		685010	76585	68500000	53015	142.88			
Total Object 53015												
Object 54010 - WORKERS COMPENSATION INSURANCE												
2023	01	7/18/2022	275904		685010	76585	68500000	54010	378,682.00	SANTA CRUZ COUN SVFD	V104861	SANTA CRUZ COUNTY FIRE AGENCIES
Total Object 54010												

Run: 8/1/2022 7:16 AM Includes transactions posted through: 7/29/2022

Expenditure Actual Transactions

Criteria: Position = 7/1/2022..7/31/2022; Entry Date = 7/1/2022..7/31/2022; GL Key = 685010, 685020, 685030, 685040; Summarize by = GL Key, Character, Object

FY	FM	Posted	Document	Doc Ref	GL Key	Fund	Organization	GL Obj	Amount	Description	Vendor No	Vendor Name
GL Key 685010 - SCOTT'S VALLEY FIRE PROT SVC												
Character 50 - SALARIES AND EMPLOYEE BENE												
Object 55021 - OTHER BENEFITS MISC												
2023	01	7/27/2022	PAYPERIOD		685010	76585	68500000	55021	2,073.07	PAYPERIOD 15PAYDATE 07292022		
2023	01	7/13/2022	PAYPERIOD		685010	76585	68500000	55021	2,073.07	PAYPERIOD 14PAYDATE 07152022		
2023	01	7/1/2022	SA0220001R		685010	76585	68500000	55021	<u>(789.23)</u>	REVERSE SA0220001		
Total Object 55021									3,356.91			
Total Character 50									1,821,331.25			
Character 60 - SERVICES AND SUPPLIES												
Object 61110 - CLOTHING & PERSONAL SUPPLIES												
2023	01	7/7/2022	DU88837		685010	76585	68500000	61110	<u>(127.36)</u>	Wildland Boct Reimb.R#3980	C98888	DEP
Total Object 61110									(127.36)			
Object 61125 - UNIFORM REPLACEMENT												
2023	01	7/18/2022	26343		685010	76585	68500000	61125	154.75	SPORTS DESIGN SVFD POW# 22-003	V106392	SPORTS DESIGN
2023	01	7/11/2022	80959		685010	76585	68500000	61125	302.97	SUMMIT UNIFORMS SVFD	V107901	SUMMIT UNIFORMS CORP
2023	01	7/18/2022	26341		685010	76585	68500000	61125	<u>386.32</u>	SPORTS DESIGN SVFD POW#22-003	V106392	SPORTS DESIGN
Total Object 61125									844.04			
Object 61215 - RADIO												
2023	01	7/11/2022	0722SVFD		685010	76585	68500000	61215	30,633.00	SANTA CRUZ REGI SVFD 1st 1/2 2	V13917	SANTA CRUZ REGIONAL 9-1-1
Total Object 61215									30,633.00			
Object 61425 - OTHER HOUSEHOLD EXP-SERVICES												
2023	01	7/26/2022	263863-1		685010	76585	68500000	61425	122.99	MID VALLEY SUPP SVFD	V481	SPRENKEL, INC
2023	01	7/26/2022	266208		685010	76585	68500000	61425	<u>120.52</u>	MID VALLEY SUPP SVFD	V481	SPRENKEL, INC
Total Object 61425									243.51			
Object 61535 - OTHER INSURANCE												
2023	01	7/26/2022	39875130		685010	76585	68500000	61535	17,922.00	MCNEIL & COMPANY SVFD	V124152	MCNEIL & COMPANY INC
2023	01	7/26/2022	39873130		685010	76585	68500000	61535	25,614.00	MCNEIL & COMPANY SVFD	V124152	MCNEIL & COMPANY INC
2023	01	7/26/2022	39877130		685010	76585	68500000	61535	<u>5,555.00</u>	MCNEIL & COMPANY SVFD	V124152	MCNEIL & COMPANY INC
Total Object 61535									48,991.00			
Object 61720 - MAINT-MOBILE EQUIPMENT-SERV												
2023	01	7/11/2022	0722SVFD3		685010	76585	68500000	61720	50.17	SCARBOROUGH LUM SVFD Acct 1169	V1233	SCARBOROUGH LUMBER & BLDG INC
2023	01	7/18/2022	8325		685010	76585	68500000	61720	<u>1,689.36</u>	CENTRAL FIRE PR SVFD	V116986	CENTRAL FIRE PROTECTION DIST
Total Object 61720									1,739.53			
Object 61725 - MAINT-OFFICE EQUIP-MNT-SERVICES												
2023	01	7/11/2022	14159		685010	76585	68500000	61725	1,780.12	PAGODA TECHNOLO SVFD	V126184	PAGODA TECHNOLOGIES INC
Total Object 61725									1,780.12			
Object 61730 - MAINT-OTH EQUIP-SERVICES												
2023	01	7/11/2022	0722SVFD1		685010	76585	68500000	61730	63.93	SCARBOROUGH LUM SVFD Acct 1169	V1233	SCARBOROUGH LUMBER & BLDG INC
Total Object 61730									63.93			

Expenditure Actual Transactions

Criteria: Position = 7/1/2022..7/31/2022, EntryDate = 7/1/2022..7/31/2022, GLKey = 685010, 685020, 685030, 685040; Summarize by = GLKey,Character, Object

GL Key	FY	FM	Posted	Document	Doc Ref	GLKey	Fund	Organization	GL Obj	Amount	Description	Vendor No	Vendor Name
GL Key 685010 – SCOTT'S VALLEY FIRE PROT SVC													
Character 60 – SERVICES AND SUPPLIES													
Object 61845 – MAINT-STRUCT/MP/GRDS-OTH-SRV													
2023	01		7/18/2022	24367057		685010	76585	68500000	61845	62.70	WESTERN EXTERMI SVFD	V15766	WESTERN EXTERMINATOR COMPANY
2023	01		7/18/2022	24367968		685010	76585	68500000	61845	62.70	WESTERN EXTERMI SVFD	V15766	WESTERN EXTERMINATOR COMPANY
Total Object 61845													
Object 61920 – MEDICAL, DENTAL & LAB SUPPLIES													
2023	01		7/18/2022	84594642		685010	76585	68500000	61920	1,006.38	BOUND TREE MEDI SVFD POW 22-00	V12149	BOUND TREE MEDICAL
Total Object 61920													
Object 62020 – MEMBERSHIPS													
2023	01		7/11/2022	02343		685010	76585	68500000	62020	75.00	AFSS NORTHERN D SVFD Walton AI	V129524	AFSS NORTHERN DIVISION
2023	01		7/11/2022	02345		685010	76585	68500000	62020	75.00	AFSS NORTHERN D SVFD Mayfield	V129524	AFSS NORTHERN DIVISION
2023	01		7/11/2022	02153		685010	76585	68500000	62020	988.14	CALIFORNIA FIRE SVFD 2022/2023	V111287	CALIFORNIA FIRE CHIEFS ASSN
2023	01		7/11/2022	000247282		685010	76585	68500000	62020	260.00	INTERNATIONAL A SVFD	V42190	INTERNATIONAL ASSOCIATION OF FIRE
2023	01		7/11/2022	02333		685010	76585	68500000	62020	75.00	AFSS NORTHERN D SVFD Bridges M	V129524	AFSS NORTHERN DIVISION
Total Object 62020													
Object 62219 – PC SOFTWARE PURCHASES													
2023	01		7/11/2022	INV53088		685010	76585	68500000	62219	754.74	TARGET SOLUTION SVFD	V31376	TARGET SOLUTIONS LEARNING LLC
2023	01		7/18/2022	2022-72		685010	76585	68500000	62219	1,972.00	STREAMLINE AUTO SVFD	V38876	STREAMLINE AUTOMATION SYSTEMS
Total Object 62219													
Object 62301 – ACCOUNTING AND AUDITING FEES													
2023	01		7/18/2022	1267		685010	76585	68500000	62301	3,400.00	PEHLING & PEHL SVFD	V128403	PEHLING & PEHLING CPAS AN
Total Object 62301													
Object 62327 – DIRECTORS' FEES													
2023	01		7/13/2022	PAYPERIOD		685010	76585	68500000	62327	1,500.00	PAYPERIOD 14PAYDATE 0715/2022		
Total Object 62327													
Object 62381 – PROF & SPECIAL SERV-OTHER													
2023	01		7/18/2022	8542		685010	76585	68500000	62381	500.00	REUBEN, DAVID P SVFD	V128713	REUBEN, DAVID P
2023	01		7/25/2022	44959		685010	76585	68500000	62381	845.00	CSG CONSULTANTS SVFD	V121100	CSG CONSULTANTS INC
Total Object 62381													
Object 62715 – SMALL TOOLS & INSTRUMENTS													
2023	01		7/11/2022	0722SVFD2		685010	76585	68500000	62715	7.88	SCARBOROUGH LUM SVFD Acct 1169	V1223	SCARBOROUGH LUMBER & BLDG INC
Total Object 62715													
Object 62890 – SUBSCRIPTIONS BOOKS & ED MATER													
2023	01		7/11/2022	846532486		685010	76585	68500000	62890	210.39	WEST PUBLISHING SVFD	V120635	WEST PUBLISHING CORPORATION
Total Object 62890													
Object 62914 – EDUCATION & TRAINING(REPT)													
2023	01		7/18/2022	145045INV		685010	76585	68500000	62914	8,078.00	SOUTH BAY REGIO SVFD Placida	V128603	SOUTH BAY REGIONAL PUBLIC SAFETY
Total Object 62914													

Run: 8/1/2022 7:16 AM Includes transactions posted through: 7/29/2022

Expenditure Actual Transactions

Criteria: Position = 7/1/2022, 7/31/2022, EntryDate = 7/1/2022, 7/31/2022, GLKey = 685010, 685020, 685030, 685040; Summarize by = GLKey, Character, Object

FY	FM	Posted	Document	Doc Ref	GL Key	Fund	Organization	GL Obj	Amount	Description	Vendor No	Vendor Name
GL Key 685010 - SCOTT'S VALLEY FIRE PROT SVC												
Character 60 - SERVICES AND SUPPLIES												
Object 62920 - GAS, OIL, FUEL												
2023	01	7/25/2022	829440		685010	76585	68500000	62920	3,203.41	WESTERN STATES SVFD	V39738	TOP LOPES DISTRIBUTING
2023	01	7/25/2022	829441		685010	76585	68500000	62920	400.66	WESTERN STATES SVFD	V39738	TOP LOPES DISTRIBUTING
Total Object 62920									3,604.07			
Object 63070 - UTILITIES												
2023	01	7/18/2022	0722SVFD2		685010	76585	68500000	63070	961.60	PACIFIC GAS AND SVFD Acct# 805	V129169	PACIFIC GAS AND ELECTRIC CO
2023	01	7/18/2022	0722SVFD4		685010	76585	68500000	63070	84.56	PACIFIC GAS AND SVFD Acct#8380	V129169	PACIFIC GAS AND ELECTRIC CO
2023	01	7/18/2022	0722SVFD1		685010	76585	68500000	63070	784.45	PACIFIC GAS AND SVFD Acct#6536	V129169	PACIFIC GAS AND ELECTRIC CO
2023	01	7/18/2022	0722SVFD3		685010	76585	68500000	63070	69.90	PACIFIC GAS AND SVFD Acct# 649	V129169	PACIFIC GAS AND ELECTRIC CO
Total Object 63070									1,900.51			
Total Character 60									109,546.28			
Total GL Key 685010									1,930,876.53			
GL Key 685030 - SCOTT'S VLY FIRE DIST.-CAPITAL												
Character 60 - SERVICES AND SUPPLIES												
Object 62381 - PROF & SPECIAL SERV-OTHER												
2023	01	7/25/2022	0622038		685030	76585	68500000	62381	3,480.00	MESITH-MILLER E SVFD	V124519	MESITH-MILLER ENGINEERING INC
Total Object 62381									3,480.00			
Total Character 60									3,480.00			
Total GL Key 685030									3,480.00			
GL Key 685040 - SV FIRE DIST-REGIONAL HAZ RESP												
Character 60 - SERVICES AND SUPPLIES												
Object 61535 - OTHER INSURANCE												
2023	01	7/28/2022	38673130-1		685040	76597	68500000	61535	2,555.00	MCNEIL & COMPAN SVFD	V124152	MCNEIL & COMPANY INC
Total Object 61535									2,555.00			
Object 62301 - ACCOUNTING AND AUDITING FEES												
2023	01	7/18/2022	1267-1		685040	76597	68500000	62301	1,200.00	PEHLING & PEHL SVFD	V128403	PEHLING & PEHLING CPAS AN
Total Object 62301									1,200.00			
Object 62914 - EDUCATION & TRAINING(REPT)												
2023	01	7/28/2022	602		685040	76597	68500000	62914	4,042.42	RW JONES AND AS SVFD	V129231	RW JONES AND ASSOCIATES HEALTH
Total Object 62914									4,042.42			
Total Character 60									7,797.42			
Total GL Key 685040									7,797.42			



SCOTTS VALLEY FIRE PROTECTION DISTRICT

7 Erba Lane, Scotts Valley, California 95066 (831) 438-0211 Fax (831) 438-0383

Date: August 10, 2022
To: Board of Directors
From: Ron Whittle, Fire Chief
Subject: 2022/2023 Final Budgets

Recommendation

1. Adopt the 2022/2023 Final Budgets as presented:

685010	General Fund:	\$ 12,210,153
685030	Capital Outlay/Zone A:	\$ 2,303,881
685040	SCHMIT:	\$ 429,223

Background

The Board of Directors must pass a preliminary budget before June 30th and a final budget by October 1st of each year.

General Fund

Revenue

The Fund Balance beginning this fiscal year is \$ 3,227,901. The increase in fund balance is due to receiving unanticipated revenue in FY21/22, and well as strike team reimbursement.

An estimated increase to property tax of 4% has been included in the preliminary budget as recommended by the County Auditor's Office.

Revenue from Plan Check and Inspection Fees for FY 2022/2023 are estimated at \$25,000, while the estimated expenditures for contract plan check and inspection services are \$5,000.

Revenue from the SCHMIT administrative contract is \$6,000.

Strike Team reimbursement is estimated at \$575,000, and is off-set in expenditures.

Expenditures

The Salaries and Benefits budget includes the cost of the 6 additional Holidays for the Union and Battalion Chiefs, and Regular Salary increases for the admin groups, as well as step increases for about 2/3 of the employees. The Overtime account includes \$575,000 for out-of-county strike team response. The amounts budgeted in all overtime categories reflect the trend over the last few years. All strike team expenses are reimbursed according the California Fire Assistance Agreement. The

Board of Directors

Robert Campbell Edward Harmon Joe Parker Russ Patterson Daron Pisciotta

Administrative Captain position is not funded, and has been replaced with the Deputy Fire Marshal. The Administrative Captain has been reassigned to a shift captain position.

The CalPERS Safety Retirement Plan is 21.84% of payroll, which is up slightly from the 2021/2022 fiscal year amount of 21.79%. The Unfunded Accrued Liability's (UAL) annual lump sum prepayment option for the Safety Plan is \$1,011,158, which is up from the 2021/2022 payment of \$876,446.

The CalPERS Miscellaneous Plan is 10.870% of payroll which is down from the 2021/2022 fiscal year amount of 10.88%. The UAL's annual lump sum prepayment option for the Miscellaneous Plan is \$23,956 which is up from the 2021/2022 payment of \$23,261.

The employer rate for new CalPERS safety employees hired after January 1, 2013, is 12.78% of payroll, down slightly from the 2021/2022 rate of 13.13%. The UAL payment for PEPRA Safety employees is \$885. The Non-Safety employee rate is 7.47% of payroll, down from the 2021/2022 rate of 7.59%. The UAL payment for PEPRA Non-Safety employees is \$756.

This represents a budgeted amount of \$1,771,982 payable to CalPERS, which represents a \$202,229 increase over 2021/2022.

Health insurance has incurred a large increase for the second year in a row. The CalPERS Platinum Health Care plan that the District uses as the benchmark for paid premiums has increased by 13.54%, which represents an overall increase to health benefits of 15%. Retiree health insurance is budgeted at \$89,056, an increase of \$4,385 over last year.

Workers compensation insurance is \$378,692, an increase of 4.5% over last fiscal year. This amount is significantly less than what we had anticipated in the preliminary budget.

The Services and Supplies budget is \$846,787, which is an increase of \$3,828 over FY2021/2022 budget.

The Contributions to Other Agencies is for the District's share of the LAFCO budget which is \$8,668, as well as \$155,000 contributions to the OPEB Trust and \$150,000 for Pension Prefunding Trust.

A \$500,000 transfer to Capital Outlay/Zone A is budgeted, and \$250,000 for Contingencies, which is just under 3% of recurring revenue.

General Reserves for 2022/2023 are set at \$1,826,574 in accordance with District Policy 1608.

Capital Outlay/Zone A

The beginning fund balance is \$1,657,465. Revenue consists of Zone A Tax collection of \$138,077, which is a 4% estimated increase in property tax revenue, \$500,000 transfer-in from the General Fund and \$5,000 in interest.

The Services and Supplies budget includes a large purchase of turnouts, general station maintenance costs and \$150,000 for architectural services for the LaMadrona Fire Station Project.

Fixed assets include \$805,000 for the purchase of a new Type 1 Engine and \$55,000 to replace a command vehicle. Due to a delay in delivery of the Bauer SCBA Compressor, we also carried over the payment to this FY. We have budgeted \$500,000 for future Erba Station facility upgrades and improvements and \$18,000 for a training building. General Reserves of \$218,381 for future projects and \$200,000 for contingencies.

SCHMIT

The beginning fund balance for the Santa Cruz Hazardous Materials Interagency Team is \$210,660. A revenue increase of 4% has been applied to the participating agencies. Services and Supplies are to support the operating costs of the team in the amount of \$80,524 which includes a \$6,000 charge for management of the program. Personnel costs include \$20,000 for reimbursement to response agencies in the event of an activation, and \$150,000 for differential costs for the response agencies. General reserves for the SCHMIT account are set at \$137,699. Fixed assets in the amount of \$16,000 are for updated SCBA compatible Communications Equipment.

Scotts Valley Fire Protection District

2022/2023 General Fund Budget Analysis

Revenue Summary					
Account #	Revenue Description	Budgeted 2021/2022	Actual 2021/2022	Budgeted 2022/2023	Variance vs Prior year
40100	Prop Tax-Current Secured	\$ 7,725,511	\$ 7,771,361	\$ 8,058,360	\$ 286,999
40106	RESIDUAL DISTRIBUTION	\$ -	\$ 356,769	\$ -	\$ (356,769)
40110	Prop Tax-Current Unsecured	\$ 131,066	\$ 143,889	\$ 156,088	\$ 12,199
40130	PROPERTY TAX-PRIOR UNSEC-GEN	\$ -	\$ 16,425	\$ -	\$ (16,425)
40150	Supplemental Prop Tax-Current Secured	\$ 49,688	\$ 171,708	\$ 75,000	\$ (96,708)
40151	Supplemental Prop Tax-Current Unsecured	\$ 2,000	\$ 2,041	\$ 2,000	\$ (41)
40160	Supplemental Prop Tax-Prior Sec, Supplemental	\$ 3,000	\$ 2,881	\$ 3,000	\$ 119
40161	SUPP PROP TAX-PRIOR UNSEC	\$ -	\$ 1,229	\$ -	\$ (1,229)
40330	Licenses and Permits	\$ 15,000	\$ 50,554	\$ 25,000	\$ (25,554)
40430	Interest	\$ 3,000	\$ 5,148	\$ 3,000	\$ (2,148)
40440	Rents and Leases	\$ 1,200	\$ 1,200	\$ 1,200	\$ -
40830	St-Homeowners' Property Tax Relief	\$ 40,191	\$ 39,254	\$ 40,104	\$ 850
40894	ST-Aid Others	\$ 64,494	\$ 937,112	\$ 575,000	\$ (362,112)
41162	RDA PASS-THROUGHS	\$ -	\$ 66,495	\$ -	\$ (66,495)
41617	ALS Response Contract - Net QA Costs	\$ -	\$ -	\$ -	\$ -
42010	SCHMIT & B40 Administrative Services	\$ 33,700	\$ 31,605	\$ 6,000	\$ (25,605)
42022	Cost Recovery, Other	\$ -	\$ -	\$ -	\$ -
42047	Other Charges	\$ -	\$ -	\$ -	\$ -
42055	SCHMIT Reimbursement	\$ 40,000	\$ 35,000	\$ 35,000	\$ -
42384	Other Revenue	\$ 2,500	\$ 5,042	\$ 2,500	\$ (2,542)
42390	Escheatment Revenue	\$ -	\$ 739	\$ -	\$ -
44142	PENALTIES FOR DELINQUENT TAXES	\$ -	\$ 357	\$ -	\$ (357)
44143	REDMPTN PNLTIES FOR DELINQ TXS	\$ 0	\$ 670	\$ 0	\$ (670)
Total Revenue		\$ 8,111,350	\$ 9,639,479	\$ 8,982,252	\$ (656,488)
Beginning Fund Balance		\$ 2,403,094	\$ 2,403,094	\$ 3,227,901	\$ 824,807
Total General Fund Revenue		\$ 10,514,444	\$ 12,042,573	\$ 12,210,153	\$ 167,580

Revenue vs Expenditures

	Budget 2021/2022	Actual 2021/2022	Recurring 2022/2023
Recurring Revenue	\$ 8,046,856	\$ 8,410,092	\$ 8,407,252
Recurring Expenses	\$ 8,275,856	\$ 8,065,551	\$ 9,058,579
	\$ (229,000)	\$ 344,541	\$ (651,327)
Salary & Benefits		\$ 7,192,339	\$ 7,898,124
Budget % of Salary and Benefits		85.52%	93.94%
Total GF Contingencies			\$ 250,000
Contingencies Total % Revenue			2.97%
Total Reserves			\$ 1,826,574
Reserves Total % of Expenditures			20.16%

**** Not Including PER Pension Trust Investment payment**

Cal PERS UAL Summary as of 6/30/22

	21/22 FY Payment	22/23 FY Payment	Estimated 23/24 FY Payment
Classic Safety Plan	\$ 876,446	\$ 1,011,158	\$ 1,091,748
Classic Misc Plan	\$ 23,261	\$ 23,956	\$ 24,312
PEPRA Safety Plan	\$ -	\$ -	\$ -
PEPRA Misc Plan	\$ 93	\$ 93	\$ 93

Scotts Valley Fire Protection District

2022/2023 General Fund Budget Analysis

Expenditure Accounts					Variance vs
Account #	Category	Budgeted 2021/2022	Actual 2021/2022	Budgeted 2022/2023	Prior year Actuals
Salaries and Benefits					
51000	Regular Pay, Perm.	\$ 3,468,588	\$ 3,467,101	\$ 3,669,912	\$ 202,811
51005	Overtime Pay	\$ 845,532	\$ 1,036,641	\$ 1,011,132	\$ (25,509)
51010	Regular Pay, Extra help	\$ 61,500	\$ 33,124	\$ 56,500	\$ 23,376
51035	Holiday Pay	\$ 144,804	\$ 134,777	\$ 300,972	\$ 166,195
51040	Differential Pay	\$ 204,096	\$ 207,326	\$ 197,736	\$ (9,590)
52010	Medicare Tax	\$ 75,188	\$ 70,118	\$ 82,355	\$ 12,237
52015	PERS	\$ 1,582,641	\$ 1,569,753	\$ 1,771,982	\$ 202,229
53010	Employee Group Insurance	\$ 740,365	\$ 763,145	\$ 878,570	\$ 115,425
53015	Unemployment Insurance	\$ 7,935	\$ 4,278	\$ 7,995	\$ 3,717
54010	Workers' Compensation Ins	\$ 375,000	\$ 362,850	\$ 378,692	\$ 15,842
55020	Sick Leave Reserve	\$ 12,993	\$ 15,026	\$ 18,378	\$ 3,352
55021	Other Benefits Miscellaneous: Vacation Payoff	\$ 100,300	\$ 63,201	\$ 98,900	\$ 35,699
Total Salaries and Benefits		\$ 7,618,942	\$ 7,727,339	\$ 8,473,124	\$ 745,785
Services and Supplies					
61110	Clothing and Personal Supplies	\$ 24,950	\$ 13,805	\$ 29,900	\$ 16,095
61125	Uniforms	\$ 22,700	\$ 2,861	\$ 36,550	\$ 33,689
61215	Radio Services and Communications	\$ 93,308	\$ 67,327	\$ 68,551	\$ 1,224
61221	Telephone and Telegraph	\$ 14,920	\$ 13,019	\$ 14,920	\$ 1,901
61310	Food	\$ 7,500	\$ 1,712	\$ 8,000	\$ 6,288
61425	Household Expense	\$ 7,500	\$ 4,322	\$ 7,500	\$ 3,178
61535	Insurance	\$ 52,709	\$ 47,903	\$ 49,191	\$ 1,288
61720	Maintenance Mobile Equipment	\$ 105,000	\$ 57,123	\$ 110,000	\$ 52,877
61725	Maintenance Office Equipment	\$ 33,512	\$ 26,199	\$ 29,112	\$ 2,913
61730	Maintenance Other Equipment	\$ 19,100	\$ 15,165	\$ 21,400	\$ 6,235
61845	Maintenance Structure & Grounds	\$ 23,400	\$ 16,949	\$ 25,200	\$ 8,251
61920	Medical Supplies	\$ 10,050	\$ 8,373	\$ 10,050	\$ 1,677
62020	Memberships	\$ 5,185	\$ 2,945	\$ 5,736	\$ 2,791
62111	Miscellaneous Expense	\$ 7,500	\$ 271	\$ 1,500	\$ 1,229
62219	Computer Software	\$ 18,750	\$ 15,206	\$ 26,272	\$ 11,066
62223	Office Expense	\$ 11,500	\$ 6,839	\$ 13,400	\$ 6,561
62301	Accounting & Auditing Fees	\$ 78,100	\$ 60,622	\$ 77,600	\$ 16,978
62327	Directors Fees	\$ 9,500	\$ 8,500	\$ 9,500	\$ 1,000
62358	Laundry Service	\$ 1,750	\$ 404	\$ 1,750	\$ 1,347
62367	Medical Services	\$ 19,500	\$ 14,267	\$ 19,500	\$ 5,233
62381	Professional/Special Services	\$ 83,500	\$ 40,436	\$ 75,500	\$ 35,064
62420	Publications and Legal Notices	\$ 2,000	\$ 354	\$ 2,000	\$ 1,647
62500	Rents and Leases, Equipment	\$ 1,000	\$ -	\$ 1,000	\$ 1,000
62715	Small Tools and Instruments	\$ 31,300	\$ 20,865	\$ 31,830	\$ 10,965
62826	Education Rembursement	\$ 17,000	\$ 8,306	\$ 17,000	\$ -
62888	Special District Expense	\$ 14,500	\$ 1,509	\$ 9,500	\$ 7,991
62890	Subscriptions	\$ 3,175	\$ 2,796	\$ 2,675	\$ (121)
62914	Education & Training	\$ 37,600	\$ 21,178	\$ 34,000	\$ 12,822
62920	Gas, Oil and Fuel	\$ 39,350	\$ 41,506	\$ 53,350	\$ 11,844
62930	Conference Tuition - Registrations	\$ 16,100	\$ 3,190	\$ 16,100	\$ 12,910
63070	Utilities	\$ 31,000	\$ 35,305	\$ 38,200	\$ 2,895
Total Services & Supplies		\$ 842,959	\$ 559,257	\$ 846,787	\$ 287,530
Other Charges					
75233	Contributions to Trust/Agency Fund	\$ 305,000	\$ 305,000	\$ 305,000	\$ -
75231	Contributions to Other Government Agencies	\$ 8,955	\$ 8,955	\$ 8,668	\$ (287)
Total Other Charges		\$ 313,955	\$ 313,955	\$ 313,668	\$ (287)
Operating Transfers Out					
90000	Transfer To Capital Outlay/Zone A (685030)	\$ 400,000	\$ 400,000	\$ 500,000	\$ 100,000
Appropriation for Contingencies					
98700	Contingencies	\$ 225,000	\$ 225,000	\$ 250,000	\$ 25,000
General Reserves					
98965	Undesignated Fund Balance	\$ 1,113,588	\$ 1,113,588	\$ 1,826,574	\$ 712,986
TOTAL EXPENDITURES		\$ 10,514,444	\$ 10,339,139	\$ 12,210,153	\$ 1,871,014

Scotts Valley Fire Protection District

General Fund (685010)

Final 2022/2023 Budget

Revenue Summary

Account #	Revenue Description	Revenue Amount
40100	Prop Tax-Current Secured	\$ 8,058,360
40110	Prop Tax-Current Unsecured	\$ 156,088
40150	Supplemental Prop Tax-Current Secured	\$ 75,000
40151	Supplemental Prop Tax-Current Unsecured	\$ 2,000
40160	Supplemental Prop Tax-Prior Sec, Supplemental	\$ 3,000
40330	Licenses and Permits	\$ 25,000
40430	Interest	\$ 3,000
40440	Rents and Leases	\$ 1,200
40830	St-Homeowners' Property Tax Relief	\$ 40,104
40894	ST-Aid Others	\$ 575,000
41617	ALS Response Contract - Net QA Costs	\$ -
42010	SCHMIT Administrative Services	\$ 6,000
42022	Cost Recovery, Other	\$ -
42047	Other Charges	\$ -
42055	SCHMIT Reimbursement	\$ 35,000
42384	Other Revenue	\$ 2,500
42462	Transfer In From Capital Outlay/Zone A	\$ -
Total Revenue		\$ 8,982,252
Beginning Fund Balance		\$ 3,227,901
Total General Fund Revenue		\$ 12,210,153

Expenditure Summary

Account #	Expense Category	Expense Amount
50000	Salaries & Benefits	\$ 8,473,124
60000	Services & Supplies	\$ 846,787
75000	Other Charges	\$ 313,668
Total Expenditures		\$ 9,633,579
Operating Transfer Out		\$ 500,000
Contingencies		\$ 250,000
Reserves - Undesignated		\$ 1,826,574
Total General Fund Budget		\$ 12,210,153

Notes:

Schedule of Revenue: 50% in December, 45% in April and 5% in June

Account 40100 reflects a 4% increase as per Santa Cruz County Auditor's Office.

Other Charges - Contributions to Trust accounts and LAFCO charges.

Account 40330 - Revenue from Permits, Plan Checks and Inspections

Account 40440 - Revenue from the Lease of the Marywood Property

Account 40894 - Revenue from Statewide Strike Teams, Overhead Assignments

Account 42010 - Revenue of \$6000 for SCHMIT Administration

Account 42055 - Reimbursement for Personnel - Haz Mat Stipends and Training

Account 42384 - Revenue from CPR Classes, Donations, and Misc. Revenue

Estimated Fund Balance as of July 1, 2022

Reserves = Balance as per Policy 1608 - Reserve Guidelines.

Scotts Valley Fire Protection District

General Fund (685010)

Final 2022/2023 Budget

Expenditure Accounts		
Account #	Category	Amount
Salaries and Benefits		
51000	Regular Pay, Perm.	\$ 3,669,912
51005	Overtime Pay	\$ 1,011,132
51010	Regular Pay, Extra help	\$ 56,500
51035	Holiday Pay	\$ 300,972
51040	Differential Pay	\$ 197,736
52010	Medicare Tax	\$ 82,355
52015	PERS	\$ 1,771,982
53010	Employee Group Insurance	\$ 878,570
53015	Unemployment Insurance	\$ 7,995
54010	Workers' Compensation Ins	\$ 378,692
55020	Sick Leave Reserve	\$ 18,378
55021	Other Benefits Miscellaneous: Vacation Payoff	\$ 98,900
Total Salaries and Benefits		\$ 8,473,124
Services and Supplies		
61110	Clothing and Personal Supplies	\$ 29,900
61125	Uniforms	\$ 36,550
61215	Radio Services and Communications	\$ 68,551
61221	Telephone and Telegraph	\$ 14,920
61310	Food	\$ 8,000
61425	Household Expense	\$ 7,500
61535	Insurance	\$ 49,191
61720	Maintenance Mobile Equipment	\$ 110,000
61725	Maintenance Office Equipment	\$ 29,112
61730	Maintenance Other Equipment	\$ 21,400
61845	Maintenance Structure & Grounds	\$ 25,200
61920	Medical Supplies	\$ 10,050
62020	Memberships	\$ 5,736
62111	Miscellaneous Expense	\$ 1,500
62219	Computer Software	\$ 26,272
62223	Office Expense	\$ 13,400
62301	Accounting & Auditing Fees	\$ 77,600
62327	Directors Fees	\$ 9,500
62358	Laundry Service	\$ 1,750
62367	Medical Services	\$ 19,500
62381	Professional/Special Services	\$ 75,500
62420	Publications and Legal Notices	\$ 2,000
62500	Rents and Leases, Equipment	\$ 1,000
62715	Small Tools and Instruments	\$ 31,830
62826	Education Reimbursement	\$ 17,000
62888	Special District Expense	\$ 9,500
62890	Subscriptions	\$ 2,675
62914	Education & Training	\$ 34,000
62920	Gas, Oil and Fuel	\$ 53,350
62930	Conference Tuition - Registrations	\$ 16,100
63070	Utilities	\$ 38,200
Total Services & Supplies		\$ 846,787
Other Charges		
75233	Contributions to Trust/Agency Fund	305,000
75231	Contributions to Other Government Agencies	8,668
Total Other Charges		313,668
Operating Transfers Out		
90000	Transfer To Capital Outlay/Zone A (685030)	500,000
Total Operating Transfer Out		500,000
Appropriation for Contingencies		
98700	Contingencies	250,000
Total Contingencies		250,000
General Reserves		
98965	Undesignated Fund Balance	1,826,574
Total Reserves		1,826,574
TOTAL EXPENDITURES		12,210,153

Scotts Valley Fire Protection District

2022/2023 Zone A / Capital Outlay Budget Analysis

Revenue Summary

Account #	Revenue Description	Budgeted 2021/2022	Actual 2021/2022	Budgeted 2022/2023	Variance vs Prior year
40100	Prop Tax-Current Secured	\$ 133,134	\$ 133,166	\$ 138,077	\$ 4,911
40110	Prop Tax-Current Unsecured	\$ 2,662	\$ 2,471	\$ 2,679	\$ 208
40130	Prop Tax-Prior Unsecured		\$ 282		
40150	Supplemental Prop Tax-Current Secured	\$ 1,500	\$ 2,957	\$ 1,500	\$ (1,457)
40151	Supplemental Prop Tax-Current Unsecured	\$ -	\$ 35		\$ (35)
40160	Supplemental Prop Tax-Prior Secured		\$ 50		\$ (50)
40161	Supplemental Prop Tax-Prior UnSecured		\$ 21		\$ (21)
40430	Interest	\$ 8,000	\$ 4,845	\$ 5,000	
40830	St Homeowners property tax relief	\$ 693	\$ 653	\$ 688	
42450	Sale of Fixed Assets		\$ 2,250		
42462	Transfer In From General Fund	\$ 400,000	\$ 400,000	\$ 500,000	\$ 100,000
44142	Penalties for Delinquent Taxes		\$ 6		
44143	Redmptn Penalties for Delinquent Taxes		\$ 12		
Total Revenue		\$ 545,989	\$ 546,748	\$ 647,944	\$ 103,556
Beginning Fund Balance		\$ 1,139,363	\$ 1,139,363	\$ 1,655,937	\$ 516,574
Total Revenue		\$ 1,685,352	\$ 1,686,111	\$ 2,303,881	\$ 617,770

Account #	Expenditure Description	Budgeted 2021/2022	Actual 2021/2022	Budgeted 2022/2023	Variance vs Prior year
Services and Supplies					
61110	Clothing & Personal Supplies	\$ 20,000	\$ -	\$ 68,000	\$ 68,000
61215	Radio Services			\$ 23,000	\$ 23,000
61720	Maintenance Mobile Equipment			\$ -	\$ -
61845	Maintenance Structure & Grounds	\$ 75,000	\$ 10,392	\$ 56,500	\$ 46,108
62111	Misc Expense	\$ 15,500	\$ 13,265	\$ 5,000	\$ (8,265)
62223	Office Supplies	\$ 4,000	\$ -	\$ 4,000	\$ 4,000
62301	Accounting & Auditing Fees	\$ 5,000	\$ 937	\$ 1,000	\$ 63
62381	Professional Services	\$ 12,000	\$ -	\$ 257,000	\$ 257,000
62710	Equipment	\$ 36,700	\$ 4,214		\$ (4,214)
62715	Small Tools and Equipment	\$ 2,000	\$ 1,367		\$ (1,367)
Total Services and Supplies		\$ 170,200	\$ 30,175	\$ 414,500	\$ 384,325
Fixed Assets					
86110	Structures and Improvements	\$ 265,000	\$ -	\$ 518,000	\$ 518,000
86204	Equipment	\$ 70,000	\$ -	\$ 93,000	\$ 93,000
86209	Mobile Equipment	\$ -	\$ -	\$ 860,000	\$ 860,000
Total Fixed Assets		\$ 335,000	\$ -	\$ 1,471,000	\$ 1,471,000
Appropriation for Contingencies					
98700	Contingencies	\$ 100,000	\$ -	\$ 200,000	
General Reserves					
98965	Undesignated Fund Balance	\$ 1,179,220	\$ -	\$ 218,381	
TOTAL EXPENDITURES				\$ 2,303,881	

Scotts Valley Fire Protection District

Capital Outlay - Zone A (685030)

Final 2022/2023 Budget

Revenue Summary

Account #	Revenue Description	Revenue Amount
40100	Prop Tax-Current Secured	\$ 138,077
40110	Prop Tax-Current Unsecured	\$ 2,679
40150	Supplemental Prop Tax-Current Secured	\$ 1,500
40151	Supplemental Prop Tax-Current Unsecured	\$ -
40430	Interest	\$ 5,000
40830	St-Homeowners' Property Tax Relief	\$ 688
42462	Transfer In From General Fund	\$ 500,000
Total Revenue		\$ 647,944
Fund Balance Capital Outlay/Zone A		\$ 1,655,937
Total Capital Outlay/Zone A Revenue		\$ 2,303,881

Expenditure Summary

Account #	Expense Category	Expense Amount
60000	Services and Supplies	\$ 414,500
86000	Fixed Assets	\$ 1,471,000
Total Expenditures		\$ 1,885,500
Operating Transfer Out		\$ -
Contingencies		\$ 200,000
General Reserves		\$ 218,381
Total Capital Outlay / Zone A Budget		\$ 2,303,881

Scotts Valley Fire Protection District

Capital Outlay - Zone A (685030)

Final 2022/2023 Budget

Expenditure Accounts

Account #	Category	Amount
Services and Supplies		
61110	Clothing & Personal Supplies	\$ 68,000
61215	Radio Services	\$ 23,000
61720	Maintenance Mobile Equipment	
61845	Maintenance Structure & Grounds	\$ 56,500
62111	Miscellaneous	\$ 5,000
62223	Office Supplies	\$ 4,000
62301	Accounting & Auditing Fees	\$ 1,000
62381	Professional Services	\$ 257,000
62710	Equipment	\$ -
62715	Small Tool	\$ -
Total Services and Supplies		\$ 414,500
Fixed Assets		
86110	Structures and Improvements	\$ 518,000
86204	Equipment	\$ 93,000
86209	Mobile Equipment	\$ 860,000
Total Fixed Assets		\$ 1,471,000
Operating Transfer Out		
90000	Transfer To General Fund (685010)	\$ -
Total Operating Transfer Out		\$ -
Appropriation for Contingencies		
98700	Contingencies	\$ 200,000
Total Contingencies		\$ 200,000
General Reserves		
98695	Fund Balance - Undesignated	\$ 218,381
Total General Reserves		\$ 218,381
Total Expenditures		\$ 2,303,881

Scotts Valley Fire Protection District

SCHMIT (685040)

Final 2022/2023 Budget

Santa Cruz Hazardous Materials Interagency Team Cost Sharing Agreement Based on MOU Revision

Amount dispersed by population	\$202,206
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Total Funding Necessary	\$429,223
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Agency	Percentage	Amount
County	52.000%	\$105,147
Santa Cruz	21.200%	\$42,868
Watsonville	18.300%	\$37,004
Scotts Valley	4.500%	\$9,099
Capitola	4.000%	\$8,088
UCSC	Fixed	\$8,706
State Parks	Fixed	\$7,251
Interest & Grant	Fixed	\$400
Fund Balance		\$210,660
Total	100.00%	\$429,223

Scotts Valley Fire Protection District

SCHMIT (685040)

Final 2022/2023 Budget

Revenue Summary

Account #	Revenue Description	Revenue Amount
40430	Interest	\$ 400
40894	Grant Funding	\$ -
Subtotal Other Revenue		\$ 400
41150	<u>Haz Mat Contract Contributions:</u>	
	<u>Percentage</u>	
	Santa Cruz County	\$ 105,147
	City of Santa Cruz	\$ 42,868
	City of Watsonville	\$ 37,004
	City of Scotts Valley	\$ 9,099
	City of Capitola	\$ 8,088
	UCSC	\$ 8,706
	State Parks	\$ 7,251
Total Contribution From Other Agencies		\$ 218,163
Total Revenue		\$ 218,563
Estimated Fund Balance		\$ 210,660
Total General Fund Revenue		\$ 429,223

Expenditure Summary

Account #	Expense Category	Expense Amount
60000	Services and Supplies	\$ 80,524
75000	Personnel Costs	\$ 170,000
86204	Fixed Assets	\$ 16,000
Total Expenditures		\$ 266,524
Contingencies		\$ 25,000
General Reserves		\$ 137,699
Total SCHMIT General Fund Budget		\$ 429,223

Scotts Valley Fire Protection District

SCHMIT (685040)

Final 2022/2023 Budget

Expenditure Accounts

Account #	Category	Amount
Services and Supplies		
61110	Protective Clothing	\$ 10,600
61221	Telephone and Telegraph	\$ 960
61535	Insurance	\$ 2,555
61720	Maintenance, Mobile Equipment	\$ 15,000
61725	Maintenance, Office Equipment	\$ 380
61730	Maintenance, Other Equipment	\$ 10,200
61920	Medical Supplies	\$ 1,000
62219	Computer Software	\$ 3,000
62301	Accounting and Auditing	\$ 1,200
62365	Management Services	\$ 6,000
62715	Small Tools and Instruments	\$ 7,129
62888	Special District Expense	\$ 1,250
62914	Training	\$ 20,600
62920	Fuel	\$ 650
Total Services and Supplies		\$ 80,524
Contributions to Agencies		
75268	Reimbursement of Costs to Agencies	\$ 150,000
75276	Emergency Response Reimbursement	\$ 20,000
Total Contributions to Agencies		\$ 170,000
Fixed Assets		
86204	Equipment	\$ 16,000
Total Fixed Assets		\$ 16,000
Appropriation for Contingencies		
98700	Contingencies	\$ 25,000
Total Appropriation for Contingencies		\$ 25,000
General Reserves		
98965	Unassigned Fund Balance	\$ 137,699
Total Reserves		\$ 137,699
Total Expenditures		\$ 429,223

Scotts Valley Fire Protection District

Capital Outlay - Zone A (685030)

Final 2022/2023 Budget

Schedule of Fixed Assets

Account #	Description	Amount
86110	Structures and Improvements	
	Station Improvements	\$ 500,000
	Training Building	\$ 18,000
Subtotal Structures and Improvements		\$ 518,000
86204	Equipment	
	SCBA Compressor	\$ 70,000
	Lucas CPR Device	\$ 23,000
Subtotal Equipment		\$ 93,000
86209	Mobile Equipment	
	Type 1 Engine	\$ 805,000
	Command Vehicle	\$ 55,000
Subtotal Mobile Equipment		\$ 860,000
86222	Furniture	
		\$ -
Subtotal Furnishings		\$ -
Total Fixed Assets		\$ 1,471,000

Signed:

Board Secretary

SCOTTS VALLEY FIRE PROTECTION DISTRICT

RESOLUTION NO. 2022-8

RESOLUTION ADOPTING FINAL BUDGET FOR FISCAL YEAR 2022/2023

WHEREAS, Sections 13890, 13891 and 13893 of the California Health and Safety Code have been complied with; and

WHEREAS, a public hearing has been completed, during which time all additions and deletions to the proposed budget for 2022/2023 were made;

NOW, THEREFORE, BE IT RESOLVED AND ORDERED in accordance with Section 13895 of the California Health and Safety Code, the Final Budget of the Scotts Valley Fire Protection District of Santa Cruz County for which the Board of Directors is the governing board, for fiscal year 2022/2023 and is hereby adopted in accordance with the following:

Final Scotts Valley Fire Protection District Budget

General Fund	Index 685010	\$12,210,153
Capital Outlay/Zone A	Index 685030	\$ 2,303,881
SCHMIT	Index 685040	\$ 429,223

BE IT FURTHER RESOLVED that the appropriations for each budget unit which constitute the respective totals for each of the objects of the expenditures listed are attached hereto and known as the Final Budget (on file with the Secretary of the Board).

PASSED AND ADOPTED BY THE Board of Directors of the Scotts Valley Fire Protection District, County of Santa Cruz, State of California, at a regular meeting held on August 10, 2022, by the following vote:

AYES NOES ABSENT ABSTAIN

Director Robert Campbell
Director Edward Harmon
Director Joseph Parker
Director Russ Patterson
Director Daron Pisciotta

ATTEST:

Ron Whittle
Board Secretary

Russ Patterson
Board President

cc: County Auditor/Controller

June 3, 2022

Mr. Jeff McNeil, *Battalion Chief*
Scotts Valley Fire Protection District
7 Erba Lane
Scotts Valley, CA 95066

Dear Chief McNeil:

I am enclosing our proposal for **one (1)** new 1250 GPM Pumper with this cover letter. Based on your department's input, we have selected the *Pierce Enforcer* chassis on which to base this proposal. Some of the noteworthy features you will find include:

- ✓ TAK-4 T3 Independent Rear Suspension (IRS) with Tight Turning Technology
- ✓ 450 horsepower Cummins L9 motor with an Allison EVS 3000 transmission
- ✓ 1,250 GPM Hale single stage pump with 500-gallon water tank
- ✓ Pierce Husky 3 single agent foam system with refill and draft features
- ✓ All emergency lighting is LED

The cost of the unit described in this proposal is dependent on how the district may choose to purchase it. As noted in the assorted options, Pierce deducts certain prepayment credits from the final invoice, depending on the selected purchasing option. Please look at the information and figures attached.

The total price shown includes California Sales Tax at the rate of 9.75% and includes two (2) factory inspection trips for three (3) District representatives per trip. Price is based on delivery F.O.B. to the Scotts Valley Fire Protection District Headquarters.

If the District elects to purchase the proposed apparatus and would like to submit a purchase order, please address it to the following:

Golden State Fire Apparatus Inc.
7400 Reese Road
Sacramento, CA 95828

This quote will be valid until July 15, 2022.

We appreciate the opportunity to submit this information and look forward to going over any questions you might have. Let me know if there is anything else I can do and feel free to give me a call anytime. My cell number is (831) 251-8931 and thank you again.

Sincerely,



Rich Myers
Sales Consultant

PRODUCT PROPOSAL

Exhibit "A"

Bid #907

OPTION A

100% Pre-Payment or Lease Purchase

This will be the price of the Product(s) contingent upon the Customer paying 100% of the Grand Total to GSFA within 30 days of Contract Signing (or issuance of Purchase Order).

This discount is also available contingent upon a 3rd Party (Leasing Company) paying 100% of the Grand Total on behalf of the Customer within 30 days of Contract Signing (or issuance of Purchase Order).



PROPOSAL PREPARED FOR
Scotts Valley Fire Protection District
Pierce Manufacturing, Inc.
Enforcer 1250 GPM Pumper
HGAC FS12-19, Code FS19VC07
June 3, 2022

SALES CONSULTANT
Rich Myers
Golden State Fire Apparatus, Inc.
7400 Reese Road
Sacramento, CA 95828
831.251.8931 Cell
rich@goldenstatefire.com

PARTS, SERVICE & SUPPORT
Golden State Emergency Vehicle Service, Inc.
7400 Reese Road
Sacramento, CA 95828
916.330.1638 Office
parts@goldenstatefire.com

PROPOSAL PREPARED FOR:

Scotts Valley Fire Protection District
7 Erba Lane
Scotts Valley, CA 95066

Submitted Date:	June 3, 2022
Proposal Number:	40603-22A
<i>Expiration Date:</i>	<i>July 15, 2022</i>
Sales Consultant:	Rich Myers

We hereby propose and agree to furnish, after your acceptance of this proposal and the proper execution by the SCOTTS VALLEY FIRE DISTRICT, hereinafter called "Customer" and an officer of Golden State Fire Apparatus, Inc., hereinafter called "GSFA", the following fire apparatus and equipment, hereinafter called "Product":

#	Description	Unit Price
A	One (1) Pierce Manufacturing, Inc. Enforcer 1250 GPM Pumper	810,555.09
B	Discount for HGAC FS12-19, Product Code FS19VC07	(38,865.00)
C	Discount For 100% Pre-Payment at Time of Order	(38,789.57)
SUBTOTAL		732,900.52
State Sales Tax @ 9.75%		71,457.80
California Tire Fee		10.50
GRAND TOTAL		804,368.83



PROPOSAL SUMMARY

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

- Fire apparatus and equipment described herein
- Delivery to GSFA service center in Sacramento
- Pre-delivery inspection/services by GSFA
- Final delivery from service center to Customer

PRODUCT COMPLETION

Product shall be built in accordance with the specifications hereto attached, delays due to acts of God, strikes, war, or intentional conflict, failures to obtain chassis, materials, unusual weather conditions or other causes beyond GSFA's control not preventing, within approximately **755 to 785 CALENDAR DAYS** after receipt of this order and the acceptance thereof at our Sacramento, California office. Within thirty (30) calendar days after receipt of this order and acceptance thereof, GSFA shall submit to Customer a production schedule including tentative pre-construction conference, final inspection and final delivery dates.

DELIVERY LOCATION

Product shall be shipped in accordance with the specifications hereto attached and be delivered to you at **SCOTTS VALLEY, CALIFORNIA**. Proof of insurance must be demonstrated by the Customer to GSFA prior to transferring of the Product(s).

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 one of this Proposal, which includes: (i) the total price for the Product (the "Purchase Price"), (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. The proposed delivery timeframe for the Product, which is outlined on page one of this Proposal, shall not begin until full payment of the Grand Total is received. In the event Customer does not pay GSFA the Grand Total in the timeframe set forth in this Section 1, 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 units 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,



Rich Myers
Golden State Fire Apparatus, Inc.

I, _____ authorized
representative of SCOTTS VALLEY FIRE DISTRICT agrees to purchase the proposed
Product(s) and agree to the terms and conditions of this proposal and the specifications
hereto attached.

SIGNATURE: _____

TITLE: _____ DATE: _____

OPTION B

Payment at Time of Delivery or Pickup

This will be the price of the Product(s) contingent upon the Customer paying 100% of the Grand Total to GSFA at time of delivery or pick up



PROPOSAL PREPARED FOR
Scotts Valley Fire Protection District
Pierce Manufacturing, Inc.
Enforcer 1250 GPM Pumper
HGAC FS12-19, Code FS19VC07
June 3, 2022

SALES CONSULTANT
Rich Myers
Golden State Fire Apparatus, Inc.
7400 Reese Road
Sacramento, CA 95828
831.251.8931 Cell
rich@goldenstatefire.com

PARTS, SERVICE & SUPPORT
Golden State Emergency Vehicle Service, Inc.
7400 Reese Road
Sacramento, CA 95828
916.330.1638 Office
parts@goldenstatefire.com

PROPOSAL PREPARED FOR:

Scotts Valley Fire Protection District
7 Erba Lane
Scotts Valley, CA 95066

Submitted Date:	June 3, 2022
Proposal Number:	40603-22B
<i>Expiration Date:</i>	<i>July 15, 2022</i>
Sales Consultant:	Rich Myers

We hereby propose and agree to furnish, after your acceptance of this proposal and the proper execution by the SCOTTS VALLEY FIRE DISTRICT, hereinafter called "Customer" and an officer of Golden State Fire Apparatus, Inc., hereinafter called "GSFA", the following fire apparatus and equipment, hereinafter called "Product":

#	Description	Unit Price
A	One (1) Pierce Manufacturing, Inc. Enforcer 1250 GPM Pumper	810,555.09
B	Discount for HGAC FS12-19, Product Code FS19VC07	(38,865.00)
SUBTOTAL		771,690.09
State Sales Tax @ 9.75%		75,239.78
California Tire Fee		10.50
GRAND TOTAL		846,940.37



PROPOSAL SUMMARY

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

- Fire apparatus and equipment described herein
- Delivery to GSFA service center in Sacramento
- Pre-delivery inspection/services by GSFA
- Final delivery from service center to Customer

PRODUCT COMPLETION

Product shall be built in accordance with the specifications hereto attached, delays due to acts of God, strikes, war, or intentional conflict, failures to obtain chassis, materials, unusual weather conditions or other causes beyond GSFA's control not preventing, within approximately **755 to 785 CALENDAR DAYS** after receipt of this order and the acceptance thereof at our Sacramento, California office. Within thirty (30) calendar days after receipt of this order and acceptance thereof, GSFA shall submit to Customer a production schedule including tentative pre-construction conference, final inspection and final delivery dates.

DELIVERY LOCATION

Product shall be shipped in accordance with the specifications hereto attached and be delivered to you at **SCOTTS VALLEY, CALIFORNIA**. Proof of insurance must be demonstrated by the Customer to GSFA prior to transferring of the Product(s).

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 (Payment at Time of Delivery) – Customer shall pay the Grand Total at time of delivery or pick up of the Product to GSFA. It is the responsibility of the Customer to have full payment ready when the Product is complete and ready to deliver or pick up. If payment is late or delivery is delayed pending payment, a daily finance charge of \$150.00 and a daily storage fee of \$50.00 may apply until such payment is received. Due to insurance liability, the Product(s) will not be left at the Customer's location without full acceptance and payment or prior written agreement between the Customer and GSFA.

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 units 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,



Rich Myers
Golden State Fire Apparatus, Inc.

I, _____ authorized
representative of SCOTTS VALLEY FIRE DISTRICT agrees to purchase the proposed
Product(s) and agree to the terms and conditions of this proposal and the specifications
hereto attached.

SIGNATURE: _____

TITLE: _____ DATE: _____

PRODUCT SPECIFICATIONS

Exhibit "B"

Bid #907



Proposal Details Report

5/23/2022

Customer: SCOTTS VALLEY FPD
Representative Myers, Rich
Requirements Manager:
Description: Enforcer IRS Pumper (duplicate)
Chassis: Enforcer Chassis
Body: Pumper, Medium, Galvanneal, 2nd Gen
Bid Number: 907
Job Number:
Organization: Golden State Fire Apparatus, Inc

OptionCode	Type	Option	ProposalText
0010012		No Boiler Plates requested	
0661794	Single Source Compliance		SINGLE SOURCE MANUFACTURER 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.
0584456	Manufacture Location, Appleton, Wisconsin		Your apparatus will be manufactured in Appleton, Wisconsin.
0584452	RFP Location: Appleton, Wisconsin		
0588609	Vehicle Destination, US		
0670275	Unit to be Similar in some Aspects, Excluding Pump Panel		SPECIAL INSTRUCTIONS The apparatus being proposed will be designed and built to match the 25802. However, some variation may be necessary due to changes in our manufacturing processes or our product offering. Revisions in NFPA guidelines and/or other regulations may also affect our ability to match the previous unit.
0610784	Comply NFPA 1901 Changes Effective Jan 1, 2016, With Exceptions		NFPA 2016 STANDARDS 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.
0533347	Pumper/Pumper with Aerial Device Fire Apparatus		
0588611	Vehicle Certification, Pumper		

0661778		Agency, Apparatus Certification, Pumper/Tanker, U.L.	<p>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".</p> <p>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.</p> <p>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.</p> <p>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, <i>Standard on Breathing Air Quality for Fire and Emergency Services Respiratory Protection</i>.</p>
0891947		Certification, Vehicle Inspection Program, NFPA 1901	<p>VEHICLE INSPECTION PROGRAM CERTIFICATION To assure the vehicle is built to current NFPA 1901 standards, the apparatus, in its entirety, will be third-party, independent, audit-certified through Underwriters Laboratory (UL) that it is built and complies to all applicable standards in the current edition. The certification includes: all design, production, operational, and performance testing of not only the apparatus, but those components that are installed on the apparatus (no exception). 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.</p>
0000000	STF	GSFA, Final Insp, ATW Factory, Major Airport, 3 Days and 2 nights	<p>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 three (3) days and two (2) 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.</p>
0000000	STF	GSFA, Pre-Construction, ATW Factory, Major Airport, 3 Days and 2 nights	<p>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 three (3) days and two (2) 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.</p>

0000000	STF	DMV Compliance, Licensing & Registration	<p>LICENSED MANUFACTURER The State of California Vehicle Code, section 11701 requires &ldquo;every manufacturer of a vehicle subject to registration shall make application to the Department of Motor Vehicles (DMV) for a license containing a general distinguishing number&rdquo;.. The manufacturer has a current license at time of proposal and shall provide a copy upon request. Temporary licenses are not acceptable.</p> <p>LICENSED DEALERSHIP The State of California Vehicle Code, section 11701 requires a &ldquo;dealer in vehicles of a type subject to registration, shall make application to the Department of Motor Vehicles (DMV) for a license containing a general distinguishing number&rdquo;.. Golden State Fire Apparatus, Inc. has a current license at time of bid as outlined above and is available upon request. Temporary licenses are not acceptable.</p> <p>LICENSED SALES REPRESENTATIVE The State of California Vehicle Code, section 11800 requires that it shall be &ldquo;unlawful for any person to act as a vehicle salesperson without having first procured a license issued by the Department of Motor Vehicles (DMV)&rdquo;.. The representative has a current vehicle salespersons license at time of proposal and shall provide a copy upon request. Temporary licenses are not acceptable.</p> <p>VEHICLE REGISTRATION The State of California Vehicle Code section 11739 requires that the &ldquo;dealer of a new motor vehicle sale is responsible for applying for the title, securing vehicle registration, and obtaining license plates for the Customer&rdquo; through the Department of Motor Vehicles (DMV). Golden State Fire Apparatus, Inc. is a factory-authorized dealer of the vehicle being sold and is authorized to register with the State of California as a new vehicle manufacturer. The dealer will make all necessary applications and complete all transfer papers, including applying for California Exempt &ldquo;E&rdquo; license plates.</p>
0000000	STF	Pre-Delivery Service, GSFA	<p>PRE-DELIVERY SERVICE After transportation from the factory and prior to delivery, the apparatus will receive a pre-delivery service to confirm proper operation and correction of any issues found as a result of said inspection. The Golden State Fire Apparatus, Inc. pre-delivery service consists of the following: Engine Compartment and Undercarriage &ndash; Check for hoses, electrical and air lines that are unprotected and provide chaffing protection as required. Check for any broken mounting brackets and inspect for correct capacities of the following (if applicable): engine oil, coolant, power steering fluid, washer reservoir fluid, transmission fluid, rear end fluid, pump transmission oil, and primer oil. Lift the apparatus with the with the ARI-HETRA lift system to inspect electrical and air line runs so that they are routed in such a manner as to prevent chaffing, rubbing, etc. The DPF and SCR components will also be inspected along with the U-joints. Interior &ndash; Operate all doors, windows and locks for proper adjustment. Check upholstery. Exterior &ndash; Repair reasonable paint scratches or chips. Tighten any loose hardware and inspect tires and wheels for proper pressure and lug torqueing. Road Test &ndash; With the water tank (if applicable) full, the apparatus will be driven approximately 20 miles which allows the drive train components to get up to operating temperature. Road test will be on both city and highway roads. A DOT compliant brake test will be conducted to ensure the system is holding air. The brake condition and wheel seals will also be inspected. Electrical - Operate all lights, sirens, and other electrical accessories to verify operation. Pump - If applicable, vacuum test the pump to hold for 15 minutes. After vacuum test, operate the relief valve, transfer valve and check pump shift. Check water tank for leaks and inspect water level gauge for calibration. With discharge caps loose, rapid test all individual gauges and main gauges for calibration. Lubricate valve rods. Foam System &ndash; If applicable, tighten caps and connect foam lines. Test selector, valves, metering valve and operation of foam system (including flush). Aerial &ndash; If applicable, operate the aerial device to ensure functionality and visually inspect for any damage during delivery to dealership. Rear Suspension Adjustment &ndash; The rear axle suspension will be re-torqued per OEM recommendations at the dealership location prior to final delivery. Fuel Tank - Fuel tank will be filled at the dealership location prior to final delivery. DEF Tank - DEF tank will be filled at the dealership location prior to final delivery. Wash - The apparatus will be thoroughly washed at the dealership location prior to final delivery.</p>
0000000	STF	Weekly Progress Reports, Pumper, GSFA	<p>WEEKLY PROGRESS REPORTS Golden State Fire Apparatus, Inc. will provide weekly progress reports including photographs of the apparatus or the major components as they are being constructed. The reports will commence at the start of the manufacturing process and will continue through production by the manufacturer. The reports will show the progress of the apparatus through the course of each week. Special attention will be given to show the unique features and aspects of the apparatus as construction progresses.</p>

0536644	Customer Service Website	<p>AFTERMARKET SUPPORT WEBSITE</p> <p>Pierceparts.com will provide <u>Pierce authorized dealer</u> 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.</p> <p>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.</p> <p>The website will consist of the following screens at the dealer level:</p> <p>My Fleet Screen</p> <p>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.</p> <p>Parts Screens</p> <p>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.</p> <p>Warranty Screen</p> <p>The Warranty screens will provide dealers the ability to submit electronically warranty claims directly to Pierce Manufacturing for reimbursement.</p> <p>My Reports Screens</p> <p>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.</p> <p>Technical Support Screens</p> <p>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.</p> <p>Training</p> <p>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.</p> <p>About Pierce</p> <p>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.</p>
0620362	Consortium, HGAC	
0537375	Unit of Measure, US Gallons	
0030006	Bid Bond Not Requested	<p>BID BOND NOT REQUESTED</p> <p>A bid bond will not be included. If requested, the following will apply:</p> <p>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.</p> <p>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.</p>
0582800	Performance Bond, 100% with 25% Warranty Bond, 1 Yr, and Payment Bond	<p>PERFORMANCE BOND, 1 YEAR</p> <p>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.</p> <p>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.</p>

0000007	Approval Drawing	<p>APPROVAL DRAWING</p> <p>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.</p> <p>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>ELECTRICAL WIRING DIAGRAMS</p> <p>Two (2) electrical wiring diagrams, prepared for the model of chassis and body, will be provided.</p>
0649754	Enforcer Chassis	<p>ENFORCER CHASSIS</p> <p>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>
0021007	Maximum Overall Height	<p>MAXIMUM OVERALL HEIGHT</p> <p>The maximum overall height of the apparatus will be 120" unloaded max.</p>
0000110	Wheelbase	<p>WHEELBASE</p> <p>The wheelbase of the vehicle will be 177.50.</p>
0000070	GVW Rating	<p>GVW RATING</p> <p>The gross vehicle weight rating will be 44,000.</p>
0649713	Frame Rails, 10.25" x 3.50" x .375", Saber FR/Enf	<p>FRAME</p> <p>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 be heat-treated steel measuring 10.25" x 3.50" x 0.375".</p> <p>Each rail will have a section modulus of 16.00 cubic inches, yield strength of 120,000 psi, and a resisting bending moment (rbm) of 1,921,069 inch-pounds.</p>
0020018	Frame Liner Not Req'd	
0633906	Axle, Front, Oshkosh TAK-4, Non Drive, 18,000 lb, Enforcer	<p>FRONT NON DRIVE AXLE</p> <p>The Oshkosh TAK-4® front axle will be of the independent suspension design with a ground rating of 18,000 lb.</p> <p>Upper and lower control arms will be used on each side of the axle. Upper control arm castings will be made of 100,000-psi yield strength 8630 steel and the lower control arm casting will be made of 55,000-psi yield ductile iron.</p> <p>The center cross members and side plates will be constructed out of 80,000-psi yield strength steel.</p> <p>Each control arm will be mounted to the center section using elastomer bushings. These rubber bushings will rotate on low friction plain bearings and be lubricated for life. Each bushing will also have a flange end to absorb longitudinal impact loads, reducing noise and vibrations.</p> <p>There will be nine (9) grease fittings supplied, one (1) on each control arm pivot and one (1) on the steering gear extension.</p> <p>The upper control arm will be shorter than the lower arm so that wheel end geometry provides positive camber when deflected below rated load and negative camber above rated load.</p> <p>Camber at load will be zero degrees for optimum tire life.</p> <p>The ball joint bearing will be of low friction design and be maintenance free.</p> <p>Toe links that are adjustable for alignment of the wheel to the center of the chassis will be provided.</p> <p>The wheel ends must have little to no bump steer when the chassis encounters a hole or obstacle.</p> <p>The steering linkage will provide proper steering angles for the inside and outside wheel, based on the vehicle wheelbase.</p> <p>The axle will have a turning angle of up to 45 degrees.</p>

0612512	SP Suspension, Front TAK-4, 18,000 lb, 5" Jounce, Enforcer	FRONT SUSPENSION Front Oshkosh TAK-4™ independent suspension will be provided with a minimum ground rating of 18,000 lb. The independent suspension system will be designed to provide maximum ride comfort. The design will allow the vehicle to travel at highway speeds over improved road surfaces and moderate speeds over rough terrain with minimal transfer of road shock and vibration to the vehicle's crew compartment. Each wheel will have a torsion bar type spring. In addition, each front wheel end will have energy absorbing jounce bumpers to prevent bottoming of the suspension. The suspension design will have at least 10.00" of total wheel travel and a minimum of 5.00" before suspension bottoms. The torsion bar anchor lock system allows for simple lean adjustments without the use of shims. One can adjust for a lean within fifteen minutes per side. Anchor adjustment design is such that it allows for ride height adjustment on each side. The independent suspension completed durability testing that simulated 140,000 miles of inner city driving.
0087572	Shock Absorbers, KONI, TAK-4, Qtm/AXT/Imp/Vel/DCF/Enf	FRONT SHOCK ABSORBERS KONI heavy-duty telescoping shock absorbers will be provided on the front suspension.
0000322	Oil Seals, Front Axle	FRONT OIL SEALS Oil seals with viewing window will be provided on the front axle.
0739662	Tires, Front, Goodyear, G751 MSA, 315/80R22.50, LRL, Speed Rating	FRONT TIRES Front tires will be Goodyear 315/80R22.50 radials, load range L, all position, G751 MSA tread, rated for 18,180 lb maximum axle load and 75 mph maximum speed.
0894433	Wheels, Front, 22.50" x 9.00", Steel, Hub Pilot, 315/80R Tire	The tires will be mounted on 22.50" x 9.00" steel disc type wheels with a ten (10) stud, 11.25" bolt circle.
0634529	Axle, Rear, Oshkosh TAK-4 T3, 26,000 lb, Rear Steer, Single, AXT/Imp/Vel/DCF/Enf	REAR AXLE The rear axle shall be a single assembly, of the Oshkosh TAK-4® T3, Tight Turning Technology, independent suspension design, with the ability to support a mechanical rear axle steering system. The rear axle shall have a ground rating of 26,000 lb. The rear axle shall be designed for specific use of the independent suspension. The rear independent suspension driving axle shall be equipped with a carrier reduction of 1.69 to 1.00 with a planetary wheel end reduction of 3.55 to 1.00. Driving torque shall be transmitted from the center differential to the planetary wheel drive by means of a half shaft. Oil fill and level check shall be required at the center differential and the planet wheel end locations. REAR AXLE STEERING The rear axle assembly shall include a mechanical rear steering system. The mechanical rear steering system shall not use electronic controls and shall not have a means to be disengaged. Coordinated steering is the only steering mode supported by the mechanical steering system. Rear steering system is actuated by a mechanical means of connecting the front master/slave steering gear system to a rear axle master/slave steering gear system.
0544249	Top Speed of Vehicle, 64 MPH	TOP SPEED OF VEHICLE A rear axle ratio will be furnished to allow the vehicle to reach a top speed of 64 MPH.
0634527	Suspen, Rear, Oshkosh TAK-4, Independent, 26,000 lb	REAR SUSPENSION The rear suspension will be an Oshkosh TAK-4® independent type with a minimum ground rating of 26,000 lbs. The independent suspension will be configured with upper and lower control arms with a spring seat for a coil spring mounted to the lower control arm. The spring tower will be integrated into the suspension frame mount. Each control arm has elastomeric bushings at the inner pivot locations with a ball joint bearing at the outer pivot location. All suspension pivot joints will be of a maintenance free design. The rear independent suspension will be provided with steering toe links providing tow adjustments and maintaining wheel control throughout the range of wheel travel. The independent suspension will be designed to provide maximum ride quality when traveling at highway speeds over improved roads or a moderate speeds over secondary road surfaces with minimal transfer of shock and vibration to the apparatus. Each independent suspension will utilize a coil type of spring. The design will allow for removal of the spring without the use of any spring compression. The rear suspension will provide a minimum wheel travel of 10.00", 6.00" jounce and 4.00" of rebound.
0000485	Oil Seals, Rear Axle	REAR OIL SEALS Oil seals will be provided on the rear axle(s).

0601529	SP Driver Controlled Differential Lock, Oshkosh TAK-4 IRS, Single	DRIVER CONTROL DIFFERENTIAL LOCK (DCDL) The rear axle will be equipped with driver controlled differential lock (DCDL). The control will be located within easy reach of the driver.
0802669	Tires, Rear, Goodyear, Armor Max MSA,445/65R22.5,20 ply, (IRS),Single FS Load Rat	REAR TIRES Rear tires will be two (2) Goodyear radials 445/65R22.50, 20 ply all-position Armor Max MSA tread, rated for 26,320 lb maximum axle load and 68 mph maximum speed.
0693621	Wheels, Rear, 22.50" x 13.00", Steel, Hub Pilot, Single, AWS	The tires will be mounted on 22.50" x 13.00" steel disc type wheels with a ten (10) stud,11.25" bolt circle.
0568081	Tire Balancing, Counteract Beads	TIRE BALANCE All tires will be balanced with Counteract balancing beads. The beads will be inserted into the tire and eliminate the need for wheel weights.
0602747	No Tire Pressure Indicator, Fire Department Omits, Non-NFPA 2016 Compliant	TIRE PRESSURE INDICATOR NFPA 1901, 2016 edition, section 4.13.4 requires each tire be equipped with a visual indicator or monitoring system that indicates tire pressure. Per Fire Department specification, a tire pressure indicator is not on the apparatus as manufactured. This apparatus will be non-compliant to NFPA 1901 standards effective at time of contract execution.
0057936	Covers, Lug Nut, Chrome	CHROME LUG NUT COVERS Chrome lug nut covers will be supplied on front and rear wheels.
0012045	Mud Flap, Rear, Pierce Logo	MUD FLAPS Mud flaps with a Pierce logo will be installed behind the rear wheels.
0544802	Chocks, Wheel, SAC-44-E, Folding	WHEEL CHOCKS There will be one (1) pair of folding Ziamatic, Model SAC-44-E, aluminum alloy, Quick-Choc wheel blocks, with easy-grip handle provided.
0544806	Mounting Brackets, Chocks, SAC-44-E, Folding, Horizontal	Wheel Chock Brackets There will be one (1) pair of Zico, Model SQCH-44-H, horizontal mounting wheel chock brackets provided for the Ziamatic, Model SAC-44-E, folding wheel chocks. The brackets will be made of aluminum and consist of a quick release spring loaded rod to hold the wheel chocks in place. The brackets will be mounted below the left side rear compartment and forward of the left side rear tire.
0010670	ABS Wabco Brake System, Single rear axle	ANTI-LOCK BRAKE SYSTEM 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.
0030185	Brakes, Knorr/Bendix 17", Disc, Front, TAK-4	BRAKES The service brake system will be full air type. The front brakes will be Knorr/Bendix disc type with a 17.00" ventilated rotor for improved stopping distance. The brake system will be certified, third party inspected, for improved stopping distance.
0581433	Brakes, Bendix, Cam, Rear, 16.50 x 7.00"	The rear brakes will be Bendix®, Model ES1657D, 16.50" x 7.00" cam operated with automatic slack adjusters.
0020784	Air Compressor, Brake, Cummins/Wabco 18.7 CFM	BRAKE SYSTEM AIR COMPRESSOR 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	BRAKE SYSTEM 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.
0790412	Air Dryer, Wabco System Saver 1200 IWT, Heated, SFR/Enf	BRAKE SYSTEM AIR DRYER 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	BRAKE LINES 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.
0000854	Air Inlet, w/Disconnect Coupling	AIR INLET One (1) air inlet with 3D series male coupling will be provided. It will allow station air to be supplied to the apparatus brake system through a shoreline hose. The inlet will be located on the driver side pump panel. A check valve will be provided to prevent reverse flow of air. The inlet will discharge into the "wet" tank of the brake system. A mating female fitting will also be provided with the loose equipment.
0000810	All Wheel Lock-up	ALL WHEEL LOCK-UP 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. A control switch will be provided for the driver on the instrument panel.
0584874	Drain, Tank, Located Lowest Point of the Air Tank	AIR TANK DRAINS Air tank drains will be mounted at the lowest point on the bottom of the tank for maximum drainage.
0736437	Engine, Cummins L9, 450 hp, 1250 lb-ft, W/OBD, EPA 2021, Saber FR/Enforcer	ENGINE 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.

0001244	High Idle w/Electronic Engine, Custom	<p>HIGH IDLE</p> <p>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.</p> <p>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>ENGINE BRAKE</p> <p>A Jacobs® engine brake is to be installed with the controls located on the instrument panel within easy reach of the driver.</p> <p>The driver will be able to turn the engine brake system on/off and have a high, medium and low setting.</p> <p>The engine brake will activate when the system is on and the throttle is released.</p> <p>The high setting of the brake application will activate and work simultaneously with the variable geometry turbo (VGT) provided on the engine.</p> <p>The engine brake will be installed in such a manner that when the engine brake is slowing the vehicle the brake lights are activated.</p> <p>The ABS system will automatically disengage the auxiliary braking device, when required.</p>
0644227	Clutch, Fan, Air Actuated, Saber FR/Enforcer	<p>CLUTCH FAN</p> <p>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>
0529506	Fuel/Water Separator, Without Heat, Davco FuelPro 382	<p>FUEL/WATER SEPARATOR</p> <p>A Davco FuelPro 382 fuel/water separator with fluid transfer, no heating, and visual filter change/restriction indicator will be provided on the chassis.</p>
0640477	Air Intake, Metal Screen, Saber FR/Enforcer	<p>ENGINE AIR INTAKE</p> <p>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.</p> <p>A stainless steel metal screen will be installed at the inlet of the air intake system that will meet NFPA 1901 requirements.</p> <p>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>EXHAUST SYSTEM</p> <p>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>
0657490	Diffuser, Exhaust, Modified For Extraction, 4"x6"x4"	<p>EXHAUST MODIFICATION</p> <p>The exhaust diffuser will be reduced to 4.00" in the center to accommodate the fire department's air recovery system. There will be a minimum of 4.00" clearance around the diffuser for proper cooling.</p>
0788765	Radiator, Saber FR/Enforcer	<p>RADIATOR</p> <p>The radiator and the complete cooling system will meet or exceed NFPA and engine manufacturer cooling system standards.</p> <p>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.</p> <p>The radiator core will have a minimum front area of 1060 square inches.</p> <p>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.</p> <p>The radiator will be compatible with commercial antifreeze solutions.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>Shields or baffles will be provided to prevent recirculation of hot air to the inlet side of the radiator.</p>

0001090	Cooling Hoses, Rubber	COOLANT LINES 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.
0021126	Fuel Tank, 50 Gallon, Left Side Fill	FUEL TANK A 50 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 .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 .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.
0001129	Lines, Fuel	All fuel lines will be provided as recommended by the engine manufacturer.
0595087	DEF Tank, 4.5 Gallon, DS Fill, Forward of Rear Axle	DIESEL EXHAUST FLUID TANK 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. A 0.50" drain plug will be provided in a low point of the tank for drainage. A fill inlet will be located on the driver's side of the body and be covered with a hinged, spring loaded, painted door that is marked "Diesel Exhaust Fluid Only". The tank will meet the engine manufacturers requirement for 10 percent expansion space in the event of tank freezing. The tank will include an integrated heater unit that utilizes engine coolant to thaw the DEF in the event of freezing.
0723716	Fuel Priming Pump, Electronic, Automatic, Cummins, No Swt Req'd	FUEL PRIMING PUMP A Cummins automatic electronic fuel priming pump will be integrated as part of the engine.
0582243	Shutoff Valves, Fuel Line @ Primary Filter, Cummins	FUEL SHUTOFF A fuel line shutoff valve will be installed on both the inlet and outlet of the primary fuel filter.
0553019	Cooler, Engine Fuel, Imp/Vel, AXT/Qtm/Sab/DCF/SFR/Enf	FUEL COOLER An air to fuel cooler will be installed in the engine fuel return line.
0011125	Door, Fuel Fill Painted Job Color	FUEL FILL DOOR Fuel fill door will be painted job color.
0690880	No Selection Required From This Category	
0887559	Trans, Allison 6th Gen, 3000 EVS P, w/Prognostics, Imp/Vel/SFR/Enf	TRANSMISSION An Allison 6th generation, Model EVS 3000P, electronic torque converting automatic transmission will be provided. 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. 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. A transmission temperature gauge with red light and audible alarm will be installed on the cab dash.
0625329	Transmission, Shifter, 5-Spd, Push Button, 3000 EVS	TRANSMISSION SHIFTER 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. The transmission ratio will be: 1st 3.49 to 1.00 2nd 1.86 to 1.00 3rd 1.41 to 1.00 4th 1.00 to 1.00 5th 0.75 to 1.00 R 5.03 to 1.00

0684459		Transmission Oil Cooler, Modine, External	TRANSMISSION COOLER A Modine plate and fin transmission oil cooler will be provided using engine coolant to control the transmission oil temperature.
0801878		Fluid, 3000 Series Trans, Allison Approved TES-668 Synthetic, IPOS, Custom	TRANSMISSION FLUID The transmission will be provided with TranSynd, or other Allison approved TES-668 heavy duty synthetic transmission fluid.
0001370		Driveline, Spicer 1710	DRIVELINE Drivelines will be a heavy-duty metal tube and be equipped with Spicer® 1710 universal joints. The shafts will be dynamically balanced before installation. 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.
0669988		Steering, Sheppard M110 w/Tilt, TAK-4, Eaton Pump, w/Cooler	STEERING Dual Sheppard, Model M110, steering gears, with integral heavy-duty power steering, will be provided. For reduced system temperatures, the power steering will incorporate an air to oil cooler and an Eaton, Model VN20, hydraulic pump with integral pressure and flow control. All power steering lines will have wire braded lines with crimped fittings. A tilt and telescopic steering column will be provided to improve fit for a broader range of driver configurations.
0509229		Steering Wheel, 2 Spoke	STEERING WHEEL The steering wheel will be 18.00" in diameter, have tilting and telescoping capabilities, and a 2-spoke design.
0690274		Logo/Emblem, on Dash	LOGO AND CUSTOMER DESIGNATION ON DASH 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: Scotts The second row of text will be: Valley Fire The third row of text will be: District
0776531	SP	Centralized Lube Point, Zerk Fittings, Rear TAK-4 Suspension Only, Single	CENTRALIZED LUBRICATION, REAR SUSPENSION The lubrication points for the rear suspension will be remote mounted. All rear suspension zerk fittings will be located on a bracket in one (1) easy to reach central location.
0603633		Bumper, Non-Extended, Steel, Painted, Saber FR/Enforcer	BUMPER A one (1) piece bumper manufactured from 0.25" formed steel with a 0.38" bend radius will be provided. The bumper will be a minimum of 10.00" high with a 1.50" top and bottom flange. The bumper will be metal finished and painted to match the apparatus. A 9.00" formed steel channel will be mounted directly behind bumper for additional strength. Gravel Pan A gravel pan, constructed of bright aluminum treadplate, will be furnished between the bumper and cab face.
0614646		No Lift & Tow Package, Imp/Vel, AXT, SFR/Enf	
0032932		Tow Eyes, Painted, Extended Out Front of Bumper	TOW EYES Two (2) tow eyes will be mounted through the front face of the bumper. The inner and outer edges of the tow eyes will have a .25" radius. The tow eyes will be mounted directly to the bumper frame. Cutouts will be provided in the front face of the stainless steel bumper to allow the tow eyes to extend out the front. The tow eyes will be designed and positioned to allow up to a 9,000 lb straight horizontal pull in line with the centerline of the vehicle. The tow eyes will not be used for lifting of the apparatus. The tow eyes will be painted job color.

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 forward cab section will have an overall height (from the cab roof to the ground) of approximately 99.00". The crew cab section will have a 10.00" raised roof, with an overall cab height of approximately 109.00". 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 64.50" in the center and outboard positions. The crew cab floor will measure 36.00" 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 51.50" to the rear wall. The big block engine tunnel will measure 41.50" 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 brushed stainless steel that covers the entire rear wall.
0639727	Cab Lift, Elec/Hyd, Manual Override, Saber FR/Enforcer	CAB LIFT 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. Cab Lift Interlock 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.
0695930	Grille, Bright Finished, Front of Cab, Enforcer	GRILLE A bright finished aluminum mesh grille screen, inserted behind a bright finished grille surround, will be provided on the front center of the cab.
0002224	Scuffplates, S/S At Cab Door Jambs, 4-Door Cab	DOOR JAMB SCUFFPLATES All cab door jambs will be furnished with a polished stainless steel scuffplate, mounted on the striker side of the jamb.
0647932	Not Required, Trim, S/S Band, Across Cab Face, AXT/Dash CF/Saber/Enforcer	
0087357	Molding, Chrome on Side of Cab	SIDE OF CAB MOLDING Chrome molding will be provided on both sides of cab.
0521669	Mirrors, Retractable, West Coast Style, Htd/Rmt, w/Htd/Rmt Convex	MIRRORS A Retractable, 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.
0648172	Door, Full Height, Saber FR/Enforcer 4-Door Cab, Raised Roof	DOORS To enhance entry and egress to the cab, the forward cab doors will be a minimum of 37.50" wide x 75.50" 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 85.50" 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 finish of the door handle will be chrome/black. 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 grab 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 cab steps at each cab door location will be located inside the cab doors to protect the steps from weather elements.

0655544	Door Panel, Painted Aluminum, Saber/Enforcer 4-Door Cab	Door Panels The inner cab door panels will be constructed out of painted aluminum.
0630636	Controls, Electric Roll-Up Windows, 4dr, 4 Driver Controls, Saber FR/Enforcer	ELECTRIC OPERATED CAB DOOR WINDOWS 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.
0653574	Electric Door Locks, Cab Doors, Conceal Switch Feature, QXS/AXT/Sab/Enf	ELECTRIC CAB DOOR LOCKS The front driver and officer doors will have a door lock master switch that will control all front and rear crew cab door locks. Each rear crew cab door will have its own lock control. There will be one (1) concealed switch located UNDER RS FRONT BUMPER.
0633615	Steps, 4-Door Cab, Reduced Bottom Step, Saber FR/Enforcer	CAB STEPS 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 an 8.00" minimum depth. The inside cab steps will not exceed 16.50" in height. The vertical surfaces of the step well will be aluminum treadplate.
0770194	Handrail, Exterior, Knurled, Alum, 4-Door Cab	CAB EXTERIOR HANDRAILS 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.
0892638	Lights, Cab & Crw Cab Acs Stps, P25, LED w/Bezel, 6lts	STEP LIGHTS There will be six (6) white LED step lights with chrome housing installed for cab and crew cab access steps. One (1) light for the left access steps. Two (2) lights for the left side crew cab access steps. Two (2) lights for the right side crew cab access steps. One (1) light for the right 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.
0583698	Fenders, S/S on cab, Extra Wide, Saber/Enf	FENDER CROWNS Stainless steel fender crowns will be installed at the cab wheel openings.
0637984	Window, Side of C/C, Fixed, Saber FR/Enforcer	CREW CAB WINDOWS One (1) fixed window with tinted glass will be provided on each side of the cab, to the rear of the front cab door. The windows will be sized to enhance light penetration into the cab interior. The windows will measure 18.70" wide x 23.75" high.
0012090	Not Required, Windows, Front/Side of raised roof	
0779033	Not Required, Windows Rear of Crew Cab, Saber FR/Enforcer	
0722796	Dash, Poly, Saber FR/Enforcer	CAB DASH The driver side dash, switch panel located to the right of the driver, and center console will be an easily removable high impact resistant polymer cover. The instrument gauge cluster will be surrounded with a high impact ABS plastic contoured to the same shape of the instrument gauge cluster. The officer side dash will be a flat top design with an upper beveled edge to provide easy maintenance and will be constructed out of aluminum and painted to match the cab interior.

0750824	Cab Interior, Vinyl Headliner, Saber FR/Enforcer, CARE	<p>CAB INTERIOR The cab interior will be constructed of primarily metal (painted aluminum) to withstand the severe duty cycles of the fire service. The engine tunnel will be padded and covered, on the top and sides, with dark silver gray 36 ounce leather grain vinyl resistant to oil, grease, and mildew. 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>CAB INTERIOR UPHOLSTERY The cab interior upholstery will be 36 oz dark silver gray vinyl.</p>
0753903	Cab Interior, Paint Color, Saber FR/Enforcer	<p>CAB INTERIOR PAINT The cab interior metal surfaces, excluding the rear heater panels, will be painted 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>CAB FLOOR 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>
0722696	HVAC, Enforcer, CARE	<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.</p> <p>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.</p> <p>Cab/Crew Auxiliary Heater There will be no auxiliary heater provided in the rear facing seat risers.</p> <p>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 rear plenum will be covered with a formed plastic cover. 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 rear plenum cover per the following: Minimum of 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 hinged with two (2) thumb latches. The air conditioner refrigerant will be R-134A and will be installed by a certified technician.</p> <p>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.</p> <p>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.</p>

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 black plastic thumb latch 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 Compt, 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 lift and turn latch will be provided on the access door.
0583039	Not Required, Side Roll and Frontal Impact Protection	
0622619	Seating Capacity, 4 Seats	SEATING CAPACITY The seating capacity in the cab will be four (4).
0636958	Seat, Driver, 911, Scissor Action, Air Ride, Mid-Height w/Headrest, Saber FR/Enf	DRIVER SEAT A Seats Incorporated, 911, scissor action, air ride, mid-height with headrest style seat will be provided in the cab for the driver.
0636949	Seat, Officer, 911, Fixed, High Back, Saber FR/Enforcer	OFFICER SEAT A Seats Incorporated, 911, fixed high back style seat will be provided in the cab for the officer.
0620420	Radio Compartment, Below Non-Air Ride Seat, Saber FR/Enforcer	RADIO COMPARTMENT A radio compartment will be provided under the officer's seat. The inside compartment dimensions will be 16.00" wide x 7.50" high x 15.00" deep, with the back of the compartment angled up to match the cab structure. A drop-down door with one (1) flush lift and turn latch will be provided for access. The compartment will be constructed of smooth aluminum and painted to match the cab interior.
0632852	Seat, Rear Facing C/C, DS Outboard, Pierce PSV, SCBA, Saber FR/Enforcer	REAR FACING DRIVER SIDE OUTBOARD SEAT There will be one (1) rear facing seat provided at the driver side outboard position in the crew cab. For optimal comfort, the seat will be provided with 15.00" 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 be furnished with a 3-point, shoulder type seat belt.
0102783	Not Required, Seat, Rr Facing C/C, Center	
0632848	Seat, Rear Facing C/C, PS Outboard, Pierce PSV, SCBA, Saber FR/Enforcer	REAR FACING PASSENGER SIDE OUTBOARD SEAT There will be one (1) rear facing seat provided at the passenger side outboard position in the crew cab. For optimal comfort, the seat will be provided with 15.00" 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 be furnished with a 3-point, shoulder type seat belt.

0108189	Not Required, Seat, Forward Facing C/C, DS Outboard	
0635962	Seat, Forward Facing C/C, Center, (2) Seats Inc 911, Hi-Back, Saber FR/Enforcer	FORWARD FACING CENTER SEATS There will be two (2) forward facing, Seats Incorporated 911 non-SCBA seats provided at the center position in the crew cab.
0108190	Not Required, Seat, Forward Facing C/C, PS Outboard	
0766467	Upholstery, Seats In Cab, All Vinyl, Seats Inc, CARE	SEAT UPHOLSTERY All seat upholstery will be leather grain 36 oz dark silver gray vinyl resistant to oil, grease and mildew. The cab will have six (6) seating positions.
0543991	Bracket, Air Bottle, Hands-Free II, Cab Seats	AIR BOTTLE HOLDERS 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 two (2) SCBA brackets.
0734952	Door, Access, Front, (2) Rear Facing Seat Risers, No Heater	ACCESS DOOR An access door will be provided in the front edge of each rear facing seat riser with a drop down door. The drop down door will be provided with a flush lift and turn latch and painted to match the cab interior. There will be no louvers.
0636545	Seat Belt, Single Retractor, Saber FR/Enforcer	SEAT BELTS All cab and tiller cab (if applicable) seating positions will have red seat belts. The seat belts will be furnished with a single automatic retractor. 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 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 seat 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.
0602464	Helmet Storage, Provided by Fire Department, NFPA 2016	HELMET STORAGE PROVIDED BY FIRE DEPARTMENT 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.
0647647	Lights, Dome, FRP Dual LED 4 Lts	CAB DOME LIGHTS 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.
0896451	Enhanced Software for Cab and Crew Cab Dome Lts	ENHANCED SOFTWARE FOR CAB AND CREW CAB DOME LIGHTS The cab and crew cab dome lights will remain on for 10 seconds for improved visibility after the doors are closed. The dome lights will dim after 10 seconds or immediately if the vehicle's transmission is put into gear.
0699972	Handlts, (2) Streamlight, E-Spot FireBox, 45865 LED, 12v, Orange, Vehicle Mnt	HAND HELD LIGHT There will be two (2) Streamlight E-Spot FireBox Vehicle Mount Systems, Model 45865, LED hand held flashlights with an orange thermoplastic body provided. The location will be locate wiring in the lower rear corner of the cab, one each side. Lights to be mounted at pickup. The system will include the hand light, a charger and the vehicle mount system.
0622803	Cab Instruments, Black Gauges, Black Bezels, Enforcer MUX	CAB INSTRUMENTATION The cab instrument panel 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.

Gauges

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

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 air conditioning control panel.

Turn signal arm: A self-canceling turn signal with high beam headlight controls will be provided.

Windshield wiper control shall 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.
0509511	Air Restriction Indicator, Imp/Vel, AXT, Dash CF, Enf MUX	AIR RESTRICTION INDICATOR A high air restriction warning indicator light LCD message with amber warning indicator and audible alarm will be provided.
0683556	Light, Do Not Move Apparatus, Wln M2R Red LED	"DO NOT MOVE APPARATUS" INDICATOR A Whelen, Model M2R flashing red indicator light with a chrome bezel, 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 not activate any alarm when the parking brake is released.
0509042	Messages, Open Dr/DNMT, Color Dsply,	DO NOT MOVE TRUCK MESSAGES 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.
0622798	Switching, Cab Instrument Lower Console & Overhead, Rocker MUX, Enforcer	SWITCH PANELS 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.
0644179	Wiper Control, 2-Speed with Intermittent, Saber FR/Enforcer	WIPER CONTROL Wiper control will consist of a two (2)-speed windshield wiper control with intermittent feature and windshield washer controls.
0610968	Wiring, Spare, 2.0 A 12V DC, USB Termination Blue Sea 1016 1st	SPARE CIRCUIT 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 2.0 amps at 12 volts DC. Power and ground will terminate per switch panel layout. Termination will be a Blue Sea Systems part number 1016 dual USB charger socket. Wires will be sized to 125 percent of the protection. This circuit(s) may be load managed when the parking brake is applied.

0548004	Wiring, Spare, 15 A 12V DC 1st	SPARE CIRCUIT There will be three (3) 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 PER SWITCH PANEL, TWO (2) IN A SINGLE PAINTED BOX CENTERED BETWEEN THE FORWARD FACING SEATS 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.
0548006	Wiring, Spare, 15 A 12V DC 2nd	SPARE CIRCUIT 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 RS1 LEAVE LOOSE WITH A 6' COIL. 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.
0548009	Wiring, Spare, 20 A 12V DC 1st	SPARE CIRCUIT 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 20 amps at 12 volts DC Power and ground will terminate RS3 AND LS1, LEAVE LOOSE WITH A 6' COIL 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.
0728840	Radio, AM/FM/WMA/WB/Aux in/ BT, Panasonic	RADIO WITH CD PLAYER There will be one (1) Panasonic, Heavy-Duty, AM/FM/MP3/WMA/WB with front panel USB port, integrated Blue Tooth and integrated SXM satellite radio. The stereo radio will be mounted per instrument panel layout. 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 as far to the front and centered side to side as possible, on the lower portion of the cab roof.
0615386	Vehicle Information Center, 7" Color Display, Touchscreen, MUX	INFORMATION CENTER 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 General Screen Design 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. 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.
0734854	Collision Mitigation, Not Requested	
0606247	Vehicle Data Recorder w/CZ 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. 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.
0735006	Intercom, David Clark, 4-Pos, 2-Radio, (D,O,RPTT), 2obC, U3805	INTERCOM SYSTEM There will be a four (4) position David Clark, Model U3800, intercom system with single radio interface capability at the driver and officer positions and remote radio push to talk buttons located PER SWITCH PANELLAYOUT. Two (2) crew cab outboard seats will have intercom only capability. The following components will be provided: One (1) U3805 Radio Cord Junction Module Two (2) U3815 Radio interface modules (Driver, Officer) Two (2) Remote Push To Talk Button Kits One (1) U3800 Master station (1 Crew) One (1) U3801 Remote headset intercom station (1 Crew) One (1) C3820 Power cord All necessary station cables and connectors
0637058	David Clark Universal Radio Interfaces Included with Single/Dual System	RADIO / INTERCOM INTERFACE INCLUDED All radio interfaced stations will have universal radio interfaces installed. The interface wiring will be routed within the cab to behind officer seat .
0597914	Headset, David Clark, H3442 Under Helmet, Flex Mic	UNDER THE HELMET HEADSET There will be four (4) under the helmet, headset(s) provided driver, officer and two forward crew seats. Each David Clark, Model H3442, headset will feature: 5' Coiled cord Noise cancelling electric microphone Flexible microphone boom rotates 200 degrees for left or right dress Microphone on/off button Comfort Gel Earseals 23 dB noise reduction

0681408	Hangers For Headsets, NFPA, Each	HEADSET HANGERS There will be four (4) headset hanger(s) installed driver's seat, officer's seat, driver's side outboard rear facing seat and passenger's side outboard rear facing seat. The hanger(s) will meet NFPA 1901, Section 14.1.11, requirement for equipment mounting.
0687904	Antenna Mount, Custom Chassis, Cable Routed to Behind Officer Seat	RADIO ANTENNA MOUNT There will be one (1) standard 1.125", 18 thread antenna-mounting base(s) installed over officer seat 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.
0653526	Camera, Pierce, Driver Mux, Rear Camera Only	VEHICLE CAMERA SYSTEM There will be a color vehicle camera system provided with the following: One (1) camera located at the rear of the apparatus, pointing rearward, displayed automatically with the vehicle in reverse 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. The following components will be included: One (1) SV-CW134639CAI, camera One (1) amplified speaker (if applicable) All necessary cables
0683718	Recess, Rear Vision Camera Into Lightstick Housing	RECESS, REAR BODY CAMERA A recessed box will be installed in the light stick housing in the rear body to protect the back up camera from damage.
0890416	Pierce Command Zone, Advanced Electronics & Control System, Enforcer, WiFi CZT	ELECTRICAL POWER CONTROL SYSTEM 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. Distribution centers located throughout the vehicle will contain battery powered studs for supplying customer installed equipment thus providing a lower cost of ownership. 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. Solid-State Control System 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 modules, electronic control modules to include black housings, a power indicator and status indicator 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 programmable to accommodate changes to the vehicle's operating parameters 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 32 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

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

Advanced diagnostic feature will be provided in this control system. From the Command Zone display or connected wireless device, these features allow the user to monitor the real-time status of every input or output on the vehicle. It also allows users logged in as an administrator to force on inputs or outputs to assist the troubleshooting process.

TCU Module with WiFi

An in cab module will provide WiFi wireless interface and data logging capability (no exception).

The WiFi interface will comply with IEEE 802.11 b/g/n capabilities while communicating at 2.4 Gigahertz. The module will communicate through a white WiFi antenna 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 TCU 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 TCU will provide up to 2 Gigabytes of data storage.

The TCU will provide a means to download the TCU 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.

Dedicated Radio Equipment Connection Points

There will be three (3) studs provided in the primary power distribution center located in front of the officer for two-way radio equipment. The studs will consist of the following:

12-volt 40-amp battery switched power

12-volt 60-amp ignition switched power

12-volt 60-amp direct battery power

There will also be a 12-volt 100-amp ground stud located in or adjacent to the power distribution center.

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, without exceptions, 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. Component and partial (incomplete) vehicle testing is not adequate as overall vehicle design can impact test results and thus is not acceptable by itself.

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	<p>ELECTRICAL</p> <p>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.</p> <p>Electrical wiring and equipment will be installed utilizing the following guidelines:</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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).</p> <p>All lights that have their sockets in a weather exposed area will have corrosion preventative compound added to the socket terminal area.</p> <p>All electrical terminals in exposed areas will have silicon (1890) applied completely over the metal portion of the terminal.</p> <p>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.</p> <p>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.</p> <p>The results of the tests will be recorded and provided to the purchaser at time of delivery.</p>
0896456	Prognostics, Electrical System	<p>ELECTRICAL SYSTEM PROGNOSTICS</p> <p>There will be a software based vehicle tool provided to predict remaining life of the vehicles critical fluid and events.</p> <p>The system will send automatic indications to the Command Zone™ information center and/or wireless enabled devices to proactively alert of upcoming service intervals.</p> <p>Prognostics will include the following:</p> <ul style="list-style-type: none"> Engine oil and filter Transmission oil and filter
0079212	Batteries, (6) Exide Grp 31, 950 CCA each, SAE Posts	<p>BATTERY SYSTEM</p> <p>Six (6) 12 volt, Exide, Model 31A950X1W, group 31 batteries that include the following features will be provided:</p> <ul style="list-style-type: none"> 950 CCA, cold cranking amps 190 amp reserve capacity High cycle Rating of 5700 CCA at 0 degrees Fahrenheit 1140 minutes of reserve capacity SAE Posts <p>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.</p> <p>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.</p>
0008621	Battery System, Single Start, All Custom Chassis	<p>BATTERY SYSTEM</p> <p>There will be a single starting system with an ignition switch and starter button provided and located on the cab instrument panel.</p> <p>MASTER BATTERY SWITCH</p> <p>There will be a master battery switch provided within the cab within easy reach of the driver to activate the battery system.</p> <p>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>BATTERY COMPARTMENTS</p> <p>Batteries will be placed on non-corrosive mats and stored in well ventilated compartments located under the cab.</p> <p>Heavy-duty, 2/0 gauge, color coded battery cables will be provided. Battery terminal connections will be coated with anti-corrosion compound.</p> <p>Battery solenoid terminal connections will be encapsulated with semi-permanent rubberized compound.</p> <p>JUMPER STUDS</p> <p>One (1) set of battery jumper studs with plastic color-coded covers will be included on the battery compartments.</p>

0531338	Charger, Sngl Sys, Kussmaul, Pump Plus 1200, 52-21-1100	<p>BATTERY CHARGER/ AIR COMPRESSOR</p> <p>There will be a Kussmaul™ Pump Plus 1200, Model # 52-21-1100, single output battery charger/air compressor system will be provided. A display bar graph indicating the state of charge will be included.</p> <p>The automatic charger will maintain one (1) set of batteries with a maximum output current of 40 amps.</p> <p>The 12-volt air compressor will be installed to maintain the air system pressure when the vehicle is not in use.</p> <p>There will be an auto pump timer installed between the pressure switch and the pump that will allow the pump to run for one hour than shut down for one hour.</p> <p>The battery charger will be wired to the AC shoreline inlet through an AC receptacle adjacent to this battery charger.</p>
0678372	Location, Charger/Compr, Behind Driver Seat, Saber FR/Enforcer	Battery charger/compressor will be located in the cab behind the driver's seat.
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>AUTO EJECT FOR SHORELINE</p> <p>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.</p> <p>The shoreline inlet(s) will include yellow weatherproof flip up cover(s).</p> <p>There will be a release solenoid wired to the vehicle's starter to eject the AC connector when the engine is starting.</p> <p>The shoreline(s) will be connected to the battery charger.</p> <p>There will be a mating connector body supplied with the loose equipment.</p> <p>There will be a label installed near the inlet(s) that state the following:</p> <p>Line Voltage</p> <p>Current Rating (amps)</p> <p>Phase</p> <p>Frequency</p>
0026800	Shoreline Location	The shoreline receptacle will be located on the driver side exterior of cab, behind crew cab door.
0538692	Cover, Protection over Battery Charger/Comp, Cab	<p>BATTERY CHARGER COVER</p> <p>A cover will be fabricated and installed over the cab mounted battery charger/compressor for protection. The cover will be painted the same color as the interior and contain cutouts for proper ventilation.</p>
0121711	Alternator, 320 amp, Leece-Neville 4962PA, Sgl Sys	<p>ALTERNATOR</p> <p>A Leece-Neville, Model 4962PA, alternator will be provided. It will have a rated output current of 320 amps, 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>

0092582	Load Manager/Sequencer, MUX	<p>ELECTRONIC LOAD MANAGER</p> <p>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.</p> <p>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.</p> <p>The system will include the following features:</p> <p>System voltage monitoring.</p> <p>A shed load will remain inactive for a minimum of five minutes to prevent the load from cycling on and off.</p> <p>Sixteen available electronic load shedding levels.</p> <p>Priority levels can be set for individual outputs.</p> <p>High Idle to activate before any electric loads are shed and deactivate with the service brake.</p> <p>If enabled:</p> <p>"Load Man Hi-Idle On" will display on the information center.</p> <p>Hi-Idle will not activate until 30 seconds after engine start up.</p> <p>Individual switch "on" indicator to flash when the particular load has been shed.</p> <p>The information center indicates system voltage.</p> <p>The information center, where applicable, includes a "Load Manager" screen indicating the following:</p> <p>Load managed items list, with priority levels and item condition.</p> <p>Individual load managed item condition:</p> <p>ON = not shed</p> <p>SHED = shed</p> <p>SEQUENCER</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>When the emergency master switch is deactivated, the sequencer will deactivate the warning light loads in the reverse order.</p> <p>Sequencing of the following items will also occur, in conjunction with the ignition switch, at half-second intervals:</p> <p>Cab Heater and Air Conditioning</p> <p>Crew Cab Heater (if applicable)</p> <p>Crew Cab Air Conditioning (if applicable)</p> <p>Exhaust Fans (if applicable)</p> <p>Third Evaporator (if applicable)</p>
0783153	Headlights, Rect LED, JW Spkr Evo 2, AXT/DCF/Enf/Imp/Sab/Vel	<p>HEADLIGHTS</p> <p>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:</p> <p>the outside light on each side will contain a part number 055***1 low beam module</p> <p>the inside light on each side will contain a part number 055***1 high beam module</p> <p>the headlights to include chrome bezels</p> <p>The low beam lights will be activated when the headlight switch is on.</p> <p>The high beam and low beam lights will be activated when the headlight switch and the high beam switch is activated.</p>
0648418	Light, Directional, WIn M6T LED, Common Bezel, Above Headlights, Sab/Enf	<p>FRONT DIRECTIONALS</p> <p>The front directional's will be Whelen, Model M6T, amber LED arrow lights. The directional's will be housed in the same chrome common bezel as the front warning light and will be located above the headlights.</p>
0620054	Light, Directional/Marker, Intermediate, Weldon 9186-8580-29 LED 2lts	<p>INTERMEDIATE LIGHT</p> <p>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.</p>
0647802	Lights, Clearance/Marker/ID, Front, P25 LED 5 Lts, Saber FR/Enforcer	<p>CAB CLEARANCE/MARKER/ID LIGHTS</p> <p>There will be five (5) amber LED lights provided to indicate the presence and overall width of the vehicle in the following locations:</p> <p>Three (3) amber LED identification lights will be installed in the center of the cab above the windshield.</p> <p>Two (2) amber LED clearance lights will be installed, one (1) on each outboard side of the cab above the windshield.</p>

0647899	Lights, Directional/Marker, Cab Front Side, Weldon 9186-8580-29 LED, Sab/Enf	FRONT CAB SIDE DIRECTIONAL/MARKER LIGHTS There will be two (2) Weldon, Model 9186-8580-29, amber LED lights installed front of the cab door, 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.
0563675	Lights, Clearance/Marker/ID, Rear, Truck-Lite 33050R LED 7Lts	REAR CLEARANCE/MARKER/ID LIGHTING 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. Per FMVSS 108 and CMVSS 108 requirements.
0564683	Lights, Tail, Wln M6BTT* Red LED Stop/Tail & M6T* Amber LED Dir Arw For Hsg	REAR FMVSS LIGHTING 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 color lenses. The lights will be mounted in a polished combination housing.
0561471	Lights, Backup, Wln M6BUW, LED, For Tail Lt Housing	There will be two (2) Whelen Model M6BUW, LED backup lights provided in the tail light housing.
0664481	Bracket, License Plate & Light, P25 LED	LICENSE PLATE BRACKET 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.
0556842	Bezels, Wln, (2) M6 Chrome Pierce, For mtg (4) Wln M6 lights	LIGHTING BEZEL 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.
0589905	Alarm, Back-up Warning, PRECO 1040	BACK-UP ALARM 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.
0626588	Lights, Perimeter Cab, TecNiq T10-LC00-1 15" LED 4Dr	CAB PERIMETER SCENE LIGHTS There will be four (4) TecNiq, Model T10-LC00-1, 15.00" lights with white LEDs and 45 degree stainless steel brackets provided per the following: one (1) under the driver's side cab access step one (1) under the passenger's side cab access step one (1) under the passenger's side crew cab access step one (1) under the driver's side crew cab access step The lights will be activated when the battery switch is on, when the respective door is open and by the same control selected for the body perimeter lights.

0617901	Lights, Perimeter Pump House, TecNiq T10-LC00-1 15" LED 2lts	PUMP HOUSE PERIMETER LIGHTS There will be two (2) TecNiq, Model T10-LC00-1, 15.00" white 12 volt DC LED weatherproof strip lights provided under the pump panel running boards, one (1) each side. The lights will be controlled by the same means as the body perimeter lights.
0626579	Lights, Perimeter Body, TecNiq T10-LC00-1 15" LED 2lts, Rear Step	BODY PERIMETER SCENE LIGHTS There will be two (2) TecNiq, Model T10-LC00-1, 15.00" 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 a switch within reach of the driver is activated and the parking brake is applied.
0617802	Lights, Perimeter, TecNiq T10-LC00-1 15" LED	ADDITIONAL PERIMETER LIGHTS There will be four (4) TecNiq, Model T10-LC00-1, 1.25" high x 15.00" long white LED light(s) provided under UNDER LS1, LS3, RS1, RS3. These additional lights will be controlled with the other body perimeter lights.
0896454	Enhanced Software for Perimeter Lts	ENHANCED SOFTWARE FOR PERIMETER LIGHTS All perimeter lights and scene lights will be deactivated when the parking brake is released. The cab and crew cab perimeter lights will dim after 10 seconds or immediately if the vehicle's transmission is put into gear.
0556360	Lights, Step, P25 LED 4lts, Pump Pnl Sw	STEP LIGHTS 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.
0776357	Light, Visor, Wln, 12V P*H2* Pioneer, Cnt Feature, 1st	12 VOLT LIGHTING 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. The housing(s) painted parts of this light assembly to be white. 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. These light(s) may be load managed when the parking brake is applied.
0774308	Lights, Wln, P*H2* Pioneer, 12 VDC, 2nd	12 VOLT DC SCENE LIGHTS There will be one (1) Whelen® Model P*H2*, 17,750 lumens 12 volt DC powered lights with white LEDs and a combination of flood and spot optics installed on the apparatus located, RIGHT SIDE CAB, ABOVE THE SIDE WINDOW. The light(s) to be installed in a 15 degree vertical recessed bracket. The painted parts of this light assembly to be white. The lights will be activated by a switch at the driver's side switch panel, by a switch at the left side pump panel and by a switch at the passenger's side switch panel. The light(s) may be load managed when the parking brake is applied.
0774309	Lights, Wln, P*H2* Pioneer, 12 VDC, 1st	12 VOLT DC SCENE LIGHTS There will be one (1) Whelen® Model P*H2*, 17,750 lumens 12 volt DC powered lights with white LEDs and a combination of flood and spot optics installed on the apparatus located, LEFT SIDE CAB, ABOVE THE SIDE WINDOW. The light(s) to be installed in a 15 degree vertical recessed bracket. The painted parts of this light assembly to be white. The lights will be activated by a switch at the driver's side switch panel, by a switch at the left side pump panel and by a switch at the passenger's side switch panel. The light(s) may be load managed when the parking brake is applied.
0774333	Lights, Wln, P*H2* Pioneer, 12 VDC, 2nd	12 VOLT LIGHTING There will be one (1) Whelen® Model P*H2*, 17,750 lumens 12 volt DC LED light(s) with a combination of flood and spot optics installed on the apparatus, located RIGHT SIDE UPPER HATCH COMPARTMENT, CENTER. The painted parts of this light assembly to be white. The light(s) to be installed in a 15 degree vertical recessed bracket. The lights will be controlled by the same control that has been selected for the driver's side scene light(s). The light(s) may be load managed when the parking brake is applied.

0774336	Lights, WIn, P*H1* Pioneer, 12 VDC, 1st	12 VOLT LIGHTING There will be two (2) Whelen® Model P*H1*, 8,875 lumens 12 volt DC LED light(s) with flood optics installed on the apparatus located, REAR UPPER BULKHEAD, EACH SIDE. The painted parts of this light assembly to be white. The light(s) to be installed in a 15 degree vertical recessed bracket. The lights will be controlled by a switch at the driver's side switch panel, by a switch at the passenger's side switch panel and by a switch in a recessed cup located at the driver's side rear bulkhead. The light(s) may be load managed when the parking brake is applied.
0774579	Lights, WIn, P*H2* Pioneer, 12 VDC, 1st	12 VOLT LIGHTING There will be one (1) Whelen® Model P*H2*, 17,750 lumens 12 volt DC LED light(s) with a combination of flood and spot optics installed on the apparatus, located LEFT SIDE UPPER HATCH COMPARTMENT, CENTER. The painted parts of this light assembly to be white. The light(s) to be installed in a 15 degree vertical recessed bracket. The lights will be controlled by the same control that has been selected for the driver's side scene light(s). The light(s) may be load managed when the parking brake is applied.
0532358	Not Required, Deck Lights, Other Hose Bed & Rear Lighting	
0768474	Lights, Hose Bed, Below Alum Cvr, Amdor AY-LB-12HW040, 40" LED 4lts	LIGHTS BELOW HOSE BED COVER There will be four (4) Amdor Model AY-LB-12HW040, 700 lumens, 40.00" white LED lights provided to illuminate the hose bed area. Two (2) LED light strips will be installed on the driver's side hose bed cover 30.00" from the front and rear of the hose bed, as close to the hinge as practical. Two (2) LED light strips will be installed on the passenger's side hose bed cover 30.00" from the front and rear of the hose bed, as close to the hinge as practical. The lights will be activated when the battery switch is on, and when the hosebed cover is raised.
0645677	Lights, Not Required, Rear Work, Alt. 12 Volt Lights At Rear Body	
0892704	Lights, Walk Surf, 8-P25 LED, Hose Bed Cover, Overall Height Restrictions	WALKING SURFACE LIGHT There will be eight (8) P25 12 volt DC LED lights with chrome housing 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.
0060111	Pumper, Medium, Galvanneal, 2nd Gen	
0554271	Body Skirt Height, 20"	
0028244	Tank, Water, 500 Gallon, Poly, Med	WATER TANK Booster tank will have a capacity of 500 gallons and be constructed of polypropylene plastic by United Plastic Fabricating, Incorporated. Tank joints and seams will be nitrogen welded inside and out. Tank will be baffled in accordance with NFPA Bulletin 1901 requirements. Baffles will have vent openings at both the top and bottom to permit movement of air and water between compartments. 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. Transverse partitions will extend from 4.00" off the bottom of the tank to the underside of the top cover. All partitions will interlock and will be welded to the tank bottom and sides. 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. Tank top will be sufficiently supported to keep it rigid during fast filling conditions. 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. A sump that will be sized dependent on the tank to pump plumbing will be provided at the bottom of the water tank. Sump will include a drain plug and the tank outlet. Tank will be installed in a fabricated cradle assembly constructed of structural steel. Sufficient crossmembers will be provided to properly support bottom of tank. Crossmembers will be constructed of steel bar channel or rectangular tubing. 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. Stops or other provision will be provided to prevent an empty tank from bouncing excessively while moving vehicle. Mounting system will be approved by the tank manufacturer.

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>SLEEVE, PLUMBING, THROUGH TANK</p> <p>Two (2) sleeves will be provided in the water tank for a 3.00" pipe to the rear.</p>
0553729	Not Required, Restraint, Water Tank, Heavy Duty	
0003429	Not Required, Direct Tank Fill	
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>HOSE BED</p> <p>The hose bed will be fabricated of 12-gauge galvalume 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>
0723549	Painted Hose Bed	The hose bed interior walls will be painted to match the lower body color.
0003481	Hose Bed Capacity, Special	Hose bed will accommodate # 1= 700' of 2.50" DJ Hose, # 2= 250' of 2.50" DJ Hose, # 3= 1000' of 4.00" DJ Hose# 4= 1000' of 1.50" SJ WILDLAND Hose 5 BUNDLES, #5 SPARE (TO BE USED FOR CTF STOKES).
0689090	Divider, Hose Bed, .25" Unpainted, w/Handhold	<p>HOSE BED DIVIDER</p> <p>Four (4) adjustable hosebed dividers will be furnished for separating hose.</p> <p>Each divider will be constructed of a .25" brushed aluminum sheet. Flat surfaces will be sanded for uniform appearance, or constructed of brushed aluminum.</p> <p>An oval opening will be provided near the rear of the divider to be used as a hand hold and aid in accessing the hose bed.</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>
0733505	Hose Restraint, Vinyl, Split, Seat Belt, w/Alum Hose Bed Cover	<p>HOSE RESTRAINT REAR</p> <p>At the rear of the hose bed, a red vinyl flap will be provided. The vinyl will be split IN THE MIDDLE. The vinyl will attach on the aluminum treadplate hose bed cover at the top with seat belt buckles. There will be four (4) seat belt buckles located TOP at the top with a metal bar, to connect each set of two buckles, and attached to a web strap, to allow a single pull release per set of two buckles. The strap(s) will be red. The vinyl will be attached at the rear body sheet below the hose bed with permanent strap through a footman loop.</p>
0010133	Cross-Divider, Hose Bed	A cross-divider will be provided just behind the fill tower. The divider will be bolted to the side sheet.

0581862	Cover/Platform, Front of Hose Bed, Single Pan, Aluminum Treadplate, 16.00"	<p>HOSE BED COVER</p> <p>A front hinged aluminum treadplate cover will be provided. The cover will extend only 16.00" into the hose bed from the front wall to a cross divider but cover the entire width. The cover will be hinged with full length stainless steel piano hinge.</p> <p>The cover will be reinforced so that it can support the weight of a man walking on the cover. Chrome grab handles and gas filled cylinders will be provided to assist in opening and closing the cover. A socket and plunger style holder will be provided to hold the cover in the closed position.</p>
0729492	Cover, Hose Bed, Alum Treadplate, Bolted T-Bar, Electric Actuated	<p>HOSE BED COVER ELECTRIC ACTUATOR</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 modular stationary bridgework support. The covers will not over lap.</p> <p>The cover will be reinforced so that it can support the weight of a man walking on the cover. A pneumatic gas spring assist will be installed at the front of the covers to help support and stabilize the cover throughout its range of motion.</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 two (2) (one (1) each side) electric linear actuator with brake cylinders will be provided to assist in opening and closing the cover. A rubber-covered momentary toggle switch will be provided for each actuator that controls the opening and closing of the covers. Each switch will be located at the rear body of the body at the left side. Additional locks on top of the cover are not required to secure the cover in the nested position.</p> <p>A cross divider will be provided directly behind the actuators, at the front of the hose bed, to support the actuators and provide a clean appearance.</p> <p>A handrail will be provided at the rear, in the center of the support, to assist in climbing up the back of the truck.</p> <p>The hose bed cover will be connected to the Do Not Move Truck indicator. The light will be activated if the cover is not in the stowed position and the parking brake is released.</p>
0013512	Running Boards, 12.75" Deep	<p>RUNNING BOARDS</p> <p>Running boards will be fabricated of .125" bright aluminum treadplate.</p> <p>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.</p> <p>Running boards will be 12.75" deep and spaced .50" away from the pump panel.</p> <p>A splash guard will be provided above the running board treadplate.</p>
0689621	Tailboard, 16" Deep	<p>TAILBOARD</p> <p>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.</p> <p>The tailboard area will be 16.00" deep.</p> <p>The exterior side will be flanged down and in for increased rigidity of tailboard structure.</p>
0690037	Wall, Rear, Smooth Aluminum/Body Material	<p>REAR WALL, SMOOTH ALUMINUM/BODY MATERIAL</p> <p>The rear facing surfaces of the center rear wall will be smooth aluminum.</p> <p>The bulkheads, the surface to the rear of the side body compartments, will be smooth and the same material as the body.</p> <p>Any inboard facing surfaces below the height of the hosebed will be brushed stainless steel.</p>
0889721	Tow Eyes, w/Hitch Receiver, 2G Pumper	<p>REAR TOW EYES</p> <p>Two (2) tow eyes, which are an integral part of the body mounting substructure, will be installed below the rear of the truck.</p> <p>The tow eyes will be of adequate strength to allow the truck to be pulled from the eyes.</p> <p>REAR HITCH RECEIVER</p> <p>One (1) hitch receiver will be installed below the tailboard at the rear of the apparatus.</p> <p>The hitch will be constructed of high strength steel and reinforced to the truck framework, via the rear body substructure. The hitch receiver will have an SAE J684 Class IV rating of 10,000 lb towing and 1000 lb tongue weight.</p> <p>Slide-in portion will be held in place by one (1) safety pin with clip.</p> <p>The trailer electrical connection will be a no electric connection.</p>

COMPARTMENTATION

Body and compartments will be fabricated of galvanized 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 steel frames as well as the steel vertical angles will be treated with an epoxy E-coat to provide resistance to corrosion and chemicals as standard.

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.

A design with body compartments hanging on the chassis, unsupported, will not be acceptable.

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 will be fully tested. Proven engineering and test techniques such as finite element analysis, strain gauging, and model analysis will be 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.

LEFT SIDE COMPARTMENTATION

The left side compartmentation will consist of three lap door compartments.

A full height, vertically hinged, single door compartment ahead of the rear wheels will be provided. The interior dimensions of this compartment will be 34.50" 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 28.63" wide x 61.88" high.

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.

A full height, vertically hinged, double door compartment behind the rear wheels will be provided. **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.

Closing of the door will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand. A positive door holder will be furnished with this compartment.

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°.

0087964	RS 152" Lap, Full Height Front & Rear, FDLER, Raised Rear 6"	<p>RIGHT SIDE COMPARTMENTATION</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 34.50" 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 28.63" 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. 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.</p> <p>Closing of the doors will not require releasing, unlocking, or unlatching any mechanism and will easily be accomplished with one hand.</p> <p>The vertically hinged doors will be furnished with a positive door holder.</p> <p>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°.</p>
0063911	Doors, Lap w/ "D" Handles - Side Compartments	<p>SIDE COMPARTMENT DOORS</p> <p>All hinged compartment doors will be lap style with double panel construction and will be a minimum of 1.50" thick. The doors will be made out of the same material as the body. 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. (Hinges which are welded on will not be acceptable.)</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>REAR COMPARTMENTATION</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>ROLLUP REAR COMPARTMENT DOOR</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	
0505888	Keyed Locks for Latches, Lap Doors (#751 Lock)	KEYED LOCK(S) There will be six (6) compartment doors that require a keyed lock. The compartments to have a keyed lock will be EACH SIDE DOOR.
0003919	Reverse Hinge Compartment Door	REVERSE HINGED DOOR The one (1) compartment door, located D3, will have the hinge at the rear of the door.
0004010	Scuffplate, Polished S/S Bottom of Door Frame	DOOR FRAME SCUFFPLATE Six (6) scuffplates will be provided for the lower door frame of each side body door. Each scuffplate will be polished stainless steel with a .38" lip down.
0004012	Scuffplate, Polished S/S, Inside Each Compt Door	SCUFFPLATE ON INTERIOR OF COMPARTMENT DOOR(S) The eight (8) 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, D2 D3, P1, P2, P3.
0616670	Lights, Compt, Pierce LED, Dual Light Strips, Each Side of Door, Pumper/Tanker	COMPARTMENT LIGHTING There will be seven (7) compartment(s) with two (2) white 12 volt DC LED compartment light strips. The dual light strips will be centered vertically along each side of the door framing. There will be two (2) light strips per compartment. The dual light strips will be in all body compartment (s). Any remaining compartments without light strips will have a 6.00" diameter Truck-Lite, Model: 79384 light. Each light will have a number 1076 one filament, two wire bulb. Opening the compartment door will automatically turn the compartment lighting on.
0739915	Hatch, (2) Liftup, Pumper	HATCH COMPARTMENT 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 or be below the side sheet by a minimum of 3.00" to a maximum hatch height of 22.00". Sides of the compartment will be constructed of the same material as the body and painted job color. A 2.00" tall formed painted aluminum trim 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. Two (2) lift-up, bright aluminum treadplate doors will be provided on the top of the compartment. Doors will have lipped edges with a rubber seal for weather resistance. Each door will have a socket and plunger type latch and chrome grab handle. Doors will be hinged on the outboard side and will utilize a gas strut (or rubber covered chain on narrow width doors) Compartment will drain to an area below the hose bed. Black rubber matting shall be provided to help prevent stored equipment in pooled water.
0730092	Not Required	
0733219	Lights, Hatch Compt, 42", LED, Light Strips, 2-Sides 4 Dr	COMPARTMENT LIGHTING 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.
0687135	Shelf Tracks, Unpainted	MOUNTING TRACKS There will be five (5) sets of tracks for mounting shelf(s) in LS1, LS2, LS3, RS1 and RS3. These tracks will be installed vertically to support the adjustable shelf(s), and will be full height of the compartment. The tracks will be unpainted with a natural finish.
0600350	Shelves, Adj, 500 lb Capacity, Full Width/Depth, Predefined Locations	ADJUSTABLE SHELVES There will be 11 shelves with a capacity of 500 lb provided. The shelf construction will consist of .188" aluminum painted spatter gray with 2.00" sides. 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(s) will be determined at a later date.

0646221	Tray, Floor Mounted, Slide-Out, 500lb, Special Side Height, 2G	<p>SLIDE-OUT FLOOR MOUNTED TRAY</p> <p>There will be one (1) floor mounted slide-out tray(s) provided D1 rearward of partition, to exit to the rear of truck thru the rear access door on the rear bulkhead (slides to run parallel to the frame). Size tray to fit a Honda EU 2000i Generator Dimensions: 20.2"L x 16.8"H x 11.4"W. Each tray will be rated for up to 500lb in the extended position. The tray(s) will be constructed of a minimum .13" aluminum with welded corners. The finish will be painted to match compartment interior.</p> <p>The side height of the tray(s) will be as follows: Front: 2.00" high Rear: 2.00" high Left and Right Sides: 2.00" high</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>
0726441	Partition, Trans Rear Compt	<p>PARTITION, TRANSVERSE REAR COMPARTMENT</p> <p>Two (2) partitions will be bolted in place to separate the left and right side rear compartments from the rear tailboard compartment. The partition will be body material painted spatter gray.</p>
0726457	Partition, Vertical Compt, Predefined Locations	<p>VERTICAL COMPARTMENT PARTITION</p> <p>One (1) partition will be provided.</p> <p>The partition construction will consist of body material painted spatter gray. Each partition will be the full vertical height of the compartment.</p> <p>The location(s) will be in LS1, 30.00" from the forward door frame.</p>
0622399	Access Door, Rear of Body	<p>ACCESS DOOR</p> <p>A quantity of two (2) smooth aluminum door(s) hinged along the outboard edge with a Southco raised trigger C2 chrome latch will be provided at the rear of the body on the lower rear bulkhead wall on left side and right side.</p> <p>The access door will be 14.00" wide x 17.00" high .</p>
0027090	Tracks, Equipment Mounting, Horizontal	<p>MOUNTING TRACKS</p> <p>There will be one (1) set 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 P2.</p>
0004016	Rub Rail, Aluminum Extruded, Side of Body	<p>RUB RAIL</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>BODY FENDER CROWNS</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>BODY FENDER LINER</p> <p>A painted to match the lower body color 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 NFPA 2016 Classification	<p>HARD SUCTION HOSE</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 3.00" diameter hose provided and equipped with long handle couplings provided on the ends.</p>

0613827	Trough, HSH, (2), Hatch Compt, Stacked, Door	HOSE TROUGH A quantity of two (2) hard suction hose troughs will be mounted one (1) above the other inside the hatch compartment located on the left side and on the right side. Troughs will be constructed of stainless steel. One (1) painted aluminum door with a flush lift and turn latch hinged on the left side, will be provided at the rear of the compartment. an aluminum floor above the length of the compartment is provided in relation to the hard suction hose in the hatch compartment to allow storage of additional equipment.
0626229	Handrails, Side Pump Panels, Per Print	HANDRAILS The handrails will be 1.25" diameter knurled aluminum 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.
0004126	Handrails, Beavertail, Standard	HANDRAILS One (1) vertical handrail will be located on each rear beavertail.
0004146	Handrail, Rear, Below Hose Bed, Full Width	HANDRAIL One (1) full width horizontal handrail will be provided below the hose bed at the rear of the apparatus.
0795333	Compt, Air Bottle, Single, Fender Panel, Bolt-In	AIR BOTTLE STORAGE (Single) A quantity of two (2) air bottle compartments, approximately 7.50" wide x 7.50" tall x 26.00" deep, will be provided on the left side rearward of the rear wheels and on the right side forward of the rear wheels. The compartment will be square with angled corners. A painted 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, black rubber matting will be provided.
0653799	Compt, Air Bottle, Double, Single Bottle Door, Fender Panel	AIR BOTTLE STORAGE (Double) A quantity of one (1) air bottle compartment, 15.25" wide x 7.75" tall x 26.00" deep, will be provided on the right side rearward of the rear wheels . A painted stainless steel door with a Southco raised trigger C2 chrome lever latch will be provided to contain the air bottle. The door will be sized to allow access to only one bottle at a time. A dielectric barrier will be provided between the door hinge, hinge fasteners and the body sheet metal. Inside the compartment, black rubber matting will be provided.
0004225	Ladder, 24' Duo-Safety 900A 2-Section	EXTENSION LADDER There will be a 24' two-section aluminum Duo-Safety Series 900-A extension ladder provided.
0004230	Ladder, 14' Duo-Safety 775A Roof	ROOF LADDER There will be a 14' aluminum Duo-Safety Series 775-A roof ladder provided.
0730782	SP Ladders/Backboard Btwn Tank & S.Sht, RS, Ext'd Rr, Encl'd Comp,RPH,Vinyl,Spcl Mt	LADDER STORAGE The ladders and a single backboard 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. Backboard dimensions will be 16.00" W x 2.00" thick x 80.00" long. The ladder storage area will be enclosed as practical by means of sheet metal to protect the ladders from road dirt. A black rubber boot will be provided to enclosed the ladders in the gap between the pump house and the body. The ladders that extend into the pump house will also be enclosed. The pump house portion of the enclosure will be made of black vinyl. The vinyl portion will be fastened to the pumphouse structure with side release buckles. The vinyl portion will allow the user to move the enclosure aside to access the pump area. Each ladder will be stored vertically in a separate stainless steel storage trough. Each stainless steel trough will be lined with Dura-Surf nylon slides. A bright aluminum treadplate enclosure will be provided at the rear of the body to properly contain the ladders This enclosure will extend to the rear of the side body compartments. The ladders will be mounted FLY INBOARD. The enclosure will also include a vertically hinged aluminum treadplate door with a D-handle latch to access the ladders. The door will be hinged along the outboard edge.
0733387	Ladder, 10' Duo-Safety Folding 585A	FOLDING LADDER One (1) 10.00' aluminum, Series 585-A, Duo-Safety folding ladder will be installed.

0602877	Pike Pole, Pumper, Provided by Fire Department, NFPA 2016	PIKE POLE PROVIDED BY FIRE DEPARTMENT NFPA 1901, 2016 edition, Section 5.9.4 requires one (1) 8 ft or longer pike pole mounted in a bracket fastened to the apparatus. The pike pole is not on the apparatus as manufactured. The fire department will provide and mount the pike pole. The pike pole(s) will be a Akron 10' pike pole.
0602875	Pike Pole, 6', Pumper, Provided by Fire Department, NFPA 2016	6' PIKE POLE PROVIDED BY FIRE DEPARTMENT NFPA 1901, 2016 edition, Section 5.9.4 requires one (1) 6' pike pole or plaster hook mounted in a bracket fastened to the apparatus. The pike pole is not on the apparatus as manufactured. The fire department will provide and mount the pike pole. The pike pole(s) will be a Akron 6' pike pole.
0593072	Steps, Folding, Front of Body, One Each Side, w/LED, Trident	STEPS A folding step will be provided on the front of each fender compartment. The step will be bright finished, non-skid with a black tread coating on the stepping surface. Each step will incorporate an LED light to illuminate the stepping surface. The step can be used as a hand hold with two openings wide enough for a gloved hand.
0581886	Steps, Folding, Rear of Body, w/LED, Trident, LS Only	REAR FOLDING STEPS Bright finished, non-skid folding steps with a black tread coating on the stepping surface will be provided at the rear on the left side. Each 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.
0080459	Platform, Slide Out, 500 lb Capacity, w/Grip Strut	SLIDE-OUT PLATFORM Two (2) slideout platforms will be provided. The capacity rating will be 500 lbs in the extended position. 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. Each platform will have a Grip-Strut insert to provide a non-skid surface. There will be a Whelen, part number 01-066D068-00, 2.00" round white 12 volt DC LED light provided to illuminate the ground area. The location will be under each side pump panel, as deep as possible.
0020500	Step, Camper Style, 8.00" Deep, Pull-out & Drop Down, 26" Wide	STEP, PULL-OUT/DROP DOWN One (1) pull-out step will be provided. Each step will be 26" wide x 8.00" deep and will pull out and drop down to provide easy access. A pullout and down (camper style) step will be installed below the body. The step surface, when pulled out from its nested position, will be 9.00" below the body. The stepping surface will be bright aluminum treadplate. The step will be located on the below rear tailboard on driver side.
0724153	Step, Folding - Extra, Body Only, w/LED, Trident	Four (4) additional folding steps will be located LS AND RS FRONT BULKHEAD. The step(s) will be bright finished, non-skid with a black tread coating on the stepping surface. Each step will incorporate an LED light to illuminate the stepping surface. The step(s) can be used as a hand hold with two openings wide enough for a gloved hand.
0650261	I Zone Bracket, Pair, Folding Style	I-ZONE BRACKETS Two (2) flip-out I-Zone brackets will be provided and mounted at the rear of the apparatus, mount with the pivot point inboard on the rear bulkhead.. The brackets will be designed with adequate reinforcement to eliminate flexing of the body (oil canning).

0005497	Pump House, Side Control, 48"	<p>PUMP COMPARTMENT 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>PUMP MOUNTING 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>PUMP CONTROL PANELS (Side Control) All pump controls and gauges will be located at the left side of the apparatus and properly marked. The pump panel on the right side is removable with lift and turn type fasteners. The left side is fastened with screws. The control panels will be 48.00" wide. The gauge and control panels will be two (2) separate panels for ease of maintenance. The side gauge panel will be hinged at the bottom with a full length stainless steel hinge. The fasteners used to hold the panel in the upright position will be quarter turn type. Vinyl covered cable or chains will be used to hold the gauge panel in the dropped position. Polished stainless steel trim collars will be installed around all inlets and outlets. 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. 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 in individual chrome plated castings with the identification tag recessed in the casting below the gauge. All remaining identification tags will be mounted on the pump panel in chrome plated bezels. Mounting of the castings and identification bezels will be done with a threaded peg cast on the back side of the bezel or screws.</p>
0563822	Raised Pump House Structure, Top Mount Vert Up-Right Moved Inboard For Ladder	<p>PUMPHOUSE STRUCTURE A special pumphouse structure is required to accommodate the ladders stored between the tank and the sidesheet. The vertical upright support will need to be moved inboard.</p>
0014447	Pump, Hale, QMAX-125, 1250 GPM, Single Stage	<p>MIDSHIP FIRE PUMP Midship fire pump will be a Hale QMAX-125, 1250 gpm single (1) stage midship mounted centrifugal type. Pump will be the class "A" type. Pump will deliver the percentage of rated discharges at the pressures indicated below: - 100% of rated capacity at 150 psi net pump pressure. - 100% of rated capacity at 165 psi net pump pressure. - 70% of rated capacity at 200 psi net pump pressure. - 50% of rated capacity at 250 psi net pump pressure. Entire pump and both suction and discharge passages will be hydrostatically tested to a pressure of 500 psi. Pump will be fully tested at the pump manufacturer's factory to the performance requirements as outlined by the current NFPA 1901 standards and will be free from objectionable pulsation and vibration. Pump body and related parts will be of fine grain alloy cast iron with a minimum tensile strength of 30,000 psi (2041.2 bar). All moving parts in contact with water will be of high quality bronze or stainless steel. Pump body will be horizontally split, on a single plane in two (2) sections, for easy removal of entire impeller assembly, including wear rings and bearings from beneath the pump, without disturbing pump piping or the mounting of the pump in the chassis. Pump will have one (1) double suction impeller. The pump body will have two (2) opposed discharge volute cutwaters to eliminate radial unbalance. Pump impeller will be hard, fine grain bronze of the mixed flow design, accurately machined, hand-ground, and individually balanced. The vanes of the impeller intake eyes will be hand-ground and polished to a sharp edge. They will be of sufficient size and design to provide ample reserve capacity utilizing minimum horsepower. Impeller clearance rings will be bronze and easily renewable without replacing impeller or pump volute body. They will be of the wrap-around double labyrinth design for maximum efficiency. Pump shaft will be electric furnace heat-treated, corrosion resistant stainless steel. It will be super-finished under packing with galvanic corrosion (zinc separators in packing) protection for longer shaft life. Pump shaft will be sealed with double oil seal to keep road dirt and water out of drive unit. Pump shaft will be rigidly supported by three (3) bearings for minimum deflection. A high lead bronze sleeve bearing will be located immediately adjacent to the impeller (on the side opposite of the drive unit). This sleeve bearing will be automatically oil lubricated and pressure balanced to exclude foreign material. The remaining bearings will be heavy-duty, deep groove ball bearings in the gearbox and will be splash lubricated.</p>

0014482	Seal, Mechanical, Hale	<p>MECHANICAL SEAL ON PUMP</p> <p>Only one (1) mechanical seal will be used on the suction (inboard) side of the pump. The mechanical seal will be 2.00" in diameter and will be spring loaded, maintenance-free, and self-adjusting.</p> <p>The mechanical seal construction will be a carbon sealing ring, stainless steel coil spring, Viton® rubber boot, and a tungsten carbide seat with a Teflon backup seal.</p>
0014477	Trans, Pump, Hale, Gear	<p>PUMP TRANSMISSION</p> <p>The drive unit will be cast and completely manufactured and tested at the Hale Products, Inc. factory. The pump drive unit will be of sufficient size to withstand up to 16,000 foot/ pounds of torque from the engine in both the road and pump operating conditions. The drive unit is will be designed with ample lubrication reserve to maintain the proper operating temperature.</p> <p>The gearbox drive shafts will be of heat treated chrome nickel steel and 2.75" in diameter on both the input and output drive shafts. They will be designed to withstand the full torque of the engine in both road and pump operating conditions.</p> <p>All gears, both drive and pump, will be of the highest quality, electric furnace, chrome nickel steel. Bores will be ground to size and teeth integrated, crown-shaved and hardened, to give an extremely accurate gear for long life, smooth, quiet running and higher load carrying capability.</p> <p>An accurately cut spur design will be provided to eliminate all possible end thrust.</p> <p>Pierce Manufacturing will select the pump ratio to provide the maximum performance with the engine and transmission selected. Three (3) green warning lights will be provided to indicate to the operator(s) when the pump has completed the shift from Road to Pump position. Two (2) lights will be located in the truck driving compartment and one (1) light on pump operator's panel adjacent to the throttle control.</p>
0635600	Pumping Mode, Stationary Only	<p>PUMPING MODE</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>
0604324	Pump Shift, Air Mnl Override, Split Shaft, Interlocked, Hale	<p>AIR PUMP SHIFT</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.</p> <p>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 the chassis transmission is in pump gear. This indicator light will be labeled "OK to pump".</p> <p>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.</p> <p>The pump shift control in the cab will be illuminated to meet NFPA requirements.</p>
0003148	Transmission Lock-up, EVS	<p>TRANSMISSION LOCK-UP</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>AUXILIARY COOLING SYSTEM</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. It will be installed in the pump or engine compartment with the control located on the pump operator's control panel. The exchanger will be plumbed to the master drain valve.</p>
0014486	Not Required, Transfer Valve, Single Stage Pump	
0746508	Valve(s), Relief Intake, Trident Air Max, Control Location	<p>INTAKE RELIEF VALVE</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>
0564941	Controller, Pressure, FRC, Pump Boss, PBA200	<p>PRESSURE CONTROLLER</p> <p>A Fire Research Pump Boss Model PBA200 pressure governor will be provided.</p> <p>A pressure transducer will be installed in the water discharge manifold on the pump.</p> <p>The display panel will be located at the pump operator's panel.</p>

0072153	Primer, Trident, Air Prime, Air Operated	PRIMING PUMP 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. All wetted metallic parts of the priming system are to be of brass and stainless steel construction. One (1) priming control will open the priming valve and start the pump primer.
0044552	Line, 0.50" Recirculating w/Check Valve	RECIRCULATING LINE WITH CHECK VALVE A 0.50" diameter recirculating line, from the pump to the water tank, will be furnished with a control installed at the pump operator's control panel. A check valve will be provided in this line to prevent the back flow of water from the tank to the pump if the valve is left in the open position.
0654518	Thermal Relief Valve, OPM, w/Red Warning Light and Audible Alarm, Hale Pump	THERMAL RELIEF VALVE A Watrous 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). 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. The discharge line will be plumbed to ground near pump operator's panel.
0780364	Manuals, Pump, (2) Total, Electronic Copies	PUMP MANUALS 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.
0603129	Plumbing, Stainless Steel and Hose, Single Stage Pump	PLUMBING, STAINLESS STEEL AND HOSE 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. 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. Plumbing manifold bodies will be ductile cast iron or stainless steel. 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. All water carrying gauge lines will be of flexible polypropylene tubing. All piping, hose and fittings will have a minimum of a 500 PSI hydrodynamic pressure rating.
0795135	Plumbing, Stainless Steel, w/Foam System	FOAM SYSTEM PLUMBING 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.
0004645	Inlets, 6.00" - 1250 GPM or Larger Pump	MAIN PUMP INLETS 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.
0014650	Pump Suction Tube(s), Short, All	SHORT SUCTION TUBE(S) The suction tube(s) on the water pump will have short suction tube(s) installed to allow for installation of adapters, elbows or intake valves without excessive overhang.
0004646	Cap, Main Pump Inlet, Long Handle, NST, VLH	MAIN PUMP INLET CAP 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.
0084610	Valves, Akron 8000 series- All	VALVES 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 ten (10) year warranty.
0004686	Valve, Inlet(s) Recess Behind Panel, Side Cntrl	The location of the valve for the one (1) inlet will be behind the pump panel.
0004700	Control, Inlet, at Valve	INLET CONTROL 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.

0004660	Inlet (1), Left Side, 2.50"	LEFT SIDE INLET 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.
0723551	Inlet (1), Right Side, 2.50"	RIGHT SIDE INLET 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.
0034720	Anode, Zinc, Pair, Pump Inlets	ANODE, INLET A pair of sacrificial zinc anodes will be provided in the water pump inlets to protect the pump from corrosion.
0092569	No Rear Inlet (Large Dia) Requested	
0064116	No Rear Inlet Actuation Required	
0092696	Not Required, Cap, Rear Inlet	
0009648	No Rear Intake Relief Valve Required on Rear Inlet	
0092568	No Rear Auxiliary Inlet Requested	
0723049	Valve, .75" Bleeder, Aux. Side Inlet, "T" Swing Handle	INLET BLEEDER VALVE A 0.75" bleeder valve will be provided for each side gated inlet. The valves will be located behind the panel with a "T" 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	TANK TO PUMP 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.
0004905	Outlet, Tank Fill, 1.50"	TANK REFILL 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.
0062133	Control, Outlets, Manual, Pierce HW if applicable	DISCHARGE OUTLET CONTROLS 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.
0004940	Outlet, Left Side, 2.50"	LEFT SIDE DISCHARGE OUTLETS 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.

0005091	Elbow, Left Side Outlets, 45 Degree, 2.50" FNST x 2.50" MNST, VLH	LEFT SIDE OUTLET ELBOWS 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.
0092570	Not Required, Outlets, Left Side Additional	
0035094	Not Required, Elbow, Left Side Outlets, Additional	
0024945	Not Required, Outlet, Right Side	
0085092	Not Required, Elbow, Right Side Outlets, 2.50"	
0011668	Outlet, Right Side, 3" w/3" Plumbing, Handwheel Control, (added)	There will be One (1) discharge outlet with a 3.00" valve on the right side of the apparatus, terminating with a 3.00" (M) National Standard hose thread adapter. The outlet will be controlled by a handwheel control located at the pump operator's panel. An indicator will be provided to show the position of the valve.
0602414	Elbow and Cap, Right Side Outlets, 3.0", Provided by Fire Dept, Addtl, NFPA 2016	ADDITIONAL RIGHT SIDE OUTLET ELBOWS PROVIDED BY FIRE DEPARTMENT NFPA 1901, 2016 edition, section 16.7.7 requires any 2.00" or larger discharge outlet that is located more than 42.00" off the ground and to which hose is to be connected and that is not in a hose storage area will be supplied with a sweep elbow of at least 30 degrees downward. NFPA 1901, 2016 edition, section 16.7.4 requires all discharge outlet connections, except connections to which a hose will be pre-connected, will be equipped with caps or closures capable of withstanding a hydrostatic gauge pressure of 100 psi over the maximum pump close-off pressure or 500 psi, whichever is greater. The elbow(s) and cap are not on the apparatus as manufactured. The fire department will provide the elbow(s) and cap.
0029137	Not Required, Outlet, Large Diameter	
0007308	Not Required, Elbow, Large Diameter Outlet	
0092572	Not Required, Outlet, Front	
0004995	Outlet, Rear, 2.50"	REAR DISCHARGE OUTLET There will be Two (2) discharge outlets piped to the rear of the hose bed, two (2) on the 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.
0045091	Elbow, Rear Outlets, 45 Degree, 2.50" FNST x 2.50" MNST, VLH	REAR OUTLET ELBOWS 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.
0092574	Not Required, Outlet, Rear, Additional	
0085695	Not Required, Elbow, Rear Outlets, Large, Additional	
0092573	Not Required, Outlet, Hose Bed/Running Board Tray	
0085076	Caps for 1.50" to 3.00" Discharge, Chain	DISCHARGE CAPS Chrome plated, rocker lug, caps with chains will be furnished for all discharge outlets 1.50" thru 3.00" in size, besides the pre-connected hose outlets. The cap will incorporate a thread design to automatically relieve stored pressure in the line when disconnected (no exception).

0723042	Valve, 0.75" Bleeder, Discharges, "T" Swing Handle	OUTLET BLEEDER VALVE 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 T 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 T 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.
0091106	Outlet, 3.00" Deluge w/TFT Extend-a-Gun XG18, Handwheel	DELUGE RISER A 3.00" deluge riser will be installed above the pump in such a manner that a monitor can be mounted and used effectively. Piping will be rigidly braced and installed securely so no movement develops when the line is charged. The riser will be gated and controlled at the pump operator's panel with a handwheel control. TELESCOPIC PIPING The deluge riser piping will include a 18.00" Task Force Model XG18 Extend-A-Gun extension. This extension will be telescopic to allow the deluge gun to be raised 18.00" increasing the range of operation. A position sensor will be provided on the telescopic piping that will activate the "do not move vehicle" light inside the cab when the monitor is in the raised position.
0770359	No Monitor Requested, Customer/Dealer Furnished and Installed	MONITOR A customer/dealer supplied and installed make and model TBD monitor will be properly installed on the deluge riser.
0029304	No Nozzle Req'd	
0046857	Deluge Mount, For TFT Crossfire Monitor, TFT Manual Extend-A-Gun Only	The deluge riser Extend-a-Gun will have provisions for direct mounting a Task Force Tips CrossFire monitor.
0723726	Speedlay Module Not Required	
0722432	Hose Restraint Not Required, No Speedlay Module	
0723395	Speedlays, Not Required	
0723394	Speedlays, Not Required	
0015140	Crosslay, 1.50" Special Cap or Single Stack, (Pan Style)	CROSSLAY HOSE BEDS Two (2) crosslays with 1.50" outlets will be provided. Each bed to be capable of carrying 200' OF 1.75" DJH and will be plumbed with 2.00" i.d. pipe and gated with a 2.00" quarter turn ball valve. 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. The crosslay controls will be at the pump operator's panel. The center crosslay dividers will be a pan style, fabricated of .090 aluminum and will provide adjustment from side to side. The divider will be painted job color. Stainless steel vertical scuffplates will be provided at hose bed ends (each side of vehicle). Bottom of hose bed ends (each side) will also be equipped with a stainless steel scuffplate. Crosslay bed flooring will consist of removable perforated brushed aluminum.
0029196	Not Required, 2.50" Crosslay	
0751312	Hose Restraint, Crosslays, Vinyl, (2) Seat Belt Buckle, Tether Release	CROSSLAY/DEADLAY HOSE RESTRAINT A red vinyl cover restraint will be provided across the ends of crosslay(s)/deadlay(s) to secure the hose during travel. The webbing assembly is to be attached at the bottom of the crosslay(s)/deadlay(s) with footman loops as a permanent attachment and is attached at the top outside corners with two (2) seat belt buckles. The female end is permanently attached above the crosslay(s)/deadlay(s) and the male end attached to the webbing. There will be a metal bar, to connect the buckles, and an attached web strap, to allow a single pull release. The color of the release strap will be red.
0029260	Not Required, Speedlays	

0750536	Hose Restr, Spdly, Not Required, No Spdly	
0590875	Hose Restraint, Crosslay/Deadlay, Aluminum Treadplate, Bi-Fold, Top Only	CROSSLAY COVER A bi-fold 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 no stay arm device hold open device.

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 five (5) discharges. The discharges capable of dispensing foam will be all three crosslays, #1 2.50 outlet, and the D/S rear 2.50" outlet.

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	SINGLE FOAM TANK REFILL 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.
0031896	Demonstration, Foam System, Dealer Provided	
0005446	Foam Cell, 20 Gallon, Not Reduce Water	FOAM TANK The foam tank will be an integral portion of the polypropylene water tank. The cell will have a capacity of 20 gallons of foam with the intended use of Class A foam. The foam cell will not reduce the capacity of the water tank. The foam cell will have a screen in the fill dome and a breather in the lid.
0891420	Drain, 1.00", Foam Tank #1, Husky 3 Foam System, "T" Swing Handle	FOAM TANK DRAIN The foam tank drain will be a 0.75" "T" swing handle drain valve with 1.00" fittings located inside the pump/plumbing compartment.
0091079	Not Required, Foam Tank #2	
0091112	Not Required, Foam Tank #2 Drain	
0746447	Approval Dwg, All Pump Panel(s), 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>PUMP OPERATOR'S PANEL DRAWING</p> <p>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.</p> <p>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>REMAINING PUMP PANEL(S)</p> <p>Detailed drawing(s) to scale of the remaining pump panel(s) will be provided for the customer to review. The drawing(s) will include all of the gauges, controls, switching, etc., located on the pump panel(s). The customer will be allowed to make changes and/or mark-ups to these approval drawing(s). The fire apparatus manufacturer will make revisions (If needed) to the drawing(s) per the customer changes and/or mark-ups as long as the changes are physically possible within a specific product line.</p> <p>The finalized and signed customer approved pump panel drawing(s) 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>COLOR CODED TAGS</p> <p>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.</p> <p>The finalized and signed customer approved drawing/chart of the colors will become part of the contract documents.</p> <p>SPECIAL TEXT/VERBIAGE TAGS</p> <p>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.</p> <p>The finalized and signed customer approved drawing/chart of the text/verbiage will become part of the contract documents.</p>
0035570	Pump Panel Configuration, No Match Required	PUMP PANEL CONFIGURATION The pump panel configuration will be neat and orderly.

0629252	Material, Pump Panels, Side Control Black Vinyl	PUMP AND GAUGE PANEL The pump and gauge panels will be constructed of aluminum with a black vinyl finish. A polished aluminum trim molding will be provided around each panel.
0723322	Panel, Pump Access -Vertical Hinge Right, Left, Front, Side Control	PUMP ACCESS Left Side Panel The left side pump panel will be split into (3) pieces. An upper, mid section and lower section panels. The upper pump panel will have vertically hinged access above the valve controls per the customer approved pump panel layout. The hinge will be located towards the rear of the pump panel. The upper panel will be made as large as possible. Right Side Panel The right side pump panel will be split into (2) pieces. Upper and lower section panels. The upper pump panel will have vertically hinged access per the customer approved pump panel layout. The hinge will be located towards the front of the pump panel. The upper panel will be made as large as possible and will be able to be opened after the elbows and/or caps/plugs are removed off the inlets and discharges. Front Pump House Access On the front of the pump house structure, provisions will be provided for access to the pump. No panels will be secured/installed on the front of the pump house. Panel Fastener The left and right side upper hinged panels will be secured with a black swell latch . The left side mid section panel, left side lower (drain bank) and right side lower (drain bank) will be secured using screws. Pump House Modification The upper channel of the pumphouse structure will be raised to provide maximum access to the pump and plumbing. The lower cross angle of the pumphouse structure will be lowered as much as possible to provide larger access to the pump and plumbing.
0583824	Light, Pump Compt, Wln 3SC0CDCR LED White	PUMP COMPARTMENT LIGHT There will be one (1) Whelen®, Model 3SC0CDCR, 3.00" white 12 volt DC LED light(s) with Whelen, Model 3FLANGEC, flange(s) installed in the pump compartment. There will be a switch accessible through a door on the pump panel included with this installation.
0586382	Gauges, Engine, Included With Pressure Controller	Engine monitoring graduated LED indicators will be incorporated with the pressure controller. Also provided at the pump panel will be the following: - Master Pump Drain Control
0005601	Throttle, Engine, Incl'd w/Press Controller	
0739224	Indicator Light @ Pump Panel, Throttle Ready, Incl w/Pressure Gov/Throttle,Green	THROTTLE READY GREEN INDICATOR LIGHT 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	OK TO PUMP INDICATOR LIGHT 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 Pmp Pnl, Red Switch	AIR HORN SWITCH 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.
0511078	Gauges, 4.00" Master, Class 1, 30"-0 -600psi	VACUUM AND PRESSURE GAUGES The pump vacuum and pressure gauges will be liquid filled and manufactured by Class 1 Incorporated ©. The gauges will be a minimum of 4.00" in diameter and will have white faces with black lettering, with a pressure range of 30.00"-0-600#. Gauge construction will include a Zytel nylon case with adhesive mounting gasket and threaded retaining nut. 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 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. This gauge will include a 10 year warranty against leakage, pointer defect, and defective bourdon tube.

0038070	Gauge, 2.50" Pressure, Class 1, 30"-0-400psi	PRESSURE GAUGES The individual "line" pressure gauges for the discharges will be interlube filled and manufactured by Class 1®. They will be a minimum of 2.50" in diameter and will have white faces with black lettering. Gauges will be compound type with a vacuum/pressure range of 30.00"-0-400#. The individual pressure gauge will be installed as close to the outlet control as practical.
0088732	Gauge, Water Level, Ernst Sight Type, W/ Ball	WATER LEVEL GAUGE An Ernst sight tube water level indicator will be mounted on the gauge panel with an unrestricted view for the operator. The gauge will include a floating ball for easy identification of the water level.
0604354	Gauge, Foam Level, FRC, Tank Vision Pro, WLA 360-A00, Class "A"	CLASS "A" FOAM LEVEL GAUGE A Fire Research TankVision Pro model WLA360-A00 cell/tank level indicator kit shall be installed on the pump operators panel. The kit will include an electronic indicator module, a pressure sensor, a 10' sensor cable and a tank vent. The indicator will show the volume of Class "A" foam concentrate in the cell/tank on nine (9) easy to see super bright RGB LEDs. A wide view lens over the LEDs will provide for a viewing angle of 180 degrees. The indicator case will be waterproof, manufactured of Polycarbonate/Nylon material and have a distinctive green label. The program features will be accessed from the front of the indicator module. The program will support self-diagnostics capabilities, self-calibration, six (6) programmable colored light patterns to display cell/tank volume, adjustable brightness control levels and a data link to connect remote indicators. Low foam level warnings will include flashing LEDs at 1/4 cell/tank and down chasing LEDs when the cell/tank is almost empty. The indicator will receive an input signal from an electronic pressure sensor. The sensor will be mounted from the outside of the foam cell/tank near the bottom. No probe will be placed on the interior of the cell/tank. Wiring will be weather resistant and have automotive type plug-in connectors.
0593161	Light Shield, S/S LED	LIGHT SHIELD There will be a polished, 16 gauge stainless steel light shield installed over the pump operator's panel. There will be 12 volt DC white LED lights installed under the stainless steel light shield 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. One (1) pump panel light will come on when the pump is in ok to pump mode. There will be a light activated above the pump panel light switch when the parking brake is set. This is to afford the operator some illumination when first approaching the control panel.
0003930	Microphone & Speaker w/Plain Door - Pump Operator's Position, Body Bulkhead	MICROPHONE AND SPEAKER COMPARTMENT A microphone and speaker compartment with a polished stainless steel door will be furnished adjacent to the pump operator's panel. The compartment size will be 12.00" high x 9.00" wide x 6.00" deep.
0508020	Air Horn, (1) Hadley, 6" Round, In Bumper	AIR HORN SYSTEM One (1) Hadley round air horn with 6.00" bell 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.
0606838	Location, Air Horn, Bumper, Left Side, Outside Frame, Outboard (Pos #7)	Air Horn Location The air horn will be located on the left side of the bumper, towards the outside.
0757092	Control, Air Horn, Multi Select	AIR HORN CONTROL The air horn(s) will be activated by the following:
0757081	Control, Air Horn, Ft Sw, LS	Left side foot switch
0723391	Control, Air Horn, Chrome Push Button Sw, RS	Right side chrome push button switch
0525667	Siren, WIn 295SLSA1, 100 or 200 Watt	ELECTRONIC SIREN A Whelen®, Model 295SLSA1, electronic siren with noise canceling microphone will be provided. This siren to be active when the battery switch is on and that emergency master switch is on.
0510206	Location, Elect Siren, Recessed Overhead In Console	Electronic siren head will be recessed in the overhead console above the engine tunnel in the center.

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	SPEAKER 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.
0601552	Location, Speaker, Frt Bumper, Recessed, Right Side, Outside Frame, Inbrd (Pos 2)	The speaker will be recessed in the right side of the front bumper, just outside of the frame rail.
0895310	Siren, Federal Q2B	AUXILIARY MECHANICAL SIREN There will be a Federal Signal Model Q2B mechanical siren furnished and installed in the front of the apparatus. The Q2B will be chrome finish. The siren will have a 2-gauge cable connected to a power solenoid that is connected by a 2-gauge cable ran battery direct to the primary chassis batteries and will be labeled Q2B+ at the battery. The power solenoid will only be enabled when the emergency master switch is on. The siren will have a 2-gauge ground wire connected to the chassis battery stud. The cable will be labeled Q2B- at the battery. When the chassis battery switch is on, and the emergency master switch is on, the Q2B siren will be activated by the following:
0006097	Location of Siren, Recessed in Bumper	The mechanical siren will be recessed in the front bumper in the center. The siren will be properly supported using the bumper framework.
0748305	Control, Mech Siren, Multi Select	MECHANICAL SIREN CONTROL The mechanical siren will be activated by the following:
0748274	Control Mech Siren, Rocker/Membrane Sw, RS	Right side momentary switch.
0748280	Control Mech Siren, Horn Ring	Steering wheel horn ring with horn/siren selector switch.
0735899	Sw, Siren Brake, Mom Rocker, Red Outline, LS Overhead Sw Pnl, Mux	A momentary rocker switch shall be included in the left side overhead switch panel to activate the siren brake. There will be a red outline decal around the black rocker switch.
0734674	Sw, Siren Brake, Mom Rocker, Red Outline, RS Overhead Sw Pnl, Mux	A momentary rocker switch shall be included in the right side overhead switch panel to activate the siren brake. There will be a red outline decal around the black rocker switch.
0746353	Not Required, Warning Lights Intensity	

0604784	Lightbar, WIn, Freedom IV-Q, 81", RRRRWRsrROptRsrRWRRRR	<p>FRONT ZONE UPPER WARNING LIGHTS</p> <p>There will be one (1) 81.00" Whelen® Freedom IV™ lightbar mounted on the cab roof. The lightbar will include the following:</p> <p>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.</p> <p>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.</p> <p>There will be clear lenses included on the lightbar. The following switches may be 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.</p>
0016380	No Additional Lights Req'd, Side Zone Upper	
0899319	Lights, Front Zone, WIn M6**, Common Bzl	<p>LIGHTS, FRONT ZONE LOWER</p> <p>There will be two (2) Whelen® Model M6**, 4.31" high x 6.75" wide x 1.37" deep flashing LED warning lights installed on the cab face above the headlights, in a common bezel with the directional lights per the following: The driver's side front warning light to be red. The passenger's side front warning light to be red. The warning light lens colors to be the same as the LEDs. There will be a switch in the cab on the switch panel to control the lights.</p>
0746667	Lights, Side Zone Lower, WIn M6**, M6**, 4Lts	<p>SIDE ZONE LOWER LIGHTING</p> <p>There will be six (6) Whelen®, Model M6**, 4.31" high x 6.75" long x 1.37" deep flashing LED warning lights with chrome trim installed per the following: Two (2) lights located, one (1) each side on the front custom cab corner. The driver's side, side front light to include red warning LEDs and the passenger's side, side front light to include red warning LEDs. Two (2) lights located, one (1) each side above rear wheels. The driver's side, side rear light to include red warning LEDs and the passenger's side, side rear light to include red warning LEDs. The warning light lens colors to be the same as the LEDs. There will be a switch in the cab on the switch panel to control the lights.</p>
0564654	Lights, Rear Zn Lwr, WIn M6*, Colored Lens, For Tail Light Housing	<p>REAR ZONE LOWER LIGHTING</p> <p>There will be two (2) Whelen®, Model M6*, LED flashing warning lights will be located at the rear of the apparatus. The driver's side rear light to be red The passenger's side rear light to be red Both lights will include a lens that is the same color as the LED's. There will be a switch located in the cab on the switch panel to control the lights.</p>
0080676	Lights, Rear/Side Up Zone, WIn 50°03Z*R, 6Lts	<p>REAR AND SIDE ZONE UPPER WARNING LIGHTS</p> <p>There will be six (6) Whelen, Model 50°03Z*R, flashing LED lights provided: There will be four (4) LED lights at the rear of the truck in the upper zone facing the rear. The upper pair will be both red Super LED/red lens. The lower pair will be both amber Super LED/amber lens. There will be one (1) LED light at the rear of the truck in the upper zone facing the driver side. There will be one (1) LED light at the rear of the truck in the upper zone facing the officer side. The color of these lights will be red Super LED/red lens. These lights will be installed with Whelen, Model 5TSMAC, chrome plated flanges. There will be a switch located in the cab on the switch panel to control the lights.</p>
0006551	Not Required, Lights, Rear Upper Zone Blocking	

0026813	No Hose Bed Warn Light Brackets Req'd, Lights Mtd on Hatch Compts, Pumper	
0791528	Light, Traffic Directing, W/in TAL65, 36.00" Long, TACTL5	TRAFFIC DIRECTING LIGHT There will be one (1) Whelen®, Model TAL65, 36.00" long x 2.87" high x 2.25" deep, amber LED traffic directing light installed at the rear of the apparatus. The Whelen, Model TACTL5, control head will be included with this installation. The controller will be energized when the battery switch is on. The auxiliary flash not activated.
0551728	Location, Traf Dir Lt, Recessed with S/S Trim	This traffic directing light will be recessed with a stainless steel trim plate at the rear of the apparatus as high as practical.
0530282	Location, Traf Dir Lt Controller, Overhead Switch Panel DS Right End	The traffic directing light control head will be located in the driver side overhead switch panel in the right panel position.
0767819	Light Twr, W-B Chf Pr NS2.3-225 WHL, 3-P*H1 12VDC Lts Cld 7.5'	LIGHT TOWER There will be one (1) Will-Burt, Model NS2.3-225 WHL light tower provided. There will be three (3) Whelen Model P*H1, 8,875 lumens 12 volt DC light heads with a combination of flood and spot optics included on this tower. The painted parts of the light tower and the light heads to be white. This tower will be connected to the Do Not Move Truck Indicator in the cab. The lights included with this tower may be load managed when the parking brake is applied.
0629874	Location, Light Tower, Cab Roof, Saber FR/Enforcer	Light Tower Location The light tower will be installed on the cab roof.
0617750	Controller, Light Tower, W-B, Wired Handheld, E-STOP Chf, Chf Pr, Pow Pr	Light Tower Controller There will be one (1) handheld wired controller included.
0664791	Location, Light Tower Controller, Driver's Side Front Body Compartment	Light Tower Controller Location The light tower controller will be installed in the driver's side front body compartment.
0519934	Not Required, Brand, Hydraulic Tool System	
0007150	Bag of Nuts and Bolts	LOOSE EQUIPMENT The following equipment will be furnished with the completed unit: One (1) bag 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>NFPA REQUIRED LOOSE EQUIPMENT PROVIDED BY FIRE DEPARTMENT</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.</p> <p>400 ft (120 m) of 1.50" (38 mm), 1.75" (45 mm), or 2.00" (52 mm) fire hose.</p> <p>One (1) handline nozzle, 200 gpm (750 L/min) minimum.</p> <p>Two (2) handline nozzles, 95 gpm (360 L/min) minimum.</p> <p>One (1) smoothbore of combination nozzle with 2.50" shutoff that flows a minimum of 250 gpm.</p> <p>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.</p> <p>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).</p> <p>One (1) first aid kit.</p> <p>Four (4) combination spanner wrenches.</p> <p>Two (2) hydrant wrenches.</p> <p>One (1) double female 2.50" (65 mm) adapter with National Hose threads.</p> <p>One (1) double male 2.50" (65 mm) adapter with National Hose threads.</p> <p>One (1) rubber mallet, for use on suction hose connections.</p> <p>Two (2) salvage covers each a minimum size of 12 ft x 14 ft (3.7 m x 4.3 m).</p> <p>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.</p> <p>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" (152 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.</p> <p>Five (5) illuminated warning devices such as highway flares, unless the five (5) fluorescent orange traffic cones have illuminating capabilities.</p> <p>One (1) automatic external defibrillator (AED).</p> <p>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).</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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>
0519913	Not Required, Soft Suction Hose	<p>SOFT SUCTION HOSE</p> <p>There will be no soft suction hose provided.</p>
0602390	Strainer, Provided by Fire Department, Pumper NFPA 2016 Classification	<p>STRAINER PROVIDED BY FIRE DEPARTMENT</p> <p>NFPA 1901, 2016 edition, section 5.8.2.1.1 requires a suction strainer when suction hose is provided.</p> <p>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>DRY CHEMICAL EXTINGUISHER PROVIDED BY FIRE DEPARTMENT</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.</p> <p>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>WATER EXTINGUISHER PROVIDED BY FIRE DEPARTMENT</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.</p> <p>The extinguisher is not on the apparatus as manufactured. The fire department will provide and mount the extinguisher.</p>
0602679	Axe, Flathead, Pumper NFPA 2016 Classification, Provided by Fire Department	<p>FLATHEAD AXE PROVIDED BY FIRE DEPARTMENT</p> <p>NFPA 1901, 2016 edition, Section 5.9.4 requires one (1) flathead axe mounted in a bracket fastened to the apparatus.</p> <p>The axe is not on the apparatus as manufactured. The fire department will provide and mount the axe.</p>

0602667	Axe, Pickhead, Pumper NFPA 2016 Classification, Provided by Fire Department	PICKHEAD AXE PROVIDED BY FIRE DEPARTMENT 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.
0741569	Paint Process / Environmental Requirements, Appleton	PAINT PROCESS 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. <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 manufacturer. After the cab and body are painted, the color will be verified to make sure that it matches the color standard. Electronic color measuring equipment will be used to compare the color sample to the color standard entered into the computer. Color specifications will be used to determine the color match. A Delta E reading will be 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 painted 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. The paint finish quality levels for critical areas of the apparatus (cab front and sides, body sides and doors, and boom lettering panels) are to meet or exceed Cadillac/General Motors GMW15777 global paint requirements. Orange peel levels are to meet or exceed the #6 A.C.T. standard in critical areas. The manufacture's written paint standards will be available upon request. Environmental Impact 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 percent 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 percent. Water wash systems will be 99.97 percent 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 recycled 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.
0709567	Paint, Single Color, Enforcer	CAB PAINT The cab will be painted #20 white.
0709845	Paint, Single Color, Body	BODY PAINT The body will be painted to match the lower section of the cab.

0646897	Paint Chassis Frame Assy, E-Coat, Standard	<p>PAINT CHASSIS FRAME ASSEMBLY</p> <p>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.</p> <p>Components treated with epoxy E-coat protection prior to paint:</p> <p>Two (2) C-channel frame rails</p> <p>Components that are included with the chassis frame assembly that will be painted not e-coated are:</p> <p>Cross members</p> <p>Axles</p> <p>Suspensions</p> <p>Steering gear</p> <p>Battery boxes</p> <p>Bumper extension weldment</p> <p>Frame extensions</p> <p>Body mounting angles</p> <p>Rear Body support substructure (front and rear)</p> <p>Pump house substructure</p> <p>Air tanks</p> <p>Steel fuel tank</p> <p>Castings</p> <p>Individual piece parts used in chassis and body assembly</p> <p>The E-coat process will meet the technical properties shown.</p>
0693798	Paint, Front Wheels	<p>PAINT, FRONT WHEELS</p> <p>All wheel surfaces, inside and outside, will be provided with powder coat paint #20 blue white.</p>
0775192	Paint, Rear Wheels, Single Axle, TAK-4 T3	<p>PAINT, REAR WHEELS</p> <p>All wheel surfaces, inside and outside, will be provided with WHITE #20.</p>
0733739	Paint, Axle Hubs	<p>AXLE HUB PAINT</p> <p>All axle hubs will be painted to match lower job color.</p>
0594533	Paint, Grille, Mesh Only, AXT/Vel/Imp/DCF/SFR/Enf	<p>PAINT GRILLE MESH</p> <p>The mesh on the front grille will be painted #590 Gray.</p>
0581434	Transit Coating, Carwell, Corrosion Protection, Including Underside	<p>TRANSIT COATING</p> <p>All non-painted metal surfaces on the exterior of the vehicle will be sprayed with a corrosion protective coating provided by Carwell. The coating can be removed with soap and water. The coating is made of a linseed oil base and is biodegradable.</p> <p>The underside non-painted metal surfaces will also be coated with a corrosion protective coating.</p>
0007230	Compartment, Painted, Spatter Gray	<p>COMPARTMENT INTERIOR PAINT</p> <p>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>
0544087	Reflective Band, 6"	<p>REFLECTIVE BAND</p> <p>A 6.00" gold reflective band will be provided across the front of the vehicle and along the sides of the body.</p>
0007356	Reflective across Cab Face	<p>The reflective band provided on the cab face will be at the headlight level.</p>
0536954	Stripe, Chevron, Rear, Diamond Grade, Pumper	<p>REAR CHEVRON STRIPING</p> <p>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.</p> <p>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>
0027461	Stripe, Color Outline, Vinyl on Reflective Band	<p>OUTLINE, REFLECTIVE STRIPE</p> <p>A Black outline will be applied on the top and the bottom of the reflective band. There will be one (1) set of outline stripes required.</p>
0065687	Stripe, Reflective, Cab Doors Interior	<p>CAB DOOR REFLECTIVE STRIPE</p> <p>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.</p> <p>This stripe will meet the NFPA 1901 requirement.</p>

0027372	Lettering Specifications, (GOLD STAR Process)	LETTERING The lettering will be totally encapsulated between two (2) layers of clear vinyl.
0686428	Lettering, Gold Leaf, 3.00", (41-60)	LETTERING Forty-one (41) to sixty (60) genuine gold leaf lettering, 3.00" high, with outline and shade will be provided.
0067290	Stripe, Gold Leaf, Side of Body, High	BODY STRIPE There will be a genuine gold leaf stripe provided on each side of the body, located along the top of the side compartmentation.
0685979	Lettering, Reflective, 16.00", Each	LETTERING There will be reflective lettering, 16.00" high, with no outline or shade provided. There will be seven (7) letters provided.
0686013	Lettering, Reflective, 6.00", Each	LETTERING There will be reflective lettering, 6.00" high, with outline and shade provided. There will be five (5) letters provided.
0686018	Lettering, Reflective, 5.00", Each	LETTERING There will be reflective lettering, 5.00" high, with no outline or shade provided. There will be 33 letters provided.
0666386	Emblem, Flag, Generic, Each	EMBLEM There will be two (2) emblem(s), approximately 12.00" - 14.00" wide in size, installed Located on body high side corners; ref LP.. The emblem will be modeled after the department submitted information (art, patch, etc).
0526005	Manuals, One (1), Fire Apparatus Parts, & (1) CD, Custom Chassis	FIRE APPARATUS PARTS MANUAL One (1) custom parts manuals for the complete fire apparatus will be provided in hard copy with the completed unit. One (1) compact disc (CD) will also be provided that will include all of the information from the above manual. The manual 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 The 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. SERVICE PARTS INTERNET SITE The service parts information included in this manual is 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.
0543577	Manuals, (1) Chassis Service & (1) CD, Custom	CHASSIS SERVICE MANUALS One (1) chassis service manuals containing parts and service information on major components will be provided with the completed unit. One (1) compact disk (CD) will also be provided that will include all of the information from the above manual. The manuals 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.

0530319	Manuals, One (1) Chassis Operation, & (1) CD, Custom	MANUALS, CHASSIS OPERATION One (1) chassis operation manual will be provided. One (1) compact disk (CD) will also be provided that will include all of the information from the above manual.
0030008	Warranty, Basic, 1 Year, Apparatus, WA0008	ONE (1) YEAR MATERIAL AND WORKMANSHIP A Pierce basic apparatus limited warranty certificate, WA0008, is included with this proposal.
0696698	Warranty, Engine, Cummins, 5 Year, WA0181	ENGINE WARRANTY A Cummins five (5) year limited engine warranty will be provided. A limited warranty certificate, WA0181, is included with this proposal.
0684953	Warranty, Steering Gear, Sheppard M110, 3 Year WA0201	STEERING GEAR WARRANTY A Sheppard three (3) year 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	FIFTY (50) YEAR STRUCTURAL INTEGRITY The Pierce custom chassis frame limited warranty certificate, WA0013, is included with this proposal.
0595698	Warranty, Axle, 3 Year, TAK-4, WA0050	FRONT AXLE THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY The Pierce TAK-4 suspension limited warranty certificate, WA0050, is included with this proposal.
0644874	Warranty, Axle, 3 Year, TAK-4, IRS, WA0249	REAR AXLE THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY Pierce TAK-4® independent rear suspension will be provided with a three (3) year material and workmanship limited warranty. The manufacturer's warranty will provide that the independent rear suspension be free from any defect related to material and workmanship on the portion of the apparatus built by the manufacturer that would arise under normal use and service.
0652758	Warranty, ABS Brake System, 3 Year, Meritor Wabco, WA0232	ABS BRAKE SYSTEM THREE (3) YEAR MATERIAL AND WORKMANSHIP WARRANTY A Meritor Wabco™ ABS brake system limited warranty certificate, WA0232, is included with this proposal.
0019914	Warranty, Structure, 10 Year, Custom Cab, WA0012	TEN (10) YEAR STRUCTURAL INTEGRITY The Pierce custom cab limited warranty certificate, WA0012, is included with this proposal.
0744240	Warranty, Paint, 10 Year, Cab, Pro-Rate, WA0055	TEN (10) YEAR PRO-RATED PAINT AND CORROSION A Pierce cab limited pro-rated paint warranty certificate, WA0055, is included with this proposal.
0524627	Warranty, Electronics, 5 Year, MUX, WA0014	FIVE (5) YEAR MATERIAL AND WORKMANSHIP The Pierce Command Zone electronics limited warranty certificate, WA0014, is included with this proposal.
0695416	Warranty, Pierce Camera System, WA0188	CAMERA SYSTEM WARRANTY A Pierce fifty four (54) month warranty will be provided for the camera system.
0647720	Warranty, Pierce LED Strip Lights, WA0203	COMPARTMENT LIGHT WARRANTY The Pierce 12 volt DC LED strip lights limited warranty certificate, WA0203, is included with this proposal.
0046369	Warranty, 5-year EVS Transmission, Standard Custom, WA0187	TRANSMISSION WARRANTY The transmission will have a five (5) year/unlimited mileage 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	TRANSMISSION COOLER WARRANTY 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	WATER TANK WARRANTY A UPF poly water tank limited warranty certificate, WA0195, is included with this proposal.
0596025	Warranty, Structure, 10 Year, Body, WA0009	TEN (10) YEAR STRUCTURAL INTEGRITY 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	ROLL UP DOOR MATERIAL AND WORKMANSHIP WARRANTY An AMDOR roll-up door limited warranty will be provided. The roll-up door will be warranted against manufacturing defects for a period of ten (10) years . A five (5) year limited warranty will be provided on painted roll up doors. The limited warranty certificate, WA0185, is included with this proposal.
0892410	Warranty, Pump, Hale, 5 Year Parts, 2 Year Labor, WA0388	PUMP WARRANTY A Hale pump limited warranty certificate, WA0388, is included with this proposal.
0648675	Warranty, 10 Year S/S Pumping, WA0035	TEN (10) YEAR PUMP PLUMBING WARRANTY The Pierce apparatus plumbing limited warranty certificate, WA0035, is included with this proposal.
0657990	Warranty, Foam System, Husky 3, WA0231	FOAM SYSTEM WARRANTY The Husky 3 foam system limited warranty certificate, WA0231, is included with this proposal.
0595820	Warranty, Paint, 10 Year, Body, Pro-Rate, WA0057	TEN (10) YEAR PRO-RATED PAINT AND CORROSION A Pierce body limited pro-rated paint warranty certificate, WA0057, is included with this proposal.
0595421	Warranty, Goldstar, 3 Year, Apparatus, WA0018	THREE (3) YEAR MATERIAL AND WORKMANSHIP The Pierce Goldstar gold leaf lamination limited warranty limited warranty certificate, WA0018, is included with this proposal.
0683627	Certification, Vehicle Stability, CD0156	VEHICLE STABILITY CERTIFICATION 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	ENGINE INSTALLATION CERTIFICATION 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	POWER STEERING CERTIFICATION 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.

0892691	Certification, Cab Integrity, Saber FR/Enforcer, CD0189	<p>CAB INTEGRITY CERTIFICATION</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>SAE J2422 Cab Roof Strength Evaluation - Quasi-Static Loading Heavy Trucks. European Occupant Protection Standard ECE Regulation No.29. SAE J2420 COE Frontal Strength Evaluation - Dynamic Loading Heavy Trucks.</p> <p>Side Impact</p> <p>The cab will be subjected to dynamic preload where a 14,320-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>Frontal Impact</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>Additional Frontal Impact</p> <p>The same cab will withstand a frontal impact of 65,098 ft-lb of force using a moving barrier. (Twice the force required by SAE J2420)</p> <p>Roof Crush</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>Additional Roof Crush</p> <p>The same cab will be subjected to a roof crush force of 110,000 lbs. (Four and a half times the load criteria of ECE 29)</p> <p>The same cab will withstand all tests without any measurable intrusion into the survival space of the occupant area.</p> <p>There will be no exception to any portion of the cab integrity certification. Nonconformance will lead to immediate rejection of bid.</p>
0631973	Certification, Cab Door Durability, Saber FR/Enforcer, CD0137	<p>CAB DOOR DURABILITY CERTIFICATION</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>WINDSHIELD WIPER DURABILITY CERTIFICATION</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>ELECTRIC WINDOW DURABILITY CERTIFICATION</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>SEAT BELT ANCHOR STRENGTH</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>SEAT MOUNTING STRENGTH</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. <i>The bidder will certify that the defrost system design has been tested in a cold chamber and passes the SAE J381 criteria.</i> Cab Auxiliary Heater <i>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.</i>
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	
0020012	HALE PUMP	
0020009	POLY TANK	
0028048	FOAM SYSTEM	
0020006	SIDE CONTROL	
0020007	AKRON VALVES	
0020015	ABS SYSTEM	
0658751	PUMPER BASE	

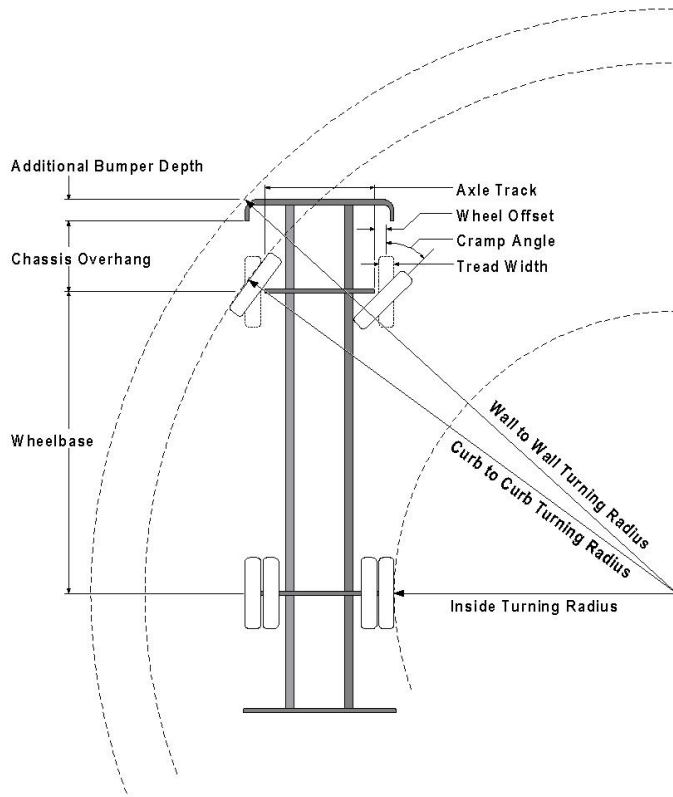


Turning Performance Analysis

05/23/2022

Bid Number: 907
Department: SCOTTS VALLEY FPD

Chassis: Enforcer Chassis
Body: Pumper, Medium, Galvanneal, 2nd Gen



Parameters:

*Inside Cramp Angle:	45°
Axle Track:	86.17 in.
Wheel Offset:	3.12 in.
Tread Width:	13.6 in.
Chassis Overhang:	65.95 in.
Additional Bumper Depth:	7 in.
Front Overhang:	72.95 in.
Wheelbase:	177.5 in.

Calculated Turning Radii:

Inside Turn:	13 ft. 0 in.
Curb to curb:	27 ft. 4 in.
Wall to wall:	30 ft. 11 in.

Category	Option	Description
Tires, Front	0739662	Tires, Front, Goodyear, G751 MSA, 315/80R22.50, LRL, Speed Rating
Bumpers	0603633	Bumper, Non-Extended, Steel, Painted, Saber FR/Enforcer
Wheels, Front	0894433	Wheels, Front, 22.50" x 9.00", Steel, Hub Pilot, 315/80R Tire
Axle, Front, Custom	0633906	Axle, Front, Oshkosh TAK-4, Non Drive, 18,000 lb, Enforcer

Notes:

*Actual Inside cramp angle may be less than shown.

Curb to Curb turning radius calculated for 9.00 inch curb.

Definitions:	
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

5/23/2022

Bid #: 907

Job #:

Desc: Enforcer IRS Pumper (duplicate to 30103)

Sales Rep: Myers, Rich

Customer: SCOTTS VALLEY FPD

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
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
0079212	Batteries, (6) Exide Grp 31, 950 CCA each, SAE Posts		0.00	3.00	0.00
0548004	Wiring, Spare, 15 A 12V DC 1st		0.00	0.00	45.00
0549333	Indicators, Engine, Included with Pressure Controller		0.00	0.35	0.00
0553643	Control, Air Horn at Pmp Pnl, Red Switch		0.00	0.16	0.00
0561471	Lights, Backup, WIn M6BUW, LED, For Tail Lt Housing		0.00	3.20	0.00
0583824	Light, Pump Compt, WIn 3SC0CDCR LED White		0.00	0.36	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
0604354	Gauge, Foam Level, FRC, Tank Vision Pro, WLA 360-A00, Class "A"		0.00	0.00	1.23
0610968	Wiring, Spare, 2.0 A 12V DC, USB Termination Blue Sea 1016 1st		0.00	0.00	5.00
0630636	Controls, Electric Roll-Up Windows, 4dr, 4 Driver Controls, Saber		0.00	26.00	0.00
0639727	Cab Lift, Elec/Hyd, Manual Override, Saber FR/Enforcer		0.00	180.00	0.00
0653526	Camera, Pierce, Driver Mux, Rear Camera Only		0.00	1.20	0.00
0683556	Light, Do Not Move Apparatus, WIn M2R Red LED		0.00	0.50	0.00
0687994	Engine Brake, Jacobs Compression Brake, Cummins Engine		0.00	0.42	0.00
0699972	Handlts, (2) Streamlight, E-Spot FireBox, 45865 LED, 12v, Orange,		0.00	0.50	0.00
0728840	Radio, AM/FM/WMA/WB/Aux in/ BT, Panasonic		0.00	0.00	4.00
0735006	Intercom, David Clark, 4-Pos, 2-Radio, (D,O,RPTT), 2obC, U3805		0.00	0.00	0.50
0774308	Lights, WIn, P*H2* Pioneer, 12 VDC, 2nd		0.00	0.00	13.00
0774309	Lights, WIn, P*H2* Pioneer, 12 VDC, 1st		0.00	0.00	13.00
0774333	Lights, WIn, P*H2* Pioneer, 12 VDC, 2nd		0.00	0.00	13.00
0774336	Lights, WIn, P*H1* Pioneer, 12 VDC, 1st		0.00	0.00	13.00
0774579	Lights, WIn, P*H2* Pioneer, 12 VDC, 1st		0.00	0.00	13.00
0776357	Light, Visor, WIn, 12V P*H2* Pioneer, Cnt Feature, 1st		0.00	0.00	13.00
0895310	Siren, Federal Q2B		0.00	100.00	0.00
0548006	Wiring, Spare, 15 A 12V DC 2nd	LM	0.00	0.00	30.00
0548009	Wiring, Spare, 20 A 12V DC 1st	LM	0.00	0.00	40.00
0722696	HVAC, Enforcer, CARE	LM	0.00	0.00	100.00
0767819	Light Twr, W-B Chf Pr NS2.3-225 WHL, 3-P*H1 12VDC Lts Cld 7.5'	LM	0.00	5.00	26.62
0002758	Amp Draw, NFPA/ULC Radio Allowance	NFPA	5.00	0.00	0.00
0080459	Platform, Slide Out, 500 lb Capacity, w/Grip Strut	NFPA	3.00	0.00	0.00
0080676	Lights, Rear/Side Up Zone, WIn 50*03Z*R, 6Lts	NFPA	1.14	0.00	0.00
0083700	Compt, Rear, Rollup, 37.75" FF, 25.88" D	NFPA	0.90	0.00	0.90
0087964	RS 152" Lap, Full Height Front & Rear, FDLER, Raised Rear 6"	NFPA	4.50	0.00	4.50
0092582	Load Manager/Sequencer, MUX	NFPA	0.56	0.56	0.00
0525667	Siren, WIn 295SLSA1, 100 or 200 Watt	NFPA	1.56	14.06	0.00
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
0564654	Lights, Rear Zn Lwr, WIn M6*, Colored Lens, For Tail Light Housing	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
0564941	Controller, Pressure, FRC, Pump Boss, PBA200	NFPA	1.80	0.00	0.00
0586382	Gauges, Engine, Included With Pressure Controller	NFPA	0.30	0.00	0.00
0593161	Light Shield, S/S LED	NFPA	3.00	0.00	0.00
0595087	DEF Tank, 4.5 Gallon, DS Fill, Forward of Rear Axle	NFPA	0.60	11.40	0.00
0604324	Pump Shift, Air Mnl Override, Split Shaft, Interlocked, Hale	NFPA	1.00	0.00	0.00
0604784	Lightbar, WIn, Freedom IV-Q, 81", RRRRWRsrROptRsrRWRRRR	NFPA	8.96	2.68	9.92

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



Electrical Analysis

5/23/2022

Bid #: 907

Job #:

Desc: Enforcer IRS Pumper (duplicate to 30103)

Sales Rep: Myers, Rich

Customer: SCOTTS VALLEY FPD

Organization: Golden State Fire Apparatus, Inc

Option	Description	Type*	Minimum Load	Intermittent Load	Total Connected
0615386	Vehicle Information Center, 7" Color Display, Touchscreen, MUX	NFPA	1.20	0.00	0.00
0617802	Lights, Perimeter, TecNiq T10-LC00-1 15" LED	NFPA	3.12	0.00	0.00
0617901	Lights, Perimeter Pump House, TecNiq T10-LC00-1 15" LED 2lts	NFPA	0.80	0.00	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
0626579	Lights, Perimeter Body, TecNiq T10-LC00-1 15" LED 2lts, Rear Step	NFPA	0.80	0.00	0.00
0626588	Lights, Perimeter Cab, TecNiq T10-LC00-1 15" LED 4Dr	NFPA	1.60	0.00	0.00
0644179	Wiper Control, 2-Speed with Intermittent, Saber FR/Enforcer	NFPA	1.20	4.80	0.00
0647647	Lights, Dome, FRP Dual LED 4 Lts	NFPA	0.80	0.80	0.00
0647802	Lights, Clearance/Marker/ID, Front, P25 LED 5 Lts, Saber FR/Enforcer	NFPA	0.35	0.00	0.00
0647899	Lights, Directional/Marker, Cab Front Side, Weldon 9186-8580-29	NFPA	0.80	0.00	0.00
0648418	Light, Directional, Wln M6T LED, Common Bezel, Above Headlights,	NFPA	1.50	0.00	0.00
0649716	Cab, Enforcer, 6010	NFPA	6.80	10.20	0.00
0664481	Bracket, License Plate & Light, P25 LED	NFPA	0.07	0.00	0.00
0684441	LS 152" Lap, Full Height Front & Rear, FDLER, Raised Rear 6"	NFPA	4.50	0.00	4.50
0733219	Lights, Hatch Compt, 42", LED, Light Strips, 2-Sides 4 Dr	NFPA	0.84	0.84	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
0739915	Hatch, (2) Liftup, Pumper	NFPA	1.80	0.00	1.80
0745568	Indicator Light, Pump Panel, Ok To Pump, Green	NFPA	0.10	0.00	0.00
0746667	Lights, Side Zone Lower, Wln M6**, M6**, 4Lts	NFPA	3.60	5.40	0.00
0768474	Lights, Hose Bed, Below Alum Cvr, Amdor AY-LB-12HW040, 40" LED	NFPA	2.40	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
0790412	Air Dryer, Wabco System Saver 1200 IWT, Heated, SFR/Enf	NFPA	7.81	0.00	0.00
0791528	Light, Traffic Directing, Wln TAL65, 36.00" Long, TACTL5	NFPA	0.60	1.20	0.00
0887559	Trans, Allison 6th Gen, 3000 EVS P, w/Prognostics, Imp/Vel/SFR/Enf	NFPA	2.00	2.00	0.00
0892638	Lights, Cab & Crw Cab Acs Stps, P25, LED w/Bezel, 6lts	NFPA	1.00	0.00	0.00
0892704	Lights, Walk Surf, 8-P25 LED, Hose Bed Cover, Overall Height	NFPA	0.07	0.00	0.00
0899319	Lights, Front Zone, Wln M6**, Common Bzl	NFPA	1.80	2.70	0.00
0121711	Alternator, 320 amp, Leece-Neville 4962PA, Sgl Sys	S	0.00	0.00	0.00
Load Totals:			88.52	450.63	351.97

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: 168.00

Minimum Continuous Load	
Supply:	168.00
Demand:	88.52
Variance:	79.48

Alternator Output at Governed Speed: 282.00

Total Connected Load	
Supply:	282.00
Demand:	243.87
Variance:	38.13

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

PRODUCT WARRANTIES

Exhibit "C"

Bid #907



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.



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.

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.



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R. H. SHEPPARD CO., INC.
101 Philadelphia St.
Hanover, PA 17331
Pierce Manufacturing Inc.
2600 American Drive
Appleton, WI 54912

LIMITED WARRANTY: The R. H. Sheppard Co. Inc., ("Sheppard") warrants all M110PKG1 and M110SAU1 steering gears manufactured and sold to Pierce Manufacturing Inc. ("Pierce") for application on Pierce TAK-4 equipped vehicles to be free from defects of workmanship and material under normal use and service for a period of thirty six months from the in service date of the vehicle to its original owner.

Vehicle applications where Sheppard product is used require an application approval before production build. If Pierce uses Sheppard product for any purpose or application which has not been approved by Sheppard in advance, including aftermarket devices (defined as a device added to the steering system directly or indirectly affecting the performance or operation of the Sheppard product in its approved application) not tested and approved by Sheppard this limited warranty SHALL NOT APPLY AND SHALL BE VOID. SHEPPARD MAKES NO OTHER WARRANTY, EITHER EXPRESS OR IMPLIED. SHEPPARD EXPRESSLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE OR PURPOSE WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.

SHEPPARD SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES OR FOR LOSS OR DAMAGE DIRECTLY OR INDIRECTLY ARISING FROM THE USE OF A PRODUCT. Pierce expressly acknowledges its obligation to inform all users (customers) of the above disclaimer.

CONDITIONS: Claims under this Limited Warranty may only be made by Pierce. In no event shall Sheppard be held liable for warranty charges by unauthorized persons. No allowance will be made for repairs or alterations, unless made with the written consent of Sheppard. Authorized Pierce dealers shall be the only authorized repair facility for Sheppard products applied to Pierce vehicles. Any warrantable repair made under this Limited Warranty must be made on or before 36 months of the in-service date for the Product to which the claim relates. Sheppard shall not be liable for claims made after such date. Sheppard product fitted to Pierce vehicles that are repaired at a repair facility other than an authorized Pierce dealer within the warranty period will be considered for payment under the guidelines of this agreement only by joint written consideration of Sheppard and Pierce warranty departments. It shall be the responsibility of the Pierce warranty department to notify Sheppard if and when this situation occurs. Sheppard will not be held responsible for damage to other steering components such as but not limited to pumps and reservoirs due to improper adjustment of steering gear relief plungers. Vehicle downtime and towing will not be considered under warranty.

REMEDIES: The sole and exclusive remedy of Pierce for Sheppard's breach of the foregoing warranty is limited to the return and repair or reimbursement as follows:

R. H. SHEPPARD CO., INC. WARRANTY
Pierce Manufacturing Inc.
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Warranty Support: In support of the Pierce dealer network, Sheppard will provide a toll-free "Hotline" service to assist in the diagnosis and troubleshooting of steering problems. The R. H. Sheppard Co., Inc. Field Service Department can be reached at 1-800-274-7437 for assistance. Sheppard will require that Pierce dealers contact this toll-free "Hotline" for approval before product is removed from a vehicle in a warranty situation. When contacted regarding a warranty situation, the Sheppard representative will provide an authorization number for removal of the product. This Returned Goods Authorization (RGA) number must be included in all warranty correspondence and attached to all returned goods.

Procedure: In the event of a warranty situation, the servicing dealer shall contact the Sheppard Hotline and receive an RGA number before replacing any steering gear. For M110PKG1 and M110SAU1 steering gear models, the dealer will first obtain an RGA number from Sheppard, and then order the replacement gear from Pierce. Replacement M110PKG1 and M110SAU1 steering gears shall be shipped from Pierce once those models are in full production. A warranty claim for both parts and labor will then be generated by the dealer and sent to Pierce. After reviewing the claim, Pierce will submit it to Sheppard for reimbursement.

Parts Reimbursement: Sheppard agrees to reimburse Pierce at Pierce's purchase price plus 30% mark-up for parts found to be defective within the warranty period. Parts being returned for warranty consideration shall be sent to the R. H. Sheppard Company, 447 E. Middle St., Hanover, PA 17331 ATTN: Warranty Dept. Sheppard's determination as to whether the part is covered by the foregoing warranty is final and conclusive. Sheppard requires the return of complete steering gears only. Individual seals replaced under warranty **should not** be returned unless specifically requested by Sheppard. All parts being returned for warranty consideration must be clearly tagged with all pertinent warranty information including, but not limited to (1) Returned Goods Authorization number (RGA); (2) claim number; (3) date in service; (4) date of failure; (5) mileage; (6) part number; (7) labor hours; (8) dealer labor rate and; (9) dollar amount claimed. Claims submitted without prior authorization are subject to rejection under this agreement.

Labor: Labor to repair Sheppard product found to be defective within the warranty period will be reimbursed at not more than 10 hours per vehicle. Labor shall be reimbursed at the rate of \$85.00 USD per hour for M110PGK1 and M110SAU1 steering gears.

Freight: Pierce will collect M110PGK1 and M110SAU1 warranty material at a designated collection point. Inbound freight to the Pierce collection point will be the responsibility of Pierce. All warranty material should be returned from the Pierce collection point to R. H. Sheppard Co. Freight Collect by a Sheppard-specified common carrier based on location of the Pierce collection point. Sheppard does not require the return of failed seals. Any freight charges incurred for the return of seals will be the responsibility of Pierce. Parts returned for warranty consideration without prior authorization are subject to rejection under this agreement and may be subject to a charge back of inbound freight charges. Parts rejected under this warranty will be returned to Pierce Freight Collect or scrapped by Sheppard at Pierce's discretion.

R. H. SHEPPARD CO., INC. WARRANTY
Pierce Manufacturing Inc.
Page 3

Outside Purchases: Pierce authorized dealers shall be the only outlet for repair, warranty service and parts for Sheppard products applied to Pierce vehicles. Sheppard will not be responsible for consumables such as hoses, belts, fluids, fittings or miscellaneous shop material that may be required for the repair of the product.

Warranty Documentation: Warranty credit memos will be issued monthly to the Pierce Warranty Department. Monthly credit memos will include (1) claim number; (2) part number; (3) parts reimbursement; (4) labor reimbursement; (5) any applicable Pierce reference number and; (6) reason for rejection or acceptance of the claim. Credit memos will be issued in U.S. funds. Debits for warranty claims will not be accepted under this agreement. Claim disposition will constitute the final and conclusive resolution of warranty claims.

Parts Retention: Sheppard will retain parts submitted for warranty consideration for a period of sixty (60) days for any material found to be rejected for warranty. Sheppard will notify Pierce within sixty (60) days of receipt of Sheppard's determination as to whether any such part is covered by this warranty. Warranty reimbursement will be issued within thirty days of receipt of material at Sheppard.

Good-Will Requests: Good-Will requests will be considered jointly between Sheppard and Pierce for equitable compensation.

RECALLS: Sheppard retains the right to review information regarding federal motor vehicle recall and /or product repair programs if Sheppard products fitted to Pierce vehicles are alleged to be non-compliant with federal motor vehicle safety standards. Sheppard retains the right to review any claims of product defect or non-compliance before participating in reimbursement of expenses incurred as a result of alleged non-compliance or defect of its products. Sheppard agrees to negotiate in good faith for the reimbursement of expenses incurred by Pierce for all administrative, material and labor cost and expense associated with any recall where Sheppard product is found to be defective or non-compliant with federal motor vehicle standards.

MISCELLANEOUS: This writing constitutes the full complete and final statement of Sheppard's limited warranty for M110PKG1 and M110SAU1 products sold to Pierce. All prior oral or written correspondence, test data, negotiations, representations, understandings and the like regarding products are merged in this writing and extinguished by it. This limited warranty may not be altered, amended extended or modified except by a writing signed by the President or Vice President of Sheppard. No employee, vendor, dealer, distributor or other representative of Sheppard has authority to make statements to extend, expand, alter or amend the terms of this Limited Warranty. Sheppard expressly disclaims any statements contrary to the Limited Warranty. Sheppard's failure at any time to enforce any of the terms and conditions stated herein shall not constitute a waiver of any provisions herein. This Limited Warranty shall be governed by and construed in accordance with the laws of the Commonwealth of Pennsylvania.

R. H. SHEPPARD CO., INC. WARRANTY
Pierce Manufacturing Inc.
Page 4

Any legal actions which may arise as a result of disputes, controversies or claims arising out of or related to this limited warranty shall be in such forum as Sheppard and Pierce shall agree, or, in the absence of agreement, in a court of appropriate jurisdiction other than in the county in which either party is located. This Limited Warranty shall not be assigned by Pierce.

COOPERATIVE EFFORT: Sheppard and Pierce agree to work cooperatively toward expanding this warranty coverage to a period of sixty months from the in service date. These cooperative efforts shall focus on examining the effects of increased heat generated by 2007 model engines and its impact on the entire power steering system.

AGREEMENT: This agreement is effective April 3, 2006 and may be modified by mutual agreement between Sheppard and Pierce of a signed amendment to be attached to the original Limited Warranty. There are no third party beneficiaries to this Limited Warranty. This warranty agreement applies to Pierce authorized dealers only. It does not encompass any special arrangements that Pierce may now have or that Pierce may enter into, with any other segments of the trucking industry. This warranty agreement does not apply to non-conforming product removed at Pierce assembly plants.

This Limited Warranty agreement between the R. H. Sheppard Co., Inc and Pierce Manufacturing Inc. may be terminated by either party with thirty days written notice prior to termination.

Signed at Pierce Manufacturing Inc., Appleton, WI this _____ day of _____, 2006.

R. H. SHEPPARD CO., INC.

PIERCE MANUFACTURING INC.

Authorized Signature

Authorized Signature

Title

Title



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:

Coverage:	Custom chassis frame rail manufactured by Pierce 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:	Fifty (50) Years (Expected Life of Apparatus)
Conditions and Exclusions: See Also Paragraphs 2 thru 4	This warranty does not apply to damage caused by corrosion.

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 TAK-4 Independent Front Suspension

Limited Warranty

1. LIMITED WARRANTY

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

Coverage:	The TAK-4 Front Independent Suspension and Steering Gears 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 -or- 30,000 Miles
Conditions and Exclusions: See Also Paragraphs 2 thru 4	This limited warranty excludes brake pads, brake rotors, seal boots and shock absorbers.

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 TAK-4 Independent Rear Suspension

Limited Warranty

1. LIMITED WARRANTY

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

Coverage:	The TAK-4 Rear Independent Suspension and Steering Gears 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 -or- 30,000 Miles
Conditions and Exclusions: See Also Paragraphs 2 thru 4	This limited warranty excludes brake shoes, brake drums, ball joint boots and shock absorbers.

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 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:

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

WARRANTY

MODEL YEAR 2021 VEHICLES



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.

How to Read Warranty Coverage (Example)

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

- The standard aftermarket warranty for WABCO products - including WABCO Original parts, WABCO Reman Solutions, ProVia quality aftermarket parts and WABCO retrofit solutions - is one year, parts only from in-service date when purchased from ZF distributor networks or its affiliates and/or subsidiaries.

WABCO

WARRANTY - MODEL YEAR 2021 VEHICLES

LINEHAUL/GENERAL SERVICE WARRANTY INFORMATION

LINEHAUL/GENERAL SERVICE VEHICLES

- Aerial Ladder Truck
- Aerial Platform
- Ambulance
- Auto Hauler
- Beverage Truck
- Bulk Hauler
- Chip Hauler (Truck)
- Cross Country Coach
- Doubles
- Flatbed
- Front Engine Commercial Chassis
- Front Engine Integral Coach
- General Freight
- Grain Hauler
- Intercity Coach
- Intermodal Chassis
- Livestock Hauler
- Meat Packer
- Moving Van
- Municipal Truck
- Pipe Hauler
- Platform Auto Hauler
- Pumper
- Rear Engine Integral Coach
- Recreational Vehicles
- Refrigerated Freight
- School Bus
- Stake Truck
- Tanker
- Tanker Truck
- Triples
- Tour Bus
- Wrecker

LINEHAUL TYPICALLY IS

- High mileage operation (over 60,000 miles/year)
- Well maintained major highways of concrete or asphalt construction

GENERAL SERVICE TYPICALLY IS

- Moderate mileage operations (less than 60,000 miles/year)
- Well maintained public roads (less than 10% off-road)
- Less than three (3) stops per mile

WABCO Components ¹	
Air Management	
Air Brake Valves	1/100/P&L
Trailer Lift Axle Control Valve	
Trailer Control Line Filter ³	
Air Compressors (ALL) ²	2/200/P&L
Air Dryers (ALL)	3/300/P&L
Aerodynamics	
OptiFlow® TrailerSkirt	2/UnU/P
OptiFlow® Trailer Tail and AutoTail	2/UnI/P
Braking Systems	
ABS (Anti-Lock Braking System) Air	3/300/P&L
ABS (Anti-Lock Braking System) Hydraulic	
Electronic Braking System (EBS)	
Electronic Stability Control (ESC)	
Roll Stability Control (RSS)	
Trailer Roll Stability Support (RSS)	
Trailer ABS (Anti-Lock Braking System) ³	
Driveline Suspension Control	
Clutch Controls	2/200/P&L
Leveling Valves	1/100/P&L
OptiRide® Automated Manual Transmission (AMT)	
OptiRide® Electronically Controlled Air Suspension (ECAS)	3/300/P&L

WABCO Components ¹ (cont.)	
Safety	
OnGuardACTIVE®	3/300/P&L
OnLane®	
OnLaneALERT®	
OnSide®	
Trailer SafeStart™	
Trailer TailGUARD™	
Telematics	
TrailerCAST™ Telematics Device	3/300/P&L
Wheel End Solutions	
EasyFit™ Slack Adjuster	6/600/P
MAXXUS™ Truck Air Disc Brake	5/500/P&L
IVTM - Wheel Module	6/P
IVTM - All Other Products	2/P
Pan 17 and 19 Air Disc Brake	2/UnI/P and 1/UnI/L
Pan 22 Air Disc Brake	5/500/P and 1/L
TRISTOP™ D Actuator w/ IBV or IRB	6/600/P
TRISTOP™ D Actuator	3/300/P
UNISTOP™ Actuator	2/200/P
Trailer MAXX22T™ Air Disc Brake	5/500/P and 1/L

¹ ZF and WABCO branded components. ² WABCO compressors installed on Cummins, Mercedes, and DDC engines are not warranted or serviced by ZF. Please contact your respective dealer/distributor of those engines for warranty and servicing. ³ An extended warranty of 4/400/P will apply when a WABCO Trailer Control Line Filter is used in combination with a WABCO Trailer ABS valve.

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



WABCO Components ¹	
Air Management	
Air Brake Valves	1/100/P&L
Air Compressors (ALL)2	
Air Dryers (ALL)	
Trailer Control Line Filter ³	
Braking Systems	
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)	
Trailer ABS Valve ³	
Roll Stability Control (RSS)	
Trailer Roll Stability Support (RSS)	
Driveline Suspension Control	
OptiRide® Electronically Controlled Air Suspension (ECAS)	2/200/P&L
Leveling Valves	1/100/P&L
Clutch Controls	2/200/P&L
Safety	
OnGuardACTIVE®	3/300/P&L
OnLane®	
OnLaneALERT®	
OnSide®	
Trailer SafeStart™	
Trailer TailGUARD™	
Telematics	
TrailerCAST™ Telematics Device	3/300/P&L
Wheel End Solutions	
EasyFit™ Slack Adjuster	2/200/P
MAXXUS™ Air Disc Brake	1/Unl/P&L
IVTM - Wheel Module	6/P
IVTM - All Other Products	2/P
Pan 22, 19 and 17 Air Disc Brake	1/Unl/P&L
Trailer MAXX22T™	1/Unl/P&L
TRISTOP™ D Actuator w/ IBV	3/Unl/P
TRISTOP™ D Actuator	2/200/P
UNISTOP™ Actuator	1/100/P

¹ ZF and WABCO branded components. ² WABCO compressors installed on Cummins, Mercedes, and DDC engines are not warranted or serviced by ZF. Please contact your respective dealer/distributor of those engines for warranty and servicing. ³ An extended warranty of 4/400/P will apply when a WABCO Trailer Control Line Filter is used in combination with a WABCO Trailer ABS valve.

WARRANTY - MODEL YEAR 2021 VEHICLES

INDUSTRIAL/OFF-HIGHWAY SERVICE WARRANTY INFORMATION

INDUSTRIAL AND OFF-HIGHWAY SERVICE TYPICALLY IS

- Low mileage operation³
- Vehicles are not typically licensed for highway use

Market	Common Application Types
Agriculture	Fertilizer Spreader, Tractor, Heavy Duty Ag Trailers, Harvester, Sprayer, Skid Loader, Silage Bagger, Slurry Wagons, Grain Cart
Airport Support	Pushback Tractor, Towing Tugs, Aircraft Tow Tractor, Refueling Trucks, Food Service Trucks, Baggage Tractors, De-Icing Equipment, Runway Clearing Equipment
Construction	All-Terrain Crane, Rough Terrain Crane, Excavator, Compactor, Wheel Loader, Road Roller, Motor Grader, Articulated Dump Truck, Rubber Tire Road Roller, Backhoe Loaders, Haul Trucks, Scraper Rough Terrain Forklifts, Trenchers, Drills
Forestry	Logging Forwarder, Kidder, Loaders, Yard Forklifts, Harvesters Fellers
Material Handling	Port Tractor, Rail Yard Spotter, Stevedoring Tractor, Trailer Spotter, Yard Jockey, Scissor Lift, Straddle Carrier, Manlift, Forklift, Boom Lift Telehandlers, Aerial Work Platforms
Mining	Specialized Mining, Excavator, Haul Truck, Underground Loader, Service Trucks, Wheel Loaders, Scrapers, Load Haul Dumps, Personnel Transports, Bolters, Scalpers
Municipal	Street Sweeper, Utility Tractor, Utility Trucks, Tree Trimmers, Dump Trucks, Tow Trucks, Flat Bed Trucks, Winch Applications
Oil & Gas	Fracturing Trailer, Injector Heads, Top Drives, Jack/Lift Boats, Wireline Trucks, Load-On / Load-Off
Rail	Railcar Mover, Track Layers, Grinders, Platform Crane, Locomotive Railcars, Ballast Equipment, Winch Applications



WABCO Components ¹	
Air Management	
Air Brake Valves	2/Unl/P
Air Compressors (ALL)2	
Air Dryers (ALL)	
Brake Actuation	
Air/Hydraulic Actuators	2/Unl/P
Master Cylinders	
Remote Actuators	
Slave and Wheel Cylinders	
Two Fluid Actuators	
Brake Locks	
Brake Locks (ALL)	2/Unl/P
Electric Brake Locks	
Lever Locks	
Braking Systems	
ABS (Anti-Lock Braking System) Air	1/100/P&L
ABS (Anti-Lock Braking System) Hydraulic	
Driveline Suspension Control	
Clutch Controls	1/100/P&L
Leveling Valves	
Electrohydraulics & Controls	
Electronic Pedals	2/Unl/P
Electrohydraulic Brake Valves (EBV)	
Pressure Switches	
Hydraulic Braking Solutions	
Accumulator Charging Valves	2/Unl/P
Hydraulic Throttle Controls and Switches	
Modulating Brake Valves	
Wheel End Solutions	
EasyFit™ Slack Adjuster	2/200/P
Caliper Disc Brakes	2/Unl/P
MAXXUSTM Air Disc Brake	1/Unl/P&L
Multiple Disc Brakes	2/Unl/P
IVTM - Wheel Module	6/P
IVTM - All Other Products	2/P
Pan 22, 19 and 17 Air Disc Brake	1/Unl/P&L
TRISTOPTM D Actuator w/ IBV	3/Unl/P
TRISTOPTM D Actuator	2/200/P
UNISTOPTM Actuator	1/100/P

¹ ZF and WABCO branded components. ² WABCO compressors installed on Cummins, Mercedes, and DDC engines are not warranted or serviced by ZF. Please contact your respective dealer/distributor of those engines for warranty and servicing. ³ Equivalent hours of service limit: 2,000 hours for all components.

TERMS AND CONDITIONS

COVERAGE EXCLUSIONS

PRODUCT DESCRIPTION

ALL PRODUCTS

This Warranty shall not apply to the following, but not limited to: (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, damaged threads, cut, broken, chafed, pinched or otherwise damaged wiring (sensors, harnesses and connectors), (b) sensors damaged during removal when seized in block, or associated with sensor adjustments/ alignments, and (c) damage resulting from the use or installation of non-genuine 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 WABCO name plate, serial numbers or label identifying the device as a ZF 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 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 PRODUCTS

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 PLUS™ DIAGNOSTIC SOFTWARE

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

WARRANTY - MODEL YEAR 2021 VEHICLES

TERMS AND CONDITIONS

(1) What is Covered by this Commercial Warranty?

ZF CV Systems North America LLC and its North American subsidiaries and affiliates (ZF) warrant 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 distribution agreements 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 ZF'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 ZF warranty has not expired under the terms stated above, the ZF warranty will 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 ZF distributor networks 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 ZF through the OEM new truck and/or trailer dealer of the intended vocational use of the vehicle into which the 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 ZF directly. Failure to notify ZF 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 ZF as to the intended vocational use of the vehicle. This notification can be sent directly to ZF 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 ZF's warranty requires that the application of products be properly approved pursuant to OEM and ZF, 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 "Coverage Exclusions," 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 ZF, (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 ZF.

(5) 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 ZF or the dealer from which the vehicle was purchased. To obtain service, the vehicle must be taken to any participating OEM dealer or ZF distributor networks' servicer. The dealer or ZF authorized servicer will inspect the vehicle and contact ZF for an evaluation of the claim. When authorized by ZF, the dealer or ZF authorized servicer will repair or replace during the term of this warranty any defective WABCO component covered by this warranty.

(6) Disclaimer of Warranty and Limitation of remedies. TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE LIMITED WARRANTY SET FORTH HEREIN IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ARISING BY OPERATION OF LAW OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND/OR WARRANTY FOR HIDDEN OR LATENT DEFECTS, AND IN NO EVENT WILL ZF OR ANY OF ITS AFFILIATES BE LIABLE FOR DIRECT, INDIRECT, INCIDENTAL, PROGRESSIVE, SPECIAL, OR CONSEQUENTIAL DAMAGES OF ANY KIND.

- (7) 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. Any dispute arising in connection with this agreement shall be governed by and construed according to the laws of the State of Michigan and be brought, heard and determined exclusively in either the Circuit Court for the County of Oakland, State of Michigan or the United States District Court for the Eastern District of Michigan. The parties stipulate that the referenced venues are convenient.
- (8) Remedy. The exclusive remedy under this warranty shall be the repair or replacement of the defective component at ZF's option. ZF reserves the right to require that all applicable covered components are available and/or returned to ZF for review and evaluation. THE MAXIMUM LIABILITY, IF ANY, OF ZF FOR ALL DAMAGES, INCLUDING WITHOUT LIMITATION CONTRACT DAMAGES, BREACH OF WARRANTY, NEGLIGENCE, STRICT LIABILITY, OR OTHER TORT, IS LIMITED TO AN AMOUNT NOT TO EXCEED THE PURCHASE PRICE OF THE PRODUCT and where indicated in the product and application warranty information above, the inclusion of labor is limited to the standard repair time. THE PARTIES ACKNOWLEDGE AND AGREE THAT THE LIMITATION OF DAMAGES PROVISION SET FORTH IN THIS PARAGRAPH SURVIVES BETWEEN THE ORIGINAL END USER AND ZF EVEN IF THE EXCLUSIVE REMEDY SET FORTH ABOVE IS DEEMED TO FAIL OF ITS ESSENTIAL PURPOSE. ZF may change the design or make improvements to its Products without incurring any warranty obligation for previously manufactured Product .
- (9) Entire Agreement. This is the entire agreement between ZF and the Owner about warranty and no, ZF employee, or dealer is authorized to make any additional warranty on behalf of ZF unless in writing and signed by an authorized representative of ZF.





**For further product details contact your distributor or the
WABCO Customer Care Center at 855-228-3203.**

About ZF Friedrichshafen AG

ZF is a global technology company and supplies systems for passenger cars, commercial vehicles and industrial technology, enabling the next generation of mobility. ZF allows vehicles to see, think and act. In the four technology domains Vehicle Motion Control, Integrated Safety, Automated Driving, and Electric Mobility, ZF offers comprehensive solutions for established vehicle manufacturers and newly emerging transport and mobility service providers. ZF electrifies different kinds of vehicles. With its products, the company contributes to reducing emissions and protecting the climate.

ZF, which acquired WABCO Holdings Inc. on May 29, 2020, now has 160,000 employees worldwide with approximately 260 locations in 41 countries. In 2019, the two then-independent companies achieved sales of €36.5 billion (ZF) and \$3.4 billion (WABCO). For more information, visit: www.wabco-na.com



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:

Coverage:	The Pierce Custom Cab shall be free from structural 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:	Ten (10) Years - or - 100,000 Miles
Conditions and Exclusions: See Also Paragraphs 2 thru 4	<p>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.</p> <p>This warranty does not apply to damage caused by corrosion.</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

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:	<p>This limited warranty is applicable to the vehicle in the following percentage costs of warranty repair, if any:</p> <p>Topcoat Durability & Appearance: Gloss, Color Retention & Cracking 0-72 months 100% 73-96 months 50% 97-120 months 25%</p> <p>Integrity of Coating System: Adhesion, Blistering/Bubbling 0-36 months 100% 37-84 months 50% 85-120 months 25%</p> <p>Corrosion: Dissimilar Metal and Crevice 0-36 months 100% 37-48 months 50% 49-72 months 25% 73-120 months 10%</p> <p>Corrosion Perforation 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

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

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.



Fire and Rescue Apparatus

Ten (10) Year Material and Workmanship

Pierce 12V LED Strip Light

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 Pierce 12V LED strip lights installed on the apparatus occurring during the warranty period.
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Ten (10) Year
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.

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 - 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:

Coverage:	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.
Warranty Begins:	The date of delivery to the first retail purchaser.
Warranty Period Ends After:	Five (5) Years on Oil Cooler and three (3) years on collateral damage coverage
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> <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.

POLY-TANK® & POLYSIDE® are registered trademarks of UPF, Inc. INTEGRATOR™, ELLIPSE™, ELLIP-T-TANK™ & DEFENDER™ are trademarks of UPF, Inc. © 08/01/09 UPF, Inc. Printed in the USA



BULLETIN



TO: All Dealer Service Representatives

From: Kevin Hanegraaf

DATE: January 4, 2010

RE: UPF Tank Warranty Policy – Truck in Accident

Service Topic #292

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)



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:

Coverage:	The apparatus body shall be free from structural 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:	Ten (10) Years - or - 100,000 Miles
Conditions and Exclusions: See Also Paragraphs 2 thru 4	<p>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.</p> <p>This warranty does not apply to damage caused by corrosion.</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.



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.



Warranty Statement

Effective May 30, 2020

Subject to the following general and specific terms and conditions, Hale Products, Inc. ("Seller") hereby warrants to the original Purchaser¹ that Products sold under Hale and Class 1 brands will be free of defects in material and workmanship for the applicable Warranty Period. General terms and conditions applicable for all Products are set forth under the heading **General Terms and Conditions** below. Product specific terms and conditions, including Warranty Periods and Warranty Coverages, are set forth in the Tables following the **General Terms and Conditions**.

General Terms and Conditions

The following limitations, exclusions, procedures, and other terms and conditions shall apply for all Products: Warranty is voided if:

- Product is used for an application, with products or in a manner other than the application, products, and manner for which such Product is designed and intended
- Product is subjected to a use, service, condition or environment other than a use, service, condition or environment for which such Product is designed and intended
- Product is not properly installed
- Product is not properly tested and maintained in accordance with Seller's product manuals and supplemental instructions and guidelines, applicable industry standards and guidelines, and applicable legal and regulatory requirements
- Product is altered, modified, serviced (except routine maintenance performed in accordance with Seller's instruction manual for Product and Industry accepted standards and guidelines), or repaired by a person other than Seller or a person authorized by Seller to make such alteration or modification or perform such service or repair
- Seller is not paid the full amount of the purchase price for Product when due.

No Warranty covers:

- Ordinary wear and tear
- Failure due to compliance with a specification or design provided or required by Purchaser
- Failure due to improper operation, excess pressure, excess voltage or other similar cause
- Failure due to operator error
- Damage during or after shipment and failure attributable thereto or resulting there from
- Failure attributable to or resulting from the failure or substandard, inadequate or improper performance of any part, component or equipment not supplied by Seller
- Failure attributable to or resulting from the failure or substandard, inadequate or improper performance of any third party (e.g., not Hale or Class 1 brand) part, component, Product or equipment, whether or not combined, packaged, incorporated, installed or used with a Hale or Class 1 brand part, component, Product or equipment.

Seller shall have no obligation under any Warranty unless Purchaser promptly notifies Seller of the failure giving rise to the Warranty claim, such notice is received by Seller within the applicable Warranty Period, and Seller is provided with such information, data and records (including, but not limited to, in service date, run hours, and service and repair records) as Seller may reasonably request in evaluating the Warranty claim. The notice of failure must be given in writing, identify the Product claimed to be defective (including serial number, if any), and describe in reasonable detail the circumstances surrounding the failure.

Repaired Product and replacement Product shall be warranted only for the remainder of the original Warranty Period.

¹ The "original Purchaser" is the original purchaser from Hale Products, whether the original purchaser is a distributor, dealer or other reseller, an OEM, or an end user.

Seller reserves the right to use reconditioned parts for Warranty repairs and to use reconditioned Products for Warranty replacements



Warranty Statement

Effective May 30, 2020

Seller shall have the right to physically inspect Product claimed to be defective. If requested by Seller, Purchaser shall deliver the Product claimed to be defective to Seller at its manufacturing facility or to another party or location designated by Seller. In such event, Seller shall issue to Purchaser a Return Materials Authorization (RMA) for the Product to be delivered. The Product must be delivered to Seller within 30 days of issuance of the RMA. The RMA number must be included with the Product when delivered to Seller. Failure to make timely delivery to Seller of the Product claimed to be defective shall void any Warranty.

Purchaser or its customer shall be responsible for all freight and shipping charges in connection with the delivery of Product claimed to be defective to Seller at its manufacturing facility or to another party or location designated by Seller. Product claimed to be defective must be shipped by Purchaser freight prepaid, and Purchaser shall bear all risk of loss or damage during shipment.

Repaired and replacement Product and parts will be shipped to Purchaser freight collect, unless a determination is made prior to shipment that the warranty claim is valid, in which case Product and parts will be shipped to Purchaser freight prepaid from Supplier. Repaired or replacement Product will be shipped back to purchaser via UPS ground or IDEX approved standard freight. If Purchaser requires expedited UPS shipment, Purchaser will cover the difference between ground and service selected costs. Purchaser shall bear all risk of loss or damage for all freight collect shipments.

When a warranty claim is confirmed by Hale's Quality department, Hale will issue a credit for freight costs under the following conditions:

- Product was shipped by Purchaser freight prepaid to Supplier. Purchaser to provide a copy of paid freight bill upon Hale's request.
- Repaired or replacement Product was shipped to Purchaser freight collect. If Purchaser required expedited shipment, the difference between ground and expedited service costs will be deducted from total credit.

If requested to do so by Purchaser, Seller may, at its sole option and in its sole discretion, supply a replacement Product or part to Purchaser prior to making a final determination as to whether Warranty Coverage is available. If Seller ultimately determines that no Warranty Coverage is available for the Product claimed to be defective, whether the determination is based on the Warranty being voided, the Product failure being due to a cause not covered by the Warranty, the failure to make a timely and proper Warranty claim, or otherwise, Purchaser or its customer will be required to purchase the replacement Product or part that has been supplied to it by Seller at the price at which Purchaser is then entitled to purchase such Product or part under the Supply Agreement.

If Seller ultimately determines that no Warranty Coverage is available for a Product claimed to be defective, whether the determination is based on the Warranty being voided, the Product failure being due to a cause not covered by the Warranty, the failure to make a timely and proper Warranty claim, or otherwise, Purchaser shall have the option of either (i) having the Product returned to it freight collect, without repair or replacement, or (ii) if Seller determines that the Product is repairable, have the Product repaired by Seller or another party designated by it on a time and materials basis at Seller's then current standard charges for non-warranty repairs and then returned to Purchaser freight collect.

SELLER'S WARRANTY AS SET FORTH HEREIN IS SELLER'S SOLE AND EXCLUSIVE WARRANTY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ALL WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT ALL OF WHICH OTHER WARRANTIES ARE EXPRESSLY EXCLUDED.

THE RIGHTS AND REMEDIES SET FORTH HEREIN ARE THE SOLE AND EXCLUSIVE RIGHTS AND REMEDIES AGAINST SELLER. EXCEPT FOR THE SPECIFIC LIABILITIES AND OBLIGATIONS



Warranty Statement

Effective May 30, 2020

PROVIDED HEREIN, SELLER SHALL HAVE NO LIABILITY OR OBLIGATION WITH RESPECT TO ANY PRODUCT CLAIMED TO BE DEFECTIVE IN ANY MANNER.

UNDER NO CIRCUMSTANCES SHALL SELLER BE LIABLE FOR SPECIAL, INCIDENTAL, INDIRECT, CONSEQUENTIAL OR PUNITIVE DAMAGES OF ANY KIND, INCLUDING, BUT NOT LIMITED TO, LOST OR UNREALIZED SALES, REVENUES, PROFITS, INCOME, COST SAVINGS OR BUSINESS, LOST OR UNREALIZED CONTRACTS, LOSS OF GOODWILL, DAMAGE TO REPUTATION, LOSS OF PROPERTY, LOSS OF INFORMATION OR DATA, LOSS OF PRODUCTION, DOWNTIME, OR INCREASED COSTS, IN CONNECTION WITH ANY PRODUCT, EVEN IF SELLER IS ADVISED OR PLACED ON NOTICE OF THE POSSIBILITY OF SUCH DAMAGES AND NOTWITHSTANDING THE FAILURE OF ANY ESSENTIAL PURPOSE OF ANY PRODUCT.



Warranty Statement

Effective May 30, 2020

Hale Products, Inc.			
Product Specific Warranty Terms and Conditions			
Product*		Warranty Period	Coverage**
Pumps Mid-Ship, Rear Mount, and Booster (Excludes all Engine Driven Units)	Non-Marine Fire Service Applications	Earlier of (i) 5 years from in service date of vehicle or equipment in which Product is initially installed, or (ii) 5-1/2 years from date of shipment of Product to original Purchaser. Labor is only covered for the first two (2) years of this warranty coverage.	<p>Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship.</p> <p>At time pump is ordered, original Purchaser may take Standard Warranty at no charge or purchase Extended Warranty for an additional charge which will be quoted by Seller at original purchaser's request at time of order.</p> <p>Under Standard Warranty, Seller will cover parts and labor for first 2 years of Warranty Period and parts only (no labor) for remainder of the Warranty Period.</p> <p>Under Extended Warranty (if purchased by original Purchaser), Seller will cover parts and labor for the full Warranty Period.</p> <p>When labor is covered, original Purchaser will be reimbursed at Seller's then current standard labor hours and rates for labor to make repair (if not repaired by Seller) and to remove defective Product and re-install repaired or replacement Product. Seller's approval of repair estimate is required prior to performance of repair work. If applicable, actual mileage will be reimbursed at Seller's then current mileage reimbursement rate. See the Hale Pump and Pump Accessories Labor Warranty Guide for details on issues covered and fees paid.</p>
	Marine and Other Application	Earlier of (i) 2 years from the date of shipment of Product to original Purchaser, or (ii) 2,000 run hours.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
Engine Driven Units (Excluding Engines ***)	Pump Ends Backpacks Floats	If not used for rental or contracting, 2 years from the date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. Repair labor is included but any other labor (including removal and re- installation) and mileage are excluded. Original Purchaser will be reimbursed at Seller's then current standard labor hours and rates for labor to make repair (if not repaired by Seller). Seller's approval of repair estimate is required prior to performance of repair work.
		If not used for rental or contracting, 2 years from the date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
	HP Portables	If not used for rental or contracting, 3 years from the date of shipment of Product to original Purchaser	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included. See Hale Portable Pump Labor Warranty Guide for details on issues covered and fees paid
		If used for rental or contracting, earlier of (i) 6 months from date of shipment to original Purchaser, or (ii) 1,000 run hours.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
	Cross-Chassis Skids Trailer Units	Earlier of (i) 12 months from date of shipment to original Purchaser, or (ii) 1,000 run hours.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.



Warranty Statement

Effective May 30, 2020

Hale Products, Inc.			
Product Specific Warranty Terms and Conditions			
Product*		Warranty Period	Coverage**
Pump Modules	Pump Body Weldments, Stainless Manifolds, and Fabricated <u>non-painted</u> or powder coated panels	10 years from the date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed (including cracks resulting from stress and rust through of panels) during Warranty Period due to a defect in material or workmanship. No labor is included. Pump modules are built to original Purchaser's specification or design. Although individual Hale and Class 1 brand components used for pump modules comply with NFPA standards, pump modules are not NFPA compliant. Original Purchaser is solely responsible for (i) ensuring finished pump houses are NFPA complaint and adhere to industry accepted standards and guidelines, and (ii) supplying manuals that include appropriate directions, instructions and warnings concerning pump house operation.
	Fabricated painted or powdered coated panels	2 years from the date of shipment of Product to original Purchaser	Repair or replacement of Product that Seller determines failed from paint, finish, and corrosion during Warranty Period due to a defect in material or workmanship. No labor is included.
Foam SmartFoam, SmartCAFS, CAFS Systems, SmartATP, and EZ Fill		3 years from the date of shipment to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included. Datalogger download from Product may be requested to determine cause of defect.
Foam FoamLogix Systems		1 year from the date of shipment to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
Pump Repair & Replacement Parts	Ordered for service and repair	90 days from date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
Pressure Gauges		3 years from date of shipment of Product to the original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
Plumbing		2 years from date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
Valves	Akron Valve	10 years from date of shipment of Product to original Purchaser on everything except seal. No warranty on seal.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
	Class 1 Valve	10 years from date of shipment of Product to original Purchaser on everything except seal. No warranty on seal.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
	Hale Valve	10 years from date of shipment of Product to original Purchaser on everything except seal. No warranty on seal.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.



Warranty Statement

Effective May 30, 2020

Hale Products, Inc.			
Product Specific Warranty Terms and Conditions			
Product*		Warranty Period	Coverage**
	SVS Torrent Valve	10 years from date of shipment of Product to original Purchaser on everything except seal. 2 years from date of shipment of Product to original Purchaser on seal.	Repair or replacement of Product that Hale determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
Electronics		2 years from date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
Monitors	Akron	5 years from date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
SafeBuy Modules Bundles	QMAX/QMAX-XS Pump Non-Marine Fire Service Applications	Earlier of (i) 8 years from in service date of Safebuy QMAX/QMAX-XS bundle in the vehicle or equipment in which Product is initially installed, or (ii) 8-1/2 years from date of shipment of Product to original Purchaser. This is predicated on the end user supplying Hale with their yearly service and pump testing records by the end of each calendar year.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship.
			Under Safebuy Warranty, Seller will cover parts and labor for earlier of (i) 8 years from in service date of vehicle or equipment in which Product is initially installed, or (ii) 8-1/2 years from date of shipment of Product to original Purchaser.
			When labor is covered, original Purchaser will be reimbursed at Seller's then current standard labor hours and service rates for labor to make repair (if not repaired by Seller) and to remove defective Product and re-install repaired or replacement Product. Seller's approval of repair estimate is required prior to performance of repair work. If applicable, actual mileage will be reimbursed at Seller's then current mileage reimbursement rate. See the Hale Pump and Gearbox Labor Warranty Guide for details on issues covered and fee paid.
SAM Bundles- Pump with Loose Valves, Kits or Modules	Pumps-Mid-Ship, Rear Mount, and Booster (Excludes all Engine Driven Units) Non-Marine Fire Service Applications	Earlier of (i) 10 years from in service date of vehicle or equipment in which Product is initially installed, or (ii) 10-1/2 years from date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship.
			Under SAM Warranty, Seller will cover parts and labor for earlier of (i) 10 years from in service date of vehicle or equipment in which Product is initially installed, or (ii) 10-1/2 years from date of shipment of Product to original Purchaser.



Warranty Statement

Effective May 30, 2020

Hale Products, Inc.			
Product Specific Warranty Terms and Conditions			
Product*		Warranty Period	Coverage**
SAM Bundles- Pump with Loose Valves, Kits or Modules			When labor is covered, original Purchaser will be reimbursed at Seller's then current standard labor hours and service rates for labor to make repair (if not repaired by Seller) and to remove defective Product and re-install repaired or replacement Product. Seller's approval of repair estimate is required prior to performance of repair work. If applicable, actual mileage will be reimbursed at Seller's then current mileage reimbursement rate. See the Hale Labor Warranty Guides for details on issues covered and fee paid.
	Akron Electric Valve Actuators and Navigator Pros	5 years from date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.
	Electronics	4 years from date of shipment of Product to original Purchaser.	Repair or replacement of Product that Seller determines failed during Warranty Period due to a defect in material or workmanship. No labor is included.

*When Products are combined to form a module or package, each Product will have its own separate Warranty Period and Warranty Coverage

** For each Product, Seller will have the option to refund to Purchaser (in cash or by credit) the purchase price Seller was paid for such Product, less depreciation determined on a straight line basis over the Warranty Period, in lieu of repair or replacement (including, when applicable, labor). The decision whether to repair, replace or refund (and, if there is a refund, whether to refund in cash or by credit) shall be made by Seller in its sole discretion.

*** Seller makes no warranty with respect to engines. Any warranty with respect to engines is limited to whatever warranty may be provided by the engine manufacturer.



Fire and Rescue Apparatus

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:

Coverage:	Stainless steel piping shall be free from structural failures caused by defects in material and workmanship, or perforation caused by corrosion.
Warranty Begins:	The date of the original purchase invoice (issued when the product ships from the factory).
Warranty Period Ends After:	Ten (10) Years - or - 100,000 Miles
Conditions and Exclusions: See Also Paragraphs 2 thru 4	<p>Pierce's obligation under this warranty is limited to repairing or replacing without charge, as Pierce may elect, the stainless steel piping or components which Pierce determines to have failed due to defective material and workmanship, or perforation caused by corrosion.</p> <p>This warranty does not cover the use of fluoroprotein (FP) type foam. The sodium chloride within FP foam can cause long-term damage to system components if not thoroughly flushed immediately after use.</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

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>

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:

Coverage:	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.
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>Topcoat Durability & Appearance: Gloss, Color Retention & Cracking 0-72 months 100% 73-96 months 50% 97-120 months 25%</p> <p>Integrity of Coating System: Adhesion, Blistering/Bubbling 0-36 months 100% 37-84 months 50% 85-120 months 25%</p> <p>Corrosion: Dissimilar Metal and Crevice 0-36 months 100% 37-48 months 50% 49-72 months 25% 73-120 months 10%</p> <p>Corrosion Perforation 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

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

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SCOTTS VALLEY FIRE PROTECTION DISTRICT

7 Erba Lane, Scotts Valley, California 95066 (831) 438-0211 Fax (831) 438-0383

Date: August 10, 2022
To: Board of Directors
From: Chief Whittle
Subject: July Administrative Report

Administration

Admin Specialist Bridges inspected/installed 3 car seats in the month of July.

Operations

On July 24th at 0300 hours, E2538 staffed by Captain Petteys, Eng. Green, Eng. Nehf, and FF Shaughnessy, were deployed as part of strike team XCZ2325C to the Oak Fire near Mariposa. Crews reported that much of the terrain is steep and difficult to access but are in good spirits. The strike team was released on 8/1 and reassigned to the McKinney Fire in Siskiyou County. Other agencies on the strike team include Watsonville, Central, Zayante, and Moraga-Orinda Fire.

E2512 was sent to High Tech Fire apparatus in Oakdale to have the pump transmission rebuilt.

WT2550 returned from Golden State Fire Apparatus after having the mounting pads for the tank redone.

Several significant vehicle accidents happened in July. Many of these incidents included extrications and/or multiple major trauma patients.

B-shift performed a full service on E-2512 including replacing the engine oil pan gasket.

The soils engineers have drilled and collected the soil samples needed for testing and waiting for the final report to come in.

EMS

Several response changes have occurred for certain medical call types. Some of the changes include removing ambulance being pended to calls based on availability, discretionary code 2/3 responses to medical alarms with no patient contact, and low acuity ground level falls. Fire only response to person down calls with no patient contact. Future changes as well as an evaluation of the current changes are being discussed in early at a meeting in early August.

Board of Directors

Robert Campbell Edward Harmon Joseph Parker Russ Patterson Daron Pisciotta

Training

SCHMIT Quarterly training was held at Zayante Fire Station July 20th. The training consisted of apparatus and equipment familiarization, table top exercises, monitoring equipment, donning and doffing level A suits and decon.

Captain Sundermier and crew attended a joint water tender training at the Summit Restaurant with Santa Clara County Fire Captain Brook Hardy and crew. The drill focused on drafting and jet syphoning utilizing 2 portable tanks. Great collaborative drill and even better relationship building between the two agencies.

Crews have been working on identifying and pre-planning all the elevators within the District. A big thank you to Matt Smiley who has been doing the majority of the site visits and data entry and to Brian Green who put together the new passive forcible entry and elevator tool kits on the engines.

Moving forward the Santa Cruz County Fire Agencies will be holding quarterly Battalion Chief meetings. In an attempt to constantly improve standardization and relationships across the county BC's will meet quarterly to discuss and train on issues, hot topics and incidents. The first meeting was held July 7th at Cal Fire Santa Cruz headquarters. Topics discussed were wildland fire incidents, Strike team deployments, Radio communications and multiple dispatch frequencies. Great meeting with the intent of collaboration and good communication.

Crews have been training on pumping operations and hose deployments. The two probationary employees have been the center of attention as they move into apparatus driving and pumping.

SVFD received new rope rescue equipment. The Aztec / mechanical advantage rope system. Captain Sundermier is working on building and delivering the training. This August September and October the Santa Cruz County Fire agencies training will be focusing on rope rescue and the new equipment. More to follow in the upcoming months.

Health and Wellness and Safety. To continue to prepare for this wildland fire season crews were assigned Heat illness and heat emergency training and IWI (incident within an incident) training. NWCG (National Wildfire Coordination Group) video on management of the IWI.

EMS training. Crews were assigned CE's (continuing education) to maintain Paramedic licensure. Training consisted of Advanced Cardiac Emergencies 2 hour credit.

Prevention

Crews did a second flow test of the hydrant system at Spring Lakes Mobile Home Park. The pressure was boosted in the park increasing the flow of the hydrants by approximately 200 GPM. SVFD will be working with the pipe contractor, engineer, and home owners associations on other ways to help improve fire flow in the park.

Deputy Fire Marshal Collins worked alongside Captain Vandervoort the first week of July, which included county building and the city of Scotts Valley plan review processes, on-site meeting at the Avis buildings at 440 Kings Village Road, Polo Ranch project manager introductions and SV City Building Official introduction. DFM Collins and Captain Vandervoort also completed the inspection of the 4th of July fireworks event.

DFM Collins completed 7 state mandated annual fire inspections, including 6 re-inspections.

DFM Collins performed 8 construction inspections, 5 vegetation clearance & complaint inspections and 5 in-house plan reviews.

DFM Collins met with a representative from SV Water District to inspect several of their tank sites to discuss vegetation clearance.

DFM Collins has been working on the Streamline database that is currently being used to track inspections. She is working on setting up all non-state mandated inspections to auto schedule for her to inspect every other year. She has also working with Streamline to try and track all construction plan submittal, reviews, permits, fees and inspections.

Admin Assistant Michelle Mayfield did a ride-a-long with DFM Collins for the fire sprinkler final at Target. The fire alarm final is scheduled for August as they get closer to their proposed September opening.

In following the fire district's record retention policy, DFM Collins cleared out a file cabinet of old plans and looking into converting the remaining documents to electronic in order to discard the remaining paper documents and plans.

SC County Fire Prevention Officers are continuing the code adoption chapter reviews.

DFM Collins and Chief Whittle met with several representatives and the fire alarm contractor at the SV Theater Guild (SV Library building). The fire alarm system and fire sprinkler notification are not working properly and must be repaired before final fire clearance is granted for the Theater Guild and Library remodel.

Chief Report

The City of SV Independence Day celebration took place on July 3rd this year. We participated in the parade and staffed an extra engine and water tender for the fireworks display. We also had a type 3 engine from Cal Fire available in District. The event was attended by approximately 6,500 people, and there were no significant incidents.

On July 7th the SCO Adhoc committee met with LAFCO and the Branciforte Adhoc members to discuss next steps in the annexation process.

I attended the NetCom users group meeting on July 11th.

BC Stubendorff, Captain Vandervoort and myself met with representatives of the Spring Lakes Mobile Home Park to discuss their new water system. Also in attendance was the system engineer and the plumbing company. Our initial flow test results were below expectations. After some adjustments, the GPM flow has increased, and they're going to work on other improvements to enhance flows.

I met with Marilyn Underwood, the Director of County Environmental Health, and John Gerbrandt from County Environmental Health. We discussed the SCHMIT program past present and future, including operations, administration and finance.