



One (1)

WARRANTY

We warrant each new motorized fire apparatus manufactured by CENTRAL STATES FIRE APPARATUS for a period of ONE YEAR from the date of delivery, except for chassis and other components noted herein.

Under this warranty we agree to furnish any parts to replace those that have failed due to defective material or workmanship where there is no indication of abuse, neglect, unusual or other than normal service providing that such parts are, at the option of CENTRAL STATES FIRE APPARATUS, made available for our inspection at our request, returned to our factory or other location designated by us with transportation prepaid within thirty days after the date of failure or within one year from the date of delivery of the apparatus to the original purchaser, whichever occurs first, and inspection indicates the failure was attributed to defective material or workmanship.

The warranty on the chassis and chassis supplied components, storage batteries, generators, electrical lamps and other devices subject to deterioration is limited to the warranty of the manufacturer thereof and adjustments for the same are to be made directly with the manufacturer by the customer.

This warranty will not apply to any fire apparatus that has been repaired or altered outside our factory in any way, which in our opinion might effect its stability or reliability.

This warranty shall not apply to those items that are usually considered normal maintenance and upkeep services: including, but not limited to, normal lubrication or proper adjustment of minor auxiliary pumps or reels.

This warranty is in lieu of all other warranties, expressed or implied, and all other obligations or liabilities on our part. We neither assume nor authorize any person to assume for us any liability in connection with the sales of our apparatus unless made in writing by CENTRAL STATES FIRE APPARATUS.

One (1)

10 YEAR ALUMINUM BODY WARRANTY

Central States Fire Apparatus LLC (CSFA) warrants to the original purchaser only, that the all aluminum body, fabricated by Central States Fire Apparatus, under normal use and with reasonable maintenance, be structurally sound and will remain free from corrosion perforation for a period of TEN (10) years.

This warranty does not apply to the following items that are covered by a separate warranty: paint finish, hardware, moldings, and other accessories attached to this body. In addition, this warranty does not apply to any part or accessory manufactured by others and attached to this body.



CENTRAL STATES FIRE APPARATUS MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, WITH RESPECT TO THE ALUMINUM BODY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE AND HEREBY DISCLAIMED.

Central States Fire Apparatus will replace without charge, repair or make a fair allowance for any defect in material or workmanship demonstrated to its satisfaction to have existed at the time of delivery or not due to misuse, negligence, or accident. If Central States Fire Apparatus elects to repair this body, the extent of such repair shall be determined solely by Central States Fire Apparatus, and shall be performed solely at the Central States Fire Apparatus factory, or at an approved facility. The expense of any transportation to or from such repair facility shall be borne by the purchaser and is not an item covered under this warranty.

Central States Fire Apparatus will not be liable for damages and under no circumstances will its liability exceed the price for a defective body. The remedies set forth herein are exclusive and in substitution for all other remedies to which the purchaser would otherwise be entitled.

Central States Fire Apparatus will be given a reasonable opportunity to investigate all claims. The purchaser must commence any action arising out of, based upon or relating to agreement or the breach hereof, within twelve months from the date the cause of the action occurred.

One (1)

PAINT WARRANTY

The PPG paint performance guarantee will cover the areas of the vehicle finished with the specified product for a period of FIVE (5) years beginning the day the vehicle is delivered to the purchaser.

The areas as outlined on the Guarantee Certificate, will be covered for the following paint failures:

GUARANTEE INCLUSIONS:

FULL APPARATUS BODY MANUFACTURED AND PAINTED BY CENTRAL STATES FIRE APPARATUS:

- * Peeling or delamination of the topcoat and/or other layers of paint.
- * Cracking or checking.
- * Loss of gloss caused by cracking, checking, or hazing.



* Any paint failure caused by defective PPG Fleet Finishes which are covered by this guarantee.

All guarantee exclusions, limitations, and methods of claims are covered in the full certificate provided to the original purchaser.

One (1)

NAVISTAR 7400 CONVENTIONAL CHASSIS

A Navistar 4400 chassis per the following specifications, shall be furnished:

One (1)

FRONT TOW EYES

There shall be two (2) tow eyes mounted directly to the frame under the front bumper extension.

One (1)

FRONT BUMPER

A 9-inch channel shall be mounted directly behind the bumper for additional strength.

One (1)

FRONT BUMPER GRAVELSHIELD

There shall be a horizontal gravelshield fabricated from bright 1/8" aluminum treadplate installed at the front bumper to cover the area between the bumper and the cab.

One (1)

BUMPER EXTENSION

The chassis front bumper is to be extended forward approximately 16". The area between the bumper and the front of the chassis grille is to be reinforced and covered on the top and both sides with aluminum treadplate material. Aluminum fabrications are to be completely bolted in place and removable.

One (1)

HOSEWELL COVER

A hinged aluminum treadplate cover, with latches, is to be provided and installed over the center front hosewell.

One (1)

CHASSIS STEP OVERLAY COMPARTMENTS

Step under the passenger side cab entrance door shall be provided with fully enclosed, storage compartment designed to be as large as possible and constructed of the same material as the runningboards. The step surface of the compartment shall have slip resistant overlay material installed. A vertically hinged door with stainless steel D-handle latch shall be provided for each compartment.

One (1)

CHASSIS STEP SLIDE OUT TRAY



Step under the driver's side cab entrance door shall be provided with fully enclosed, storage compartment designed to be as large as possible and constructed of the same material as the runningboards. A heavy-duty slide-out drawer shall be provided in each compartment with roller bearing slides and stainless steel D-handle latches. The step surface of the compartment shall have slip resistant overlay material installed.

One (1)

STEP TYPE FUEL TANK

There shall be a step type fuel tank furnished with the chassis.

One (1)

FRONT MUD FLAPS

Heavy-duty, white colored, rubber mud flaps shall be furnished and installed behind the front wheels of the vehicle. Mud flaps shall extend the full width of the front tires and are to be attached with stainless steel fasteners.

One (1)

REAR MUD FLAPS

Heavy-duty, white colored, rubber mud flaps shall be furnished and installed behind the rear wheels of the vehicle. Mud flaps shall extend the full width of the rear duals and are to be attached with stainless steel fasteners.

One (1)

HORIZONTAL CHASSIS EXHAUST

The chassis exhaust system shall be extended to the front of the right rear wheel.

Three (3)

SCBA BRACKETS IN CAB

There shall be an SCBA bracket with collision restraint strap mounted in each chassis seating position as specified by the Fire Department. The brackets shall be a Ziamatic KD-UH-7-SFCRS.

There shall be three (3) SCBA mask pouches installed on the ceiling of the crew cab.

One (1)

DOME LIGHTS IN CHASSIS CAB

There shall be a dome light furnished on the ceiling of the chassis cab. The light(s) shall be controlled by individual switches located on each light.

One (1)

ALTERNATOR

The alternator shall be of adequate size to meet the NFPA requirements and to accommodate the specific apparatus electrical load.

One (1)

WATEROUS CX-1250 GPM SINGLE STAGE REAR MOUNT FIRE PUMP

The centrifugal type fire pump shall be a Waterous model CX rear mounted with a rated capacity of 1250 GPM. The pump shall meet NFPA 1901 requirements.



One (1)

SINGLE STAGE REAR MOUNTED FIRE PUMP

A Waterous Model CX fire pump shall be rear mounted, single stage centrifugal type. In addition to meeting NFPA 1901 requirements, it shall be constructed and mounted in accordance with the following specifications.

The shift engagement shall be accomplished by a freesliding collar and shall incorporate an internal locking mechanism to insure that collar will be maintained in ROAD or PUMP operation.

At time of delivery the pump shall be tested and rated as follows:

- 100% of rated capacity at 150 pounds net pressure
- 70% of rated capacity at 200 pounds net pressure
- 50% of rated capacity at 250 pounds net pressure
- 100% of rated capacity at 165 pounds net pressure

The pump casing shall be a three-piece, vertically split design, high strength gray iron.

The impeller shaft shall be stainless steel, heat treated, and precisely machined and ground to size. All bearings are to be oil or grease lubricated, ball-type, located outside the pump casing in the pump transmission, to accurately align and support the impeller shaft assembly and input shaft. Ball bearings are to be deep groove type, designed to carry both radial and axial loads. A face-type, self-adjusting, corrosion and wear resistant mechanical seal is to be provided.

The pump must be tested by the pump manufacturer for 10 minutes hydrostatically at a pressure of 500 psig. Certification by the pump manufacturer must be provided.

The pump shall be provided with a plate giving the rated flow at "capacity" and "pressure" test pressures, together with the R.P.M. of the engine at those pressures and deliveries and mounted in clear view of the pump operators panel. Data plate shall include model and serial numbers of the pump body and chain transmission, hydro and discharge test pressures, and the date of pump and transmission manufacture.

All pump components including relief valve, pump shift and priming system shall be manufactured by the Waterous Company to insure sole source responsibility and engineered compatibility.

PRIMING SYSTEM:

The pump shall be capable of taking suction and discharging water with a lift of 10 feet in not more than 30 seconds with the pump dry, through 20 feet of suction hose of



appropriate size. It shall be capable of developing a vacuum of 22" at an altitude of up to 1000 feet.

One (1)

A vacuum test with a capped suction of at least 20' long shall develop 22" of vacuum and hold a vacuum with a drop not in excess of 10" in 5 minutes.

VPE PRIMING SYSTEM

A high capacity, electrically driven Waterous model VPE rotary vane priming pump shall be provided mounted in the pump compartment.

One (1)

The priming system shall include a one-gallon oil reservoir tank that is conveniently located behind a hinged access door. Priming tank shall be properly vented so as to provide priming pump lubrication.

MANUAL CONTROL PRIMING PUMP

One (1)

Priming pump shall be activated by a mechanical/electric valve with a single pull control located at the pump operators panel area. Valve actuation may be accomplished while the main pump is operational, if necessary to assure a complete prime.

PUMP PACKING

One (1)

Stuffing boxes shall be integral with the pump body and be equipped with two piece glands to permit adjustment or replacement of packing without disturbing the pump. Lantern rings shall be located at the inner ends of stuffing boxes so that all rings of packing can be removed without removal of the lantern rings. Water shall be fed into the stuffing box lantern rings for proper lubrication and cooling when the pump is operating.

CLASS ONE GOVERNOR

One (1)

Class 1, pressure governor for electronic engines shall be furnished and installed on the apparatus. The system shall include an alpha/numeric display to show pump pressure and engine RPM. The control panel shall include a RPM/PSI mode switch, an on/off power switch, increase and decrease switches for throttle control, a preset switch to select preset pressure or RPM, and an idle switch to return to idle. The pressure governor shall be connected to the electronic engine and maintain the specified preset discharge pump pressure or a preset engine speed.

The device will be furnished, installed and tested by the apparatus body builder.

MANIFOLD DRAIN:

A manifold drain valve shall be furnished with all pump drains connected to it so that the entire pump system may be drained by one control.



Drain valve assembly shall consist of a stainless steel plunger and a bronze body rigidly attached to the fire pump transmission.

One (1)

A push-pull control with chrome plated "T" handle is to be provided and located at the drivers side of the pump house, properly identified as MASTER DRAIN.

PUMP ANODES

A pair of sacrificial, zinc anodes shall be provided in the water pump inlets to protect the pump from corrosion.

One (1)

FIRE PUMP WARRANTY

The Waterous fire pump shall carry the pump manufacturer's two (2) year warranty covering defective parts and workmanship. A copy of the pump manufacturer's warranty policy shall be provided with the completed apparatus.

One (1)

UL TEST

The pump shall undergo an Underwriters Laboratories Incorporated test per Class A requirements of NFPA #1901 prior to delivery of the completed apparatus. The UL acceptance certificate shall be furnished with the apparatus on delivery.

One (1)

PUMP COOLING LINE

A 3/8" cooling line shall be installed to recirculate water from the pump back to the water tank, to cool the pump during pro-longed pumping operations. The cooling line shall be controlled at the operator's position with a quarter turn valve.

One (1)

HEAT EXCHANGER

A heat exchanger shall be provided on the pump driving engine cooling system. The heat exchanger shall not allow mixing of the pump driving engine coolant and water from the fire pump.

A gated line shall be installed to provide water from the fire pump to the pump driving engine heat exchanger to assist in engine cooling during pumping operations. The heat exchanger line shall be controlled at the pump operator's panel.

One (1)

WATEROUS PUMP INSTALLATION

The Waterous fire pump shall be installed in conjunction with the body manufacturing process. Fire pump installation shall include installation of the fire pump, modification and/or fabrication of new drivelines and all pump-mounting brackets. All drivelines shall be spin balanced prior to final installation.

One (1)



INTAKE RELIEF VALVE

A 2-1/2" intake relief valve preset at 125 psi shall be permanently installed on the suction side of the fire pump. The valve shall have an adjustment range of 75 psi to 250 psi, and shall be designed to automatically self-restore to a non-relieving position when excessive pressure is no longer present.

Discharge side of the intake relief valve shall be plumbed to the right side below the runningboards, away from the pump operator, and shall terminate with a 2-1/2" NST male chrome threaded adapter, marked with an engraved tag "Intake pressure relief outlet - Do Not Cap".

One (1)

HOT DIP GALVANIZED INTAKE MANIFOLD

The suction manifold shall be fabricated from heavy-duty tubular steel. The suction manifold shall have radiused sweep elbows to minimize water turbulence into the suction volute. The suction manifold shall be welded and pressure tested prior to the galvanizing process. After testing the entire suction manifold shall be hot dip galvanized to minimize corrosion. The hot dip galvanized suction manifold shall be attached to the pump intake volute with a heavy-duty, flexible victaulic coupling.

The hot dip galvanized manifold assembly shall have a ten (10) year warranty.

One (1)

REAR STEAMER INLET

There shall be one (1) steamer inlet furnished on the rear pump panel. The suction inlet shall have 6" NST thread. The suction inlet shall have a removable strainer provided inside the external inlet.

Steamer inlet to be as short as possible to allow suction fittings to be attached without extending past the rear of the body.

One (1)

MANUALLY OPERATED VALVE

There shall be a air operated butterfly valve furnished on the rear of the apparatus. Gate valve shall be operated with the electronic control located on the pump operator's panel. Valve shall be mounted directly to the pump and be located behind the rear pump panel. The valve shall be capable of withstanding the same pressures as the pump. The valve will have a built in adjustable relief valve installed on the supply side of the valve that dumps to atmosphere. The butterfly valve shall have a 3/4" bleeder/drain valve.

One (1)

REAR SUCTION CAP

The rear suction inlet shall have a chrome-plated, long handled, cap capable of withstanding 500 PSI.



One (1)

STORZ 30 DEG. ADAPTER WITH CAP

One (1) 6" NST Female X 5" Storz, 30 degree elbow adapter shall be provided with 5" Storz cap and retaining device.

One (1)

2-1/2" GATED SUCTION INTAKE DRIVER SIDE REAR

A 2-1/2" independent gated suction intake shall be provided on the driver's side rear of body. Intake shall be provided with a quarter-turn valve and control handle. The intake shall have a 1/4 turn bronze flange mounted drain valve with handle. Each intake shall have chrome-plated female swivel adapter with removable internal screen and a chrome-plated plug type cap with end chain.

One (1)

SUCTION VALVE CONTROL

Electric control for the 2 1/2" suction valve shall be located on pump operator's panel.

One (1)

HOT DIP GALVANIZED DISCHARGE MANIFOLD

The discharge manifold shall be fabricated from heavy-duty tubular steel. The discharge manifold shall be fabricated, welded, all fittings attached and pressure tested prior to the galvanizing process. After testing the entire suction manifold shall be hot dip galvanized to minimize corrosion. The hot dip galvanized discharge manifold assembly shall be bolted to the pump and have stabilizer arms attached to reinforce the discharge manifold.

One (1)

The hot dip galvanized manifold assembly shall have a ten (10) year warranty.

PUMP DISCHARGES

Each gated discharge outlet shall include an Akron heavy-duty brass, quarter-turn, swing-out ball valve. All lines to have victaulic couplings or hose with stainless steel fittings installed where flex may occur to prevent cracking of the plumbing system. Each discharge shall have 3/4" cast bronze 1/4 turn drain valve complete with reinforced teflon seals, and blowout proof stem rated to 600 psi. A chrome-plated zinc handle shall be provided on each drain valve, complete with a 1" X 1 1/2" recessed identification label. Drains shall be aligned in a straight horizontal row at the lower edge of the corresponding pump panel so as to allow for ease of identification and operation. Each drain shall be labeled and numbered to correspond to the respective discharge outlet and coloring.

One (1)

Individual discharge controls are to be aligned in a straight horizontal row across the pump operator's control panel, directly in-line with the corresponding discharge outlet line pressure gauges.



GALVANIZED PLUMBING

One (1) All rigid piping five-inch diameter or less shall be galvanized type with tapered thread or victaulic type couplings.

DRIVER SIDE REAR DISCHARGE OUTLET

One (1) There shall be one (1) 2-1/2" discharge outlet located on the driver's side rear of the body below the hosebed. The discharge outlet shall have a 2-1/2" quarter turn, swing-out valve with control on pump operator's panel. There shall be a chrome-plated 2-1/2" NST adapter that extends through the rear of the body. The discharge shall be provided with a chrome-plated 30-degree discharge elbow.

MANUAL VALVE

Two (2) Discharge valve shall be swing-out type with manual control handle located on pump operator's panel.

PASSENGER SIDE REAR DISCHARGE OUTLET

Two (2) There shall be one (1) 2-1/2" discharge outlet located on the passenger's side rear of the body below the hose bed. The discharge outlet shall have a 2-1/2" quarter turn, swing-out valve with control on pump operator's panel. There shall be a chrome-plated 2-1/2" NST adapter that extends through the rear of the body. The discharge shall be provided with a chrome-plated 30-degree discharge elbow.

MANUAL VALVE

Three (3) Discharge valve shall be swing-out type with manual control handle located on pump operator's panel.

2-1/2" CAPS AND CHAINS

One (1) The following discharge outlets shall be equipped with a 2-1/2" chrome-plated cap and chain.

DRIVER SIDE REAR LDH OUTLET

One (1) One (1) LDH discharge outlet on the driver's side rear of the body below the hose bed. The discharge outlet shall be plumbed with 4" I.D. pipe, and have a quarter turn valve with control on pump operator's panel. The valve shall have a slow close device. The discharge shall extend through the rear of the body. The discharge outlet shall terminate with a 4" NST male connection.

MANUAL VALVE WITH SLOW CLOSE



Discharge valve shall be three and one-half inch (3-1/2") swing out type, with slow close and manual control handle located on pump operator's panel.

One (1)

PASSENGER SIDE REAR LDH OUTLET

One (1) LDH discharge outlet on the passenger's side rear of the body below the hose bed. The discharge outlet shall be plumbed with 4" I.D. pipe, and have quarter turn valve with control on pump operator's panel. The valve shall have a slow close device. The discharge shall extend through the rear of the body. The discharge outlet shall terminate with 4" NST thread.

One (1)

MANUAL VALVE WITH SLOW CLOSE

Discharge valve shall be three and one half-inch (3-1/2") swing out type, with slow close and manual control handle located on pump operator's panel.

Two (2)

NSTM ADAPTER WITH CHROME CAP & CHAIN

The following discharge outlets shall have a 4" NSTF x 2-1/2" NSTM adapter with 2-1/2" chrome-plated cap and chain.

Two (2)

STORZ ADAPTER

The following discharge outlets shall have a 4" NSTF x 5" Storz 30-degree drop adapter.

Two (2)

5" STORZ CAPS AND CHAINS

The following discharge outlets shall be equipped with a 5" storz cap and chain.

One (1)

1-1/2" FRONT DISCHARGE

One and one half (1-1/2") discharge located at front bumper. Front discharge shall be plumbed using two-inch (2") pipe and wire reinforced high-pressure hose coupled with stainless steel fittings. Front discharge outlet shall have two-inch quarter turn swing out valve with control on pump operator's panel. The front discharge shall be provided with a 1-1/2" brass 90-degree swivel adapter with 1-1/2" NST male outlet.

One (1)

MANUAL VALVE

Discharge valve shall be swing out type with manual control handle located on pump operator's panel.

One (1)

AUTOMATIC DRAIN VALVE

Front discharge outlet shall have automatic drain valves furnished as required to drain the plumbing system between the pump and the front discharge connection.



One (1)

FRONT DISCHARGE HOSE CONNECTION

The hose connection for the front discharge outlet shall be located on top of the front bumper extension. The hose connection shall have a continuous swivel adapter located on top of the front bumper extension.

One (1)

MONITOR PROVISION

There shall be a three-inch (3") deluge discharge above the speedlay assembly. Deluge outlet shall be plumbed with 3" quarter turn, swing out valve and 3" I.D. schedule 40 galvanized pipe with 3" NPT male thread. The three-inch valve shall have a slow close device. Deluge outlet shall have control on pump operator's panel.

One (1)

MANUAL VALVE WITH SLOW CLOSE

Discharge valve shall be swing out type, with slow close and manual control handle located on pump operator's panel.

One (1)

MANUAL DRAIN VALVE

Monitor shall have a 3/4" drain with individual control on side pump panel.

One (1)

AKRON 3440 REMOTE ELEC. MONITOR

The deluge riser piping shall terminate with an Akron Style 3440 or equal remote control deck gun. Deck gun must have a 1250 GPM remote control nozzle. All controls shall be mounted on the pump operator's panel. Deck gun design must allow for storage below the top of the hose bed with a stow setting on the controls. Deck gun must be able to be fully deployed, utilized and stowed without having to leave the ground.

A position sensor shall be provided on the deck gun that will activate the "DO NOT MOVE VEHICLE" LIGHT inside the cab when the monitor is in the raised position.

Three (3)

1-3/4" SPEEDLAY ASSEMBLY IN FRONT OF BODY

Speedlay hosebed(s) shall be designed to carry 200 feet of 1-3/4" double jacket fire hose. Speedlay hosebed(s) shall be located in front of the apparatus body. The floor of the speedlay hosebed(s) shall be perforated to allow for drainage. The walkway side of the speedlay(s) shall have a large opening with radius corners for access to the hose coupling. The speedlay(s) shall be an integral part of the pump compartment with all panels bolted in place and removable. Polished stainless steel hose roller assemblies shall be provided at the sides and lower edges of the speedlay opening on each side of the apparatus body.



The speedlay discharge(s) shall be plumbed using rigid pipe or flexible high-pressure hose coupled with stainless steel fittings. The speedlay(s) shall be provided with 2" brass valve, and a 2" 90 degree swivel adapter with 1-1/2" NST male outlet thread.

Three (3)

MANUAL VALVE

Discharge valve shall be swing out type with manual control handle located on pump operator's panel.

Three (3)

MANUAL DRAIN VALVE

Each crosslay/speedlay shall have a 3/4" drain with individual control on side pump panel.

Three (3)

REMOVABLE SPEEDLAY TRAY

There shall be a removable tray furnished for each speedlay assembly. The tray shall be fabricated with 1/8" aluminum, and formed to fit the contour of the speedlay assembly. The removable tray shall have handholds cut into each side at each end to assist in loading and unloading the tray from the speedlay assembly.

One (1)

TOOL COMPARTMENTS

There shall be a tool compartment located on each side, below the speedlays. The compartment shall be equipped with a hinged aluminum treadplate door and D-ring latch. The compartments shall be as large as possible.

One (1)

FOAM SYSTEM

The apparatus shall be equipped with a FoamPro #2002 fully automatic electronic direct injection foam proportioning system. The system shall be capable of Class A foam concentrates and most Class B foam concentrates. The proportioning operation shall be based on an accurate direct measurement of water flows with no water flow restriction. The proportioning system shall meet NFPA standards for foam proportioning systems and the design shall have passed testing against SAE automotive reliability standards appropriate for the application. The foam system shall be installed in accordance with the manufacturer's recommendations.

The system shall be equipped with a digital electronic control display. It shall be installed on the pump operator's panel and enable the pump operator to perform the following control and operation functions;

1. Activate the foam system.
2. Change foam concentrate proportioning rates from 0.1% to 3% in 0.1% increments.



3. From discharges plumbed after the paddlewheel type flow meter: show current flow in gpm, show total volume of water pumped, show total amounts of foam concentrate used.
4. Provide simulated flow for manual operation.
5. Perform setup and diagnostic functions.
6. Flash a "low concentrate" warning for two minutes when the foam concentrate tank(s) run low of concentrate.
7. Flash "no concentrate" warning if foam concentrate tank was not changed or foam concentrate was not added to the low tank and shut down foam concentrate pump.

The display shall have the capabilities when using a Hypro-FoamPro manual or electronic dual tank switching system of the following additional functions;

1. Display which foam concentrate tank is selected (tank A: PA or tank B: PB)
2. Separate default setting for foam concentrate injection rate.
3. Total amount of foam concentrate used from selected tank.
4. Dual foam concentrate foam pump calibration.

The foam system shall have a 12-volt, 3/4-h.p. "TENV" electric motor designed for wet and high humidity environments, direct coupled to a positive displacement piston type foam pump with a rated capacity of .01 to 5.0 gpm with operating pressures up to 400 psi.

The foam injection system shall be plumbed to the onboard foam concentrate tank or tanks and to the discharge or discharges as specified.

The FoamPro system must be installed by a FoamPro Certified Dealer.

Plumbed to all speedlays and front discharges

One (1)

ELECTRIC REFILL PUMP

There shall be an electric refill pump shall be installed in the pump compartment with a pickup tube to be used to fill the on board foam tank. The pump shall operate independent of the foam system and fire pump so that the foam tank may be filled at any time.

One (1)

SINGLE FOAM TANK PLUMBING SYSTEM



The foam tank shall be plumbed with three-quarter inch (3/4") valve and corrosion resistant hose from the foam tank to the foam inlet. There shall be a three-quarter inch (3/4") drain line furnished on the foam tank. Drain valve to be located on foam tank with corrosion resistant hose piped to below the frame level of the chassis.

One (1)

FOAM TANK

A 30-gallon foam concentrate tank shall be furnished as an integral component of the booster tank. The foam tank shall have a separate fill tower provided in a location to allow easy access for filling. Fill tower shall be equipped with a pressure/vacuum vent and have a sealed airtight cover. Tank shall be plumbed to the on board "Class A" foam system. A valved drain shall be provided at the lowest point of the foam tank. The drain shall be plumbed to drain directly to the surface below the apparatus without contacting other body or chassis components.

The following labels shall be attached to the foam tank:

"CLASS A FOAM TANK FILL"

"WARNING: DO NOT MIX BRANDS AND TYPES OF FOAM"

One (1)

TANK TO PUMP PLUMBING

A 3" Akron ball type gated suction valve shall be furnished from the tank to the pump, complete with a flexible connection and enclosed in the pump compartment.

A check valve shall be provided and installed in the line between the tank and the pump to prevent the possibility of backfilling the booster tank through the tank to pump suction line.

Tank suction shall be located in a sump assembly located below the bottom of the tank, properly baffled to prevent surging of water. A 3" cleanout plug shall be provided in the bottom of the tank sump.

One (1)

TANK FILL/COOLING LINE

A gated discharge line from the pressure side of the pump to the tank shall be furnished so the tank can be filled from draft or hydrant. Valve shall have control on the operator's panel. The valve is to be two-inch (2"), swing out type ball valve and be plumbed to tank with flexible type hose.

One (1)

POLY BOOSTER TANK

The booster tank shall be of a specific configuration and is so designed to be completely independent of the body and compartments. All joints and seams shall be nitrogen welded and tested for maximum strength and integrity.



The transverse swash partitions shall be manufactured of polypropylene and extend from approximately 4" off the floor to just under the cover. The longitudinal swash partitions shall be constructed of polypropylene and extend from the floor of the tank through the cover to allow for positive welding and maximum integrity. All partitions shall be equipped with vent and air holes to permit movement of air and water between compartments. The partitions shall be designed to provide maximum water flow. All swash partitions interlock with one another and are welded to each other as well as to the walls of the tank.

A forward mounted sump shall be provided in the tank. The sump shall be constructed of polypropylene and be located in the left front quarter of the tank. A polypropylene pipe shall be installed that will sweep from the front of the tank to the sump location. The sump shall have a 3" N.P.T. threaded coupling on the bottom for a plug. This shall be used as a combination clean out and tank drain. An anti-swirl plate shall be located above the sump.

There shall be two standard tank outlets; one for tank-to-pump suction lines, and one for a tank fill line. All tank couplings shall be backed with flow deflectors to break up the stream of water entering the tank.

The tank shall carry a lifetime warranty from its manufacturer.

One (1)

FILL TOWER

The tank shall have a combination vent and manual fill tower. The fill tower shall be constructed of polypropylene and with a minimum dimension of 8" x 14" outer perimeter. The fill tower shall be located in the left front corner of the tank. The fill tower shall have a polypropylene screen and a polypropylene hinged cover. Inside the fill tower, shall be fastened a combination vent overflow pipe. The vent overflow shall be polypropylene pipe that is designed to run through the tank and shall be piped behind the rear wheels.

One (1)

BOOSTER TANK

A 750-gallon capacity polypropylene booster tank shall be provided.

One (1)

HOT DIP GALVANIZED BOOSTER TANK SUBFRAME

The booster tank shall be mounted on a steel subframe. Steel subframe shall consist of two (2) longitudinal 3" x 4 pound channels and two (2) 3" x 4 pound channels welded together to form a tank retention cradle. The tank retention cradle shall prevent fore and aft, and side to side movement of the tank. Additional 3" x 4 pound transverse crossmember channels shall be installed to support the floor of the booster tank. The crossmembers shall have a maximum spacing of 20" for the polypropylene tanks.



There shall be an additional full-length longitudinal member installed in the center of the tank support area. The booster tank shall rest on heavy rubber channels that isolate the polypropylene tank from the subframe.

One (1)

The booster tank subframe shall be hot dip galvanized after fabrication.

EXTERNAL TANK FILL

An external tank fill shall be provided and installed at the rear of the body. The tank fill shall include a quarter turn 2-1/2" Akron ball valve with a chrome-plated female swivel, plug and chain.

One (1)

DRIVER SIDE REAR MOUNTED PUMP OPERATORS CONTROL PANEL

The fire pump shall be located in the driver's side rear compartment of the apparatus body. All NFPA required gauges and controls shall be installed on the driver's side, exterior rear compartment wall.

All pump suction and discharge controls are to be mounted on the pump operator's panel so as to permit operation of the pump from a central location.

All of the pump controls shall be clearly identified with permanently engraved plate type labels.

A full panel width polished light hood with a minimum of three light assemblies shall be provided to illuminate the entire pump operator's control panel.

GAUGE PANEL

All gauges shall be suitably enclosed and mounted on a gauge panel constructed of the same material as the pump operators control panel. The gauge panel shall be bolted in place and have removable access panel in the drivers side rear compartment for access to the backside of all gauges and gauge lines. Electrical wiring and all gauge lines shall be properly tie wrapped to prevent kinking or cutting of the lines.

PUMP ACCESS DOORS

There shall be two access panels furnished for the center rear mounted pump, one in each rear side compartment. Each panel shall be approximately 18" high and as wide as possible, and shall be constructed of polished aluminum treadplate. The access panels shall be removable, and have two (2) flush mounted, push type latches to hold the access panel in place.



An aluminum lift up door shall be installed on the rear of the apparatus above the pump to allow access to the pump and all piping. This access shall be no smaller than 40" wide and 30" high.

One (1)

PUMP PANEL PUMP ENGAGEMENT LIGHT

There shall be one light on the operator's panel that will come on with a successful pump engagement.

One (1)

PUMP PANEL

The pump and gauge panels shall be constructed of black, vinyl, covered or black anodized aluminum to allow easy identification of the gauges and controls and to eliminate glare.

The black vinyl shall be bonded to the aluminum by the company that supplies the product.

The gauge panel shall be hinged at the bottom with a full length stainless steel hinge. The fasteners that hold the panel in the up right position shall be quarter-turn style. Vinyl covered chains shall be used to hold the panel in the dropped position.

One (1)

MIKE/SPEAKER COMPARTMENT

A mike and speaker box shall be furnished adjacent to the pump operator's panel inside the compartment. Box size shall be 12" high x 9" wide x 6" deep.

One (1)

PUMP OPERATORS PANEL

The following equipment shall be installed on the pump operator's panel.

One (1)

MASTER GAUGES

Class One #LFP410, 4-1/2" diameter liquid filled pressure gauge registering up to 600-lbs per square inch with 1/4" pipe thread connection. The gauge shall be of the type that will not be injured when subjected to a vacuum. The gauge is to have a white face with black lettering. The gauge is to be located at the right of the gauge panel and labeled "DISCHARGE" with an engraved label.

Class One #LFP410, 4-1/2" diameter liquid filled compound gauge shall be provided on the suction side of the pump registering at least 600-lbs pressure and 30-inches of vacuum. The gauge shall have a white face with black lettering. The gauge is to be located to the left of the master discharge gauge and labeled "INTAKE" with an engraved label.

One (1)

PRESSURE GAUGES



Class One #LFP220, 2-1/2" diameter liquid filled pressure gauges shall be provided. The gauges are to have white faces with black lettering. The gauges shall read -30 to 600 lbs. Line pressure gauges shall be individually identified with engraved labels.

Individual line pressure gauges are to be mounted adjacent to the corresponding discharge valve control.

Four (4)

There shall be one (1) pressure gauge for each 1-1/2" discharge outlet.

Three (3)

There shall be one (1) pressure gauge for each 2-1/2" discharge outlet.

One (1)

There shall be one (1) pressure gauge for each deck gun outlet.

Two (2)

There shall be one (1) pressure gauge for each large diameter discharge outlet.

One (1)

CLASS ONE GOVERNOR

Class 1, pressure governor for electronic engines shall be furnished and installed on the apparatus. The system shall include an alpha/numeric display to show pump pressure and engine RPM. The control panel shall include a RPM/PSI mode switch, an on/off power switch, increase and decrease switches for throttle control, a preset switch to select preset pressure or RPM, and an idle switch to return to idle. The pressure governor shall be connected to the electronic engine and maintain the specified preset discharge pump pressure or a preset engine speed.

The device will be furnished, installed and tested by the apparatus body builder.

One (1)

INFORMATION CENTER

A Class 1 Enfo III master engine gauge and warning device shall be furnished and installed on the pump operator's panel. The device will monitor the following engine systems;

- Engine RPM display
- System voltage display and alarm
- Engine oil pressure display and alarm
- Engine water temperature display and alarm.

One (1)

PUMP PANEL IDENTIFICATION TAGS

Labels shall metal "VISION MARK" style. Labels shall be located adjacent to each control function. Color-coded as recommended by NFPA.

One (1)

TANK LEVEL GAUGE

A Fire Research "Tank Vision" water tank level gauge shall be provided on the pump panel of the apparatus. Ultra-brite LED's can be seen in bright sunlight and the wide-



viewing lens gives you a full 180 degrees of visibility. The operator is warned with flashing lights when the volume is below 25%.

One (1)

FOAM TANK LEVEL GAUGE

A Fire Research "Tank Vision" foam tank level gauge shall be provided on the pump operator's panel of the apparatus. Ultra-brite LED's can be seen in bright sunlight and the wide-viewing lens gives you a full 180 degrees of visibility. The operator is warned with flashing lights when the volume is below 25%.

One (1)

PUMP LUBRICATION FITTING

A grease zerk shall be installed on the pump left side panel, plumbed to the front impeller shaft-bearing cap with relief valve. Grease zerk shall be provided with a dust cap, and identified with an engraved label.

One (1)

UL TEST CONNECTIONS

A pump pressure and vacuum test block assembly shall be provided and mounted at the pump operator's control panel. The test block assembly shall include plug type caps.

One (1)

HOSEBODY

The apparatus hosebody is to be properly reinforced without the use of angles or structural shapes, and free from all projections that might injure the fire hose.

The main apparatus hosebody shall run the full length of the apparatus body from behind the pump panel area to the rear face of the body.

The upper rear interior of the beavertail extrusions on the right and left side shall be overlaid with brushed stainless steel to protect the painted surface from damage by hose couplings

One (1)

HOSEBED CAPACITY

The hosebed will be configured to be 55 cubic feet, unless the desired hoseload requires more area.

The hosebed shall hold the following:

- 1500' of 2.5"
- 400' of 1.75"

One (1)

HOSEBED FLOORING



Floors of the hosebeds are to be provided with removable slat style extruded aluminum hosebed gratings, spaced 1/2" apart for proper hose ventilation. Hosebed gratings are easily lifted out of the main hosebed for access to the top of the specified booster water tank.

Three (3)

MAIN HOSEBED DIVIDER

Adjustable hosebed dividers shall be provided in the main hosebed.

The hosebed divider(s) shall be fabricated of 1/4" smooth aluminum sheet stock, pressed into a "T" shaped aluminum extrusion for added strength along the bottom edge of the divider.

The divider shall be fully adjustable, mounted using aluminum "C" channel tracks at the front and rear of the divider for full side to side adjustment.

One (1)

LADDER MOUNTINGS

The ladders and two (2) backboards shall be mounted in a compartment, on the passenger side beside the water tank and below the hosebed, on individual poly scratch resistant slides. There shall be an aluminum treadplate door on the rear with push button latch for access to the interior of the compartment.

One (1)

GROUND LADDERS FURNISHED BY BODY BUILDER

The body builder shall furnish the ground ladders. See equipment section of this document for make and model of ladders.

One (1)

HARD SUCTION HOSE COMPARTMENTS

Hard suction hoses shall be mounted in individual compartments located above the body compartments. There shall be one hard suction hose compartment on each side of body. There shall be a hinged door with latch and stainless steel hinge on each side for access to the hard suction hoses.

One (1)

HARD SUCTION HOSE FURNISHED BY BODY BUILDER

The hard suction hose shall be furnished by the body builder. See equipment section of this document for make and model of hard suction hose.

One (1)

ALUMINUM BODY

The body shall be fabricated of aluminum extrusions, smooth aluminum sheet and aluminum treadplate.



The aluminum extrusion alloy shall be 6061 with a temper rating of T6, and have a tensile strength of 45,000 PSI and yield strength of 40,000 pounds. The aluminum extrusions shall 3" x 3" aluminum tubing and specially designed extrusions where applicable.

The smooth aluminum sheet material alloy shall be 5052 with a temper rating of H32, and have a tensile strength of 33,000 PSI and yield strength of 28,000 pounds.

The aluminum treadplate alloy shall be 3003 with a temper rating of H22, and have a tensile strength of 30,000 PSI and yield strength of 28,000 pounds.

The extrusions shall be designed as structural-framing members with the smooth aluminum and treadplate fabricated to form compartments, hosebeds, and floors. All aluminum material shall be welded together using the latest mig spray pulse arc welding system.

Compartments to be sweepout design and to be water and dust proof. All compartments shall be made to the maximum practical dimensions to provide maximum storage capacity.

All exterior compartments shall have polished aluminum drip moldings installed above the doors where necessary to prevent water from entering the compartments.

Wheel well panels shall be double break formed smooth aluminum that is welded in place. There shall be no visible bolt heads, retention nuts or fasteners on the exterior surface of the panel. To fully protect the wheel well area from road debris and to aid in cleaning, a full depth radius wheel well liner shall be provided. The frame side of the wheel well area on each side of the opening shall be attached to the frame side of the front and rear compartments. All seams on the frame side of the body shall be welded and caulked to prevent moisture from entering the compartments.

The rear wheel wells shall be radius cut for a streamlined appearance. A polished aluminum fenderette shall be furnished at each rear wheel well opening, held in place with stainless steel fasteners.

FASTENERS

All aluminum and stainless steel components shall be attached using stainless steel fasteners.

Compartment door hinges, handrails and running boards shall be attached using minimum 1/4" diameter machine bolt fasteners.

3/16" diameter fasteners shall only be used in nonstructural areas such as; door handles, trim moldings, gauge mounting, etc.



One (1)

CS 1/8" ALUMINUM BODY

The aluminum sheet material used in fabricating the body shall be a minimum of .125 (1/8") in thickness.

One (1)

BODY DIMENSIONS

Apparatus body shall be up to 168" long and 102" wide, reference drawing for actual body length. Body compartments shall be divided into upper and lower areas with the upper area approximately thirteen-inches in depth, and the lower area approximately twenty-six inches in depth. The hose bed shall be 74" wide.

One (1)

APPARATUS BODY SUB-FRAME

The apparatus body subframe shall be constructed entirely of heavy steel structural channel material.

Two full frame lengths, three-inch (3") 4 pound per foot longitudinal steel channels shall form the sides of the body subframe and sides of the water tank cradle. Subframe crossmembers shall be fabricated with three inch (3") 4 pound per foot heavy steel channel cross members welded to the longitudinal body subframe sides and the full length frame pads.

Two full frame length 1/2" x 3" flat steel frame pads shall be attached to the body subframe and rest on top of the chassis frame rails for proper frame weight distribution.

The steel frame pads, longitudinal steel channels and subframe crossmembers shall be attached to the chassis frame rails using heavy "U" bolt fasteners to allow removal of the subframe and body assembly from the chassis. There shall be a barrier provided between the subframe and body to prevent electrolysis.

The rear subframe and lower body platform support members shall be of the "two piece" design, fabricated of 4.3 lb. Per foot heavy channel and welded to the full length subframe channel liners at the rear.

A minimum of two rear platform support channels shall be provided and constructed of 4.3 lb. Per foot heavy steel material. Each support channel shall have welded in gusset where the support meets the rear subframe rails.

After fabrication the entire subframe assembly shall be hot dip galvanized to prevent corrosion. The hot dip galvanized subframe shall have a lifetime warranty.

One (1)

COMPARTMENT VENTS



All body compartments shall have a minimum of one (1) louvered panel bolted into a wall to provide the proper airflow inside the compartment. There shall be a filter installed behind the louvered panel. The filter shall be accessible for cleaning by removing the louvered panel on the interior of the compartment.

One (1)

WHEEL WELL LINER AND FENDERETTES

For ease of accessibility and maintenance, wheel well panels shall be double break formed painted smooth plate that is welded in place.

To fully protect the wheel well area from road debris and to aid in cleaning, a full depth (minimum of 25") radius wheel well liner shall be provided. Wheel well liner shall be smooth aluminum to prevent corrosion.

The rear wheel wells shall be radius cut for a streamlined appearance. A polished aluminum fenderette shall be furnished at each rear wheel well opening, held in place with concealed stainless steel fasteners.

One (1)

REAR TOW EYES

There shall be two tow eyes furnished under the rear of the body and attached directly to each chassis frame rail. There shall be a reinforcement spreader bar connecting the two tow eyes. Tow eyes are to be constructed of 3/8" plate steel with a 4" I.D. hole, large enough for passing through a tow chain end hook.

One (1)

RECEIVER HITCH

A tow bar shall be installed under the tailboard at center of truck. The tow bar shall be fabricated of 1" CRS bar rolled into a 3" radius. The tow bar assembly shall be constructed of .38" structural angle. When force is applied to the bar it shall be transmitted to the frame rail. The tow bar assembly shall be designed and positioned to allow up to a 30 degree upward angled pull of 17,000 pounds, or a 20,000 pound straight horizontal pull in line with the centerline of the vehicle.

Tow bar design shall have been fully tested and evaluated using strain gauge testing and finite element analysis techniques.

One (1)

APPARATUS COMPARTMENTATION

There shall be large enclosed compartments on both sides of the body, starting at the front of the hosebody and continuing to the rear of the apparatus. These compartments shall be as large as possible, using all available space.

The aluminum treadplate compartmentation tops on each side of the body shall be extended out and downwards a minimum of .50" over the compartment doors forming a drip rail. Corners shall be TIG welded.



Lower or rear face compartments, if specified shall be provided with polished aluminum drip rails.

One (1)

SIDE BODY COMPARTMENT ROLL-UP DOOR CONSTRUCTION

Exterior side equipment compartments so specified shall be equipped with roll-up shutter doors to be installed as specified herein.

The drum assembly shall be fully enclosed and protected from the elements. Pendent plates supporting the door roll assembly shall be bolted in place, adjustable and capable of being removed with common hand tools. Pendent plates and supports that are welded in place do not meet the maintenance and service criteria of these specifications.

Six (6)

PAINTED ROLL UP DOORS

The specified roll-up doors shall be painted to match the apparatus body:

Six (6)

ROLL UP DOORS

R.O.M. Robison brand extruded aluminum shutter style doors with lift bar latch mechanisms and associated hardware shall be provided and installed as specified.

One (1)

DRIVER SIDE

The driver side of the apparatus body shall consist of the following configuration.

One (1)

DRIVER SIDE COMPARTMENTS

Three body compartments shall be furnished as follows:

- One compartment ahead of the rear wheels with full height roll-up door.
- One compartment above rear wheels with roll-up door.
- One compartment behind the rear wheels with full height roll-up door. The compartment interior shall be 53" wide x 61" high x 25" deep in the lower 32" and 12" deep in the remaining upper portion. The pump operator's panel shall be located in this compartment. The panel shall be sloped for easier monitoring from the ground.

One (1)

PASSENGER SIDE COMPARTMENTS

The passenger side of the apparatus body shall consist of the following compartment configuration.

One (1)

PASSENGER SIDE COMPARTMENTS



Three body compartments shall be furnished as follows:

- One compartment ahead of the rear wheels with full height roll-up door.
- One compartment above rear wheels with roll-up door.
- One compartment behind the rear wheels with full height roll-up door.

One (1)

FLAT BACK BODY

The rear vertical surface of the body shall be flat from side to side.

One (1)

REAR ACCESS LADDER

The top of the apparatus shall be accessible from the ground by ladder. The ladder shall be constructed of aluminum tubing and the steps shall have a non-slip surface. The ladder will be located on the right rear of the apparatus.

One (1)

EXTERIOR COMPARTMENT FLOOR COVERING

All enclosed compartment floors with exterior opening doors on the apparatus body shall be covered with black colored rigid Turtle Tile for improved ventilation and added scuff protection for the compartment floor.

One (1)

SHELF FLOOR COVERING

All shelving in compartments with exterior opening doors on the apparatus body shall be covered with black colored rigid Turtle Tile for improved ventilation and added scuff protection for the compartment floor.

One (1)

ALUMINUM UNISTRUT CHANNEL

Extruded aluminum unistrut channel shall be installed in the following compartments for future addition of adjustable shelves.

Five (5)

ADJUSTABLE SHELVES

Compartment shelves shall be constructed of .188" smooth Aluminum. Shelves shall have formed edges on three sides for added strength. Shelves shall be fully adjustable, with extruded aluminum unistrut channels provided on the front and rear compartment walls.

The shelves shall be located as follows:

- (1) right rear upper compartment
- (1) right front upper compartment
- (1) right front lower compartment
- (2) two in the left front

Four (4)

SLIDE-OUT TRAY



Slide-out trays shall be constructed of 3/16" aluminum material. Trays shall have with heavy-duty roller bearing slides with a latch to hold the tray in the "open" and "closed" positions. Tray shall have capacity of 500 pounds.

Two (2)

There shall be a slide out tray located on the floor of both front and both rear compartments.

ROLL-OUT AND DOWN EQUIPMENT TRAY

Roll-out and down type equipment tray shall be provided. Each roll-out and down tray shall be constructed of formed .125" aluminum and have extruded aluminum guide tracks on each side. The extrusion shall include a specially sized channel at both sides of the drawer for the installation of two (2) high quality stainless steel ball bearing rollers. These bearings shall provide support of the outside front of the tray. A second set of stainless steel ball bearing rollers shall be provided for the inside rear of the tray. These rollers shall be bolted to the rear of the drawer and shall slide on two (2) extruded aluminum tracks that are angled to provide an out and down action of the tray. Mounting of the drawer slide mechanisms shall be to the specified shelf tracks to allow for future adjustment and removal.

One (1)

There shall be a roll out & down tray in the left front compartment and one in the left middle compartment.

PEGBOARD ON BACK WALL OF COMPARTMENT

There shall be aluminum pegboard furnished on the back wall of the compartment for mounting equipment. The panel shall be bolted to the back wall of the specified compartment.

Two (2)

The pegboard shall be mounted in the right center compartment.

DRIVER SIDE AIR BOTTLE COMPARTMENTS IN WHEELWELL

The air bottle compartments shall be in the form of a rectangular compartment with a capacity of two 7.5" bottles in each compartment. Adequate depth to accommodate different size air bottles shall be provided.

Flooring shall be rubber lined and have a drain hole. A stainless steel door with a chrome plated latch shall be provided to contain the air bottles. The door need only be large enough to remove one bottle at a time. A dielectric barrier shall be provided between the door hinge, hinge fasteners (screws) and the body sheet metal.

Two (2)

PASSENGER SIDE AIR BOTTLE COMPARTMENTS IN WHEELWELL

The air bottle compartments shall be in the form of a rectangular compartment with a capacity of two 7.5" bottles in each compartment. Adequate depth to accommodate different size air bottles shall be provided.



Flooring shall be rubber lined and have a drain hole. A stainless steel door with a chrome plated latch shall be provided to contain the air bottles. The door need only be large enough to remove one bottle at a time. A dielectric barrier shall be provided between the door hinge, hinge fasteners (screws) and the body sheet metal.

One (1)

EXTRUDED ALUMINUM RUB RAILS

Full body length polished aluminum rub rails shall be bolted in place on the right and left body sides and in the pump panel area. The rub rails shall extend outward beyond the body sides for protection of the compartments and doors. There shall be a bolt on aluminum corner casting on each rear corner to blend the rear tailboard assembly with the side rub rails.

One (1)

The side rub rails shall be a heavy extruded aluminum "C" channel.

REFLECTIVE STRIPE RECESSED INTO RUB RAIL

There shall be a reflective stripe recessed into the rub rail on each side of the body.

One (1)

SIDE AND REAR OVERLAYS

Overlay panels shall be constructed of 3003 polished aluminum treadplate. Polished aluminum overlay shall be provided and installed in the following areas:

- The front face of each side compartment.
- The rear body face and vertical area above tailboard and below hosebed.
- Drivers side and passenger compartment top extending down over side to the compartment doors then forming a drip rail above doors.
- Front face of hose bed above booster tank.

One (1)

Overlay shall be installed with "Aluminized" stainless steel bolts to prevent corrosion.

SLIP-RESISTANT WALKWAY SURFACE

All exterior surfaces designated as stepping, standing, and walking areas shall have an aluminum slip-resistant overlay material installed. The slip-resistant overlay material shall have a raised serrated surface that will allow moisture to drain out either side. The recessed surface shall be one piece solid material to prevent road spray and debris from entering the top surface from below. The slip-resistant overlay material shall meet the requirements of NFPA 13-7.3. The slip-resistant surface shall be installed in the following areas of the apparatus body:

- Step areas of the side running boards.
- Rear step running board step.
- Walkway and standing platforms



One (1)

REAR STEP/RUNNING BOARDS

The apparatus body running boards and rear step shall be constructed with slip-resistant surface and shall have bright aluminum treadplate trim around the outside edges. Side running boards and rear step shall be removable for ease of service in case of damage.

One (1)

REAR STEP/TAILBOARD

A single piece .188 rear step/tailboard shall be furnished that is a minimum of 12.00" deep and full width of the apparatus body, from rub rail to rubrail. The tailboard shall be provided with a removable casting on each corner for a pleasing appearance.

One (1)

GRIP STRUT INSERTS

The runningboards and rear steps shall be provided with non-slip expanded aluminum "Grip Strut" inserts. The non-slip inserts shall be recessed into the step areas. Grating area shall be left open under the inserts for self-cleaning.

One (1)

HANDRAILS

Access handrails shall be 1 1/4" in diameter extruded aluminum with rubber insert. Access rail escutcheons and brackets shall be chrome plated and attached with stainless steel bolts. Anchoring of posts and framing members for railings of all types shall be of such construction that the completed railing structure shall be capable of withstanding a load of at least 225 pounds applied in any direction at any point along the rail.

One (1)

REAR HANDRAILS

Two (2) vertical access handrails shall be provided and mounted on the rear of the apparatus body, one on each side. Each rear handrail to be approximately 48" long.

One (1)

HANDRAILS

A full width access rail is to be provided and installed across the rear face of the apparatus body, below the hosebed level above the rear compartment doors.

One (1)

HANDRAILS

An access rail shall be provided and installed on the upper section of the right side rear body corner.

One (1)

HANDRAILS



An access rail shall be provided and installed on the upper section of the left side rear body corner.

One (1)

FULL WIDTH INTERMEDIATE STEP

There shall be a full width intermediate step furnished and installed on the rear of the apparatus body. The top surface to the intermediate step shall have a slip-resistant surface meeting NFPA requirements. The intermediate step shall be fabricated of polished aluminum treadplate material and be bolted to the rear of the apparatus body.

One (1)

ELECTRICAL

Electrical wiring, hydraulic lines, air system tubing, and control cables shall be fastened to the frame or body structure of the apparatus and shall be furnished with protective looms, grommets, or other devices, so that any such connector and/or wiring will be protected from shear or tear.

The body 12-Volt electrical system shall be designed specifically for the apparatus body. Automatic reset circuit breakers shall be provided and installed in all circuits.

Wiring data shall be provided with the completed apparatus.

The following electrical equipment and lights shall be provided and installed:

One (1)

WIRING SYSTEM

All electrical wiring shall be 14-gauge heavy strand copper with type GXL crosslink high temperature insulation, being circuit function printed every three-inches along its entire length.

Wiring data shall be provided with the completed apparatus.

The following electrical equipment and lights shall be provided and installed:

One (1)

TAIL LIGHTS WHELEN LED 64 (RECT)

Two (2) Whelen #64 LED rectangular red stop/tail lights shall be provided and mounted at the rear of the body, one on each side.

One (1)

DIRECTIONAL LIGHTS WHELEN LED 64 (RECT)

Two (2) Whelen Model 64 amber arrow directional signal LED lights shall be provided and mounted at the rear of the body, one on each side below the stop/tail lights.

One (1)

BACKUP LIGHTS WHELEN LED 64



Two (2) Whelen Model 64 rectangular clear backup halogen lights shall be provided and mounted, one on each side at the rear of the body. The backup lights shall be mounted below the rear stop/tail and directional lights.

One (1)

TAIL LIGHT TRIM

A polished cast aluminum three hole taillight bezel/housing shall be provided. The specified rear lighting units shall be installed in the bezel/housing and secured. The completed assembly is to be bolted to the apparatus body, one each side.

One (1)

CLEARANCE LIGHTS

There shall be clearance marker lights installed meeting all DOT requirements. The vehicle clearance lights shall be recess mounted within the rear center tailboard step.

One (1)

LICENSE PLATE BRACKET

A license plate mounting bracket shall be provided complete with a chrome-plated shielded indirect type light. Bracket shall be mounted at the rear of the apparatus body.

One (1)

BACKUP ALARM

An automatic, electronic reverse alarm shall be provided and installed. An alarm shall activate whenever the reverse gear is selected in the transmission.

One (1)

LOAD MANAGER

The apparatus shall be equipped with a Kussmaul model 091-79 Automatic Load Shedding System for performing continuous electrical load management. The Load Manager shall have the following features:

- Monitor 12-volt system and detect low voltage.
- Capability to control two (2) loads.
- Automatic reset when voltage rises.
- Adjustable voltage setpoint.

The load manager shall be protected against reverse polarity and shorted outputs, and be enclosed in a metal enclosure to enhance EMI/RFI protection. CSFA shall provide for all electrical loads in excess of the NFPA minimum electrical requirements that exceed the alternator output.

One (1)

HIGH IDLE SYSTEM

There shall be a high idle system furnished and installed on the apparatus. The high idle system shall have an on/off switch located in the chassis on the switch console. The



system shall have an interlock that will disable the solenoid if the parking brake is not completely set.

Ten (10)

COMPARTMENT LIGHTING

All side and rear exterior equipment compartments shall be provided with one (1) clear compartment light mounted to the side walls of the compartment. Compartment lights shall switch on automatically when the compartment door is opened and switch off when the door is closed.

Five (5)

ADDITIONAL COMPARTMENT LIGHTS

Additional sealed lights shall be provided and installed for compartments with shelves, as directed by the Fire Department. Additional lights shall be mounted to a bracket attached to the unistrut shelf standard. Lights mounted to the shelf brackets shall have additional wire to allow the light to be adjusted with the shelf. Lights shall be wired to switch on and off with the automatic door jamb switch.

One (1)

OPEN COMPARTMENT/HAZARD WARNING LIGHT

A red flashing, warning light shall be provided and installed in the driver's compartment to indicate an open passenger or apparatus compartment door. The hazard light shall also be attached to folding equipment racks and light towers as specified. Light shall be properly marked and identified.

One (1)

BATTERY DISCONNECT SWITCH

A master battery on/off switch shall be provided and mounted in a convenient location to the driver. The master battery switch shall disconnect the batteries from all chassis and body accessories.

A "Battery-On" pilot light shall be provided, visible to the driver.

One (1)

AIR COMPRESSOR/BATTERY CONDITIONER

A 110-volt Kussmaul Auto-Charge 1000, single system, 15-amp, automatic battery charger and power supply shall be provided and installed within the chassis cab and wired to the battery system. Battery charger shall be 15-amp output type designed to automatically charge the battery system when shoreline power is connected. The charger shall be equipped with a bar graph type charge level indicator to indicate the charge rate. The charger shall have an electronic sensing circuit to sense the true battery voltage while eliminating the need for external sense wires. Charging is completely automatic, when the battery is fully charged, all charging stops. There is no over charging and no water boil off.

The charger shall have a built in 3-amp battery saver for rechargeable hand lights.



There shall be an air compressor furnished to maintain the air pressure in the vehicle brake system. The compressor shall be wired to the vehicle electrical system and plumbed to the vehicle air system.

One (1)

AUTO-EJECT

A Kussmaul "Auto-Eject" automatic disconnect device shall be provided and installed on the 110-volt shoreline connection complete with weatherproof cover and matching plug. The Auto-Eject shall be activated by the chassis starter switch to disconnect the plug.

One (1)

ELECTRICAL CONSOLE WITH EMERGENCY LIGHT SWITCH PANEL

An electrical console shall be constructed of .125" smooth aluminum material and mounted in the cab of the truck chassis. Console shall be designed and installed between the driver and passenger seats with a smooth non slip top to provide a writing surface. The top face of the console shall be open to provide a storage area. The console shall also be designed as the switch panel for all emergency light switches, siren and the pump shift. The switch panel shall be hinged for easy access to the switch connections.

All emergency light switches shall be lighted, rocker style. Switches shall be internally lit when the switch circuit is in the on position. A plug-in identification label is to be provided and installed adjacent to each rocker switch with backlighting provided behind the label.

A rocker style internally lighted switch shall be provided and wired through a heavy-duty relay to activate power to the emergency lights. The emergency lights shall be activated by a single "MASTER SWITCH" on the electrical console.

There shall be two (2) switches, with internal indicator lights installed on the light switch panel for future use.

One (1)

TERMINAL STRIP

There shall be a terminal strip with five (5) terminals and one (1) ground stud provided near the center console, as directed by the fire department. A 12-inch pigtail shall be provided from each terminal.

One (1)

MAP LIGHT

One (1) flexible "gooseneck" type map light shall be provided and mounted on the cab dash panel complete with a switch on the light fixture base.

One (1)

SPOTLIGHT



One high intensity hand held spotlight shall be provided and mounted in the chassis cab on the passenger side and wired to the chassis 12-volt system. Spotlight shall be "Collins" model CL-12.

One (1)

REAR STEP LIGHTS

Two (2) chrome plated lights shall be furnished and installed on the rear face of the body to illuminate the rear step area. Lights shall be wired to the panel light switch at the pump operator's panel.

One (1)

SIDE RUNNING BOARD LIGHTS

Two (2) flush mounted, chrome-plated lights shall be furnished and installed one on each side of the front face of the body to illuminate the step area. Lights shall be wired to the panel light switch at the pump operator's panel.

Two (2)

ENGINE COMPARTMENT WORK LIGHT

An engine compartment work light shall be provided complete with a switch mounted on the light head.

Two (2)

PUMP COMPARTMENT WORK LIGHT

A pump compartment work light shall be provided and installed within the pump compartment area complete with a switch mounted on the light head.

One (1)

UNDER CAB LIGHTING

There shall be four (4) lights furnished below the chassis cab, one on each side below each door. The lights shall be wired to switch on and off automatically when the cab doors are opened.

One (1)

UNDER BODY LIGHTING

There shall be two (2) lights furnished below the pump house running board, one on each side. The lights shall be wired to turn on and off with the park brake switch. When the park brake is engaged, the lights will come on and when the park brake is released the lights will go off.

One (1)

UNDER BODY LIGHTING

There shall be two (2) lights furnished below the rear step, one on each side. The lights shall be wired to turn on and off with the park brake switch. When the park brake is engaged, the lights will come on and when the park brake is released the lights will go off.

One (1)

REAR DECK LIGHTS



Two (2) Unity #AG series, chrome-plated, six-inch rear mounted lights with swivel type mounting bracket and individual switches shall be provided.

One light shall be a **35-watt 75,000 candlepower spot** lamp, and one light shall be a **35-watt 1,100 candlepower flood** lamp.

One (1)

DRIVERS SIDE SPOTLIGHT

One (1) Unity #325, chrome-plated, six-inch cab mounted spotlight, with interior control shall be provided on the driver's side of the cab. The light shall be halogen beam, six-inch type, with on/off switch.

One (1)

PASSENGER SIDE SPOTLIGHT

One (1) Unity #325, chrome-plated, six-inch cab mounted spotlight, with interior control shall be provided on the passenger's side of the cab. The light shall be halogen beam, six-inch type, with on/off switch.

One (1)

DRIVER SIDE SCENE LIGHT

There shall be a Whelen Model 6E, 12-volt Opti-Scenelight provided and mounted on the driver side of the body. Light shall be complete with 13-degree lens optics and wired through a switch in the truck cab labeled "Driver's Side Scene Light".

One (1)

PASSENGER SIDE SCENE LIGHT

There shall be a Whelen Model 6E, 12-volt Opti-Scenelight provided and mounted on the passengers side of the body. Light shall be complete with 13-degree lens optics and wired through a switch in the truck cab labeled "Passenger's Side Scene Light".

One (1)

TRAFFIC DIRECTION BAR

A Federal Signal Model SMLED6-2DS1 Signal Master, traffic direction bar shall be installed facing rear of apparatus complete with a Model SMC3 control head mounted in the truck cab.

One (1)

SURFACE MOUNTED TRAFFIC ADVISOR BELOW INTERMEDIATE STEP

The traffic advisor shall be surface mounted on the rear of the apparatus body directly below the rear intermediate step.

One (1)

AIR HORNS

Two (2) chrome-plated Grover "Stuttertone" air horns shall be provided and recess mounted in the front bumper extension. A pressure protection valve to prevent the use



of air horns or other air operated accessories when the system air pressure drops below 80 psi shall be provided.

One (1)

Air horns shall be controlled from the following switch positions.

One (1)

One (1) foot switch shall be provided on the driver's side floor for activation of the air horn.

One (1)

One (1) foot switch shall be provided on the passenger's side floor for activation of the air horn.

ELECTRONIC SIREN

One (1)

A Federal model E-Q2B electronic 200-watt siren shall be supplied on the apparatus. The siren shall include "Q" wail, yelp, air horn, PA, radio rebroadcast, a "Q" brake, and a noise cancelling microphone.

HORN SELECTOR SWITCH

One (1)

An Q2B/horn selector switch shall be provided and mounted on the switch console to select activation of the chassis horn, or the Q2B siren.

SPEAKER

One (1)

A Federal Model BP200-Q 200-watt speaker shall be provided and mounted on the front bumper of the chassis. The speaker shall be connected to the electronic siren. The speaker shall have the classic chrome plated Q-siren grille and backplate.

EMERGENCY LIGHTING

One (1)

The upper and lower zones "A", "B", "C", "D" of the apparatus shall have the following emergency lighting equipment:

LIGHT BAR

One (1)

One (1) Federal model JLL5401 JetStream 54" light bar mounted on chassis cab roof to meet the NFPA upper zone A lighting requirement. Light bar to have the following equipment:

- (2) Traffic clearing lights
- (18) ModLED light modules, red

ADDITIONAL UPPER REAR BLOCKING ZONE

There shall be a Code 3, Model 4135 BZ, or equal, halogen flashing light provided at the rear of the apparatus at a level of 62" or higher. The light shall have a red lense. The halogen flashing light shall be activated whenever the rear upper zone rocker



switch is on and the parking brake is set. The rear warning lights shall be mounted on top of the compartmentation with all wiring totally enclosed. The rear deck lights shall be mounted on the beavertails high as possible.

One (1)

ZONE A FRONT LIGHTS

There shall be two (2) Federal model GS5 FireRay strobe lights furnished on the front grill to meet the NFPA Zone A lower level lighting requirement. The strobe lights shall be connected to a power supply and be activated through the master emergency light switch located on the electrical console. The light on the driver's side shall have a red lens and the passenger side shall have a blue lens.

One (1)

ZONE B & D SIDE LIGHTS

There shall be three (3) Federal model GS5 FireRay strobe lights furnished on each side of the apparatus to meet the NFPA Zone B & D lower level lighting requirement. One strobe light mounted as far forward as possible, one strobe light mounted as far to the rear as possible, and one strobe light mounted between the front and rear lights. The strobe lights shall be connected to a power supply and be activated through the master emergency light switch located on the electrical console.

One (1)

ZONE C REAR LIGHTS

There shall be two (2) Federal model GS5 FireRay strobe lights furnished on the rear of the apparatus body to meet the NFPA Zone C lower level lighting requirement. The strobe lights shall be connected to a power supply and be activated through the master emergency light switch located on the electrical console. Each light shall have a red lens.

There needs to be four total, two on top and two on bottom.

This is for upper and lower Zone C.

The lower zone c lights will be mounted towards the inside below the taillights.

One (1)

12 VOLT ELECTRICAL CERTIFICATION

The low voltage electrical system shall be tested and certified per NFPA 1901 requirements.

A certificate of compliance shall be provided with the completed vehicle upon delivery.

Minimum electrical load consists of the total amperage required to simultaneously operate the following in a stationary mode at the incident scene.

- The propulsion engine and transmission.
- All Clearance and marker lights.
- The communication radio. (Default of 5.0 amps used for testing).



- Illumination of all walking surfaces, the ground at all egress points, controls and instrument panels and 50% of the total compartment lighting load.
- Minimum warning lights required for "Blocking Right of Way" mode.
- The current to simultaneously operate any fire pump, aerial device & hydraulic pumps.
- Anything defined by the purchaser to be critical to the mission of the apparatus.

The first test for the electrical system is the **Reserve Capacity Test**. All the above listed components operate with the engine shut off. After 10 minutes all electrical loads are shut off and the battery system must have adequate reserve power to start the engine.

The second test is the **Alternator Performance Test at Idle**. All the above listed components operate with the engine at an idle. There can be no current draw from the batteries of the apparatus.

The third test is the **Alternator Performance Test at Full Load**. All electrical components shall be activated with the engine operating at governed RPM for two hours. During the test the system voltage can not drop below 11.7-volts or have excessive battery discharge for more than 120 seconds. Any loads not listed in the minimum electrical load may be load managed in order to pass the test.

All of the above tests must be conducted with the engine compartment at approximately 200 degrees.

One (1)

GENERATOR

A 8-KW "SMART POWER" hydraulically powered generator system generator shall be furnished and installed on the apparatus. The system shall be capable of producing 8-KW single phase, 120/240-volts at 60 hertz regardless of engine RPM.

A "HOT SHIFT" PTO and hydraulic pump unit shall be provided and installed. Interconnecting hoses shall be of the size, pressure rating and length recommended by the generator manufacturer.

The tray assembly for the generator unit shall be mounted with the air exhaust properly vented. Generator air intake shall be positioned away from personnel.

The reservoir/filter assembly shall be a high efficiency 3 micron glass filter. The system shall use Dextron 11E or III hydraulic oil.

A Smart Power electronic controller shall be mounted in an enclosed compartment with the circuit breaker box, which is connected to the generator system. The controller provides precise voltage and frequency control, including automatic load and temperature compensation. A soft start engagement reduces mechanical stress on the



vehicle transmission, PTO and the generator system. The controller's integrated system monitoring warns the operator of over-current and/or excessive hydraulic fluid temperature condition prior to system damage.

One (1)

CIRCUIT BREAKER PANEL

A circuit breaker panel shall be provided and mounted with two (2) manual reset circuit breakers properly labeled.

A portable generator shall be connected to the circuit breaker panel with S/O cord and quick disconnect plug. A permanent mount generator shall be hard wired to the circuit panel.

The circuit breaker panel shall be located in a compartment as close to the generator as practical, and mounted to not interfere with shelves or trays if specified. Circuit breaker panel shall be mounted toward the bottom of the compartment just above the compartment floor. Breaker panel cover shall be accessible with hand tools.

One (1)

All AC wiring to be installed in liquid tight conduit.

One (1)

GENERATOR MOUNTING

The generator shall be mounted in the front of the hosebed.

One (1)

START/STOP ASSEMBLY

A remote start/stop control assembly shall be provided for the generator in the chassis cab area.

STOP only with RUN light.

One (1)

START/STOP ASSEMBLY

A remote start/stop control assembly shall be provided for the generator on the pump panel.

STOP only with RUN light.

One (1)

DRIVER SIDE 110 VOLT RECEPTACLES

All 110-volt receptacles shall be provided with weather proof covers. Receptacle shall be mounted on the driver side rear wheelwell area of the apparatus body.

One (1)

PASSENGER SIDE 110 VOLT RECEPTACLES

All 110-volt receptacles shall be provided with weather proof covers. Receptacles shall be mounted on the passenger side rear wheelwell area of the apparatus body.



Two (2)

FRONT BUMPER 110 VOLT RECEPTACLES

All 110-volt receptacles shall be provided with weather proof covers. Receptacle shall be mounted on the front bumper.

Two (2)

ELECTRIC CORD REEL

A Hannay Model ECR1616-17-18 electric rewind cord reel(s) shall be supplied and installed in a compartment on the apparatus body, location to be determined at preconstruction conference. The cable reel(s) shall be a 12-volt electric rewind type complete with a four-way roller assembly and a push button rewind switch, properly labeled.

The reel shall be provided with a 12v electric rewind switch, that is guarded to prevent accidental operation and labeled for its intended use. The switch shall be protected with a fuse and installed at a height not to exceed 72 inches above the operators standing position. A roller fairlead shall be provided for each reel with the word accessible through the top on the body. One on each side of the monitor provision. See drawing.

Two (2)

ELECTRICAL CORD

150-Feet of 12/3 SO cord shall be installed on each reel complete with a HS-3 ball stop and female receptacle.

One (1)

FLUSH MOUNT QUARTZ LIGHTING

A 1000-watt quartz light shall be flush mounted on the driver side, upper center of the apparatus body, wired to the 220-volt power source. The light shall be UL listed as "Scenelights for Fire Service Use". Light shall be Fire Research Focus model #M-12.

Light shall be controlled by a switch located on the electrical breaker panel.

One (1)

FLUSH MOUNT QUARTZ LIGHTING

A 1000-watt quartz light shall be flush mounted on the passenger side, upper center of the apparatus body, wired to the 220-volt power source. The light shall be UL listed as "Scenelights for Fire Service Use". Light shall be Fire Research Focus model #M-12.

Light shall be controlled by a switch located on the electrical breaker panel.

Two (2)

TELESCOPING QUARTZ LIGHTING

A quartz light shall be provided and mounted on the apparatus, wired to the 110-volt power source. The light shall be UL listed as "Scenelights for Fire Service Use". Light shall be controlled by a switch located on the light head.



Light shall be a Fire Research 1000W/110V FOCUS.

The light shall be attached to a side mounted, top raise telescoping, anodized aluminum pole with retractable tripod stand. The telescoping pole shall have a four (4) foot extension with friction lock mechanism. The telescoping pole shall be prewired with heavy-duty retractile cord with pigtail extending out the bottom of the lower tube.

The tripod bracket shall be attached to the apparatus with quick release mounting bracket and footplate.

The tripod-telescoping pole shall be Fire Research model 600 with model 603 quick release truck mount brackets.

The lights shall be mounted on the rear of the apparatus, one on each side. These shall be mounted to the outside of the body, under the hard suction hose doors.

One (1)

PAINTING

All bright metal fittings if unavailable in stainless steel shall be heavily chrome-plated. Iron fittings shall be copper plated prior to chrome plating.

All seams shall be caulked both inside and along the exterior edges with an automotive sealant to prevent moisture from entering between any body panels.

The body and all parts shall be thoroughly washed with grease cutting solvents prior to any sanding. After the body has been sanded and the minor imperfections filled and sanded, the body shall be washed again with a solution to remove any contaminants on the surface. The first coating to be applied is a self-etching primer for maximum adhesion to the body metal. The next three coats shall be an acrylic, urethane, primer surfacer. The primer surfacer coat is to be hand sanded with 600-grit sandpaper to insure maximum gloss of the paint. The last step is the application of at least three coats of Concept Acrylic Urethane two component color.

The fire pump and all rigid discharge and suction plumbing shall be painted silver in color.

While constructing the truck body, all aluminum parts shall be properly fitted on the body. The backside of all aluminum parts shall be sanded smooth of any burrs and sharp edges.

All aluminum parts shall be bolted to the body using stainless steel fasteners. Cadmium plated fasteners are not acceptable.

During reassembly of the apparatus, care shall be exercised in fitting and fastening the parts back in their respective position on the vehicle.



Six (6)

PAINTED ROLL UP DOORS

The roll-up doors on each side of the body shall be painted to match the apparatus body:

One (1)

UNDERCOATING

The body subframe shall be undercoated with a heavy-duty automotive type undercoating before the rubber backing and the compartments are attached. After the body has been attached to the subframe and all final items have been installed the entire body assembly shall be undercoated

One (1)

INTERIOR COMPARTMENT PAINT

The interior vertical compartment walls are to be painted white with a gray colored spatter finish material.

One (1)

WHEEL PAINTING

The exterior faces of the front and rear wheels, shall be finished painted to match the apparatus body. Wheels shall be properly prepared and finished with primer coats and topcoats as specified.

The outer two-inches of each outside wheel rim shall be painted Silver in color, unless otherwise specified.

One (1)

PAINT BODY TO MATCH CHASSIS

The apparatus body to be painted to match the chassis.

One (1)

LETTERING

Lettering shall be supplied by purchaser.

One (1)

KEEP BACK SIGN

A "KEEP BACK 500 FEET" sign with reflective lettering shall be provided and installed on the rear of the vehicle in a position as directed by the Fire Department.

One (1)

REFLECTIVE SAFETY STRIPE

A 1" x 6" x 1" wide 3M brand Scotchlite #680-10 reflective multi-stripe shall be affixed to the perimeter of the vehicle. There shall be a 1" gap between each of the stripes. Striping shall be placed up to 60" above ground level and shall conform to NFPA reflectivity requirements. At least 60% of the perimeter length of each side and width of



the rear, and at least 40% of the perimeter width of the front of the vehicle shall have reflective stripe.

The side stripe shall be applied in a Large "Z" design

The stripe shall be white in color.

One (1)

REFLECTIVE STRIPE

The entire surface of the apparatus, between the beavertails shall be covered with red and white reflective striping in a "chevron" pattern.

One (1)

IDENTIFICATION & SAFETY LABELS

A permanent plate shall be installed in the driver's compartment to specify the quantity and type of the following fluids in the vehicle:

1. Engine oil.
2. Engine coolant.
3. Transmission fluid.
4. Pump Transmission Lubrication Fluid.
5. Pump Primer Fluid (If applicable).
6. Drive Axle Lubrication Fluid.
7. Air-conditioning refrigerant.
8. Air-conditioning lubrication oil.
9. Power steering fluid.
10. Transfer case fluid.
11. Equipment rack fluid.
12. Air compressor system lubricant.
13. Generator system lubricant.

When trucks have been UL certified, a permanent plate with pump performance data and serial numbers shall be installed on the pump panel.

A permanent plate shall be installed in the driver's compartment specifying the maximum number of personnel the vehicle is designed to carry per NFPA standards. It shall be located in an area visible to the driver.

An accident prevention sign stating "DANGER PERSONNEL MUST BE SEATED AND SEAT BELTS MUST BE FASTENED WHILE VEHICLE IS IN MOTION OR DEATH OR SERIOUS INJURY MAY RESULT". The warning sign shall be placed so it is visible from all seating positions.



An accident prevention sign stating "DANGER DO NOT RIDE ON REAR STEP WHILE VEHICLE IS IN MOTION, DEATH OR SERIOUS INJURY MAY RESULT". The warning sign shall be placed so it is visible from the rear step of the vehicle.

If an inlet located at the pump operator's position is valved, it shall be provided with a permanent label that states "WARNING SERIOUS INJURY Or DEATH COULD OCCUR IF INLET IS SUPPLIED BY A PRESSURIZED SOURCE WHEN THE VALVE IS CLOSED".

A keep back sign stating KEEP BACK 500 FEET shall be mounted at the rear of the body. It shall have red reflective lettering with a white background.

One (1)

OPERATION/SERVICE MANUALS

The following applicable documentation shall be supplied upon delivery:

- Two (2) copies of Operation/Service manual of the apparatus operations and service manuals supplied by components manufacturers.
- Pump certification including manufactures record of apparatus construction details.
- Certificate of compliance to Electrical Warning System Low Voltage test.
- Water tank capacity certificate.
- Line Voltage Electrical System test certificate.
- (NFPA 19-14.4.1 - 19.14.4.2)
- Certificate of approval for stationary pumping.

One (1)

ADDITIONAL EQUIPMENT

The apparatus body builder shall furnish the following equipment.

One (1)

A 24-foot, 2-section aluminum fire department extension ladder, DUO-SAFETY Model 900A, in which the side rails also act as guides for the fly ladder, shall be furnished.

One (1)

A 14-foot aluminum roof ladder with folding roof hooks, DUO-SAFETY Model #775A, shall be furnished.

One (1)

A 10-foot aluminum folding ladder with mounting brackets, DUO-SAFETY Model #585A, shall be furnished.

One (1)

A 14-foot aluminum combination ladder, DUO-SAFETY Series 35, shall be provided. The ladder shall be capable of being used as an "A" frame stepladder or as a single ladder.

One (1)

8-foot pike pole with fiberglass handle and steel hook shall be furnished.

One (1)

12-foot pike pole with fiberglass handle and steel hook shall be furnished.

One (1)



- Two (2) 4-foot "D" handle fiberglass pike pole and steel hook shall be furnished.
- One (1) A 10-foot length of 6" lightweight PVC, flexible fire department suction hose, first quality non-collapsible type, of a design having a low friction loss and which will not collapse under a vacuum of 23".
- One (1) Hard suction hose to be equipped with lightweight couplings. Long handles on female and rocker lugs on male couplings.
- One (1) A 6" NST chrome-plated barrel type suction hose strainer shall be provided.
- One (1) A 6-pound flathead axe(s) with fiberglass handle shall be mounted as specified. Chrome-plated mounting shall be provided.
- One (1) A 6-pound pickhead axe(s) with fiberglass handle shall be mounted as specified. Chrome-plated mounting shall be provided. Rubber protector for pickhead axe shall be supplied.
- One (1) A pair of Zico Model SAC-44 Quic-Chok NFPA compliant folding wheel chocks shall be provided and mounted under the apparatus runningboards in model SQCH-44H horizontal mounting brackets.
- One (1) There shall be a bag of miscellaneous hardware included with the apparatus. This bag shall contain nuts and bolts that are commonly used on the apparatus.

FOR MORE INFORMATION OR PICTURES OF THIS TRUCK PLEASE CALL:

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