

Rosenbauer – Central Division

One (1)
BS-10-3200

CUSTOM CHASSIS

A HME custom fire truck chassis shall be furnished with the following apparatus body and equipment.

The wheel base shall be 174", CA to be 120".

The following shall be modified at Central States:

Top hinged aluminum tread plate doors shall be provided on the compartments under the driver's and officer's seats. The door on the driver's side shall be louvered to ventilate the heat created by the radio. Both doors shall have finger type latches.

The tow hooks shall be relocated to the inside of the frame rails, and shall have access through the two holes in the front bumper. Fire department will provide photographs to match.

Mount or relocate the manual cab lift mechanism so it is readily accessible for use.

One (1)
CC-50-0520

REAR MOUNT FUEL TANK

There shall be a rear mounted fuel tank furnished with the chassis.

One (1)
CC-50-0550

CAST ALUMINUM FUEL FILL ASSEMBLY WITH HINGED DOOR TO MATCH SCBA COMPARTMENTS

There shall be a cast aluminum fuel fill assembly furnished in the driver's side behind rear axle for the rear mount fuel tank. The fuel fill assembly shall consist of a polished cast aluminum housing with a spring-loaded fill door. **The door shall be the same shape and configuration as the SCBA compartment doors.** The fill neck and cap assembly shall be located behind the spring-loaded door. The fill assemble shall drain on the backside of the body to prevent fuel from running down the exterior of the body.

One (1)
CC-50-5500

FRONT MUD FLAPS

Heavy-duty, black 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)
CC-50-6000

REAR MUD FLAPS

Heavy-duty, black 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)
CC-50-9001

RADIATOR GUARD

A custom bracket below the radiator shall be provided for protection.

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One (1)
CC-51-1100

The fire department will provide photographs of what was provided for their last pumper

HORIZONTAL CHASSIS EXHAUST

Three (3)
CC-60-2000

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

SCBA BRACKETS IN CAB

One (1)
CC-65-0400

There shall be an SCBA bracket with collision restraint strap mounted in each chassis seating position as specified by the Fire Department.

ALTERNATOR

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

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PUMP AND PLUMBING

One (1)
DD-00-0490

WATEROUS CX-1250 GPM SINGLE STAGE FIRE PUMP

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

One (1)
DD-01-4000

SINGLE STAGE MIDSHIP MOUNTED FIRE PUMP

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

Fire pump shall incorporate high strength involute toothform Morse HV chain drive transmission. Benefits of the chain drive include quiet, noiseless operation at high shaft speeds, and improved power-transmitting capabilities due to the fact that the chain wraps itself halfway around the gear distributing a very uniform pattern of tooth engagement. Pump transmissions utilizing spur or helical drive gears that create high noise levels at elevated speeds and only permit minimal tooth to tooth engagement are not acceptable.

The shift engagement shall be accomplished by a free sliding 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 operator's 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.

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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.

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.

One (1)
DD-04-0080

VPO/VPOS OILLESS PRIMING SYSTEM

A Waterous VPO/VPOS oil less priming system shall be supplied with the pump.

One (1)
DD-04-0100

MANUAL CONTROL PRIMING PUMP

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

One (1)
DD-04-0500

PNEUMATIC PUMP SHIFT

The pump shift shall be air operated and shall incorporate an air cylinder with an electric actuating switch to shift from road to pump and back.

The pump shift switch shall be mounted in the cab and identified as "Pump Shift" and include instructions permanently inscribed on the pump shift switch plate. The In-Cab operating switch uses a spring loaded lock to prevent it from accidentally being moved.

*A "Pump Engaged" indicator shall be provided in the driving compartment to indicate that the pump shift has been successfully completed.

*An "Ok to Pump" indicator shall be provided in the driving compartment to indicate that the pump is engaged, the chassis transmission is in pump gear, and the parking brake is engaged.

*A "Throttle Ready" indicator shall be provided at the pump operator's panel that indicates that the apparatus is in "OK to Pump" mode or that the chassis transmission is in neutral and the parking brake is engaged.

*An interlock system shall be provided to prevent advancement of the engine speed at the pump operators panel unless the chassis transmission is in neutral and the parking brake is engaged, or the apparatus is in "OK to Pump" mode.

*Controls for the pump shift are to be in the cab, and easily accessible.

One (1)
DD-04-5000

MECHANICAL SHAFT SEAL

The pump shall be equipped with self-adjusting, maintenance free, "Mechanical Shaft Seal" which is designed to be functional in the unlikely event of a seal failure. Pumps with packing which requires periodic adjustment and/or replacement will not be acceptable.

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One (1)
DD-04-7220

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)
DD-04-7500

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.

A control handle is to be provided and located below the driver's side running board of the pump house, properly identified as MASTER DRAIN.

One (1)
DD-99-0500

FIRE PUMP WARRANTY

The Waterous fire pump shall carry the pump manufacturer's five (5) 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)
DH-20-1000

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)
DH-20-2000

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)
DH-20-5000

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.

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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)
EE-01-2000

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)
EE-02-1000

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 running boards, 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)
EE-02-5100

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)
EE-02-5600

DRIVER SIDE STEAMER INLET

There shall be one (1) steamer inlet furnished on the driver side of 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 side running boards.

One (1)
EE-02-5700

PASSENGER SIDE STEAMER INLET

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

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Steamer inlet to be as short as possible to allow suction fittings to be attached without extending past the side running boards.

No suction caps are required.

Two (2)
EE-02-9001

AKRON PISTON VALVES

Two (2) Akron 7980 piston valves shall be provided and installed on each 6" steamer intake. The valves shall include relief valves that are adjustable and discharge to the atmosphere.

Each valve shall have 4" NSTM rigid threads on the supply side and 6" NSTF swivels on the steamer side.

One (1)
ES-02-1500

2-1/2" GATED SUCTION INTAKE DRIVER SIDE

A 2-1/2" independent gated suction intake shall be provided on the driver's side pump panel. Intake shall be provided with a quarter-turn valve and control. The intake shall have a 3/4" 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)
ES-02-1510

SUCTION VALVE CONTROL

Suction valve shall have swing type control handle located adjacent to valve.

One (1)
ES-02-2000

2-1/2" GATED SUCTION INTAKE PASSENGER SIDE

A 2-1/2" independent gated suction intake shall be provided on the passenger's side pump panel. Intake shall be provided with a quarter turn-valve and control. The intake shall have a 3/4" 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)
ES-02-2010

SUCTION VALVE CONTROL

Suction valve shall have swing type control handle located adjacent to valve.

One (1)
ES-04-0000

TRIM PANEL

A bolt on stainless steel trim panel shall be provided for easy access to the valve for repair or removal without removing the side panel on all intakes and discharges.

One (1)
FA-00-1000

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.

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

One (1)
FA-01-0000

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.

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.

One (1)
FA-01-0010

GALVANIZED PLUMBING

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

Two (2)
FA-01-0500

DRIVER SIDE DISCHARGE OUTLET

Each 2-1/2" discharge outlet on the driver's side pump panel shall have a 2-1/2" quarter turn valve with control on pump operator's panel. There shall be a chrome plated 2-1/2" NST adapter that extends through the pump panel. Each discharge shall be provided with chrome-plated 30-degree discharge elbow.

Two (2) 2-1/2" discharge valves shall be provided on the driver's side pump panel.

Two (2)
FA-01-0501

MANUAL VALVE

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

Two (2)
FA-01-0510

MANUAL DRAIN VALVE

The driver's side 2-1/2" discharge outlet shall have a 3/4" drain with individual control on side pump panel.

One (1)
FA-01-1000

PASSENGER SIDE DISCHARGE OUTLET

Each 2-1/2" discharge outlet on the passenger's side pump panel 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"

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NST adapter that extends through the pump panel. Each discharge shall be provided with chrome-plated 30-degree discharge elbow.

Two (2) 2-1/2" discharge valves shall be provided on the passenger's side pump panel.

One (1)
FA-01-1001

MANUAL VALVE

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

One (1)
FA-01-1010

MANUAL DRAIN VALVE

The passenger's side 2-1/2" discharge outlet shall have a 3/4" drain with individual control on side pump panel.

One (1)
FA-01-1500

DRIVER SIDE REAR DISCHARGE OUTLET

There shall be one (1) 2-1/2" discharge outlet located on the driver'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.

One (1)
FA-01-1501

MANUAL VALVE

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

One (1)
FA-01-1510

MANUAL DRAIN VALVE

The driver's side rear 2-1/2" discharge outlet shall have a 3/4" drain with individual control on side pump panel.

Four (4)
FA-01-3220

2-1/2" CAPS AND CHAINS

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

All 2-1/2" discharges shall have chrome plated caps and chains.

One (1)
FA-01-4000

PASSENGER SIDE LDH OUTLET

One (1) LDH discharge outlet on the passenger's side pump panel. The discharge outlet shall be plumbed with 3" I.D. pipe and quarter turn, swing out valve with control on pump operator's panel. The valve shall have a slow close device. The discharge shall extend through the pump panel. The discharge outlet shall terminate with a 3" NST male connection.

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One (1) 3" NSTF swivel x 4"NSTM 30 degree elbow with chrome plated cap shall be provided for the large diameter discharge.

One (1)
FA-01-4002

MANUAL VALVE WITH SLOW CLOSE

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

One (1)
FA-01-4010

MANUAL DRAIN VALVE

The passenger's side LDH discharge outlet shall have a 3/4" drain with individual control on side pump panel.

One (1)
FB-02-2500

MONITOR PROVISION

There shall be a three-inch (3") deluge discharge above fire pump. Deluge outlet shall be plumbed with 3" quarter turn, swing out valve and 3" I.D. 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.

The location of the monitor shall be in the center of the dunnage area above the pump and mounted so it is possible to rotate the monitor 360 degrees in the lowered position.

If required, the monitor can be offset to the driver's side.

One (1)
FB-02-2502

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)
FB-02-2505

MANUAL DRAIN VALVE

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

One (1)
FB-31-7400

TFT #XFC-62 DECK GUN

A TFT Crossfire model XFC-62 monitor package shall be furnished and installed on the monitor discharge outlet. The XFC-62 monitor package shall be furnished with the following components:

- 18" Telescoping Extend-a-Gun.
- SAFE-TAK base assembly.
- Direct truck mount model XFF-MPL.
- Halo ring automatic nozzle model M-R.
- Quad stacked tips model MST-4NJ.
- Five-inch stream straightener model XF-SS5.
- Storage bracket inside compartment for SAFE-TAK base.

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Two (2)
FC-31-0100

1-3/4" CROSSLAY(S) ASSEMBLY ABOVE PUMP

Crosslay hose bed(s) shall be designed to carry 200 feet of 1-3/4" double jacket fire hose. Crosslay hose bed(s) shall be located above the fire pump. The floor of the crosslay hose bed(s) shall be perforated to allow for drainage. Polished stainless steel hose roller assemblies shall be provided at the sides and lower edges of the crosslay opening on each side of the apparatus body.

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

The front crosslay swivel shall be located 12" in from the edge of the pump house on the driver's side.

The rear crosslay swivel shall be located 12" in from the edge of the pump house on the passenger's side.

Each crosslay shall be large enough to hold at least 200 feet of 1-3/4" double jacket fire hose in a single stack and nozzle.

Crosslay gauges shall be located directly below each crosslay hose bed and the "T" handles shall be located directly below each gauge.

Two (2)
FC-31-0101

MANUAL VALVE

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

Two (2)
FC-31-0108

MANUAL DRAIN VALVE

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

One (1)
FC-31-2001

BACK BOARD STORAGE

Back board storage shall be provided behind the crosslays.

The area shall be 5" wide and "deadlay" style.

The crosslay cover shall cover both crosslays and back board storage area.

One (1)
FC-31-4200

CROSSLAY HOSEBED COVER

A .125 polished aluminum treadplate hinged cover shall be provided over the crosslay hose bed(s) complete with full length stainless steel piano hinge and with chrome plated lift handles provided on each side of the cover. Stops shall be provided to hold the cover in the open position or to protect cab or other adjacent body components. The hinge shall be located on the forward section of the cover, closest to the chassis cab.

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One (1)
FC-31-6800

BOOSTER HOSE REEL

There shall be a Hannay booster hose reel with leak proof ball bearing swing joint, adjustable friction brake and electric rewind furnished. The reel shall be plumbed with wire reinforced, high-pressure hose coupled with brass fittings, and have one-inch (1") swing out, ball valve with control on pump operator's panel.

Booster hose reel is to be mounted at the rear of the apparatus body inside the rear lower compartment.

Access shall be provided for the hand rewind crank.

One (1)
FC-31-6801

MANUAL VALVE

Discharge valve shall have manual control handle located on pump operator's panel.

One (1)
FC-31-6810

ALUMINUM REEL

Each booster reel shall have an all aluminum frame and drum assembly with polished side discs. The drive chain, sprocket, hub assembly swivel joint and fasteners shall be polish plated. The booster reel assembly shall be Hannay model SB.

One (1)
FC-31-7200

ROLLER ASSEMBLY FOR BOOSTER REEL

The booster hose reel shall be equipped with a heavy-duty, stainless steel roller assembly.

Two (2)
FC-31-8200

BOOSTER HOSE

One hundred (100) foot length of 1-inch rubber covered booster hose, high-pressure type at least 800 lbs test, coupled and installed on the specified booster hose reel.

Two (2) lengths of 1" booster hose shall be provided.

One (1)
FC-31-9100

HOSEREEL REWIND SWITCH

A bush button hose reel rewind switch shall be located adjacent to the hose reel.

The button shall be located inside the compartment on the left side of the reel.

One (1)
FF-26-8400

FOAM SYSTEM

The apparatus shall be equipped with a FoamPro 2001, electronic, fully automatic, direct injection, discharge side foam proportioning system. The system shall be capable of handling Class A foam concentrates and most Class B foam concentrates. The foam proportioning operation shall be based on direct measurement of water flows with no water flow restriction. The proportioning system shall meet NFPA Standards for foam proportioning systems and the design

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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, suitable for installation on the pump panel.

The digital computer control display shall enable the pump operator to perform the following control and operation functions for the foam proportioning system:

1. Activate the foam system.
2. Provide foam concentrate proportioning rates from 0.1% to 3.0% 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.
6. 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 1/2-h.p. "TENV" electric motor designed for wet and high humidity environments, direct coupled to a positive displacement piston type foam concentrate pump with a rated capacity of .01 to 2.6 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.

The foam system shall be plumbed to the following discharges:

Both 1-3/4" crosslays
Deck gun

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Booster reel
One (1) of the passenger's side 2-1/2" discharges
Driver's side rear 2-1/2" discharge

One (1)
FF-27-0100

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)
FF-27-2000

FOAM TANK

A 20-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)
FH-03-0100

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.

The control for the tank to pump valve shall be reversed so the valve is "open" when the handle is in.

One (1)
FH-03-6000

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 one and one-half inch, (1-1/2") swing out type ball valve and be plumbed to tank with flexible type hose.

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One (1)
FJ-00-0202

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)
FJ-01-0208

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)
FJ-01-1000

BOOSTER TANK

A 500-gallon capacity polypropylene booster tank shall be provided.

One (1)
FJ-02-7600

HOT DIP GALVANIZED BOOSTER TANK SUBFRAME

The booster tank shall be mounted on a steel sub frame. Steel sub frame 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 cross member channels shall be installed to support the floor of the booster tank. The cross members 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 sub frame.

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One (1)
FK-01-1000

The booster tank sub frame shall be hot dip galvanized after fabrication.

DRIVER SIDE MOUNTED OPERATOR'S CONTROL PANEL

All pump suction and discharge controls are to be mounted on the driver side 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 Weldon model 2025 light assemblies shall be provided to illuminate the entire pump operator's control panel.

An additional polished light hood with a minimum of two Weldon model 2025 light assemblies shall be provided to illuminate the right side pump panel. Lights shall be controlled by the operator's panel light switch.

GAUGE PANEL

All gauges shall be suitably enclosed and mounted on a full pump compartment width "hinged" gauge panel constructed of the same material as the pump operators control panel, allowing access to the backside of all gauges and gauge lines. Panel is to include a stainless steel piano hinge, Hartwell HTL81 flush mounted chrome plated trigger latch, and stainless steel cable end stops. Electrical wiring and all gauge lines shall be properly tie wrapped to prevent kinking or cutting of the lines when the panel is opened.

One (1)
FK-01-1600

EXTRUDED ALUMINUM PUMP HOUSE STRUCTURE

The pump house structure shall be fabricated of extruded aluminum. The structure shall be welded together and have gusset plates on each corner. The pump house shall be mounted separate from the body and chassis and be bolted to the chassis frame rails.

The exposed areas of the pump house structure shall be overlaid with polished aluminum treadplate.

One (1)
FK-01-2100

PUMP PANEL PUMP ENGAGEMENT LIGHT

One (1) light in the control panel light hood shall come on with a successful pump engagement. This shall be in addition to the "OK to Pump" light on the control panel.

One (1)
FK-01-2200

PUMP PANELS

The right and left side pump panels shall be constructed entirely of 14-gauge type 304 brushed stainless steel material. The panels are to be completely "bolted" in place for ease of removal.

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One (1)
FK-01-3000

PUMP COMPARTMENT ACCESS DOOR

The passenger's side pump panel shall be provided with a full panel width vertically hinged access door located in the upper portion of the side panel. This door shall be approximately 18" high and as wide as possible, and shall be constructed of polished aluminum treadplate. Two (2) flush mounted, push type latches shall be furnished to hold the door closed. The inspection door shall be attached with a stainless steel hinged and have a retainer cable attached to prevent the door from opening too far.

One (1)
FK-01-5500

DUNNAGE OVER PUMP

There shall be a dunnage compartment furnished above the pump. The dunnage compartment shall be as wide as possible from side to side, and be a minimum of 12" deep. The floor shall be bolted in place and removable for access to the pump.

One (1)
FK-10-0000

PUMP OPERATORS PANEL

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

One (1)
FK-10-1100

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)
FK-10-2700

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.

Two (2)
FK-10-2900

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

Four (4)
FK-10-3000

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

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One (1)
FK-10-3100

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

One (1)
FK-10-3200

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

One (1)
FK-11-2520

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)
FK-12-0900

INFORMATION CENTER

A Class 1 Enfo IV master engine gauge and warning device shall be furnished and installed on the pump operator's panel. The Class 1 Enfo IV is equipped with super bright displays for maximum visibility during daytime hours. The device will monitor the following engine systems;

- Engine RPM display
- System voltage display
- Engine oil pressure display
- Engine water temperature display

One (1)
FK-12-3800

PUMP HOURMETER

A pump hour meter shall be provided on the pump operator's panel.

One (1)
FK-12-5200

PUMP PANEL IDENTIFICATION LABELS

All discharges shall be provided with color-coded labels. Identification labels shall be provided at the discharge control, the discharge outlet, and at the discharge drain valve control, color-coded according to NFPA recommended standards.

One (1)
FK-12-7100

PUMP PANEL WATER TANK LEVEL GAUGE

A Class One ITF Intelli-tank water tank level gauge shall be provided on the pump operator's panel. The Intelli-tank display features wide angle viewing and four (4) ultra-bright LED's for high visibility, even in direct sunlight. The Intelli-tank utilizes a pressure transducer, ILO of probes, to provide nine (9) accurate levels of indication.

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One (1)
FK-12-9400

WATER LEVEL SIGHT GAUGE

A clear water level sight gauge shall be provided on the side pump operator's pump panel. The sight gauge shall be plumbed to the booster tank with clear plastic tubing. There shall be a plastic float inside the clear tubing to indicate the water level of the booster tank.

There shall be a shut-off valve on the bottom end to allow removal of the tube for cleaning with water in the tank.

One (1)
FK-13-1500

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.

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APPARATUS BODY SPECIFICATIONS

One (1)
HA-00-0200

HOSEBODY

The apparatus hose body 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 hose body 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)
HA-00-0320

HOSEBED CAPACITY

The hose bed will be configured to be at least 80 cubic feet.

One (1)
HA-00-0400

HOSEBED FLOORING

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

One (1)
HA-00-0520

BULKHEAD DIVIDER

There shall be a full width smooth aluminum bulkhead behind the fill tower(s).

Three (3)
HA-00-1600

MAIN HOSEBED DIVIDER

Adjustable hose bed dividers shall be provided in the main hose bed.

The hose bed divider(s) shall be fabricated of 1/4" smooth aluminum sheet stock, welded 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.

The dividers shall also be secured at the top in front of the hose bed to prevent deflection. The same type of extrusion shall be used as is used at the rear of the hose bed to allow for adjusting.

Each divider shall have a radius cut on the top to prevent damage to the cover.

Three (3)
HA-00-1650

HANDHOLD CUTOUTS

There shall be a hand hold cutout provided on the end of the hose bed divider to aid the firefighter in accessing the hose bed.

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One (1)
HA-01-0100

VINYL HOSEBED COVER

A vinyl coated nylon hose bed cover shall be provided and designed to cover the entire main hose bed area. The hose bed cover shall be fastened with velcro and three (3) quarter turn-fasteners across front and velcro on both sides. The rear flap shall be weighted.

A 12" wide piece of material shall be sewn full width on the underside for strength where the cover transitions over the rear of the dividers.

The cover shall stop at the bulkhead behind the fill towers.

The color of the cover shall be white.

One (1)
HD-00-1300

LADDER MOUNTINGS

The ladders shall be mounted in a compartment, beside the water tank and below the hose bed, 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)
HD-00-2510

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.

Two (2)
HD-01-0500

PIKE POLE(S) MOUNTED IN LADDER COMPARTMENT

There shall be room for the pike pole(s) to be mounted in the compartment, along with the specified ladders.

Two (2) pike pole mounting tubes shall be provided.

One (1)
KB-02-0200

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.

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

Compartments to be sweep out 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)
KB-02-0400

CS 3/16" ALUMINUM BODY

The aluminum sheet material used in fabricating the body shall be a minimum of .1875 (3/16") in thickness.

One (1)
KB-02-0420

COMPARTMENT FLOORS

The compartment floors shall be constructed of smooth aluminum material, to match the compartment interior walls.

One (1)
KB-10-0100

BODY DIMENSIONS

Apparatus body shall be up to 144" long and 96" wide, reference the 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-three inches in depth. The hose bed shall be 68" wide.

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One (1)
KK-01-1000

APPARATUS BODY SUB-FRAME

The apparatus body sub frame 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 sub frame and sides of the water tank cradle. Sub frame cross members shall be fabricated with three inch (3") 4 pound per foot heavy steel channel cross members welded to the longitudinal body sub frame 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 sub frame and rest on top of the chassis frame rails for proper frame weight distribution.

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

The rear sub frame 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 sub frame 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 sub frame rails.

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

One (1)
KK-02-0400

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)
KK-02-0500

BODY AND PUMP HOUSE FLEX JOINT

When equipped with a fire pump, the body and pump house shall be a separate freestanding component forming a true flex joint between the body and pump house. The intent is to allow either to be easily removed as a single unit without disturbing the other and to provide a flex joint between the two modules. Designs where the pump house and body are interjoined as a common unit do not meet the technical requirement of providing a flex joint or the repairability requirement of these specifications.

One (1)
KK-02-0652

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.

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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)
KK-02-3700

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)
KK-03-0050

APPARATUS COMPARTMENTATION

There shall be large enclosed compartments on both sides of the body, starting at the front of the hose body 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)
KK-03-0070

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.

One (1)
KK-03-0071

NATURAL FINISH ROLL UP DOORS

The roll-up doors on each side of the apparatus body shall be natural finish aluminum.

One (1)
KK-03-0080

ROLL UP DOORS

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

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One (1)
KK-03-6200

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.

One (1)
KK-04-6200

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)
KK-50-0645

REAR BODY CONFIGURATION

Rear apparatus body compartments shall be as follows:

- There shall be one lower compartment with roll-up door.

Bolt in dividers shall be provided to isolate this compartment from the rear side compartments. The compartment to contain the booster reel.

One (1)
KK-50-4200

FLAT BACK BODY

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

Seven (7)
KM-49-1603

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.

Seven (7) adjustable shelves shall be provided and mounted as follows:

- One (1) in the shallow portion of the compartment in front of the rear wheels on the driver's side (L1),
- Three (3) in the compartment behind the rear wheels on the driver's side (R3), two in the shallow portion and one in the deep portion,
- One (1) in the shallow portion of the compartment in front of the rear wheels on the passenger's side (R1),
- One (1) in the compartment above the rear wheels on the passenger's (R2),

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- One (1) in the shallow portion of the compartment behind the rear wheels on the passenger's side (R3),

Two (2)
KM-49-1614

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 250 pounds.

- Two (2) 250 lb. slide out trays shall be provided and located as follows:
- Two (2) in the compartment in front of the rear wheels on the driver's side. Both trays shall be adjustable and located in the deep portion of the compartment.

Two (2)
KM-49-1615

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) 500 lb. slide out trays shall be provided and located as follows:
- Floor mounted in the compartment in front of the rear wheels on the passenger's side of the body (R1),
- Floor mounted in the compartment behind the rear wheels on the passenger's side of the body (R3).

One (1)
KM-49-9001

SCBA STORAGE RACK

A custom built SCBA storage rack shall be provided and mounted in the compartment over the rear wheels on the driver's side of the body.

The rack shall be thermoplastic lined and shall match the rack built for the department's last engine.

The design of the rack shall be approved by the fire department prior to construction.

One (1)
KM-50-0100

DRIVER SIDE AIR BOTTLE COMPARTMENTS IN WHEELWELL

SCBA storage compartment shall be provided and located in the driver side rear wheel well of the apparatus body. Compartment door and frame shall be constructed entirely of cast aluminum and have hinged style door. The compartment bottom and rear wall shall be lined with rubber material to protect paint finish of the air cylinder.

One (1) SCBA compartment shall be provided on the driver's side of the body.

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Two (2)
KM-50-0250

PASSENGER SIDE AIR BOTTLE COMPARTMENTS IN WHEELWELL

SCBA storage compartment shall be provided and located in the passenger side rear wheel well of the apparatus body. Compartment door and frame shall be constructed entirely of cast aluminum and have hinged style door. The compartment bottom and rear wall shall be lined with rubber material to protect paint finish of the air cylinder.

Two (2) SCBA compartments shall be provided on the passenger's side of the body.

Three (3)
KM-50-0900

SCBA COMPARTMENT WITH O-RING GASKET

All SCBA compartments mounted in the wheel well area shall have an o-ring gasket with push button latch assembly.

One (1)
KR-01-0100

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.

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

One (1)
KR-04-0002

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 hose bed.
- Driver's 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.

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

One (1)
KR-04-3000

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.

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- Walkway and standing platforms

One (1)
KR-04-4902

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)
KR-04-4908

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 rub rail. The tailboard shall be provided with a removable casting on each corner for a pleasing appearance.

One (1)
KR-10-0000

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)
KR-10-0100

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)
KR-10-0400

HANDRAILS

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

One (1)
KR-10-0600

HANDRAILS

An access rail shall be provided and installed on the upper section of the right side pump house.

One (1)
KR-10-0700

HANDRAILS

An access rail shall be provided and installed on the upper section of the left side pump house.

Eight (8)
KS-01-0100

FOLDING ACCESS STEPS

NFPA approved folding steps shall be provided and mounted on the apparatus as listed below. All access steps shall have a minimum surface area of 35-square inches, and have a slip-resistant standing surface. The step shall be capable of supporting a 500-lb. load.

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- Three (3) steps shall be located on the front wall of the compartments by the pump panel on the driver's side of the body,
- Three (3) steps shall be located on the front wall of the compartments by the pump panel on the passenger's side of the body,
- Two (2) steps shall be located at the rear of the apparatus body below the full width intermediate step, one on each side.

One (1)
KS-01-2600

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.

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One (1)
NA-00-0010

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)
NA-00-0080

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)
NA-00-1000

TAIL & STOP LIGHTS

Two (2) Weldon #2010 rectangular red stop/tail lights shall be provided and mounted at the rear of the body, one on each side.

One (1)
NA-00-2500

DIRECTIONAL LIGHTS WELDON 2010

Two (2) Weldon #2010, rectangular amber directional signal lights with black arrows shall be provided and mounted at the rear of the body, one on each side below the stop/tail lights.

One (1)
NA-00-4000

BACKUP LIGHTS WELDON 2010 (RECT)

Two (2) Weldon #2010, rectangular clear backup 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)
NA-00-5200

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.

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One (1)
NA-00-5300

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)
NA-00-5400

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)
NA-00-5600

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)
NA-00-6300

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 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.

Thirteen (13)
NA-01-1010

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.

Each side compartment shall have two (2) compartment lights.

One (1)
NA-01-3000

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.

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One (1)
NB-02-5200

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)
NB-02-9101

CUSTOM BUILT ELECTRICAL CONSOLE

A custom built electrical console shall be provided and mounted on the dog house. The console shall be a shelf with the siren head, customer supplied radio and arrow stick control suspended underneath. The shelf must be grounded. All heads to be mounted at an angle and even with respect to the top. An aluminum cover shall be provided over the wiring.

The speaker for the radio shall also be mounted in the cab.

The exact layout of the console and the location of the speaker shall be approved by the fire department prior to construction.

One (1)
NB-02-9500

DASH MOUNTED EMERGENCY ELECTRICAL SWITCH PANEL

An electrical switch panel shall be designed and mounted in the cab dash area as furnished by the custom chassis manufacturer. All switches shall be provided with back lighted snap-in legend inserts.

SWITCHES

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.

An 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.

One (1)
NB-10-5000

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)
NB-10-5400

ENGINE COMPARTMENT WORK LIGHT

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

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One (1)
NB-10-5600

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)
NB-10-6100

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)
NB-10-6800

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 a switch located on the pump operator's panel.

One (1)
NB-10-6900

UNDER BODY LIGHTING REAR STEP

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 a switch located on the pump operator's panel.

One (1)
NB-30-0200

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.

Two (2)
NB-30-1100

REAR SCENE LIGHT

There shall be a Weldon Model 2010, 12-volt 50-watt Scenelight provided and mounted at the rear of the body. Light shall be mounted on an 18-degree downward angled, polished aluminum casting. The light shall be wired through a switch in the chassis cab and be labeled "Rear Scene Light".

Two (2) Scene lights shall be provided at the rear of the body, one each side. Both lights shall be wired to a switch provided on the custom console.

Two (2)
NB-30-1200

DRIVER SIDE SCENE LIGHT

There shall be a Weldon Model 2010, 12-volt 50-watt Scenelight provided and mounted on the driver side of the body. Light shall be mounted on an 18-degree downward angled, polished aluminum casting. The light shall be wired through a switch in the chassis cab and be labeled "Driver's Side Scene Light".

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Two (2) lights shall be provided on the driver's side, one light on the side of the cab and the other in the area above the pump panel.

Both lights shall be wired to a switch provided on the custom console.

Two (2)
NB-30-1300

PASSENGER SIDE SCENE LIGHT

There shall be a Weldon Model 2010, 12-volt 50-watt Scenelight provided and mounted on the passenger side of the body. Light shall be mounted on an 18-degree downward angled, polished aluminum casting. The light shall be wired through a switch in the chassis cab and be labeled "Passenger's Side Scene Light".

Two (2) lights shall be provided on the passenger's side, one light on the side of the cab and the other in the area above the pump panel.

Both lights shall be wired to a switch provided on the custom console.

One (1)
NB-30-9000

AUTOMATIC REAR SCENE LIGHT SWITCHING

The rear scene lights shall be wired to automatically switch on with the backup lights when the transmission is placed into the reverse gear.

One (1)
NB-40-0400

TRAFFIC DIRECTION BAR

A Code 3, Model AS-10S, 47" ten-lamp Arrowstik traffic direction light shall be provided and installed facing the rear of the apparatus with the control head mounted in the truck cab.

The light shall be mounted below the full width intermediate step. The light control shall be recessed mounted on the custom console in the cab.

One (1)
NB-40-0910

SURFACE MOUNTED TRAFFIC ADVISOR

The traffic advisor shall be surface mounted on the rear of the apparatus body.

One (1)
NC-02-9010

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.

Air horns shall be controlled from the following switch positions.

One (1)
NC-02-9025

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

One (1)
NC-02-9028

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

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One (1)
NC-03-2500

ELECTRONIC SIREN

A Whelen Model WS-295HF, 100/200-watt electronic siren with Hands Free feature, and hardwired microphone shall be provided and mounted in the cab.

One (1)
NC-03-3000

HORN SELECTOR SWITCH

A siren/horn selector switch shall be provided and mounted on the switch console to select activation of the chassis horn, or the siren from the steering wheel horn control.

One (1)
NC-03-8000

ELECTRONIC SPEAKER

There shall be an electronic speaker furnished with the custom chassis.

One (1)
NC-04-2900

RED LIGHT

There shall be a steady burning red light furnished on the chassis cab.

The steady burning light shall be provided at the front of the light bar to meet California DMV requirements.

One (1)
NC-05-1200

RADIO ANTENNA

There shall be a universal base for the radio antenna installed on the chassis cab roof. The power and ground wires for the radio shall also be installed.

The antenna wiring shall be run into the custom console and attached to the fire department supplied radio.

The antenna base shall be mounted in the center of the cab, 18" behind the light bar.

One (1)
NE-04-0950

EMERGENCY LIGHTING

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

One (1)
NE-05-2150

ZONE A FRONT LIGHTS

The lower front zone "A" lights shall be furnished with the chassis.

One (1)
NJ-02-0800

LIGHT BAR

One (1) Whelen model Edge Strobe 9M387NV, 72" light bar mounted on chassis cab roof to meet the NFPA upper zone A lighting requirement. The lights shall be activated through the master

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emergency light switch located on the electrical console. Light bar to have the following equipment:

- (8) Red Strobe Lights
- (2) Clear Strobe Lights

The lens shall be red/clear/red on the front and amber on the rear.

A steady burning light shall be provided at the front to meet California DMV requirements.

One (1)
NJ-02-3200

REAR WARNING

Two (2) Whelen model RB6PAP rotating beacons mounted on the rear of the apparatus body to meet the NFPA Zone B, C, D upper level lighting requirement. The lights shall be activated through the master emergency light switch located on the electrical console. Each light to have the following equipment:

- (1) 50-watt Halogen Rotator
- (1) Large Reflector
- Amber lens on each side

One (1)
NJ-02-4220

UPPER ZONE "B, C, D" LIGHT MOUNTING

The upper rear lights designated for Upper Zone "B" shall be mounted on cast aluminum stanchions attached to the apparatus body, one on each side.

One (1)
NJ-02-7600

ZONE B & D SIDE LIGHTS

There shall be three (3) Whelen model 602000RU 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)
NJ-02-9200

ZONE C REAR LIGHTS

There shall be two (2) Whelen model 602000RU 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.

One (1)
NS-00-0100

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.

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- 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)
OA-35-0003

GENERATOR

A Honda EM-5000SXX1, 5000-watt, 120/240-volt generator shall be provided. The unit shall have an air cooled 11HP gasoline engine equipped with low oil pressure shutdown. The unit shall be three wire, single phase 60-hz with full rated power available from a single 120-volt outlet. The oil drain, oil dip stick, fuel filter and oil filter for the generator must be easily accessible for maintenance.

An integral 4.5-gallon fuel tank, with electric and recoil starter shall be furnished with the generator.

Electric start provisions shall be furnished for the generator from the chassis battery system. Generator start/stop switches shall be provided at the generator.

One (1)
OA-35-0101

GENERATOR COVER

There shall be a hinged cover mounted over the generator assembly. The cover shall be fabricated of aluminum treadplate and have stainless steel hinge with hold down latches. The top and sides of the cover shall have ventilation slots installed for heat dissipation.

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One (1)
OA-35-0105

CIRCUIT BREAKER PANEL

A circuit breaker panel shall be provided and mounted with four (4) 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. Breaker panel cover shall be accessible with hand tools.

The load center shall be mounted in the compartment in front of the rear wheels on the driver's side (L1) on the front wall above the adjustable shelves.

One (1)
OA-35-0115

The electrical wiring shall be fine stranded copper type THHN, sized to load and circuit breaking rating. The wiring shall be color coded and encased in a thick rubber casing.

One (1)
OA-35-0145

GENERATOR MOUNTING

The generator shall be mounted in the dunnage compartment

Generator shall be mounted on the passenger's side.

One (1)
OA-35-0165

12 VOLT POWER CONNECTION

12-volt power from the chassis batteries shall be provided for the portable generator electric start. Power cable shall be heavy-duty battery cable with a quick disconnect receptacle provided in the area of the generator mounting location, complete with a matching male plug for connection to the generator.

One (1)
OA-35-0180

START/STOP ASSEMBLY

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

One (1)
OA-37-4000

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.

One (1)
OA-37-6700

ELECTRICAL CORD

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

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One (1)
OA-37-8000

LIGHTED JUNCTION BOX

There shall be an Extenda-Lite model EJB electrical junction box provided. The electrical junction box shall be a heavy duty cast aluminum that has at least one-quarter of an inch thick walls and the four corner edges shall be at least three quarters of an inch (3/4") thick to withstand the roughest of handling. The carrying handle shall be large enough to fit a fully gloved hand and be an integral part of the body casting. Each side of the electrical junction box shall be fitted with a quarter of an inch (1/4") thick polypropylene faceplates. The faceplates shall be back lighted so that plug orientation to the receptacle is quick and easy to align. Each electrical junction box shall be equipped with four (4) electrical receptacles (two on each side) as specified by the user. Each receptacle shall be equipped with a spring loaded snap cover that is marked in white lettering with that receptacles voltage and ampere rating. All electrical receptacles, plugs and snap type weather proof covers shall be UL listed components.

The receptacles to be 15 amp, NEMA L5-15.

The junction box shall be mounted in the upper portion of the driver's side rear compartment (L3) above the adjustable shelf. The storage area for the junction box shall be suspended from the ceiling and be independent of the shelves.

One (1)
OA-37-8500

CAPTIVE ROLLERS FOR CORD REEL

There shall be a captive roller system furnished for the cord reel. The roller mounting brackets shall be attached to guide the cord on and off the reel assembly.

Two (2)
OA-42-0230

TELESCOPING QUARTZ LIGHTING

A quartz light shall be provided and mounted on the apparatus, wired to the 220-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 1500W/220V FOCUS.

The light shall be attached to a side mounted, top raise telescoping, anodized aluminum pole. The telescoping pole shall have a forty-inch 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 telescoping pole shall be Fire Research model 540.

Two (2) lights shall be provided and mounted to the back of the cab, one on each side.

Short brackets shall be provided with the light head above the cab drip rail.

Two (2)
OA-48-1000

REMOTE SWITCH

The quartz light(s) shall be controlled by individual, lighted rocker switch located at the pump operator's panel and wired through a 110 volt relay.

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One (1)
PA-01-0002

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)
PA-01-0010

NATURAL FINISH ROLL UP DOORS

The roll-up doors on each side of the apparatus body shall be a natural finish aluminum.

One (1)
PA-01-0200

UNDERCOATING

The body sub frame 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 sub frame and all final items have been installed the entire body assembly shall be undercoated

One (1)
PA-01-1515

INTERIOR COMPARTMENT PAINT

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

One (1)
PA-01-3500

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.

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

One (1)
PA-01-4500

PAINT BODY TO MATCH CHASSIS

The apparatus body to be painted to match the chassis.

The color shall match Imron 5000, N1772 Chrome Yellow. (Production information from last pumper shows a PPG Concept number of 80502. Please check last production for correct information).

Touch up paint shall be provided at time of pickup.

One (1)
PA-02-1910

LETTERING

Lettering shall be done in gold leaf mylar letters, shaded in black, and encapsulated in clear mylar. Lettering to be placed on each cab door as directed by fire department. Maximum of fifty (50) letters.

One (1)
PA-02-2600

LETTERING SHALL BE AS FOLLOWS:

The lettering shall be gold vinyl with cobalt blue shadowing to match the last pumper. The fire department will send photographs to match.

One (1)
PA-02-7500

REFLECTIVE SAFETY STRIPE

A 1" x 4" 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 stripe shall be white in color.

The stripe shall be blue in color.

The department will send photographs of their last pumper to match.

One (1)
PC-00-0100

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).

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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".

One (1)
TA-01-0100

OPERATION / SERVICE MANUALS

The manufacturer shall provide with the vehicle upon delivery, one (1) complete delivery manual. These manuals shall be in a notebook type binder, with reference tabs for each section of the vehicle. Within each section shall be:

1. Individual component manufacturer instruction and parts manuals.
2. Warranty forms for body.
3. Warranty forms for all major components.
4. Warranty instructions and format to be used in compliance to warranty obligations.
5. Wiring diagrams.
6. Installation instructions and drawings for major parts.
7. Visual graphics, electronic photos of installations of major parts.
8. Necessary normal routine service forms, publications and components of body portion of the apparatus.
9. Technical publications on training and instructions for major body components.
10. Warning and safety related notices for personnel protection.
11. Cab and chassis manuals on parts, service and maintenance shall be provided.
12. UL Pump Certification sheets, including the Manufacturer's Record of Apparatus construction details.
13. Certificate of Compliance to Electrical Warning System Low Voltage test.
14. Line Voltage Electrical System test certificate.
15. Water tank capacity certificate.

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One (1)
VA-00-0000

ADDITIONAL EQUIPMENT

The following equipment shall be furnished by the apparatus body builder.

LADDERS

One (1)
VA-01-0400

A 24-foot, 2-section aluminum fire department extension ladder, ALCO-LITE Model PEL-24, shall be furnished.

One (1)
VA-01-0425

A 14-foot aluminum roof ladder with folding hooks, ALCO-LITE model PRL-14, shall be furnished.

One (1)
VA-01-0435

A 10-foot folding aluminum attic ladder, with mounting brackets, ALCO-LITE model FL-10, shall be furnished.

Two (2)
VA-03-6000

HARD SUCTION HOSE

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".

Hard suction hose to be equipped with lightweight couplings. Long handles on female and rocker lugs on male couplings.

Two (2) lengths of 6" suction hose shall be provided. No brackets for the suction hoses shall be provided. Hose to be shipped loose.

One (1)
VA-04-3100

SUCTION STRAINER

A 6" NST chrome-plated barrel type suction hose strainer shall be provided.

WHEEL CHOCKS

One (1)
VA-05-6800

A pair of heavy-duty aluminum wheel chocks shall be provided and mounted in underbody slide-out mounting brackets as directed by the fire department.

The chock blocks shall be mounted in front of the rear wheels on the driver's side.

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One (1)
1B-00-0500

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 affect 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)
1B-00-2500

5 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 FIVE (5) 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

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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)
1B-00-3500

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)
1B-01-1000

SUBFRAME WARRANTY

Subject to the provisions, limitations and conditions set forth in this warranty, Central States Fire Apparatus, LLC (hereby referred to as "seller"), hereby warrants to each original purchaser only that each new hot dip galvanized or stainless steel body sub frame (exclusive of paint finish and hardware) is structurally sound and free of all structural defects of both material and workmanship and further warrants that it will maintain such structural integrity. This warranty terminates upon transfer of possession or ownership by original purchaser.

This warranty is conditioned upon normal use and reasonable maintenance of such sub frame; prompt written notice of all defects to seller or one of the seller's then authorized dealers in the area; no repair or additions there to except by seller or authorized by it; said defect not resulting from misuse, negligence, accident, remount, overloading beyond applicable weight rating by

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customer or third parties. If any such conditions are not complied with, this warranty shall become void and unenforceable.

Should repairs become necessary under the terms or the warranty, the extent of that repair shall be determined solely by the seller and shall be performed solely at Central States Fire Apparatus, LLC or a repair facility designated by the seller. The expense of any transportation to or from such repair facility shall be that of the purchaser and is not an item covered by this warranty.

Seller reserves the unrestricted right at any time from time to time to make changes in the design of and/or improvements on its products without thereby imposing any obligation on itself to make corresponding changes or improvements in or on its products theretofore manufactured.

EXCLUSIONS AND LIMITATIONS: THIS MANUFACTURER'S WARRANTY IS PROVIDED IN PLACE OF ANY AND ALL OTHER REPRESENTATIONS OR IMPLIED WARRANTIES. NO PERSON IS AUTHORIZED TO MAKE ANY REPRESENTATIONS OR WARRANTY ON BEHALF OF CENTRAL STATES FIRE APPARATUS, LLC OR ANY OF ITS DISTRIBUTORS OTHER THAN SET FORTH IN THIS MANUFACTURER'S WARRANTY. YOUR RIGHT TO SERVICE AND REPLACEMENT OF PARTS ON THE TERMS EXPRESSLY SET FORTH HERIN ARE YOUR EXCLUSIVE REMEDIES AND NEITHER THE MANUFACTURER NOR ANY OF ITS DISTRIBUTORS SHALL BE LIABLE FOR DAMAGES, WHETHER ORDINARY, INCIDENTAL OR CONSEQUENTIAL.