First Choice Fire & Safety Inc.

CAB AND CHASSIS

MAKE & MODEL - 2023 International model 4400 SBA
4 x 2 Two Door cab and chassis.

WHEEL BASE - AS REQUIRED
CAB TO AXLE - AS REQUIRED

Front mounted tow hooks, (2) Frame mounted

FRAME RAILS: Heat treated alloy steel (120,000 PSI Yield) 10.375" x 3.705" x 0.438"

BUMPER

Full width, Aerodynamic, chrome plated steel (0.142" material thickness)

FRONT AXLE: - I-Beam type (International I-140S) 14,000 lb capacity

Front suspension - Spring Parabolic, Taper Leaf, 14,000 lb capacity, with shock absorbers

Includes: Spring pins Rubber bushing, Maintenance free

BRAKE SYSTEM

Dual air system for straight truck applications.

Includes:
Air compressor air supply line
Brake Chambers, Spring (2) Rear Parking
Brake Lines Color Coded Nylon
Dust shields, Front
Automatic slack adjusters front and rear
Parking Brake Valve - Color coded yellow knob, located on instrument panel
DV2 heated moisture ejector on wet tank
Drain valve Twist Type
Spring Brake modulator valve
Gauge, Air Pressure located in instrument cluster Air 1 and Air 2 gauges

AIR BRAKE ABS (Bendix Antilock Brake System) Full vehicle wheel control system (4-channel)

Brakes, Front, Air Cam S-Cam; 16.5" x 5.0"; Includes 20 Sq. In. MGM Long Stroke Brake Chambers

Includes Dust Shields, Front Brake

Brake Linings, Front Non-Asbestos for S-Cam Brake

Brakes, Rear, Air Cam 16.5" x 7.0"; Includes MGM TR3030 Long Stroke Brake Chamber and Heavy Duty Spring Actuated Parking Brake

Brake Shoes, Rear Cast

AIR COMPRESSOR (Bendix Tu-Flo 550) 13.2 CFM

Bendix AD-9 air dryer with heater

STEERING COLUMN - Tilting
Steering Wheel 2-Spoke, 18" diameter, Black
Steering Gear (TRW/Ross TAS-65) Power

EXHAUST SYSTEM - Single, Horizontal stainles steel muffler w/internal catalytic converter, short tail pipe, frame mounted right side for 2004 emissions.

ENGINE EXHAUST BRAKE - Dlogic engine exhaust brake for International DT570 Engine, electronically activated

ELECTRICAL SYSTEM - 12-Volt, Standard Equipment

Includes:
Fuses, Electrical SAE Blade-Type
Turn signal switch self-canceling, Headlight Dimmer (with Flash-To-Pass feature)
Horn electric single
Integral parking light with front turn signal and rear tail lights
Stop, turn, tail and B/U lights dual, rear combination with reflector
Electric key operated starter switch
Front flush mounted turn signals, with reflectors and auxiliary side turn signals - Solid State Flashers
Data Link Connector in cab for vehicle programming and diagnostics
Windshield Wipers single motor, electric, cowl mounted
2-Speed integral windshield wiper switch with turn signal switch with wash and intermittent feature
Wiring, Chassis color coded an continuously numbered

ALTERNATOR -(Leece-Neville 4949PA) 12 volt 270 Amp. Capacity with self excite,
includes 1-gauge charging circuit, pad mounted.

STARTER MOTOR (Delco MT-42 type 450) 12-Volt; with Thermal Over-Crank Protection

BATTERY SYSTEM - (International) Maintenance-Free (3) 12-VOLT
2775CCA Total

IGNITION SWITCH - Keyless

Circuit Breakers Manual-Reset (Main Panel) SAE type III with trip indicators, replaces all fuses except for 5-amp fuses

Body builder wiring back of cab at left frame, includes sealed connectors for Tail/Amber Turn/Marker/Backup/Accessory Power/Ground and sealed connector for Stop/Turn.

CIGAR LIGHTER

HORN, ELECTRIC (2)

HORN AIR -Grover Chrome Stuttertone, Single Trumpet, Air Solenoid operated, mounted one each side of cab hood

Air horn switches - (LineMaster 632-S) passenger side switch located on floor board center in front of officers seat near firewall, drivers side left of steering column near firewall. Driver also to activate switch at steering wheel.

A pressure protection valve shall be provided for the air horn system preset at 90 psi.

Headlights - Long life halogen, composite aero design for two light system, Includes Daytime Running Lights

GRILLE - Chrome

FRONT END - Tilting, fiberglass with three piece construction

PAINT

Paint schematic; ID LETTERS "GA"
PAINT TYPE; Base coat/clear coat, 1 tone - CUSTOM RED
Paint to match Dupont 20726 ALT. #1 (As per the Spartan/FFA Carolina Forest stations aerial unit S/N YC037129 per Spartan Customer Service info)

KEYS - All Alike, ID Z-001

ENGINE

Engine, diesel (International DT570 Standard Torque) Electro-Hydraulic fuel System, 50 state, 330 HP @ 2000/2200 RPM, 950 lb - ft torque @ 1200 RPM, 2200 RPM governed speed, 330 peak HP (Max) Includes No.2 bell housing

Includes:
Fuel/Water seperator mounted on engine and fuel filter in a single assembly
Wet type cylinder sleeves
Gauge, Air cleaner restriction - Air cleaner mounted
Cruise Control - Electronic, Controls integral to steering wheel
Engine shutdown - Electric, switch Operated
Governor Road speed, electronic
Engine oil drain plug - Magnetic
Oil Filter, Engine Spin-On type
Engine oil change system 30 Quart Capacity
Damper, Crankshaft Viscous
Fan Optimized position
Fuel Filter Engine mounted

FEDERAL EMISSIONS for 2004; for International DT570 Engine

ENGINE WATER COOLER - (Sen-Dure) auxiliary, for use with Fire Trucks

Fan Drive (Horton DriveMaster) two speed type with residual torque device for disengaged fan speed, use with International DT570 engines

Includes - Fan Nylon

Fan drive special effects for cooling ring w/ fan schroud effects, engine mounted

RADIATOR Aluminum; 2 row, cross flow, over under system, with 630 square inch louvered, with 270 square inch charge air cooler, 4.25" core.

Includes:
Antifreeze - Shell Rotella Extended Life Coolant -40F
Deaeration system with surge tank
Radiator hoses premium, rubber

Expanded engine temp effects to allow higher engine operating temperature range, includes nylon surge tank and 15 psi pressure cap

Air Cleaner - Single element w/ ember seperator

OMIT - Over-Temperature Protection (For Engine Coolant)

Engine control, remote mounted provision for, Includes: Wiring for body builder installation of PTO controls, with ignition switch control.

Throttle, hand control - Engine speed control for PTO, electronic, stationary preset, two speed settings; mounted on steering wheel. (NOTE! USED AS A FAST IDLE CONTROL BY BODY BUILDER)

TRANSMISSION - AUTOMATIC (Allison EVS-3000P) Close Ratio, 6-Speed; with PTO gear and less retarder

Includes:
6 speed transmission programming
Synthetic transmission fluid (Castrol TranSynd)
Oil level sensor
Oil cooler, water to oil type in combination w/ air to oil type
Transmission oil pan Magnet in Oil Pan
Transmission shift control (Allison) Push Button Type
Allison WT Spare Input/Output for Fire truck/Emergency vehicles

REAR AXLE - Single (Dana Spicer 26105S) single reduction 26,000 lb. Capacity hypoid gearing with 200 wheel ends

Gear Ratio: 6.14 = 67.9 mph

Includes: Rear axle drain plug (1) magnetic

Axle, Rear, Lube (EmGard 75W-90) Synthetic oil; 40 thru 49.99 pints

SUSPENSION - Rear, spring, single Vari-Rate, 31,000 lb. Capacity, includes 4500 lb. Auxiliary Rubber Spring

Axle, rear, lube EmGard 75W-90 synthetic oil

FUEL TANK -Top Draw; D Style, Steel, 50 U.S. Gallon capacity, 16" deep, with quick connect outlet, mounted right side, under cab.

Includes: Fuel lines nylon tubing with O-Ring snap-on quick-connect fittings at both ends

Heated fuel/water seperator (Fleetguard) w/ indicator light

CAB - Conventional, Steel, 2 door

Includes:
Clearance/Marker lights (5) Flush Mounted
Arm Rest (2) molded plastic, Smoke Gray, One each door
Floor covering rubber, Black
Coat hook located on rear wall, centered above rear window
Grab Handle, cab interior (1) "A" Pillar mounted passenger side

Grab Handle, cab interior (2) "B" Pillar mounted, one each side
Two steps per door
Glass, All windows tinted

CAB INTERIOR TRIM - Deluxe for extended cab

Includes:
Console, Overhead molded plastic with dual storage pockets and retainer nets and CB radio pocket, Smoke Gray with Black netting over storage pockets
"A" Pillar cover - Molded Plastic, Smoke Gray
Headliner - Printed Cloth
Instrument Panel Trim - Molded plastic, Drawbridge Gray with Black center section, hidden cup holder and ash tray (pullout)
Dome Light, Cab - Rectangular, center mounted, Integral to console - Door activated, Timed Theater Dimming
Sun Visor (2) Padded vinyl integral to console with Toll Ticket Strap and with integral extenders
Storage Pocket, Door - Molded plastic, Smoke Gray Full-Length - Driver Door
Cab Interior Trim Panels - Molded Plastic, Full Height - All interior sheet metal is covered
Door Trim Panels - molded plastic; Driver and Passenger Doors

SEATING

Driver Seat - Gra-Mag Non-Suspension, high back with integral head rest, vinyl,
fixed seat back

Includes - RED 3-point Seat Belt, lap and shoulder belt

Passenger seat - Gra-Mag High back style non-suspension high back w/Integrated headrest, vinyl, fixed back.

Includes - RED 3-point Seat Belt, lap and shoulder belt.

INSTRUMENT PANEL - Center Section, Flat Panel

GAUGE CLUSTER - English with english electronic Speedometer

Includes:
Odometer Display, Miles, Trip Miles, Engine Hours, Trip Hours, Fault Code Readout
Warning System Low Fuel, Low oil pressure, High engine coolant temp, and low battery voltage (Visual and Audible)
Gauge Cluster Gauges (5) Engine oil pressure (Electronic), Water temperature (Electronic), Fuel (Electronic), Tachometer (Electronic), Voltmeter

Gauge, Oil temp, Allison Transmission

Gauge, Air Cleaner Restriction (Filter-Minder) with black bezel mounted in instrument panel

AIR CONDITIONER - (International Blend-Air) with integral heater and defroster

Includes:
Refrigerant Hydrofluorocarbon HFC-134A
Heater Hoses - Premium

Fresh Air Filter for HVAC

MIRRORS - (2) (Lang Mekra) Styled; Rectangular, 7.09" x15.75", brackets breakaway type, with 102" wide spacing, with integral Convex both sides, with all heated heads, Thermostatically controlled, with clearance lights LED, powered both sides, Bright heads & Brackets..

GRAB HANDLE (2) Towel Bar Type Anti-Slip Rubber inserts; for cab entry mounted left and right

WHEELS

Wheels Seals, Front Oil Lubricated Bearings
Wheels, front disc, 22.5" painted steel, 10-stud (285.75MM BC) hub piloted, flanged nut, metric mount, 8.25 DC rims; with steel hubs

Wheel painted Custom 20726 RED - front

Wheels, rear dual disc, 22.5" painted steel, 10-stud (285.75MM BC) hub piloted, flanged nut, metric mount, 8.25 DC rims; with steel hubs

Includes: Wheel seals, rear oil lubricated, includes wheel bearings

Wheels painted Custom 20726 RED - rear

TIRES

Front tires: (2) 12R22.5 Michelin XZE 486 rev/mile, load range H, 16 ply

Rear tires: (4) 12R22.5 Michelin XZY-2 487 rev/mile, load range H, 16 ply

ADDITIONAL ITEMS TO BE PROVIDED:

ONE SET ONLY FOR THE ORDER OF FIVE (5) TANKERS:

*** ONE (1) CD FOR PARTS, SERVICE & MAINTENANCE.**

*** ONE (1) SET OF DIAGNOSTIC CABLES TO CONNECT TO CUSTOMER FURNISHED LAP TOP COMPUTER.**

One (1) CM - Exhaust Heat Shield - Horizontal Exhaust Y___N___
04-06-0500

EXHAUST

The chassis horizontal exhaust pipe shall be equipped with a stainless steel heat shield to protect the body compartments.

The exhaust pipe shall discharge engine exhaust to the right side of the apparatus.

One (1) Mudflaps - Front & Rear Y___N___
04-07-0500

MUDFLAPS

Heavy-duty black rubber mudflaps shall be provided behind the front tires.

Black, anti-sail mudflaps shall be installed behind the rear wheels.

One (1) Rear Tow Bar Y___N___
04-08-1500

REAR TOW BAR

A two inch diameter, solid steel bar shall be suspended approximately 28" below the top of the rear chassis frame rail.

The tow bar shall be attached to the frame rail at each side using properly reinforced channel supports.

Tow bars that are attached to both the frame rails and the apparatus body will not be acceptable, due to undue stresses on the body, caused when the chassis frame flexes.

One (1) Front Bumper Compartment - Center with Lid Y___N___
04-09-2100

FRONT BUMPER COMPARTMENT - CENTER - WITH LID

A compartment shall be provided in the bumper apron, located in the center, between the frame rails, which may be used as a hose well. The compartment shall be constructed of .125 inch 5052-H32 grade aluminum, and shall include drain holes in the bottom corners to allow excess moisture to escape. The compartment will be sized to hold _____.

HINGED LID

The compartment shall include a hinged lid, constructed of aluminum diamond plate. The lid shall include a twist lock latch to secure the lid, and a gas spring rod to hold the lid open.

One (1) Helmet Holders - Chassis Supplied Y___N___
04-10-0948

HELMET HOLDERS

The required helmet holders will be supplied with the custom chassis.

One (1) Fuel Fill - Painted Stainless Steel Y___N___
04-12-1900

FUEL FILL

The fuel fill for the custom chassis shall be located in the left side rear fender area, and shall have a painted stainless steel door, labeled: "DIESEL FUEL ONLY".

One (1) Cab Tilt Control Y___N___
04-12-1910

CAB TILT CONTROL

A cab-tilt pendant control shall be provided and installed on the right side of the apparatus. The pendant shall be located directly behind the upper auxiliary pump access panel.

A cab tilt instruction plate shall be located as close as possible to the control pendant for ease of operation.

One (1) Pump Shift - Dash Mounted (Midship) Y___N___
07-00-0500

PUMP CONTROL

Provisions shall be made for placing the pump drive system in operation, using controls and switches that are identified, and within convenient reach of the operator.

A "PUMP ENGAGED" indicator shall be provided in the driving compartment and on the operator's panel to indicate that the pump shift process 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.

The fire pump-shift system shall be equipped with a means to prevent unintentional movement of the control device from its set position. The system shall include a nameplate, indicating the chassis transmission shift selector position to be used for pumping, and located so that it can be easily read from the driver's position.

The system shall include the applicable NFPA standard interlocks, pump shift, and "OK TO PUMP" indicator lights in the cab and at the pump panel. The fire pump system shall be equipped with an interlock system to ensure that the pump drive system components are properly engaged in the pumping mode of operation, so that the pumping system can be safely operated from the pump operator's position.

If applicable, the secondary braking device shall be automatically disengaged for pumping operations.

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One (1) Pump System - HaleQMAX XS 1500 - GPM HALE Y___N___
07-04-2622

PUMP - HALE QMAX XS SERIES

1500 GPM SINGLE-STAGE MIDSHIP-MOUNTED CENTRIFUGAL PUMP

The pump must deliver the percentage of rated capacity at the pressure listed below:

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

PUMP ASSEMBLY

1. The pump shall be designed to mount on the chassis rails of commercial or custom truck chassis and have the capacity of 1,000 to 2,250 gallons per minute (U.S. GPM), NFPA-1901 rated performance.

2. The pump shall be driven by a driveline from the truck transmission. The engine shall provide sufficient horsepower and RPM to enable pump to meet and exceed its rated performance.

3. The entire pump shall be assembled at the pump manufacturer's factory, and hydrostatically tested to 600 PSI. The pump shall be tested at the pump manufacturer's factory to confirm performance specs, as outlined by the latest edition of NFPA 1901. The pump shall be free from objectionable pulsation and vibration during testing and operation.

4. The pump body and related parts shall be constructed of fine-grain alloy cast iron with a minimum tensile strength of 30,000 PSI (2,069 bar). All metal moving parts in contact with water shall be of high-quality bronze or stainless steel. Pumps utilizing castings made of lower tensile strength cast iron are not acceptable.

5. Pump body shall be horizontally split, on a single plane, in two sections, for easy removal of entire impeller assembly, including wear rings and bearings, from beneath the pump, without disturbing piping or the mounting of the pump in chassis.

6. The pump body shall extend, as one piece, across the truck chassis from side to side, and incorporate discharge manifolding with a minimum of (12) 4” ports and (1) 3” port. Six additional/optional 3” ports are available/optional.

7. The pump shall have one double suction impeller and two opposed discharge volute cutwaters to eliminate radial unbalance. (No exceptions.)

8. The pump shaft shall be rigidly supported by three bearings for minimum deflection. One high lead bronze sleeve bearing shall be located immediately adjacent to the impeller, (on side opposite the gearbox). The sleeve bearing is to be lubricated by a force-fed, automatic oil lubricated design, pressure balanced to exclude foreign material. (No exceptions.) The remaining bearings shall be heavy-duty, deep-groove ball bearings in the gearbox, and they shall be splash lubricated.

9. The pump shaft shall have only one packing gland, located on the inlet side of the pump. It shall be of split design for ease of repacking. The packing gland shall be a full-circle threaded design to exert uniform pressure on packing, and to prevent uneven packing loading when tightened. (No exceptions.) It shall be easily adjusted, by hand, with rod or screwdriver, without special tools or wrenches required. The packing rings shall be made of a permanently lubricated, long-life graphic composition, and have sacrificial zinc foil separators to protect the pump shaft from galvanic corrosion (No exceptions.)

10. Pump impeller shall be constructed of hard, fine-grain bronze, and accurately machined and balanced. The vanes of the impeller intake eyes shall be designed to provide ample reserve capacity, utilizing minimum horsepower.

11. Impeller clearance rings shall be bronze, easily renewable without replacing impeller or pump volute body, and of wrap-around, double-labyrinth design for maximum efficiency. (No exceptions.)

12. The pump shaft shall be heat-treated, electric furnace, corrosion resistant stainless steel to be super-finished for long shaft life. Pump shaft shall be sealed with double-lip oil seal to keep road dirt and water out of gearbox.

GEARBOX

1. Pump gearbox shall be of sufficient size to withstand up to 16,000 lbs. ft. of drive through torque of the apparatus engine. The drive unit shall be designed with ample lubrication reserve, and to maintain proper operating temperature.

2. The gearbox driveshafts shall be of heat-treated chrome-nickel steel and at least 2-3/4 inches in diameter, on both the input and output driveshafts. They shall withstand the full torque of the engine.

3. All gears, both drive and pump, shall be made of the highest quality, electric furnace chrome nickel steel. Bores shall be ground to size and teeth integrated and hardened, to give an extremely accurate design for long life, smooth and quiet running, and high load carrying capability. An accurately cut spur design shall be provided to eliminate all possible end thrust. (No exceptions.)

4. The pump ratio shall be selected by the apparatus manufacturer to provide maximum performance with the engine and transmission selected.

5. If the gearbox is equipped with a power shift, the shifting mechanism shall be a heat-treated, hard-anodized aluminum power cylinder, with stainless steel shaft. An in-cab control for rapid shift shall be provided that locks in road or pump.

6. Three green warning lights shall be provided to indicate to the operator when the pump has completed the shift from “road” to “pump” position. Two green lights are to be located in the driver compartment and one green light on pump operator's panel adjacent to the throttle control.

One (1) Hale Anode System Y___N___
07-07-2200

HALE ANODE SYSTEM

Two (2) Hale anodes shall be installed in the pump to prevent damage caused by galvanic corrosion within the pump.

One (1) installed in the suction side of the pump and one (1) installed in the discharge side of the pump.

The anodes should be inspected every 12 months and replaced when over 75% of the zinc has been consumed. Performance of the anode life will vary with water quality and PH.

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07-07-2200

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One (1) 07-15-0000 Pump System - Hale Primer - ESP Y___N___

HALE PRIMING PUMP

A Hale *ESP* environmentally-safe, oil-less primer shall be provided.

The priming pump will be a positive displacement vane-type, shall be electrically-driven, and shall conform to standards outlined in NFPA 1901.

One *PVG* priming control valve will both open the priming valve and start the priming motor.

One (1) 07-16-1002 Trident Auto Air Primer with Lift Gauge (Pump Only) 31.011.3 Y___N___

AUTOMATIC FIRE PUMP PRIMING SYSTEM WITH LIFT GAUGE

A Trident Model #31.011.3 automatic air-operated priming system shall be installed. The unit shall be of all brass and stainless steel construction, and designed for fire pumps of 1,250 GPM (4,690 LPM) or more. Due to corrosion exposure. no aluminum or vanes shall be used in the primer design. The primer shall be a three-barrel design with ¾" NPT connection to the fire pump.

The primer shall be mounted above the pump impeller so that the priming line will automatically drain back to the pump. The primer shall also automatically drain when the panel control actuator is not in operation. The inlet side of the primer shall include a brass 'wye' type strainer with removable stainless steel fine-mesh strainer to prevent entry of debris into the primer body.

AUTOMATIC PRIMER CONTROL WITH VACUUM GAUGE PANEL

The 12 volt primer control shall be an automatic-type, with a pump panel three-way switch to operate an air solenoid valve. The air valve shall direct air pressure from the air brake system to the primer. To prevent freezing, no water shall enter the primer valve control.

A vacuum gauge, 2" in diameter, with graduations from zero to 30 feet, shall be installed in the primer control panel. The gauge shall be physically connected to the vacuum side of the primer, and read only when the primer is running, so it will never see or be subject to damage from high pump intake pressures.

The automatic priming switch shall have three positions as follows:

- **Prime -** the lower position shall be a momentary "push-to-prime". The "Prime" position also allows the operator to "ramp" test the primer without the fire pump being engaged.

- **Off** - center position

- ***Auto-Prime*** - in the upper position, a green LED pilot light shall be illuminated when the switch is the "Auto-Prime" position. The *Auto-Prime* operates automatically when the pump pressure drops below 20 PSIG. The primer shuts off automatically when the pump pressure is re-established, and exceeds 20 PSIG. The *auto* mode only operates when the fire pump is engaged.

Warranty - The primer shall be covered by a five (5) year parts warranty.

One (1) Hale Standard Pump Warranty Y___N___
07-25-0000

HALE PRODUCT INC. STANDARD LIMITED PUMP WARRANTY

Hale Products, Incorporated ("Hale") hereby warrants to the original buyer that products manufactured by Hale are free of defects in material and workmanship for a period of five (5) years from the date the product is first placed into service or five and one-half (5-1/2) years from date of shipment by Hale, whichever period shall be first to expire. Within this warranty period Hale will cover parts and labor for the first two (2) years and parts only for years three (3) through five (5).

One (1) Fire Research - PumpBoss Series - PBA401-D00 - Cummins Y___N___
09-70-0010

PRESSURE GOVERNOR AND ENGINE MONITORING DISPLAY

Fire Research *PumpBoss* series PBA401-D00 pressure governor and monitoring display kit shall be installed. The kit shall include a control module, intake pressure sensor, discharge pressure sensor, and cables. The control module case shall be waterproof, and have dimensions not to exceed 6-3/4" high by 4-5/8". The control knob shall be 2" in diameter with no mechanical stops, have a serrated grip and a red *Idle* push button in the center. It shall not extend more than 1-3/4" from the front of the control module. Inputs for monitored engine information and outputs for engine control shall be on the J1939 databus. Inputs from the pump discharge and intake pressure sensors shall be electrical.

The following continuous displays shall be provided:

- *Engine RPM*; shown with four (4) daylight-bright LED digits, more than 1/2" high
- *Check Engine* and *Stop Engine* warning LEDs
- *Engine Oil Pressure*; shown on a dual-color (green/red) LED bar graph display
- *Engine Coolant Temperature*; shown on a dual-color (green/red) LED bar graph display

- *Transmission Temperature*: shown on a dual-color (green/red) LED bar graph display
- *Battery Voltage*; shown on a dual-color (green/red) LED bar graph display
- *Pressure* and *RPM* operating mode LEDs
- *Pressure* / *RPM* setting; shown on a dot-matrix message display
- *Throttle Ready* LED.

The dot-matrix message display shall show diagnostic and warning messages as they occur. It shall show monitored apparatus information, stored data, and program options, when selected by the operator. All LED intensity shall be automatically adjusted for day and nighttime operation.

The program shall store the accumulated operating hours, for the pump and engine, to be displayed with the push of a button. It shall monitor inputs and support audible and visual warning alarms for the following conditions:

- High Battery Voltage
- Low Battery Voltage (Engine Off)
- Low Battery Voltage (Engine Running)
- High Transmission Temperature
- Low Engine Oil Pressure
- High Engine Coolant Temperature
- Out of Water (visual alarm only)
- No Engine Response (visual alarm only).

The program features shall be accessed via push buttons, located on the front of the control module. There shall be a USB port, located at the rear of the control module, to upload future firmware enhancements.

The governor shall operate in two control modes, *Pressure* and *RPM*. No discharge pressure or engine RPM variation shall occur when switching between modes. A *Throttle Ready* LED shall light when the interlock signal is recognized. The governor shall start in *Pressure* mode, and set the engine RPM to idle. In *Pressure* mode, the governor shall automatically regulate the discharge pressure at the level set by the operator. In *RPM* mode, the governor shall maintain the engine RPM at the level set by the operator, except in the event of a discharge pressure increase. The governor shall limit a discharge pressure increase in *RPM* mode to a maximum of 30 psi. Other safety features shall include recognition of no-water conditions, with an automatic programmed response and a push button to return the engine to idle.

The pressure governor and display shall be programmed to interface with a Cummins engine.

One (1) Class 1- ENFO IV Y___N___
09-75-0020

CLASS 1 - ENFO IV

The apparatus shall be equipped with the Class 1 *ENFO IV* that provides the pump operator with information on the engine RPM, oil pressure, engine temperature and electrical system voltage. The *ENFO IV* utilizes the SAE-J1939 data bus for engine information on engines that support the J-1939 protocol.

Features:

- Engine RPM display
- System voltage display and alarm
- Engine oil pressure display and alarm
- Engine temperature display and alarm
- Meets NFPA 1901 requirements

One (1) Chassis-Supplied Throttle Control Y___N___
09-76-0025

REMOTE THROTTLE CONTROL - CHASSIS SUPPLIED

The throttle control furnished with the custom chassis shall be installed at the pump panel.

One (1) Pump System Piping Stainless Steel & Class 1 Hose Y___N___
10-01-0100

PIPING

All piping shall be heavy-duty, 304 grade, schedule 10 stainless steel or Class 1 high-pressure flexible hose. All stainless steel fittings shall be threaded or welded.

Class 1 flexible hose shall be Black SBR synthetic rubber hose with 300# working and 1200# burst pressure, with stainless steel fittings.

Whenever possible, sweep-type elbows shall be utilized, in order to reduce friction loss. Thread-in 45's and 90's will be used elsewhere.

Victaulic or rubber couplings shall be used, where necessary, to allow flexing of plumbing, which will prevent damage or loosening of the piping, which can occur with rigid plumbing.

All threaded joints shall have non-hardening type sealant for easy removal for repairs.

All piping, including intake and discharge lines, shall be hydrostatically tested. A vacuum test shall be applied to the pump, plumbing, and valves, to test for leaks. The system shall be tested, and shall show minimum loss of no more than 10 inches of vacuum over a 5 minute period, as required by NFPA section 16.13.6.4.

SYNFLEX SUCTION, DISCHARGE, PRESSURE AND CONTROL LINES

Small lines within the pump enclosure shall be constructed from Synflex hose. Uses include, but are not limited to, such lines as priming control, gauge lines, drain lines, air control valves, pump shift, supplemental cooling, foam flush, and air bleeder valves.

One (1) Fire Pump & Plumbing System Painting Y___N___
10-01-0210

FIRE PUMP & PLUMBING SYSTEM PAINTING

The fire pump and plumbing system shall be painted job color, or the lower color when a two paint scheme is specified. No exceptions.

One (1) Valves - All Akron HD 8000 Series w/ Stainless Steel Ball Y___N___
10-02-0000

AKRON VALVES

All pump intake and discharge valves shall be *AKRON 8000* heavy-duty swing-out series. The valves shall have an all-brass body with flow-optimizing stainless steel ball, and dual-polymer seats. The valves shall be capable of dual-directional flow, while incorporating a self-locking ball feature, using an automatic friction lock design, and specially designed flow-optimizing stainless steel ball. All stainless steel parts must be 316 grade for increased resistance to corrosion. The valve shall not require the lubrication of seats or any other internal waterway parts, and be capable of swinging out of the waterway for maintenance by the removal of six bolts. The valves shall carry a ten (10) year manufacturers warranty. The valve shall be manufactured and assembled in the United States.

One (1) Elkhart Intake Relief Valve Y___N___
10-05-0000

INTAKE RELIEF VALVE

An Elkhart Brass intake relief valve shall be installed on the suction side of the pump. The valve shall be the preset type at 125 PSI and is adjustable from 75 to 250 PSI, and shall be designed to prevent vibration from altering the setting. The relief outlet shall be directed below the pump with the discharge terminating in a 2-1/2" male NST connection. The discharge shall be away from the pump operator and labeled "Do Not Cap".

One (1) U.L. Pump Certification Test Y___N___
10-15-0400

U.L. PUMP CERTIFICATION TEST

One (1) certification test shall be performed at the manufacturers on-site testing facility, by Underwriters Laboratories.

The certification shall include at minimum:

A) Pumping Test - NFPA 16.13.2
B) Pumping Engine Overload Test – NFPA 16.13.3
C) Pressure Control System Test - NFPA 16.13.4
D) Priming System Tests - NFPA 16.13.5
E) Vacuum Test - NFPA 16.13.6
F) Water Tank-To-Pump Flow Test - NFPA 16.13.7
G) If Fire Pump is Driven by the Chassis Engine: Engine Speed Advancement Interlock Test – NFPA 16.13.8
H) Gauge and Flowmeter Test – NFPA 16.13.9

A test plate shall be provided at the pump operator's position that gives the rated discharges and pressures, together with the speed of the engine, as determined by the certification test. The plate shall be completely engraved with all information at the factory, and attached to the vehicle prior to delivery. The original U.L. certificate shall be provided upon acceptance and payment of the apparatus in full.

One (1) Vented Lug Caps & Plugs Y___N___
10-15-0600

VENTED LUG CAPS AND PLUGS

All intake and discharge plugs and caps shall be vented-lug type, designed to relieve trapped pressure and help reduce possible operator injuries.

One (1) Suction - 6" With Long Handle Chrome Caps-Pair Y___N___
12-01-1000

STEAMER INLETS

Two (2) 6" steamer inlets shall be provided on the pump panels, one (1) on the left side and one (1) on the right side.

Both inlets shall have screens and chrome caps with long handles.

One (1) Suction - (1) 2-1/2" - Side Mount Panel - Left Side Y___N___
12-07-0500

SUCTION - LEFT SIDE

One (1) 2-1/2" suction valve shall be installed on the left side of the unit. The the valve body shall be mounted behind the pump panel, with a 2-1/2" NST chrome inlet swivel, chrome plug and chain, and removable inlet strainer.

One (1) Suction - (1) 2-1/2" - Side Mount Panel - Right Side Y___N___
12-07-1000

SUCTION - RIGHT SIDE

One (1) 2-1/2" suction valve shall be installed on the right side of the unit. The valve body shall be mounted behind the pump panel, with a 2-1/2" NST chrome inlet swivel, chrome plug and chain, and removable inlet strainer.

One (1) Tank To Pump - 3" - Midship Pumps Y___N___
13-01-1500

TANK TO PUMP

There shall be one (1) 3" gated tank to pump line, piped to the tank sump.

Piping from the sump to the valve shall be 4" diameter.

The line shall be plumbed directly into the back of the pump for maximum efficiency.

A full-flow, inline ball valve, with check valve, shall be provided to prevent accidental pressurization of the water tank through the pump connection.

A control with a function plate will be located on the operator's panel.

One (1) Tank Fill - 2-1/2" Y___N___
13-02-1000

TANK FILL - 2-1/2"

There shall be a 2-1/2" tank refill line installed, with a 2-1/2" inline valve.

Valve shall be controlled at the pump operator's panel, and will be clearly marked "TANK REFILL/PUMP COOLER".

One (1) Booster Reel - Hannay - Steel - In Dunnage - Left Side Y___N___
14-01-1200

BOOSTER REEL

A Hannay steel booster reel with painted discs shall be installed over the pump compartment, left side.

The reel shall be constructed utilizing a steel welded base.

Rewind shall be a 12v electric motor that will chain-drive the reel drum.

The booster reel shall have an automatic brake to prevent the booster hose from unwinding.

Reel shall include 150' of 1" booster hose.

A TFT *Twister* model #DS1040 1" nozzle shall be provided.

A weatherproof push button switch shall be provided near the reel on the pump panel.

A gear-driven manual rewind shall be included.

Chrome rollers and guides shall be provided on the left side of the pump compartment.

The booster reel discharge control shall be located at the operator's control panel.

One (1) Crosslay - (2) 1.75" w/2" Plumbing - Double-Stack Y___N___
14-02-0500

CROSSLAY HOSEBEDS W/ 2" PLUMBING

Two (2) crosslays shall be installed over the pump compartment.

Each section of the crosslay shall be capable of holding 200' of 1.75" double-jacketed hose, in a double-stack load.

A 2" mechanical swivel with 1.5" NST hose connector shall be used in each crosslay, to allow deployment of hose in either direction.

Stainless steel rollers with nylon guides shall be mounted on both ends, and below the crosslays.

A 1/4" aluminum divider shall separate the crosslays, and poly-plas matting shall be used on the stainless steel crosslay floor.

Each crosslay shall be plumbed with 2" piping and a 2" valve, and shall be controlled at the operator's panel.

One (1) Crosslay - Hinged Lid Y___N___
14-02-4600

CROSSLAY LID

A polished aluminum diamond plate lid shall be provided over the crosslay(s).

The lid shall have full length stainless steel hinge with velcro straps to hold lid firmly in place.

One (1) Crosslay - Vinyl End Covers Y___N___
14-02-4610

CROSSLAY VINYL FLAPS

Black vinyl flaps shall be installed on each end of the crosslay to retain the hose load. The flaps shall be secured with 2" wide straps with Velcro fasteners.

Meets NFPA 15.10.5 - Any hose storage area shall be equipped with a positive means to prevent unintentional deployment of the hose from the top, side, front, and rear of the hose storage area while the apparatus is underway in normal operations.

One (1) Dunnage Compartment Y___N___
14-02-5000

DUNNAGE COMPARTMENT

The remaining area behind the crosslay(s) shall be used for additional storage space.

One (1) Close Off Panel Sides of Dunnage Compartment S/S Y___N___
14-02-5600

DUNNAGE COMPARTMENT

Each side of the dunnage compartment shall be enclosed with 12 gauge satin-finish stainless steel.

One (1) Sump Box - Floating - Left Side Running Board Y___N___
14-05-1510

SUMP BOX

The left side running board shall have a 12 gauge stainless steel floating sump box.

The sump box shall have matting and drain holes in the floor of the compartment.

It shall be capable of holding _____.

The hose shall be secured with Zico Quic-straps to prevent unintentional deployment of the hose per NFPA 15.10.5.

One (1) Sump Box - Floating - Right Side Running Board Y___N___
14-05-2010

SUMP BOX

The right side running board shall have a floating 12 gauge stainless steel floating sump box as large as possible.

The sump box shall have matting and drain holes in the floor of the compartment.

It shall be capable of holding _____.

The hose shall be secured with Zico Quic-straps to prevent unintentional deployment of the hose per NFPA 15.10.5.

One (1) Discharges - (2) 2-1/2" Left Side Y___N___
15-01-0700

DISCHARGES LEFT SIDE

Two (2) 2-1/2" discharges shall be located on the left side pump panel and be controlled from the operator's panel.

Discharge shall terminate with a 2-1/2" NST 30 degree turn down with chrome cap and retainer chain.

One (1) Discharge - (1) 2-1/2" Right Side Y___N___
15-02-0500

DISCHARGE RIGHT SIDE

One (1) 2-1/2" discharge shall be located on the right side pump panel and be controlled from the operator's panel.

Discharge shall terminate with a 2-1/2" NST 30 degree turn down with chrome cap and retainer chain.

One (1) Discharge - (1) 3" Right Side 3" NST x 4" 30 degree Storz adapter Y___N___
15-02-1500

DISCHARGE RIGHT SIDE

One (1) 3" discharge shall be located on the right side pump panel and be controlled from the operator's panel.

Discharge shall terminate with a 3" NST x 4" 30 degree Storz adapter with blind cap and retainer chain.

One (1) Discharge - 2-1/2" Left Front Hosebed Y___N___
15-03-0500

DISCHARGE LEFT FRONT HOSEBED

One (1) 2-1/2" discharge shall be piped to the left front of the hose bed and terminate with a 2-1/2" chrome male NST adapter.

Discharge shall be controlled from the operator's panel.

One (1) Discharge - 2-1/2" Left Rear Hosebed Y___N___
15-03-1500

2-1/2" LEFT REAR DISCHARGE

One (1) 2-1/2" discharge shall be piped to the left rear of the hosebed and be controlled from the operator's panel.

Discharge shall terminate with a 2-1/2" NST 30 degree turn down, with chrome cap and retainer chain.

One (1) Extension Pipe 18" TFT Extend-A-Gun Y___N___
15-06-2700

TFT EXTEND-A-GUN

A Task Force Tips, Extend-A-Gun, deck gun extender shall be supplied and connected to the deck gun discharge of the unit.

This will allow the deck gun to be lowered to a shorter travel height, yet still allow 360 degree use of the deck gun when fully extended 18 inches.

The Extend-a-gun will be wired to the hazard light in the cab.

One (1) Akron Slo-Clos 3" Valves Y___N___
15-08-0500

AKRON SLO-CLOZ

An Akron Slo-Cloz device shall be provided on each 3" discharge valve to limit the opening of the valve to no faster than 3 seconds per N.F.P.A. specifications.

The hydraulic device shall be operable from -40 deg. F to 140 deg. F.

The device shall be made of corrosion-resistant materials and shall not add more than 1-1/2" to the valve height.

One (1) Drain - Pump Master Valve Y___N___
15-10-0500

PUMP MASTER DRAIN

A master drain that will have the capacity to drain all lines and main pump at the same time. The master drain will be mounted on the left side panel and will be readily accessible.

One (1) Drain Valves - Side Disharges Innovative Controls Lift Lever Y___N___
15-10-0700

DRAIN VALVES

All side discharges and auxiliary suction drain valves shall be Innovative Controls 3/4" ball brass drain valves with chrome-plated lift lever handles and ergonomic grips. Each lift handle grip shall feature built-in color-coding labels and a verbiage tag identifying each valve, also supplied by Innovative Controls. The colors labels shall also include valve open and close verbiage. The drain valves shall located in the lower portion of the pump panels. All other discharges shall have Class 1 3/4" automatic bleeder drains.

One (1) Independent Pump Module Y___N___
19-00-0100

INDEPENDENT PUMP MODULE

The pump module shall be a self-supported structure mounted independently from the body and chassis cab. The pump module shall be fabricated and constructed from the same material as the body. The design shall allow for normal frame deflection without imposing stress on the pump module structure. The pump module shall consist of a welded tubular stainless steel frame work, properly braced to withstand chassis frame flexing. The pump module shall be bolted to the frame rails of the chassis.

One (1) Pump Panel - Side Control - Midship Pump - Class A Y___N___
19-02-0000

SIDE MOUNTED OPERATOR'S PANEL

CONSTRUCTION

The pump house shall be a properly supported structure mounted between the body and chassis cab and shall be bolted to the chassis frame rails. The panel shall be supported by 1-1/2" stainless steel tubing.

The pump and all of the pump mounted valves shall be completely enclosed by the pump house design.

Left and right side pump house panels shall consist of upper and lower stainless steel removable panels.

Stainless panels to be brushed satin finish 12 gauge 304 material to ensure longevity.

The left side of the pump house shall consist of an upper hinged panel containing all required gauges.

The lower panel shall contain left side specified discharges, inlets, drains, and pump controls.

The right side of the pump house shall consist of a double vertically hinged access door. The door will be swing open style with quick opening latch.

A separate lower panel shall contain the specified right side mounted discharges and inlets and their respective drains.

The bottom panel shall be fastened to the pump house with stainless steel bolts and shall be completely removable.

INNOVATIVE CONTROLS PUSH/PULL VALVE CONTROL HANDLES

For valve actuation, the apparatus pump panel shall be equipped with Innovative Controls side mount valve controls.

The ergonomically designed push-pull T-handle shall be chrome plated zinc with recessed labels for color coding and verbiage. The control rod, double laminated locking clips and rod housing shall be stainless steel and provide a true positive lock that will eliminate valve drift. Bronze and Teflon impregnated stainless steel bushings in both ends of rod housing shall minimize rod deflection, never need lubrication, and ensure consistent long term operation. Where required locking 1/4 turn push-pull T-handle controls will be provided.

The control assembly shall include a decorative chrome plated zinc panel mounting bezel and 4 mounting bolts.

IDENTIFICATION LABELS FOR PUMP PANEL

Innovative Controls verbiage label bezels shall be installed. The bezel assemblies will be used to identify apparatus components. These labels shall be designed and manufactured to withstand the specified apparatus service environment.

The verbiage label bezel assemblies shall include a chrome plated panel mount bezel with durable easy to read UV resistant polycarbonate inserts featuring the specified verbiage and color coding. The UV resistant polycarbonate verbiage and color inserts shall be sub-surface screen printed to eliminate the possibility of wear and protect the inks from fading. Both the insert labels and bezel shall be backed with 3M permanent adhesive (200MP), which meets UL969 and NFPA standards.

SIDE MOUNTED OPERATOR'S PANEL

The following items shall be located on the left side pump panel:

*Individual 0-400# compound discharge gauges shall be provided for each 1.5" or larger discharge

*One (1) -30 to 400 psi master pressure gauge

*One (1) -30 to 400 psi master vacuum gauge

*One (1) engine oil pressure gauge with audible & visual alarm

*One (1) engine water temperature gauge with audible & visual alarm

*One (1) engine voltmeter

*One (1) waterproof engine tachometer

*Two (2) UL test connections

*One (1) master pump house lighting switch

*One (1) engine throttle control

*One (1) relief valve control and open indicator light

*One (1) primer control

*All discharge controls

*One (1) tank fill/pump bypass control

*One (1) tank to pump valve control

*One (1) pump ENGAGED indicator light

*One pump certification plate

*One liquid level meter with sensor in the water tank

One (1) Running Board - Aluminum Diamond Plate Y___N___
19-04-0020

RUNNING BOARDS

Running boards shall be provided on each side of the pump module and extend from the front of the side compartments forward to the back of the cab. Running boards shall be constructed of 1/8" aluminum diamond plate. The rear edge shall be formed upward 1-1/2" to provide a kick strip along the bottom of the pump panel. The outer edge shall be bent downward to provide a safety rail.

Running boards are supported by 1.50" structural stainless steel tubing welded to the panel framing and shall be able to support a minimum of 500 pounds. The running board stepping surface will comply with the latest version of NFPA 1901.

One (1) Side Mount Pump Panel Lighting Standard Y___N___
19-10-1800

PANEL LIGHTING

The side mount pump panel shall be illuminated by four (4) TecNiq (model E10-W000-1) 6.00" LED lights with clear lens.

Lights shall be mounted across the top of the gauge panel and shall be protected by a full width polished stainless steel shield.

Lights are controlled by a master panel mounted lights switch.

One (1) side pump panel light shall illuminated when the pump is shifted into gear form inside the cab, affording the operator illumination when first approaching the control panel.

One (1) Gauges - 4.0" No-Shok Master Gauges Y___N___
20-01-1500

4.0" NOSHOK MASTER GAUGES

The master intake and master discharge gauges shall be 4” diameter No-Shok pressure gauges. Each gauge shall have a one-piece die-cast brass case that integrates the valve stem connection, movement support, and bourdon tube support into a single unit that eliminates distortion and leakage. Clear scratch resistant molded crystals with captive O-ring seals shall be used to ensure distortion free viewing and to seal the gauge. The gauges shall be filled with a synthetic mixture to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from –40°F to +160°F. Each gauge shall meet ANSI B40.1 Grade 1A requirements with an accuracy of +/- 1% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy.

A polished chrome-plated brass bezel shall be provided to prevent corrosion and protect the lens and gauge case. The gauges shall be installed into decorative chrome-plated mounting bezels that incorporate valve-identifying verbiage.

The master gauges shall be installed on the pump panel no more than 6 inches apart. The gauge on the left shall be the master pump intake gauge and display a range from -30 to 400 psi with Black graphics on a White background. The gauge on the right shall be the master pump discharge gauge and display a range from -30 to 400 psi with Black graphics on a White background.

One (1) Gauge - 2-1/2" No-Shok Discharge Gauges Y___N___
20-01-2200

2-1/2" NOSHOK GAUGES

The valve discharge gauges shall be 2 ½ ” diameter No-Shok pressure gauges. Each gauge shall have a one-piece die-cast brass case that integrates the valve stem connection, movement support, and bourdon tube support into a single unit that eliminates distortion and leakage. Clear scratch resistant molded crystals with captive O-ring seals shall be used to ensure distortion free viewing and to seal the gauge. The gauges shall be filled with a synthetic mixture to dampen shock and vibration, lubricate the internal mechanisms, prevent lens condensation and ensure proper operation from –40°F to +160°F.

Each gauge shall exceed ANSI B40.1 Grade B requirements with an accuracy of +/- 1.5% full scale and include a size appropriate phosphorous bronze bourdon tube with a reinforced lap joint and large tube base to increase the tube life and gauge accuracy. A polished chrome-plated brass bezel shall be provided to prevent corrosion and protect the lens and gauge case. The gauges shall be installed into decorative chrome-plated mounting bezels that incorporate valve-identifying verbiage and color labels. The gauges shall display a range from 0 to 400 psi with Black graphics on a White background.

One (1) ICI SL-10 LED Water Level - Pump Panel Y___N___
20-03-0500

ICI WATER LEVEL MONITOR

An Innovative Controls SL-10 Series Tank Level Monitor System shall be installed. The system shall include an electronic display module, a pressure transducer-based sender unit, and a 10' connection cable. The display module shall show the volume of water in the tank using 10 superbright easy-to-see LEDs. Tank level indication is enhanced by the use of green LEDs at the full and near-full levels, amber LEDs between ¾ and ¼ tank levels, and red LEDs at the near-empty and empty levels. A wide-angle diffusion lens in front of the LEDs creates a 180° viewing angle. The electronic display module shall be waterproof and shock resistant being encapsulated in a urethane-based potting compound. The potted display module shall be mounted to a chrome plated panel-mount bezel with a durable easy-to-read polycarbonate insert featuring blue graphics and a water icon.

All programming functions shall be accessed and performed from the front of the display module. The programming includes self-diagnostics, manual or self-calibration, and networking capabilities to connect remote slave displays. Low tank level warnings shall include flashing red LEDs starting below the ¼ level, down-chasing LEDs when the tank is almost empty, and an output for an audible alarm.

The display module shall receive an input signal from a pressure transducer. This stainless steel sender unit shall be installed on the outside of the water tank near the bottom. All wiring, cables and connectors shall be waterproof without the need for sealing grease.

Location of water tank level monitor shall be on the pump operators panel.

One (1) Whelen Plus XL Tank - Large 4 Light Display LED (3) Y___N___
20-03-6052

WHELEN TANK LEVEL LIGHTS

There shall be three (3) Whelen Strip-Light Plus XL tank lights surface mounted within a chrome bezel. Lights will be mounted vertically one (1) on each side of the body and one (1) on the rear of the body.

The light strips shall feature four (4) colors of LED lights to indicate the fluid level of a tank. The lights shall change in color to indicate the water level of the tank in ¼ tank increments, the colors shall change from green indicating a full tank to blue, amber, and red as the tank level drops.

One (1) Air Horn Button Pump Panel Y___N___
20-05-3000

AIR HORN BUTTON ON PANEL

An air horn button shall be installed on the pump operators panel.

This button will allow pump operator to activate air horns at any point in time. Button will be waterproof and marked properly.

One (1) Tank Fill - Akron 2-1/2 Right Rear Y___N___
25-01-0500

2-1/2" REAR DIRECT TANK FILL

There shall be one (1) 2.5" Akron Brass style 8825 valve provided and terminate with a Red Head 2.50" 30 degree chrome elbow, with Trident chrome plug with retainer chain. A 3/4" bleeder will be installed.

The valve will be installed on the rear of the tank to the right of the rear dump valve.

One (1) Water Tank Description - 1000 GAL. UPF Y___N___
35-04-1500

WATER TANK

The UPF Poly water tank shall be constructed of PT3™ polypropylene material. This material shall be a non-corrosive stress relieved thermoplastic and UV stabilized for maximum protection. Tank shell thickness may vary depending on

the application and may range from 1/2” to 1" as required. Internal baffles are generally 3/8" in thickness.

The tank capacity shall be 1000 gallons and will be equipped with a 6" vent/overflow.

TANK CONSTRUCTION

The Poly water tank shall be of a specific configuration and is so designed to be completely independent of the body and compartments. Joints and seams shall be fused using nitrogen gas as required and tested for maximum strength and integrity. The tank construction shall include PolyProSeal™ technology wherein a sealant shall be installed between the plastic components prior to being fusion welded. This sealing method will provide a liquid barrier offering leak protection in the event of a weld compromise. The top of the booster tank is fitted with removable lifting assembly designed to facilitate tank removal. The transverse and longitudinal swash partitions shall be manufactured of a minimum of 3/8" PT3™ polypropylene. 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 completely fused to each other as well as to the walls of the tank. All partitions and spacing shall comply with NFPA 1901. The walls shall be welded to the floor of the tank providing maximum strength as part of the tank's unique Full Floor Design™. Tolerances in design allow for a maximum variation of 1/8" on all dimensions.

CAPACITY CERTIFICATION

All water tanks shall be tested and certified as to capacity on a calibrated and certified tilting scale. Each tank shall be weighed empty and full to provide precise fluid capacity. Each Poly-Tank® III is delivered with a Certificate of Capacity delineating the weight empty and full and the resultant capacity based on weight.

TANKNOLOGY™ TAG

A tag shall be installed on the apparatus in a convenient location and contain pertinent information including a QR code readable by commercially available smart phones. The information contained on the tag shall include the capacity of the water and foam (s), the maximum fill and pressure rates, the serial number of the tank, the date of manufacture, the tank manufacturer, and contact information. The QR code will allow the user to connect with the tank manufacturer for additional information and assistance.

TANK LID

The tank cover shall be constructed of 1/2" thick PT3™ polypropylene and UV stabilized, to incorporate a multi-piece locking design, which allows for individual removal and inspection if necessary. The tank cover(s) shall be flush or recessed 3/8" from the top of the tank and shall be fused to the tank walls and longitudinal partitions for maximum integrity. Each one of the covers shall have hold downs consisting of 2" minimum polypropylene dowels spaced a maximum of 40" apart. These dowels shall extend through the covers and will assist in keeping the covers rigid under fast filling conditions. A minimum of two lifting dowels shall accommodate the necessary lifting hardware.

TANK FILL TOWER

The tank shall have a combination vent and manual fill tower. The fill tower shall be constructed of 1/2" PT3™ polypropylene and shall be a minimum dimension of 12" x 12" outer perimeter. The fill tower shall be blue in color indicating that it is a water-only fill tower. The tower shall be located in the left front corner of the tank unless otherwise specified by the tank manufacturer to the purchaser. The tower shall have a 1/4" thick removable polypropylene screen and a PT3 polypropylene hinged cover. The capacity of the tank shall be engraved on the top of the fill tower lid. Inside the fill tower there shall be a combination vent/overflow pipe.

OVERFLOW AND VENT PIPE

The fill tower shall be fitted with an integral 6” ID schedule 40 P.V.C. combination overflow/vent pipe that is designed to run through the tank, and shall be piped to discharge water behind the rear wheels as required in NFPA 1901 so as to not interfere with rear tire traction.

TANK SUMP

There shall be one (1) sump standard per tank. The sump shall be constructed of a minimum of 1/2" PT3™ polypropylene and be located in the left front quarter of the tank, unless specified otherwise. On all tanks that require a front suction, a 3" schedule 40 polypropylene pipe shall be installed that will incorporate a dip tube from the front of the tank to the sump location. The sump shall have a minimum 3" N.P.T. threaded outlet on the bottom for a drain plug per NFPA.
This shall be used as a combination clean-out and drain. All tanks shall have an anti-swirl plate located approximately 3" above the inside floor.

TANK OUTLETS

There will be two (2) standard tank outlets: one for the tank-to-pump suction line, which shall be a minimum of 4” coupling and one for a tank fill line which shall be a minimum of a 2” N.P.T. coupling. All tank fill couplings shall be backed with flow deflectors to break up the stream of water entering the tank.

WATER TANK MOUNTING

The tank shall rest on the body cross members spaced a maximum of 22” apart, and shall be isolated from the cross members through the use of ¼” to 1/2” rubber, 2-1/2” wide. The tank shall sit cradle-mounted using four (4) stainless steel corner angles 3” x 3” x ¼” thick. Angles are welded directly to the body cross members. The angles shall keep the tank from shifting left to right or front to rear. The angles are also isolated from the tank through the use of ¼” to 1/2” rubber. The tank is designed on the free-floating suspension principle and shall not require the use of hold downs. The tank shall be completely removable without disturbing or dismantling the apparatus body structure. The body or hose bed cross braces shall act as water tank retainers.

One (1) Apparatus Body Single Axle Y___N___
36-00-0100

STAINLESS STEEL BODY& COMPARTMENT CONSTRUCTION

The complete apparatus body and sub frame shall be fabricated of 12 gauge type 304 grade stainless steel sheeting with a tensile strength of 87,000 psi and a yield strength of 39,000 psi.

All body and compartment components shall be break form design. Compartments are constructed of 12 gauge type 304 stainless steel. This shall include compartment floors, side walls and ceiling. No Exception. Compartments shall be formed from a single sheet of metal when possible. The exterior of the compartments shall be solid seam welded. The corner seams shall be caulked with Gray silicone caulking. All burrs shall be removed to eliminate sharp edges.

Interior of compartments are to be left natural stainless steel with a swirl finish applied to give a lasting and pleasing appearance.

COMPARTMENT SUPPORTS

Compartment floor supports shall be provided fabricated of 12 gauge stainless steel 2.00" x 4.00" support members and shall be installed under the compartment floors. The supports shall be formed "U" sections that will extend the full width beneath

the compartment floors. The upper body walkway floor will be supported in a similar fashion.

STAINLESS STEEL SUBFRAME

A 1.50" x 3.00" stainless steel tubular sub frame shall be fabricated to support the body and tank. Structural stainless steel rails shall run the full length of the body across the top of the chassis frame rails. Appropriate 3.00" stainless steel cross members shall be utilized to ensure rigidity with cross members being space no more than 24" apart.

The sub frame and cross members shall be Mig welded. All compartments and all stainless steel sheeting is TIG welded with 308 stainless steel filler wire.

The complete body structure shall be secured to the chassis frame rails with high grade 5/8" diameter U-bolts.

One inch x three inch heavy duty rubber sill will be installed between the body sub frame and chassis frame rails to prevent stress on the body and tank components. The rubber sill shall be retained by a full length stainless steel channel.

STEPPING, STANDING, & WALKING SURFACES

All stepping, standing, and walking surfaces on the body shall meet NFPA #1901 anti-slip standards.

WHEEL WELLS

12 gauge stainless steel wheel wells shall be an integral part of the body construction.

Wheel wells and cabinetry are to be designed so road debris will not be trapped on top of the cabinets.

Full one piece circular, 24" deep stainless steel wheel well liners shall be installed. The fender flares shall be bright polished stainless steel and are attached to the wheel well using stainless steel bolts.

WIRING ACCESS PANELS

Wiring access panels shall be provided in the body interior corner compartments. The panels shall be bolted in place to allow easy removal for service.

FUEL TANK ACCESS

If the apparatus is equipped with a rear frame mounted fuel tank a removable bolted on access panel will be provided in the rear compartment wall.

REMOVAL OF BODY

The completed body with all related parts will be able to be removed in its entirety and accompany the water tank when removed.

FASTENERS

All fasteners used in securing components to the body shall be type 304 stainless steel.

COMPARTMENT VENTS

Compartments shall have a minimum of two (2) 4" louvered stainless steel vents per compartment. They shall be installed in the rear wall of each compartment in a fashion
to prevent foreign matter and water from entering.

COMPARTMENT DRAINS

Duckbill type rubber floor drains will be installed in the corners of the lower compartment floors.

One (1) 42-10-0100 DWG 1: Rescue Pumper Full Depth LS & RS Hinged Doors Y___N___

RESCUE PUMPER COMPARTMENTS - FULL DEPTH & FULL HEIGHT LEFT AND RIGHT SIDE WITH HINGED DOORS

L1: 62.00” High x 26.00” Deep x 40.00” Wide
Door Opening: 58.50” High x 35.50” Wide

L2: 30.00” High x 26.00” Deep x 64.00” Wide
Door Opening: 27.00” High x 59.00 Wide

L3: 62.00” High x 26.00” Deep x 46.00” Wide
Door Opening: 58.50” High x 41.50” Wide

RR: 57.00” High x 26.00” Deep x 46.00” Wide
Door Opening: 45.75” High x 43.50” Wide

R1: 62.00” High x 26.00” Deep x 40.00” Wide
Door Opening: 58.50” High x 35.50” Wide

R2: 30.00” High x 26.00” Deep x 64.00” Wide
Door Opening: 27.00” High x 59.00 Wide

R3: 62.00” High x 26.00” Deep x 46.00” Wide
Door Opening: 58.50” High x 41.50” Wide

One (1) DWG 11: Pumper Partial Depth Rescue Style Doors LS & RS Y___N___
42-12-4000

DWG 11: Pumper Partial Depth Rescue Style Doors LS & RS

L1: 62.00” High x 13.00/28.00” Deep x 40.00” Wide
Door Opening: 58.50” High x 35.50” Wide

L2: 32.00” High x 13.00” Deep x 64.00” Wide
Door Opening: 29.00” High x 57.00” Wide

L3: 62.00” High x 13.00/28.00” Deep x 48.00” Wide
Door Opening: 58.50” High x 43.50” Wide

RR: 60.00” High x 26.00” Deep x 42.00” Wide
Door Opening: 50.50” High x 32.50” Wide

R1: 62.00” High x 13.00/28.00” Deep x 40.00” Wide
Door Opening: 58.50” High x 35.50” Wide

R2: 32.00” High x 13.00” Deep x 64.00” Wide
Door Opening: 29.00” High x 57.00” Wide

R3: 62.00” High x 13.00/28.00” Deep x 48.00” Wide
Door Opening: 58.50” High x 43.50” Wide

One (1) Square Back Body Y___N___
46-00-0305

SQUARE BACK BODY DESIGN

The rear side body compartments and the body side walls shall extend all the way to the rear of the apparatus and shall be squared off design.

One (1) Rear Bumper 12" Y___N___
56-20-0004

REAR BUMPER

The rear bumper shall be fabricated of 1.50" x 1.50" and 1.50" x 3.00" structural stainless steel tubing. The bumper shall be fully welded design and shall be welded to the rear side body compartments.

The rear bumper shall be 12" deep and run full width of the vehicle.

One (1) Aluminum Diamond Plate Step Y___N___
56-30-0001

BUMPER STEP SURFACE

The bumper step shall be covered with aluminum diamond plate with welded end caps. The bumper stepping surface will comply with the latest version of NFPA 1901.

One (1) Top Side Body Aluminum Trim Y___N___
57-00-0501

TOP SIDE BODY TRIM

The top of all side body compartments shall be covered with Aluminum diamond plate.

Top overlay edges shall be angled downward and extended over the outer body panel approximately 1.00"

One (1) Rear Body Aluminum Finish Y___N___
57-00-0601

REAR BODY TRIM

Any areas on the rear not covered with Chevron reflective stripping, shall be covered with Aluminum diamond plate.

One (1) Compartment Trim Aluminum Finish Y___N___
57-00-0701

FRONT COMPARTMENT TRIM

Front exterior wall of the front compartments shall be covered with Aluminum diamond plate.

One (1) Post Trim Aluminum Finish Y___N___
57-00-0801

SIDE BODY POST TRIM

Side body support posts shall be covered with Aluminum diamond plate.

One (1) Pump House Trim Aluminum Finish Y___N___
57-00-0901

PUMP HOUSE TRIM

The front of the pump house shall be covered with Aluminum diamond plate.

One (1) Rub Rails 1.00 x 1.50 S/S Y___N___
57-20-0310

STAINLESS STEEL RUB RAILS

Rub rails shall be provided and installed below each side compartment. The rub rail assembly shall be constructed of 1.00" x 1.50" heavy-duty 14-gauge 304 grade stainless steel tubing with black end caps and will be DA finished. Rub rails shall be bolted to the lower exterior edge of the apparatus body, with 0.50" nylon spacers installed between the body and the rub rail.

One (1) Hose Bed Description Y___N___
58-08-0100

HOSE BED

A stainless steel hose bed with swirl finish shall be located above the water tank. The hose bed front and side walls shall be free of all sharp objects to prevent hose damage. There shall be two removable floor sections constructed of fiberglass grating, model T-3500, 1" "T" bars with 35% open area. This will allow for proper ventilation and drainage of hose.

One (1) Hose Bed Dividers (3) Y___N___
58-08-1200

HOSE BED DIVIDERS

Three (3) full length adjustable hose bed dividers shall be located in the hose bed area and shall be fully adjustable by means of stainless steel uni-strut tracking located at the front and rear of the hose bed.

The dividers shall be of "one piece" 1/4" extruded aluminum construction with integral extruded bottom "T" bar which runs full length of the hose bed. A top 1/2" diameter smooth edge is provided to prevent damage to hose.

The dividers shall be bolted in place with stainless steel fasteners and be easily adjusted from side to side with simple hand tools.

One (1) Hose Bed Capacity Y___N___
58-08-2200

HOSE BED CAPACITY

The hose bed shall be capable of holding the following hose:

____ Feet of 5.00" LDH hose
____ Feet of 4.00" LDH hose
____ Feet of 3.00" DJ hose
____ Feet of 2.50" DJ hose
____ Feet of 1.75" DJ hose

One (1) Hosebed Tarp - vinyl (single axle) Y___N___
58-08-5100

HOSEBED TARP

A Black vinyl hosebed cover shall be provided with Velcro and twist lock fasteners on the front, shock cords fasteners on the sides with stainless steel hooks, and rear weighted flap with straps.

One (1) Hand Rails - Extruded aluminum tubing with ribbed rubber inserts Y___N___
58-09-0100

HAND RAILS

Access hand rails shall be 1-1/4" in diameter extruded aluminum tubing with ribbed rubber inserts. Access rail escutcheons and brackets shall be chrome plated and attached with stainless steel bolts. Anchoring of posts and framing members for handrails of all types shall capable of withstanding a load of at least 225 pounds applied in any direction at any point along the rail.

Hand rails and handholds shall be constructed so that three points of contact (two hands and one foot, or one hand and two feet) can be maintained at all times while ascending and descending.

One (1) Vertical Rear Hand Rails Standard Y___N___
58-09-0200

VERTICAL HAND RAILS

Two (2) 48" long hand rails shall be mounted vertically at the rear of the apparatus, one on each side of the rear compartment.

One (1) Horizontal Rear Hand Rails Standard Y___N___
58-09-0700

HORIZONTAL HAND RAILS

One (1) 72" long hand rail shall be mounted horizontally just below the hosebed.

One (1) Steps - (4) Innovative Controls Folding Steps Y___N___
58-10-0005

FOLDING ACCESS STEPS

There shall be four (4) Innovative Controls folding steps provided and installed. Each step shall be designed to exceed the strength, load and traction requirements of NFPA. Each step shall be chrome plated and include a molded gasket to help prevent water ingress and keep the step mount from damaging painted surfaces. The step shall include a drain at the bottom to allow any water to escape the assembly.

The folding step shall be spring loaded to hold the step in the upright stowed position while in transit and when not in use.

The step shall include a white LED step light.

Location: Rear of unit to allow easy access to the hose bed.

One (1) 60-00-2100 Suction Hose V tray - (2) - (1) Each Side Y___N___

SUCTION HOSE MOUNTING BRACKETS

Two (2) aluminum V-Trays shall be provided and mounted on stainless steel unistrut tracking. One (1) mounted on the left side over the upper compartments and one (1) mounted on the right side over the ladders.

The hose shall be held in place with quick release holders.

One (1) 60-00-3400 Vertical Ladder Compartment Y___N___

LADDER COMPARTMENT

A compartment will be located on right side of the booster tank under the hose bed.

Compartment shall be fabricated of 1/2" polypropylene and shall be designed to allow easy removal and storage of all specified equipment. All equipment shall be separated by dividers.

The compartment will be designed to hold a 14' roof ladder and 24' extension ladder, 10' attic ladder and two (2) pike poles.

One (1) 60-00-3450 Through Tank Ladder Compt. Doors-Aluminum Y___N___

LADDER COMPARTMENT DOOR

Compartment will have a single vertically hinged aluminum diamond plate door with a stainless steel D'Ring latching handle. Door(s) shall be wired to the door ajar circuit.

One (1) 60-00-3454 Through Tank Ladder Compt. Doors-Painted Finish Y___N___

LADDER COMPARTMENT DOOR

Compartment will have a single vertically hinged painted finish stainless steel door with a stainless steel D'Ring latching handle. Door(s) shall be wired to the door ajar circuit.

One (1) 60-00-5655 No Driver's Side Front Wheel Well Compt. Y___N___

One (1) 60-00-5670 Air Bottle Compartment SS - Triple Bottle Y___N___

AIR BOTTLE STORAGE COMPARTMENT (TRIPLE COMPARTMENT)

One (1) spare air bottle compartment shall be provided and located, in the front portion of the driver's side rear wheel well area. The compartment will be capable of holding three (3) spare air bottles. The compartment shall be fabricated of stainless steel and lined to prevent vibration. The compartment shall have a drain hole in the floor.

One (1) 60-00-5705	No Driver's Side Rear Wheel Well Compt.	Y___N___
One (1) 60-00-5717	Air Bottle Compartment SS - Triple Bottle	Y___N___

AIR BOTTLE STORAGE COMPARTMENT (TRIPLE COMPARTMENT)

One (1) spare air bottle compartment shall be provided and located, in the rear portion of the driver's side rear wheel well area. The compartment will be capable of holding three (3) spare air bottles. The compartment shall be fabricated of stainless steel and lined to prevent vibration. The compartment shall have a drain hole in the floor.

One (1) 60-00-5805	No Officer's Side Front Wheel Well Compt.	Y___N___
One (1) 60-00-5820	Air Bottle Compartment SS - Triple Bottle	Y___N___

AIR BOTTLE STORAGE COMPARTMENT (TRIPLE COMPARTMENT)

One (1) spare air bottle compartment shall be provided and located, in the front portion of the officer's side rear wheel well area. The compartment will be capable of holding three (3) spare air bottles. The compartment shall be fabricated of stainless steel and lined to prevent vibration. The compartment shall have a drain hole in the floor.

One (1) 60-00-5905	No Officer's Side Rear Wheel Well Compt.	Y___N___
One (1) 60-00-5920	Air Bottle Compartment SS - Triple Bottle	Y___N___

AIR BOTTLE STORAGE COMPARTMENT (TRIPLE COMPARTMENT)

One (1) spare air bottle compartment shall be provided and located, in the rear portion of the officer's side rear wheel well area. The compartment will be capable of holding three (3) spare air bottles. The compartment shall be fabricated of stainless steel and lined to prevent vibration. The compartment shall have a drain hole in the floor.

One (1) 60-00-6101	Wheel Well Door - Painted	Y___N___

COMPARTMENT DOOR(S)

The wheel well compartment(s) where specified will have a vertically hinged painted stainless steel door(s) with Southco #E3-17-22 all stainless steel door latch. The door(s) shall be labeled: "SPARE SCBA CYLINDER". Door(s) shall be wired to the door ajar circuit.

One (1) Wheel Well Door - Painted Y___N___
60-00-6101

COMPARTMENT DOOR(S)

The wheel well compartment(s) where specified will have a vertically hinged painted stainless steel door(s) with Southco #E3-17-22 all stainless steel door latch. The door(s) shall be labeled: "SPARE SCBA CYLINDER". Door(s) shall be wired to the door ajar circuit.

One (1) Wheel Well Door - Painted Y___N___
60-00-6101

COMPARTMENT DOOR(S)

The wheel well compartment(s) where specified will have a vertically hinged painted stainless steel door(s) with Southco #E3-17-22 all stainless steel door latch. The door(s) shall be labeled: "SPARE SCBA CYLINDER". Door(s) shall be wired to the door ajar circuit.

One (1) Wheel Well Door - Painted Y___N___
60-00-6101

COMPARTMENT DOOR(S)

The wheel well compartment(s) where specified will have a vertically hinged painted stainless steel door(s) with Southco #E3-17-22 all stainless steel door latch. The door(s) shall be labeled: "SPARE SCBA CYLINDER". Door(s) shall be wired to the door ajar circuit.

One (1) Wheel Well Door - Painted Y___N___
60-00-6101

COMPARTMENT DOOR(S)

The wheel well compartment(s) where specified will have a vertically hinged painted stainless steel door(s) with Southco #E3-17-22 all stainless steel door latch. The door(s) shall be labeled: "SPARE SCBA CYLINDER". Door(s) shall be wired to the door ajar circuit.

One (1) Shelf Tracking S/S with (1) Adjustable Shelf for 5 compartments Y___N___
60-02-1004

SHELVING - ADJUSTABLE

A total of five (5) adjustable shelves shall be provided and installed in customer specified location.

Shelf construction where specified shall be rigid with 2" lip on the front and rear, and fabricated of 3/16" aluminum.

The shelving shall be adjustable by means of a threaded tightener that slides in a track to allow precise adjusting height. All tracking will be stainless steel uni-strut.

One (1) Shelving Adjustable (2) Y___N___
60-02-1600

SHELVING - ADJUSTABLE

A total of two (2) adjustable shelves shall be provided and installed in customer specified location.

Shelf construction where specified shall be rigid with 2" reinforcement on the front and rear, and fabricated of 3/16" aluminum.

The shelving shall be adjustable by means of a threaded tightener that slide in a track to allow precise adjusting height.

LOCATION:

Four (4) Poly Equipment Mounting Board Y___N___
60-02-3210

POLY BOARD MOUNTING BOARD

1/2" Black poly board will installed on the back wall of the specified compartment to allow for equipment mounting. The board will be spaced 1/2" from the back wall of the compartment.

Quantity:
Location:

Two (2) Slide Master steel 100% 1,000# Y___N___
60-03-0607

PULL OUT TRAY

A total of one (1) Slide Master, SM3-SP 3- rail, 100% steel powder coated slide out tray shall be provided and installed in customer specified location.

Sliding tray where specified shall be mounted in a manner that provides for maximum clearance overhead.

The tray shall have a minimum capacity of 1,000 pounds in its fully extended position.
The side mounted slides are to be equipped with ball bearings for ease of operation.

Trays will have a HSL push pull lock in the open and closed positions.

One (1) Mateflex Interlocking Tiles Y___N___
60-03-3010

FLOOR MATTING

All compartment floors shall be lined with Black Mateflex 13" X 13" x 9/16" interlocking tiles with tapered edging at the front compartment opening.

One (1) Compartment Doors S\S 18 Gauge Standard Y___N___
62-00-0500

COMPARTMENT DOORS

Doors to be fabricated of 304 grade stainless steel with 18 gauge inner and outer panels.

The doors shall be 3/4" thick and reduce the compartment depth by approximately 5/8" with the door closed.

The double panel design provides strength and a tight fit with 5/8" insulation installed between the panels for sound dampening.

Doors shall be of a rigid design. Door outer panel edges will be folded and welded to the inner panel.

Welding of the inner panel directly to the outer panel face shall not be permitted due to distortion caused by welding.
The use of body filler prior to painting of the outer door panels shall not be permitted. **No Exception**

Each door is to have closed cell rubber seal to provide a weather proof seal between the door and compartment.

The compartment doors shall pivot on full length stainless steel piano hinges with a 3/16" pin diameter.

Hinges shall be welded to compartment wall and bolted to doors with 10-24 stainless steel bolts.

Compartment doors will have stainless steel flush bent "D" ring handles. Latching mechanism shall be non-locking safety slam positive latch. Gasket material is placed between the door handles and outer door panels to prevent electrolytic reaction between dissimilar metals to protect paint finish.

Mechanism is enclosed in stainless steel not exposed to equipment stored in compartment.

An inner two point latch shall be provided on the second door of all double doors with a rubber covered pull cable when applicable.

Interior of doors shall be left natural stainless with swirl finish applied to give a lasting and pleasing appearance.

One (1) Drip Rails For Hinged Compartment Doors Y___N___
62-00-0800

DRIP RAILS

Bright aluminum "J" channel shall be provided over each lower side body compartment and at the front and rear of the compartments.

One (1) ROM - Roll-Up Series IV Compartment Door Rear Comp Y___N___
62-00-1500

ROLLUP DOOR

The rear compartment shall have a R•O•M Series IV roll-up shutter door with "satin finish" installed. Each shutter slat, track, bottom rail, and drip rail shall be constructed from anodized 6063 T6 aluminum.

Shutter slats will feature a double wall extrusion 0.315” thick with a concave interior surface to minimize loose equipment jamming the shutter door closed. Shutter slats will feature an interlocking end shoe to prevent side to side binding of the shutter door during operation. Slats must have interlocking joints with an inverted locking flange. Slat inner seal shall be a one piece PVC extrusion; seal design will be such to prevent metal to metal contact while minimizing dirt and water from entering the compartment.

Shutter door track shall be one piece design with integral overlapping flange to provide a clean finished look without the need of caulk. Door track shall feature an extruded Santoprene rubber double lip low profile side seal with a silicone co-extruded back to reduce friction during shutter operation.

Shutter bottom rail shall be a one piece double wall extrusion with integrated finger pull. Finger pull shall be curved upward with a linear striated surface to improve operator grip while operating the shutter door. Bottom rail shall have a smooth contoured interior surface to prevent loose equipment from jamming the shutter door. Bottom rail seal shall be made from Santoprene; it will be a double “V” seal to prevent water and debris from entering compartment. Bottom rail lift bar shall be a one piece “D” shaped aluminum extrusion with linear striations to improve operator grip during operation. Lift bar shall have a wall thickness of 0.125”. Lift bar shall be supported by no less than two pivot blocks; pivot blocks

shall be constructed from Type 66 Glass filled reinforced nylon for superior strength. Bottom rail end blocks shall have incorporated drain holes which will allow any moisture that collects inside the extrusion to drain out.

Shutter door shall have an enclosed counter balance system. Counter balance system shall be 4" in diameter and held in place by 2 heavy duty 18 gauge zinc plated plates. Counter balance system shall have 2 over-molded rubber guide wheels to provide a smooth transition from vertical track to counter balance system; no foam material of any kind shall be permitted or used in this area.

Magnetic door ajar switches shall be provided and installed within the shutter door strike block. Strike block will be mounted to the door track outside of the compartment. Door switch will be controlled by a magnetic end cap installed into the shutter lift bar. Door switch will provide a ground signal to a relay or multiplexing device to control compartment lighting and/or warn operator door is open.

The shutter door assembly shall be manufactured and assembled in the United States, no exceptions.

One (1) 62-00-2025	Roll-Up Door Modification - No Pull Strap Required	Y___N___
One (1) 62-00-2025	Roll-Up Door Modification - No Pull Strap Required	Y___N___
One (1) 62-01-0500	Door Closures Power Hydraulic Vertically Hinged	Y___N___

DOOR CLOSURES

All vertically hinged doors shall have power lift gas filled cylinders installed.

Closure shall assist in the closing of door once it has past the halfway point.

One (1) 62-01-1500	Door Closures Power Hydraulic Horizontally Hinged	Y___N___

DOOR CLOSURES

All horizontally hinged doors shall have power lift gas filled cylinders installed. Doors shall be held open at a 90 degree angle to the body.

Closure shall assist in the closing of door once it has past the halfway point.

One (1) 70-01-0000	Electrical - Custom Pumper	Y___N___

12 VOLT ELECTRICAL SYSTEM

All wiring and electrical equipment shall meet N.F.P.A. 1901 (2016 edition) and SAE standards.
A master optical warning device switch that energizes all of the optical warning devices shall be provided.

The optical warning system shall be capable of two separate signaling modes during emergency operations. One mode shall signal to drivers and pedestrians that the apparatus is responding to an emergency and is calling for the right of way. The other mode shall signal that the apparatus is stopped and is blocking the right of way. Switching of modes shall be controlled by the parking brake.

All wiring to be GXL ultra high temperature cross link type.
Wiring installed by the builder to be run in protective split loom where exposed to the outside.

Where wires pass through body compartments or panels grommets, snap bushings, or compression fittings shall be utilized.

All wiring harnesses and associated wiring shall be secured with nylon "ultra violet resistant" cable ties or bolted to the body with cable clamps.

Polyolefin "heat shrink" tubing with adhesive or Deutsch water tight connectors shall be used on all exterior wiring connections.

Flexible non-conductive polyurethane film shall be sprayed on all terminal studs, relays, starter, batteries, etc. To prevent corrosion.

All wiring shall be protected by automatic reset circuit breakers which conform to SAE standards. Any required exterior fuses shall be protected by an environmentally sealed fuse holder.

The breakers shall be selected to prevent wire damage when subjected to extreme current overload. Wiring to be color, function, and/or number coded.

A Class I power distribution relay board shall be utilized.
Distribution board contains independently switching relays with selectable input polarity. Relays can be connected in either their normally open or normally closed positions.

Relay board features heavy duty components, visual diagnostics, and load management inputs. System is user friendly for trouble shooting.

A wiring diagram for the body electrical system shall be included with the apparatus.

JUNCTION BOX

The electrical junction box for all 12 volt wiring shall be located in a convenient location. It will be recessed into the compartment wall not to protrude into the storage area. It shall have a removable access panel.

The compartment shall be sealed and weather proof. All components in compartment shall have identification tags.

CLEARANCE LIGHTS

All required Clearance lights shall be provided at the rear and on each side of the unit to meet Federal regulations. All lights will be (LED) Light Emitting Diode type with a five (5) year warranty.

On apparatus 30 feet in length or longer, a Trucklite model 60072Y Amber LED turn signal light with stainless steel flange shall be mounted one (1) each side in rear wheel well area at approximately running board height.

LED STEP AREA LIGHTING

Four (4) step area lights shall be provided. One mounted each side on the front compartment face to illuminate the panel running board steps and two mounted at the rear of the unit to illuminate the rear tailboard step. These lights shall be activated when the parking brake is applied.

Whelen 3SCOCDCR series 3.00” round LED lights shall be utilized. Depending on body application the lights will either be mounted in a rubber grommet or surface mounted with a chrome flange.

HAZARD LIGHT

A red flashing light shall be located in the driving compartment, and shall be illuminated automatically whenever the apparatus parking brake is not fully engaged and any passenger or equipment compartment door is open, any ladder or equipment rack is not in the stowed position, a stabilizer system is deployed, a powered light tower is extended, or any other device is opened, extended, or deployed that creates a hazard or is likely to cause damage to the apparatus if the apparatus is moved. The light shall be marked "DO NOT MOVE APPARATUS WHEN LIGHT IS ON".

One (1) License Plate Light - LED Y___N___
70-02-1570

LICENSE PLATE LIGHT

One (1) Trucklite model 15055 LED license plate light and bracket shall be provided on the rear of the unit.

One (1) Emergency Warning Light Switches Custom Cab Y___N___
70-02-1600

EMERGENCY WARNING LIGHT SWITCH CONTROLS

All warning light switches shall be mounted in the cab in a readily accessible location.

The master switch and individual switches furnished with custom chassis shall be utilized to allow preselection of lights. The light switches are to be "rocker" type with an internal indicator light to show when the switch is energized. All switches to be properly identified and mounted in a removable panel for ease in servicing. Identification of the switches shall be done by either printing or etching on the switch panel.

One (1) Whelen M6 Quad Cluster LED Rear Stop, LED Turn, LED Backup Y___N___
70-02-2800

WHELEN M6FCV4 QUAD CLUSTER REAR DOT LIGHTING

BACKUP LIGHTS

Two (2) Whelen model M6BUW Super LED backup lights

STOP/TAIL LIGHTS

Two (2) Whelen model M6BTT series Super LED Brake/Tail lights

DIRECTIONAL LIGHTS

Two (2) Whelen model M6T series Super LED arrow directional turn signal lights

The backup lights, stop/tail lights, and directional lights along with rear lower level warning lights shall be installed on the lower rear face of the unit and shall be recessed in chrome plated flange.

One (1) Compartment Lights Soundoff Signal (1) 10" Y___N___
70-02-3100

COMPARTMENT LIGHTS

One (1) SoundOff Signal model ECVCLLED10, 10” strip LED compartment light shall be provided in each compartment. The lighting shall be mounted in the ceiling of the compartment.

All compartment lighting shall be automatic by the opening and closing of the door.

All main apparatus body compartments shall have door ajar switches.

One (1) Compartment Lights SoundOff Signal 21" Single For 30" H Compt. Y___N___
70-02-3290

COMPARTMENT LIGHTS

SoundOff Signal model ECVCLLED21, 21” LED compartment lighting shall be provided in each compartment. The lighting shall be mounted behind the door jamb on one side of the compartment.

All compartment lighting shall be automatic by the opening and closing of the door.

All main apparatus body compartments shall have door ajar switches.

One (1) Ground LED Lighting Custom Pumper Y___N___
71-03-0700

LED GROUND LIGHTING

The apparatus shall be equipped with lighting capable of providing illumination at a minimum level of two (2) footcandle on ground areas within 30.00" of the edge of the apparatus in areas designed for personnel to climb onto the apparatus or descend from the apparatus to the ground level. Lighting designed to provide illumination on areas under the driver and crew riding area exits, which shall be activated automatically when the parking brake is set. Lights shall be installed in a manner that illuminates all walkways and steps for safe operation of the apparatus.

TecNiq E10-WSOO-1 6.00" LED lights mounted in a stainless steel bracket shall be utilized.

Two (2) lights mounted under the rear step.
One (1) light located each side under the pump panel running boards.

One (1) (1) SoundOff LED Pump Compartment Light Y___N___
71-04-0099

PUMP COMPARTMENT LIGHT

One (1) SoundOff model ECVCSLLED10-10” LED pump compartment light shall be provided within the pump enclosure. The control switch shall be located on the pump operators panel.

One (1) TecNiq LED Front Hose Bed Lights Y___N___
71-31-3000

HOSE BED LIGHTS

There shall be two (2) TecNiq (model E10-W000-1) 6.00" LED lights with clear lens lights mounted at the front of the hose bed. The lights will be activated by a swtich located on the pump panel.

One (1) Whelen Dunnage Area LED Lights Y___N___
71-31-3008

DUNNAGE AREA LIGHTS

There shall be two (2) Whelen 3SCOCDCR series 3.00” round LED lights provided and mounted in the dunnage area to provide adequate illumination of this area. The lights will be activated when the parking brake is applied.

One (1) Light Bar - Furnished With Custom Chassis Y___N___
75-12-0025

NFPA APPROVED UPPER LEVEL LIGHT PACKAGE

ZONE A - FRONT UPPER

A cab roof light bar will be furnished with the custom chassis.

One (1) L31H - Super Red LED Zone C Y___N___
75-30-0004

ZONE C - UPPER

Two (2) model L31HRFN Super Red LED 360 beacon lights mounted on the upper rear light stanchions.

One (1) Whelen M9 Zone B&D (4) Zone C (2) Y___N___
75-30-1018

ZONE B & D - SIDE UPPER

Two (2) Whelen M9 Super LED lights with chrome bezels will be mounted one each side on the upper front side corners of the body.

Two (2) Whelen M9 Super LED lights with chrome bezels will be mounted one each side on the upper rear side corners of the body.

ZONE C - REAR UPPER

Two (2) Whelen M9 Super LED lights with chrome bezels will be mounted on the upper rear of the body.

One (1) Whelen Upper Level Light Lens Color - Red Y___N___

75-30-1050

UPPER LEVEL LIGHT LENS COLOR

The upper level lights shall have red lenses.

One (1) Whelen M Series LED Lower Level Lighting Custom Cab B&D (2) Y___N___

75-40-0620

WHELEN LOWER LEVEL LIGHTING

ZONE A - LOWER

Two (2) LED lights provided by chassis manufacture.

ZONE B & D- SIDE LOWER

One (1) LED lights provided by the chassis manufacture.

Two (2) M7 Super LED lights with chrome bezel mounted one (1) each side in the rear body fender area.

ZONE C - LOWER

Two (2) M6 Super LED lights mounted on the lower rear of the apparatus in M6FCV4 chrome housing.

One (1) Whelen Lower Level Light Lens Color - Red Y___N___

75-40-0800

LOWER LEVEL LIGHT LENS COLOR

The lower level lights shall have red lenses.

One (1) Siren - Furnished with Custom Chassis Y___N___

85-01-0480

ELECTRONIC SIREN

The electronic siren will be furnished with the custom chassis.

One (1) Speaker - Furnished with the Custom Chassis Y___N___

85-02-0480

SIREN SPEAKER

The siren speaker will be furnished with the custom chassis.

One (1) Six (6) Tech Guardian Elite Y___N___

88-01-0502

SCENE LIGHTS

Six (6) FireTech HI-Viz model GESM Gaurdian Elite 20,500 lumens LED, (9.65" high x 10.63" wide) white scene lights will be installed on the body.

Two (2) located each side of the body, one (1) at the front and one (1) at the rear, and two (2) located on the rear face of the unit.

Lights will be controlled by three individual switches located in the cab. Rear lights will also be activated when unit is put into reverse.

One (1) Paint And Preparation - Body Only Y___N___
98-00-0100

PAINT AND PREPARATION

All metal surfaces will be properly sanded, prepared and finished ready for our Axalta Coating Systems pretreatment. This is done to insure optimum adhesion, corrosion resistance, and durability.

After pretreatment, 1220S Axalta Coating Systems 5000 URO primer filler is applied designed to fill any minor surface defects and provide an adhesion layer between the pretreatment and the Imron Base Coat/Clear Coat. This is also applied to improve color gloss, retention, and durability of the paint.

Next the URO primer will be sanded to a smooth prepainting surface. The surface will be decontaminated and prepared for application of High Solids Axalta Coating Systems Productive Base Coat/Clear Coat finish to complete the finished paint process.

A full inspection is performed of Defects, Depth Imagery, Gloss, Film Build, Color Match and Texture, all to meet or exceed Axalta Coating Systems OEM fleet finish specifications.

Body assemblies that cannot be finish painted upon assembly shall be painted prior to finish assembly. All doors are removed and painted separate from the body.

Prior to reassembly and reinstallation of lights, handrails, door hardware, and any miscellaneous items; a gasket material or silicone sealant shall be applied to prevent damage to the finish painted surfaces and to protect against electrolysis between dissimilar metals.

Touch up paint shall be provided for each color paint used.

The complete apparatus body will be painted a single color to match the color of the cab. The cab shall remain as painted from the chassis supplier.
Paint Color _____ - Paint #_____

One (1) Paint Stripe Wheels Single Axle Y___N___

98-01-0100

PAINTED WHEELS

Vehicle wheels shall be painted to match the exterior paint.

One (1) 3.00" Lettering - Gold Vinyl Y___N___

99-00-0500

LETTERING

Lettering shall be provided. It shall be computer generated, non-reflective, Gold Metallic Acrylic Vinyl Applique with a black border.

Computer generated lettering provides a proportional layout design and durable finish.

Included will be a maximum of sixty five (65) three (3) inch letters.

One (1) Reflective Striping - 4" Y___N___

99-01-0500

REFLECTIVE STRIPING

A 4" wide white reflective stripe shall be applied to the unit in a straight line.

Per NFPA 15.9.3.1 this shall include at least 50 percent of the cab and body length on each side, excluding the pump panel areas, and at least 25 percent of the width of the front of the apparatus.

One (1) Chevron Rear reflective Y___N___

99-03-2200

REFLECTIVE CHEVRON - NFPA 15.9.3.2

50 percent of the rear-facing vertical surfaces, visible from the rear of the apparatus, shall be equipped with retroreflective striping in a chevron pattern sloping downward and away from the centerline of the vehicle at an angle of 45 degrees. Each stripe shall be 6" in width.

Stripe Colors will be Red & Yellow.

One (1) Equipment Y___N___

A0-00-0000

EQUIPMENT

The following equipment shall be provided along with any necessary mounting brackets.

NFPA EQUIPMENT CLARIFICATION

Any equipment specified in the “Minor Equipment” section (e.g. hose, nozzles, adapters, AED, traffic cones, traffic safety vests, etc.) of NFPA 1901 for each apparatus classification which is not specified in this proposal will be considered to be customer supplied.

One (1) Two (2) Suction Hose - 6" x 10' Flex Y___N___
B1-10-5900

SUCTION HOSE

Two (2) Firequip Maxi-Flex 6" x 10' light weight PVC Suction hose with male and 6" long handled female couplers.

One (1) Strainer - 6" Barrel Y___N___
B2-01-6000

SUCTION HOSE STRAINER

One (1) South Park #BS4522AC, 6.00" barrel strainer will be provided and mounted in customer specified location.

One (1) Duo-Safety 10' Folding Attic - Model 585-A-10 Y___N___
E5-02-3000

10' FOLDING LADDER

A Duo-Safety model 585-A-10, 10' folding ladder shall consist of 1-section aluminum ladder with rubber feet shall be provided and installed in customer specified location. Ladder shall meet or exceed the latest NFPA standards.

One (1) Duo-Safety 14' Roof - Model 775-A-14 Y___N___
E5-02-5100

14' ROOF LADDER

There shall be a 14', Duo-Safety model 775-A-14, roof ladder of single section aluminum with folding steel roof hooks on one end and steel spikes on the other end. Ladder shall meet or exceed latest NFPA standards.

One (1) Duo-Safety 24' Extension - Model 900-A-24 Y___N___
E5-02-7500

24' EXTENSION LADDER

A Duo-Safety model 900-A-24, 24' extension ladder shall consist of 2 aluminum sections. Ladder shall meet or exceed NFPA standards.

One (1) Pike Pole - 8' Fiberglass Y___N___
E5-10-3500

8' FIBERGLASS PIKE POLE

One (1) Duo-Safety Type FP, 8' fiberglass handle pike pole shall be provided consisting of a 8' hollow fiberglass pole 1-3/4" OD with a painted steel pike riveted to the pole.

One (1) Pike Pole - 10' Fiberglass Y___N___
E5-10-4000

PIKE POLE

One (1) Duo-Safety Type FP, 10' fiberglass handle pike pole shall be provided consisting of a 10' hollow fiberglass pole 1-3/4" OD with a painted steel pike riveted to the pole.

One (1) F1-01-0001 Zico AC32 Wheel chocks - underbody (2) Y___N___

WHEEL CHOCKS

Two (2) Zico AC32 wheel chocks will be provided and mounted under the left front compartment.

One (1) O2-01-0000 Kochek Spanner wrench - with hydrant wrench Y___N___

SPANNER WRENCH SET W/HYDRANT WRENCH

One (1) set of Kochek style K45-3Y spanner wrenches shall be provided and mounted in customer specified location. Includes (1) Hydrant wrench and (2) spanner wrenches with mounting bracket.

Location:

One (1) O2-01-0500 Kochek Spanner wrench - (2-1/2") Y___N___

SPANNER WRENCH SET

One (1) set of Kochek style K46-2Y spanner wrenches shall be provided and mounted in customer specified location. Includes (2) spanner wrenches with mounting bracket.

Location:

One (1) O4-00-6100 Traffic Vest NFPA Customer Supplied Y___N___

SAFETY FIRE VEST

The NFPA required Safety Vest will be supplied and installed by the purchaser before the truck is placed into service.

One (1) O4-00-6110 Traffic Cones Customer Supplied Y___N___

TRAFFIC CONES

The NFPA required traffic cones will be supplied and installed by the purchaser before the truck is place into service.

One (1) O4-00-6120 Automatic External Defibrillator (AED) Customer Supplied Y___N___

AUTOMATIC EXTERNAL DEFIBRILLATOR (AED)

The NFPA required AED will be supplied and installed by the purchaser before the truck is placed into service.

One (1) Chassis Delivery Y___N___
Z0-20-0000