

Central States Fire Apparatus

One (1)

Production Specifications, revised 10-06-03

One (1)

01-01-0100

DEPARTMENT NAME: Gooding City-Rural Fire Department

ADDRESS: 422 Idaho Street

CITY: Gooding

STATE: Idaho

ZIP: 83330

FIRE CHIEF: Pat Bishop

TELEPHONE: (208) 934-8348

FAX: (208) 934-0994

CHASSIS MAKE: Navistar

MODEL: 4400

ENGINE: DT530 330 HP

TRANSMISSION: 3000EVS_P

MAXIMUM OVERALL HEIGHT: N/A

MAXIMUM OVERALL LENGTH: N/A

WHEELBASE: 232"

One (1)

1B-00-0500

WARRANTY

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

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

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

Central States Fire Apparatus

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

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

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

One (1)
1B-00-0900

DARLEY PUMP WARRANTY

W.S. Darley & Co. ("Darley") warrants to the original purchaser (the "Customer") only, subject to the terms and conditions of this Limited Warranty, that Darley will at its option, repair or replace, in whole or in part, any Champion Pump (hereafter, "Pump") which Darley determines to be defective in materials or workmanship produced or performed by Darley, for a period commencing on the date such Pump is shipped to Customer from Darley's plant ("the Ship Date") and ending on the earlier of **(five) years or 5000 hours** of pump usage following the Ship date (the "Warranty Period"). Darley may also, at its discretion, elect to refund the purchase price to the Customer in lieu of any repair or replacement. Original Equipment Manufacturer ("OEM") Customers may transfer this warranty to their end purchasers without the written consent of Darley, provided such OEMS identify such customers by written notice to Darley.

This warranty does not cover any parts or equipment which may be included in a Pump, but which are not manufactured by Darley, and such non-covered items shall carry only such warranties, if any, made by their respective manufacturers and assignable to Customer. This warranty further excludes any coverage of damage or loss to any equipment or structures in which a Pump is incorporated or to which a Pump may be attached, as well as any damage to or failure of a Pump caused by or related to misuse, accident, failure to maintain or service, abuse, negligence, applications which exceed Darleys recommended limitations, or in the event of Customer's unauthorized or improper modifications of a Pump and (regardless of any actual or constructive knowledge Darley may have of such modifications), or in the event a pump has been repaired, altered, or treated by anyone other than Darley-trained technicians, Darley or its authorized service provider.

The following repairs or replacement expenses are specifically excluded from the scope of the warranty: Non-defective parts worn, exhausted or consumed through normal usage; consumable parts subject to routine replacement, including but not limited to pump packing, O-rings, gaskets, intake screens, anodes or filters; and routine maintenance specified in the operator's manual.

Customer shall notify Darley in writing within the Warranty Period of any claim under this Warranty, to Darley's Melrose Park, Illinois office (except as other wise directed), and Customer shall comply with Darley's Reasonable claim documentation and processing according to Darley's Returned Goods Authorization form and procedures, which should be requested when making a warranty claim.

Within 30 days of Customer's receipt of a Returned Goods Authorization, Customer shall return the Pump or claimed defective component thereof to Darley, F.O.B. Darley's designated plant. Customer shall bear all of its own costs of dismantling, removing, shipping, storing, insuring and reinstalling Pumps or parts thereof, which are submitted to Darley for warranty evaluation. Darley shall within a reasonable time examine the returned item and determine whether such item is defective, and at Darley's election, whether to repair, replace, recondition, or refund the

Central States Fire Apparatus

price thereof. The amount of any refund shall not exceed Customer's purchase price. No reimbursement or allowance will be made to Customer for Darley's labor costs or other expenses of repairing or replacing defective products or workmanship, all such costs of which shall be billed to Customer. Any repaired Pumps or replacement parts shall also be covered by this limited warranty, subject to the same original Warranty Period (which shall not be extended by reason of any repair or replacement).

This limited warranty shall be Customer's sole and exclusive contractual remedy for any defect or failure of a Pump or component, and as such excludes any remedy or cause of action in tort or contact against Darley or any of its suppliers or distributors for liability to Customer or to any other person for any incidental, consequential, or other damages (including but not limited to personal injury; death; property damage due to fire, water, or any other cause; loss of crops, timber, or wildlife; loss of time or interruption of operations or related costs; delays; demurrage; lost profits; or indirect or special damages) arising out of or relating to the use (including any malfunction) or inability to use any original, repaired, replaced, or substitute Pump, regardless of the reason for such damage, loss or injury. Under no circumstance will Darley's liability for any claim hereunder, including for breach of warranty of any cause of action related to an alleged breach of this warranty, exceed Customer's purchase price for the pump or component thereof, which is the subject of the warranty.

THIS LIMITED WARRANTY IS THE ONLY WARRANTY MADE BY DARLEY, AND IS IN LIEU OF ANY OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, ANY OF WHICH ARE DISCLAIMED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY, OF FITNESS FOR A PARTICULAR PURPOSE, OR OF FREEDOM FROM PATENT INFRINGEMENT. CUSTOMER ASSUMES ALL RISK OF USING ALL PUMPS FOR ALL FORESEEN AND UNFORESEEN PURPOSES, CUSTOMER'S REMEDIES CONTAINED HEREIN ARE EXCLUSIVE.

All terms of this limited warranty are subject to the standard W.S. Darley & Co. purchase contract standard terms and conditions in effect at the time of sale, and to any written modifications to this standard limited warranty agreed to by Darley and Customer (including but not limited to the Darley Champion Pump Premium Protection Plan). Any bad faith invocation of a warranty claim, or customer's breach of purchase contract (including OEM breaches), will void Darley's obligations to Customer Hereunder. The scope and operation of this limited warranty shall be interpreted under Illinois law.

One (1)
1B-00-2500

5-YEAR ALUMINUM BODY WARRANTY

Central States Fire Apparatus LLC (CSFA) warrants to the original purchaser only, that the all aluminum body, fabricated by Central States Fire Apparatus, under normal use and with reasonable maintenance, be structurally sound and will remain free from corrosion perforation for a period of FIVE (5) years.

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

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

Central States Fire Apparatus will replace without charge, repair or make a fair allowance for any defect in material or workmanship demonstrated to its satisfaction to have existed at the time of

Central States Fire Apparatus

delivery or not due to misuse, negligence, or accident. If Central States Fire Apparatus elects to repair this body, the extent of such repair shall be determined solely by Central States Fire Apparatus, and shall be performed solely at the Central States Fire Apparatus factory, or at an approved facility. The expense of any transportation to or from such repair facility shall be borne by the purchaser and is not an item covered under this warranty.

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

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

One (1)
1B-00-3500

PAINT WARRANTY

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

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

GUARANTEE INCLUSIONS:

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

- * Peeling or delamination of the topcoat and/or other layers of paint.
- * Cracking or checking.
- * Loss of gloss caused by cracking, checking, or hazing.
- * Any paint failure caused by defective PPG Fleet Finishes which are covered by this guarantee.

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

One (1)
BI-49-2000

CAB AND CHASSIS SPECIFICATIONS

APPLICATION: 2004 International 4400 SBA 4x2

MISSION: Requested GVWR: 36000. Calc. GVWR: 36000
Calc. Strt/Grade Ability: 46% / 3.51% @ 55 MPH
Calc. Geared Speed: 72 MPH

FUEL ECONOMY: 8.19 MPG @ 55 MPH

DIMENSION: Wheelbase: 231", CA: ", Usable CA: 120", Axle to Frame: 75

ENGINE, DIESEL: (International DT530 Standard Torque) Electro-Hydraulic Fuel System, 50 State, 330 HP @ 2000/2200 RPM, 950 lb-ft. Torque @ 1200 RPM,

Central States Fire Apparatus

2200 RPM Governed Speed, 330 Peak HP (Max) Includes #2 Bell Housing

**TRANSMISSION,
AUTOMATIC:**

(Allison 3000EVS_P) Close Ratio, 5-Speed; Includes Oil Level Sensor, With Provision for PTO, Less Retarder

CLUTCH:

Omit Item (Clutch & Control)

**AXLE, FRONT
DRIVING TYPE:**

(International I-120SG), 12,000-lb. Capacity

**AXLE, REAR,
SINGLE:**

(Dana Spicer 23090S) Single Reduction 24,000-lb Capacity with 200 Wheel Ends Gear Ratio for 72 MPH

CAB:

Conventional Steel; 6-Man Crew Cab

TIRE, FRONT:

(2) 11R22.5 Unisteel G159 (GOODYEAR) 501 rev/mile, load range G, 14 ply

TIRE, REAR:

(4) 11R22.5 G124 (GOODYEAR) 482 rev/mile, load range H, 16 ply

**SUPENSION,
RR SPRING, SINGLE:**

Vari-Rate; 31,000-lb Capacity, includes 4500-lb. Multileaf Auxiliary

Description

Base Chassis, Model 4400 SFA 4X2 with 231" Wheelbase, 120" CA, 120" Usable CA, and 75 Axle to Frame.

TOW HOOK FRONT (2) Frame Mounted.

FRAME RAILS Heat Treated Alloy Steel (120,000 PSI Yield); 10.375" x 3.705" x 0.438" (263.5mm x 94.1mm x 11.1mm); 456.0" (11582mm) Maximum OAL

BUMPER, FRONT full Width, Aerodynamic, Chrome Plated Steel; 0.142" Material Thickness

AXLE, FRONT DRIVING TYPE (International I-120SG) 12,000-lb Capacity

SUPENSION, FRONT, SPRING Parabolic, Taper Leaf; 12,000-lb Capacity; With Shock Absorbers

Includes

:SPRING PINS Rubber Bushings, Maintenance-Free

BRAKE SYSTEM, AIR Dual System for Straight Truck Applications

Includes

:AIR COMPRESSOR AIR SUPPLY LINE Through Air Cleaner

:BRAKE CHAMBERS, SPRING (2) Rear Parking

:BRAKE LINES Color Coded Nylon

:SLACK ADJUSTERS, FRONT Automatic

:SLACK ADJUSTERS, REAR Automatic

:PARKING BRAKE VALVE Color-Coded Yellow Knob, Located on Instrument Panel

Central States Fire Apparatus

:DRAIN VALVE Twist-Type
:SPRING BRAKE MODULATOR VALVE
:GAUGE, AIR PRESSURE Located in Instrument Cluster Air 1 and Air 2
Gauges;

DRAIN VALUE, AUTOMATIC {Bendix DV-2} With Heater, for Air Tank

AIR BRAKE ABS {Bendix AntiLock Brake System} Full Vehicle Wheel Control System (4-channel)

AIR DRYER {Bendix AD-IP} With Heater; for Air Tank

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

BRAKES, REAR, AIR CAM 16.5" x 7.0", Includes MGM TR3030 Long Stroke Brake Chamber and Heavy duty Spring Actuated Parking Brake

AIR COMPRESSOR {Bendix Tu-Flo 750} 16.5 CFM

DUST SHIELDS, FRONT BRAKE

DUST SHIELDS, REAR BRAKE

STEERING COLUMN Tilting

STEERING WHEEL 2-Spoke, 18" Diam, Black

STEERING GEAR {TRW (Ross) TAS-65 } Power

EXHAUST SYSTEM Single, Horizontal Muffler and Short Tail Pipe, Aluminized Steel; Frame Mounted Right Side

ENGINE EXHAUST BRAKE (Jacobs) for International I-6 Engines

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

:PARKING LIGHT Integral with Front Turn Signal and Rear Tail Light

:STOP, TURN, TAIL & B/U LIGHTS Dual, Rear, Combination with Reflector

:STARTER SWITCH Electric Key Operated

:TURN SIGNALS, FRONT Flush Mounted Include 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

:WINDSHIELD WIPER SWITCH 2-Speed Integral with Turn Signal Switch with Wash and Intermittent Feature,

:WIRING, CHASSIS Color-coded and Continuously Numbered

Central States Fire Apparatus

ALTERNATOR (Leece-Neville 4867JB) Brush Type; 12 Volt 270 Amp.
Capacity with Self Excite, Includes a 1-Gauge Charging Circuit

BODY BUILDER WIRING To Rear of Frame, With Stop, Tail, Turn, and Marker Lights Circuits,
Ignition Controlled Auxiliary Feed and Ground, Less Trailer Socket

Battery System (3) (International) Maintenance-Free 12-Volt 1950 CCA Total

HORN, AIR {Grover} Black, Single Trumpet, Air Solenoid Operated, Mounted Behind Bumper on
Right Side

BATTERY DISCONNECT SWITCH {Joseph Pollack 51-315} Positive Type, Lever Operated,
Mounted on Cab Floor

ALTERNATOR PULLEY 2.4" Diameter for Increased Alternator Output at idle; for Fire Truck Must
Include: Fire Truck Identity Code

SWITCH, AIR HORN, PASSENGER Fire Truck Application; Switch Located in Instrument Panel
Close to Passenger, Driver Also to Activate Switch at Steering Wheel.

HEADLIGHTS Long Life Halogen: Composite Aero Design for Two Light System; Includes
Daytime Running Lights

STARTING MOTOR {Leece-Neville MS2} 12-Volt; less Thermal Over-Crank Protection

GRILLE Chrome

FRONT END Tilting, Fiberglass, With Three Piece Construction

PAINT SCHEMATIC, PT-1 Single Color, Design 100

Includes

:PAINT SCHEMATIC ID LETTERS "GM"

PAINT TYPE Base Coat/Clear Coat, 1-2 Tone

CLUTCH Omit Item (Clutch & Control)

ENGINE, DIESEL {International DT530 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 #2 Bell Housing

Includes

:GAUGE, AIR CLEANER RESTRICTION Air Cleaner Mounted

:CRUISE CONTROL Electronic; Controls Integral to Steering Wheel

:WET TYPE CYLINDER SLEEVES

:ENGINE SHUTDOWN Electric, Key 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

Central States Fire Apparatus

FAN DRIVE {Borg Warner Kysor Series 8000} With Front Tether Air Inlet and With Nylon Fan;
Use With International DT466 & 530 Engines

Includes

:FAN Nylon

RADIATOR Aluminum; 2-Row, Cross Flow, Over Under System, 516 Sqin Louvered, With 270
Sqin Charge Air Cooler, 4.25" Core

Includes

:ANTI-FREEZE Texaco Long Life Coolant -40F (-40C)

:DEAERATION SYSTEM with Polypropylene Tank

:RADIATOR HOSES Premium, Rubber

AIR CLEANER Single Element

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; Electronic, Stationary,
Variable Speed; Mounted on Steering Wheel

ENGINE WATER COOLER {Sen-Dure} Auxiliary, For Use With Fire Trucks

TRANSMISSION, AUTOMATIC {Allison EVS3000_P} Close Ratio, 5-Speed; Includes Oil Level
Sensor, With Provision for PTO, Less Retarder

Includes

:TRANSMISSION OIL PAN Magnet in Oil Pan

TRANSMISSION SHIFT CONTROL (Allison) T-Bar Type; for Allison MD & HD Transmissions

TRANSMISSION OIL (Castro TranSynd) Synthetic; 29 thru 42 Pints

ALLISON WT SPARE INPUT/OUTPUT for Fire Truck/Emergency Vehicles

AXLE, REAR, SINGLE {Dana Spicer 23090S} Single Reduction 24,000-lb Capacity with 200
Wheel Ends, For Fire Truck/RescueUnit/Tanker, Applications Only

Includes

:REAR AXLE DRAIN PLUG (1) Magnetic

SUSPENSION, RR, SPRING, SINGLE Vari-Rate; 31,000-lb Capacity, Includes 4500-lb Capacity
Multileaf Auxiliary

FUEL TANK Top Draw; D Style, Steel, 50 U.S. Gal., 189 L 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

CAB Conventional Steel; 5-Man Crew Cab

Includes

:CLEARANCE/MARKER LIGHTS (5) Flush Mounted

:ARM REST (2) Molded Plastic, Smoke Gray; One Each Door

Central States Fire Apparatus

:FLOOR COVERING Rubber, Black
:COAT HOOK Located on Rear Wall, Centered Above Rear Window
:GRAB HANDLE, CAB INTERIOR (4) Front and Rear of “B” Pillar, Two Each Side
:GRAB HANDLE, CAB INTERIOR (2) “A” Pillar Mounted, One Each Side
:STEP (4) Two Steps Per Door
:GLASS, ALL WINDOWS Tinted

GAUGE CLUSER 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 CLUSER GAUGES (5) Engine Oil Pressure (Electronic), Water Temperature (Electronic), Fuel (Electronic), Tachometer (Electronic), Voltmeter

GAUGE, OIL TEMP, ALLISON TRAN

GAUGE, AIR CLEANER RESTRICTION {Filter-Minder} With Black Bezel Mounted In Instrument Panel

SEAT, DRIVER {M.O. Bostrom Sierra Air 140} Air Suspension, High Back, Vinyl with Covered Back and International on Headrest

Includes

:SEAT BELT 3-Point, Lap and Shoulder Belt Type

SEAT, PASSENGER {H.O. Bostrom Tanker 450} for SCBA; non-Suspension, High Back, Vinyl, 7-Degree Back Angle, With Covered Back and International on Headrest, With Adjusters

Includes

:SEAT BELT 3-Point, Lap and Shoulder Belt Type

SEAT, REAR BENCH {H.O. Bostrom Tanker 400Ct} for SCBA; Three Individual Seats on One Riser, Non Suspension, High Back, Vinyl, With Covered Back and International on Head Rest

Includes

:SEAT BELT (3) 2-Point Lap Belts

GRAB HANDLE (2) Towel Bar Type Anti-Slip Rubber Inserts, for Cab Entry Mounted Left and Right

GRAB HANDLE, ADDITIONAL (2) Chrome; Towel Bar Type With Anti-Slip Rubber Inserts; Mounted Left and Right Side on Exterior, Rear of Rear Doors, With Crew Cab

MIRRORS (2) {Lang Mekra} Styled; Rectangular, 7.09 x 15.75, Brackets Breakaway Type, With 102 Wide Spacing, With Integral Convex Both Sides, With Heads, Thermostatically Controlled, With Bright Finish Head and Brackets

INSTRUMENT PANEL Center Section, Flat Panel

AIR CONDITIONER {International blend-Air} With Integral Heater & Defroster

Central States Fire Apparatus

Includes

:REFRIGERANT Hydrofluorocarbon HFC-134A
:FRESH AIR FILTER
:HEATER HOSES Premium

CAB INTERIOR TRIM Delux; for Crew 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 (Pull-Out)
: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 (1) Molded Plastic, Smoke Gray, Full-Length; Mounted on Passenger Door
:CAB INTERIOR TRIM PANELS Molded Plastic, Full-Height; All Exposed Interior Sheet Metal is Covered
:DOOR TRIM PANELS (2) Molded Plastic; Driver and Passenger Doors

CAB REAR SUSPENSION Air Bag Type

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

Includes

:WHEEL SEALS, FRONT Grease Lubricated, Includes Wheel Bearings

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 Bearing
:WHEEL SEALS, FRONT {International} Oil-Lubricated Wheel Bearings

(2) TIRE, FRONT 11R22.5 UNISTEEL G159 {GOODYEAR} 501 rev/mile, load range H, 14 ply

(4) TIRE, REAR 11R22.5 G124 (GOODYEAR) 482 rev/mile, load range H, 16 ply

CHASSIS COLOR: White

One (1)
CC-50-0116

CHASSIS STEP OVERLAY COMPARTMENTS

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

One (1)
CC-50-0118
good-0005

Central States Fire Apparatus

CHASSIS STEP OVERLAY COMPARTMENTS

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

One (1)
CC-50-0510

STEP TYPE FUEL TANK

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

One (1)
CC-50-3500

CHASSIS AIR FILL CONNECTION

A quick disconnect male air-fill fitting is to be provided and installed near the drivers door entrance area. Air chuck is to be plumbed through a one way check valve, and connected to the proper air reservoir tank to fill the chassis air system. A matching female fitting is to be provided and shipped loose with the completed apparatus.

One (1)
CC-50-6000

REAR MUD FLAPS

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

One (1)
CC-51-1100

HORIZONTAL CHASSIS EXHAUST

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

One (1)
CC-51-1300

CHASSIS EXHAUST HEAT SHIELD

The chassis exhaust system shall have a heat shield installed where the exhaust pipe passes below the side compartments.

One (1)
CC-60-1000

AUTOMATIC TIRE CHAINS

On-Spot automatic chains shall be provided and mounted at the rear wheels and have a control switch mounted in the chassis cab accessible to the driver.

Four (4)
CC-60-2000

SCBA BRACKETS IN CAB

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

The brackets shall hold SurviveAir 30 minute composite bottles.

One (1)
CC-60-2300

MAP BOX

good-0005

Central States Fire Apparatus

A fabricated map box/pocket 5" wide x 12.5" long x 8" deep is to be provided and mounted within the chassis cab, accessible to the left and right front seating positions. The box is designed to hold three ring notebook binders.

One (1)
CC-65-0400

ALTERNATOR

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

One (1)
DH-20-1000

UL TEST

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

One (1)
DH-20-1200

ALTITUDE REQUIREMENTS

The apparatus shall be designed to meet the specified rating at 3800 feet altitude. .

One (1)
DH-20-2000

PUMP COOLING LINE

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

One (1)
DH-20-5000

HEAT EXCHANGER

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

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

One (1)
DW-01-1300

DARLEY PSM-1250 GPM SINGLE STAGE FIRE PUMP

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

One (1)
DW-02-1500

SINGLE STAGE FIRE PUMP

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

Central States Fire Apparatus

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

Suction intakes shall be provided with removable die cast zinc screen designed to provide cathodic protection for the pump, thus reducing corrosion in the pump.

Fire pump shall be driven by a midship mounted high strength gear drive transmission.

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

The pump casing shall be a three piece, vertically split design, high strength gray iron. The impeller shall be a single suction double hubbed, balanced both mechanically and hydraulically for virtually vibration free operation. Replaceable bronze wear rings shall be provided.

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

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

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

PRIMING SYSTEM

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

A high capacity, electrically driven rotary vane priming pump shall be provided.

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

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

One (1)
DW-05-0100

MANUAL CONTROL PRIMING PUMP

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

Central States Fire Apparatus

One (1)
DW-05-0500

PNEUMATIC PUMP SHIFT

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

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

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

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

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

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

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

One (1)
DW-05-1200

MECHANICAL SHAFT SEAL

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

One (1)
DW-05-6000

DARLEY PUMP REVOLUTION ADAPTER

A mechanical pump revolution adapter with cap shall be supplied with the pump.

One (1)
DW-05-7120

CLASS ONE GOVERNOR

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

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

One (1)
EE-01-2200

DARLEY PUMP INSTALLATION

Central States Fire Apparatus

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

All discharge and intake valves shall be Akron band.

One (1)
EE-02-1000

INTAKE RELIEF VALVE

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

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

One (1)
EE-02-5100

HOT DIP GALVANIZED INTAKE MANIFOLD

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

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

One (1)
EE-02-5600

DRIVER SIDE STEAMER INLET

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

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

One (1)
EE-02-5700

PASSENGER SIDE STEAMER INLET

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

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

One (1)
EE-09-6100

DRIVER SIDE MANUALLY OPERATED VALVE

Central States Fire Apparatus

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

One (1)
EE-20-0500

SUCTION CAP DRIVER'S SIDE

The driver's side suction inlet shall be equipped with a chrome-plated, long handled, cap capable of withstanding 500 PSI.

One (1)
EE-20-1000

SUCTION CAP PASSENGER SIDE

The passenger's side suction inlet shall be equipped with a chrome-plated, long handled, cap capable of withstanding 500 PSI.

One (1)
ES-02-1500

2-1/2" GATED SUCTION INTAKE DRIVER SIDE

A 2-1/2" independent gated suction intake shall be provided on the driver's side pump panel. Intake shall be provided with a quarter-turn valve and control. The intake shall have a 3/4" drain valve with handle. Each intake shall have chrome-plated female swivel adapter with removable internal screen and a chrome-plated plug type cap with end chain.

One (1)
ES-02-1510

SUCTION VALVE CONTROL

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

One (1)
FA-00-1000

HOT DIP GALVANIZED DISCHARGE MANIFOLD

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

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

One (1)
FA-01-0000

PUMP DISCHARGES

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

Central States Fire Apparatus

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

One (1)
FA-01-0010

GALVANIZED PLUMBING

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

Two (2)
FA-01-0500

DRIVER SIDE DISCHARGE OUTLET

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

Two (2) 2-1/2" discharges shall be located on the driver's side pump panel.

Two (2)
FA-01-0501

MANUAL VALVE

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

One (1)
FA-01-1000

PASSENGER SIDE DISCHARGE OUTLET

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

One (1) 2-1/2" discharge shall be located on the passenger's side pump panel.

One (1)
FA-01-1001

MANUAL VALVE

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

One (1)
FA-01-1500

DRIVER SIDE REAR DISCHARGE OUTLET

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

One (1)
FA-01-1501

MANUAL VALVE

Central States Fire Apparatus

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

Three (3)
FA-01-3220

2-1/2" CAPS AND CHAINS

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

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

One (1)
FA-01-4000

PASSENGER SIDE LDH OUTLET

One (1) LDH discharge outlet on the passenger's side pump panel. The discharge outlet shall be plumbed with 3" I.D. schedule 40 galvanized pipe and quarter turn, swing out valve with control on pump operator's panel. The valve shall have a slow close device. The discharge shall extend through the pump panel. The discharge outlet shall terminate with a 3" NST male connection.

One (1)
FA-01-4002

MANUAL VALVE WITH SLOW CLOSE

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

One (1)
FA-01-8050

STORZ ADAPTER

The following discharge outlets shall have a 3" NSTF x 5" Storz 30-degree drop adapter.

The adapter shall be provided for the large diameter discharge located on the passenger's side.

One (1)
FB-02-2500

MONITOR PROVISION

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

One (1)
FB-02-2502

MANUAL VALVE WITH SLOW CLOSE

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

One (1)
FB-02-2505

MANUAL DRAIN VALVE

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

Two (2)
FC-31-0100

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

good-0005

Central States Fire Apparatus

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

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

Two (2) 1-3/4" crosslays shall be provided.

Two (2)
FC-31-0101

MANUAL VALVE

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

Two (2)
FC-31-0108

MANUAL DRAIN VALVE

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

One (1)
FF-26-1000

FOAM SYSTEM

A Foam Pro Model #1600 built in foam injection system shall be provided with the controls at the operator's panel.

The foam system shall be a fully automatic, electronic, direct injection foam proportioning system. The system shall be capable of Class A foam concentrate. The foam proportioning operation shall be based on an accurate direct measurement of water flows with no water flow restriction. The foam system shall be installed in accordance with the manufacturer's recommendations.

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

1. Activate the foam system
2. Change foam concentrate proportioning rates of .1% to 1%.
3. Flash a "low concentrate" warning light when the foam concentrate tank runs low of concentrate and in two minutes if foam concentrate is not added to tank, shut the foam concentrate pump down.

The foam system shall have a 12-volt, 1/3-hp electric motor driven positive displacement piston type foam concentrate pump with a rated capacity of .01 to 1.6 gpm with operating pressures up to 400 psi.

The FoamPro system shall be plumbed to the following discharge outlet.

The foam system shall be plumbed to both 1-3/4" crosslay discharges.

One (1)
good-0005

Central States Fire Apparatus

FF-27-0100

SINGLE FOAM TANK PLUMBING SYSTEM

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

One (1)
FF-27-2000

FOAM TANK

A 20-gallon foam concentrate tank shall be furnished as an integral component of the booster tank. The foam tank shall have a separate fill tower provided in a location to allow easy access for filling. Fill tower shall be equipped with a pressure/vacuum vent and have a sealed airtight cover. Tank shall be plumbed to the on board "Class A" foam system. A valved drain shall be provided at the lowest point of the foam tank. The drain shall be plumbed to drain directly to the surface below the apparatus without contacting other body or chassis components.

The following labels shall be attached to the foam tank:

"CLASS A FOAM TANK FILL"
"WARNING: DO NOT MIX BRANDS AND TYPES OF FOAM"

One (1)
FH-03-0100

TANK TO PUMP PLUMBING

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

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

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

One (1)
FH-03-6000

TANK FILL/COOLING LINE

A gated discharge line from the pressure side of the pump to the tank shall be furnished so the tank can be filled from draft or hydrant. Valve shall have control on the operator's panel. The valve is to be one and one-half inch, (1-1/2") swing out type ball valve and be plumbed to tank with flexible type hose.

One (1)
FJ-00-0202

POLY BOOSTER TANK

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

Central States Fire Apparatus

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

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

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

The tank shall carry a lifetime warranty from its manufacturer.

One (1)
FJ-01-0208

FILL TOWER

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

One (1)
FJ-01-3000

BOOSTER TANK

A 1000-gallon capacity polypropylene booster tank shall be provided.

One (1)
FJ-02-7600

HOT DIP GALVANIZED BOOSTER TANK SUBFRAME

The booster tank shall be mounted on a steel subframe. Steel subframe shall consist of two (2) longitudinal 3" x 4 pound channels and two (2) 3" x 4 pound channels welded together to form a tank retention cradle. The tank retention cradle shall prevent fore and aft, and side to side movement of the tank. Additional 3" x 4 pound transverse crossmember channels shall be installed to support the floor of the booster tank. The crossmembers shall have a maximum spacing of 20" for the polypropylene tanks. There shall be an additional full-length longitudinal member installed in the center of the tank support area. The booster tank shall rest on heavy rubber channels that isolate the polypropylene tank from the subframe.

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

One (1)
FJ-04-7000

EXTERNAL TANK FILL

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

Central States Fire Apparatus

One (1)
FK-01-1000

The direct tank fill shall be located at the rear of the body on the driver's side.

DRIVER SIDE MOUNTED OPERATOR'S CONTROL PANEL

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

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

A full panel width polished light hood with a minimum of three Weldon model 2025 light assemblies shall be provided to illuminate the entire pump operator's control panel.

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

GAUGE PANEL

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

One (1)
FK-01-1600

EXTRUDED ALUMINUM PUMP HOUSE STRUCTURE

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

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

One (1)
FK-01-2100

PUMP PANEL PUMP ENGAGEMENT LIGHT

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

One (1)
FK-01-2300

PUMP PANELS

The right and left side pump panels shall be constructed entirely of aluminum, and be coated with black thermo-plastic material. The panels are to be completely "bolted" in place for ease of removal.

One (1)
FK-01-3000
good-0005

Central States Fire Apparatus

PUMP COMPARTMENT ACCESS DOOR

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

One (1)
FK-01-5500

DUNNAGE OVER PUMP

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

One (1)
FK-10-0000

PUMP OPERATORS PANEL

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

One (1)
FK-10-1100

MASTER GAUGES

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

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

One (1)
FK-10-2700

PRESSURE GAUGES

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

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

Two (2)
FK-10-2900

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

Three (3)
FK-10-3000

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

One (1)
FK-10-3100

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

One (1)
good-0005

Central States Fire Apparatus

FK-10-3200

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

One (1)

FK-11-2520

CLASS ONE GOVERNOR

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

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

One (1)

FK-12-1100

INFORMATION CENTER

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

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

One (1)

FK-12-3800

PUMP HOURMETER

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

One (1)

FK-12-5200

PUMP PANEL IDENTIFICATION LABELS

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

One (1)

FK-12-7100

PUMP PANEL WATER TANK LEVEL GAUGE

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

One (1)

FK-12-7120

WATER TANK LEVEL GAUGE AT REAR OF APPARATUS

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

One (1)

good-0005

Central States Fire Apparatus

FK-12-9200

PUMP PANEL FOAM TANK LEVEL GAUGE

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

One (1)
FK-13-1500

UL TEST CONNECTIONS

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

One (1)
HA-00-0200

HOSEBODY

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

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

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

One (1)
HA-00-0320

HOSEBED CAPACITY

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

The hosebed shall hold the following hose:

800 feet of 5" hose
300 feet of 2-1/2" hose
300 feet of 3" hose
300 feet of 1-1/2" hose

One (1)
HA-00-0400

HOSEBED FLOORING

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

One (1)
HA-00-0540

ALUMINUM BOX

There shall be a full width smooth aluminum box fabricated around the fill tower(s).

good-0005

Central States Fire Apparatus

Three (3)
HA-00-1600

MAIN HOSEBED DIVIDER

Adjustable hosebed dividers shall be provided in the main hosebed.

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

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

Three (3) hosebed dividers shall be provided.

One (1)
HD-00-1300

LADDER MOUNTINGS

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

One (1)
HD-00-2510

GROUND LADDERS FURNISHED BY BODY BUILDER

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

One (1)
HD-01-0500

PIKE POLE(S) MOUNTED IN LADDER COMPARTMENT

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

One (1)
KB-02-0200

ALUMINUM BODY

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

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

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

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

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

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

Central States Fire Apparatus

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

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

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

FASTENERS

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

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

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

One (1)
KB-02-0300

CS 1/8" ALUMINUM BODY

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

One (1)
KB-10-0100

BODY DIMENSIONS

Apparatus body shall be up to 144" long and 96" wide, reference the drawing for actual body length. Body compartments shall be divided into upper and lower areas with the upper area approximately thirteen-inches in depth, and the lower area approximately twenty-three inches in depth. The hose bed shall be 68" wide.

One (1)
KK-01-1000

APPARATUS BODY SUB-FRAME

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

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

Central States Fire Apparatus

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

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

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

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

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

One (1)
KK-02-0400

COMPARTMENT VENTS

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

One (1)
KK-02-0500

BODY AND PUMP HOUSE FLEX JOINT

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

One (1)
KK-02-0652

WHEEL WELL LINER AND FENDERETTES

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

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

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

One (1)
KK-02-3800

REAR TOW EYE

Central States Fire Apparatus

One (1) tow eye shall be furnished at the rear of the body and attached directly to a reinforced steel cross channel that connects the chassis frame rails. The tow eye shall be centered on the cross channel between the chassis frame rails. The tow eye shall be constructed of 5/8" plate steel with a 4" I.D. hole, large enough for passing through a tow chain end hook. Tow eye shall be painted black.

One (1)
KK-03-0050

APPARATUS COMPARTMENTATION

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

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

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

One (1)
KK-03-0065

HINGED COMPARTMENT DOOR CONSTRUCTION

All hinged compartment doors shall be of the flush style so that the entire door fits flush against the apparatus body sides. Doors shall be designed, in the closed position, to have the painted edges protected from damage on the tops by forming the treadplate compartment tops into an extended drip edge, on the bottoms by the rub rail.

Doors shall be a minimum 2" thick, fabricated of a minimum of .125 smooth aluminum. Full panel inner compartment door liners shall be provided and constructed of .125" polished aluminum treadplate. The compartment doors shall have a foam panel glued in place between the exterior and interior door skin. Exterior door panels shall be smooth with no welds visible on the exterior skin. Double door compartments shall be equipped with a secondary latch to hold the secondary door in position.

All compartment door hinges shall be full-length piano type constructed of a minimum 14-gauge type 304 polished stainless steel with 3/16" stainless steel hinge pin with dual directional bolt holes for ease of adjustment.

When horizontally hinged lift-up doors are specified, they shall be equipped with heavy-duty gas filled props to hold the doors in the open position. All other hinged doors shall be equipped with spring loaded hold open device specifically designed for use on vertically hinged doors. Door holders shall be bolted in position. The door ajar switches shall be fully enclosed within structural members and shall not extend into the clear door opening.

All compartment doors shall be provided with hollow core weather stripping to provide a weather tight seal at the door opening and to prevent road spray and debris from entering the compartment.

One (1)
KK-03-0076

EXTERIOR DOOR LATCHES

Side exterior compartment doors shall be furnished with a large stainless steel spring loaded D-handle with slam type latches. D-handles shall have the large "bent" D-ring for ease of grabbing the handle even when wearing mitts or gloves.

Central States Fire Apparatus

A non-moisture absorbing gasket shall be installed between the door latch and the door skin panel.

One (1)
KK-03-0099

DRIVER SIDE

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

One (1)
KK-03-2400

DRIVER SIDE COMPARTMENTS

Three body compartments shall be furnished as follows:

- One compartment ahead of the rear wheels with full height double hinged doors.
- One compartment above rear wheel with one lift-up door.
- One compartment behind the rear wheels with full height double hinged doors.

One (1)
KK-04-0100

PASSENGER SIDE COMPARTMENTS

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

One (1)
KK-04-2400

PASSENGER SIDE COMPARTMENTS

Three body compartments shall be furnished as follows:

- One compartment ahead of the rear wheels with full height double hinged doors.
- One compartment above rear wheel with one lift-up door.
- One compartment behind the rear wheels with full height double hinged doors.

One (1)
KK-50-0640

REAR BODY CONFIGURATION

Rear apparatus body compartments shall be as follows:

- There shall be one compartment with full height roll-up door.

One (1)
KK-50-4100

REAR BEAVER TAIL

There shall be a beaver tail on the rear of the body. The beaver tail shall angle down from the top of the hose bed to the rear step area. Polished aluminum tread bright shall be installed on the inside of the beaver tail.

Ten (10)
KM-49-1604

ADJUSTABLE SHELVES

Compartment shelves shall be constructed of .125" smooth Aluminum. Shelves shall have formed edges on three sides for added strength. Shelves shall be fully adjustable, with extruded aluminum unistrut channels provided on the front and rear compartment walls.

Central States Fire Apparatus

A total of ten (10) shelves shall be provided and located in the following compartments:

Two (2) Upper portion of the front compartment on the driver's side.

One (1) Over the rear wheels on the driver's side.

Two (2) Upper portion of the front compartment on the passenger's side.

One (1) Over the rear wheels on the passenger's side.

Two (2) Upper portion of the compartment behind the rear wheels on the passenger's side.

Two (2) In the rear compartment above the rear step.

Two (2)
KM-49-1615

SLIDE-OUT TRAY

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

Two (2) slide-out trays shall be provided. Locations of the slide out trays shall be determined prior to construction.

One (1)
KM-49-1628

PULL-OUT VERTICLE TOOL BOARD

There shall be a pullout tool board furnished in the compartment. Tool board shall be 3/16" smooth aluminum and have adjustable rollers top and bottom.

The pull-out tool board shall be located in the compartment behind the rear wheels on the driver's side. The tool board shall be notched at the top portion, matching the contour of the compartment.

Two (2)
KM-50-0100

DRIVER SIDE AIR BOTTLE COMPARTMENTS IN WHEELWELL

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

Two (2)
KM-50-0250

PASSENGER SIDE AIR BOTTLE COMPARTMENTS IN WHEELWELL

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

Four (4)
KM-50-0900

SCBA COMPARTMENT WITH O-RING GASKET

Central States Fire Apparatus

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

One (1)
KR-01-0100

EXTRUDED ALUMINUM RUB RAILS

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

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

One (1)
KR-01-0200

REFLECTIVE STRIPE RECESSED INTO RUB RAIL

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

One (1)
KR-04-0002

SIDE AND REAR OVERLAYS

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

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

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

One (1)
KR-04-0010

POLISHED COMPARTMENT TOP WELDS:

The compartment top welds to be polished.

One (1)
KR-04-3000

SLIP-RESISTANT WALKWAY SURFACE

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

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

One (1)
good-0005

Central States Fire Apparatus

KR-04-4902

REAR STEP/RUNNING BOARDS

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

One (1)
KR-04-4912

REAR STEP/TAILBOARD

A single piece .188 rear step/tailboard shall be furnished that is a minimum of 18.00" deep and full width of the apparatus body, from rub rail to rubrail. The tailboard shall be provided with a removable casting on each corner for a pleasing appearance.

One (1)
KR-10-0000

HANDRAILS

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

One (1)
KR-10-0100

REAR HANDRAILS

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

Ten (10)
KS-01-0100

FOLDING ACCESS STEP

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

Four (4) steps shall be located at the rear of the apparatus body, three (3) on the driver's side and one on the passenger's side below the ladder storage compartment.

Six (6) shall be mounted on the front walls of the compartments next to the pump panels, three (3) on each side.

One (1)
NA-00-0010

ELECTRICAL

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

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

Wiring data shall be provided with the completed apparatus.

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

Central States Fire Apparatus

One (1)
NA-00-0080

WIRING SYSTEM

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

Wiring data shall be provided with the completed apparatus.

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

One (1)
NA-00-1000

TAIL & STOP LIGHTS

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

One (1)
NA-00-2500

DIRECTIONAL LIGHTS WELDON 2010

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

One (1)
NA-00-3600

MID MOUNTED TURN SIGNAL

Mid mounted body turn signals shall be installed recess mounted in the vehicle rub rails. Lights shall be mounted in a rubber grommet for ease of replacement.

One (1)
NA-00-4000

BACKUP LIGHTS WELDON 2010 (RECT)

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

One (1)
NA-00-5300

CLEARANCE LIGHTS

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

One (1)
NA-00-5400

LICENSE PLATE BRACKET

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

One (1)
NA-00-5600

BACKUP ALARM

Central States Fire Apparatus

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

One (1)
NA-00-6300

LOAD MANAGER

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

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

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

One (1)
NA-00-7000

HIGH IDLE SYSTEM

There shall be a high idle system furnished and installed on the apparatus. The high idle system shall have an on/off switch located in the chassis on the switch console. The system shall have an interlock that will disable the solenoid if the parking brake is not completely set.

Seven (7)
NA-01-1000

COMPARTMENT LIGHTING

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

Four (4)
NA-01-1100

ADDITIONAL COMPARTMENT LIGHTS

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

The additional lights shall be located in the four (4) tall compartments, one in each compartment.

One (1)
NA-01-3000

OPEN COMPARTMENT/HAZARD WARNING LIGHT

Central States Fire Apparatus

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

One (1)
NB-02-5200

BATTERY DISCONNECT SWITCH

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

One (1)
NB-02-7710

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

12-VOLT BATTERY CHARGER RECEPTACLE

There shall be a 12-volt receptacle furnished on the apparatus to accommodate an in station twelve-volt battery charger. The receptacle shall be a male recessed type and have a matching female plug. The recessed male receptacle shall be wired to the battery system.

One (1)
NB-02-9100

DASH MOUNTED EMERGENCY ELECTRICAL SWITCH PANEL

An electrical switch panel shall be designed and mounted in the cab dash area. All switches shall be provided with backlighted snap-in legend inserts.

SWITCHES

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

An internally lighted "master" switch shall be provided and wired through a heavy-duty relay to activate power to the emergency lights.

One (1)
NB-03-2400

MAP LIGHT

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

One (1)
NB-10-5000

REAR STEP LIGHTS

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

One (1)
NB-10-5400

ENGINE COMPARTMENT WORK LIGHT

good-0005

Central States Fire Apparatus

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

One (1)
NB-10-5600

PUMP COMPARTMENT WORK LIGHT

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

One (1)
NB-10-6100

UNDER CAB LIGHTING

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

One (1)
NB-10-6800

UNDER BODY LIGHTING

There shall be two (2) lights furnished below the pump house running board, one on each side. The lights shall be wired to turn on and off with a switch located on the driver's side pump panel.

One (1)
NB-10-6900

UNDER BODY LIGHTING REAR STEP

There shall be two (2) lights furnished below the rear step, one on each side. The lights shall be wired to turn on and off with a switch located on the driver's side pump panel.

Two (2)
NB-30-1100

SCENE LIGHT

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

Two (2) scene lights shall be provided at the rear of the apparatus. Lights shall be located above the taillights, one on each side.

One (1)
NB-30-1200

DRIVER SIDE SCENE LIGHT

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

The light shall be located above the pump panel on the driver's side of the body.

One (1)
NB-30-1300

PASSENGER SIDE SCENE LIGHT

There shall be a Weldon Model 2010, 12-volt 50-watt Scenelight provided and mounted on the passenger side of the body. Light shall be mounted on an 18-degree downward angled, polished

Central States Fire Apparatus

aluminum casting. The light shall be wired through a switch in the chassis cab and be labeled "Passenger's Side Scene Light".

The light shall be located above the pump panel on the passenger's side of the body.

One (1)
NC-02-9020

AIR HORNS

Two (2) chrome-plated Grover "Stuttertone" air horns shall be provided and mounted on the sides of the engine hood. A pressure protection valve to prevent the use of air horns or other air operated accessories when the system air pressure drops below 80 psi shall be provided.

Air horns shall be controlled from the following switch positions.

One (1)
NC-02-9030

One (1) overhead lanyard control shall be provided in the front of the cab for activation of the air horn. The lanyard control shall be accessible to both the driver and the officer when seated.

One (1)
NC-03-2000

ELECTRONIC SIREN

A Code 3 Model 3692 V-CON, 200-watt electronic siren with Hi-Lo and hardwired microphone shall be provided and mounted in the cab.

One (1)
NC-03-5100

SPEAKER

DYNAMAX, 100-watt speaker shall be provided and recess mounted in the front bumper of the chassis. The speaker shall be connected to the electronic siren control unit.

One (1)
NC-04-3200

HEADLIGHT FLASHER

The headlight circuit of the chassis shall be provided with a heavy-duty headlight flasher system designed for emergency vehicles. Flasher shall include override for high beam headlights and controlled by switch located on the electrical module in the chassis cab. Headlight flasher to be turned off when the park brake is set.

One (1)
NC-05-1200

RADIO ANTENNA

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

One (1)
NE-04-0950

EMERGENCY LIGHTING

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

One (1)
NE-05-2105

Lower Zones "A", "B", "C", "D" Emergency Lighting

One (1)
NJ-02-0600
good-0005

Central States Fire Apparatus

LIGHT BAR

One (1) Whelen model 9308 NFPA Edge 9000, 60" light bar mounted on chassis cab roof to meet the NFPA upper zone A lighting requirement. The lights shall be activated through the master emergency light switch located on the electrical console. Light bar to have the following equipment:

- (8) Strobe Lights
- (2) Power Supplies

One (1)
NJ-02-3200

REAR WARNING

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

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

One (1)
NJ-02-4220

UPPER ZONE "B, C, D" LIGHT MOUNTING

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

One (1)
NJ-02-5500

ZONE A FRONT LIGHTS

There shall be two (2) Whelen model 58EC20RU strobe lights furnished on the front grill to meet the NFPA Zone A lower level lighting requirement. The strobe lights shall be connected to a power supply and be activated through the master emergency light switch located on the electrical console. Each light shall have a red lens.

One (1)
NJ-02-7200

ZONE B & D SIDE LIGHTS

There shall be three (3) Whelen model 402000RU strobe lights furnished on each side of the apparatus to meet the NFPA Zone B & D lower level lighting requirement. One strobe light mounted as far forward as possible, one strobe light mounted as far to the rear as possible, and one strobe light mounted between the front and rear lights. The strobe lights shall be connected to a power supply and be activated through the master emergency light switch located on the electrical console.

One (1)
NJ-02-9200

ZONE C REAR LIGHTS

There shall be two (2) Whelen model 602000RU strobe lights furnished on the rear of the apparatus body to meet the NFPA Zone C lower level lighting requirement. The strobe lights

Central States Fire Apparatus

shall be connected to a power supply and be activated through the master emergency light switch located on the electrical console. Each light shall have a red lens.

One (1)
NS-00-0100

12-VOLT ELECTRICAL CERTIFICATION

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

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

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

- The propulsion engine and transmission.
- All Clearance and marker lights.
- The communication radio. (Default of 5.0 amps used for testing).
- Illumination of all walking surfaces, the ground at all egress points, controls and instrument panels and 50% of the total compartment lighting load.
- Minimum warning lights required for "Blocking Right of Way" mode.
- The current to simultaneously operate any fire pump, aerial device & hydraulic pumps.
- Anything defined by the purchaser to be critical to the mission of the apparatus.

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

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

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

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

One (1)
PA-01-0002

PAINTING

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

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

The body and all parts shall be thoroughly washed with grease cutting solvents prior to any sanding. After the body has been sanded and the minor imperfections filled and sanded, the body shall be washed again with a solution to remove any contaminants on the surface. The first coating to be applied is a self-etching primer for maximum adhesion to the body metal. The next three coats shall be an acrylic, urethane, primer surfacer. The primer surfacer coat is to be hand

Central States Fire Apparatus

sanded with 600-grit sandpaper to insure maximum gloss of the paint. The last step is the application of at least three coats of Concept Acrylic Urethane two component color.

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

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

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

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

One (1)
PA-01-0210

UNDERCOATING

The entire underside of the chassis cab and apparatus body is to be sprayed with an automotive type undercoating for added corrosion resistance.

One (1)
PA-01-1520

INTERIOR COMPARTMENT LINER

The interior compartment walls shall be coated with a heavy spray on lining material. The lining material shall dry to form an impervious one-piece covering to protect the compartment interiors from damage. The lining material shall be dark gray in color.

The lining material shall be white in color.

One (1)
PA-01-3500

WHEEL PAINTING

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

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

One (1)
PA-01-5500

TWO TONE CAB PAINT

The chassis cab exterior shall be two-tone finish painted. The area to be painted shall be sanded and thoroughly prepared then refinished with PPG Concept paint.

The top portion of the cab shall be painted white, the lower portion to match International 2303 red.

One (1)
PA-01-7000

TOUCH-UP PAINT

There shall be touch-up paint furnished with the truck.

One (1)
PA-02-1910
good-0005

Central States Fire Apparatus

LETTERING

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

One (1)
PA-02-2600

Lettering shall be as follows:

The front cab door each side shall have GOODING in an arc and FIRE DEPT. under the arc in straight letters.

The rear doors each side shall have CITY & RURAL in straight letters.

Exact layout shall be provided to the fire department for approval prior to construction.

One (1)
PA-02-5000

REFLECTIVE SAFETY STRIPE

A 6" wide 3M brand Scotchlite #680-10 reflective stripe shall be affixed to the perimeter of the vehicle. Striping shall be placed up to 60" above ground level and shall conform to NFPA reflectivity requirements. At least 60% of the perimeter length of each side and width of the rear, and at least 40% of the perimeter width of the front of the vehicle shall have reflective stripe.

The side stripe shall be applied straight across the apparatus body.

The stripe shall be white in color.

One (1)
PC-00-0100

IDENTIFICATION & SAFETY LABELS

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

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

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

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

Central States Fire Apparatus

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

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

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

One (1)
TA-01-0100

OPERATION/SERVICE MANUALS

The following applicable documentation shall be supplied upon delivery:

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

One (1)
VA-00-0000

ADDITIONAL EQUIPMENT

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

LADDERS

One (1)
VA-01-0400

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

One (1)
VA-01-0425

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

One (1)
VA-01-0435

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

PIKEPOLE

One (1)
VA-02-6000

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

AXES

One (1)
VA-05-3400

Central States Fire Apparatus

One (1)
VA-05-3800

A 6-pound flathead axe(s) with fiberglass handle shall be mounted as specified. Chrome-plated mounting shall be provided.

A 6-pound pick head axe(s) with fiberglass handle shall be mounted as specified. Chrome-plated mounting shall be provided. Rubber protector for pick head axe shall be supplied.

WHEEL CHOCKS

One (1)
VA-05-7000

A pair of Zico Model SAC-44 Quic-Chok NFPA compliant folding wheel chocks shall be provided and mounted under the apparatus runningboards in model SQCH-44H horizontal mounting brackets.

The wheel chocks shall be mounted in front of the rear wheels on the driver's side of the body.

EXTINGUISHERS

One (1)
VA-05-7200

A 20-lb. CO-2 fire extinguisher(s) complete with runningboard mounting bracket shall be provided and mounted in a location to be determined by Fire Department.

One (1)
VA-05-7400

A 20-lb. ABC rated, dry chemical extinguisher(s) complete with runningboard mounting bracket shall be provided and mounted in a location to be determined by Fire Department.

The locations of the fire extinguishers shall be determined prior to construction.