



MIDWEST FIRE®

400 Gallon Brush Truck Specifications

Prepared for: MWF Stock # 3084S

<City, State>

Midwest Fire Rep:

Date:

QMS-WIN-022 Rev J

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SECTION 1: WATER TANK

1.00 Tank

The tank shall be constructed of 1/2" thick high-impact, polypropylene sheet stock. The material shall be of a certified, high quality, non-corrosive, stress relieved thermoplastic, black in color, and UV stabilize for maximum protection.

The tank shall have a combination vent and manual fill tower. The fill tower shall be constructed of 1/2" polypropylene and shall have a standard dimension of 8" Round x 8" high with a molded cover. The tower shall be located on the curb side rear corner of the tank. Inside of the fill tower approximately 2" down from the top shall be fastened a combination vent/overflow pipe which shall be of standard schedule 40 polypropylene pipe with minimum ID of 4" designed to run vertically through the tank. The transverse swash partitions shall be manufactured of 3/8" polypropylene which shall interlock with a longitude partition constructed of 1/2" polypropylene.

The tank will include:

- One (1) liquid level gauge with a clear sight tube and to be located at passenger's side rear wall of the tank.
- One (1) 1/4" deep X 6 1/2" diameter recess in floor to act as sump.
- Two slotted mounting pads on top of tank for mount addition equipment.
- There shall be a 3/4" FNPT female tank drain located on the rear tank wall.

1.00.07 400 gallons, (64" L x 47" W x 38.5" H), 2CE

1.01 Foam Tank

Foam Tank, there shall be a drop-in foam tank to accommodate the use of the foam system.

1.01.02 12-gallon, 2CE

THE TANK WILL CARRY A LIFETIME WARRANTY FROM ITS MANUFACTURER

SECTION 2: BOOSTER TANK PIPING, FILLS, & GAUGES

2.02 Tank Level Gauge

- One (1) pressure transducer mounted on the outside of the tank in an easily accessible area. Sealed foam tanks (if so equipped) will require zero pressure vacuum vents.
- Super bright LED display viewable from 180 degrees with a visual indication at multiple accurate levels.
- Weather resistant connectors to connect to the digital display, the pressure transducer, and the apparatus power. Additional displays are easily integrated and will receive data from the same source as the Master Display; no additional transducers required.
- Tank level gauge indicates the liquid level on easy to read LED display.

2.02.04 One (1) Innovative Controls SL Series Plus Tank Level Gauge

2.02.04.01 Installed on the pump panel. –Master

2.02.05 One (1) Innovative Controls SL Series Plus “Mini” Tank Level Gauge

2.02.05.01 Installed on the center console.

2.03 Spanner Wrenches

One (1) adjustable hydrant wrench and two (2) spanner wrenches with holder.

2.03.02 Installed on the curb side rear panel

SECTION 5: FLATBED BODY

5.00 Apparatus Body

The flatbed body is constructed of all aluminum with aluminum stringers running front to back above the frame and C-channels running side to side. The top surface will be tread-plate. An aluminum angle will be welded to the perimeter of the body. The body will be 96” wide and built to accommodate the chassis cab to axle for the best weight distribution possible.

5.00.01 119” body length (60” cab to axle)

SECTION 6: FLATBED BODY COMPARTMENTS

6.00 Body Compartments

All compartments are constructed of Aluminum Tread-Brite, and will have a door activated LED compartment light, door restraints, corrosion resistant vents, black Turtle Tile plastic dry decking, and floor drains.

6.01 Transverse Compartment

One (1) full width transverse compartment provided behind the cab on top of the flatbed with one (1) swing up aluminum door on each side, held in the open position with gas struts.

6.01.01 Compartment to be 96” wide x 40” tall by 26” wide for a 60” cab to axle

6.02 Over Wheel Compartment

One (1) compartment above the flatbed to approximately 30” tall x 24” deep. One (1) swing up aluminum door, held in the open position with a gas struts.

6.02.01 60” wide

6.02.01.01 Street side

6.02.01.02 Curb Side

6.03 Front Lower Compartment

Compartment under the flatbed ahead of the rear wheels.

- 6.03.01 A swing forward vertical hinged door with a single point latch compartment size 30" wide x 18" tall x 16" deep (60" CA)
 - 6.03.01.01 Street side
 - 6.03.01.02 Curb Side

6.07 Dunnage Box

Dunnage box on the side of the body above the compartments, made of aluminum tread brite, with rubber tile installed in the bottom. This area will be 10" tall x 21" wide. This area will be open to the top and enclosed on all four side to securely house cargo and misc. equipment. Ventilation slots will be provided on each side.

- 6.07.03 Dunnage Box to be located on the street side, extending the length of the body.
- 6.07.04 Dunnage Box to be located on the curb side, extending the length of the body.
- 6.07.06 Two (2) Velcro straps installed on top sides of dunnage box to secure cargo
 - 6.07.06.01 Straps on street side
 - 6.07.06.02 Straps on curb side

SECTION 7: RUNNING BOARDS, & REAR STEP

7.00 Running Boards & Chassis Steps

- 7.00.06 OEM Chassis Running Boards, one (1) set of running boards, provided by the manufacturer installed on the chassis for ease of entry.

7.02 Rear Step

An 8" deep aluminum tread plate step is provided at the rear of the flatbed.

SECTION 8: GRAB RAILS & FOOTSTEPS

8.00 Grabs Rails

The grab rails are made of 1 ¼ " diameter extruded aluminum tubing with knurled finish and chrome plated stanchion brackets.

- 8.00.01 Rear Grab Rails
 - Grab rails provided at the rear, for access into the flatbed
 - 8.00.01.02 One (1) Grab Rail, Street Side
 - 8.00.01.03 One (1) Grab Rail, Curb Side

SECTION 9: ELECTRICAL EQUIPMENT

9.00 Apparatus Electrical

- Electrical Wiring

The electrical compartment to be installed in the chassis cab. The body and chassis shall be wired as independent modules and connected as a completed unit at the final assembly via electrical connectors located in the electrical compartment. Seals shall be provided on each individual wire and the assembly. All wiring for the apparatus body shall be within a temperature resistance harness. All wires in each harness shall be color-coded. Wiring shall be run along structural rails and tied in a neat and orderly manner. A backup alarm will be wired into the reverse circuit to sound when the vehicle is placed in reverse. The key on position energizes a relay which acts as the master switch connecting the apparatus to the battery system, eliminating power drain while the truck is not in use.

- Overload Protection

The apparatus circuits requiring load protection shall utilize sealed relays and automatic reset circuit breakers.

9.01 DOT Lighting Details

- A total of seven (11) LED clearance lights and seven (7) red LED lights installed at the rear.
- Four (4) amber LED lights are installed on the front street and curb sides.
- Reflectors are installed per DOT specifications.
- A red warning light visible to the driver in the chassis cab that illuminates when a compartment door is ajar/open.
- An illuminated license plate bracket installed at rear.

9.02 Lower Level Rear Lighting

9.02.03 LED Taillight Package

Two (2) LED stop/tail/turn and white LED backup lights installed at the rear.

SECTION 10: EMERGENCY SIREN & LIGHTING EQUIPMENT

10.00 Apparatus Controls

10.00.03 Center Console

Console installed between driver and passenger seats.

10.01 Light Bars

10.01.01 Whelen model JE2NFPA Justice Series light bar

Whelen model JE2NFPA Justice Series, Super-LED low-profile, 56" long. Covers front and front side zones. The light bar has four (4) linear corner modules with nine (9) Super-LED light heads per module, and six (6) CON3 modules with three (3) CON3 Super-LED light heads per module.

10.01.01.02 Mounted on the transverse compartment.

10.02 Sirens:

10.02.04 Whelen Siren

Whelen Siren 200-watt, Class A electronic siren, mounted in the chassis cab in a location convenient to the driver. The electronic siren includes a 9-Switch Light Control (three (3) position slide switch and six (6) Push On/ Push Off switches) with 17 Scan-Lock™ Siren Tones, and hard-wired microphone. The siren control is lighted for easy night operation. Cast aluminum speaker available with three (3) siren mounting locations. Slide switch programming,

position one will engage light bar and upper level flashers, position two will engage the previous and front and rear flashers, position three will engage the previous and intersection lights.

10.02.04.02 Whelen 295SLSA6 siren w/ speaker flush mounted street side

10.04 Lower Level Lights

10.04.03 Front/Rear Whelen SurfaceMax C6 Series

Two (2) Whelen SurfaceMax C6 series LED lights with black bezels mounted on the front and two (2) mounted on the rear.

10.04.03.01 Front/Rear Flashers, Red, C6 Series

10.05 Intersection Lights

All lights mounted a minimum of 18" above the ground and no higher than 60". One (1) positioned on the front quarter panels, and one (1) on the body rail at the rear.

10.05.01 Intersection, Red, SurfaceMax C6 Series, Two (2) each side

10.06 Upper Level Warning

10.06.03 Side/Rear Whelen M6V2R Series Upper Flashers

Whelen M6V2R Series LED Flasher are on each side and rear of the body. Lights will include a chrome bezel.

10.06.03.02 Side/Rear Flashers, Red, M6V2R Series, Two (2) each side and one (1) to the rear of each dunnage basket. (Six (6) Total)

10.07 Scene lights

10.07.04 Pump Work Area Lights

There are two (2) Whelen PELCB, 1000 lumen flood lights mounted on the rear dunnage baskets pointing inward towards the pump area. The lights shall be controlled from a unit mounted switch.

SECTION 11: LETTERING, STRIPING, AND SIGNAGE

11.01 ID plate

There is a permanent plate located in the center top chassis cab with the following information:

- Quantity and type of fluids used in the vehicle. This plate includes:
- Engine oil, quantity.
- Engine coolant, quantity.
- Chassis transmission fluid, quantity.
- Pump transmission fluid, quantity.
- Drive axle lubrication fluid, quantity.
- Air conditioning refrigerant, quantity.
- Air conditioning lubrication oil, quantity.

- Power steering fluid, quantity.
- Front and rear cold tire pressure
- Number of personnel the vehicle is designed to carry located in an area visible to the driver.
- Height and length of the vehicle in feet and inches
- Gross vehicle weight rating (GVWR) in pounds

11.03 Vinyl Lettering

11.03.01 Provided on the chassis doors.

11.03.03 Provided for the customer unit number on the street and curb side chassis fenders.

11.05 Reflective striping

The apparatus body and chassis will have a reflective stripe on each side and the front per NFPA 1901 standards.

11.05.01 4" wide white reflective stripe with a 1" wide white reflective stripe spaced approximately 1/2" above on the chassis, and 4" wide red reflective stripe on flatbed rails.

11.05.03 White reflective tape inside chassis doors- Per NFPA 1901 standards any door designed to allow persons to enter or exit has a minimum of 96 square inches of retro-reflective material affixed to the inside of the door.

11.06 Rear Chevron

11.06.05 Diamond Grade Chevron

The rear area above the tailboard will include red and fluorescent yellow diamond grade chevron retro-reflective striping installed, with each stripe a minimum of 6" wide.

SECTION 12: CORROSION PROTECTION & MUD FLAPS

12.00 Corrosion Protection

All fasteners which are used in aluminum are plated with Magnaguard 560 to prevent galvanic corrosion resulting from dissimilar metals.

12.01 Mud Flaps

There are two (2) mud flaps installed one (1) behind each of the rear wheels. The mud flaps are constructed of ¼" thick black rubber, with weighted chrome trim at the bottom. Stiffeners are provided when rear lockers are not requested.

SECTION 13: PUMP & PLUMBING

13.00 Engine Driven Pumps

Portable Pumps have the following standard features:

- High-strength aluminum alloy casing and discharge valve
- Aluminum alloy engine adapter
- Bronze impeller and wear rings

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- Stainless steel impeller shaft
- Direct drive
- The pump control panel includes an ignition switch, starter button, stop button, and engine throttle.
- The engine will have an oil drain for ease of changing the pump engine oil.
- Pump drain: one (1) pump drain provided to drain the suction side of the pump. The pump drain is controlled from a control handle located directly below the pump compartment.
- An electric fuel pump is installed in all applications to assist in delivering fuel to the engine.

13.00.02 Darley Model 2BE 18V Engine driven Pump

A Darley, model 2BE 18V, 18hp Vanguard engine driven pump with the following features:

Pump Ratings:

375 GPM @ 25 PSI

300 GPM @ 45 PSI

150 GPM @ 115 PSI

100 GPM @ 140 PSI

The engine is a four-cycle air cooled 18 HP Briggs and Stratton, model OHV Vanguard V-Twin, gasoline engine, with integral fuel pump, 12-volt electric start, and manual start. Pump comes equipped with exhaust primer.

13.00.02.01 The engine driven pump's fuel to be supplied by the chassis fuel tank

13.00.06 Engine driven Pump Options

13.00.06.01 Tank to Pump

A tank to pump line provided from the water tank to the pump with valve.

13.00.06.01.01 2.5" line and valve

13.00.06.03 Tank Fill/Pump Re-Circulating 1" Line

A 1" tank fill/pump re-circulating line provided from the pump to the water tank with a 1" valve and 1" plumbing.

13.00.06.04 Non-Gated 2 1/2" Suction Line

A 2-1/2" suction pipe provided at the pump for drafting or direct fill. It is equipped with a 2-1/2" NPT male X 2 1/2" NST female chrome plated swivel adapter with screen, and a 2 1/2" chrome plated plug and chain.

13.02 Discharges

Discharges include:

- Industrial grade valves
- Chrome cap and chain

13.02.01 Engine driven Pump Discharges

13.02.01.01 One (1) 1 ½" Discharge

13.04 Foam System

13.04.04 Scotty Through-The-Pump System

There shall be a Scotty, through the pump, foam system plumbed to the discharge head of the water pump. For use with Class "A" Foam only. When engaged all discharges from the pump have foam, including tank fill.

SECTION 16: HOSE REEL

16.01 Electric hose reel with Reel Lite Hose

One (1) electric rewind hose reel with hose rollers, gated with a 1" valve and supplied with reel lite hose. Each hose reel comes equipped with one (1) button located on the reel.

16.01.04 1" Reel Lite hose located on the rear curb corner, facing curb side.

16.01.04.01 100 ft.

SECTION 17: CHASSIS ACCESSORIES

17.04 Receiver Hitch, Winches, & Bumpers

17.04.01 Rear Receiver Hitch

Class III 2" receiver hitch tube installed on the rear of the apparatus and furnished with a 7-pin electrical receptacle and safety chain rings. Both sides of the receiver hitch will have tow-eyes cut into the plates.

17.06 Chassis Exhaust

17.06.01 Standard Chassis Exhaust Modifications

Chassis exhaust is modified to exit passenger side behind the rear wheels and to the edge of the body.

SECTION 18: LOOSE EQUIPMENT

Loose equipment required by NFPA not listed will be supplied by customer after delivery of the apparatus prior to being put in service.

18.05 Nozzles

Dual gallonage nozzle with two flow settings of 10 and 40 gpm @ 100 psi (37 and 150 l/min @ 7 bar). All lightweight materials, hard coat anodized aluminum. Quick-change rear valve seat, stainless steel shut-off ball and a twist "off" position for positive shut off. Pistol grip is mounted below the valve. Rocker lug 1" NH (25mm) swivel is standard.

18.05.01 1" Task Force Tips model # DS1040P – 10 and 40 GPM @ 100 PSI

18.05.01.01 Qty One (1)

SECTION 19: CHASSIS

19.00 Midwest Fire supplied chassis per specification attached. Brief summary below:

Chassis Summary			
Manufacturer	Ford	Cab to Axle (in.)	60"
Model	F-550 Red Cab Gas 4x4	Wheelbase (in.)	145"
Engine Manufacturer	Ford	Front Axle Rating (Lbs.)	7,500#
Engine Model	6.8 L V-10	Rear Axle Rating (Lbs.)	14,000# (19.500 GVW)
Horsepower	288	Paint Color Code	Race Red