

300 Gallon Flatbed Brush Truck

Specifications

Prepared for:

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| Stock |

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| --- |
| Date: 2017 |
| Sales Representative:  |

QMS-WIN-004 Rev A

 901 Commerce Road

Luverne, MN 56156

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# Section 1: Water Tank

## THE TANK SHALL CARRY A LIFETIME WARRANTY FROM ITS MANUFACTURER

## 1.00 Tank

### 1.00.05 300-gallon poly tank with 10-gallon foam cell

# Section 5: Flatbed Body

## 5.00 Apparatus Body

One (1) custom Fire Application aluminum flatbed body, 135” long x 94-5/8’’ wide. The aluminum plate used in construction is .100” 3003-H22 polished aluminum alloy treadplate.

Body sub-frame is made from 6061-T6 aluminum tubes and channels. Sub-frame crossmembers are installed every 16”. The channel is 1-1/2” wide x 3” high x 3/16” thick. The body crossmembers shall extend the full width to support the compartment framing and shall be welded to the sub-frame main members.

The Body sub-frame main members consist of 6061-T6 Aluminum square tubing of 2” wide x 6” high x 3/16” thick.

The perimeter shall be made with 1/8” thick forged 3003H14 Aluminum. Forged aluminum brings a strong design that was specially made to embed emergency lighting & designed to fit properly a 4” reflective stripping.

The body shall be attached to the chassis rails with a minimum of four (4) heavy duty “U” bolts (shipped loose). The body shall be separated from the chassis by 3/8” Teflon (shipped loose). Attachment of the body and sub-frame will allow the body to resist from all distortion and off road operational condition.

The body is a modular design to allow removal from the chassis for major repair or mounting on a new chassis. Isolating material between the body and the chassis to be installed

All welding shall be done electrically using 5356 aluminum welding wire.

Rear vertical skirt will be made from smooth aluminum plate.

Rear skirt to include Signal, brake, reverse lights, D.O.T., license plate & NFPA steps.

Clearance, marker, license plate lights and reflectors will be furnished and installed per D.O.T. Junction box supplied and installed under the flat bed.

License plate light shall be an Eon light with SS polish case that has a light output equivalent to a 10-watt halogen lamp. Eon light to have a 50,000 hr. LED life.

LED Signal, brake and reverse lights will be High Quality Grote Automotive lights recessed mount into rear aluminum skirt area of body per FMVSS 108 and CMVSS 108 requirements. Light to be LED Oval with chromed housing.

Two (2) LED Amber marker/clearance lights with chrome housing and clear lens will be installed on the front side of the bed, one (1) each side. Two (2) LED Red marker/clearance lights with chrome housing and clear lens will be installed on the rear side of the bed, one (1) each side. Three (3) LED Red marker/clearance lights with chrome housing and clear lens will be installed at the rear center of the bed. Amber & Red reflectors shall be installed around the perimeter of the bed as per DOT requirement.

Two (2) heavy duty tow eyes shall be shipped loose (NFPA 1906 requirement). The tow eyes will be fastened directly to each rear chassis frame rail.

The rear of the flat bed shall have two (2) non-skid rear steps for access to pump and controls. The rear steps shall be made so it can be folded up for use in rough terrain. All steps shall sustain a minimum static load of 500 lb. (227 kg) without deformation (NFPA 1906 & 1901 compliant). Stepping height from the ground to the first step shall not exceed 24”.

An angle of approach and an angle of departure of at least 20 degrees shall be maintained at the front and the rear of the vehicle when it is loaded.

## Compartments

All compartments will be made with tread plate aluminum sheet.

All compartments shall have a minimum of one (1) louvered panel bolted into a wall to provide the proper airflow inside the compartment.

All compartments shall be of sweep-out type with no lip at bottom edge for easy cleaning.

Transverse Compartment

One (1) transverse compartment of 30” long x 22” high x 94-5/8” wide shall be installed. Each side door shall be horizontally hinged, drop down style with retaining cables.

The recessed aluminum diamond plate compartment doors shall be securely attached to the body with a full stainless steel hinge. Door openings shall be fitted with solid neoprene weather strip completely sealing the perimeter of the compartment door opening. The drop-down door shall be retained with cable. Compartment door seams is sealed with a pliable automotive body caulking. The compartment door is latched with recessed, polished stainless steel “D” ring handles and locks.

The upright with light bar brackets will be angled inward to match the aerodynamic contour of the chassis cab.

### *Top Transverse Pre-Connect Hose Tray*

One (1) aluminum storage pre-connect hose tray shall be supplied and installed on top of the transverse compartment.

The dimensions of the storage tray shall be full length of the top compartment, 94-5/8” L x 24” W x 8” H.

The hose tray shall have a 1-1/2” Pre-Connect swivel elbow.

The area shall be designed to prevent the accumulation of water and allow for ventilation to aid in drying hose in the storage area. Black Turtle Tiles to be installed and bolted on the floor.

The hose tray shall be covered with black canvas and two (2) side nets.

### *Left (Driver) Side Compartment*

One (1) 62’’ long x 30’’ high x 22’’ deep compartment behind the chassis, located at the left (driver) side of the water tank.

The overlap aluminum compartment door shall be securely attached to the body with a full stainless steel hinge. Door opening shall be fitted with solid neoprene weather strip completely sealing the perimeter of the compartment door opening. Lift up door shall be installed with gas hold open struts. The compartment door is latched with recessed, polished stainless steel ‘’D’’ ring handle and lock.

The aluminum door complete with the following features: door ajar switch and two (2) LED strip lights.

One (1) switch shall be installed so the compartment light(s) shall come on only when compartment door is open.

There shall be a set of tracks for future installation of adjustable shelf(s) in each compartment. These tracks shall be installed vertically on the walls of the compartment(s) and shall offer a multitude of height adjustment possibilities.

The compartment floor will be covered with Plastic Tiles. The tiles shall be black with yellow angled leading edges.

### *Right (Passenger) Side Compartment*

One (1) 62’’ long x 30’’ high x 22’’ deep compartment behind the chassis, located at the right (passenger) side of the water tank.

The overlap aluminum compartment door shall be securely attached to the body with a full stainless steel hinge. Door opening shall be fitted with solid neoprene weather strip completely sealing the perimeter of the compartment door opening. Lift up door shall be installed with gas hold open struts. The compartment door is latched with recessed, polished stainless steel ‘’D’’ ring handle and lock.

The aluminum door complete with the following features: door ajar switch and two (2) LED strip lights.

One (1) switch shall be installed so the compartment light(s) shall come on only when compartment door is open.

There shall be a set of tracks for future installation of adjustable shelf(s) in each compartment. These tracks shall be installed vertically on the walls of the compartment(s) and shall offer a multitude of height adjustment possibilities

The compartment floor will be covered with Plastic Tiles. The tiles shall be black with yellow angled leading edges.

## Wheel Chocks

Medium Kochek Wheel Chocks with storage brackets shall be provided and mounted underneath the flatbed behind the chassis cab on the driver side.

## Electrical Components

A 12-volt electrical system is supply.

The wiring is secured in place, readily accessible and protected against heat, water and physical damage.

The complete electrical system is separated from the chassis wiring system except for a power supply connection at chassis battery.

All wiring will be run in heat and moisture resistant plastic convoluted split loom. Loom shall be held in place with screw-mounted holders spaced at appropriate distance.

Grommets will be used where conductors or loom pass through metal.

Power control relays and solenoids shall have a direct current rating of 125 percent of the maximum current for which the circuit is protected.

Conductor insulation will conform to S.A.E. requirements. All circuit are protected by automatic reset circuit breakers.

All wiring furnished will conform to the national Electric Code.

All circuits will be wired in conformance with S.A.E. J1292, Automobile wiring standard.

All wiring will be function worded schematically.

A set (2) of electric diagram will be remit upon delivery.

Clearance, marker, license plate lights and reflectors will be furnished per D.O.T.

## Back-up Alarm

One (1) back-up alarm that meets the type D (87 dba) requirements of SAEJ994 shall be provided at the rear of the apparatus. It will activate when the transmission is placed in reverse.

## Door Ajar

One (1) door ajar warning light shall be provided and shipped loose to indicate an open body compartment door. The light shall be properly marked with a sign “Warning Door Ajar” shipped loose.

# Section 7: Running Boards, Catwalks, & 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.

# Section 9: Electrical Equipment

## 9.00 Apparatus Electrical

### Electrical Wiring

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.

# Section 10: Emergency Siren & Lighting Equipment

## 10.00 Apparatus Control Center

All emergency lighting, options, and accessories are controlled at a master control center in the cab.

The apparatus control center:

- Controls all warning lights and scene lights

### 10.00.01 Factory Dash Switches

For use with low option content. All lighting controlled from the 4 switches located on chassis dashboard.

## 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.

#### 10.01.01.01 Mounted on the chassis cab.

## 10.02 Sirens:

### 10.02.01 Whelen Siren

Whelen model 295SLSA1 Siren 200 watt, six (6) function Class A electronic siren, mounted in the chassis cab in a location convenient to the driver. The electronic siren includes full function, 17 Scan-Lock siren tones, and hard wired microphone. The siren control is lighted for easy night operation. Available with three (3) siren mounting locations.

#### 10.02.01.02 Siren speaker flush mounted street side

## 10.04 Lower Level Lights

### 10.04.03 Front/Rear Whelen 600 Series

Two (2) Whelen 600 series LED lights with black bezels mounted to the grill of the chassis and two (2) mounted on the rear light skirt.

#### 10.04.03.01 Front/Rear Flashers, Red, 600 Series

## 10.05 Intersection Lights

All lights mounted above 18” from the ground, and no higher than 60”, (preferably centered in the reflective striping if present). One (1) positioned on the front quarter panels, and one (1) on the body rail at the rear.

### 10.05.01 Intersection, Red, 600 Series, Two (2) each side

## 10.07 Scene lights

Lights are controlled from individual switches on the control center located in the chassis cab.

### 10.07.05 Body Deck/Flood Lights

Maxxis MWL-30, 1200 lumen deck/flood lights will be provided on the body and/or headache rack. Lights can be mounted on street and curb side of headache and/or street and curb side at the rear of the body.

#### 10.07.05.03 Four (4) Deck Lights, MWL-30, Headache Rack-Rear Body, Street/Curb Side

# Section 11: Painting, Lettering, Striping, and Signs

## 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 reflective stripe with a 1" wide reflective stripe spaced approximately 1/2" above. White on chassis, 4” red only 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

### 11.06.03 Diamond Grade Chevron

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

# Section 12: Corrosion Protection & Mud Flaps

## 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 Portable 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
* Stainless steel impeller shaft
* Direct drive
* A pump control panel attached to the pump unit.
* The pump control panel includes an ignition switch, starter button, stop button, engine throttle, and pressure gauge.
* The pump primer is a combination vacuum type exhaust primer and a spark arresting-muffler.
* The engine compartment will have an oil drain access in the floor 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.

###  CET Model PFP-11HPND-EM Portable Pump

A CET model PFP-11HNND-EM, powered by an 11hp Honda GX340 air cooled gas engine with 12V electric start with recoil backup:

* Pump Ratings:

290 GPM @ 10 PSI

190 GPM @ 50 PSI

120 GPM @ 75 PSI

### 13.00.06 Portable Pump Options

#### 13.00.06.01 Tank to Pump 2 ½” Line -

A 2 ½" tank to pump line provided from the water tank to the pump with a 2 ½" 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 ½” Suction Line –Check with Kelsey on the BOM

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.

## 13.01 Primer Pump Options

### 13.01.02 Exhaust Primer Pump

Venturi-style exhaust primer equipped on the engine of the pump. Minimum 12’ lift capacity.

## 13.02 Discharges

Discharges include:

* Industrial grade valves
* Chrome cap and chain

### 13.02.01 Portable Pump Discharges

#### 13.02.01.01 One (1) 1 ½” Discharge

## 13.04 Foam System

### 13.04.04 Scotty Around-The-Pump System

There shall be a Scotty, around the pump, foam system plumbed to the discharge head of the water pump. Has capability to run Class B.

# Section 14: Hose Trays, Cross Lays, & Pre-connects

## 14.00 Pre-connect hose tray

One (1) pre-connected hose tray located above the transverse locker, or manwell area, to fit 150’ of 1 ½” hose.

### 14.00.01 Pre-connect plumbed with 2”, gated with a 1 ½”” valve, and terminated with 1 ½” NST male.

## 14.01 Hose Tray Options

### 14.01.01 Hose tray divider

Hose tray divider installed in the center of the hose tray to create two hose compartments.

### 14.01.02 Velcro straps

Two Velcro hose straps mounted on the hose tray to secure the hose.

# Section 16: Hose Reel

## 16.00 Electric hose reel with and Hose

One electric rewind hose reel with hose rollers, gated with a 1” valve and supplied with hose.

16.00.01 1" Booster hose located on the rear street corner, facing rear.

16.00.01.01 100 ft.

# Section 17: Chassis Accessories

## 17.00 Wheel simulators

Phoenix stainless steel wheel simulators are installed on front and rear wheels.

## 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

## 18.07 Nozzle

The selectable, dual gallonage nozzle shall be furnished with customer requested flow settings. Ball shut off nozzle with fog and straight stream patterns provided.

### 18.07.01 1” Task Force Tips model # DS1040P – 10 and 40 GPM @ 100 PSI

#### 18.07.01.01 Qty One (1)

# Section 19: Chassis

## 19.00 Midwest Fire Equipment furnished per specification attached:

|  |
| --- |
| Chassis Summary |
| Manufacturer | Ford | **Cab to Axle (in.)** | 84” |
| Model | F-550 XL Crew Cab Gas | **Wheel Base (in.)** | 200” |
| Engine Manufacturer | Ford | **Front Axle Rating (Lbs.)** | 7,000# |
| Engine Model | 6.8L V10 | **Rear Axle Rating (Lbs.)** | 14,700# (19,500 GVW) |
| Horsepower | 362 HP | **Paint Color Code** | Red |