BUILD SPECIFICATIONS

TRUCK MOUNTED JET RODDER MODULE
700 Gallon / 4000 PSI @ 25 GPM
MODEL 7744 TM

INTENT:

This specification describes a 700-gallon high-pressure truck mounted sewer jetter module only. The sewer cleaner shall be manufactured in a way that will utilize a water pump driven by an auxiliary diesel engine. The machine is equipped with a self contained, non-corrosive, non-metallic water tank supply as the water source for the high-pressure pump. The machine is capable of being operated by one man, with all operating controls for high-pressure, hose reel, located on a single control panel at the Rear of the machine for operator safety.

GENERAL TERMS:

All equipment furnished under this contract shall be new and current production. Accessories not specifically mentioned herein, but necessary to furnish complete unit ready for use, shall also be included. Unit and shall conform to the best practice known to the body trade in design, quality of material and workmanship. The equipment furnished shall be manufactured in the USA.

PARTS MANUAL:

Complete parts, maintenance, and operator's manual with each body sold.

STATE DELIVERY TIME: TBD

TANK

The capacity of the tank shall be at least 700 gallons

Construction shall be black high density polyethylene with ultraviolet inhibitors to prevent undue brittleness when exposed to sunlight and shall be of round design for additional strength. White or clear tanks will not be acceptable due to algae growth from sunlight. Tank shall have sight gauge visible from operator's station. The sight gauge shall be connected to the tank on the top and the bottom of the gauge. Open-ended gauges are not acceptable.

The tank shall be mounted over the rear axle for optimum load distribution.

The tank shall have a minimum five (10) year standard manufacturer's warranty.

A 2 ½" overhead type tank filling assembly shall be located on the curbside. A positive air gap anti-siphon system shall be incorporated to protect the portable water supply. A 25' x 2 ½" curb side filler hose with fittings and carrying rack will be included.

The tank shall be vented and fitted with a suitable removable port to permit inspection and access into the tank.

The system shall incorporate a suction line and a slope bottom tank to permit utilizing the entire bottom portion of the tank and settling chamber for heavy materials and to eliminate the possibility of these materials reaching the pump.

A final strainer shall be provided in the main water pump feed line. The strainer cap shall be removable by hand. Strainers requiring tools to remove the cap are unacceptable.

The tank shall be mounted in such a manner as to prohibit torsional racking of the frame from transmitting through the tank.

The tie down pipes shall be painted. Nylon tie down straps will not be accepted.

The tank shall have a minimum 2 ½" ball valve for isolating the filter strainer. Gate valves are not acceptable.

PUMP:

The pump drive to be direct belt drive design. The pump shall have a minimum 2-year standard manufacturer's warranty.

The pump shall be Triplex positive displacement, heavy duty, single acting triple plunger type. It shall be installed to operate at 25 GPM at 4000 PSI.

Valves shall be hardened stainless steel disc type with stainless steel valve springs. Stainless Steel constructed Manifold (Fluid End)

To prevent friction loss, the water pressure line from water pump to the hose reel shall have no swivels or elbows.

The plungers shall be ceramic. Hardened steel shall not be accepted.

Wash down system to be equipped on trailer to Include:

- Hand Gun to operate 500 to 800 psi maximum
- 25 ft hand gun hose with quick connects on operator control panel

ARTICULATING HOSE REEL ASSEMBLY

The unit shall be equipped with a jet hose reel having a capacity of 600' of 1/2" hose. Hose reel shall be constructed of a minimum of 3/8" steel to withstand maximum working pressure without distortion. Hose Reel shall be manufactured as a narrow design for easy level wind. The width shall not exceed 10".

Hose reel shall be mounted to truck frame for lower profile and ease of operation.

The hose reel shall be driven by hydraulic power in both directions. The hydraulic drive shall have sufficient power to retract the hose when fully extended into the sewer with the cleaning nozzle in operation.

A hose guide shall be provided for each reel to permit proper alignment of the hose on the reel. The guides shall be pinned in place when not in use.

The reel shall be so constructed that there are no elbows or fittings inside the drum to hinder winding and to cause maintenance problems. The hose shall enter the reel through the side flange to permit ease in winding and to minimize the possibility of damage to the hose.

The hose reel shall hydraulically articulate 90 degrees to each side of center. The reel shall articulate on a heavy-duty worm gear.

For operator's safety and ease of operation, the hose reel shall be infinitely lockable throughout its travel.

The reel shall lock in position utilizing a hydraulic self-adjusting lock system.

HOSE REEL DRIVE SYSTEM

The hydraulic power for driving the hose reel shall consist of a hydraulic pump gear direct driven by the engine, a direction (reel in & out) and a speed control valve with a built in overload relief and hydraulic hose rated to withstand the maximum system pressure.

The hydraulic pump shall have a minimum capacity of at least 8 GPM @ 2500 RPM.

The steel oil reservoir tank shall have a minimum capacity of at least 9 gallons.

The hydraulic oil filter shall be the spin-on, in-line type.

CONTROL PANEL

All gauges, switches, levers, necessary for the operation of the unit, shall be located at operator's station so the operator may have complete control of the cleaning operation while standing at one location.

The following instruments and controls shall be located at the hose reel operator station.

- Keyed engine ignition switch/ With throttle
- Water temperature, oil pressure, tachometer, hour meter, voltage,
- The water pressure gauge shall be oil filled.
- Lever for controlling the speed and direction of the hose reel when moved from a central position.
- Flow control valve for further control of reel speed for safety of operator.
- Single lever water control valve shall regulate direction of water to hose reel or back to tank utilizing a high pressure valve assembly.
- The control panel shall move with the hose reel when it is articulated for safety and ease of operation.
- Safety Lanyard: A safety lanyard shall be utilized when the main water pump is in use. The Lanyard shall attach to the operator and cause the water pump engine to shutdown if the operator leaves the operators station.

ENGINE AUXILIARY

The engine shall have a minimum two (2) year standard manufacturer's warranty.

The engine shall be a diesel. Tier 4 Water-cooled, heavy duty, industrial type having a rating of min 74 HP at 2,400 RPM.

The engine shall be mounted next to the cab of the chassis for ease of access and noise suppression for the operator.

The engine shall be installed so that it is easily accessible for maintenance and service. Engine shrouding and belt guards to be constructed of Aluminum.

All required accessories shall be furnished, including:

- 12-volt ignition system with alternator and battery
- Throttle
- Starter with lock starting switch
- Replacement cartridge type oil filter
- Positive crank case ventilation system

- Governor to limit RPM

PIPING

All piping systems subjected to high pressure shall be fabricated of high pressure piping with forged steel fittings. Pump suction lines and low pressure return piping systems may be standard weight pipe with malleable fittings. Heater hoses and vinyl are not acceptable for return hoses. All piping from the water pump to the hose reel shall be replaceable piping welded to frame will not be acceptable.

A strainer shall be installed in the suction line to prevent foreign material from damaging the pump, and at a location permitting ease accessibility for cleaning.

The unit design shall incorporate steel tubing running from the water pump area to the hose reel. This design will provide less down time and quicker repairs. Hoses running the total length of the unit are unacceptable.

A relief valve adjustable from 0-4000 PSI shall regulate pressure to the sewer-cleaning nozzle. The valve must be repairable; throw away type sealed units are not acceptable.

MAIN FRAME

The frame to be custom channel 6” Rail 10” front and rear shall be bolted to the chassis frame utilizing shear plates. U-bolt systems will not be accepted.

All decking shall be diamond tread plate steel for operator safety.

Following cleaning tools to supplied:

- One 1/2” stainless steel sewer-cleaning nozzle having five 35-degree rearward jets.
- One 1/2” stainless steel sewer-cleaning nozzle having five 15-degree rearward jets.
- One 1/2” skid assembly, 6” long, threaded for hose fittings and nozzle
- Nozzle storage rack for 1/2” nozzles
- Tiger Tail hose protector

Following cleaning hoses to be supplied:

600 ft 1/2” 4000 PSI jet hose (Minimum 4000 PSI 10000 Burst)

(1) Leader Hose (steel wire braid) 1/2” x 10’ long. Installed ready for use.

Tool Boxes

One (1) 14” x 14” x 60” Tool tray aluminum construction.

One (1) 18” x 18” x 36” Tool box under frame aluminum construction.

LIGHTING

Stop Lights
Tail light & direction light
Markers
DOT/ICC lighting to meet Federal/State laws

PAINTING/LINER

Each component shall be painted/lined separately prior to assembly

The entire module shall be painted/lined Standard colors