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MAL2000 Aluminum Service Vehicle

The MAL2000 aluminum service module is designed for the International 4300 or Ford F750 but works well with many other chassis models with a minimum 25,999 lbs. GVWR or larger. The 1,500-waste / 500-fresh tank can handle the largest of routes. Pump systems are PTO driven with right angle drives with Masport HXL4V vacuum pumps. See the specification section for available options and other chassis choices, complies with DOT safety requirements.



Dimensions

Vehicle Length	287"
Length (module)	172"
Width (overall) excl. mirror bracket	99"
Overall height (mounted)	122"
Module height (not mounted)	78"
Module weight	2827 lbs.

Cab/Chassis Specifications

Navistar 4300 chassis

- DT 466 engine, 210 HP, 540 ft.-lbs. torque
- Allison AT 2100RDS, with PTO gear
- Bendix air brakes with dryer, Driver's air ride seat
- Single reduction differential 5.57 gear ratio
- 175" wheelbase; 108" cab to axle
- 25,999 GVW, 8,000 front: 17,500 rear
- Towing capacity: 5,000 lbs.- 3/4 load, tongue weight: 500 lbs.

Ford F750 chassis

- Cummins ISB engine, 215 HP, 520 ft.-lbs. torque
- Allison AT 2500RDS, with PTO gear
- Power assist hydraulic brakes Easy-air driver seat, manual pump
- Single reduction differential 4.88 gear ratio
- 194" wheelbase; 120" cab to axle
- 25,999 GVW, 10,000 front: 21,000 rear
- Towing capacity: 5,000 lbs. – 3/4 load, tongue weight: 500 lbs.

Cabinet Design and Materials

Design

1/8" Aluminum side panels with one aluminum locking cabinet on each side. Cabinet and side panels are weld-together construction.

Finish:

Bright Aluminum

Bumper, Hitch Assembly & Unit Hauler

- Self-supporting
- Recess-mounted tail, back-up and marker lights
- Female half of six-pin connector flush mounted
- Trailer and safety chain hookup
- Locking pin to hold unit hauler in position
- Fold up design holds two units
- License plate holder

Weight and Balance

Front	Axle Weights	Rear	Total
6,186 lbs.	Empty	5,525 lbs.	11,711 lbs.
7,862 lbs.	Full fresh	8,019 lbs.	15,881 lbs.
7,432 lbs.	Full waste	17,007 lbs.	24,439 lbs.
7,967 lbs.	Full truck*	17,406 lbs.	25,373 lbs.

*Full truck = Full waste, 10% fresh, driver

25,999 lbs. = International 4300 Factory published GVW rating; 25,999 lbs. = Ford F650 Factory published CVW rating

Tank Design and Material

Rear Waste Compartment: **Volume** - 1,500 gallons, Shell – 1/4" ASTM 5454, Heads - two 1/4" X 66" diameter, one 1/4" cross baffles; and two wing baffles. One 19" quick opening manway in center of waste.

Front Fresh Compartment: **Volume** - 500 gallons, Shell - 1/4", with one 1/4" X 66" head, two wing baffles.

Mounts: Tank rests on chassis frame on captive 2" x 3" plastic lumber strips. Front consists of spring loaded mounts with 5/8" Grade 8 bolts and lock nuts. Center mount H-style mounting bracket. Rear mounts consist of 3/8" and 1/4" brackets. Brackets are bolted with 5/8" diameter Grade 8 plated bolts, to frame and to tank with 5/8" bolts.

Dump Locations: **Waste** - 4" full port dump located just behind rear wheel on driver's side.
Fresh - 2" dump located just behind cab on left side.

Fitting Sizes:				
	Fresh outlet	2" MPT	Fresh inlet	3" FPT
	Waste outlet	4" MPT	Waste inlet	3" MPT
	Vacuum line	1-1/2" hose	Fresh indicator	1" sight tube
	Waste indicator	5" sight glass		

Tank Finish: Bright finish aluminum

Vacuum System Specifications

Standard Pump: Masport HXL4V pump with pressure dump

Standard Pump Drive: PTO with torque overload protection

Optional Pump: Masport HXL75V pump with pressure dump

Vacuum System Features:

- Service hose 30' (others optional)
- Electronic fast idle system (chassis option)
- Pump oiling system
- Primary overflow valve (in-tank design)
- Secondary check valve (in-line design)
- Exhaust muffler/Oil catch
- Vacuum gauge (cabinet mounted)

The service module features a PTO driven vacuum system for pumping waste and a gravity flow chemical system for recharging the restroom with fresh chemical.

Performance on 1400 compartment:

1400 RPM	Rating (CFM)	Vacuum levels	
		12" HG	18" HG
HXL4	160	39 seconds	80 seconds
HXL75	230	28 seconds	58 seconds

The above times are for empty tank performance.

Standard Module Features

- 36" x 30" x 24" cabinets both sides
- 1/4" aluminum catwalks and cabinets
- Round sight glasses waste, sight tube fresh
- Rubber dock guard on rear of catwalks
- 19" quick opening manway in waste
- Ladder to gain access to top manway
- DOT safety equipment package (flag and reflector, first aid kit, fire extinguisher)

Optional Module Features

- Vacuum hose length options
- Pressure wash systems
- Dump hose length options
- Right hand service
- Three compartment tanks (requires extra lead time)
- Ford, Freightliner, Sterling, Peterbilt chassis options, (requires extra lead time)