

FX50/FXT50

Tier 4

Operator's Manual



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FX50/FXT50 Tier 4 Operator's Manual

This manual covers the following models: FX50 Tier 4, FXT50 Tier 4.

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Part number 053-2755

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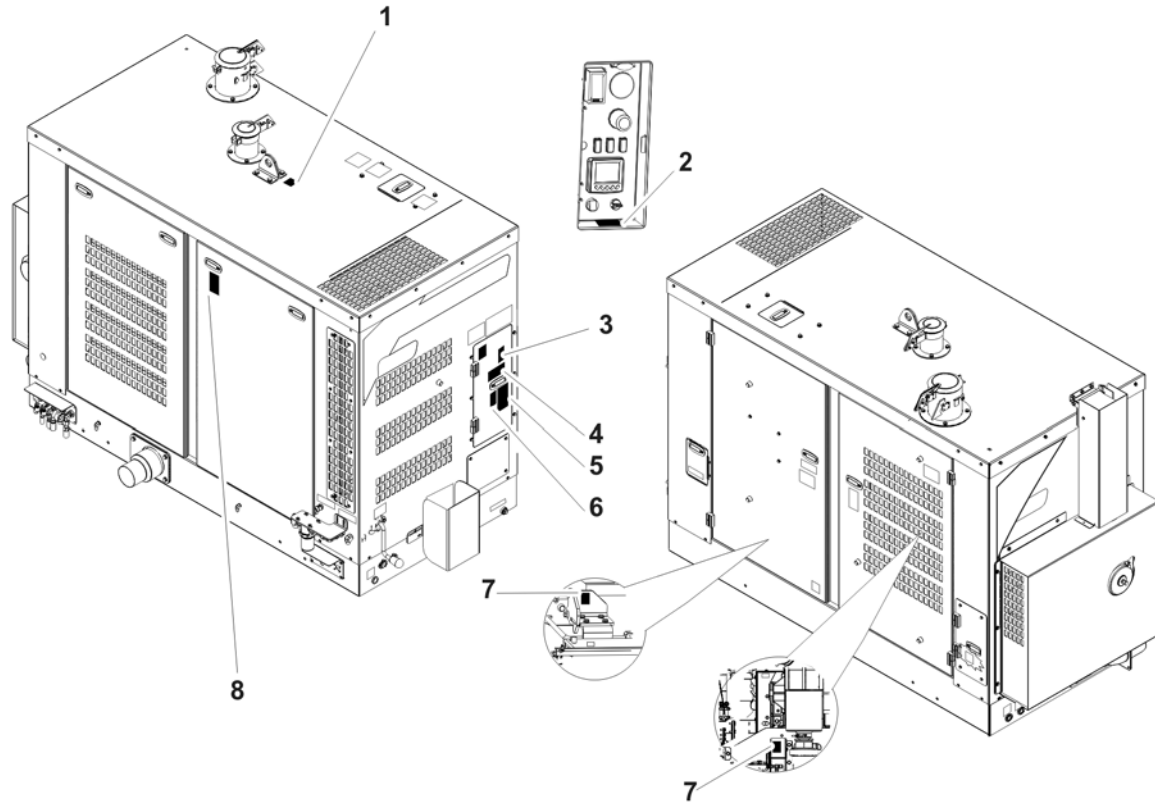


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FX50T4 Machine Safety Alerts

Power Unit



Decal_FX50T4



Lift point. See Transport chapter for more information.

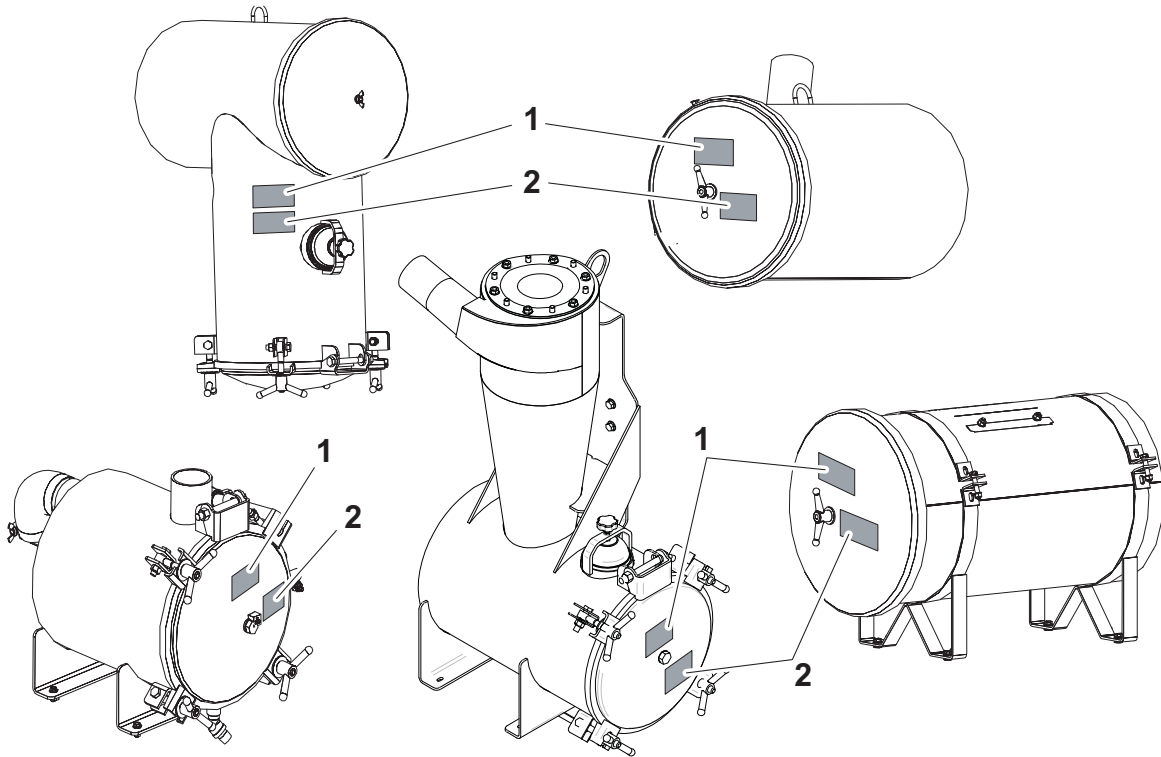


WARNING Read operator's manual. Know how to use all controls. Your safety is at stake. 273-475



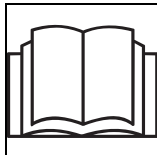
CAUTION Exposure to high noise levels may cause hearing loss. Wear hearing protection. 700-009 (2-P)

FX Filters and Cyclones Safety Alerts



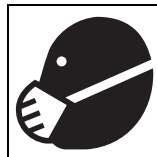
FX_Filters_&_Cyclones.eps

1

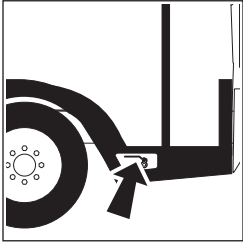
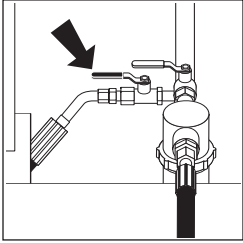
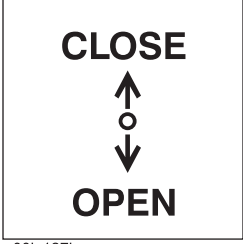
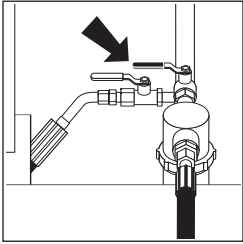
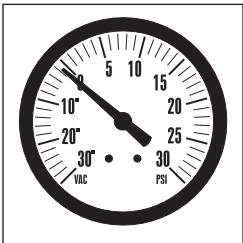


⚠ WARNING Contents under pressure. Relieve pressure before opening. Death or injury could occur. 270-2732

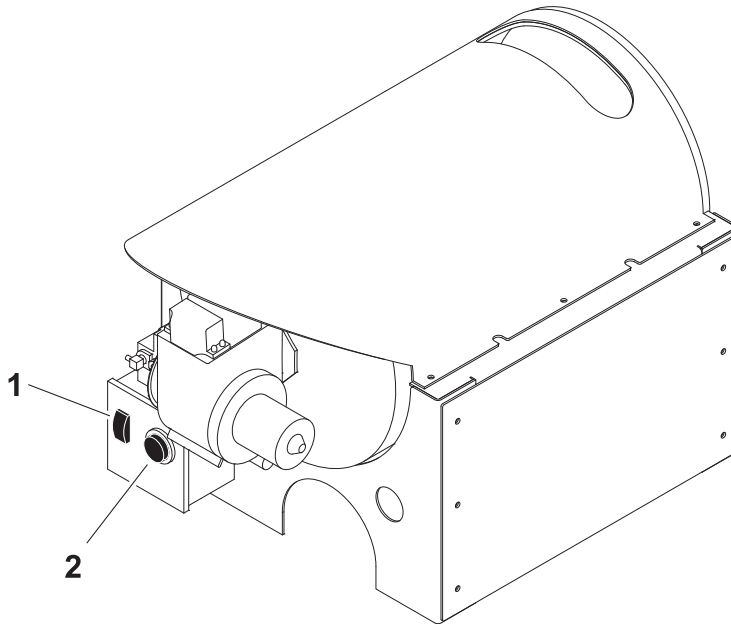
2



⚠ CAUTION Breathing crystalline silica dust may cause lung disease. Cutting, drilling, or working materials such as concrete, sand, or rock containing quartz may result in exposure to silica dust. Use dust control methods or appropriate breathing protection when exposed to silica dust. 270-4952

Item	Description	Notes
<p>2. Water tank drain</p>  <p>c00ic132h.eps</p>	<p>To drain tank, open valve.</p> <p>Close valve when tank is empty.</p>	
<p>3. Water tank supply valve</p>  <p>c00ic129h.eps</p>	<p>To open valve (send water from the water tank through the pump and water lance), rotate counterclockwise.</p> <p>To close valve (stop water flow), rotate clockwise.</p>	<p>IMPORTANT: Water tank supply valve or antifreeze supply valve must be open when pump is running or pump will be damaged.</p>
<p>4. Drain/Outlet valve</p>  <p>c00ic127h.eps</p>	<p>To drain tank, rotate down.</p> <p>To close drain, rotate up.</p>	
<p>5. Antifreeze tank supply valve</p>  <p>c00ic130h.eps</p>	<p>To open valve (send antifreeze through pump and water lance), rotate counterclockwise.</p> <p>To close valve (stop antifreeze flow), rotate clockwise.</p>	<p>IMPORTANT: Water tank supply valve or antifreeze supply valve must be open when pump is running or pump will be damaged.</p>
<p>6. Vacuum gauge</p>  <p>c00ic131h.eps</p>	<p>Displays blower vacuum reading in inches of mercury. Vacuum relief valve opens when vacuum reaches 16" (406 mm).</p>	

Water Heater (optional)

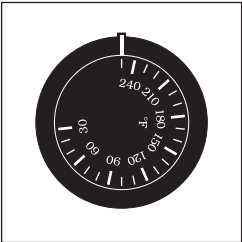


j33om085h.eps

1. Power switch

2. Temperature control *

* Temperature control not available on tandem-axle truck water heaters.

Item	Description	Notes
<p>1. Power switch</p>	<p>To turn water heater on, press top. Red light will glow.</p> <p>To turn off, press bottom.</p>	<p>NOTICE: Turn power switch off when unit is not in use. Turning off power pack engine does not turn off heater.</p> <p>IMPORTANT: Heater automatically shuts off when water level is too low.</p>
<p>2. Temperature control</p>  <p>c00ic634h.eps</p>	<p>Turn dial to set heater to desired temperature.</p>	<p>Not available on tandem-axle truck water heaters</p>

Check Supplies

- water and additional hoses
- fuel
- keys
- spray lubricant
- personal protective equipment, such as hard hat and safety glasses

Prepare Equipment

Fluid Levels

- fuel
- hydraulic fluid
- engine coolant
- battery charge
- engine oil
- blower oil

Condition and Function

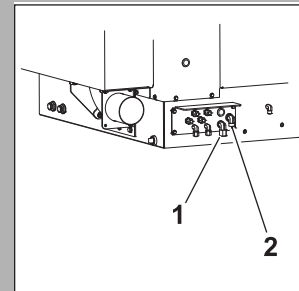
- filters (air, oil, hydraulic)
- belts
- hydraulic pump
- blower
- tires
- hoses and valves
- couplers and fittings
- water tanks

Start Unit

EMERGENCY SHUTDOWN: Turn ignition switch to STOP.

Standard Procedure

IMPORTANT: If power pack is not connected to external tank control valves (for 1200 gallon), connect a -08 hose with a minimum working pressure rating of 3000 psi (207 bar) from tank (1) to pressure (2) connections on power pack.

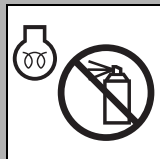


1. Open tank inlet valve.

NOTICE: Avoid idling engine with inlet valve closed.

2. If equipped with reverse flow, ensure vacuum is in “vacuum” mode before starting.
3. Insert key.
4. Turn key clockwise. See page 33 for more information.
5. Run engine at low throttle for 5 minutes.

Cold Start Procedure



WARNING Fire or explosion possible. Do not use starter fluid. 273-459 (2P), 274-206 (2P), 700-206 (2P)

1. Open tank inlet valve.

NOTICE: Avoid idling engine with inlet valve closed.

2. If equipped with reverse flow, ensure vacuum is in “vacuum” mode before starting.
3. Insert key.
4. Wait for glow plug indicator to go out.
5. Turn key clockwise. See page 33 for more information.
6. Run engine at low throttle for 5 minutes.

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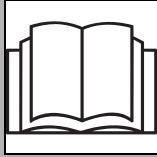


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Unload to Another Tank

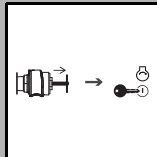
Optional reverse flow mode can be used to transfer vacuumed material to another tank or disposal site.


WARNING

Read operator's manual. Know how to use all controls. Your safety is at stake. 273-475

To help avoid injury:

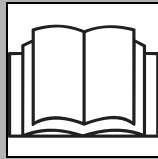
- Keep unit in "vacuum" mode unless pressure is needed.
- Restrain hose prior to pressurization. Unrestrained hose may cause property damage, injury or death.
- Do not open fitting cams or valves when tank is pressurized. Flying debris, plugs and doors can cause injury or death.
- Do not open tank door while tank is pressurized.
- Do not use pressure to clear clogs in vacuum hose.


WARNING

System may be pressurized. If over pressurized, death or serious injury can occur. Exercise and clean relief before each use. 270-2736

1. Securely connect transfer hose to FX tank. Ensure drain/outlet valve on FX tank is closed.
2. Securely connect other end of transfer hose to offboard tank. Ensure inlet valve on offboard tank is closed and tank is vented.
3. Open FX tank drain/outlet valve. Material may flow into transfer hose.
4. Open offboard tank inlet valve. Move valve handle counterclockwise to engage "reverse flow" mode. Material will flow into offboard tank.
5. Increase throttle as desired to transfer material.
6. When transfer is complete, close FX tank drain/outlet valve.
7. Close offboard tank inlet valve and disconnect hose from offboard tank inlet valve.
8. Move handle clockwise to "vacuum" mode.
9. Open FX tank drain/outlet valve. Material will empty from transfer hose.
10. Close FX tank drain/outlet valve.
11. Disconnect transfer hose from FX tank.

Service Precautions



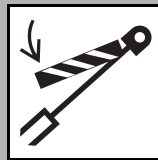
WARNING Read operator's manual. Know how to use all controls. Your safety is at stake. 273-475

To help avoid injury:

- Unless otherwise instructed, all service should be performed with engine off.
- Refer to engine manufacturer's manual for engine maintenance instructions.

IMPORTANT: Service illustrations show unit configured with 1200-gal (4542-L) tank unless indicated otherwise.

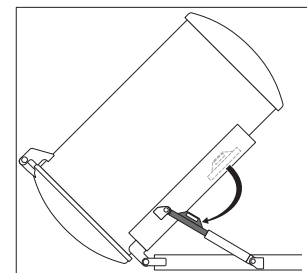
Working Under Raised Debris Tank



WARNING Crushing weight. Place cylinder lock on extended cylinder and secure. 273-231

If using 800:

1. Raise vacuum tank.
2. Remove cylinder lockout tool and place over extended cylinder rod.
3. Lower vacuum tank until load is supported by cylinder lockout tool.

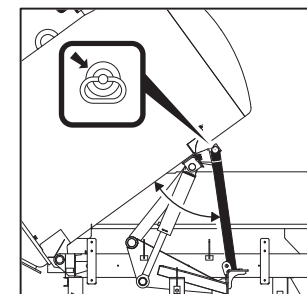


FX_Tank_Raised.eps

800

If using 1200:

1. Raise vacuum tank.
2. Pull spring-loaded pin and rotate tank support leg down until pin clicks into hole.
3. Lower vacuum tank until load is supported by tank support leg.



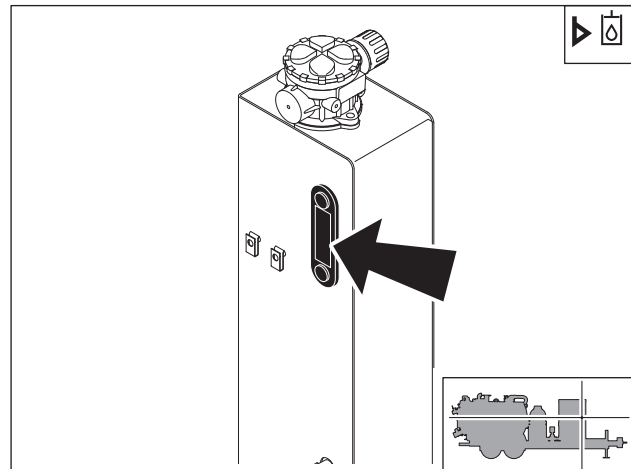
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1200

Check Hydraulic Fluid Level

With frame level, check oil at indicator every 10 hours. Add THF at fill as necessary. Clean dust from cap by blowing with low-pressure air.

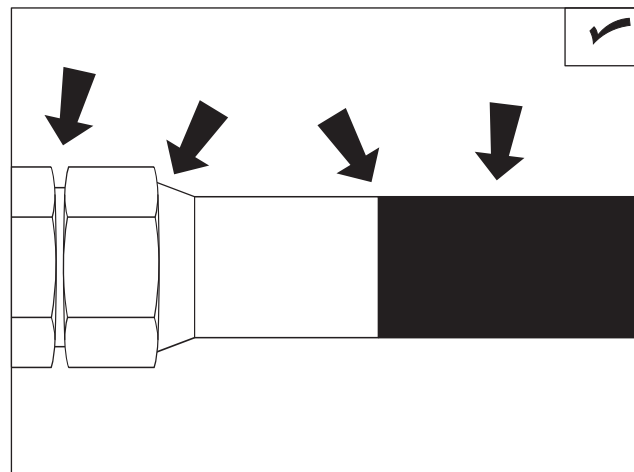
IMPORTANT: Use a ladder or other means to access hydraulic fluid fill.



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Check Hydraulic Hoses

Check hoses every 10 hours for wear or damage. Replace as needed.



CheckHoses.eps



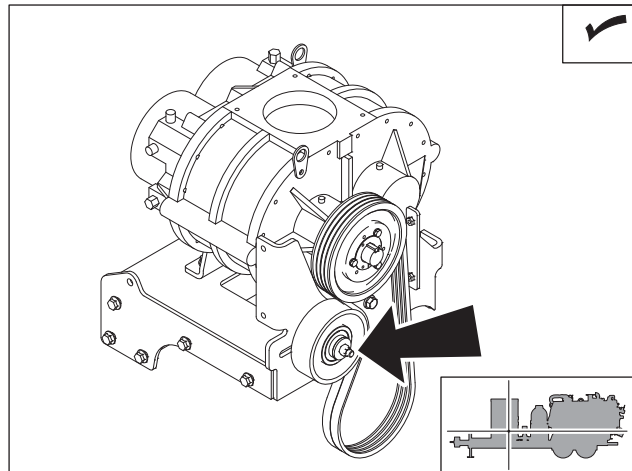
WARNING Pressurized fluid or air could pierce skin and cause severe injury. Refer to operator's manual for proper use. 270-6035

To help avoid injury:

- Before disconnecting a hydraulic line, turn engine off and operate all controls to relieve pressure. Lower, block, or support any raised component with a hoist. Cover connection with heavy cloth and loosen connector nut slightly to relieve residual pressure. Catch all fluid in a container.
- Before using system, check that all connections are tight and all lines are undamaged.
- Use a piece of cardboard or wood, rather than hands, to search for leaks.
- Wear protective clothing, including gloves and eye protection.
- If you are injured, seek immediate medical attention from a doctor familiar with this type of injury.

Check Blower Belt Tension

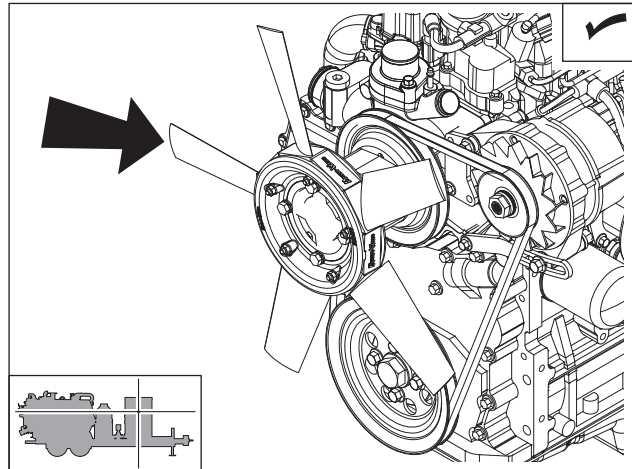
Check belt every 10 hours for correct tension, damage or wear. Replace worn belt. Tighten as needed. See "Adjust Hydraulic Belt Tension" on page 121.



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Inspect Cooling Fan

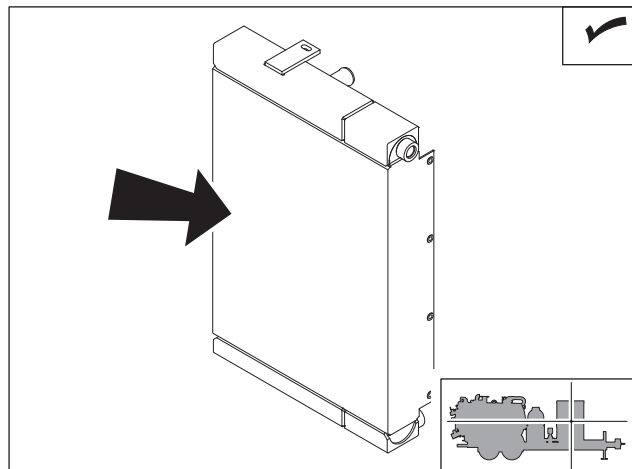
Check for cracks, loose rivets, and bent or loose blades. Check mounting screws and tighten if needed.



j44om006h.eps

Check Radiator

Check radiator for dirt, grass, and other foreign matter every 50 hours. Clean out with compressed air or spray wash if required. Be careful not to damage fins with high-pressure air or water. Check more often if operating in dusty or grassy conditions.



j43om026h.eps

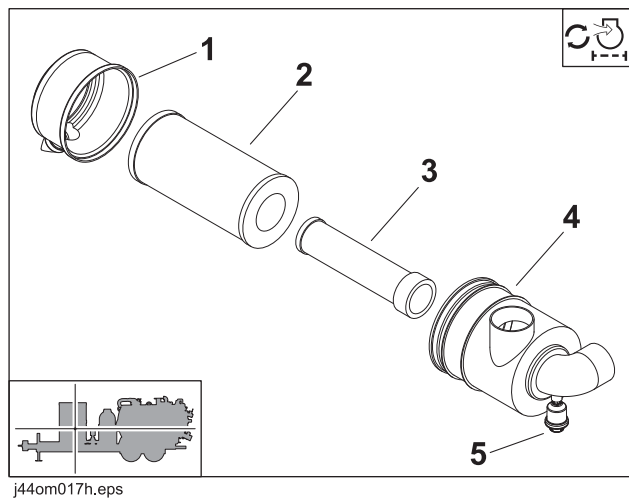
Vacuum System

Change Air Filter

Change air filter element when red band on filter minder (1) is visible. Push button to reset indicator.

To replace air filter:

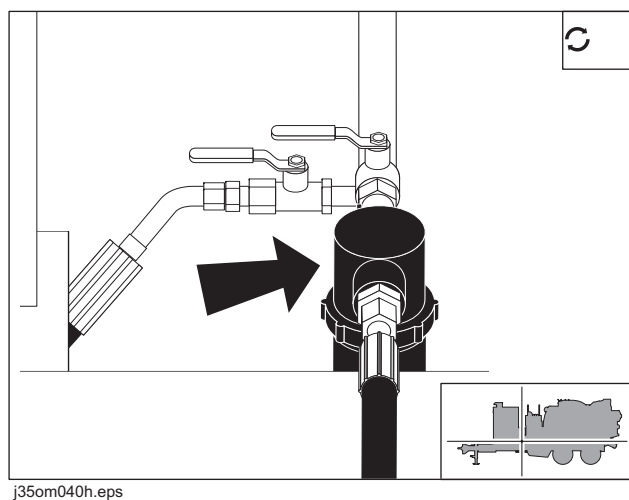
1. Unthread cover (1) and remove.
2. Remove the primary (2) and secondary (3) filters from the canister (4).
3. Wipe out the canister (4) and cover (1) with a damp cloth.
4. Install the new secondary and primary filters by hand with a slight turn and firm push to seat the filters in the canister.
5. Thread the cover on.
6. Reset filter minder indicator (5) by pressing the yellow button.



NOTICE: If the cover contacts the filter before the cover is fully in place, remove cover and push filter element further into housing and try again. The cover should go on without extra force.

Change Water Pump Filter

1. Open filter housing.
2. Remove element and rinse housing thoroughly with clean water.
3. Install new element and close filter housing.



200 Mile

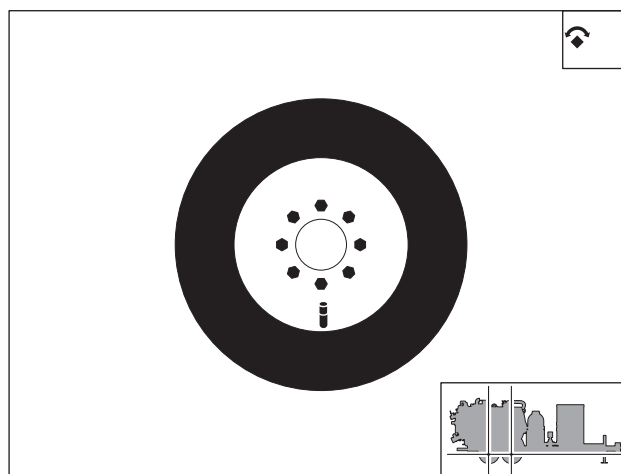
Location	Task	Notes
Trailer	Adjust electric brakes	Initial
	Adjust hydraulic brakes	Initial

Trailer

Adjust Electric Brakes (Initial)

Adjust brakes after 200 miles (320 km).

1. Place adequate jack stands under frame rails and remove wheels.
2. Remove cover from adjusting slot on bottom of backing plate.
3. Rotate adjuster starwheel with screwdriver or brake spoon to expand brake shoes. Adjust until drum is very difficult to turn by hand.
4. Rotate starwheel the other direction until drum turns with slight drag.
5. Replace adjusting slot cover and replace wheel.
6. Repeat procedure for all remaining brakes.
7. Remove jack stands and lower wheels to ground.



j350m023h.eps

T18S Trailer		U.S.	Metric
Dimensions			
	Clearance (at jack foot pad)	12 in	305 mm
	Adj. coupler height	17-26 in	432-660 mm
	Width between fenders	80.5 in	2 m
	Width outside fenders	100.5 in	2.6 m
General			
	Number of axles	2	
	Coupler (square mount drawbar)	3 in or 2.5 in	76 mm or 64 mm
	Type of brakes	electric	
	Lug nut torque	300 ft•lb	407 N•m
	Hitch bolt torque	200 ft•lb	271 N•m
	Electrical system	12V DC	
Tire			
	215/75R-17.5, H16TL	125 psi	8.6 bar
Load rating			
	Tongue weight (empty)	2330 lb	1057 kg
	Tongue weight (full water)	2460 lb	1116 kg
	Max tongue load	2700 lb	1225 kg
	Tongue weight, maximum	3100 lb	1406 kg
	GVWR (gross vehicle weight rating)	18,000 lb	8165 kg
	GAWR (gross axle weight rating, each)	8,000 lb	3632 kg

Load ratings for speeds up to 65 mph (104 km/h).

Vac Tank	U.S.	Metric
Capacity	800 gal	3028 L
Length	98 in	2.5 m
Diameter	50 in	1.3 m
Drain valve size	6 in	152 mm
Inlet valve size	4 in	102 mm

Engine	U.S.	Metric
Deutz D2.9L4, diesel, Tier 4		
Cooling medium	water	
Aspiration	natural	
Number of cylinders	4	
Displacement	178 in ³	2.9 L
Bore	3.62 in	92 mm
Stroke	4.33 in	110 mm
Engine manufacturer's gross power rating (per SAE J1995)	49 hp	36.5 kW
Estimated net power rating (per SAE 1349)	39 hp	29 kW
Rated engine speed	2600 rpm	2600 rpm
Emissions compliance	EPA Tier 4	EU Stage IIIA

* Exceeding these operating angles will cause engine damage. This DOES NOT IMPLY machine is stable to maximum angle of safe engine operation.

Hydraulic system	U.S.	Metric
Pressure	2500 psi	172 bar
Drive type	engine-driven gear pump	
Tank lift cylinder size (2)	2.5 in	63.5 mm
Maximum tilt angle	45°	45°

Battery

SAE res. cap. 195 min; SAE cold crank @ 0°F (-18°C) 950A, 12V

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