Satellite®

Learning Center

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Service Truck Maintenance

Primary Overflow Valve

Cleaning: Internal

Frequency: Weekly or if over pumping has occurred

Procedure for 1999 and earlier models

- Remove the dust cap at the top of the waste compartment as shown above.
- Remove the white perforated valve as shown.
- Vigorously wash the valve in a pail of premix or soap and water mixture. Make sure that no foreign material stays on the valve.
- Replace overflow and dust cap.

Secondary Ball Check

Cleaning: Drain Internal fluid

Frequency: Every time the tank is dumped or if over- pumping has occurred

Procedure for 1999 and earlier models

- Drain valve by opening yellow handle on 1" ball valve on bottom of assembly as shown in picture above. Draining prevents buildup of condensation that would build up in bottom of valve causing the valve to shut down vacuum to the tank.

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Check Oil Reservoir

Cleaning: Check and add as needed

Frequency: Daily

Procedure for 1999 and earlier models

- Always maintain an adequate oil level in vacuum pump oiler. Vacuum pumps run at high temperatures and require a good quality oil such as Shell Rotella. Standard automotive oils may not be adequate and can breakdown under the heat of normal operating conditions.

Vacuum Pump Flushing

What occurs: Fluid cleans rotor, vanes and internal bore

Frequency: Every three months or any time pumping occurs where waste material gets drawn into vacuum line

- Remove Vacuum intake and exhaust hoses. Use short pieces of hose to add fuel to intake and collect dirty fuel from the pump in a separate container. Start and run pump at engine low idle speed. See picture above.
- With engine running slowly add about 2 ounces of Diesel or kerosene to the pump. Allow this fluid to clear then repeat. Run through about 1 quart of liquid in total. Be sure to collect and properly dispose of liquid that has run through pump.
- Slowly poor about 6 ounces of lubricating oil through pump again at 2-ounce quantities. The oil restores lubricant to the pump.
- Stop pump, reconnect lines and dispose of dirty fuel.

TROUBLE SHOOTING GUIDE

SYMPTOM	POSSIBLE CAUSE	REMEDY
1. No vacuum at wand end, gauge registers vacuum.	A. Plugged valve or hose	A. Clear obstruction in hose. (To clear hose, reverse ends and draw obstruction out of hose using tank vacuum.)
	B. Overflow check valve closed waste compartment full	B. Empty waste tank and release vacuum between pump and overflow valve by opening secondary ball valve. Check overflow valve for obstruction. Clean as necessary to loosen ball.
2. Vacuum pump turns but produces no vacuum or no vacuum is indicated.	A. Secondary ballcheck valve closed.	A. Open and drain ballcheck ball valve.
	B. Vacuum gauge broken or sticky.	B. Replace gauge
2C. Vacuum pump turns but produces very loud noises and chatters.	C. Exhaust line from pump plugged, or frozen.	C. Check carbon pot, drain muffler, check hose for obstruction, or thaw as necessary.
3. Vacuum pump turns but produces only little vacuum	A. Pump is excessively dirty causing some vanes to stick in rotor slots.	A. Flush pump with a pint of diesel fuel using the standard flushing procedure. See pump manual.
	B. Several small leaks in vacuum hose between tank and pump.	B. Repair leaks/replace hose.
	C. Rotor vanes worn or broken	C. Replace vanes
	D. Vanes swollen, stuck in rotor slot.	Replace vanes. See rebuild procedure in pump manual.
4. Vacuum pump shaft not turning	A. Fuse powering electric clutch blown.	A. Replace fuse.
	B. Clutch failure.	B. Replace clutch
	C. Wiring problem.	C. Repair/replace wiring.
5. Idle control does not advance engine speed when button is pushed.	A. Parking brake not applied	A. Apply parking brake.
	B. Clutch or brake pedal sensors out of adjustment.	Have Ford dealer or mechanic adjust sensor brackets and pedal travel.
6. Cannot dump waste	A. Dump valve plugged.	A. With vacuum on tank, quickly and repeatedly cycle dump valve open and closed. Release vacuum and dump.