

CHAPTER 10

SERVICE CHECKLISTS

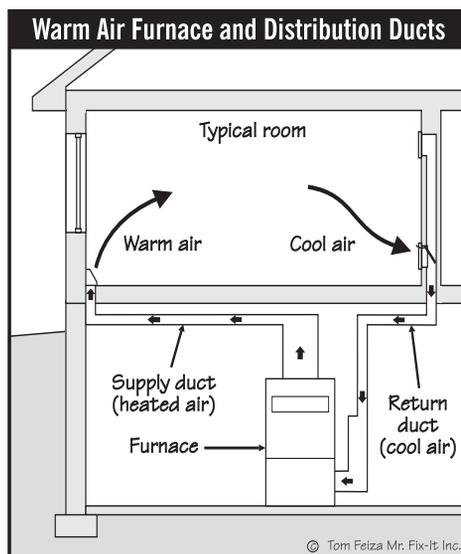
Whether you're doing it yourself or hiring professionals to service your home, these checklists help ensure that all important points are covered.

Make photocopies of applicable checklists. You can send a copy to the service company when you arrange service and/or review the list with the technician at the beginning of the service call.

Warm Air Furnace – Homeowner Service Checklist

Note: Turn off power to the unit before inspection or maintenance.

- Maintain records. Have a professional service the unit yearly. Proper maintenance keeps equipment operating efficiently and ensures safety. Contact the manufacturer of your furnace for specific maintenance requirements.
- Change the filter as required—often every other month.
- Switch high/low returns at the start and end of the heating season. For complete instructions, see “High and Low Returns” in Chapter 3.
- Check all flue pipes and vents for rust, water leaks, and loose connections.
- Lubricate the fan motor and fan bearing with a few drops of oil twice per year. (This is only required on certain units.)
- Check the belt to make sure it’s not cracked or loose. (This is only required with belt-driven fans.)
- Listen to the furnace operate and follow up on any strange sounds.
- Check drain lines to make sure they are clear and draining properly.
- Look for water leaks or changes in the system.



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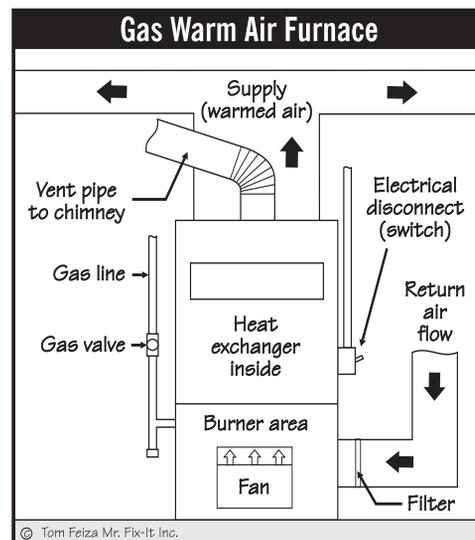
Warm Air Furnace – Professional Service Checklist

During a routine service call, the service technician should perform the following general maintenance measures. The technician may perform other checks, too, depending on the type of furnace.

- Check and clean burner.
- Check flue pipes, draft diverter, heat exchanger, and chimney.
- Remove burners to clean burners and heat exchanger if necessary.
- Check electrical wiring and connections.
- Check and clean circulating fan. Lubricate fan and motor if necessary.
- For belt-driven fans: check for tension, wear and alignment.
- Check supply and return ducts for air leakage, water stains, rust.
- Check and maintain filter.
- Perform an operational check of furnace and safety controls.
- Test for carbon monoxide in the flue gas and in the air around the furnace.
- Check for gas leaks.
- Check, clean, and (if necessary) adjust pilot light.
- Check the water heater. For a gas water heater, check flue gas for carbon monoxide.

For a high-efficiency furnace, the technician should also:

- Check for water leaks (condensation from combustion).
- Check flue pipes and connections.
- Check for condensation on metal pipes and parts.
- Check for a clean condensate drain line.
- Check operation and condition of draft fan.

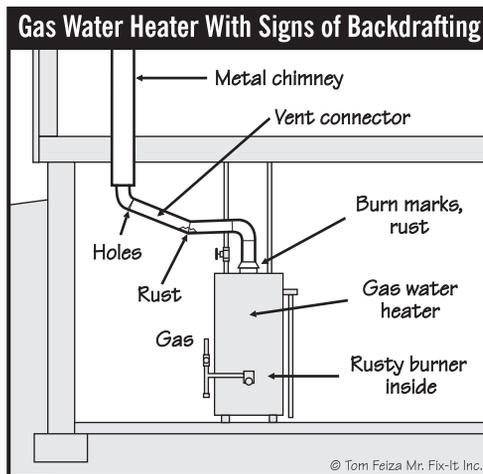


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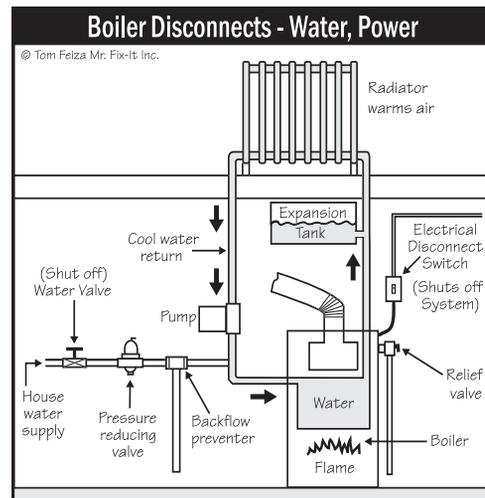
Hydronic Heating – Homeowner Service Checklist

Note: Turn off power to the unit before inspection or maintenance.

- Maintain records, and have a professional service the unit yearly.
- Check all flue pipes and vents for rust, water leaks, loose connections.
- Listen to the boiler operate, and follow up on any strange noises.
- Check drain lines to make sure they are clear and draining properly. (This is required only for high efficiency condensing units.)
- Look for water leaks or changes in the system.
- Oil the circulating pump twice per year. (Use just a few drops.)
- Check that the temperature/pressure gauge is in the operating range identified by a professional service technician. Mark the proper range on the gauge.



W006



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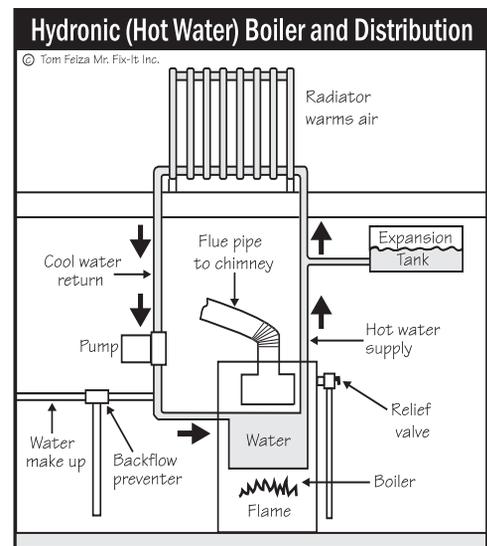
Hydronic Heating – Professional Service Checklist

A service technician should perform the following general maintenance measures. The service technician may also perform additional checks, depending on the type of furnace.

- Check and clean burner.
- Vent the system at the high points as necessary.
- Check all flue pipes, draft diverter, boiler housing, and chimney.
- Remove burners to clean burners and heat exchanger if necessary.
- Check electrical wiring and connections.
- Check and lubricate circulating pump(s).
- Check for water leaks.
- Check temperature and pressure relief valve.
- Check water supply system and backflow preventer.
- Add backflow preventer if none is present.
- Check expansion tank for proper water level.
- Check for gas leaks.
- Test for carbon monoxide in the flue gas and in the air around the furnace.
- Perform an operational check of controls for temperature, pressure and safety.
- Check, clean, and (if necessary) adjust pilot light.
- Check the water heater. For a gas water heater, check flue gas for carbon monoxide.

Additional checks for a high-efficiency boiler with a draft fan:

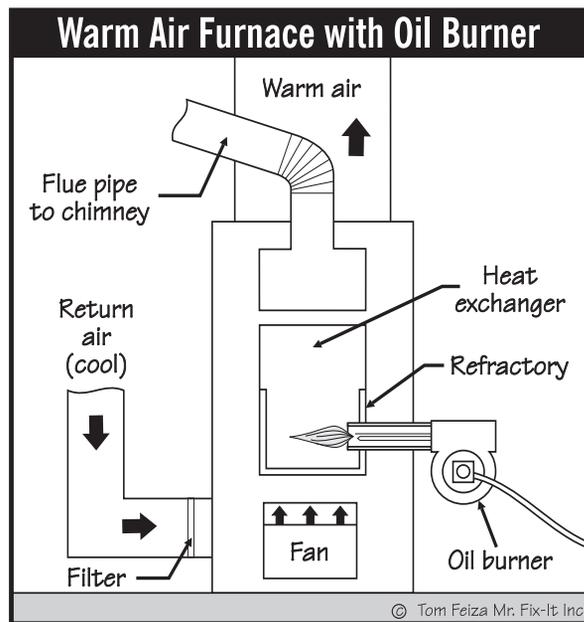
- Check draft fan for condensation and rust.
- Check flue pipe for condensation.
- Check condensate drain lines.



Oil Heating – Homeowner Service Checklist

Note: Turn off all power to the unit before attempting inspection or maintenance.

- Follow the maintenance requirements listed on previous pages for warm air or hydronic boiler systems.
- Schedule routine maintenance yearly.
- Lubricate the burner motor if it has oil ports.
(Ask your service technician.)
- Make sure the system never, never runs out of fuel oil.



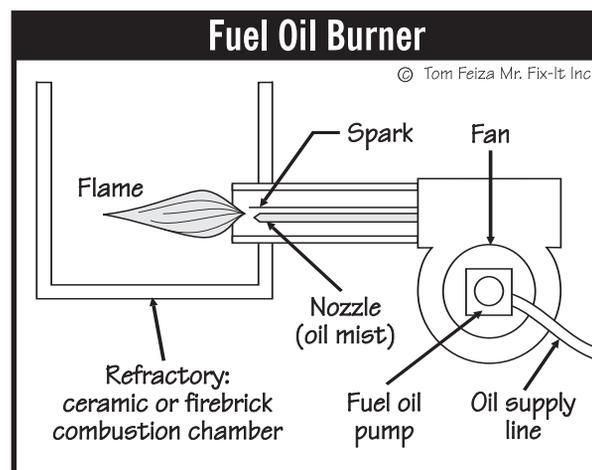
H013

Oil Heating – Professional Service Checklist

A service technician should perform the following general maintenance measures. The service technician may also perform additional checks, depending on the type of furnace.

Note: The first item on this checklist refers to general maintenance requirements found in the checklist for a warm-air furnace, so photocopy the warm air furnace checklist, too, and give both lists to your service technician.

- Follow applicable maintenance requirements listed for a warm air furnace.
- Remove and clean burner, clean blower blades, replace or clean filter and/or strainer, replace the nozzle, clean flame and heat sensors, check and clean or replace electrodes.
- Lubricate the burner motor.
- Check flue and barometric damper.
- Check for oil leaks.
- Check and clean oil pump.
- Clean and test stack control.
- Check and adjust draft regulator.
- Test for efficiency and make proper adjustments.
- Check the water heater. For a gas water heater, check flue gas for carbon monoxide.

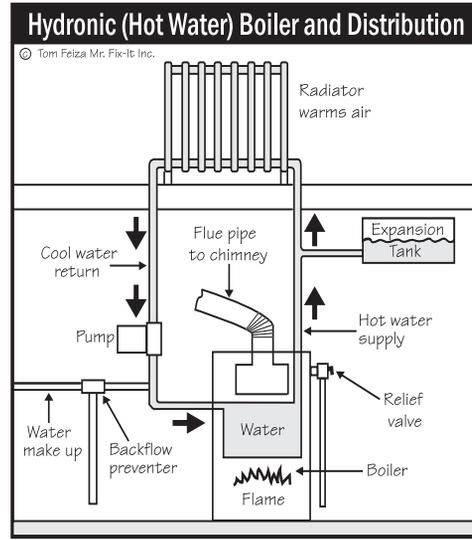
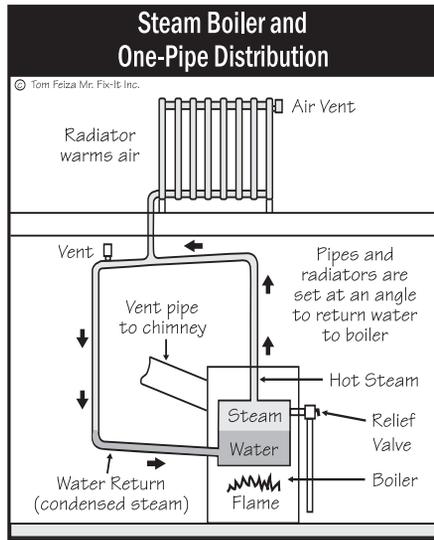


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Steam Heating – Homeowner Service Checklist

Note: Turn off power to the unit before inspection or maintenance.

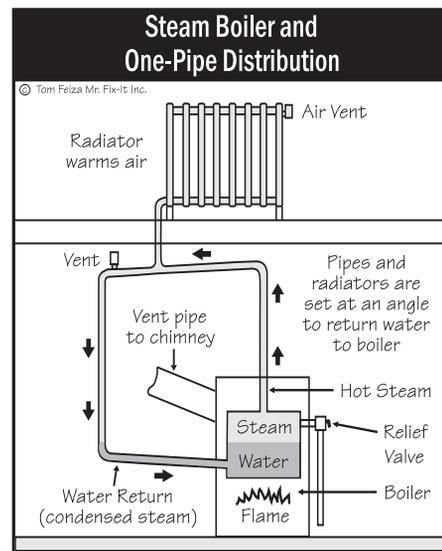
- Maintain records.
- Check all flue pipes and vents for leaks, rust, and loose connections.
- Check the system for any leaks.
- Check the steam gauge. Have your contractor mark the normal range.
- Check the water level every month. The normal range should be marked on a sight glass.
- Make sure the radiators slope slightly toward the steam inlet pipe. This will help keep the pipe from knocking or pounding.
- Make sure the vents on the radiators are operating; otherwise, radiators may be cold.



Steam Heating – Professional Service Checklist

A service technician should perform the following general maintenance measures. The service technician may also perform additional checks, depending on the type of boiler. **For an oil fired system, see the information on oil burners, which require additional checks.**

- Check and clean the burner.
- Check all vents on radiators and piping.
- Check all flue pipes, draft diverter, boiler housing and chimney.
- Remove burners to clean them and the heat exchanger if necessary.
- Check electrical wiring and connections.
- Check for water or steam leaks.
- Check the temperature and pressure relief valve.
- Add a backflow preventer if none is present.
- Perform an operational check of controls for temperature, pressure and safety.
- Test for carbon monoxide in the flue gas and the air around the boiler.
- Check for gas leaks.
- Check, clean, and (if necessary) adjust the pilot light.
- Check the water heater. For a gas water heater, check flue gas for carbon monoxide.



H006

Central Air Conditioning – Homeowner Service Checklist

Note: Turn off all power and disconnect switches before performing inspections/maintenance.

- Maintain records, and have a professional service the unit yearly.
- Change the filter as often as required (in some cases, every month).
- Switch high/low returns (and adjust ductwork if necessary) at the start and end of the cooling season. For complete instructions, check the section on “Heating and Cooling Distribution” in Chapter 3.
- Listen to the air conditioner operate, and follow up on any strange noises.
- Check drain lines from the furnace to make sure they are clear and draining properly.
- Look for water leaks or changes in the system.
- Keep plants and obstructions away from the exterior coil and fan. Allow 3 feet of clearance at the air discharge and 1 foot all around the unit.
- Keep the exterior coil clean.
- Keep the exterior unit level and away from soil or landscape materials.
- Make sure that supply and return registers inside your home are not blocked.

Fall Maintenance

- Disconnect power to the unit to prevent accidental use.
- (Optional)—Cover the top of the unit.

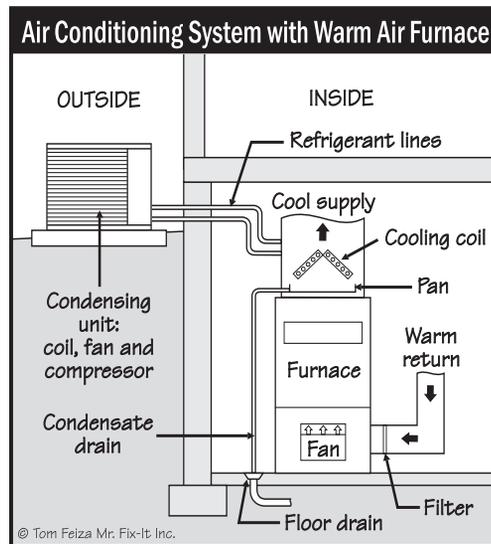
Spring Maintenance

- Uncover the unit.
- Turn the power on 24 hours before operation. Keep the thermostat off.
- Perform the maintenance listed above and arrange for professional service.

Central Air Conditioning – Professional Service Checklist

A service technician should perform the following procedures during a routine service call. The technician may perform additional checks, depending on the type of air conditioner you have.

- Check filter and replace as needed.
- Check exterior unit for level conditions, a clean coil, clearances, and adequate air flow.
- Check interior temperature drop across the cooling coil (15 to 22 degrees F).
- Check the condensate drain pan and line.
- Check secondary pan and line if unit is located in an attic.
- Look for signs of water leaks or excessive air leaks.
- Lubricate the fan motor and check the belt if required.
- Inspect electrical connections.
- Inspect refrigerant lines for signs of leaks.
- If performance problems exist, the technician may check for amp draw, clean the coils, check the refrigerant charge, and/or complete general performance tests.

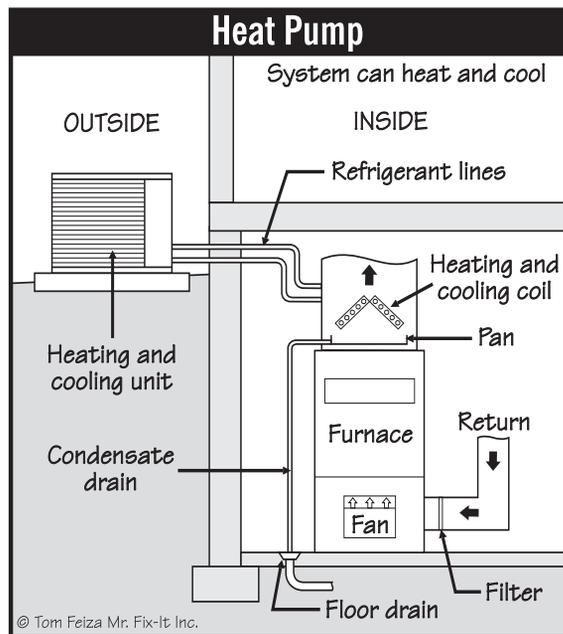


A001

Heat Pump – Homeowner Service Checklist

Note: Turn off all power and disconnect switches before performing inspections/maintenance.

- Schedule professional service yearly.
- Watch for ice forming on the exterior unit. This is a serious problem indicating that the unit needs service.
- Follow all the maintenance recommendations for central air conditioning.

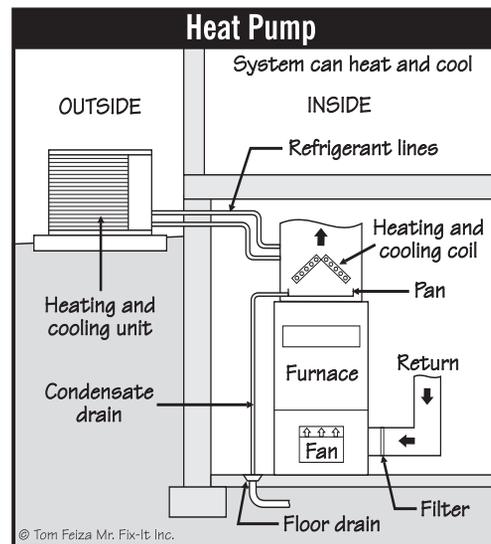


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Heat Pump – Professional Service Checklist

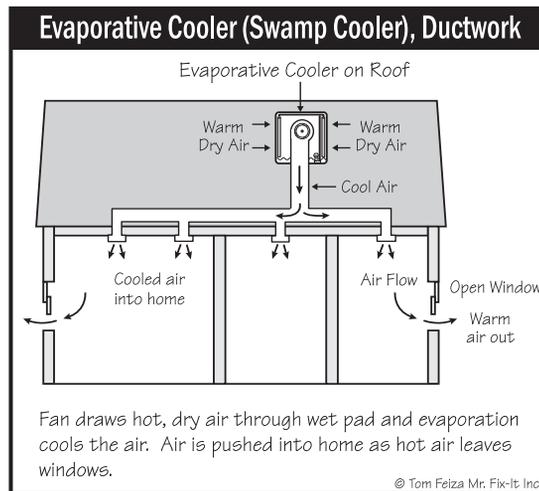
A service technician should perform the following procedures during a routine service call. The technician may perform additional checks, depending on the type of heat pump you have.

- Check filter and replace as needed.
- Check exterior unit for level conditions, a clean coil, clearances, and adequate air flow.
- Check interior temperature drop across the cooling coil (15 to 22 degrees F).
- Check the condensate drain pan and line.
- Check secondary pan and line if unit is located in an attic.
- Look for signs of water leaks or excessive air leaks.
- Lubricate the fan motor and check the belt if required.
- Inspect electrical connections.
- Inspect refrigerant lines for signs of leaks.
- If performance problems exist, the technician may check for amp draw, clean the coils, check the refrigerant charge, and/or complete general performance tests.
- Follow any specific recommendations made by the heat pump manufacturer.
- Check the water heater. For a gas water heater, check flue gas for carbon monoxide.



Evaporative Cooler – Homeowner Service Checklist

- Maintain records. Have a professional service the unit yearly. Proper maintenance keeps the equipment operating efficiently and eliminates contaminants from the system. Maintenance will help prevent water leaks. Contact the manufacturer of the unit for the specific maintenance requirements.
- In the winter, drain the reservoir and supply piping. Clean the pan. Close the duct and cover the unit.
- In the spring, clean the reservoir and activate the supply piping.
- Routinely inspect the unit and the area around it for leaks.
- Inspect and test the drain piping.
- Clean the pads and reservoir on a routine basis.
- Paint rusted areas as needed.
- Clean louvers in the cabinet as needed.
- If the unit has a belt drive, check the belt condition and belt tension. The belt should not shimmy and should not have cracks on its edges.
- Open windows when the unit is in operation.
- If you have central air conditioning and an evaporative cooler, do not run the units at the same time. This wastes energy.
- If you operate central air conditioning, close the windows that you have opened while operating the evaporative cooler.

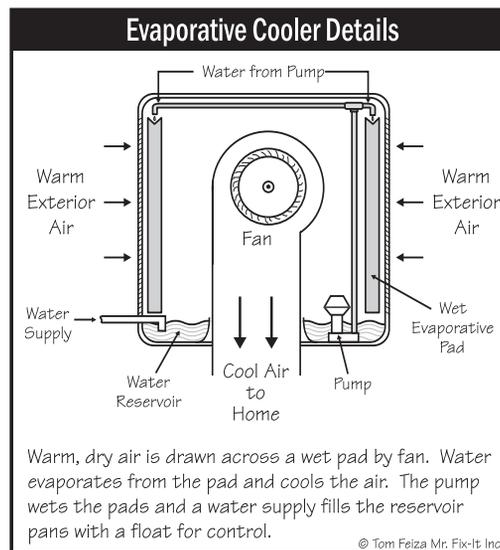


V048

Evaporative Cooler – Professional Service Checklist

A service technician should perform the following procedures during a routine service call. The technician may perform additional checks, depending on the type of evaporative cooler and related equipment.

- Check and lubricate motors.
- Check belt and replace if necessary. Check tension of the belt.
- Clean fan as required.
- Clean or replace evaporative pads as needed. Clean pad frames, and paint as needed.
- Clean the evaporative water pan.
- Test and clean the drain lines.
- Test and operate the fill system, valve, and float. Check for valve leaks, and check the float level. Adjust float to maintain proper water level in the pan.
- Test the pump to ensure that the proper amount of water is being delivered to the evaporative pads and that the pads are fully wetted.
- Clean the water distribution system as needed. Tubes can become clogged with mineral deposits from the water. Replace any damaged tubing.
- Lubricate the pump if needed.
- Inspect electrical wiring and controls for damage and to ensure proper operation.
- Check the overall unit for proper operation.



VO49