

ANNUAL SYSTEM TUNE-UP/PREVENTATIVE MAINTENANCE SERVICE PROCEDURE FOR OIL

This procedure applies to all service technicians, installers and trainees

Upon arrival at job location:

A

1. Ask customer if there have been any problems with the appliance throughout the year.
2. Have the customer turn up the thermostat to start the unit. Observe how the unit operates, is there any delayed ignition, hard start, after-burn, odors, unusual noises, etc.
3. If there's an old style steel type expansion tank start draining it first. By the time you have completed your system tune-up the tank should be empty.

Working on the oil burner:

B

1. Connect pump pressure gauge then operate unit confirming proper fuel unit pressure adjust as necessary at the same time observe the amount of time it takes for the primary control to lock out noting the safety timing. If the safety timing exceeds the controls listed safety timing, replace the control. Once the control has locked out observe the cut-off pressure of the fuel unit. **Note: it should not drop more than 20 PSI of the operating pressure. If it does, the fuel unit should be replaced.**
2. Leaving the gauge connected remove the tray assembly inspect and clean the burner air tube and burner head. If the head is damaged in any way it should be replaced. Remove the burner motor to clean the burner housing, burner blower wheel and to inspect the burner coupling and fuel unit seal. Reassemble the burner, oil the burner motor when applicable then wipe down the motor, burner housing and especially around the air band and shutter. Check the transformer/ignitor with your tester or multi-meter. Clean the cad-cell eye. If the appliance has a stack relay carefully remove it and clean the helix.
3. Before taking the tray assembly out to your service vehicle make note of the type of oil filter and strainer you may need also note the size of any air filters for warm air furnaces you may need.
4. Clean the tray assembly and porcelain's, inspect porcelains for chips or cracks and replace as necessary. Clean and adjust electrodes, replace as necessary. Replace nozzle.
5. When you return to the appliance to re-install the tray assembly. once again take notice to the cut-off pressure of the fuel unit. Remember, it should not drop more than 20 PSI of the operating pressure. If it has, the fuel unit should be replaced.
6. Install new strainer and gasket making sure any old gasket material has been completely removed.
7. Confirm that there is a thermal safety valve located at or close to the fuel unit, install one if necessary.

Oil Tanks, Cartridge's, Valves & fuel lines:

C

1. Change oil cartridge, inspect canister for rust, pitting, leaks and/or any signs of water, replace if needed, clean the canister before installing the new filter. If water is present drain it off from the oil tank
2. Inspect the condition of the tank, tank legs, oil valve, oil line and fittings including fill and vent pipes, document and report any deficiencies. Replace and/or repair what you can within reason while you're there.
3. Confirm that there is a thermal safety valve located at the oil tank, install one if necessary.
4. Confirm that there is an Oil Safety Valve (PRV) where applicable.
5. Take note of the fuel level and report if it is low
6. When bleeding the fuel unit place the nozzle line into a container and allow enough clean oil to flow from the nozzle line to evacuate any sludge or particles from the fuel unit. **Note: Large quantities of CLEAN fuel should be return to the tank with the use of a suitable container.**
7. Wipe everything down and check for leaks.

Cleaning the appliance: Furnaces, Water Heaters and Boilers

1. Remove cleanouts and/or flue hood, brush and vacuum flues and/or baffles.
2. Re-install cleanouts and/or flue hood ensure that they are sealed properly
- D** 3. Remove all flue pipe, brush and vacuum thoroughly, inspect pipe for rust, holes or weak areas and replace as necessary.
4. Inspect and clean chimney base. Chimney bases should always be left clear of any debris.
5. Re-install flue pipe securing each section with a minimum of 3 screws and seal the flue pipe to the flue inlet. Always inspect combustion chamber and chamber area. Carefully vacuum as needed

Additional maintenance required: Warm air furnaces

1. Check and clean blower fan and housing.
2. Oil blower motor and bearings as needed.
- E** 3. Inspect the condition of the blower belt, replace as needed
4. Replace the air filter/s
5. Check the operation of the fan/limit switch

Additional maintenance required: Boilers

1. Check the operation of the low water cut-off. On a steam system flush the low water cut-off while burner is running, confirm that the burner turns off once the water drops below the permissible level and that the water feeder turns on where applicable. To test probe type cutoffs, drain boiler water to below probe, burner should stop. Probe type low water cut-offs should be removed and cleaned once a year.
- F** 2. Check the boiler pressure.
3. Check the boiler temperature and operation of the boiler temperature control or pressure control
4. Check the pressure relief valve and replace as needed
5. Check for water leaks, air in zones, circulation problems and air eliminators.

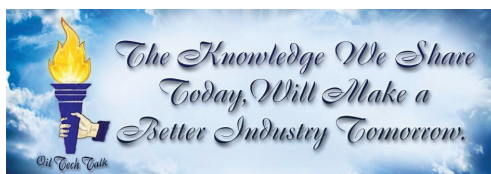
Completing the system tune-up: Furnaces, Water Heaters and Boilers

1. Using your combustion test equipment adjust the burner to manufacturers specifications to ensure safe and proper operation
2. Obtain and record the draft over fire, the draft at the breech, smoke sample, CO₂, O₂, stack temperature and combustion efficiency results.
3. Obtain and record cad-cell resistance.
- G** 4. Be sure to remove any jumpers that may have been used and make sure zone valves are set in the auto position and thermostats are set to desired temperature.
5. Re-check for any oil and/or water leaks.
6. Wipe down the appliance and components nearby.
7. Always leave the work area cleaner than you found it.
8. Place the company service decal on the appliance and record any pertinent information on the decal.

Completing the work order: At the end of a system tune-up or service call

1. Review work performed with the customer. Address any concerns and/or additional work needed.
2. Be sure your work order is completely filled out including arrival time and departure time
- H** 3. Have the customer sign the work order and provide them with their copy.
4. In the event no one is available to sign the work order note that on the bottom of the work order and leave the customers copy behind.

Note: In the event you're unsure of the annual maintenance procedures of any appliance please refer to the manufactures instructions and/or feel free to contact your supervisor



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Revised: 09/27/2022