

Recommended Annual Maintenance for Espar HYDRONIC Heaters

To ensure a trouble-free cold weather season, annual or pre-season maintenance is recommended for all Espar Hydronic heaters. Please use the recommended tools and follow the procedures, as outlined in the heater manual, while removing and reinstalling the different heater components. It should be noted that periodic heater maintenance is the responsibility of the owner of the heater and is not covered under Espar's warranty. If the heater needs repair, please contact an Espar trained mechanic.

- **Heater Clearances:** Before initial operation ensure that the heater is not being subjected to external loads by heavy objects being placed over it. This may cause damage to the heater parts and affect its normal operation. Ensure that sufficient clearances, as recommended in the heater manual, are being maintained around the heater, even while the vessel or vehicle is in operation.
- **Wiring & Electrical Connections:** Check all electrical connections from the heater to the batteries. Check for wear and abrasion along the length of the harnesses. Repair or replace the harness whenever the harness insulation is broken or damaged. Check the battery connections. Clean any corrosion at the terminals. Replace the battery terminals if the corrosion is severe. Check the fuse for corrosion and the correct rating.
- **Plumbing:** Check all plumbing lines, clamps and hoses for leaks. Replace as required. Check the coolant/water level in the hydronic system and re-fill as needed.
- **Exhaust:** Check the condition of the exhaust system. Look for any holes or breaks in the exhaust piping. Make sure all connections are sealed securely. Replace if necessary. Ensure the exhaust pipe is securely located and correctly routed.
- **Fuel Metering Pump:** Ensure the mounting angle of the fuel metering pump is in between 15-35°. An incorrectly mounted fuel metering pump may lead to excessive carbon issues. Check the fuel lines for possible leaks, loosened clamps, etc. Inspect the integrated fuel filter on the suction side of the fuel metering pump - clean or replace as necessary. If there is an excessive amount of carbon buildup, this can indicate an issue with the fuel metering pump. Consulting a certified Espar technician is recommended to address excessive carbon buildup.
- **Leaks From Heater Body:** Check and clear any clogged weep holes on the side of the heater body. Look for any indication of coolant leaks. If a leak is suspected, remove the cover of the water pump assembly and inspect and replace the O-rings on the water pump housing. Closely inspect the heater water jacket for leaks and replace the O-ring between the water jacket and heat exchanger. If the water jacket is cracked, replace it.
- **Glow Pins:** Remove the glow pin and if necessary, clean it. If the glow pin shows signs of dissimilar color or distortions, replace it. Inspect the glow pin wires for damage and if necessary, replace it. Remember to clean the chamber and ensure the ventilation hole is clear of any obstructions, then replace the glow pin.

- **Glow Pin/Plug Screen:** Regardless of its condition, remove and replace the glow pin screen annually. Make sure that the new screen is installed correctly.
- **Coolant Pump:** The coolant pump should be removed and the impeller checked for damage. Any dirt or metal particles on the impellor magnet should be removed and the cavity in the pump should also be cleaned. Coolant pumps are not covered by warranty if the coolant system is excessively contaminated.
- **Burner Tube:** Remove the burner tube and check the condition of the burner tube end. The burner tube should be light brown in color with no excessive carbon on the end of the tube. Check for carbon build up on the burner “nose” at the cold end of the burner tube. Any carbon covering the air slots should be removed. Check the inside of the heat exchanger and scrape any loose carbon out from between the fins in the heat exchanger. Re-install the burner tube replacing all seals/gaskets and O-rings.
- **Gaskets:** When reassembling the burner tube, heat exchanger and combustion air blower, use a new burner seal and O-ring each time.
- **Combustion Air Intake:** Check the condition of the combustion air intake tube. Clear any blockages. If damaged, replace it. Ensure that the combustion air intake tube is securely located and correctly routed.
- **Run Once A Month:** Regardless of the season, run the heater every month for a minimum period of 20 minutes, preferably using kerosene. This will help the heater to burn away any combustion residue in the burner chamber and prevent corrosion in the water jacket and decay of the O-rings. It will ensure that the fuel in the lines to the heater does not gel and solidify and that the heater will start reliably when heating season arrives. It is recommended to run the heater on kerosene for at least 20 minutes prior to extended periods of non-use.