Technical Information
05-2010

SPHEROS

Maintenance Record - Thermo 230/ 300/ 350

The heater should be checked in regular intervals at least at the beginning of the heating season (point of time when weather conditions cause increased use of heater). The maintenance intervals indicated below apply to applications and requirements typical of buses.

Check / Maintenance	Important Information	Check Result		Measured values, Maintenance / Repair performed
		O.K.	Not O.K.	
1. Electrical connections				
a) Disconnect electrical connectors to wiring harness, inspect for corrosion, spray and reconnect after performing step 5.	Use suitable anti-corrosion, electrical contact spray.	☐	☐	
b) Inspect fuses for corrosion and/ or check continuity.		☐	☐	
2. Heat exchanger				
a) Inspect paint for dark stains or burns (local overheating).	If necessary, investigate reason for overheating (e.g. water circuit). Check temperature limiter.	☐	☐	
b) Check for signs of leaking.		☐	☐	
c) Clean heater exterior and interior.		☐	☐	
3. Fuel system				
a) Check fuel lines and connections for leaks.	Check for tight fuel supply and return line connections. Retighten connections and hose clamps.	☐	☐	
b) Replace fuel filter cartridge and gasket.		☐	☐	
c) If installed, open shut-off valves.		☐	☐	
d) Fuel pump and fuel lines.	Replace pump and lines every 5 years.	☐	☐	
e) Replace fuel pump inlet screen and mounting O-rings.		☐	☐	
4. Burner head				
a) Check combustion air inlet for contamination.		☐	☐	
Swing burner head open:				
b) Check protection cover for damage.	Replace damaged protection cover.	☐	☐	
c) Check housing interior for accumulation of fuel caused by leaks.		☐	☐	
d) Clean flame detector lens and window.		☐	☐	
e) Check condition of ignition electrodes.	Replace bent electrodes.	☐	☐	
f) Replace fuel nozzle.	When carbon deposits are evident, replace fuel filter more often.	☐	☐	

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		O.K.	Not O.K.	
5. Exhaust system a) Check exhaust tubing for contamination and clean as required. b) Remove combustion chamber from heat exchanger, inspect both components for damage and contamination and clean or replace as required. c) Insert combustion chamber and mount burner head. Check for secure connection to heat exchanger. d) Restore electrical connections.		☐ ☐ ☐ ☐	☐ ☐ ☐ ☐	
6. Water system a) If present, service water filtration. b) If installed, open water shut-off valves.		☐ ☐	☐ ☐	
7. Functional checks a) If installed, open shut-off valve in fuel return line. b) Check heater function. c) Check for smoke emissions in run-down; replace nozzle if required.	Allow heater to operate for a minimum of 10 minutes.	☐ ☐ ☐	☐ ☐ ☐	

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