

PHP - Technical Bulletin



Bulletin Number: TB-210801
Subject: Air Heater Maintenance
Issue Date: August 15, 2021



Scope: 2kW - 4kW Air Heaters

Complaint:

Provide additional tools for customers to conduct their own air heater maintenance.

Resolution:

This Technical Bulletin covers general, annual maintenance procedures recommended for most air heater. Webasto heaters use a different atomization technique and therefore require slightly different replacement parts than shown here.

Here are some simple tips on how to keep your bunk heater running safely and reliably.

Monthly Maintenance

Run your heater:

Operate your heater at least once monthly for 10 minutes

This will keep the fuel fresh, dry out any moisture, loosen bearings and get rid of any light dust that may have collected in the system.

Combustion Air:

Check and clean the combustion air intake and exhaust hoses and make sure that no water has been trapped inside or other blockages. Make sure that the combustion air tube has not been crushed. It is made from a light aluminum foil which can easily be crushed and cause combustion problems in a hurry.

Ducting:

Also clean and inspect the hot air ducting, inlet and outlet and eliminate any restrictions. Keep the area around the heater clear from clutter and combustible materials. Be conscious that the air being drawn into the heater will be circulated into the heated area.

Annual (Fall) Maintenance

Electrical System:

Maintain the vehicle batteries and overall integrity of your electrical system.

Inspect and clean all electrical connections and apply dielectric grease.

Remember that as the batteries get colder, their performance is diminished significantly.

Fuel System:

If the heater is equipped with an external, in-line fuel filter, replace it annually. Inspect fuel lines for kinks, abrasions, etc. and replace as required. Inspect and tighten fuel line clamps.



In addition to in-line fuel filters, some fuel pumps may also have a fuel screen on the inlet side of the pump. These do not normally need to be replaced but if the heater is having difficulty starting or has excessive smoking, it would be a good idea to inspect and or replace this.

Glow Pins:

The glow pin is used to ignite the fuel / air mixture on initial startup.

This is an electrical resistor with a ceramic body. You apply 12 volts and it gets red hot. Due to significant thermal stresses, these do wear out.

Generally speaking, it either works or it doesn't. However, sometimes it is possible that only part of this tip gets hot which leads to inconsistent ignition.



Remove the glow pin using the special socket tool.

Inspect the glow pin for any damage to wires or wire connections and scratches or buildup on the heating element.

Wipe the glow pin clean with a soft cloth only, do not use anything abrasive to clean the glow pin.

If the glow pin shows any signs of wear or damage it must be replaced

For peace of mind and the minimal investment, it's a good idea to change this annually.

Be very careful not to damage this top portion of the glow pin when removing or reinstalling the glow pin and do not over tighten.



Atomizer Screen:

The atomizer screen sits just inside the glow pin chamber.

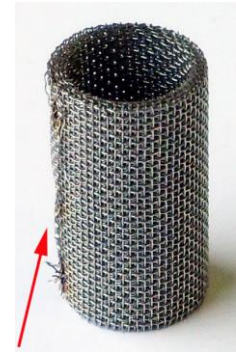
It plays an important role of helping to atomize the fuel as it enters the combustion chamber and is critical in the ignition phase.

The atomizer screen should be replaced annually and should not be reused once removed.

Remove the atomizer screen with a hook-pick and needle nose pliers.

Inspect the glow pin chamber for soot buildup and clean with a small wire brush and blow out debris as necessary.

Confirm the small air inlet hole on the side of the atomizer screen chamber is not obstructed with debris or buildup and clean as necessary.



Note the seam on the atomizer screen.

This should be positioned away from the fuel and air inlets when installing. Use the insert tool to assist in proper positioning of the new screen.

Deep Clean:

For extra peace of mind or if the heater exhibits signs of excessive smoking or carbon build up, disassemble and clean the heater.

Use of a brass brush, carburetor cleaner or a varsol bath and some compressed air will assist with this process.

If you proceed with doing this, be prepared to replace both the burner and blower motor gaskets upon reassembly.

PHP Maintenance Kits

Consider purchasing a complete PHP Maintenance Kit for your annual preseason tune up.



PHP Gen I - PH23A
Snugger - SF2300
Fleetrite - FLTAIR2300B

Maintenance Kit: <ul style="list-style-type: none">• Glow Pin• Atomizer Screen• Gaskets (Blower & Burner)• Glow Pin Tool	P23A-T801
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PHP Gen II - PH20A

Maintenance Kit: <ul style="list-style-type: none">• Glow Pin• Atomizer Screen• Gaskets (Blower & Burner)• Glow Pin Removal Tool• Glow Pin Insert Tool	E20A-T801
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PHP Gen III - PH21A

Maintenance Kit: <ul style="list-style-type: none">• Glow Pin• Atomizer Screen• Gaskets (Blower & Burner)• Glow Pin Removal Tool• Glow Pin Insert Tool	P21A-T803
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Espar - D2, 12V

Maintenance Kit: <ul style="list-style-type: none">• Glow Pin• Atomizer Screen• Gaskets (Blower & Burner)• Glow Pin Removal Tool• Glow Pin Insert Tool	E20A-T801
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Espar - D4, 12V

Maintenance Kit: <ul style="list-style-type: none">• Glow Pin• Atomizer Screen• Gaskets (Blower & Burner)• Glow Pin Removal Tool• Glow Pin Insert Tool	E40A-T801
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Webasto - AT2000S

See this Webasto video for disassembly

<https://www.youtube.com/watch?v=u4qv2DO12v0>

Maintenance Kit - Long: <ul style="list-style-type: none">• Burner Insert• Gasket Kit (Blower & Burner)• Glow Pin• Flame Sensor	W20A-T801
Maintenance Kit - Short: <ul style="list-style-type: none">• Burner Insert• Gasket Kit (Blower & Burner)	W20A-X801

Webasto - AT2000ST

See this Webasto video for disassembly

<https://www.youtube.com/watch?v=u4qv2DO12v0>

Maintenance Kit - Long: <ul style="list-style-type: none">• Burner Insert• Gasket Kit (Blower & Burner)• Glow Pin	W20A-T802
Maintenance Kit - Short: <ul style="list-style-type: none">• Burner Insert• Gasket Kit (Blower & Burner)	W20A-X802