

## Service Bulletin EP-24

Models: AE115, AE125, RP17PT, RP27PT (polymer modules only)

# Removing & Replacing Flow Transducer



# BOSCH



## WARNING

ELECTRICITY IS EXTREMELY DANGEROUS. TAKE EXTRA PRECAUTIONS AND ENSURE ALL CIRCUIT BREAKERS ARE OFF BEFORE PERFORMING ANY WORK TO THE HEATER.

### Tools required

- Phillips head screwdriver
- 7mm socket head driver
- Plumbing wrenches
- Waterproof grease
- Heat transfer paste

### Preparation

**NOTE: Supply wiring and main wiring from circuit board to elements is not shown in all figures for clarity purposes.**

1. Turn off circuit breakers supplying power to the water heater.
2. Verify power is off at the water heater.
3. Close installer supplied cold water shutoff valve.
4. Open a hot water fixture to allow water to drain from water lines and heater.
5. Remove water pipes connected to heater.

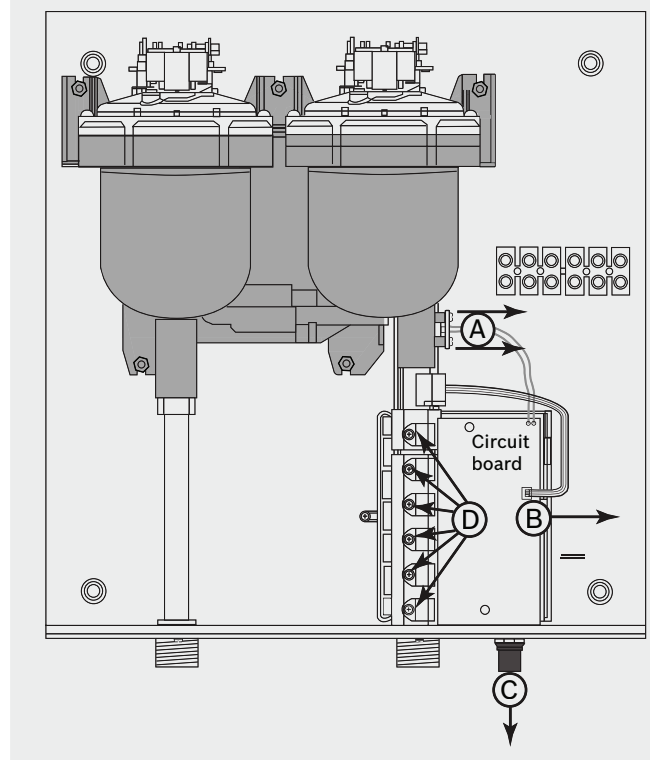
**NOTE: With water pipes disconnected, verify the inlet water filter is clear of debris. A clogged inlet filter may indicate a water quality problem and possible cause of the transducer failure.**

6. Remove front cover from heater.

### Removing flow transducer

1. Remove gray circuit board cover on lower right side of heater. Cover is secured with one screw. Remove neon light from clip inside cover.
2. Remove 2 screws, bracket and thermistor from bottom of module. (Fig. 1 pos. A)
3. Disconnect transducer wire connector from circuit board. (Fig. 1, pos. B)
4. Remove knob, retaining nut and lock washer from temperature adjustment control. Pull shaft up through heater frame. (Fig. 1, pos. C).

Figure 1

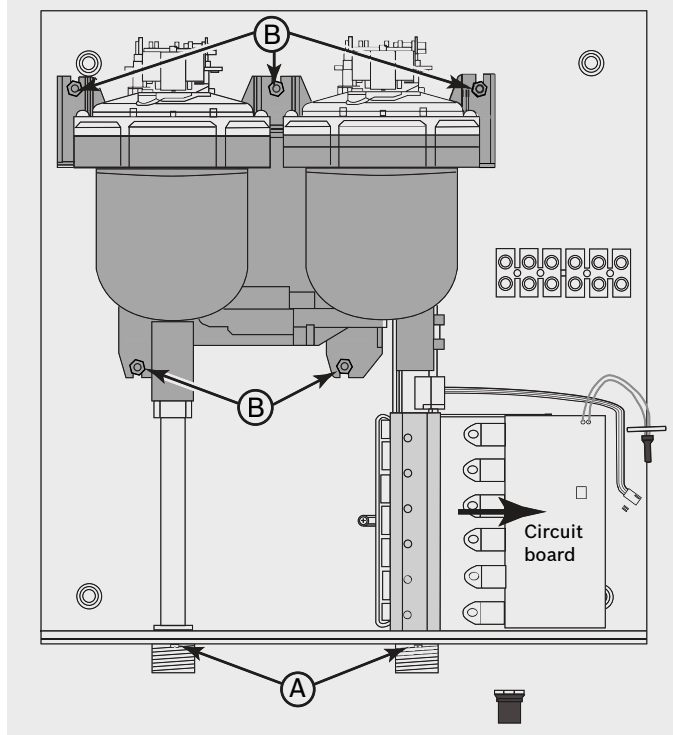


5. Remove the 4 or 6 screws with washers from the triacs. (Fig. 1, pos. D).
6. Pull circuit board (with other wires attached) out from under tab on right side of circuit board enclosure. Move board to the left to allow access to inlet pipe behind (Fig. 2).
7. On the bottom of the heater next to the pipe connections, remove the screw next to each connection. (Fig. 2, pos. A).
8. Remove the five 7mm nuts and washers attaching modules to back of heater. (Fig. 2, pos. B).
9. Remove the modules from back of heater by pulling slightly forward and lifting up. Lift modules up approximately 2". (Fig. 3, pos. A)
10. Rotate modules to the right to expose rear of modules. (Fig. 3, pos. B).
11. On the back side of the brass inlet pipe, the module tailpiece and retaining screw should be visible. Remove screw (Figure 3, pos. C).
12. Carefully pull down on brass inlet pipe and pull up on the right hand module. Remove transducer from module. (Fig.4)

## Installing flow transducer

1. Lubricate o-rings on transducer with waterproof grease.  
**CAUTION: Do not allow grease to get into transducer.**
2. Insert transducer into module with wires on right. Arrow on transducer must point towards module.

Figure 2



3. Install the brass inlet pipe on the transducer. Triac mounting screw holes must face towards front of modules.
4. Rotate modules to install retaining screw through tailpiece into inlet pipe. (Fig3, pos.C)
5. Rotate modules again so brass inlet pipe is on the right. Holding modules, guide inlet and outlet fittings through holes in bottom of frame and modules onto studs in frame. (Fig.2, pos.B).
6. Reinstall and tighten nuts and washers onto studs.
7. Reinstall and tighten screws at water connections (Fig.2, pos.A).
8. Apply white heat transfer paste to the back of each triac, guide right side of circuit board under tab on circuit board plastic enclosure and reinstall screws through triacs into inlet pipe. Screws must be tightened securely to provide adequate heat transfer to inlet pipe (Fig.1, pos.D)
9. Reinstall thermistor, bracket and screws (Fig.1, pos.A).
10. Connect transducer wire to circuit board (Fig.1, pos.B).
11. Reinstall temperature control through bottom of heater frame. Reconnect nut, washer and temperature knob. (Fig.1, pos. C).
11. Clip neon light to inside circuit board cover and reinstall cover.
12. Reconnect water pipes to heater.

**CAUTION: Use only Teflon tape on pipe threads.**

## Returning heater to service

**CAUTION: Do not turn on power until heater is full of water.**

1. Open water shut off valves on hot and cold pipes.
2. Open a faucet to run water through the heater and purge air.

3. Check for leaks at all connections.
4. Turn on power to heater.

Figure 3

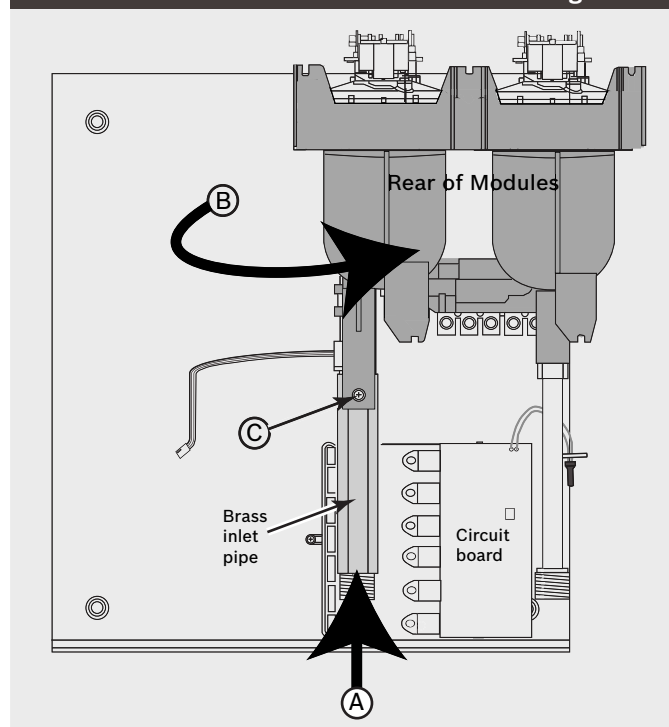
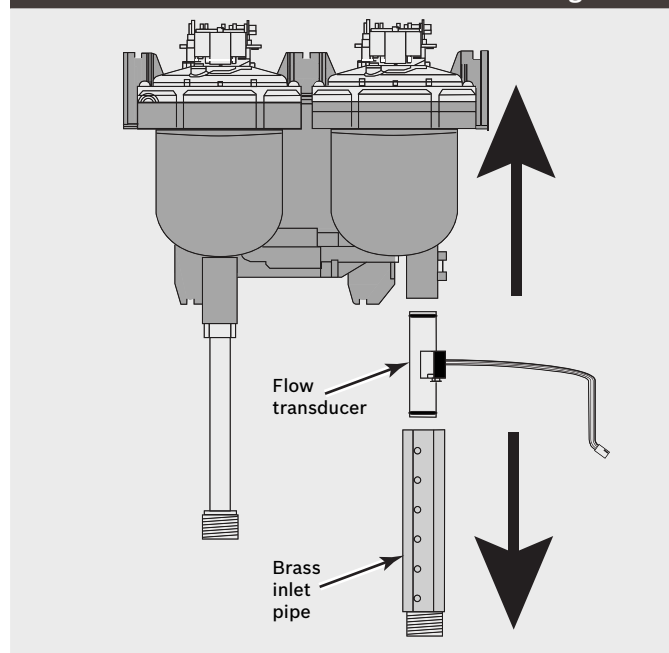


Figure 4



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