



INSTALLATION OF AN AL1009 POST - PURGE TIMER MODULE MANUAL

MODEL 40 SERIES BF3 OR BF5

IMPORTANT: If this burner is being installed in a packaged unit (i.e. Burner comes with a boiler or furnace), follow the installation and set-up instructions supplied with the heating unit, as settings may differ from those shown in this manual.

These directions are for the installation of an AL1009 Post - Purge Timer Module onto a 40 Series BF3 or BF5 burner. Failure to follow these directions carefully may lead to permanent damage of the components and burner.

The installation of this controller will require a second constant uninterrupted 120 Volt AC power supply line and is mandatory for the post-purge controller and burner to operate properly. This requirement is the responsibility of the installing technician and must be in accordance with all local, state/provincial and nationally recognized electrical authorities.

Reversed polarity may cause damage to the controller printed circuit board and other electronic components. Ensure correct polarity, with proper grounding, prior to beginning these procedures and before restoring power to the burner/appliance. Disconnect power prior to servicing. There are no serviceable parts on the printed circuit board.

Before beginning this conversion ensure that all of the parts are provided with this C7001084 kit. See parts list, Figure 1.

Model	Quantity	Description
40 BF3 & BF5 Kit Part Number C7001084	1	AL1009 Post-purge Timer Board
	1	Mounting bracket (pre-drilled)
	1	Wire nut
	2	Sub-base terminal hardware (Clamp)
	2	Sub-base terminal hardware (Threaded plate)
	2	Sub-base terminal hardware (Screw)
	1	Technical instructions

Figure 1

Installation Procedure:

1. Shut off the electrical power to the appliance and oil burner using the main power disconnect circuit breaker or fuse to the burner circuit.
2. Remove the burner cover.
3. Remove the burner control box from the sub-base.
4. Remove the wiring from the burner sub-base at terminals 'L' and 'N' and the ground wire.
5. Remove the wire strain relief clamp and mounting screw. Retain the screw and clamp.
6. After removing the wire strain relief clamp and the mounting screw, the K7R Module and mounting bracket should be released from the chassis.

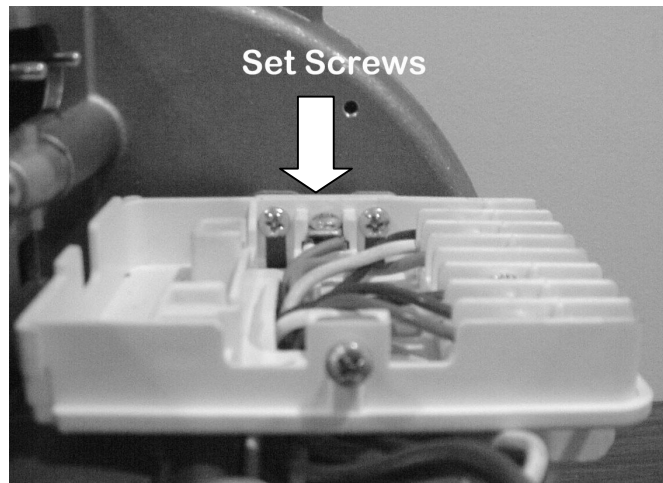


Figure 2

7. Loosen the two right-side set screws holding the control base to the housing without removing the screws, **Figure 2**.
8. Lift the sub-base straight up and away from the holding screws.
NOTE: If the burner is not equipped with an existing K7R Post-purge Module go to Step 13.
9. Refer to **Figure 3** and make the following wiring changes.

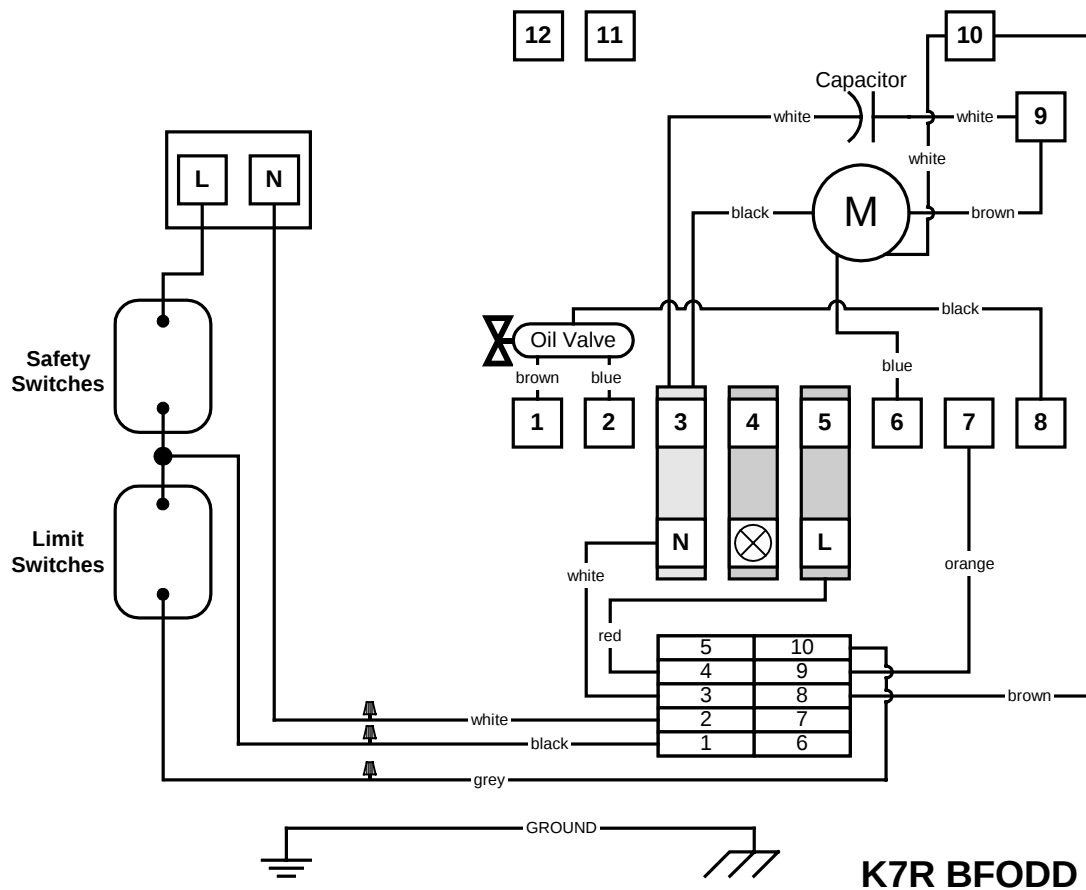


Figure 3

10. Remove the orange wire from terminal #7. Attach the gray wire from the AL1009 circuit board to the #7 terminal and re-tighten.

11. Remove the brown wire from terminal #10.

Take the white wire from terminal #10 and place it on terminal #12 with the yellow wire from the AL1009 circuit board and tighten the terminal screw.

12. Remove the wire nuts and disconnect the white, black and gray wires from the K7R Module. Mark and note the source of these wires. The module should now be free of the burner chassis.

13. Mount the AL1009 circuit board onto the mounting bracket until the snap mounts click into the holes. Align the mounting bracket with the chassis and secure using the wire strain relief clamp and mounting screw, **Figure 4**.

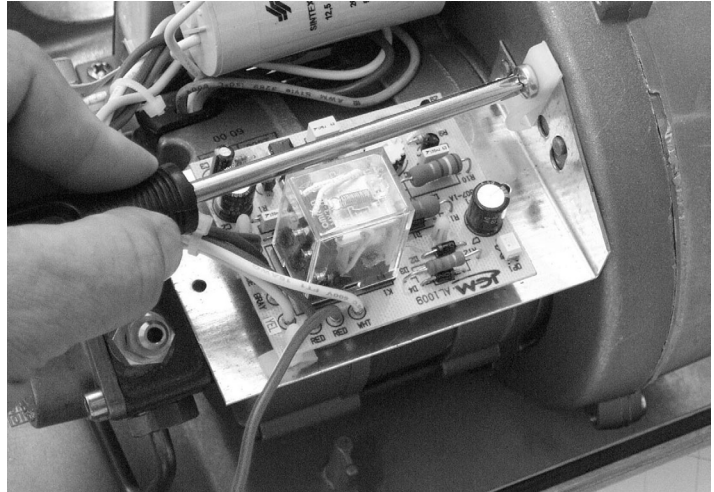


Figure 4

14. Install the threaded plate and clamp onto the sub-base at terminal #11 and terminal #12, see Figure 5. Install the provided screws onto the plates and clamps but leave loose. There are now seven wires that must be connected from the AL1009 circuit board to the burner sub-base.

NOTE: Some of this wiring may have just been completed if you are retrofitting from a K7R Module.

15. Run the wires from the AL1009 circuit board so that the sub-base can be reattached to the burner chassis without pinching the wires. Then push the sub-base back down over the two securing screws and fasten snugly.

NOTE: Do not power the red wire except from the nearest safety disconnect. Do not power it from any of the operating limits.

21. Reconnect the burner wiring at the 'L' and 'N' terminals and reattach the ground wire.
NOTE: If the burner was equipped with a K7R Module these were the gray and white wires.
22. Replace the burner control box.
23. Leaving the burner cover off, check the operation of the electronic post-purge timer and the burner.
24. Turn on the power to the burner by closing the main disconnect. Now turn on the serviceman's disconnect switch.
25. Ensure that the burner does not start.
26. Turn up the thermostat or low limit controller and watch the operation of the burner. Be prepared to immediately shut off the power if nothing happens.
27. The timer may be adjusted by rotating the small white dial that is located to the right and slightly above the relay cube, **Figure 6**. The post-purge timing of the burner can be increased by turning the dial clockwise and reduced by turning the dial counter-clockwise. The timing of the post-purge is adjustable from 10 seconds and 5 minutes.

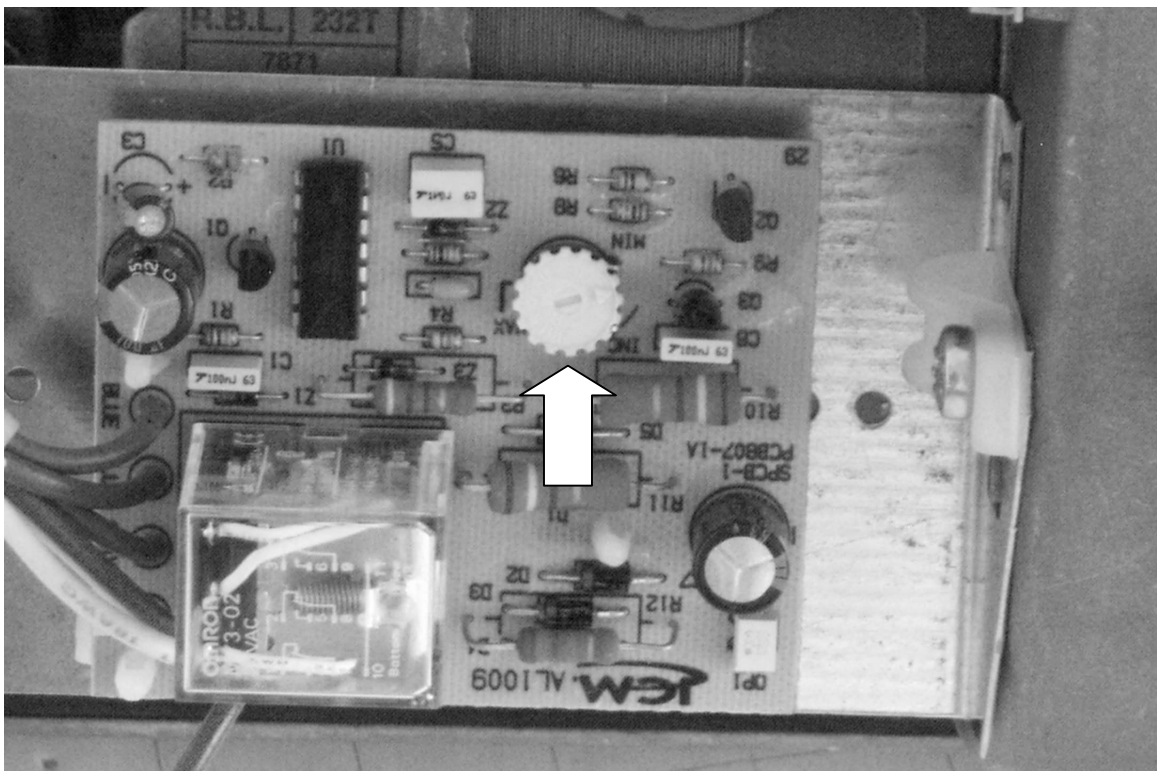


Figure 6

28. Reinstall the burner cover and allow the burner to operate until it reaches normal operating limit settings.



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