

# ELECTRONIC AIR FLOW SENSOR KIT

TRION PART NO. 144501-001

Parts Kit Oncludes:

Qty.	Description	TRION Part No.
1	Air Flow Sensor Assembly	244500-003
4	¼" long x .18 dia. Plastic Spacers	144616-001
2	4" long blue wires	242477-025
2	4½" long yellow wires	242477-023
2	20" long yellow wires	242477-024
2	Wire Nuts (Orange)	120093-003
2	Wire Nuts (Grey)	120093-002
1	Replacement Procedure	144497-001
2	Wire Tie	220711-002

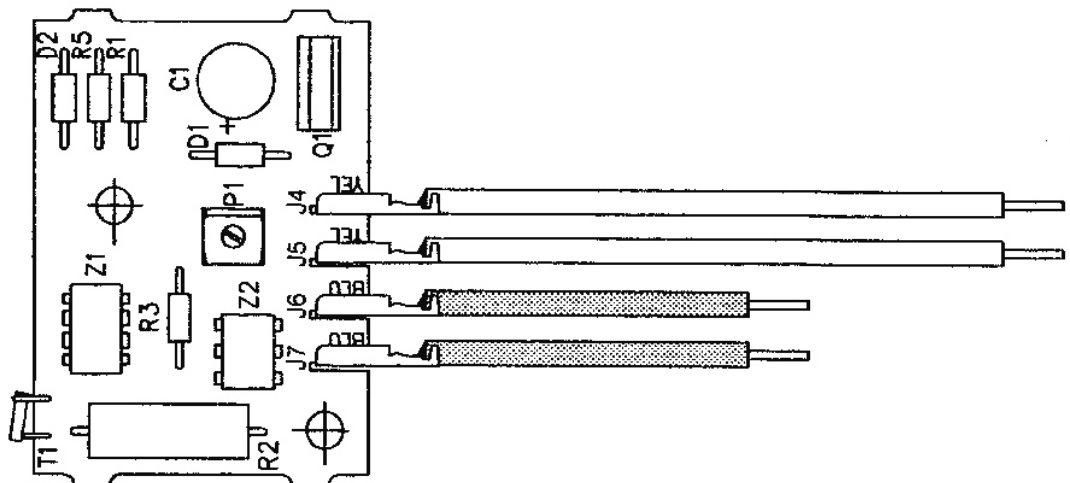
**Tools Required:** Phillips screwdriver, ¼" nut driver, diagonal cutters, wire stripper

**Note:** Yellow wires are connected to slots J4 and J5 marked YEL. Blue wires are connected to slots J6 and J7 marked BLU.

## CAUTION:

Edge Connectors must be connected as shown in Figure1 with connectors covering the printed markings "YEL" and "BLU" respectively. **If the edge connectors are not positioned correctly the Air Flow Sensor may be damaged when power is turned on.**

**FIGURE 1**



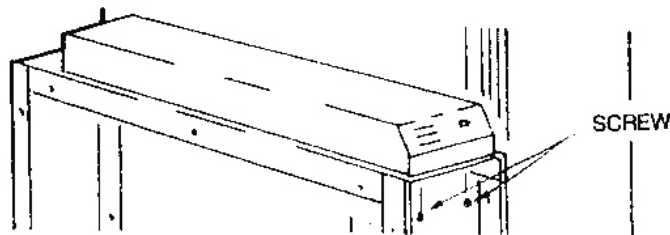
**-EXERCISE SPECIAL CAUTION WHEN WORKING ON ELECTRICAL PARTS-**

### Replacement Procedure

1. Turn off power at circuit breaker panel to Electronic Air Cleaner.
2. Turn off power supply on/off switch located on front panel.
3. Remove cell access door.
4. Check parts kit to assure all necessary parts are available.
5. Remove front cell.

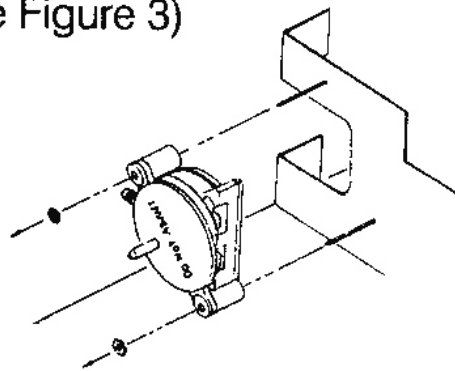
- Remove two screws at the front of the air cleaner (see Figure 2). Put these screws in a safe place. They will be used to reinstall power pack after installation of the electronic air flow sensor.

**FIGURE 2**



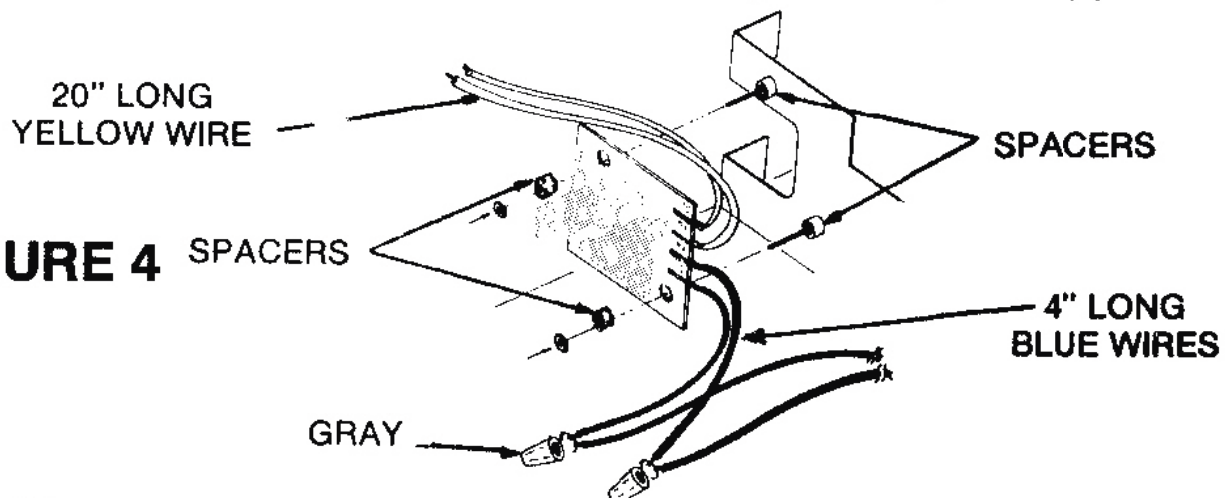
- Remove power pack cover and put it aside for reinstallation after installation of air flow sensor assembly.
- Disconnect two blue wires and plastic tube by carefully pulling them off the terminals of the gray air pressure switch. (Discard tubing)
- Remove present air pressure switch by removing two (2) ea. #4-40 hex nuts. Put them with cover for use when installing new switch. (See Figure 3)

**FIGURE 3**



- Cut off the 3/16 x .020 female terminals and strip blue wires 1/2".
- Using 2 gray wire nuts, connect the blue wires supplied as part of the switch assembly to each of wires you have just stripped.

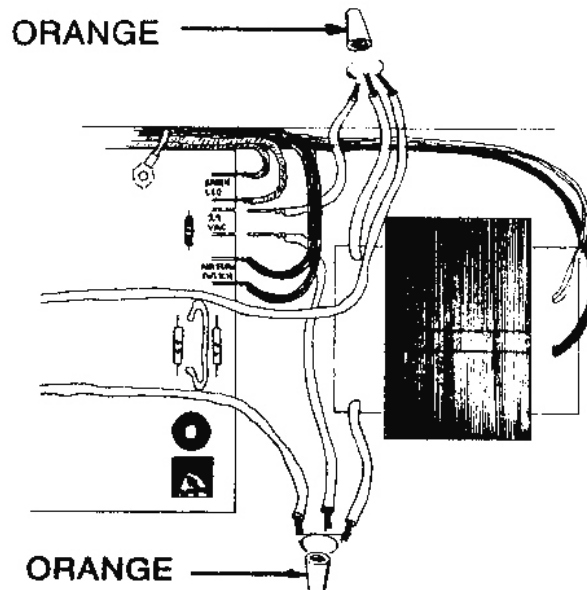
**FIGURE 4**



- Disconnect the yellow wires that connect the 24 volt output of the transformer to the Power Supply printed circuit board.

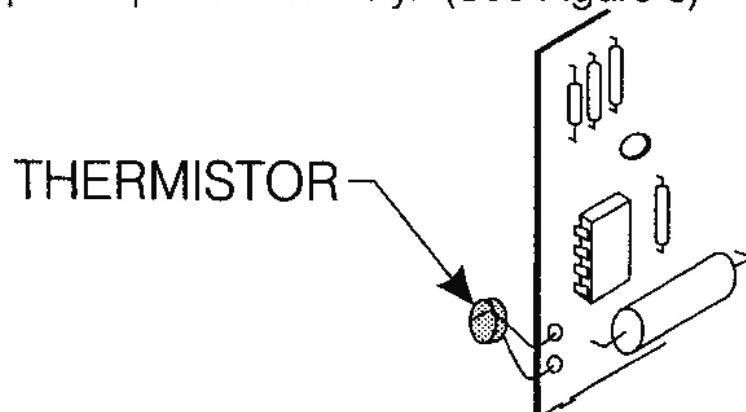
13. Carefully cut the edge connectors from these wires as close to the edge connector as possible and strip  $\frac{1}{2}$ " leaving the full length of yellow wire supplied as part of the transformer.
14. Using one of the orange wire nuts, connect one 20" long yellow wire from Air Flow Sensor and one  $4\frac{1}{2}$ " long yellow wire to one of the yellow transformer wires modified in step 13. Repeat process to make connection to the remaining yellow lead on transformer.

**FIGURE 5**



15. Connect the two  $4\frac{1}{2}$ " long yellow wires with edge connectors to the power supply printed circuit board to the slots labeled 24 VAC.
16. Route the remaining 2 yellow wires in the bundle of wires from the transformer to the replacement air flow sensor.
17. Place one each  $\frac{1}{4}$ " long plastic spacer over each of the weld studs where the original pressure switch was mounted. (See Figure 4)
18. Mount the new air flow sensor so that the orientation of the blue & yellow wires are directly over the air cleaner safety disconnect switch and all components except the thermistor are visible. The thermistor must be located directly in the center of the  $\frac{5}{16}$ " diameter hole on the side of the power pack assembly. (See Figure 6)

**FIGURE 6**



19. Place two (2) more spacers on the ends of the weld studs on top of the air flow sensor Printed Circuit Board. Secure with #4-40 nuts removed in Step 9. (See Figure 4)
20. Review Figures 4 and 5 to assure correct mechanical installation and that all electrical connections are made in accordance with these instructions.
21. Replace power pack cover removed in Step 7 and secure with screws removed in Step 6.
22. Replace front cell.
23. Replace air cleaner access door.
24. Turn on air cleaner circuit breaker at the installation circuit breaker panel.
25. Turn on air cleaner on/off switch on front of panel
26. Turn off furnace/air conditioner blower at furnace control.
27. After completing installation, turn furnace to normal control.

**ATTENTION:** You will observe that the air cleaner is now energized even when the blower in the furnace/air conditioner is not running. The power supply will remain energized until the thermistor reaches operating temperature (130°C). This should not take more than 1 to 1½ minutes. If the air cleaner is installed in an unusually warm environment (attic installation) the air flow switch will operate sooner. If it is installed in an unusually cool environment (crawl space or attic in the winter) the switch may remain energized for a slightly longer time.

**CAUTION:** The electronic air flow switch is factory set and tested to operate with normal air flow through the electronic air cleaner.

**CAUTION: DO NOT ATTEMPT TO ADJUST. Tampering with the switch voids the warranty.**