

# Stack Flue Sensor

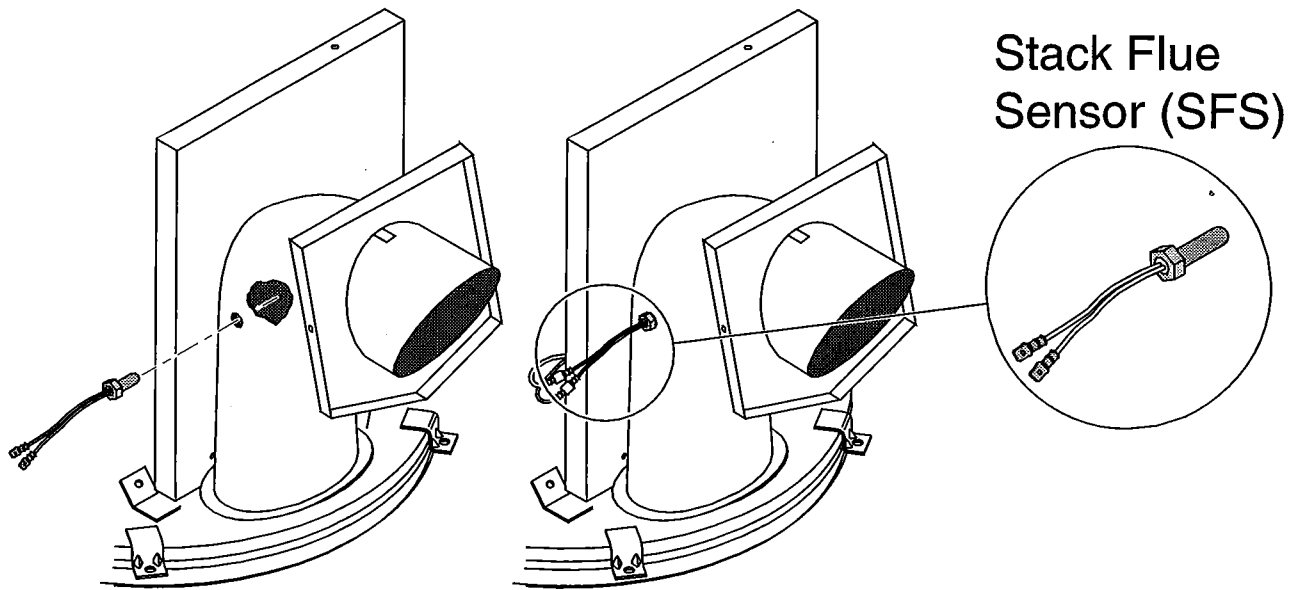


FIGURE 1

**▲WARNING** Risk of fire, explosion, and electrical shock. Heater service and repair must be performed by a qualified installer, service agency, or the gas supplier.

## Location

The Indoor Stack Flue Switch (ES2) / Stack Flue Sensor (SFS) is located on the Exhaust Elbow.

## Function

The Stack Flue Sensor prevents the flue gas output from exceeding 500°F ±18°F (260°C ±8°C).

## Servicing Procedure

To replace the Indoor Stack Flue Switch or Stack Flue Sensor (See Figure 2, Page 2):

1. Turn off the filter pump and all electrical power to the heater.

2. Allow the heater to cool for at least half an hour before proceeding.
3. Unbolt and remove the Upper Left and Upper Right Jackets from the heater.
4. Disconnect the wires from the old Indoor Stack Flue Switch or Sensor.
5. Remove the old Switch or Sensor by turning it counter-clockwise with a 1/2" open end wrench.
6. Reverse Steps 1 through 5 above.

**▲WARNING** Risk of carbon monoxide poisoning. BE SURE to seal the Stack Flue Sensor with a bead of RTV sealant before threading it into the exhaust elbow.

## Control Board Setup

The Control Board is designed to work with both the Stack Flue Switch (on older heaters) and the Stack Flue Sensor (newer heaters). Please see Figure 2 to identify which type of Stack Flue protection you are replacing.

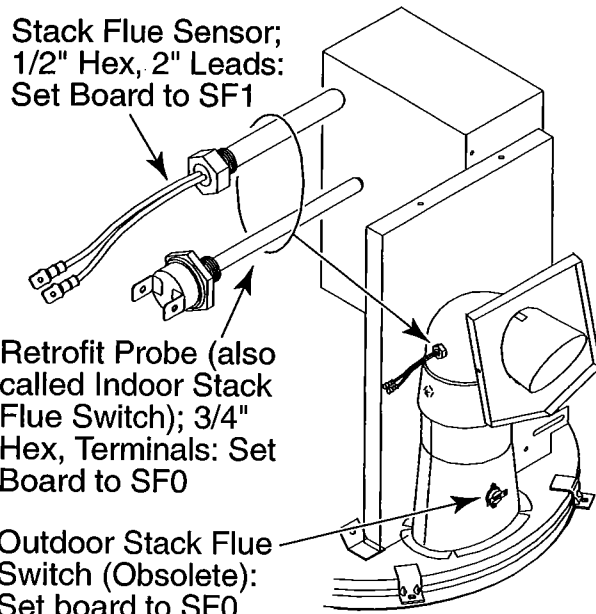
**NOTICE:** If you have a pump module installed with your heater, skip this procedure and go to the pump module instruction manual. Follow the instructions for accessing "SF0/SF1" under Low Level Programming. The Control Board must be set to "SF1" for the heater to operate with a Stack Flue Sensor installed.

If you are replacing a failed Stack Flue Sensor, your Control Board should be set correctly for the new one. However, if you are replacing either an Outdoor Stack Flue Switch or an Indoor Stack Flue Switch, the Control Board will need to be reset as follows:

1. Turn the power to the heater ON.
2. Press and hold the OFF button on the membrane pad until the 3-digit display shows "Ad0" or "Ad1" (about 10 seconds).
3. Release the button and then press it momentarily. The 3-digit display will now show either "SF0" or "SF1".
4. If the display reads "SF1", it is correctly set. Go to Step 5. If it reads "SF0", use the arrow buttons on the membrane pad to set it to read "SF1".
5. Momentarily press the "OFF" button to exit the program. See the heater owner's manual for normal heater operation instructions.

## Safety Precautions:

**⚠ WARNING** Burn hazard. If heater has been operating, allow it to cool for at least half an hour before touching the Stack Flue Switch or the Combustion Chamber Collar.



3674 0300

**FIGURE 2 - Stack Protection Identification**

## REPAIR PARTS LIST

Part Description	Qty.	Part No.
Stack Flue Sensor	1	42002-0024S