

# TJERNLUND PRODUCTS, INC.

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## L-185 SAFETY INTERLOCK SYSTEM (P/N 950-2064)

### ▲ WARNING

#### (For Millivolt and 24 Volt Control Systems only)

This Safety Interlock System may be used on conventional chimney or Power Vented appliances equipped with a draft hood, draft diverter or draft control.

### PURPOSE

To provide a means for appliance shut-down in the event of flue blockage or down drafts.

### OPERATION

The Linear Limit Spillage Sensor circuit is “normally closed” and will not affect normal appliance operation. When concentrated spillage of combustion gases occurs from the draft hood, diverter or barometric control, the Linear Limit Spillage Sensor circuit will open preventing burner operation.

### PARTS LIST

QUANTITY	DESCRIPTION
(1)	Linear Limit Spillage Sensor with manual reset, 185° set point and six foot cable
(1)	Linear Limit mounting packet
(1)	Wire routing packet

### INSTALLATION

#### NOTE:

DO NOT CUT THE COPPER CAPILLARY SENSING TUBE!! TO DO SO WOULD DESTROY IT AND DISABLE THE APPLIANCE.

1. Shut off fuel supply to the appliance.
2. Attach Linear Limit Spillage Sensor to draft hood (A1), diverter (A2) or barometric control (A3), see respective diagram.

#### IMPORTANT:

Copper capillary sensing tube should not come in direct contact with metal surfaces. Linear Limit Spillage Sensor should be mounted so that capillary will sample temperature of gases spilling from vent or chimney, not temperature of metal surface.

- 3a. WATER HEATERS:  
Millivolt water heaters require the Tjernlund Model JA-1 P/N 950-0470, Thermocouple Junction Adapter (ordered separately). Connect ends of six foot cable to spade connections on Thermocouple Adapter, (see Diagram B1).
- 3b. FURNACES AND BOILERS:  
Splice ends of six foot cable in a series circuit between the thermostat and gas valve or burner control, (see Diagram B2).
4. Using cable routing tabs from wire routing packet, attach Linear Limit control cable to appliance maintaining a safe distance from hot surfaces, e.g. appliance vent pipe and hot water pipes.

DIAGRAM A1

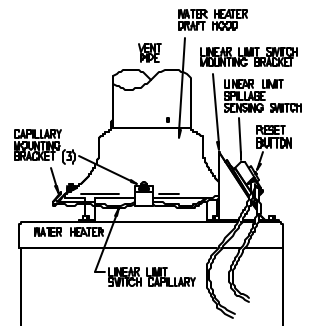


DIAGRAM A2

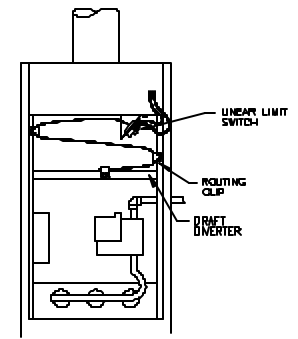


DIAGRAM A3

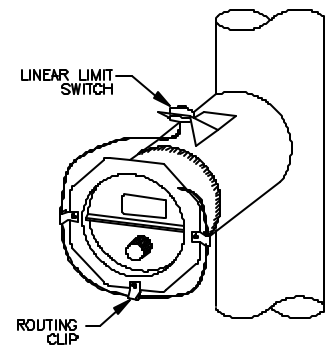


DIAGRAM B1

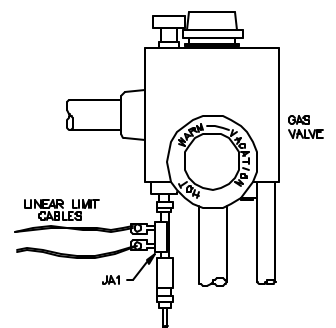
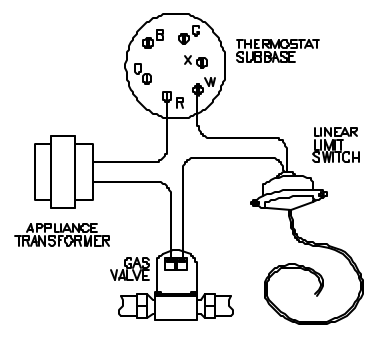


DIAGRAM B2



## SAFETY INTERLOCK TEST

1. Turn on fuel supply to the appliance.
2. Remove vent connector from vent breaching at joint above Linear Limit Spillage Sensor, (See Diagram C1).
3. Block vent connector with sheet metal or other non-combustible material, (See Diagram C2).
4. Adjust thermostat to call for heat allowing burner to fire.

RESULT: Spillage will emit from draft hood, diverter or barometric control. In less than two minutes, Linear Limit Spillage Sensor will open, preventing thermostat signal from reaching burner. If Linear Limit does not open, check for vent pipe leakage. Seal leaks and repeat steps 1-4.

5. Wait 2-3 Minutes...Push reset button on Linear Limit Sensor Switch.
6. Reconnect vent pipe to venting system. **CAUTION:** Metal vent pipe may be HOT!

## COMBUSTION AIR TEST

### WARNING

The L-185 Linear Limit Safety Interlock System is designed to alert the user to a potentially hazardous condition. It is not designed to, and cannot replace regular chimney inspection, appliance servicing and combustion testing. **DO NOT USE THE L-185 AS A SUBSTITUTE FOR PROFESSIONAL APPLIANCE MAINTENANCE.**

1. Close all doors and windows of the building. If appliance is installed in utility room or closet, close the entrance door to this room. Close fireplace dampers.
2. Turn on clothes dryer. Turn on all exhaust fans, such as range hoods, bathroom exhausts and whole house fans to maximum speeds.
3. Place in operation the appliance that the L-185 has been installed on. Set thermostat for continuous operation.
4. Allow fans and appliance to operate for 5 minutes.
5. Tripping of the Linear Limit Spillage Sensor circuit during the 5 minute appliance operation indicates an unsafe operating condition. Check appliances for venting malfunction and check for adequate combustion air. Turn off fuel supply to appliance and **DO NOT OPERATE UNTIL UNSAFE VENTING CONDITION IS INVESTIGATED BY PROFESSIONAL CONTRACTOR OR UTILITY SERVICE PERSONNEL.**
6. Return all windows, doors and fans to their previous conditions of use.

### NOTE:

For further assistance contact the Tjernlund Products, Inc. Customer Service Department at 1-800-255-4208. 7:30 AM-4:30 PM CST.

