

SV9500 SmartValve™ TROUBLESHOOTING SEQUENCE

START

- TURN OFF GAS SUPPLY
- ASSURE SmartValve SWITCH IS IN ON POSITION
- DISCONNECT SYSTEM CONTROL HARNESS
- SET THERMOSTAT TO CALL FOR HEAT

CHECK FOR PROPER VOLTAGE AT CONTROL HARNESS (SEE INSET A). VOLTAGE SHOULD BE 24V BETWEEN THERMOSTAT OR PRESSURE SWITCH AND 24V COMMON, AND 24V BETWEEN 24V COMMON AND 24V HOT. ²

PLUG HARNESS INTO SmartValve CONTROL. WAIT FOR INTERNAL CHECK DELAY

IGNITER WARMS UP AND GLOWS RED

- TURN ON GAS SUPPLY
- PILOT BURNER LIGHTS

MAIN VALVE OPENS AND MAIN BURNER LIGHTS

SYSTEM IS OKAY

NOTE: BEFORE TROUBLESHOOTING, BECOME FAMILIAR WITH THE STARTUP AND CHECKOUT PROCEDURE. ALSO CHECK PILOT BURNER ELEMENT FOR RESISTANCE LESS THAN 10 OHMS WITH ELEMENT AT ROOM TEMPERATURE.

- CHECK:
- LINE VOLTAGE POWER
 - LOW VOLTAGE TRANSFORMER
 - LIMIT CONTROLLER
 - THERMOSTAT
 - WIRING
 - AIR PROVING SWITCH ON COMBUSTION AIR BLOWER SYSTEM
 - VENT DAMPER (IF USED) IS OPEN AND END SWITCH MAKES

WITH PILOT BURNER CABLE CONNECTED, MEASURE VOLTAGE AT SmartValve HSI ELEMENT OUTPUT (SEE INSET B) 24V NOMINAL. ¹ ²

REPLACE IGNITER/FLAME ROD ASSEMBLY

CHECK THAT PILOT GAS IS FLOWING. WAIT TO ASSURE PILOT GAS TUBING IS PURGED.

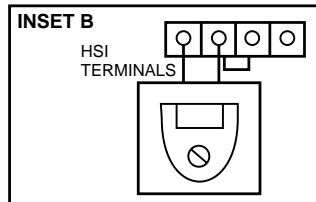
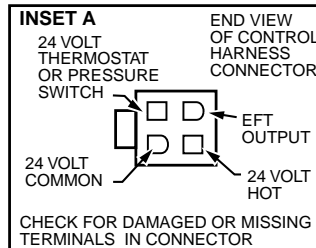
MEASURE VOLTAGE BETWEEN 24V HOT AND 24V COMMON LEADS TO SmartValve CONTROL. MUST MEASURE AT LEAST 19.5 VAC WITH IGNITER POWERED. SEE INSET A TO IDENTIFY PROPER LEAD. THIS CHECK MUST BE DONE WITH THE SmartValve CONTROL CONNECTED AND IGNITER POWERED. ²

REPLACE IGNITER/FLAME ROD ASSEMBLY

- CHECK THAT PILOT FLAME MAKES GOOD CONTACT WITH PILOT BURNER FLAME ROD.
- CHECK FOR GOOD ELECTRICAL CONNECTION THROUGH THE PILOT TUBING.
- IF BOTH OF THE ABOVE ARE GOOD, REPLACE IGNITER/FLAME ROD ASSEMBLY

CYCLE THERMOSTAT OFF AND BACK ON

MAIN BURNER LIGHTS



REPLACE SmartValve CONTROL

REPLACE SmartValve CONTROL

CHECK TRANSFORMER AND LINE VOLT SUPPLY

REPLACE SmartValve CONTROL

¹ IGNITER WILL STAY ENERGIZED AS LONG AS APPLIANCE CALL FOR HEAT IS IN PLACE.

² WHEN MEASURING VOLTAGE AT CONNECTIONS, USE CARE TO ASSURE TERMINALS ARE NOT DAMAGED.

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SV9501/SV9502 SmartValve™ TROUBLESHOOTING SEQUENCE

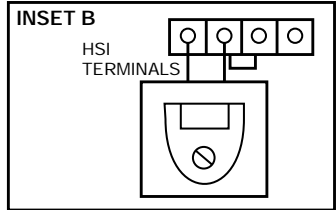
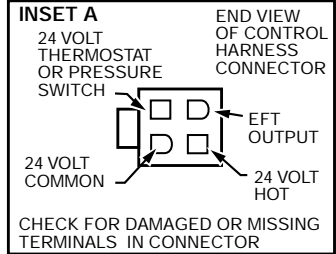
START

- TURN OFF GAS SUPPLY
- ASSURE SmartValve SWITCH IS IN ON POSITION
- DISCONNECT SYSTEM CONTROL HARNESS
- SET THERMOSTAT TO CALL FOR HEAT

CHECK FOR PROPER VOLTAGE AT CONTROL HARNESS (SEE INSET A). VOLTAGE SHOULD BE 24V BETWEEN THERMOSTAT OR PRESSURE SWITCH AND 24V COMMON, AND 24V BETWEEN 24V COMMON AND 24V HOT. 2

NO

- NOTE: BEFORE TROUBLESHOOTING, BECOME FAMILIAR WITH THE STARTUP AND CHECKOUT PROCEDURE. ALSO CHECK PILOT BURNER ELEMENT FOR RESISTANCE LESS THAN 10 OHMS WITH ELEMENT AT ROOM TEMPERATURE.**
- CHECK:**
- LINE VOLTAGE POWER
 - LOW VOLTAGE TRANSFORMER
 - LIMIT CONTROLLER
 - THERMOSTAT
 - WIRING
 - AIR PROVING SWITCH ON COMBUSTION AIR BLOWER SYSTEM
 - VENT DAMPER (IF USED) IS OPEN AND END SWITCH MAKES



PLUG HARNESS INTO SmartValve CONTROL. WAIT FOR INTERNAL CHECK DELAY (SV9501) OR PREPURGE (SV9502)

IGNITER WARMS UP AND GLOWS RED

NO

WITH PILOT BURNER CABLE CONNECTED, MEASURE VOLTAGE AT SmartValve HSI ELEMENT OUTPUT (SEE INSET B) 24V NOMINAL. 1 2

NO

REPLACE SmartValve CONTROL

YES 1

REPLACE IGNITER/FLAME ROD ASSEMBLY

- TURN ON GAS SUPPLY
- PILOT BURNER LIGHTS

NO

CHECK THAT PILOT GAS IS FLOWING. WAIT TO ASSURE PILOT GAS TUBING IS PURGED. RECYCLE CALL FOR HEAT IF NECESSARY.

NO

REPLACE SmartValve CONTROL

YES

MEASURE VOLTAGE BETWEEN 24V HOT AND 24V COMMON LEADS TO SmartValve CONTROL. MUST MEASURE AT LEAST 19.5 VAC WITH IGNITER POWERED. SEE INSET A TO IDENTIFY PROPER LEAD. THIS CHECK MUST BE DONE WITH THE SmartValve CONTROL CONNECTED AND IGNITER POWERED. 2

NO

CHECK TRANSFORMER AND LINE VOLT SUPPLY

REPLACE IGNITER/FLAME ROD ASSEMBLY

MAIN VALVE OPENS AND MAIN BURNER LIGHTS

NO

- CHECK THAT PILOT FLAME MAKES GOOD CONTACT WITH PILOT BURNER FLAME ROD.
- CHECK FOR GOOD ELECTRICAL CONNECTION THROUGH THE PILOT TUBING.
- IF BOTH OF THE ABOVE ARE GOOD, REPLACE IGNITER/FLAME ROD ASSEMBLY

YES

CYCLE THERMOSTAT OFF AND BACK ON

SYSTEM IS OKAY

MAIN BURNER LIGHTS

NO

REPLACE SmartValve CONTROL

1 IGNITER WILL CYCLE OFF AND BACK ON ONCE DURING THE 90 SECOND IGNITION TRIAL. ALL VOLTAGE MEASUREMENTS MUST BE TAKEN WHILE THE IGNITER IS POWERED.

2 WHEN MEASURING VOLTAGE AT CONNECTIONS, USE CARE TO ASSURE TERMINALS ARE NOT DAMAGED.

