

BURNER TROUBLESHOOTING



HEATED HOSE

GRAVITY

Please click on the links below for further troubleshooting

Burner fail light is on

Burner enable is on but fail is off

Burner enable is not on

Burner fail light is on

Burner enable is on but fail is off

Burner enable is not on







CRACK PRO BURNER WILL NOT LIGHT BURNER FAIL LIGHT IS ON

*** IF BURNER FAIL LIGHT IS NOT ON GO TO SECTION 2 ***



1. Open the bleeder port with a 3/8" wrench. Turn the control box on. Is there a steady stream of fuel coming out of the bleeder?



- a. Yes, continue to step 7.
- b. No, continue to step 2.

2. Does the blower motor turn on when burner enable light is on? Check by placing hand over the exhaust vent feeling for air blowing.



a. Yes, continue to step 7.

b. No, continue to step 3.

3. Remove the blower motor and check coupler. <u>Coupler inspection instructions</u> Is it damaged or worn?

a. Yes, replace coupler.

b. No, continue to step 4.

4. Open the burner primary. Are the primary fuses good?



- a. Yes, continue to step 5.
- b. No, replace the bad fuse.

5. Is there power on the red and white wires coming into the front of the primary?



Note: 13 volts+ are recommended for efficient burner operation.

a. Yes, continue to step 6.

b. No, check wiring from burner to control box.

6. Is there power on the primary controller orange wire?

a. Yes, verify all wires in the primary have a good connection. If all connections are good and the blower motor still doesn't turn, replace the blower motor. Blower motor replacement instructions

b. No, change the burner primary. Burner primary replacement instructions

7. With the control box off, open the igniter lid and remove the cad cell eye. Turn on the control box. Place a well-insulated screwdriver across the springs like shown in the picture. Do you see a spark between the spring and the screwdriver?

a. Yes, continue to step 9.

b. No, continue to step 8.

- 8. When the blower motor is running, Is there power on the blue wires inside the burner primary?
- a. Yes, replace the ignitor assembly. Ignitor assembly replacement instructions
- b. No, replace the burner primary. <u>Burner primary replacement instructions</u>

9. Remove the air fuel tube assembly and check the position of the ignitor probes. Are the ignitor probes in the correct position?

a. Yes, replace the fuel nozzle. Nozzle replacement instructions

b. No, position the probes correctly or replace the air fuel tube assembly. <u>Fuel tube removal instructions</u>

c. If these actions did not fix the issue continue to step 10.

10. Turn the control box on. When blower motor turns on, is there power on the purple wire inside burner primary control?

a. Yes, continue to step 11.

b. No, replace the primary control. <u>Burner primary replacement instructions</u>

11. Does the fuel pump solenoid have magnetic pull?

- a. Yes, replace fuel pump. Fuel pump replacement instructions
- b. No, replace the solenoid. <u>Fuel solenoid replacement instructions</u>

HEATED HOSE UNITS BURNER ENABLE LIGHT IS ON BUT BURNER FAIL LIGHT IS OFF

BURNER ENABLE LIGHT IS ON BUT BURNER FAIL LIGHT IS OFF. (Heated Hose Units)

1. With the control box off, open the igniter lid and remove the cad cell eye. *Warning: Ignitor springs will shock you if touched while control box is on.* Shut the ignitor lid and secure the tabs. Does the burner ignite?

- a. Yes, replace the cad cell. Cad cell replacement instructions
- b. No, continue to step 2.

2. Is there power on terminal 4 of CR1 inside the control box when the burner enable light is on?

a. Yes, continue to step 3.

b. No, replace CR1 relay.

3. Make sure the High temp light is not illuminated. Is there power on terminal 5 of CR2 Relay?

a. Yes, continue to step 4.

b. No, replace CR2 Relay.

4. Is there power at terminal TB1-9?

a. Yes, check wiring from control box to burner. Check all connections inside of burner primary control.

b. No, Replace CR2A relay.

SECTION 3

GRAVITY UNITS BURNER ENABLE LIGHT IS ON BUT BURNER FAIL LIGHT IS OFF

BURNER ENABLE LIGHT IS ON BUT BURNER FAIL LIGHT IS OFF. (Gravity Units)

1. Is there power on terminal 4 of CR1 inside the control box when the burner enable light is on?

- a. Yes, continue to step 2.
- b. No, replace CR1 relay.

2. Make sure the high temp light is not on. Is there power on terminal 5 of the CR2 relay?

a. Yes, continue to step 16.

b. No, replace CR2 Relay.

3. Is there power at the terminal with the white wire coming into the box?

a. Yes, check wiring from control box to burner. Check all connections inside of burner primary control.

b. No, replace CR2A relay.

HEATED HOSE UNITS BURNER ENABLE LIGHT IS NOT ILLUMINATED

BURNER ENABLE LIGHT IS NOT ILLUMINATED.

(Heated Hose Units)

1. Are the oil and material temperature controller out one lights illuminated?

a. No, check temperatures and settings. If your material and oil temp PVs are more than 10° under the SVs your out1 light should be illuminated. If the parameters are set correctly and out 1 light is not on, replace that temperature controller.

b. Yes, continue to step 2. Temperature controller replacement instructions

2. Do The oil and material temperature controllers have power on terminal 5?

- a. No, replace the temperature controller. <u>Temperature controller replacement instructions</u>
- b. Yes, continue to step 3.
- 3. Is there power at terminal 5 of CR1?

- a. No, replace the relay.
- b. Yes, replace the burner enable light.

GRAVITY UNITS BURNER ENABLE LIGHT IS NOT ILLUMINATED

BURNER ENABLE LIGHT IS NOT ILLUMINATED. (Gravity Units)

1. Is the oil temperature controller out one light illuminated?

a. No, check temperatures and settings. If your material and oil temp PVs are more than 10° under the SVs your out1 light should be illuminated. If the parameters are set correctly and out 1 light is not on, replace that temperature controller. <u>Temperature controller replacement instructions</u>

b. Yes, continue to step 2.

2. Does the oil temperature controller have power on terminal 5?

a. No, replace the temperature controller. <u>Temperature controller replacement instructions</u>

b. Yes, continue to step 3.

3. Is there power at terminal 5 of CR1?

a. No, replace the relay.

b. Yes, replace the burner enable light.

Cad Cell Assembly Replacement Instructions:

- 1. Loosen tab screws on the cad cell ignitor lid.
- 2. Remove the 2 cad cell wires from the burner primary control.
- 3. Remove the cad cell assembly from its position in the ignitor lid.
- 4. Install new cad cell assembly.

Burner Blower Motor Replacement:

- 1. Disconnect the Blower motor wires from the burner primary.
- 2. Loosen the 2 bolts with a 3/8" wrench.
- 3. Twist the motor counterclockwise and pull the motor out of the burner assembly.
- 4. Install new blower motor in reverse order.

Burner Primary Replacement Instructions:

- 1. Disconnect Wires from the burner primary.
- 2. Connect color coded wires to new primary and secure to burner.

Ignitor Transformer Replacement:

- 1. Remove the Cad Cell Assembly from the Ignitor Transformer lid.
- 2. Disconnect the ignitor ground (black) and power (white) wires from the burner primary.
- 3. Unscrew the 2 lid screws and remove the Ignitor Transformer.
- 4. Install new Ignitor Transformer in reverse order.

Fuel Tube Assembly Removal: Ignitor Probe check:

- 1. With a 7/16" wrench, loosen the fuel tube nut.
- 2. Loosen the fuel tube jam nut.
- 3. Mark the alignment plate and loosen the screw securing it to make fuel tube removal easier.
- 4. Inspect the ignitor probes. There should be a 5/32" gap between them and a ¼" above the nozzle center.
- 5. If needed install new fuel probe assembly in reverse order making sure the alignment plate is in original position.

Fuel Nozzle Replacement:

Part Numbers : CP 125 and Up = P662A017

CP 60 = P662A060

SM 125 = P662A069

- 1. With a 7/16" wrench, loosen the fuel tube nut.
- 2. Loosen the fuel tube jam nut.
- 3. Mark the alignment plate and loosen the screw securing it to make fuel tube removal easier.
- 4. With a 5/8" and a ¾" wrench, loosen the fuel nozzle and replace. Never touch the tip of the new nozzle and never try to clean a used nozzle. This could severely impact burner performance.
- 5. Reinstall fuel probe assembly in reverse order making sure the alignment plate is in original position.

Fuel Solenoid replacement:

- 1. Unplug burner plug from solenoid receptacle.
- 2. With a 10mm. wrench, remove the nut from the top of solenoid.
- 3. Remove fuel solenoid and replace with a new one in reverse order.

Coupler Inspection Instructions:

Part # P662A016

- 1. Loosen the 2 bolts with a 3/8" wrench.
- 2. Twist the motor counterclockwise and pull the motor out of the burner assembly.
- 3. Inspect the coupler making sure the endcaps are securly connected to the coupler and the flats are not rounded.

Fuel Pump Replacement:

- 1. Close main fuel supply.
- 2. Disconnect fuel hose and unplug solenoid.
- 3. Remove 2 blots connecting pump to the burner.
- 4. Remove fuel pump.
- 5. Install new fuel pump in reverse order.

Temperature controller replacement:

Part number: Material controller = P735M018

Oil Controller – P7350018

- 1. Remove all of the wires from the terminals. Note: Take a picture of the wiring configuration before removal for reinstall efficiency.
- 2. Lift and pull the tabs on the top and bottom of the temperature controller.
- 3. Pull the controller out through the front of the door.
- 4. Reinstall the new controller in reverse order.

