Introduction - 1

Troubleshooting Flowchart .......................... 1 - 1
Who should use this guide ............................. 1 - 2
Precautions ............................................. 1 - 2
How to use this troubleshooting guide .............. 1 - 2
Conventions ............................................ 1 - 2
Tools required ........................................ 1 - 3
Spare Components ..................................... 1 - 3
Natural Gas ("NG") vs. Propane ("LP") Heaters .... 1 - 3
Lopi Model Determination ............................. 1 - 4
Heritage Bay Model Determination ................... 1 - 4
Avalon Model Determination ........................... 1 - 5
Avanti Model Determination ............................ 1 - 5
Fireplace Xtrordinair Model Determination ......... 1 - 6
Travis Industries Model Determination ............... 1 - 6

Troubleshooting Steps - 2

Piezo Wire Loose or Damaged ............................ 2 - 1
Spark Electrode Too Far From Pilot Hood .................. 2 - 1
Piezo Not Grounded ...................................... 2 - 1
Electrode has a Cracked Base ............................ 2 - 2
Piezo Defective .......................................... 2 - 2
Gas Line not Purged ...................................... 2 - 2
Propane Tank Empty ..................................... 2 - 2
Gas Supply Turned Off ................................... 2 - 3
Pilot Tube/Orifice Blocked ............................... 2 - 3
Pilot Needs Adjustment ................................... 2 - 3
Thermocouple Defective ................................ 2 - 4
EPU Defective ........................................... 2 - 6
Thermocouple Defective ................................ 2 - 6
Burner Electrical Circuit Faulty ......................... 2 - 7
Head Coil Defective ...................................... 2 - 8
Incorrect Air Shutter Setting ............................ 2 - 8
Incorrect Restrictor Position ............................ 2 - 9
Logs Placed Incorrectly .................................. 2 - 9
Burner Pan Holes Clogged ............................... 2 - 9
Gas Pressure Incorrect (Propane Running Empty) .... 2 - 10
Burner Orifice Obstructed ............................... 2 - 11
Vent not Drafting/ Negative Pressure ................. 2 - 12
Remote Thermostat Faulty ............................... 2 - 14
Blower Circuit Faulty .................................... 2 - 15
Blower Defective ........................................ 2 - 16
Gas Control Knob Doesn't Pop Out ...................... 2 - 16
Pilot or Main Burner Does Not Shut Off ............. 2 - 16

Door & Glass Removal - 3

Lopi Spirit, Spirit DV, & Spirit Bay ....................... 3 - 1
Avalon 700 & 700 DV .................................... 3 - 2
Avanti (1997) B-Vent & DV ............................... 3 - 4
FPX36-DV .................................................. 3 - 5
Lopi Heritage Bay (DV and B-Vent) ................. 3 - 6
Lopi Heritage Bay Insert ................................ 3 - 7
DVS Insert and DVS Fireplace .......................... 3 - 8

Burner Pan Components - 4

Overview of Burner Disassembly ........................ 4 - 1
Burner Assembly Removal - BVM, DVS & DVM ....... 4 - 2
Burner Assembly Removal - DVL Burners ............... 4 - 3
Burner Pan Removal - BVM, DVS & DVM Burners .... 4 - 4
Burner Pan Removal - DVL Burners ..................... 4 - 5
Burner Orifice Removal ................................. 4 - 6
Pilot Assembly Removal, - 96 (inflexible pilot tube) . 4 - 7
Pilot Assembly Removal, - 97 (flexible pilot tube) ... 4 - 8
Pilot Orifice Removal ................................. 4 - 9
Thermocouple Removal ................................ 4 - 10
Thermocouple Removal ................................ 4 - 10
Spark Electrode Removal ............................... 4 - 11
Piezo Igniter Removal .................................. 4 - 11
On/Off Switch ........................................... 4 - 11
Burner Pan Replacement ................................. 4 - 12

Blower Components - 5

Avanti Stove (BV & DV) Blower Removal ............... 5 - 1
Avalon 700 (BV & DV) Blower Removal ................. 5 - 2
Lopi Spirit (BV & DV) Blower Removal .................. 5 - 3
Avanti Insert (BV & DV) Blower Removal ............... 5 - 4
Heritage Bay Insert Blower Removal ..................... 5 - 5
Spirit Bay Insert Blower Removal ....................... 5 - 4
A20 Blower Assembly - Removal & Disassembly ...... 5 - 5
DVS Insert Blower Removal ............................... 5 - 6
DVS Fireplace Blower Removal .......................... 5 - 7
FPX36-DV Blower Removal ............................... 5 - 9
Heritage Bay Stove Blower Removal ...................... 5 - 10
Blower Rheostat Removal ................................ 5 - 11
Blower Snap Disk Removal - Her. Bay & 36-DV ... 5 - 11
Blower Snap Disk - All Except Her. Bay & 36-DV .. 5 - 12
Blower Replacement Parts ............................... 5 - 13
# Troubleshooting Flowchart

<table>
<thead>
<tr>
<th>Troubleshooting Flowchart</th>
<th>Possible Causes</th>
</tr>
</thead>
</table>
| **Does the igniter spark?** | - Piezo wire loose or damaged (pg. 2-1)  
- Spark electrode too far from pilot hood (pg. 2-1)  
- Piezo not grounded (pg. 2-1)  
- Electrode has a cracked base (pg. 2-2)  
- Piezo defective (pg. 2-2) |
| **Does the pilot ignite with the gas control knob in?** | - Gas line not purged (pg. 2-2)  
- Propane tank empty (pg. 2-2)  
- Gas supply turned off (pg. 2-3)  
- Pilot tube/orifice blocked (pg. 2-3) |
| **Does the pilot stay lit when the gas control knob is released?** | - Gas control knob not held down long enough (30 seconds)  
- Millivolt production inadequate  
- Pilot needs adjustment (pg. 2-3)  
- Thermocouple Defective (pg. 2-4)  
- Spill switch circuit faulty (pg. 2-5)  
- EPU defective (pg. 2-6) |
| **Does the main burner turn on?** | - Gas control knob turned to “PILOT” (turn to “ON”)  
- On/Off switch, thermostat, or remote control off (turn “ON”)  
- Millivolt production inadequate  
- Pilot needs adjustment (pg. 2-3)  
- Thermocouple Defective (pg. 2-4)  
- Burner electrical circuit faulty (remote, thermostat, etc.) (pg. 2-7)  
- Head Coil Defective (pg. 2-8) |
| **Does the flame look correct?** | - Flame is blue for first 15 minutes (This is normal)  
- Flame height may be adjusted too low (Adjust higher)  
- Incorrect air shutter setting (pg. 2-8)  
- DV’s Only Incorrect Restrictor Position (pg. 2-9)  
- Logs placed incorrectly (pg. 2-9)  
- Burner pan holes may be clogged (pg. 2-9)  
- Gas pressure incorrect (propane running empty) (pg. 2-10)  
- Orifice may be obstructed (pg. 2-11) |
| **Does the main burner shut off unexpectedly?** | - B-Vents Only Vent not drafting/Negative pressure (pg. 2-12)  
- DV’s Only Pilot lifting off of thermocouple (pg. 2-13)  
- B-Vents Only Spill switch circuit faulty (pg. 2-5)  
- Remote Thermostat Faulty (pg. 2-14) |
| **Does the blower work correctly?** | - Blower starts when heater is hot (15 min. - This is Normal)  
- Blower knob is in “OFF” position (Turn blower knob “ON”)  
- Heater unplugged or breaker “OFF” (Check Outlet & Breaker)  
- Blower circuit may be faulty (pg. 2-15)  
- Blower is defective (pg. 2-16) |
Who should use this guide

This guide was developed for service personnel and those selling Travis Industries products. Because of the inherent danger involved with gas appliances, all work must be done by qualified personnel only. Your local building official will have guidelines for those people considered qualified. The heater must be installed in accordance with the owner's manual and the local building codes, if any; if not, follow ANSI 223.1. Bring an owner's manual for the heater being serviced in case any installation or maintenance questions arise.

Precautions

Warning  Turn off all gas to the unit before working on any component on the gas line
Warning  When the gas is on make sure the remote, thermostat, or remote on/off switch does not turn on
Warning  Make sure the appliance is unplugged when inspecting the wiring

How to use this troubleshooting guide

This guide uses a flow chart on the inside of the cover to help direct the troubleshooting procedure from start to finish. A list of troubleshooting steps is on page 1 for those service personnel familiar with gas appliances. The second portion of this manual is dedicated to removal and replacement instructions.

Conventions

When this troubleshooting guide refers to a side or direction, use the following diagram to determine direction.
**Tools required**

- Gas Leak Detection Device (Gas Sniffer is recommended)
- Pressure Sensing Device (Magnehelic or manometer) with 1/2" water column increments (0" to 15" minimum)
- Multimeter (with ability to detect millivolts and continuity)
- Pipe Wrench
- Standard and Phillips-head Screwdrivers
- Pipe Sealant
- Wire with a male quick-connect attached to each end (called a jumper wire)
- Power cord with female quick-connects attached to the hot and common wires (hotwire)

**Spare Components**

When going on a service call, Travis Industries, Inc. recommends that the following spare components be included to better facilitate a quick diagnosis and repair of the heater. These parts may be used to determine which portion of the appliance is inoperative and can often make the repair quick and effective. In addition to the items below, gas line equipment should be included if needed.

- Flex Tube or Pipe with Shutoff Valve
- Spill Switch Snap disk
- Thermopile
- Piezo Igniter
- Burner Pan w/. Gas Control Valve (NG & LP)
- Logs & Ember Strip
- Wiring Harness
- On/Off Switch
- Pilot Assembly (NG & LP)
- Replacement Orifices (NG & LP)
- Blower Rheostat
- Blower Snap disk
- 3 Pilot Tubes (with compression fittings)
- Blower

**Natural Gas ("NG") vs. Propane ("LP") Heaters**

Travis Industries' heaters use unique gas control valve pressure-regulators, burners, orifices, pilot orifices, and burner pans for natural gas and propane versions of their heaters. Heaters may be converted - pay close attention to all details when converting. If you have any questions or concerns, call Travis Industries for details.
### Lopi Model Determination

#### Stoves

<table>
<thead>
<tr>
<th>Model, Vintage, Ser. #</th>
<th>Burner</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spirit (300 GS) B-Vent Stove 1993 Serial # 1002-1494</td>
<td>Phase 1 93 BV 31,000 BTU</td>
<td>B-Vent freestanding gas stove. Natural gas (NG) only. Two burner orifices attach to a brass manifold attached to the valve.</td>
</tr>
<tr>
<td>Spirit (300 GS) B-Vent Stove 1994 Serial # 1495-4600</td>
<td>Phase 1 94 BV 31,000 BTU</td>
<td>B-Vent freestanding gas stove. Natural gas (NG) or Propane (LP). Label is marked with the gas type. Single burner orifice attaches to a brass manifold attached to valve.</td>
</tr>
<tr>
<td>Spirit B-Vent Stove 1996 Serial # 4602-Present</td>
<td>Phase 2 96 BVM 40,000 BTU</td>
<td>B-Vent freestanding gas stove. Convertible Natural Gas (NG) or Propane (LP). Label does not specify the particular gas. Valve has label on top that shows gas type. Burner orifice attaches to a manifold penetrating the burner assembly which attaches to a flex tube that runs to a fitting attached to the valve.</td>
</tr>
<tr>
<td>Spirit Direct Vent Stove 1996 Serial # 50002-Present</td>
<td>Phase 2 96 DVM 38,500 BTU</td>
<td>Direct Vent freestanding gas stove. Convertible Natural Gas (NG) or Propane (LP). Label does not specify the particular gas. Valve has label on top that shows gas type. Burner orifice attaches to a manifold penetrating the burner assembly which attaches to a flex tube that runs to a fitting attached to the valve.</td>
</tr>
</tbody>
</table>

#### Inserts and Fireplaces

<table>
<thead>
<tr>
<th>Model, Vintage, Ser. #</th>
<th>Burner</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spirit Bay B-Vent Insert 1994 Serial # 5003-7102</td>
<td>Phase 1 94 BV 31,000 BTU</td>
<td>B-Vent Insert with bay window sides. Brass frames on sides hold small clear glass viewing windows. Main door utilized the Lopi cast iron glass retainer and arched glass with handle that screwed into a latch plate on firebox. Single burner orifice attaches to a brass manifold attached to valve.</td>
</tr>
<tr>
<td>Spirit Bay B-Vent Insert 1996 Serial # 25002-Present</td>
<td>Phase 2 96 BVM 40,000 BTU</td>
<td>B-Vent Insert with bay window sides. Brass frames on sides hold small clear glass viewing windows. Main door is the shell with mounting plate &amp; hinges. Door latched on small clips on left side. Rectangular front glass mounted on firebox. Burner orifice attaches to a manifold penetrating the burner assembly which attaches to a flex tube that runs to a fitting attached to the valve.</td>
</tr>
<tr>
<td>Discovery DVS Insert &amp; Fireplace 1997 Serial #</td>
<td>Phase 2 97 DVS 31,000 BTU</td>
<td>See Travis Industries DVS Insert or DVS Fireplace</td>
</tr>
</tbody>
</table>

### Heritage Bay Model Determination

#### Stoves

<table>
<thead>
<tr>
<th>Model, Vintage, Ser. #</th>
<th>Burner</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heritage Bay DV Stove 1996 Serial # 60000-61703</td>
<td>Phase 2 96 DVL 40,000 BTU</td>
<td>Direct Vent freestanding stove welded to the unique Heritage Bay pedestal. Has three sided, arch top gold frame door. Glass is mounted in the door. Side panels hinged &amp; swing open. Has a pair of Black louvers in convection chamber above center of door. Burner shipped separately from stove.</td>
</tr>
<tr>
<td>Heritage Bay DV Stove 1997 Serial # 61704-Present</td>
<td>Phase 2 96 DVL 40,000 BTU</td>
<td>Direct Vent freestanding stove welded to unique Heritage Bay pedestal. Glass mounted in the three sided, arch-top gold frame door. Side panels hinged &amp; swing open. Has a pair of gold plated bars formed with three sides in convection chamber above door. Each unit is built with a 40,000 BTU natural gas (NG) burner with propane (LP) conversion parts included with the stove.</td>
</tr>
<tr>
<td>Heritage Bay B-Vent Stove 1997 Serial # 160001 - Present</td>
<td>Phase 2 96 DVL 40,000 BTU</td>
<td>B-Vent freestanding stove welded to the unique Heritage Bay pedestal. Has three sided, arch top gold frame door. Glass is mounted in the door. Side panels hinged &amp; swing open. Double round bar gold plated trim across front &amp; sides conceals the upper convection chamber above door. Each unit is built with a 40,000 BTU natural gas (NG) burner with propane (LP) conversion parts included with the stove.</td>
</tr>
</tbody>
</table>

#### Inserts and Fireplaces

<table>
<thead>
<tr>
<th>Model, Vintage, Ser. #</th>
<th>Burner</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heritage Bay B-Vent Insert 1997 Serial # 110002 - Present</td>
<td>Phase 2 96 BVM 40,000 BTU</td>
<td>B-Vent fireplace insert for masonry or zero clearance fireplace. Has three sided gold frame door with arch top. Glass is mounted in the door. Double round bar gold plated trim across front &amp; sides conceals the upper convection chamber above door. Each unit is built with a 40,000 BTU natural gas (NG) burner with propane (LP) conversion parts included with the insert.</td>
</tr>
</tbody>
</table>
Avalon Model Determination

### Stoves & Inserts

<table>
<thead>
<tr>
<th>Model, Vintage, Ser. #</th>
<th>Burner</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>700 B-Vent (Gas Stove) 1993 1001-2077</td>
<td>Phase 1 93 BV 31,000 BTU</td>
<td>B-vent unit, insert or freestanding on legs or pedestal. Two burner orifices attach to a brass manifold attached to the valve.</td>
</tr>
<tr>
<td>700 B-Vent (Gas Stove) 1994 2078-4968</td>
<td>Phase 1 94 BV 31,000 BTU</td>
<td>B-vent unit, insert or freestanding on legs or pedestal. Single burner orifice attaches to a brass manifold attached to the valve.</td>
</tr>
<tr>
<td>700 B-Vent (Gas Stove) 1997 6001 - Present</td>
<td>Phase 2 96 BVM 40,000 BTU</td>
<td>B-vent unit, insert or freestanding on legs or pedestal. Burner is 40,000 BTU (dvm burner) with flex tube leading from right side of valve to one orifice. Mixing tube is located under the rear logshelf. Pilot assembly has thermocouple for 30 second drop-out. There is a raised platform across the front of the burner for the front log to sit on. A natural gas burner is standard with parts included to convert to LP. Burner orifice attaches to a manifold penetrating the burner assembly which attaches to a flex tube that runs to a fitting attached to the valve. Ser. Nos 4052 to 5537 use 96 burners with inflexible pilot tube (burner removed to convert to LP). After ser. no. 51227 use 97 burners with flexible pilot tube (LP conversion done without removing burner).</td>
</tr>
</tbody>
</table>

### Avanti Model Determination

#### Stoves & Inserts

<table>
<thead>
<tr>
<th>Model, Vintage, Ser. #</th>
<th>Burner</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avanti B-Vent 1995 2503-4050</td>
<td>Phase 1 95 BV 31,000 BTU</td>
<td>B-vent contemporary style, bay window unit, insert or freestanding. Burner orifice connects directly to gas control valve. Burner is a single thickness sheet metal plate with small upright flanges near left &amp; right sides at the front to locate the front log. Lift-off gold door is standard.</td>
</tr>
<tr>
<td>Avanti B-Vent 1996 4052-Present</td>
<td>Phase 2 96 BVM 40,000 BTU</td>
<td>B-vent contemporary style, bay window unit, insert or freestanding. Burner is a raised &quot;platform&quot; for front log to sit on. Has thermocouple for 30 second drop-out. Natural gas burner standard, includes parts to convert to LP. Burner orifice attaches to a manifold penetrating the burner assembly which attaches to a flex tube that runs to a fitting attached to the valve. Ser. Nos 4052 to 5537 use 96 burners with inflexible pilot tube (burner removed to convert to LP). After ser. no. 51227 use 97 burners with flexible pilot tube (LP conversion done without removing burner). Lift-off gold door is standard from ser. Nos 4052 to 5730. Starting with ser. No. 5731 the swing-open door is standard.</td>
</tr>
<tr>
<td>Avanti Direct Vent 1995 1004-3037</td>
<td>Phase 2 97 DVS (modified) 31,000 BTU</td>
<td>Direct vent, contemporary style, bay window unit, insert or freestanding. Burner is a box assembly with no locator flanges or platform for the front log to rest on. Has two tall flanges toward back to stop the front log. Has flex tube off right side of valve leading to one orifice and mixing tube located under the rear log support. Natural gas burner standard, includes parts to convert to LP. Burner orifice attaches to a manifold penetrating the burner assembly which attaches to a flex tube that runs to a fitting attached to the valve. Burner must be removed from stove to make gas conversion. Has lift-off gold door standard.</td>
</tr>
<tr>
<td>Avanti Direct Vent 1996 32002-Present</td>
<td>Phase 2 96 DVM 38,500 BTU</td>
<td>Direct vent, contemporary style, bay window unit, insert or freestanding. Burner has raised &quot;platform&quot; across front of burner for front log to sit on. Has thermocouple for 30 second drop-out. Burner orifice attaches to a manifold penetrating the burner assembly which attaches to a flex tube that runs to a fitting attached to the valve. Natural gas burner is standard with unit. Includes parts to convert to LP. Ser. Nos 32002 to 32986 use 96 burners with inflexible pilot tube (burner removed to convert to LP). After ser. no. 32986 use 97 burners with flexibe pilot tube (LP conversion done without removing burner). Starting with ser. no. 33189 the swing open door is standard.</td>
</tr>
<tr>
<td>Avanti DVS Insert &amp; Fireplace</td>
<td>Phase 2 97 DVS 31,000 BTU</td>
<td>See Travis Industries DVS Insert or DVS Fireplace</td>
</tr>
</tbody>
</table>
Fireplace Xtrordinair Model Determination

Fireplaces & Inserts

<table>
<thead>
<tr>
<th>Model, Vintage, Ser. #</th>
<th>Burner</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>36 DV -A 1995 1004-5967</td>
<td>Phase 2 96 DVL 40,000 BTU</td>
<td>Arch face only. Ser. Nos. 1004-3037 are natural gas only and have no intake restrictor. Ser. Nos. 3038-5967 are natural gas or LP and have an exhaust restrictor with pivot adjustor at the top front of unit behind finish face. Firebox is 30-1/2&quot; wide at front.</td>
</tr>
<tr>
<td>36 DV:R 1996 25002-25298</td>
<td>Phase 2 96 DVL 40,000 BTU</td>
<td>Rectangular face only. All have an exhaust restrictor at the top front of unit behind face. Firebox is 30-1/2&quot; wide at front.</td>
</tr>
<tr>
<td>36 DV-A/R 1997 30000 &amp; continuing</td>
<td>Phase 2 96 DVL 40,000 BTU</td>
<td>Will accept arch or rectangle faces. Intake restrictor adjustor is a lever located under burn pan at left side. Firebox is 30-1/2&quot; wide at front. Natural gas burner (40,000 BTU) is standard feature with parts to convert to LP gas included.</td>
</tr>
<tr>
<td>FPX 32 DVS Insert &amp; Fireplace</td>
<td>Phase 2 97 DVS 31,000 BTU</td>
<td>See Travis Industries DVS Insert or DVS Fireplace</td>
</tr>
</tbody>
</table>

Travis Industries Model Determination

Fireplaces & Inserts

<table>
<thead>
<tr>
<th>Model, Vintage, Ser. #</th>
<th>Burner</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DVS Insert 1996 80000 &amp; continuing</td>
<td>Phase 2 97 DVS 31,000 BTU</td>
<td>Must be installed into existing zero clearance or masonry fireplace. Will accept arch or rectangle faces. Firebox is 24&quot; wide at front. No intake restrictor. 31,000 BTU natural gas burner is standard with parts to convert to LP gas included.</td>
</tr>
<tr>
<td>DVS Fireplace 1997 100001 &amp; continuing</td>
<td>Phase 2 97 DVS 31,000 BTU</td>
<td>This unit is a zero clearance fireplace. Intake restrictor is a three position lever under burner at right. Will accept either arch or rectangle face. Firebox is 24&quot; wide at front. 31,000 BTU natural gas burner is standard with parts to convert to LP gas included.</td>
</tr>
</tbody>
</table>
Piezo Wire Loose or Damaged

Make sure the orange wire is attached to the piezo igniter and is not damaged (make sure it has not contacted the bottom of the burner pan).

Remedy

Connect the piezo wire, making sure the connection is tight (crimp slightly if necessary). If the wire is damaged, replace the pilot assembly which includes a new piezo igniter wire.

Spark Electrode Too Far From Pilot Hood

The spark electrode should be no more than 1/8" from the pilot hood. You should see the spark travel from the electrode to the pilot hood.

Remedy

Bend the spark electrode so that it is within 1/8" of the pilot hood. The diagonal offset in the electrode allows it to be bent closer to the pilot hood if necessary (use needle-nose pliers).

Piezo Not Grounded

The grounding tab must make contact with the mounting plate.

Remedy

If you suspect the piezo igniter is not grounded, remove it and check to make sure the tab is exposed and undamaged. Bend the piezo grounding tab out or replace the piezo igniter.
2 - 2  Troubleshooting Steps

Electrode has a Cracked Base

If the spark electrode has a cracked ceramic base the spark will occur at the base—not near the pilot hood. Look down at the pilot assembly from the top to inspect. Cracking or an uneven space between the insulator and the electrode indicates possible grounding near the base. If uncertain, remove the pilot assembly and inspect.

Remedy

Replace the pilot assembly.

Piezo Defective

Defective piezo igniters will not create the electrical charge necessary. You may notice that the red button does not create a "snap" when it is depressed or that the button has no spring resistance. The only way to check this component is to replace it and see if it creates a spark.

Remedy

Replace the piezo igniter.

Gas Line not Purged

All air in the gas line must be purged prior to operation.

Remedy

Remove the glass (or open the door) and depress the gas control knob (on pilot) while repeatedly pressing the igniter until the pilot lights.

Propane Tank Empty

Make sure propane is still supplied. To verify, check the gas inlet pressure (see "Gas Pressure Inadequate" on page 2-10).

Remedy

Re-fill propane tank.

Gas Supply Turned Off

Make sure all gas shut-offs are open. To verify, check the gas inlet pressure (see "Gas Pressure Inadequate" on page 2-10).

Remedy

Turn gas shut-off valves to "ON".
**Pilot Tube/Orifice Blocked**

If no gas is present at the pilot hood, check for blockage in the tube inside the pilot hood. Check for gas flow by carefully listening for air flow from the pilot hood. If blockage is not found, remove the pilot orifice and check for debris.

The pilot tube is often overlooked as a source of gas leakage. Check both pilot tube connections after making any alteration to the pilot tube or pilot assembly (use a gas leak detector).

![Diagram of Pilot Hood and Orifice](image)

**Remedy**

Remove any blockage from pilot orifice or pilot tube by forcing air through it. Replace if necessary.

**Pilot Needs Adjustment**

The pilot flame should impinge the top 3/8" of the thermopile and thermocouple.

![Diagram of Thermopile and Thermocouple](image)

**Remedy**

To adjust the pilot flame, remove the cover screw (and gasket) and turn the needle valve. Clockwise lowers the flame while counter-clockwise raises it.

The cover screw and gasket must be replaced to prevent gas from leaking.

**NOTE:** The thermopile millivolt production can be monitored while adjusting the pilot. Place multimeter probes on the middle and lower posts of the gas control valve (see page 2-6). Millivolt production is factory set at approximately 400. If you can not adjust the pilot to achieve 200 millivolts, your thermopile may require replacement. See the section "Thermopile Defective" on page 2-6 for more details.

![Diagram of Needle Valve and Cover Screw](image)
Thermocouple Defective

To check the millivolt production from the thermocouple, remove the thermocouple connector and connect the multimeter to the center tab and copper tube. Start the pilot and hold down the gas control knob. The minimum acceptable reading is 15 millivolts.

To check millivolt production from the thermocouple, remove the thermocouple connector and connect the multimeter to the center tab and copper tube (min. 15 millivolts).

NOTE: Make sure the pilot flame contacts the thermocouple 3/8" (for 30 seconds) while testing millivolt production. If it does not, see "Pilot Flame Needs Adjustment".

Remedy

Replace the pilot assembly (includes thermocouple).
B-Vents Only

Spill Switch Circuit Faulty

The spill switch circuit disables the heater if spillage is detected from the draft hood. If a connection between the components is loose, corroded, or damaged, the circuit will be disabled and the pilot will not stay lit when the gas control knob is released. To check the spill switch circuit, follow the directions below.

1. Start the pilot and hold down the gas control knob. Ground one of the multimeter probes to the copper tube on the thermocouple connector.

2. Use a multimeter to measure the millivolt reading on the spill switch interrupt terminal nearest the thermocouple connector. If no millivolts are detected, and the thermocouple is producing millivolts (see "Thermocouple Defective" pg. 2-4), the thermocouple connector is not attached correctly.

3. Replace the spill switch wire nearest the thermocouple connector and measure the millivolt reading on the other terminal of the spill switch interrupt. If no millivolts are detected, and millivolts were detected in step 2 above, the spill switch wires or spill switch snap disk is faulty (see steps 4 & 5 below). If millivolts are detected (minimum of 15 millivolts), yet the pilot does not stay lit, the spill switch interrupt is not attached to the gas control valve correctly.

4. Carefully Inspect the spill switch wires for damage or loose connections. If the wire insulation is melted and the wire contacts a metal surface, the thermocouple circuit will ground out to the chassis of the heater and disable the heater. Replace damaged wire.

5. Remove the rear panel of the heater (if applicable) to access the spill switch. Remove the two red wires leading to the spill switch and check for continuity on the spill switch. Replace if no continuity is detected.

Remedy

Replace or repair the appropriate component based upon the above troubleshooting steps.
2 - 6 Troubleshooting Steps

EPU Defective

If the thermocouple production is adequate (see "Thermocouple Defective"), yet the pilot does not stay lit when the knob is released, the EPU inside the gas control valve is malfunctioning.

Remedy

Replace the gas control valve.

Thermopile Defective

To check millivolt production from the thermopile, connect the multimeter to the center and lower posts on the gas control valve. Millivolt production is factory set at approximately 400 millivolts (with the burner off).

Make sure the pilot flame contacts the thermopile 3/8" (for 30 seconds) while testing millivolt production. If it does not, see "Pilot Flame Needs Adjustment". If you can not adjust the pilot to achieve 200 millivolts, your thermopile may require replacement.

NOTE: If the main burner is turned on, the millivolt production will appear to drop because the head coil (the valve that operates the main burner) will draw electricity.

NOTE: If the heater operates for 1 to 5 minutes, then shuts off, it may be a defective thermopile. Millivolt production is based upon the difference in temperature between the top and bottom of the thermopile. A defective thermopile may create sufficient millivolts to keep the main burner operating for the first minutes of operation. But once the stove warms, the temperature differential lessens and millivolt production goes down.

NOTE: When using a thermostat or remote control, the millivolt production may need to be increased in certain cases (see page 2-3 for pilot adjustment). The thermostat or remote wire creates electrical resistance in the main burner circuit, making larger millivolt production necessary to offset the resistance.

Remedy

Replace the thermopile (or pilot assembly).
Troubleshooting Steps 2 - 7

Burner Electrical Circuit Faulty

The burner electrical circuit controls the main burner. If any item, including the wiring, is faulty, the burner will not turn on. This also applies to any remote components (remote control, thermostat, wall switch) used to operate the burner. Follow the steps below to diagnose the burner electrical circuit.

1. Make sure the pilot is burning and the gas control knob is turned to "ON". Remove the brown and red wire connected to the top and bottom posts of the gas control valve. Connect a jumper wire between the top and bottom posts. If the heaters turns on, the burner electrical circuit is faulty - go to step 2 below. If the heater does not turn on (and the thermocouple production is adequate) the head coil inside the gas control valve is defective (replace the gas control valve).

2. Turn off the appliance and carefully inspect the burner electrical circuit wires for damage or loose connections.

   HINT: Keep in mind that millivolt circuits are very weak. Unlike 110 Volt circuits, a slightly loose connection can interrupt the circuit and disable the burner. The most frequent cause for faulty on/off circuits are connections that are loose or dirty. Remove, clean, and re-crimp all connections before replacing components or wiring.

   NOTE: If the wire insulation is melted and the wire contacts a metal surface, the on/off circuit will ground out to the chassis of the heater and disable the main burner. Any wiring that is exposed or severed should be replaced or properly insulated.

3. If no wiring is found damaged, turn on the pilot and trace the burner electrical circuit. Keep one probe of the multimeter on the center post of the gas control valve while systematically following the circuit. Start with the red wire leading to the on/off switch. You should detect millivolts where it connects to the on/off switch. If it does not, replace or re-connect the wire to fix the circuit. Repeat this process for the on/off switch, jumper wire (or remote/thermostat), and brown wire until the bad connection is found.

Remedy

Replace or fix the faulty component.
Head Coil Defective

If the thermopile production is adequate (see "Thermopile Defective") and the burner does not turn on when jumped (see step #1 under "Burner Electrical Circuit is Faulty"), yet the burner does not turn on, the Head Coil inside the gas control valve is malfunctioning.

Remedy

Replace the gas control valve.

Incorrect Air Shutter Setting

The air shutter regulates the amount of air allowed into the mixing tube prior to ignition on the burner. It is factory-adjusted for use near sea level. But due to venting configuration, gas quality, and altitude, the air shutter should be adjusted for each installation. The flames should be blue at the base and orange/yellow at the top with no sooting. When adjusted correctly, the flames will be efficient and attractive.

1. Start the heater, and let it burn for 15 minutes.
2. Inspect the flames.

Locate the air shutter adjustment lever behind the gas control valve. Move it up or down until the flame is correct. Pushing up gives the flame more air (making it bluer). Pulling it down cuts air down, making it more orange.

**NOTE:** If the air control is all the way up, yet the flames remain sooty, shut off gas to the fireplace and contact a qualified gas service technician.

**NOTE:** If the air control is all the way up, yet the flames remain sooty, make sure to check the restrictor position (on DV’s only), gas inlet pressure, and log position.

**Remedy**

Move the air shutter lever up or down until the flame is correct. Pushing up gives the flame more air (making it bluer). Pulling it down cuts air down, making it more orange.
Incorrect Restrictor Position

Direct vent appliances require a restrictor to regulate exhaust velocity. With the restrictor set too low, the flames will flutter and the flames will be short. Set too high, the flames will be lazy and it may be difficult to set the air shutter position to a clean, yet attractive, flame.

Remedy

Use the chart in the owner's manual to determine the restrictor position.

The restrictor position indicated in the owner's manual is based upon lab tests. The optimum setting may be slightly different.

Logs Placed Incorrectly

The ceramic fiber logs must be placed correctly on the burner pan for the heater to burn correctly. Too much flame impingement on the logs, sooting, or no "glowing" are symptoms of incorrectly placed logs (or an incorrectly adjusted air shutter). This may lead to excessive sooting, increased emissions, shortened flames, and decreased efficiency.

Remedy

Place the logs correctly (see the owner’s manual).

Burner Pan Holes Clogged

If the flames on the heater do not completely light across the width of the burner, there may be some debris clogging the burner pan holes (check for any pieces of log that may have chipped off, lint, etc.). There might also be occasional "lifting" of flames in this case.

Remedy

Remove the logs from the burner and clean all the burner pan holes.
Gas Pressure Inadequate (Propane Running Empty)

Improper input pressure may lead to abnormal flame height or inability to achieve a clean flame. Follow the procedure below to check input pressure.

! Whenever working with gas, make sure to follow the proper precautions. This procedure opens the gas line - use extreme care.

! Do not press the piezo igniter until you are certain there is no gas leak or gas buildup inside the firebox.

Note: Gas appliances on the same gas line may affect input pressure. Check input pressure while the other appliances are on to see if pressure is correct.

Note: Make sure to check the propane level if using propane.

1 Turn the gas control knob to off.

2 Follow the directions below to access a gas port and attach a manometer (or other pressure sensor).

Newer Models (with Gas Inlet Pressure-Test Port)

- a Unscrew the gas inlet pressure-test port needle valve several turns.
- b Place a tube over the needle valve port.

Older Models

- a Remove the cover screw (and gasket).
- b Unscrew the needle valve several turns.
- c Place a tube over the needle valve port.

3 Start the pilot, making sure to keep the test port covered the entire time.

4 Monitor the inlet pressure with the main burner on.

Warning: Gas will come out of the test port. Make sure to turn the gas control knob to off and extinguish all flames prior to removing the tube.

Note: You may follow the same procedure to purge the gas line, monitoring for gas at the needle valve location.

Remedy

Correct the gas inlet pressure. This may entail adjusting the regulator or increasing the pipe diameter.
**Burner Orifice Obstructed**

The orifice(s) work in conjunction with the gas control valve to provide the correct amount of gas to the burner pan. Any obstruction (debris from gas line installation) caught in an orifice will lead to improper performance. Follow the instructions below to check for obstructions.

1. **Check for clogging by removing the orifice and looking inside.**
   - While the orifice(s) are removed, check the inside of the mixing tubes for obstructions.
2. **Orifice (removed from back side of manifold)**
   - Always use thread sealant when replacing the orifice(s).
3. **While the orifice(s) are removed, use a flashlight to inspect the inside of the mixing tubes for obstructions.**
   - If the flame height is less than 6” tall in the rear, or 2” in front, the orifice(s) may need to be checked for obstructions. First check the input pressure to see if that is correct, then adjust the air shutter. If the flames remain too short, remove the orifice(s) and check for debris inside.
4. **Remedy**
   - The orifices or inside of mixing tubes will need to be cleaned (force air through it) or replaced.
Troubleshooting Steps

B-Vents Only  Vent not Drafting/ Negative Pressure Situation

If a b-vent appliance shuts down within 5 minutes of starting, chances are it encountered a cold-air block or negative pressure. In most cases you can re-start the appliance and it will draft properly. However, if persistent shut-downs occur, you may wish to check for negative pressure.

Negative Pressure

Negative pressure describes a situation in which less pressure is inside the home (near the heater) than outside. This allows air to rush down the vent. Because B-Vent heaters utilize natural draft to pull combustion products up the vent, negative pressure can cause combustion products to spill into the room. The spill switch then detects the heat and shuts the heater off. The pilot will then need to be re-started. The following are possible causes of negative pressure:

• Exhaust Fans in Air-Tight Homes
  Kitchen Jenn-Air type fans, dryers, or bathroom fans can pull air out of the home, causing air to come down the vent.
  
  Remedy
  Turn all exhaust fans off while starting the heater. If this is not feasible, the heater may need to be re-started a couple of times to generate draft. In severe cases, supply outside air to the appliance to overcome negative pressure (install an outside air kit or crack the window).

• Down Drafts
  Installations in a high-wind area may lead to air pushing down the gas vent. Homes located next to a lake or on the leeward side of tall trees or a hill are most susceptible. This type of problem may be sporadic.

  Remedy
  Increase the vent height above the downward flow of air or install a draft-inducing hood or draft inducer.

• Thermal Negative Pressure
  Thermal negative pressure describe a situation in which the home circulates warm air up and out of the home. Cold air then replaces it by coming down the vent. This type of negative pressure can be pervasive. Homes with un-sealed, un-insulated ceilings are especially susceptible. A heater located in a cold basement compounded by air exiting through the upper portions of the home is another scenario. In homes with two fireplaces on different levels, you might notice the downstairs fireplace tends to draw air in while the upstairs fireplace will pull the warmer air out of the home.

  Remedy
  This type of negative pressure is extremely difficult to diagnose and remedy. Make sure the attic or ceiling area is sealed and insulated. In severe cases the heater may need an outside air kit or draft inducer.
DV’s Only  

Pilot Blowing Off of Thermocouple

If the pilot goes out sporadically, inspect the pilot flame near the thermocouple. Watch the flame to see if it blows off of the thermocouple. Check this after shutting off the main burner.

Check to see if the pilot flame is being blown off of the thermocouple.

Remedy

Make sure the vent restrictor is in the correct position (see the owner’s manual for details).

Make sure vertical terminations utilize the high-wind cap (part # 991)

36-DV’s and Heritage Bays should have a pilot deflector - if they do not, contact Travis Industries for details.

If the Heritage Bay or 36-DV does not have this deflector, contact Travis Industries.
Remote Thermostat Faulty

The remote thermostat consists of two components, the transmitter and receiver. Follow the instructions below to check the remote thermostat.

Note: The remote thermostat, when in thermostat mode, may require up to 5-1/2 minutes to react to changes made to the heat setting. The remote works on 5-1/2 minute cycles for updating the temperature.

Note: The remote thermostat has a 20’ range to the receiver and must be within direct line of sight. Weak batteries may adversely affect range.

1. Switch the receiver to “MANUAL” and turn the heater on. If the heater does not work, the malfunction is with the heater (or in rare cases with the remote receiver or the wire leading to it).

2. Switch the receiver to “REMOTE”. Install new batteries in both the receiver and remote and press the “MAN” button on the remote. Then press “ON”. If the heater does not turn on, the remote is not operational.
**Blower Circuit Faulty**

The blower circuit controls the electricity flowing to the blower. It consists of a power cord, wiring harness, snap disk, and rheostat. This allows the blower to be variable speed and shut down automatically when the heater cools. The two symptoms below detail the troubleshooting steps for the blower circuit (the blower circuit is 115V A.C., not a D.C. millivolt system).

Disconnect the power supply before servicing electrical components.

**Blower is stuck on High**

This indicates a defective rheostat. Replace the rheostat (see the directions below).

**Blower does not turn “ON”**

The blower will not start until the heater is up to temperature - approximately 15 minutes. This time is longer if the flame is turned to low.

1. Check the outlet to make sure it is supplying power.
2. With the power cord removed, check the wiring using the diagram below as a guide. Use a multimeter to check continuity between the wires. Check for loose connections or burned wire insulation. Replace any damaged component.

3. With the power off, access the blower snap disk (it is found on the back side of the firebox on stoves and inserts and underneath the burner pan on fireplaces. Disconnect the two wires leading from it and “jump” them together with a wire that has two male quick-connects attached. This will bypass the snap disk. If the blower then turns on when the power is restored, the snap disk is defective and should be replaced.

![](image)
Blower Defective

A defective blower may be loud or not circulate air. This component is not user serviceable and must be replaced if defective. The blower is checked by attaching it to a hotwire (a power cord with a female quick connect on the hot and common wire). Follow the directions for accessing the blower in the section "Removing the blower" (NOTE: do not remove the blower, simply follow the instructions until the blower wires can be accessed). If the blower does not turn on or is especially loud, it is defective.

Remedy

Replace the blower.

Gas Control Knob Doesn't Pop Out when Released

If the gas control knob does not pop out when released after starting the pilot, the EPU inside the gas control valve is not working correctly.

Warning: This is a potentially dangerous situation.

Remedy

Turn the gas control knob to "OFF", shut off gas to the heater, and do not operate the heater until the gas control valve is replaced.

Pilot or Main Burner Does Not Shut Off

If the pilot or main burner does not shut off correctly, there may be blockage inside the gas control valve. Make sure the thermostat or remote control is operating correctly.

Remedy

Replace the gas control valve.
Lopi Spirit, Spirit DV, & Spirit Bay

Remove the door by lifting up on it and swinging it to the left. Then lift it up and off of the hinges.

Remove the glass by following the directions below.

To remove the glass:

Loosen the nuts on the top and right side glass clips. Then slide the glass to the right, pivot the glass forward, and remove it from the heater.

Loosen the nuts on the bottom and left side glass clip. Then slide the glass clips off.

To replace the glass:

Follow the directions above in reverse order. Make sure the gasket forms an air-tight seal around the perimeter of the glass.

Cross Section of Glass Attachment

Glass Clip Attachment Studs
Face of Heater
Glass Gasket (5/8" self-adhesive channel gasket)
Glass Clip Nuts
Glass Clip

NOTE: Some models do not have key-hole slots in the glass clips. Simply remove the nuts to remove the glass clips.
Remove the door following the directions below.

Unscrew and remove the door handle. Swing the door until it is open 90° Lift the door up and away from the heater.

NOTE: When re-installing, make sure the handle points away from the glass when finished.

The door components are shown below.

The glass is held in place with the retainer clips and a 5" piece of 3/8" flat white gasketing.

Door Gasket -
7/8" rope gasketing is held in place with gasket cement.

Use a 5/16" nutdriver for the retaining clip screws.

Retaining Clip

3/8" flat gasketing behind the retaining clips (prevents the glass from cracking when being secured.

Glass Gasket -
3/8" dia. white rope gasket

Door Frame
Make sure there is a small space around the edge of the glass
Remove the door following the directions to the right.

The door hangs on a pair of hooks on both sides. Lift the door up and off the hooks to remove. To replace, align the brackets on the door over the hooks and slide downwards until the door locks in place.

Remove the glass following the directions to the right.

Loosen the three glass clips holding the side glass in place. Slide the side glass to the rear. Do these steps for both sides.

Place one hand on the glass. Loosen the four nuts on the bottom glass clip until the glass can be tilted forward and removed.

Loosen the three glass clips holding the side glass in place.

Replace the glass following the directions to the right.

The side glass has gasket attached to the top, bottom and outward sides. The center glass has gasket on the top and bottom.
Open the door following the directions to the right.

Lift the control cover off the heater.

Remove the two screws holding the door in place.

Swing the door open.

The illustration below details the door assembly.

Exploded View

Cross Section

Gold Door Frame
Door Gasket
Door Gasket Clips
Glass Clip(s)
Glass
Glass Clip Nut
Door Gasket

Travis Industries Gas T-Shoot Guide 19203
Rectangular Faces

There is no center attachment for rectangular faces.

Arch Faces

Use the inside attachments on the side and the attachment at the center of the face.

To remove the glass:

1. Remove the arch covers
2. Unscrew the glass clip screws several turns to loosen them from the clips.
3. Slide off the glass clips on the top and sides of the glass, holding the glass to insure it does not fall forward
4. Loosen the glass clip on the bottom
5. Slide the glass up and away from the bottom glass clip

To install the glass:

1. Place the bottom glass clip in place and screw the 5 screws that hold it in place a couple of turns (use a Phillips screwdriver).
2. With the glass gasket in place, position the glass on the bottom glass clip (if the glass is cracked or broken, replace).
3. Install the side and top glass clips, tightening the screws only a couple of turns.
4. Adjust the glass so it is centered.
5. Tighten the screws on the glass clips all the way (screws must bottom out).

These key-holes allow for glass clip removal without removing the screws.
The Heritage Bay door hinges open. Follow the directions below to open the door.

1. Open both the top and bottom latch.
2. With the pawl free of the strike, the door may be swung open.
3. Swing the left panel back.
4. When securing the door, make sure the pawl fits over the strike before tightening.

**NOTE:** Do not overtighten the pawl by screwing it in. This will permanently damage the latch.

The illustration below details the door assembly.

To remove the glass, peel back the door gasket and unscrew the nuts holding the glass clips in place. Re-attach the gasket using stove gasket cement.
Lopi Heritage Bay Insert

The Heritage Bay door hinges open. Follow the directions below to open the door.

Use the door latch tool (3/16" allen wrench) to unscrew the door bolt.

NOTE: When closing the door, lift up on it gently to prevent scratching the gold trim on the ashlp.

To remove the glass, peel back the door gasket and unscrew the nuts holding the glass clips in place. Re-attach the gasket using stove gasket cement.
DVS Insert and DVS Fireplace

**Lopi Discovery** - remove the door by lifting it up and away from the face.

**Avanti DVS** - remove the door by lifting it up and away from the face.

**FPX 32** - use a phillips-head screwdriver to remove the four screws holding it in place.

The glass is removed following the directions below.

### Removing the Glass

1. Loosen the nuts on the top and side glass clips until they are flush with the end of the stud (do not remove the nuts).

2. While holding the glass, slide the side and top glass clips off.

3. While holding the glass, loosen the nuts on the bottom glass clip until they are flush with the end of the stud. Pivot the glass forward and remove.

### Replacing the Glass

1. With the bottom glass clip in place and the nuts flush with the end of the stud, position the glass over the bottom clip (do not tighten the nuts).

2. Replace the top glass clip (do not tighten nuts).

3. Center the glass then replace the side glass clips (do not tighten nuts).

4. Tighten the nuts on the bottom glass clip first, then the top, then the sides.

---

**Cross Section of Glass Attachment**

- Glass Clip Attachment Studs
- Glass Clip Nuts
- Face of Heater
- Glass Gasket (3/4" self-adhesive channel gasket)
- Glass
Overview of Burner Dissassembly

Warning: Shut off all gas to the appliance prior to conducting service.

Each burner assembly can be removed as a whole or disassembled to replace an individual component. Use the chart below to determine what steps are required to remove the desired component based upon the burner assembly you are servicing.

Hint: Use the chart on page 4-12 to determine the burner being serviced.

<table>
<thead>
<tr>
<th>Part</th>
<th>1997 Phase 2 Burner Assemblies (with flexible pilot tubes)</th>
<th>1996 Phase 2 Assemblies (inflexible pilot tube)</th>
<th>1995 or Earlier Burner Assemblies (see '94 T-Shoot Guide)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burner Pan</td>
<td>• Remove Burner Pan</td>
<td>• Remove Burner Assembly</td>
<td>• Remove Burner Assembly</td>
</tr>
<tr>
<td></td>
<td>• Connect New Burner Pan</td>
<td>• Remove Gas Control Valve</td>
<td>• Remove Pilot Assembly</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Remove Pilot Assembly</td>
<td>• Connect New Burner Pan</td>
</tr>
<tr>
<td>Burner Orifice</td>
<td>• Remove Burner Pan</td>
<td>• Remove Burner Assembly</td>
<td>• Remove Burner Assembly</td>
</tr>
<tr>
<td></td>
<td>• Remove Burner Orifice</td>
<td>• Remove Pilot Tube</td>
<td>• Remove Pilot Tube</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Remove Gas Control Valve</td>
<td>• Remove Burner Orifice</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Remove Burner Orifice</td>
<td></td>
</tr>
<tr>
<td>Pilot Assembly</td>
<td>• Remove Burner Assembly</td>
<td>• Disconnect Pilot Assembly</td>
<td>• Remove Burner Assembly</td>
</tr>
<tr>
<td></td>
<td>• Disconnect Thermocouple, Thermopile, and Pilot Tube</td>
<td>• Disconnect Pilot Tube</td>
<td>• Disconnect Pilot Tube</td>
</tr>
<tr>
<td></td>
<td>• Connect New Pilot Asbly</td>
<td>• Connect New Pilot Tube</td>
<td></td>
</tr>
<tr>
<td>Pilot Orifice</td>
<td>• Remove Burner Pan (leave burner asbly in place)</td>
<td>• Remove Burner Assembly</td>
<td>• Remove Burner Assembly</td>
</tr>
<tr>
<td></td>
<td>• Disconnect Pilot Assembly</td>
<td>• Disconnect Pilot Tube</td>
<td>• Disconnect Pilot Tube</td>
</tr>
<tr>
<td></td>
<td>• Disconnect Pilot Tube</td>
<td>• Connect New Pilot Tube</td>
<td></td>
</tr>
<tr>
<td>Pilot Tube</td>
<td>• Remove Burner Assembly</td>
<td>• Remove Pilot Tube</td>
<td>• Remove Burner Assembly</td>
</tr>
<tr>
<td></td>
<td>• Remove Pilot Tube</td>
<td>• Remove Pilot Tube</td>
<td>• Remove Pilot Tube</td>
</tr>
<tr>
<td></td>
<td>• Connect New Pilot Tube</td>
<td>• Connect New Pilot Tube</td>
<td></td>
</tr>
<tr>
<td>Thermocouple</td>
<td>• Remove Burner Assembly</td>
<td>• Remove Thermocouple</td>
<td>• Remove Burner Assembly</td>
</tr>
<tr>
<td></td>
<td>• Remove Thermocouple</td>
<td>• Connect New Thermocouple</td>
<td>• Remove Pilot Assembly</td>
</tr>
<tr>
<td></td>
<td>• Connect New Thermocouple</td>
<td>• Connect New Thermocouple</td>
<td>• Connect New Thermocouple</td>
</tr>
<tr>
<td>Thermopile</td>
<td>• Remove Burner Pan (leave burner asbly in place)</td>
<td>• Remove Burner Assembly</td>
<td>• Remove Burner Pan Assembly</td>
</tr>
<tr>
<td></td>
<td>• Disconnect Pilot Assembly</td>
<td>• Remove Thermopile</td>
<td>• Remove Thermopile</td>
</tr>
<tr>
<td></td>
<td>• Remove Thermopile</td>
<td>• Connect New Thermopile</td>
<td>• Connect New Thermopile</td>
</tr>
</tbody>
</table>

Note: The table above illustrates how the 1996 burner allows for many service procedures to be conducted without removing the burner pan assembly.
Burner Assembly Removal - BVM, DVS & DVM Burners

Warning: Shut off all gas to the appliance prior to conducting service. Access the firebox (see Door & Glass Removal if necessary).

1. Remove the log shelf following the directions above.

2. Remove the gas inlet following the directions to the right.

3. Remove the burner pan following the directions to the right.

**Stoves**
The gas inlet on freestanding stoves protrudes from the rear panel.

**Inserts**
The gas inlet on inserts is on the left side - either facing to the rear or to the left.

**DVS Fireplaces**
Disconnect the flex tube from the fitting on the gas control valve.

Disconnect the gas supply from the gas inlet and turn the pipe counterclockwise with a pipe wrench.

Hold the fitting in place while unscrewing the flex tube.

Remove the burner pan, tilting it forward to allow the gas control valve to clear the front of the heater.

**Components**
- Disconnect the six nuts used to attach the burner pan.
- Disconnect the orange wire from the burner pan to the piezo igniter.
- Disconnect the brown and red wires from the on/off switch.
- Disconnect the gas inlet on freestanding stoves protrudes from the rear panel.

**Tools**
- 3/8" M.P.T to 1/2" O.D. Fitting
- 7/8" Wrench
- Gas Control Valve
- 3/4" Wrench
- 7/16" Socket Wrench (use an extension)
- Flex Tube
- Hold the fitting in place while unscrewing the flex tube.
Burner Assembly Removal - DVL Burners

Warning: Shut off all gas to the appliance prior to conducting service.

Heritage Bay Only

Remove the control panel following the directions below.

1. Remove the four screws holding the control panel in place.
2. Lay the control panel face down so the area behind it may be accessed.

Access the firebox and remove the burner pan following the directions below.

1. Open the Door on the pedestal.
2. Remove the burner pan, tilting it forward to allow the gas control valve to clear the front of the heater.
3. Disconnect the six nuts used to attach the burner pan.
4. Disconnect the orange wire from the burner pan to the piezo igniter.
5. Disconnect the brown and red wires from the on/off switch.
6. Hold the fitting in place with the 3/4" wrench while unscrewing the flex tube.

Tools:
- 1/4" Nutdriver
- 7/16" Socket
- 3/4" Wrench
- 7/8" Wrench
Remove the burner pan following the directions above.

**NOTE:** When installed, the log shelf must maintain a parallel 3/8” gap to the burner pan.

**a**
Remove the two screws holding the burner box front in place.

1/4” Nutdriver

Remove the burner box front.

**b**
Rotate the burner pan upwards.

**c**
Slide the burner pan to the left until the fixed shutter disengages from the orifice. Place the burner pan aside.
Burner Pan Removal - DVL Burners

Remove the burner pan following the directions above.

- **a**
  - Remove the burner box front and rear log shelf.
  - Standard Screwdriver
  - Burner Box Front

- **b**
  - Rotate the burner pan upwards.

- **c**
  - Slide the burner pan to the left until the fixed shutter disengages from the orifice. Place the burner pan aside.

**Rear Log Shelf**
(when replacing, make sure to slide it all the way back).

**Fixed shutter**

**Orifice**
Burner Orifice Removal

Follow the directions below to remove the orifice. When re-installing the orifice, apply thread sealant to the threads and tighten in place with a 1/2" open end wrench.

(a) Push the adjustable shutter to the left, off the orifice (be careful not to bend the shutter linkage).
(b) Slide the adjustable shutter down, away from the orifice.
(c) Remove the spring

(d) Use a 1/2" open end wrench to unscrew the orifice.
(e) There is usually a number stamped here to indicate orifice size.
(f) Make sure to keep any sealant or debris from entering the orifice and blocking gas flow.

Apply thread sealant to the new orifice prior to installation.
Warning: The pilot tube is a common location of gas leaks - check this area after conducting any service on the pilot tube.

Remove the burner assembly following the directions on page 4-2 (DVM) or 4-3 (DVL).
Place the burner assembly upside down on a work surface.
Disconnect and move the pilot tube away from the pilot assembly following the directions below.

Loosen (do not remove) this connection.

Unscrew this compression nut.

Swivel the pilot tube up to access the pilot orifice.

The pilot assembly may be removed in its entirety by disconnecting the thermocouple, thermopile, and pilot tube. Or, if you wish, you can remove an individual component separately.
Pilot Assembly Removal, Disassembly - 1997
(flexible pilot tube)

Warning: The pilot tube is a common location of gas leaks - check this area after conducting any service on the pilot tube.

Remove the burner pan (not the entire burner assembly) following the directions above.

The pilot assembly may be removed in its entirety by disconnecting the thermocouple, thermopile, pilot tube, and piezo igniter wire. Or, if you wish, you can remove an individual component separately.

To remove the pilot assembly, remove the two screws holding the assembly in place. Then pull up on the pilot hood until the assembly can be accessed from the bottom.

IMPORTANT NOTE:
Make sure the pilot assembly does not rotate while detaching components from the pilot assembly. Insert a standard screwdriver between the components or use a vice-grip to clamp the assembly in place.

Spark Electrode
(part of the pilot assembly)

Thermopile
(remove from the bottom)

Piezo Igniter Wire
(to disconnect, remove the orange wire leading to the piezo igniter)

Pilot Tube Nut
Pilot orifice is inside
(remove from the bottom)

Do not kink or excessively bend the pilot tube - this may lead to leaks.
Pilot Orifice Removal

Warning: The pilot tube connections are a common location for gas leaks. Take special care on these gas connections and leak test at both connections after installing.

1996 or Earlier Burners

The burner pan must be removed prior to removing the pilot orifice. Disconnect the compression nut with a 7/16" open end wrench and move the pilot tube away from the pilot assembly (see “Pilot Assembly Removal” on page 4-7). You may need to tap the burner pan to dislodge the pilot orifice.

1997 or Later Burners

Disconnect the compression nut with a 7/16" open end wrench and move the pilot tube away from the pilot assembly (see “Pilot Assembly Removal” on page 4-8).

NG vs. LP Orifice

LP Pilot Orifice

NG Pilot Orifice
Thermopile Removal

Refer to the section on pilot assembly removal (for 1997 or later models see page 4-8, 1996 or earlier see page 4-7). Use a 7/16" open end wrench to remove the thermopile from the pilot assembly.

Disconnect the theropile from the gas control valve following the instructions below.

Use a standard screwdriver to remove the two thermopile wires from the gas control valve.

Thermocouple Removal

Remove the burner pan (for 1997 or later models see page 4-2, 1996 or earlier see page 4-1).

Place the burner pan upside down and remove the thermocouple with a 7/16" open end wrench (see the illustration on page 4-7 for the location of the thermocouple).

Disconnect the thermocouple wire from the gas control valve following the instructions below.

Use a 3/8" open end wrench to remove the thermocouple wire.
Spark Electrode Removal

The spark electrode is incorporated into the pilot assembly - replace the entire assembly (for 1997 or later models see page 4-8, 1996 or earlier see page 4-7).

Piezo Igniter

To remove the piezo igniter, follow the directions below.

Remove the orange piezo wire from the pizo igniter.

Unscrew the nut - usually this can be done by hand, otherwise use an 1-1/16" open end wrench.

On/Off Switch

Remove the on/off switch following the directions below.

Depress the locking tabs on the back of the on/off switch. Use a screwdriver, if necessary, to gain enough leverage.

Carefully thread the on/off switch out, making sure not to disconnect or damage the wiring.

Note the orientation of the wiring on back of the switch before detaching the wires.

Warning When replacing the switch, make sure to secure the wires so they do not contact the bottom of the burner pan and melt.
### Burner Pan Components

#### Phase 2 Burners

<table>
<thead>
<tr>
<th>Burner Description</th>
<th>compatibility</th>
<th>NG Max BTU/HR</th>
<th>LP Max BTU/HR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flex Tube comes off valve, goes to manifold inside burner assembly</td>
<td>Avanti B-Vent (1996 +)</td>
<td>40,000</td>
<td>36,500</td>
</tr>
<tr>
<td>Direct Vent Medium</td>
<td>700 B-Vent (1996 +)</td>
<td>36,500</td>
<td>31,000</td>
</tr>
<tr>
<td>Flex Tube comes off valve, goes to manifold inside burner assembly</td>
<td>Spirit B-Vent (1996 +)</td>
<td>36,500</td>
<td>31,000</td>
</tr>
<tr>
<td>Dv's Insert &amp; Ip</td>
<td>Spirit Insert (1996 +)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Dv's Insert &amp; Ip</td>
<td>Heritage Insert (1997 +)</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

#### Phase 1 Burners (see 1994 Gas Troubleshooting Guide for Details)

<table>
<thead>
<tr>
<th>Burner Description</th>
<th>compatibility</th>
<th>NG Max BTU/HR</th>
<th>LP Max BTU/HR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two burner orifices coming off manifold that connects to gas control valve. Replace with 94 BV</td>
<td>700 NG (93 only)</td>
<td>31,000</td>
<td>31,000</td>
</tr>
<tr>
<td>One burner orifice coming off manifold that connects to gas control valve</td>
<td>300 GS (93 only)</td>
<td>31,000</td>
<td>31,000</td>
</tr>
<tr>
<td>Orifice directly off gas control valve</td>
<td>700B-Vent (300 GS (95 only)</td>
<td>31,000</td>
<td>31,000</td>
</tr>
<tr>
<td>Spirit-B-Vent - 300 GS (1995 only)</td>
<td>97000737</td>
<td>98900706</td>
<td>98900712</td>
</tr>
<tr>
<td>Spirit-Bay Insert - 300 GI (1995 only)</td>
<td>98900738</td>
<td>98900714</td>
<td>98900718</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Burner Description</th>
<th>compatibility</th>
<th>NG Max BTU/HR</th>
<th>LP Max BTU/HR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burner Pan Assembly</td>
<td>#53 Front #44 Rear</td>
<td>31,000</td>
<td>31,000</td>
</tr>
<tr>
<td>Gas Valve (NG)</td>
<td>#37 98900713</td>
<td>98900706</td>
<td>98900714</td>
</tr>
<tr>
<td>Gas Valve (LP)</td>
<td>#53 Front #44 Rear</td>
<td>98900716</td>
<td>98900718</td>
</tr>
<tr>
<td>NG Burner Orifice</td>
<td>98900708</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>LP Burner Orifice</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Pilot Orifice (NG)</td>
<td>98900717</td>
<td>98900717</td>
<td>98900717</td>
</tr>
<tr>
<td>Pilot Orifice (LP)</td>
<td>98900718</td>
<td>98900718</td>
<td>98900718</td>
</tr>
<tr>
<td>Pilot Tube</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Logs</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Avanti Stove (DV & B-Vent) Blower Removal

Warning Make sure the power cord is disconnected prior to conducting service.

Warning Shut off gas to the heater - you may need to disconnect the gas line depending upon the heater location and the type of gas connection.

1 Remove the rear panel.

2 Disconnect the side panels from the baseplate. Slide the side and top panels up and prop them in place to access the blower area.

3 With the left rear of the heater exposed, the blower assembly can be accessed. Follow the directions on page 5-5 (A20 Blower Assembly Removal & Disassembly) to remove the blower from the heater.
Avalon 700 (B-Vent & DV) Blower Removal

Warning Make sure the power cord is disconnected prior to conducting service.

Warning Shut off gas to the heater - you may need to disconnect the gas line depending upon the heater location and the type of gas connection.

Note: If the Avalon 700 was installed as an insert, remove it from the fireplace (remove the panels, glass and logs first to prevent damage while moving the insert).

1 Remove the two screws on the cover plate around the gas inlet. Unscrew the nine screws holding the rear panel in place.

2 Swing the rear panel to the left and disconnect the molex connector leading from the power cord.

3 Remove the nuts holding the left side panel to the baseplate.

4 Loosen the nuts holding the left side panel to the convection top (three turns).

5 Remove the left side panel by pushing it backwards and sliding it down (NOTE: the top panel has an “L” shaped notch for attachment).

6 With the left rear of the heater exposed, the blower assembly can be accessed. Follow the directions on page 5-5 (A20 Blower Assembly Removal & Disassembly) to remove the blower from the heater.
Lopi Spirit (B-Vent & DV) Blower Removal

Warning Make sure the power cord is disconnected prior to conducting service.

Warning Shut off gas to the heater - you may need to disconnect the gas line depending upon the heater location and the type of gas connection.

1. Remove the two screws on the cover plate around the gas inlet. Unscrew the nine screws holding the rear panel in place.

2. Swing the rear panel to the left and disconnect the molex connector leading from the power cord.

3. Remove the nuts holding the left side panel to the baseplate.

4. Remove the nuts holding the left side panel to the convection top.

5. Remove the left side panel by lifting up on the top convection panel and lifting the panel free of the base.

6. With the left rear of the heater exposed, the blower assembly can be accessed. Follow the directions on page 5-5 (A20 Blower Assembly Removal & Disassembly) to remove the blower from the heater.
Avanti Insert (DV or B-V) Blower Removal

Warning Make sure the power cord is disconnected prior to conducting service.
Warning Shut off all gas and disconnect the gas line from the heater.
1 Remove the insert from the fireplace (remove the panels, glass and logs first to prevent damage while moving the insert).
2 With the left rear of the heater exposed, the blower assembly can be accessed. Follow the directions on page 5-5 (A20 Blower Assembly Removal & Disassembly) to remove the blower from the heater.

Heritage Bay Insert Blower Removal

Warning Make sure the power cord is disconnected prior to conducting service.
Warning Shut off all gas and disconnect the gas line from the heater.
1 Remove the insert from the fireplace (remove the panels, glass and logs first to prevent damage while moving the insert).
2 With the left rear of the heater exposed, the blower assembly can be accessed. Follow the directions on page 5-5 (A20 Blower Assembly Removal & Disassembly) to remove the blower from the heater.

Sprit Bay Insert Blower Removal

Warning Make sure the power cord is disconnected prior to conducting service.
Warning Shut off all gas and disconnect the gas line from the heater.
1 Remove the insert from the fireplace (remove the panels, glass and logs first to prevent damage while moving the insert).
2 With the left rear of the heater exposed, the blower assembly can be accessed. Follow the directions on page 5-5 (A20 Blower Assembly Removal & Disassembly) to remove the blower from the heater.
A20 Blower Assembly Removal & Dissassembly

1. Disconnect the wires leading to the blower. Remove the four nuts holding the blower assembly in place.

2. Remove the four nuts holding the blower in place. Slide the blower out.

3. When re-installing, make sure to position the brackets correctly behind the blower assembly.
DVS Insert Blower Removal

Warning Make sure the power cord is disconnected prior to conducting service.

Warning Shut off all gas and disconnect the gas line from the heater.

1 Remove the insert from the fireplace (remove the panels, glass and logs first to prevent damage while moving the insert).

2 To disconnect the vent, disconnect the manifold from the heater (see the illustration to the right).

3 Remove the left side cover plate (see the illustration below to the left).

4 Remove the four nuts holding the blower in place. Then remove the stud plate behind the blower on the right side (see the illustration below to the right).

5 Slide the blower to the left, disconnect the electrical connection, then slide the blower out.

6 When re-installing, make sure to position the brackets correctly behind the blower assembly.
DVS Fireplace Blower Removal

**Warning** Make sure power is disconnected to the heater prior to conducting service - remove the fuse or disable the breaker servicing the heater.

**Warning** Shut off all gas and disconnect the gas line from the heater.

1. Remove the faceplate of the fireplace (see page 3-5).
2. Remove the burner pan assembly (see page 4-2).
3. Remove the cover plate at the back of the firebox (see the illustration above).
4. Remove the heat shield behind the firebox.
5. Remove the two nuts (and washers) on the right side of the blower.
6. Remove the right side blower heat shield.

1/4" Nutdriver

Remove the ten screws holding the plate in place.

1/4" Nutdriver

Remove the three screws holding the heat shield in place.

11/32" Wrench

Remove the nuts (and washers) holding the blower and right side heat shield in place.
7 Disconnect the electrical connections to the blower (orientation does not matter when re-connecting). Remove the two nuts on the left side of the blower.

8 Remove the blower from the heater.

9 When re-installing, make sure to position the brackets correctly behind the blower assembly.
FPX 36-DV Blower Removal

**Warning** Make sure power is disconnected to the heater prior to conducting service - remove the fuse or disable the breaker servicing the heater.

**Warning** Shut off gas to the heater - you may need to disconnect the gas line depending upon the heater location and the type of gas connection.

1. Remove the faceplate of the fireplace (see page 3-5).
2. Disconnect the flex tube from the gas control valve.
3. Remove the nuts holding the blower in place.
   - Hold the fitting in place with the 3/4" wrench while unscrewing the flex tube with a 7/8" wrench.
4. Move the blower to the left of the gas control valve and thread it out of the appliance.
5. Disconnect the wires leading to the blower (orientation does not matter when re-installing).
6. When re-installing, make sure the rubber grommet fits into the bracket. Place the washer over the grommet and tighten the nut just enough to slightly compress the grommet.
Heritage Bay Blower Removal

Warning Make sure the power cord is disconnected prior to conducting service.
Warning Shut off gas to the heater - you may need to disconnect the gas line depending upon the heater location and the type of gas connection.

1 Remove the four nuts underneath the blower.

2 Slide the blower assembly out. You may wish to remove the stud bracket and rubber grommets from the blower assembly to better facilitate removal.

3 Disconnect the wires from the blower.

4 When re-installing, make sure the grommet slides into make sure the stud bracket is fed through from above with a washer between it and the rubber grommet.
Blower Rheostat Removal

Warning Make sure the power cord is disconnected prior to conducting service.
Warning Shut off gas to the heater - you may need to disconnect the gas line depending upon the heater location and the type of gas connection.

Remove the rheostat following the directions below.

- Pull the knob off.
- Disconnect the wires.
- Unscrew this nut.

**NOTE:** this tab fits into the hole on the mounting bracket.

Blower Snap Disk Removal - Heritage Bay Stove & FPX 36-DV

Warning Make sure the power cord is disconnected prior to conducting service.
Warning Shut off gas to the heater - you may need to disconnect the gas line depending upon the heater location and the type of gas connection.

**Heritage Bay Only**

Remove the control panel following the directions to the right.

- Open the Door on the pedestal.
- Lay the control panel face down so the area behind it may be accessed.
- Remove the four screws holding the control panel in place.

The blower snap disk is located underneath the burner pan on the right side. Disconnect the black & white wires from the snap disk (orientation does not matter when re-connecting).

- Remove the snap disk from its bracket below the firebox.
Blower Snap Disk Removal - All Models Except Heritage Bay Stove & 36-DV

Warning: Make sure the power cord is disconnected prior to conducting service.

Warning: Shut off gas to the heater - you may need to disconnect the gas line depending upon the heater location and the type of gas connection.

Inserts

1. Remove the insert from the fireplace (remove the panels, glass and logs first to prevent damage while moving the insert).

2. With the right rear of the heater exposed, the blower snap disk may be removed from its mounting bracket. Disconnect the black & white wires from the snap disk (orientation does not matter when re-connecting).

Stoves

1. Remove the rear panel (see the instructions under “Blower Removal” for the model being serviced - pages 5-1 through 5-3).

2. With the right rear of the heater exposed, the blower snap disk may be removed from its mounting bracket. Disconnect the black & white wires from the snap disk (orientation does not matter when re-connecting).

Remove the snap disk from its bracket behind the firebox.

Remove the snap disk from its bracket behind the firebox.
### Replacement Parts

#### Blowers

<table>
<thead>
<tr>
<th>Model</th>
<th>Blower Part #</th>
<th>Blower Rheostats</th>
<th>Blower Snap Disks</th>
</tr>
</thead>
<tbody>
<tr>
<td>700 NG (93 through 95)</td>
<td>98900755</td>
<td></td>
<td></td>
</tr>
<tr>
<td>300 GS (93 through 94)</td>
<td>98900755A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spirit B-Vent - 300 GS (1995 only)</td>
<td>97300102</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spirit Bay Insert - 300 GI (1995 only)</td>
<td>91000133</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avanti B-Vent (1995 only)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avanti DV (1996 +)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>700 B-Vent (1996 +)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>700 DV (1996 +)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spirit B-Vent (1996 +)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spirit DV (1996 +)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spirit Insert (1996 +)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heritage Insert (1997 +)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heritage Bay DV</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heritage Bay B-Vent</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Blower Rheostats**

All Travis products through 1997 use part # 98900758 for the blower rheostat.

**Blower Snap Disks**

All Travis products through 1997 use part # 98900720 for the blower snap disk.