



**Atwood Mobile Products**

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## FURNACE -Electronic Ignition Model

### TROUBLE SHOOTING GUIDE

Effective: 8/10/98

Guides are only intended for use on Atwood® products by service technicians who have successfully completed Atwood® training. This guide should be used in conjunction with the appropriate Instruction Manual provided with the product and any applicable Industry Standards. This is not intended to be a complete list. Please direct questions concerning service of Atwood® products to 800-825-4328 option 5 before proceeding.

CAUSE	SOLUTION
<b>BURNER FAILS TO IGNITE AND - BLOWER FAILS TO RUN</b>	
No electrical power to the furnace	Reconnect or replace power source.*
Thermostat defective	Replace thermostat
Thermostat wires broken or shorted	Replace wire or wires*
Current overload protector device	Reset circuit breaker. Check amp draw from motor
Defective or tripped (circuit breaker).	According to furnace's specifications.
Blower relay defective	Replace relay
Wire off motor	Reconnect wire
Wire off relay	Reconnect wire
Improper ground	Clean and secure grounds*
Blower motor defective	Replace motor
<b>BLOWER RUNS - BUT FAILS TO IGNITE</b>	
Low Voltage/High Voltage	Correct Power Supply*
Gas pressure incorrect	Set pressure to a minimum of 11" W.C. with all appliances running. (Replace regulator if not obtainable).*
Furnace grounding wires not secure	Clean and secure grounds established*
Air intake restricted	Clean air intake.*
12 volt polarity reversed	Correct polarity*
Motor running slow	Check voltage first. If 12 VDC while running, replace motor.
Exhaust blocked	Clean exhaust.*
Combustion air wheel loose	Reposition and tighten.
Sail switch defective or wire off	Reconnect wire or replace.
Limit switch defective or wire off	Reconnect wire or replace.
Edge connector on circuit board dirty	Clean with pencil eraser*
Circuit Board defective	Clean plug contacts. If still defective, replace. (check on board tester when possible).
Gas valve defective	Replace valve or valve coil, depending on problem encountered.
Main burner orifice blocked	Clean main burner orifice or replace.
High tension lead wire defective	Replace wire
Electrode out of adjustment	Adjust electrode (take care not to damage porcelain).
Electrode defective	Replace
Obstructed burner head	Clean burner head*
<b>BURNER IGNITES BUT IGNITION SYSTEM "LOCKS OUT" AND TURNS BURNER OFF</b>	
Low gas pressure	Set pressure to a minimum of 11" W.C. with all appliances running. Replace regulator if not obtainable.*
Exhaust blocked	Clean exhaust.*
Combustion air wheel loose	Reposition wheel and tighten
Electrodes out of adjustment	Adjust electrode according to furnace specifications.
Electrode defective	Replace electrode.
Circuit Board defective	Clean plug contacts. If still defective, replace. (Check on board tester when possible).
Flame sensor wire between electrode and circuit board defective	Replace wire
Air leakage at gaskets	Replace gasket
Defective heat exchanger	Replace heat exchanger

\*indicates NOT covered under warranty.

continued backside

CAUSE	SOLUTION
<b>SOOTING (caused by lazy yellow flame)</b>	
Low gas pressure	*Set pressure to a minimum of 11" W.C. with all appliances running. Replace regulator if not obtainable.
Low voltage	Correct power supply*
Air leakage at gaskets	Replace gaskets
Combustion wheel installed backwards or loose	Reposition wheel and tighten.
Blockage in heating chamber or burner head	Clean or replace
Faulty motor	Replace motor
Wrong vent kit or draft cap	Replace with correct vent kit or draft cap
<b>FAN RUNS CONTINUOUSLY WITH THERMOSTAT "OFF"</b>	
Defective thermostat	Replace thermostat
Shorted thermostat leads	*Replace wire or wires
Defective relay	Replace relay
<b>LIMITING = BURNER CYCLING ON AND OFF - BLOWER RUNS CONSTANTLY WITH THERMOSTAT ON</b>	
Restricted or insufficient discharge ducting	a. Ducting must meet furnace's minimum requirements.* b. No excess ducting or unnecessary bends.* c. All closeable registers must be fully open and unrestricted.*
Furnace over fired	Set gas pressure to a minimum of 11" W.C. with all appliances running replace regulator, if not obtainable. Also, check main burner orifice, it must comply with furnace's specifications.*
Restricted return air supply	Make sure return air meets furnace minimum requirements.*
Defective limit switch	Replace limit switch
<b>BLOWER SHUTS OFF AT SAME TIME BURNER SHUTS OFF</b>	
Wired wrong	*Correct wiring
Faulty relay	Replace relay.
<b>BLOWER VIBRATES OR IS NOISY</b>	
Motor mount loose	Tighten motor mounting bracket a. Ducting must meet furnace's minimum requirements* b. No excess ducting or unnecessary bends.* c. All closeable registers must be fully open and unrestricted.
Damaged blower wheel	Replace blower wheel.
Motor shaft bent	Replace motor
<b>INSUFFICIENT HEAT</b>	
Furnace under fired	1. Set gas pressure to 11" W.C. with all appliances running, replace regulator if not obtainable. Also, check main burner orifice, it must comply with furnace's specifications. 2. Check ducting and return air according to furnaces specifications.*
Furnace improperly sized for coach/or conditions	Replace furnace with proper size.

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**CAUSE****SOLUTION****BURNER FAILS TO IGNITE AND - BLOWER FAILS TO RUN**

No electrical power to the furnace	Reconnect or replace power source.*
Current overload protector device	Reset circuit breaker. Check amp draw from motor defective or tripped (circuit breaker).according to furnace's specifications.
Thermostat defective	Replace thermostat.
Thermostat wires broken	Replace wire or wires.
Thermostat located in high area	Relocate thermostat.
Blower motor defective	Replace motor.
Blower relay defective	Replace relay.
Wire off motor	Reconnect wire.*
Wire off relay	Reconnect wire.*
Improper ground	Clean and secure grounds.*

**BLOWER RUNS - BUT FAILS TO IGNITE**

Low Voltage/High Voltage	Correct power supply.*
12 volt polarity reversed	Correct polarity.*
Furnace grounding wires not secure	Clean and secure grounds established*
Gas valve defective	Replace valve or valve coil, depending on problem encountered.
Gas pressure incorrect	*Set pressure to a minimum of 11" W.C. with all appliances running. (Replace regulator if not obtainable).
Limit switch defective or wire off	Reconnect wire or replace.
Sail switch defective or wire off	Reconnect wire or replace.
Burner orifice blocked	Clean main burner orifice or replace.
Combustion air wheel loose	Reposition and tighten.
Burner head adjustment	Reposition and tighten. Adjust burner according to furnace specifications.
Exhaust blocked	Clean exhaust.*
Air intake restricted	Clean air intake.*
Broken or loose wire	Replace or tighten*
Motor running slow	Check voltage first. If 12 VDC while running, replace motor.*
Pilot orifice plugged	Clean or replace orifice
Thermocouple defective	Replace thermocouple
Pilot assembly defective	Replace pilot assembly

**BURNER CYCLING ON AND OFF - BLOWER RUNS CONTINUOUSLY WITH THERMOSTAT "ON"**

Restricted return air supply	Make sure return air meets furnace's minimum requirements.
Restricted discharge duct system	a. Make sure ducting meets furnace's minimum requirements.* b. Make sure there is no excess ducting or unnecessary bends.* c. Make sure any closeable registers are fully open and unrestricted.
Defective limit switch	Replace limit switch.*
Furnace over fired	Set gas pressure to a minimum of 11" WC with all appliances running. Replace regulator if not obtainable. Also, check main burner orifice, it must comply with furnace's specifications.

\*indicates NOT covered under warranty.

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CAUSE	SOLUTION
<b>BLOWER SHUTS OFF AT SAME TIME BURNER SHUTS OFF</b>	
Faulty relay	Replace relay
Thermostat wired wrong	Correct wiring*
<b>BURNER FAILS TO IGNITE AND - BLOWER FAILS TO RUN</b>	
No electrical power to the furnace	Reconnect or replace power source.*
<b>BLOWER VIBRATES OR IS NOISY</b>	
Damaged blower wheel	Replace blower wheel.
Motor shaft bent	Replace motor
Loose motor	Tighten motor mounting bracket.
Restricted discharge duct system requirements.*	a. Make sure ducting meets furnace's minimum requirements.* b. Make sure there is no excess ducting or unnecessary bends.* c. Make sure any closable registers are fully open and unrestricted.*
<b>PILOT FAILS TO IGNITE OR STAY LIT</b>	
Plugged pilot orifice	Clean or replace pilot orifice.
Electrode out of adjustment	Adjust electrode to furnace's specifications.
Pilot tube defective	Replace tube.
Piezo sparker defective	Replace sparker
Defective thermocouple	Replace thermocouple.
Defective valve	Replace valve.
Vent kit not sealed	Seal vent where it meets with the furnace.*
MICA window missing	Replace MICA
Combustion air hose plugged or collapsed	Replace combustion hose
Water in propane	Add alcohol to the propane bottles.*
Burner plate gasket or pilot gasket not sealed	Replace gaskets
<b>LAZY FLAME (yellow)</b>	
High gas pressure	*Set pressure to a minimum of 11" W.C. with all appliances running. Replace regulator if not obtainable.
Burner out of adjustment	Adjust burner according to furnace specification.
Combustion wheel installed backwards or loose	Reposition wheel and tighten.
Air leakage at gaskets	Replace gaskets
Low voltage	Correct power supply*
<b>FAN RUNS CONTINUOUSLY WITH THERMOSTAT "OFF"</b>	
Shorted thermostat leads	Replace wire or wires.
Defective relay	Replace relay
Defective thermostat	Replace thermostat
<b>INSUFFICIENT HEAT</b>	
Furnace under fired	1. Set gas pressure to 11" W.C. with all appliances running, replace regulator if not obtainable. Also, check main burner orifice, it must comply with furnace's specifications.* 2. Check ducting and return air according to furnaces specifications.
Furnace limiting	Check ducting and return air. It must comply with furnace's specifications.*

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