



**Trailblazer
Indirect Fired Heater
Self- Contained Trailer
Owner's Manual**



**CERTIFIED FOR USE IN CANADA AND U.S.A.
Construction Heaters Unattended Type.
As per CSA B140.8 Portable Oil Fired Heaters / CSA B140.0 2003 Oil Burning Equipment
UL733 Oil Fired Air Heaters**

**Ignite Manufacturing
705 21 Ave. Nisku, Alberta**



HT-1000TB INDIRECT FIRED HEATER TRAILER USER INSTRUCTIONS MANUAL

GENERAL HAZARD WARNING:

ONLY PERSONS WHO CAN UNDERSTAND AND FOLLOW THE INSTRUCTIONS SHOULD USE OR SERVICE THIS HEATER.

FAILURE TO COMPLY WITH THE PRECAUTIONS AND INSTRUCTIONS PROVIDED WITH THIS HEATER, CAN RESULT IN DEATH, SERIOUS BODILY INJURY AND PROPERTY LOSS OR DAMAGE FROM HAZARDS OF FIRE, EXPLOSION, BURN, ASPHYXIATION, CARBON MONOXIDE POISONING, AND/OR ELECTRICAL SHOCK.

IF YOU NEED ASSISTANCE OR HEATER INFORMATION SUCH AS AN INSTRUCTIONS MANUAL, LABELS, ETC. CONTACT THE MANUFACTURER.

WARNING:

FIRE, BURN, INHALATION, AND EXPLOSION HAZARD. KEEP SOLID COMBUSTIBLES, SUCH AS BUILDING MATERIALS, PAPER OR CARDBOARD, A SAFE DISTANCE AWAY FROM THE HEATER AS RECOMMENDED BY THE INSTRUCTIONS. NEVER USE THE HEATER IN SPACES WHICH DO OR MAY CONTAIN VOLATILE OR AIRBORNE COMBUSTIBLES, OR PRODUCTS SUCH AS GASOLINE, SOLVENTS, PAINT THINNER, DUST PARTICLES OR UNKNOWN CHEMICALS.

This heater is designed and approved for use as a construction heater under CSA B140.8 Portable Oil Fired Heaters / CSA B140.0 2003 Oil Burning Equipment, UL733 Oil Fired Air Heaters

We cannot anticipate every use which may be made of our heaters. CHECK WITH YOU LOCAL FIRE SAFETY AUTHORITY IF YOU HAVE QUESTIONS ABOUT APPLICATIONS.

Other standards govern the use of fuel gases and heat producing products in specific applications. Your local authority can advise you about these



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PLEASE VERIFY THE FOLLOWING TO ENSURE PROPER OPERATION.

- Inspect the tires to ensure road worthy and have proper inflation.
- Inspect hitch assembly and safety tow chains.
- Inspect jack assembly to ensure it is functioning properly and isn't damaged
- Visually inspect outside & inside the unit to ensure all safety and start-up decals are in place and legible.
- Make sure all trailer doors are closed before attempting to move unit.
- Verify lug nuts and torque to 80-90 ft. lbs. Re- torqued lug nuts every 100 miles.
- Verify fuel, oil and coolant levels on genset.
- Verify operation of brake & signal lights on trailer.
- Make sure the battery is fully charged and all terminals connected properly.
- Always Start engine and heaters to verify operations
- Review engine manual for proper maintenance



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Verify Safety features

Prior to towing the Trailblazer, verify the following Items



1. Verify the hitch & safety chains are securely attached to the frame.
2. Front jack is completely retracted.
3. Check all tires ensure they have adequate air pressure.
4. Make sure all ducting is removed from heaters.
5. All doors are closed and secure.
6. Taillights are connected and operating.

HT-Trailblazer SETUP PROCEDURE

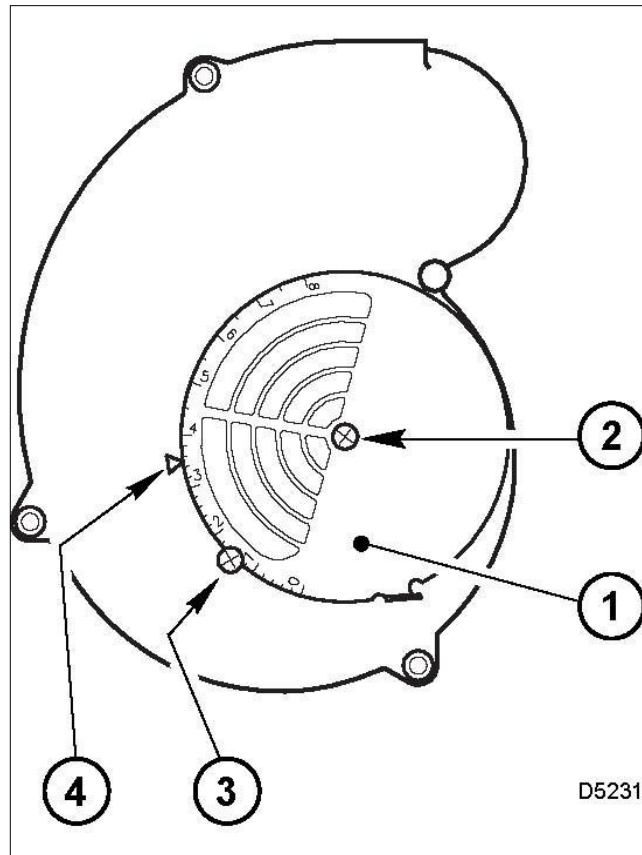
The two HO-400R heaters in the trailer need to be tested and set up before every operation. Proper combustion must be achieved using a certified combustion analyzer to ensure optimum set up. The air adjustment should be made to achieve a maximum of 10% CO₂ and No. 1 or “trace” smoke. (Bacharach Scale)

SETTING THE AIR ADJUSTMENT PLATE

A) Regulation of the combustion air flow is made by adjustment of the manual AIR ADJUSTMENT PLATE (1) after loosening the FIXING SCREWS (2 & 3). The initial setting of the air adjustment plate is set to 4.5 at the factory.

B) The proper number on the manual AIR ADJUSTMENT PLATE (1) should line up with the SETTING INDICATOR (4) on the fan housing cover. Once set, the air adjustment plate should be secured in place by tightening SCREWS 2 and 3.

C) The final position of the air adjustment plate will vary on each installation. Use instruments to establish the proper settings for maximum CO₂ and a smoke reading of zero.



NOTE: Variations in flue gas, smoke, CO₂ and temperature readings may be experienced when the burner cover is put in place. Therefore, the burner cover must be in place when making the final combustion instrument readings, to ensure proper test results.

SETUP PROCEDURE (HIGH ALTITUDE)

When the heaters are required to operate over 2000 feet above sea level there will be necessary adjustments needed to burn efficiently with thinner air. Please review the following chart as a starting point; please note that a combustion analyzer & smoke gun will be required to achieve optimum set up.

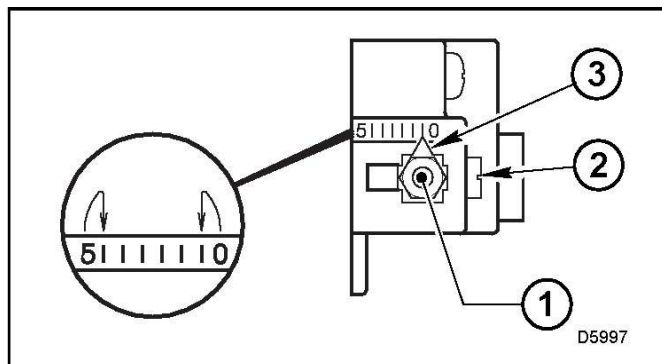
ACTUAL FIRING RATE +/- 5%	NOZZLE SIZE	PUMP PRESSURE	TURBULATOR SETTING	AIR DAMPER SETTING	ALTITUDE RANGE
2.41 GPH	2.00 X 60	170 PSI	3.5	3.4	3500-6900FT
2.61 GPH	2.00 X 60	170 PSI	5.0	4.5	0-3500FT

Please refer to the Air adjustment plate diagram on page 6, the turbulator diagram at the bottom of this page & the nozzle replacement diagram on page 8. **NOTE:** The burners are equipped with a 2.00 X 60 nozzle, due to the increase density of oil/diesel fuel at colder temperatures.

TURBULATOR SETTING

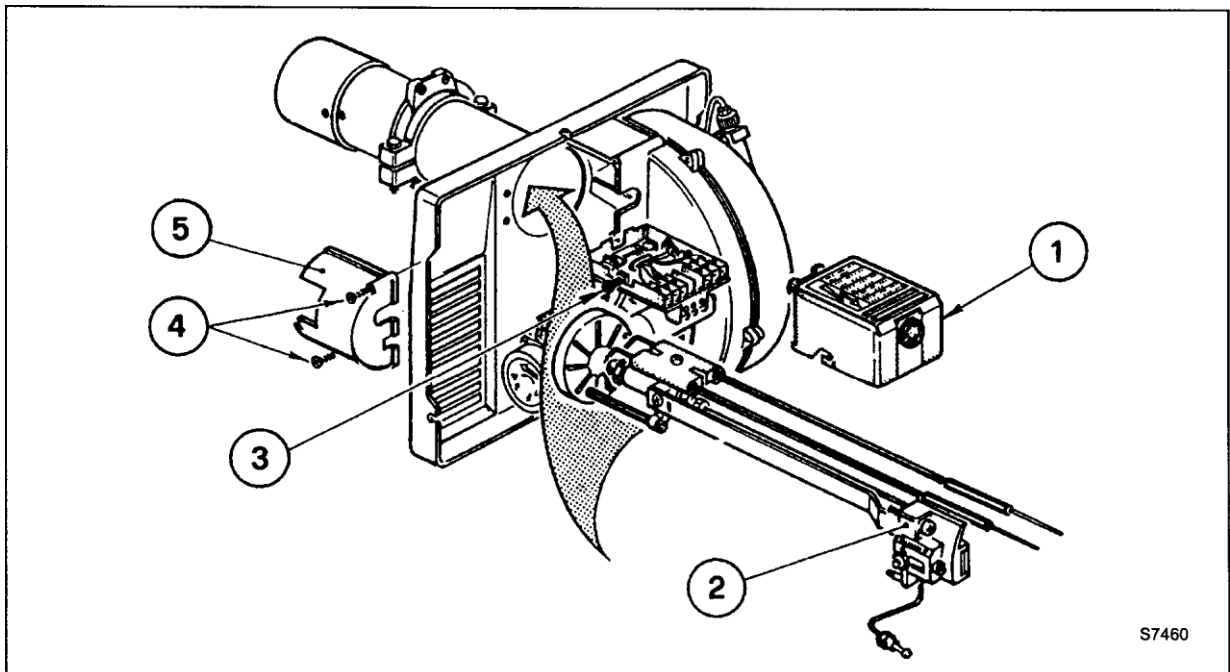
- A) Loosen NUT (1), then turn SCREW (2) until the INDEX MARKER (3) is aligned with the correct index number as per the Burner Set-up chart above.
- B) Retighten the RETAINING NUT (1)

NOTE: Zero and five are scale indicators only. From left to right, the first line is 5 and the last line 0.



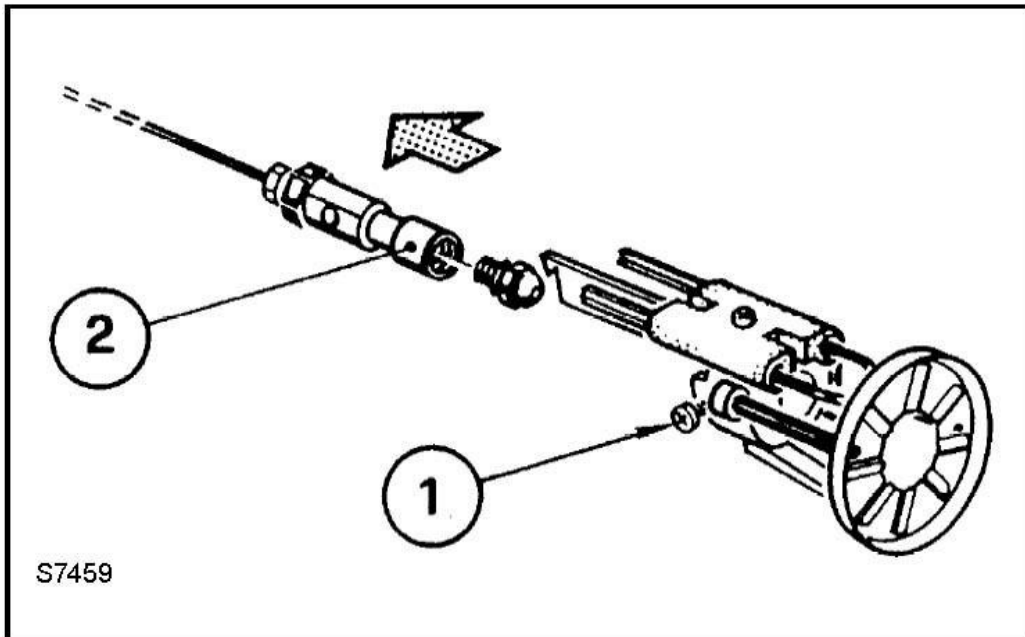
INSERTION / REMOVAL OF DRAWER ASSEMBLY

- A) To remove drawer assembly, loosen **SCREW (3)**, then unplug **CONTROL BOX (1)** by carefully pulling it back and then up.
- B) Remove the **AIR TUBE COVER PLATE (5)** by loosening the two retaining **SCREWS (4)**.
- C) Loosen **SCREW (2)**, and then slide the complete drawer assembly out of the combustion head as shown.
- D) To insert drawer assembly, reverse the procedure in items A to C above, and then attach fuel line to the pump.



NOZZLE PLACEMENT

- A) Remove the **NOZZLE ADAPTER (2)** from the **DRAWER ASSEMBLY** by loosening the **SCREW (1)**.



- B) Insert the proper **NOZZLE** into the **NOZZLE ADAPTER** and tighten securely (Do not over tighten).
- C) Replace adapter, with nozzle installed, into drawer assembly and secure with screw (1).



**HT-1000TB INDIRECT FIRED HEATER TRAILER
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SPECIFICATIONS

- Model..... HT-1000TB**
- Input353,000 BTU x 2 @ 3.00 GPH**
- Engine.....Kubota Liquid Cooled Diesel**
 - Electric start/ glow plugs**
 - Battery charging alternator**
 - Heavy duty Radiator & Air Cleaner**
 - Remote Oil Drain**
- Generator 8 kw @ 1800 rpm (15.4 HP)**
 - Single phase-120V**
 - Instrument panel including Hour**
- Meter Fuel.....No.1, No. 2, Diesel**
- Fuel Pressure 170 psi @ 0-2000 ft**
- Nozzle2.00 x 60 @ 0-2000 ft**
- Fuel Tank299 Gallons**
 - 2” Fuel inlet nozzle**
- Power Tool Outlet 1 x 15 Amp GFI Outlet**
- Ignition Direct Spark Ignition**
- Fan Motor 1- HP @ 1750 RPM**
- Air Circulation.....7000 CFM (3500 PER HEATER)**
- Fuel Consumption 7.07 GPH at full load**
- DimensionsHeight-7ft, Length-16ft, Width-7ft 4 inches**
- Weight 5,500 Lbs. (Empty)**
- Approvals cETLus listed (Heaters)**
 - CSA/ Entela approved**

Engine and Heater Start up.

Open trailer rear doors, open breaker box and turn on breakers required.

No. 1 Heater

Receptacle

No. 2 Heater

Lights



**Open Control Panel Access door at rear of trailer; verify fuel level,
Key is in ignition & battery lock out is in the “ON” Position.**



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**Attach Ducting to Heater Duct
outlets**



**Open Heater doors to access
heater start up.**





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HEATER START UP INSTRUCTIONS:

1. Open heater inlet doors verify that each heater toggle “switch” is in the “OFF” position.
2. Attach ducting to outlet duct adapters, if required
3. Start generator
4. Start heaters by moving the toggle switch to “MANUAL” position for manual control or thermostat.

Please Note:

1. If using Thermostat, heaters must be started in the thermostat position.
2. When changing between manual and thermostat operation, the heater must be left in the “OFF” position for 30 seconds to prevent the burner from locking out.
3. If the generator runs out of fuel, make sure the heater switch is in the “OFF” position before restarting generator, failure to do so may damage heater.

TO SHUT DOWN:

1. Move heater toggle switch to “OFF” position.

NOTE: Fan will continue to operate after the burner shuts off. Once the unit cools down, the main fans will stop.

Never pull power plug to shut unit down, if power plug is pulled ignition box may be damaged and will not be covered under warranty.

DO NOT TURN GENERATOR OFF UNTIL HEATERS HAVE COOL DOWN



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IF A HEATER(S) FAIL TO START:

1. Press manual reset button at rear of burner. (Red button)
2. Check fuel gauge for sufficient amount of fuel.
3. Make sure there are no air blocks in fuel lines or filter. Bleed lines if required.
4. Ensure the power supply plug is connected properly.
5. Check for dirty fuel filter or blocked fuel supply line.
6. Check burner nozzle assembly.
7. Make sure the burner control box does not need to be reset.

NOTE: IF THE BURNER HAS BEEN RESET SEVERAL TIMES THERE MAY BE AN ACCUMULATION OF FUEL IN THE CHAMBER! DO NOT CONTINUE TO TRY AND START THE HEATER!

DRAIN FUEL FROM HEAT EXCHANGER USING DRAIN HOLE AT FRONT OF HEAT EXCHANGER FOR 15-20 MINUTES BEFORE ATTEMPTING TO RELIGHT. LET REMAINING EXCESS FUEL BURN OFF BEFORE CHECKING COMBUSTION OF UNIT.

SAFE OPERATION PRECAUTIONS:

1. Do not fill fuel tank while heater is in operation.
2. Do not attempt to start heater if excess oil remains in the heat exchanger.
3. Use the switch to shut down the heater. Do not try to shut down the heater by unplugging the electrical cord.
4. Do not plug anything other than the thermostat into the "Thermostat" plug.
5. Do not use any fuel other than those listed on rating plate.
6. Before removing any guards or performing any maintenance, be sure that the main power supply is disconnected.



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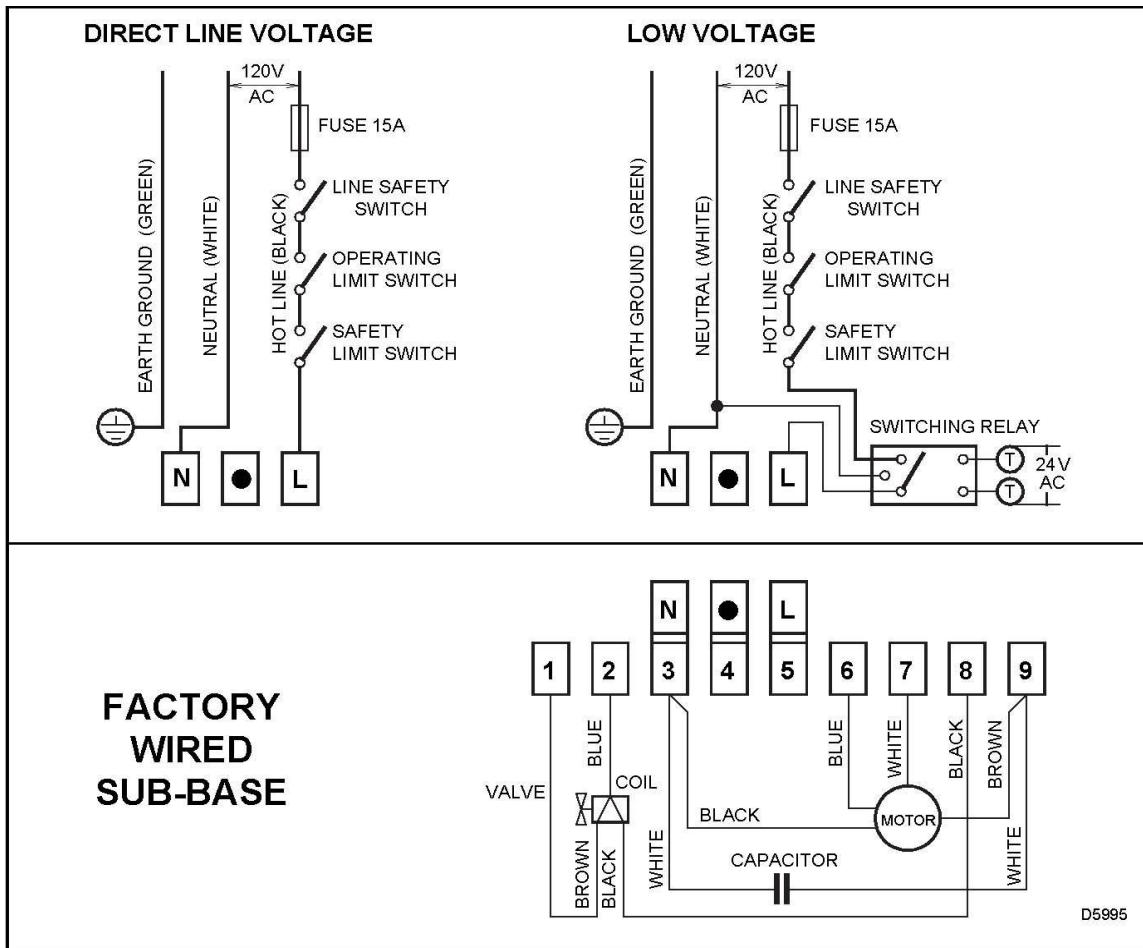
MAINTENANCE:

1. Every construction heater should be inspected before each use, and at least annually by a qualified service person. Incorrect maintenance may result in improper operation of the heater and serious injury could occur.
2. The hose assemblies shall be visually inspected prior to each use of the heater. If it is evident there is excessive abrasion or wear, or the hose is cut, it must be replaced prior to the heater being put into operation. The replacement hose assembly shall be that specified by the manufacturer.
3. The flow of combustion and ventilation air must not be obstructed. Be sure to check the fan assembly and ensure that the motor and blade are operating properly.
4. Compressed air should be used to keep components free of dust and dirt build up. Note: Do not use the compressed air inside any piping or regulator components.
5. Change fuel filter insert (Part# H-0025) once a month.
6. Change oil burner nozzle (Part# H-0065) (2.00 X 60) once per year.
7. Fan Limit Switch (Part# H-0044) should be replaced if the fan motor does not shut off after the heat exchanger has cooled down.
8. The high limit Switches (Part# H-0042 & H-0043) should be checked each season. These limit switches will ensure the burner shuts down if the temperature exceeds 150° F at rear of unit and 250° F at the outlet.
9. Fuel tank should be drained on a regular basis by removing drain plug.
10. CAUTION – Do not have any source of ignition near the heater when draining tank.

NOTE: No.1 fuel oil or kerosene is recommended for temperatures below -10° C / 8° F.

11. Heat Exchanger should be cleaned if smokey conditions continue even after the air adjustments on the burner are made

BURNER WIRING DIAGRAM

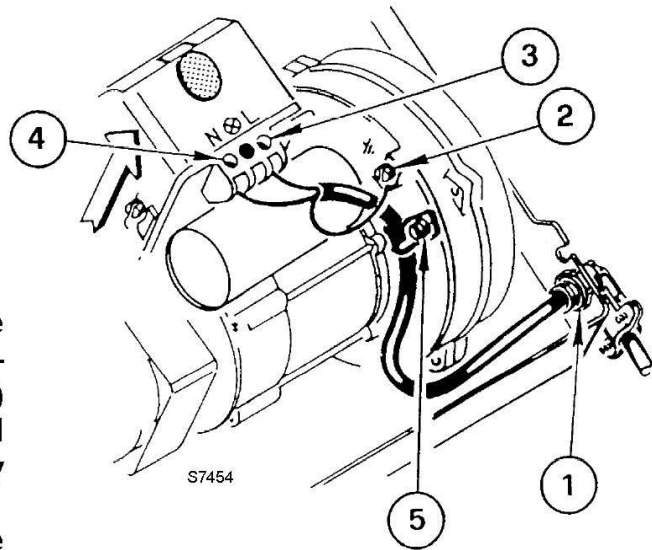


ELECTRICAL CONNECTIONS

It is advisable to leave the control box off the sub-base while completing the electrical connections to the burner.

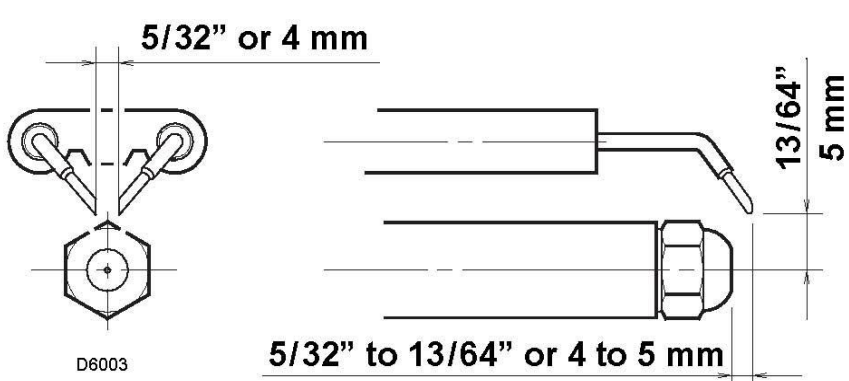
- 1) Wire access hole
(Use BX electrical connector)
- 2) Earth ground conductor terminal
(GREEN WIRE)
- 3) Hot conductor terminal
(BLACK WIRE)
- 4) Neutral conductor terminal
(WHITE WIRE)
- 5) Strain relief clamp

WARNING: The hot (black) wire must be connected to the L terminal and the neutral (white) wire must be connected to the N terminal or the primary safety control will be damaged. Do not connect either wire to the ⊗ Terminal.



ELECTRODE SETTING

**IMPORTANT:
THESE DIMENSIONS MUST BE OBSERVED AND VERIFIED.**

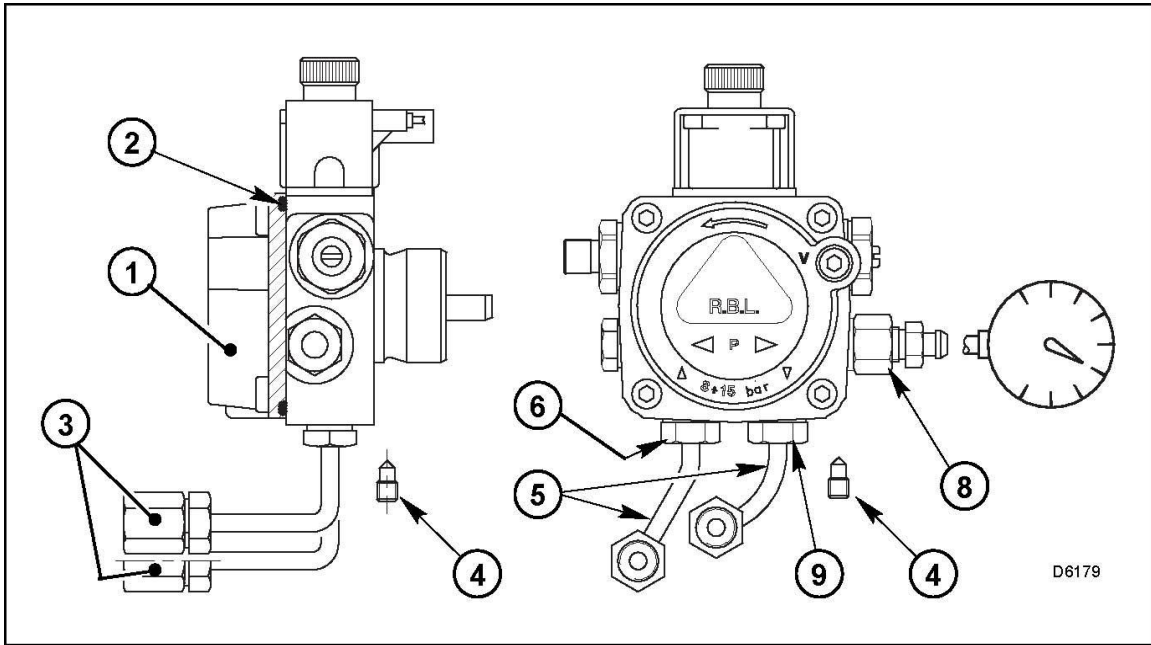


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OIL LINE CONNECTIONS

Note: Pump pressure must be set at time of burner start-up. A pressure gauge is attached to the **PRESSURE PORT (8)** for pressure readings. Two **PIPE CONNECTORS (5)** are supplied with the burner for connection to either a single or a two-pipe system. Also supplied are two **ADAPTORS (3)**, two female 1/4" NPT, to adapt oil lines to burner pipe connectors. All pump port threads are British Parallel Thread design. Direct connection of NPT threads to the pump will damage the pump body. Riello manometers and vacuum gauges do not require any adaptors, and can be safely connected to the pump ports. An NPT (metric) adapter must be used when connecting other gauge models.

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HT- Trailblazer Parts list

Part number	Description
HT-001	Pintle Hitch
HT-002	Pintle Hitch mount
HT-003	Chain and hook x2
HT-004	Jack
HT-005	Electric brake away kit
HT-006	Door hinge
HT-006A	Door Latches for control panel
HT-007	Door latches
HT-008	Shock for door
HT-009	Front cabinet driver door
HT-010	Front cabinet passenger door
HT-011	Front cabinet complete
HT-012	Checker plate front panel
HT-013	Checker plate driver door panel
HT-014	Checker plate passenger door panel
HT-015	Checker plate fender
HT-016	Checker plate bottom fender
HT-017	Checker plate below door
HT-018	Checker plate cabinet corner
HT-019	Checker plate kit (9) pieces
HT-020	Heater inlet door (front)
HT-021	Heater inlet door (Back)
HT-022	Ducting outlet door (front)
HT-023	Ducting outlet door (back)
HT-024	Rear door Driver door
HT-025	Rear door passenger side
HT-026	Control panel door
HT-026A	Control panel plate Kubota
HT-026B	Control panel plate Kohler
HT-026C	Box for control panel
HT-027	Engine intake shrouds
HT-028	Fuel cap
HT-029	Exterior LED light
HT-029A	Plastic light cover
HT-029B	Steel light cover



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HT-030	Interior LED light
HT-031	Oil pressure gauge
HT-032	Water temperature gauge
HT-033	Battery voltmeter gauge
HT-034	Hour meter
HT-035	Fuel gauge
HT-036	Fuel sending unit
HT-037	Key switch
HT-038	Battery lockout
HT-039	Toggle switch for lights
HT-040	15/15 Amp brakers
HT-041	Braker box
HT-042	Battery box
HT-042A	12V Battery
HT-043	Battery hold down
HT-044	GFI receptacle
HT-045	Block heater plug and steel covers
HT-046	Heater exhaust flue
HT-047	Heater exhaust shroud
HT-048	Engine exhaust tip
HT-049	3' exhaust tubing
HT-050	Slide out tray for heaters
HT-50A	Heater slid LOCKS
HT-051	2 Wire clamps
HT-052	3 Wire clamps
HT-053	Heater supply fuel line
HT-054	Heater return fuel line
HT-055	Wheel blocks
HT-056	Wheel block brackets x2
HT-057	Mud flaps
HT-082	Fuel tank
HT-083	Front removable panel