

TFL Gas Log Lighter (TFLGLL)

For Jetmaster Metal Fireboxes and Logpans

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TFL GAS LOG LIGHTER (TFLGLL)

IMPORTANT INFORMATION

IMPORTANT: Read all instructions carefully before starting installation.

Failure to follow these instructions may result in a fire hazard and void the Warranty.

1. Installation is to be done and certified by Craftsman Gas Fitter and Certified Electrician.
2. The TFL Gas Log Lighter is to be installed in accordance with NZS 5601.1:2010 Gas Installation and AS/NZS 2918:2001 Domestic Solid Fuel Burning Appliance Installation and any other relevant New Zealand standards and building codes.
3. The TFL Gas Log Lighter is designed for residential use with INDOOR wood burning fires. The Log Lighter is designed to be used with split, seasoned and dry wood as per the NZ Home Heating Association firewood guidelines.
4. The TFLGLL requires combustion air at all times during its operation. Care must be taken to ensure the flame shield, ignition probe and flame sensor probes are clear of all ash and fire debris before operating, and that the air inlet apertures to the flame shield are clear and unobstructed before use.
5. **Minimum annual service is required, or more if heavy use.**
6. All TFL Gas Log Lighters are manufacturer tested before shipping.

OPERATION AND DESIGN

The TFL Gas Log Lighter (TFLGLL) is a gas burner that is activated by a delayed timer wall switch. Once activated the Log Lighter will stay on for approximately 5 - 8 minutes or whatever timer period is selected. When this period is up the Log Lighter will shut down. The isolation rocker switch should be used when the unit is not to be operated for extended periods.

The TFLGLL is ignited with an electronically generated spark, directly onto the main burner. A pilot light is NOT used.

The TFLGLL is activated by switching the On/Off switch to 'On' and depressing the timer switch. There will be approximately a 4 second delay while the electronic controller performs a self check. Once this check is completed the solenoid will open allowing gas to flow into the main burner. At the same time that the solenoid opens, the spark electrode will operate. The operation of the spark is indicated by a staccato sound and should be visible at the end of the flame shield.

The solenoid will stay open and the spark will operate for a maximum time of 7 seconds. During this time the burner flame should establish.

A flame failure electrode is situated near the exit of the flame shield, almost opposite the spark electrode. The flame failure electrode operates by transmitting a rectified current back to the controller. This rectified current is produced by the flame on the flame sensor electrode. The detection by the controller of this rectified current will cause the controller to keep the gas solenoid open. If no rectified current is detected within 7 seconds, the solenoid will shut off the gas supply. This prevents delayed ignition.

This Flame Failure System ensures that the burner operates in a safe manner.

CONTROLLER / SOLENOID CAVITY

An accessible service cavity must be formed within approximately one metre (1 m) of the TFLGLL to house the electronic controller box with data plate, excess cable and solenoid, gas supply isolating valve, and gas regulator (if required).

The Spark and Flame Failure leads are 1.2 m long. This distance is measured from the connection on the spark electrode to the connection in the electronic controller enclosure.

The cavity must be in a cool position away from the heat of the firebox and must be free of any dust, moisture or corrosive environment.

Both the electronic cables and gas line will run from this cavity to the firebox where the TFLGLL is to be located.

The cavity **MUST** remain accessible, to allow maintenance of the TFLGLL and its various components.

Care must be taken to ensure no excess heat is transferred from the penetrations into the cavity or to any combustibles.

Care must also be taken to ensure no gas spillage is allowed to enter any of the cavities behind the fireplace opening, particularly LPG which is heavier than air.

MIN TEMP - 10°

MAX TEMP + 50°

CONTENTS OF A KIT

- 1 x TFLGLL stainless steel burner - fully assembled outer cover, flame and ignition probes, gas jet, pre fitted into the appropriate Jetmaster Logpan
- 1 x Loglighter SIT controller (Electrical Control Box)
- 1 x PDL On/Off and Timer Switch (to be used in conjunction with isolation switch)
- 2 x 100 mm x 10 mm dia flared tubes for containing electrical wires
- 1 x 1.2 m earth wire (green)
- 2 x M5 x 10 posi machine screws (provided for fitting wall brackets)
- 1 x M5 barrel nut to attach flare burner to mounting plate
- 1 x M5 taper taps
- 1 x wall attachment mounting plate with 5 mm threaded stud
- 1 x 3/8 Stainless steel flexi gas hose complete with fittings
- 1 x Padova bracket to mount SIT controller
- 1 x 4.2 dia. drill bit for M5 tap holes

To fit the TFL Gas Log Lighter you will need the following tools

- Counter sinking tool for the flared tubes (electrical wire)
- 3 mm Allen keys
- Dia. 10 mm drill bits
- Posi drive screw driver
- Tapping wrench
- Various spanners
- Insulation tape (heat shrink)
- Small round file for deburring drilled holes
- 25 dia. hole saw
- Electric hand drill

TO INSTALL A TFL GAS LOG LIGHTER

FOR FITTING THE TFLGLL TO THE WALL OF A JETMASTER FIREBOX LOCATED IN THE FRONT OF THE LOGPAN

1. Push logpan to the back of firebox and against the firebox L/H wall (if L/H gas entry) to enable the TFLGLL to be correctly located on the firebox wall and aligned with the logpan cut- out.
2. Note that the logpan will be provided as part of the installation **See Fig 1.1. Fig 1.2**

Fig 1.3



Fig 1.1



Fig 1.2



Fig 1.3

3. Once the correct alignment for the TFLGLL is established, hold the supplied drill template against the side wall of the logpan and drill 5 pilot holes through firebox side (as above). Thread two holes using the M5 tap. These holes accept the 2 x M5 x 10 posi screws for fixing the bracket to the firebox wall. Next, drill the 2 x 10 mm holes that will take the ignition and flame sensor wires hole and the gas feed line to the holding bracket. The 2 x 10 mm holes will house the 2 flared tubes for the electrical wires. Ensure the inner holes are countersunk to accept the flared tube ends. Refer to Fig 1.2 and Fig 1.3 above

Note - the template has the hole sizes etched onto it so the correct holes are drilled.

- 4 . Next, drill the 25 mm diameter hole for the gas jet which is attached to the wall attachment mounting plate. Ensure all drilled holes are deburred using a small rat tail file. **It is the installer's responsibility to ensure these holes are acceptable and will not damage any electrical wires when drawn through. The flared wire tubes are to ensure the wires are protected from any rough surfaces on the heat shield refer to Fig 1.2 and Fig 1.3.**

5. Feed the green earth wire through one of the flared tubes and affix to one of the M5 wall bracket fixing screws see fig 1.4. **(NOTE: *The Rail burner tube has not been shown in these pic's but is permanently affixed to the outer heat shield containing the flame sensor and ignition probes*)**

6. Next feed the red ignition and white flame sensor rod wires through the ends of the flared tubes and attach to the SIT controller refer fig 1.5 and fig 1.6.



Fig 1.4



Fig 1.5



Fig 1.5 Ignition and flame wires to heat shield



Fig 1.6 Showing electrical wires and gas line connection to wall bracket from behind the firebox wall

7. Attach the gas line to the end of the gas jet that has been affixed to the wall bracket, ensuring that the thread is sealed with Loxeal sealant or similar. Screw the bracket to the wall of the firebox with 2 x M5 x10 posi screws **refer to above figs 1.4, 1.5 & 1.6.**
8. The heat shield containing the ignition and flame sensor probes can now be screwed to the wall bracket using the M5 barrel nut **see fig 1.7 & fig 1.8.**

(NOTE: The Rail burner tube has not been shown in these pic's but is permanently affixed to the outer heat shield containing the flame sensor and ignition probes)



Fig 1.7

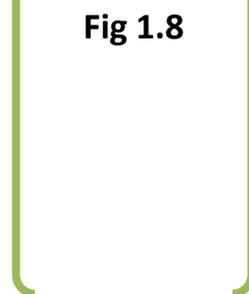
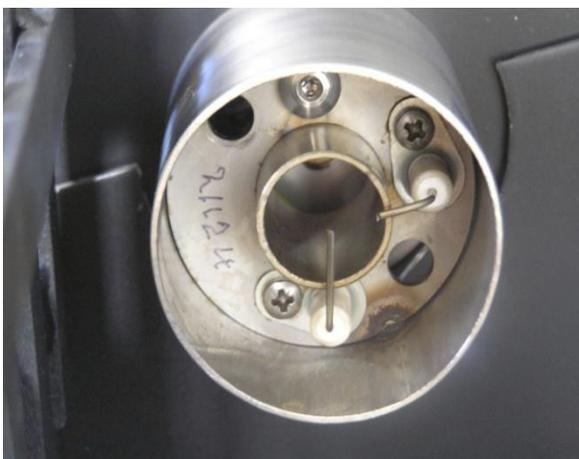


Fig 1.8

Fig 1.9

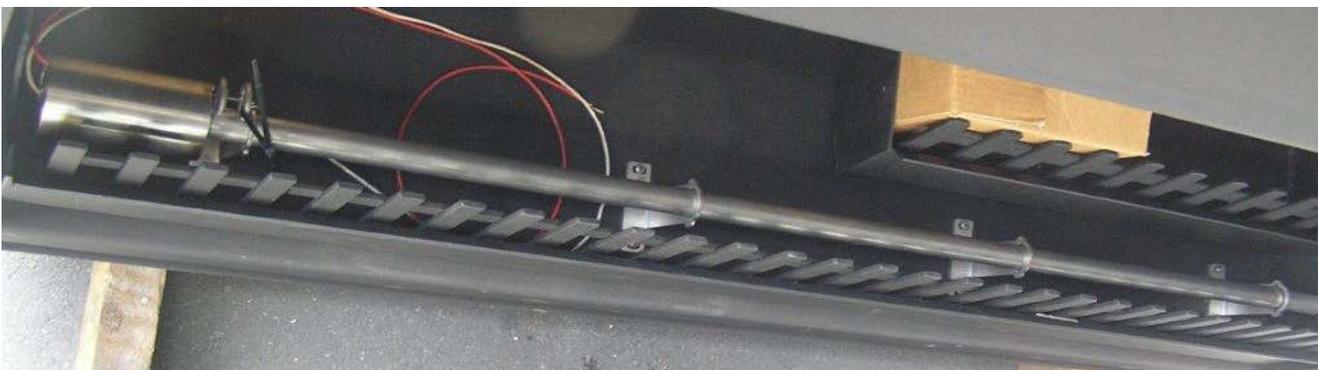
(Showing the Rail burner tube inside the heat shield. **Note** the flame sensor probe protector and the rail tube locating bracket).



Fig 1.10

The below pic shows a 1500 TFLGLL fitted to a Jetmaster logpan ready to install.

Note the rail burner tube locator brackets secured to the base of the logpan.



LOCATING THE ELECTRONIC CONTROL BOX & TIMER

1. Mount the TFLGLL Control Box in a cool, ventilated, safe, dry place at a maximum of 1 metre from the Firebox and connect electrical connections using the supplied Earth, phase and Flame Failure extension wires.
2. These connections must be heat shrink wrapped or insulation taped to ensure they cannot be unplugged, damaged, or Arc on each other or the Fireplace to cause an electrical short. A registered electrician must be employed for all electrical work.
3. It is the installer/gas fitter's responsibility to ensure all gas connections are tight and safe before attempting to run the TFLGLL.
4. ***All Gas Fittings must be sealed with 'Loxal' or similar approved gas sealant***
All wiring must be sealed through box penetrations with high temperature silicon

SETTING THE TIMER SWITCH



Fig 1.11

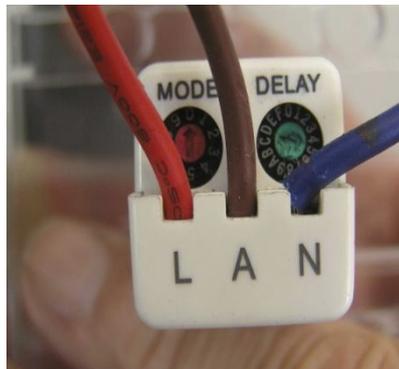


Fig 1.12



Fig 1.13

1. The Timer has two control settings - **MODE** and **DELAY** refer fig 1.12.
2. Set the **MODE** (red) button to **0**. Set the **DELAY** (green) button to **4 (SETS FOR APPROX 8 MINUTES RUN TIME)**. To increase the run times please refer to the supplied instruction sheet with the timer.
3. The Timer is operated by turning the PDL switch to ON and depressing the Timer Button. A small blue LED light will show confirming the Start sequence is live refer fig 1.12.

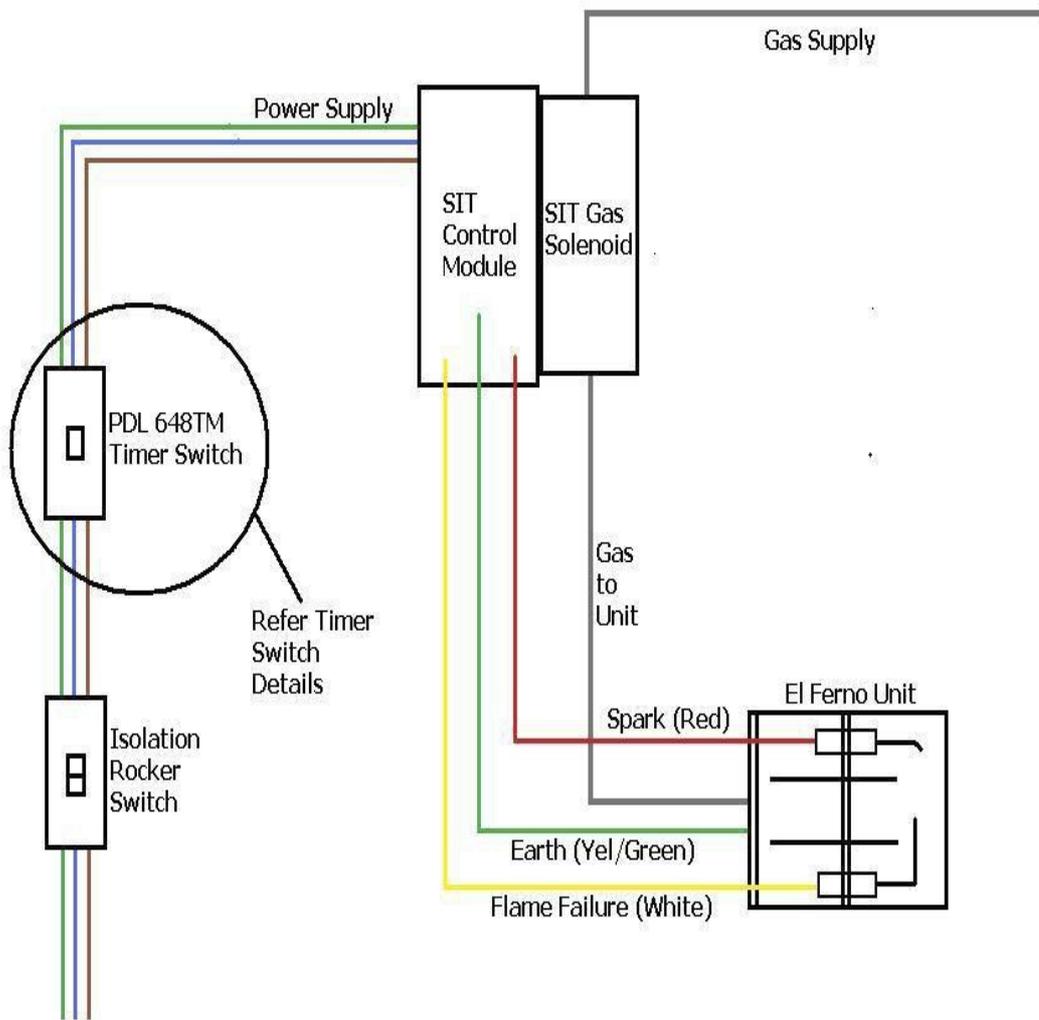
SPECIFICATIONS



The TFLGLL Data plate is attached to the front of the Electrical control box.

Product Test Approval Number:	GL974 (Gas Lab Ltd)	
Manufacturer:	DML Engineering Ltd (NZ)	
Date of Manufacture:		
Model:	TFLGLL	
Serial Number:		
Gas Type:	<u>NG (Natural Gas)</u>	<u>GPLPG</u>
Input Pressure:	1.15 kPa	2.75 kPa
Gas Input:	40 (Mj/hr)	42 (Mj/hr)
Max. Working Pressure:	1.5 kPa	4.0 kPa
Min. Working Pressure:	1.0 kPa	2.5 kPa

ELECTRICAL SCHEMATIC



The control box needs to be situated within 1 metre of the Firebox and to be accessible for maintenance purposes.

The minimum space required is approx. 400 mm wide x 400 mm high x 200 mm deep.

TFLGLL Troubleshooting

Symptom	Possible cause
NO SPARK	No power. Wiring not correct - refer electrical schematic. Damaged / grounded electrode. Ceramic insulators cracked. Carbon deposit or obstruction to electrode. Burnt out electrode.
SPARK BUT NO IGNITION	Check gas pressures are as specified. Spark electrode not positioned correctly - check gap approximately 6 mm. Soot / carbon on electrode.
IGNITES BUT GOES OUT AFTER A SHORT TIME	Flame Failure electrode not positioned. Correctly, ensure this is touching no part of the protection hoops or the burner itself or it will short out. Foreign object obstructing path of flame. Flame Failure wire not connected properly (shorting). Damaged or grounded electrode. Check timer setting is correct to the required time delay.

ALWAYS CHECK THAT GAS IS TURNED ON AND THE GAS LINES ARE PURGED OF AIR.

AN ISOLATING VALVE FOR THE GAS SUPPLY LOCATED WITHIN THE ACCESS CHAMBER IS PREFERABLE.

WARRANTY

1. The TFLGLL carries a 12 month warranty from the date of installation (provided installation is within 3 months of the date of purchase and can be verified through the gas fitters date of issue of the certificate of compliance).
2. The Fireplace Ltd warrants that the TFLGLL is free from defects in both material and workmanship for the term as described above provided the installation is carried out by a proficient and qualified gas fitter/installer.
3. Any components that may be subject to any warranty claim must be returned to The Fireplace Ltd for inspection and approval before any warranty claim is signed off. Any items, claimed under warranty, that are found to be a result of abuse or misuse will void the warranty.
4. The Fireplace Ltd reserves the right to change any or part of these installation instructions without further notice.