Contents

Introduction **2**

Specifications **3**

- General
- Pack Contents
- Gas Supply Requirements

Dimensions **4**

Installation **5**

- Installation Requirements
- Unpacking
- Location
- Clearances
- Assembly
- Gas Connection
- Commissioning

Operation **8**

- Operation Guide
- Lighting the Main Burner

Cleaning and Maintenance **12**

- Routine Maintenance
- After Each Use
- Daily Cleaning
- Weekly Cleaning

Trouble Shooting..... **13**

Replacement Parts List **14**

Explosion Drawing **15**

Spare Parts List **16**

Thor Gas Char-Broiler

Installation and Operation Instructions

Model: TR-CBR15F

IMPORTANT FOR FUTURE REFERENCE

Please complete this information and retain this manual for the life of the equipment. For Warranty Service and/or parts, this information is required.

Model Number Serial Number Date Purchased

WARNING: For your safety, do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliances. Keep the area free and clear of combustible.

WARNING: Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury, or death. Read the installation operating and maintenance instructions thoroughly before installing, or servicing this equipment.

WARNING: Instructions must be posted in a prominent location. All safety precautions must be taken in the event the user smells gas. Safety information can be obtained from your local gas supplier.

thor

15 Badgally Road, Campbelltown

NSW 2560

Thor after sales/service: 1300 225 960

Introduction

We are confident that you will be delighted with your Thor Gas Char-Broiler, and it will become a most valued appliance in your commercial kitchen.
To ensure you receive the utmost benefit from your new Gas Char-Broiler, there are two important things you can do.

Firstly:

Please read the instruction book carefully and follow the directions given. The time taken will be well spent.

Secondly:

If you are unsure of any aspect of the installation, instructions or performance of your appliance, contact your dealer promptly. In many cases a phone call could answer your question.

CE Only:

These instructions are only valid if the country code appears on the appliance. If the code does not appear on the appliance, refer to the supplier of this appliance to obtain the technical instructions for adapting the appliance to the conditions for use in that country.

WARNING:

IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH.
READ THE INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS APPLIANCE.

WARNING:

INSTRUCTIONS TO BE FOLLOWED IN THE EVENT THE USER SMELLS GAS ARE TO BE POSTED IN A PROMINENT LOCATION. THIS INFORMATION SHALL BE OBTAINED BY CONSULTING THE LOCAL GAS SUPPLIER.

WARNING:

GREAT CARE MUST BE TAKEN BY THE OPERATOR TO USE THE EQUIPMENT SAFELY TO GUARD IT AGAINST THE RISK OF FIRE.

- THE APPLIANCE MUST NOT BE LEFT ON UNATTENDED.
- IT IS RECOMMENDED THAT A REGULAR INSPECTION IS MADE BY A COMPETENT SERVICE PERSON TO ENSURE CORRECT AND SAFE OPERATION OF YOUR APPLIANCE IS MAINTAINED.
- DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPOURS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.
- DO NOT SPRAY AEROSOLS IN THE VICINITY OF THIS APPLIANCE WHILE IT IS IN OPERATION.

CAUTION:

THIS APPLIANCE IS;

- FOR PROFESSIONAL USE AND IS TO BE USED BY QUALIFIED PERSONS ONLY.
- ONLY QUALIFIED SERVICE PERSONS ARE TO CARRY OUT INSTALLATION, SERVICING AND GAS CONVERSION OPERATIONS.
- COMPONENTS HAVING ADJUSTMENTS PROTECTED BY THE MANUFACTURER SHOULD NOT BE ADJUSTED BY THE USER/OPERATOR.
- DO NOT OPERATE THE APPLIANCE WITHOUT THE LEGS SUPPLIED FITTED.

Specifications

General

A commercial heavy duty gas char-broiler.

It uses lava rocks or radiants.

Pack Contents

The following is included:

- Thor Gas Char-broiler
- Radiant
- Feet
- Instruction Manual

Gas Supply Requirements

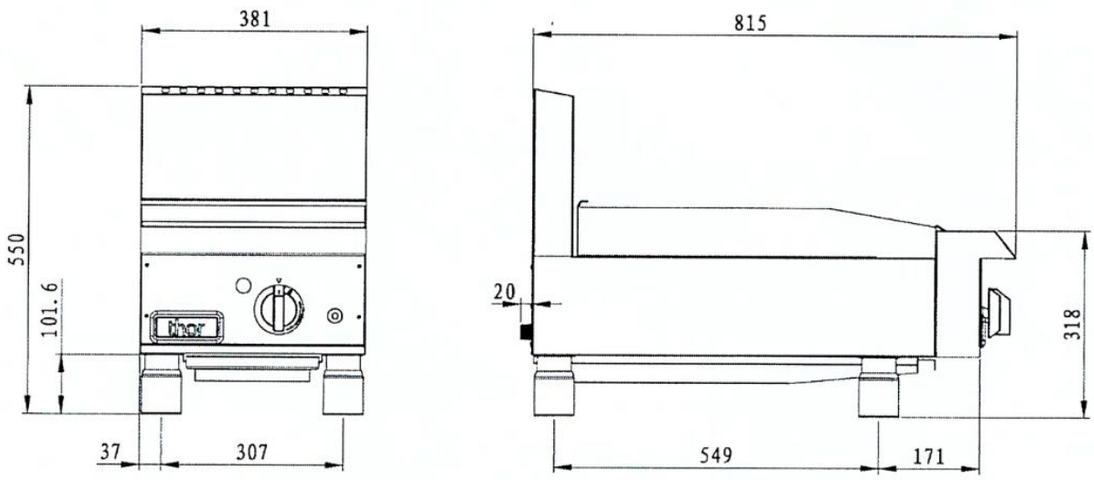
	Natural Gas	Propane
	TR-CBR15F	**TR-CBR15F**
Single Burner Heat Input	32.5 MJ	32.5 MJ
Heat Total	32.5 MJ	32.5 MJ
Burner Operating	1.0 kPa	2.75 kPa
Supply Pressure	1.0 kPa	2.75 kPa
Gas Connection	¾” BSP	¾” BSP

The burner operating pressure is to be measured at the gas control valve outlet test point with one burner operating at ‘High’ setting. The operating pressure is ex-factory set, through the appliance regulator and not to be adjusted.

Minimum input Heat of burner: 21MJ for LPG AND NG

Dimensions

TR-CBR15F



Installation

Installation Requirements

NOTE:

- **It is most important that this appliance is installed correctly and that operation is correct before use. Installation shall comply with local gas, health and safety requirements.**
- **This appliance shall be installed with sufficient ventilation to prevent the occurrence of unacceptable concentrations of substances harmful to health.**

Our Gas Char-broilers are designed to provide years of satisfactory service and correct installation is essential to achieve the best performance, efficiency and trouble-free operation.

This appliance must be installed in accordance with National installation codes and in addition, in accordance with relevant National / Local codes covering gas and fire safety.

Australia:
AS 5601/AG 601 (to be AS 5601)- Gas Installations
New Zealand:
NZS 5261 - Gas Installation.
United Kingdom:
Gas Safety (Installation and Use) Regulations 1998
BS 6173-Installation of Catering Appliances.
BS 5440-1&2 Installation Flueing & Ventilation.
Ireland:
IS 820-Non Domestic Gas Installations.

Installations must be carried out by qualified persons only. Failure to install equipment to the relevant codes and manufacturer's specifications shown in this section will void the warranty.

Components having adjustments protected by the manufacturer are only to be adjusted by an authorized service agent. They are not to be adjusted by the installation person.

Unpacking

- Remove all packaging and transit protection from the appliance including all protective plastic coating from the exterior stainless steel panels.
- Check equipment and parts for damage. Report any damage immediately to the carrier and distributor.
- Ensure that the 4 adjustable feet are fitted with the protruding centre screw.
- Report any deficiencies to the distributor who supplied the appliance.
- Check that the available gas supply is correct to that shown on the rating plate located on the right hand panel.

Location

1. Installation must allow for a sufficient flow of fresh air for the combustion air supply.
2. Installation must include adequate ventilation means, to prevent dangerous build-up of combustion products.
3. Any gas burning appliance requires adequate clearance and ventilation for optimum and trouble-free operation. The minimum installation clearances shown below are to be adhered to.
4. Position the appliance in its approximate working position.
5. All air for burner combustion is supplied from underneath the unit. The legs must always be fitted and no obstructions placed on the underside or around the base of the unit, as obstructions will cause incorrect operation and / or failure of the appliance.
6. Components having adjustments protected by manufacturer are only allowed to be adjusted by an authorized service agent. They are not to be adjusted by the installation person.

Installation

Clearances

NOTE: Only non-combustible materials can be used in close proximity to this appliance.

	Combustible Surface	Non Combustible Surface
Left / Right Hand Side	35mm	0mm
Rear	250mm	0mm

Assembly

NOTE:

- This appliance is assembled before delivery except feet.
- This appliance is fitted with adjustable feet to enable the appliance to be positioned securely and level. This should be carried out on completion of the gas connection. Refer to the 'Gas Connection' section.
- IM will be stated that the appliance shall be installed in such a way that side body surfaces are not accessible in the installed position.

Gas Connection

NOTE: ALL GAS FITTING MUST ONLY BE CARRIED OUT BY A QUALIFIED PERSON.

1. The Gas Char-broilers do not require an electrical connection, as they function totally on the gas supply only.
2. It is essential that the gas supply is correct for the appliance to be installed and that adequate supply pressure and volume are available. The following checks should therefore be made before installation:-
    a. Gas Type required for the appliance is shown in the rating label. Check that this is correct for the gas supply the appliance is being installed for. The gas conversion procedure is detailed in this manual.
    b. Supply Pressure required for this appliance is shown in the ‘Gas supply requirements’ section of this manual. Check the gas supply to ensure adequate supply pressure exists.
    c. Input Rate of this appliance is stated on the Rating label .The input rate should be checked against the available gas supply line capacity. Particular note should be taken if the appliance is being added to an existing installation.

NOTE: It is important that adequately sized piping runs directly to the connection joint on the appliance with as few tees and elbows as possible to give maximum supply volume.

NOTE: Ensure the regulator is converted to the correct gas type that the appliance will operate on. The regulator outlet pressure is fixed ex-factory for the gas type .

3. Correctly locate the appliance into its final operating position and using a spirit level, adjust the legs so that the unit is level and at the correct height.
4. Connect the gas supply to the appliance through the regulator. (refer to the picture of "Install the Regulator"). A suitable jointing compound which resists the breakdown action of propane must be used on every gas line connection, unless compression fittings are used.
5. Check all gas connections for leakages.

WARNING:

DO NOT USE A NAKED FLAME TO CHECK FOR GAS LEAKAGES.

6. Check that the gas operating pressure.

NOTE: The operating pressure is to be measured at the burner operating pressure test point outlet and with one griddle burner operating at the "High Flame" setting.

7. Turn off the mains gas supply and bleed the gas out of the appliance gas lines.
8. Turn on the gas supply and the appliance.
9. Verify the operating pressure remains correct.

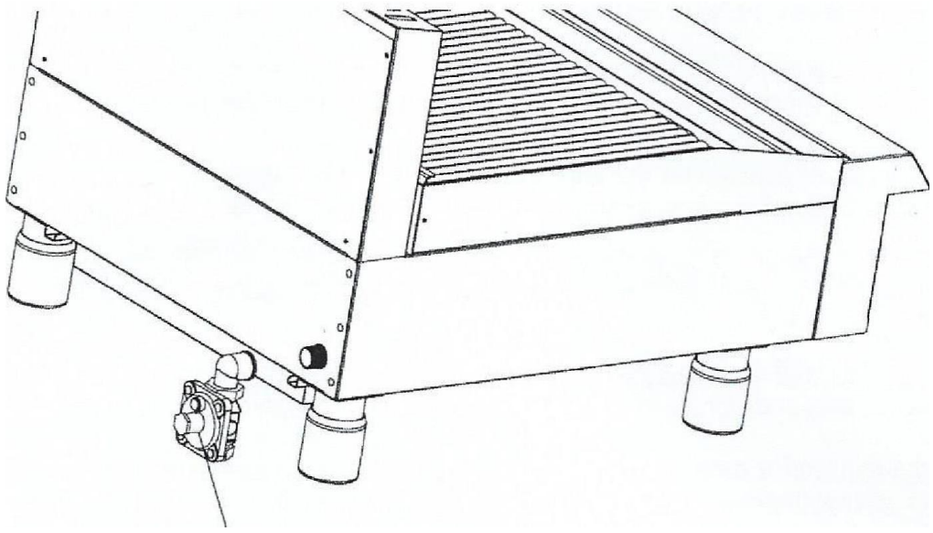
Commissioning

1. Before leaving the new installation;
    a. Check the following functions in accordance with the operating instructions specified in the 'Operation' section of this manual.
    - Light the Pilot Burner.
    - Light the Main Burner.
    - Turning 'Off the Main Burner/Pilot.

    b. Ensure that the operator has been instructed in the areas of correct lighting, operation, and shutdown procedure for the appliance.

2. This manual must be kept by the owner for future reference and a record of the Date of Purchase, Date of Installation and the Serial Number of the Appliance must be recorded and kept with this manual. (These details can be found on the Rating label, refer to the 'Gas Connection' section).

NOTE: If for some reason it is not possible to get the appliance to operate correctly, shut off the gas supply and contact the supplier of this appliance.



Regulator

Install the Regulator

Operation

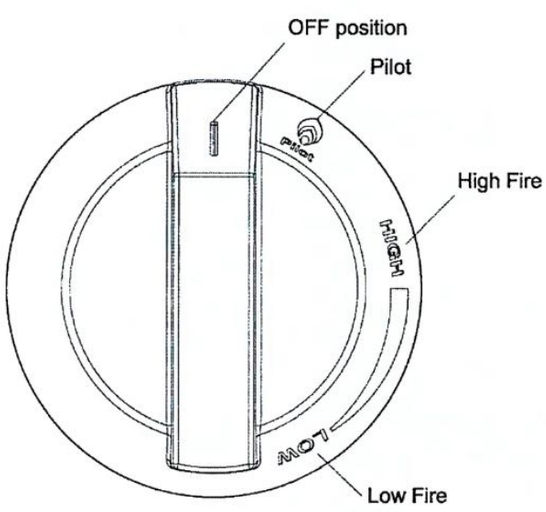
Operation Guide

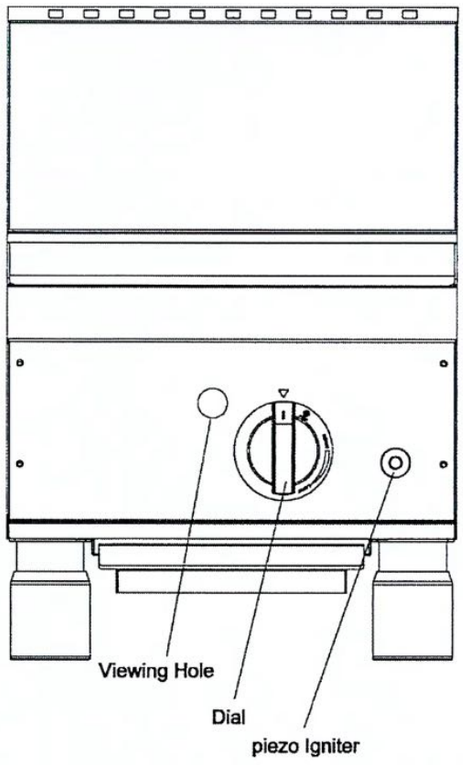
CAUTION:

- THIS APPLIANCE IS FOR PROFESSIONAL USE AND IS ONLY TO BE USED BY QUALIFIED PEOPLE.
- ONLY QUALIFIED SERVICE PERSONS ARE TO CARRY OUT INSTALLATION, SERVICING OR GAS CONVERSION OPERATIONS.
- COMPONENTS HAVING ADJUSTMENTS PROTECTED (E.G. PAINT SEALED) BY THE MANUFACTURER SHOULD NOT BE ADJUSTED BY THE USER/OPERATOR.

1. The Gas Char-broilers have been designed to provide simplicity of operation and 100% safety protection.
2. Improper operation is therefore almost impossible, however bad operation practices can reduce the life of the gas char-broiler and produce a poor quality product. To use this appliance correctly please read the following sections carefully:-

    - Lighting the Main Burner.
    - Turning off the Main Burners / Pilots.





Operation

WARNING:

SURFACE TEMPERATURE OF THE CHAR-BROILER CAN REACH OVER 300°C WHEN THE APPLIANCE IS OPERATED AT FULL SETTING.

1. Lighting the Main Burners

The burners are fitted with individual standing pilots which allows the main burners to be turned ON-OFF without the need to manually re-light the burner each time that it is turned ON, as the burner will be automatically lit itself by the pilot burner.

Flame Failure Protection is incorporated for each burner by way of a thermo-electric system which will shut off the gas supply to that burner in the event that the burner goes out, so that un-burnt gas is not expelled.

1. Select the burner required, depress and turn the corresponding gas control knob anti-clockwise to the ‘PILOT’ position.
2. With the gas control knob depressed, manually light the pilot burner or use the piezo igniter provided (optional).
3. Release the gas control knob after approximately 10-20 seconds after lighting the pilot burner.
4. The pilot burner should stay alight - if not, repeat Steps (b. to c. above.)
5. 'Full Flame' can now be achieved by depressing and rotating the gas control knob anti-clockwise to the first stop ‘HIGH’ flame position.
6. Low flame can be achieved by depressing the gas control knob and rotating fully anticlockwise to the ‘LOW’ flame position.
7. To achieve simmer control, depress the gas control knob and rotate between the ‘HIGH’ and ‘LOW’ positions to achieve the temperature required.

2. Turning 'OFF' the Main Burners / Pilots

1. To turn off the main burner, but keep the pilot burner alight, rotate the gas control knob to the ‘PILOT’ position. The main burner will extinguish and the pilot will remain alight.
2. To turn off the ‘PILOT’, depress and turn the gas control knob clockwise back to the ‘ | ’ position. The ‘PILOT’ burner will extinguish.

Operation

Main burner air supply:

1. For efficient burner operation, a proper balance of gas volume and primary air supply must be maintained which will result in complete combustion. Insufficient air supply results in a yellow streaming flame. Primary air supply is controlled by an air shutter on the front of the burner.
2. Loosen the screws on the front of the burner and adjust the air shutter to just eliminate the yellow tips of the burner flame. Lock the air shutter in place by tightening the screws.

CAUTION

The space between the legs at the bottom admits combustion air. DO NOT BLOCK THIS SPACE.

All burners are lit from constantly burning pilots. Turning the valve to the desired flame height is all that is required to put the unit in service.

Do not permit fans to blow directly at the unit. Wherever possible, avoid open windows next to the units' sides or back. Avoid wall type fans which create air cross-currents within a room.

It is also necessary that sufficient air should be allowed to enter the room to compensate for the amount of air removed by any ventilating system. Otherwise, a subnormal atmospheric pressure will occur, affecting operation and causing undesirable working conditions.

A properly designed and installed hood will act as the heart of the ventilating system for the room or area in which the unit is installed, and will leave the unit independent of changing draft conditions.

All valves must be checked and lubricated periodically. This must be done by an authorized service representative in your area.

Note:

Please wait at least 15 seconds to restart the main burners to maintain the best function of the thermostat valve after turning off the main burners.

IMPORTANT

Should any abnormal operation like;

- ignition problems,
- abnormal burner flame,
- burner control problems,
- partial or full loss of burner flame in normal operation, be noticed, the appliance requires IMMEDIATE service by a qualified service person and should not be used until such service is carried out.

Operation

OPERATION:

Turn the burners on about 15-20 minutes before cooking for preheating. Set the knobs to the desired flame height or temperature. Each valve will control the gas flow to the burner to bring that area of the unit up to the set temperature. If different temperature settings are to be used, adjoining areas should be set at progressively higher temperatures using the lowest temperatures on the outside burners. A uniform and systematic approach to the loading of the unit will produce the most consistent product results.

RADIANTS

Place the radiants in their position. Make sure that the radiants are sitting properly into the slots on the front and rear supports. Radiants should be centered over straight section of the burners.

COOKING GRATES

Place the top cooking grates with the grid bars sloping toward the front.

NOTE: When cooking grate are placed sloping toward the front, the grooves on top will guide the excess fat drippings into the grease trough.

Cleaning and Maintenance

CAUTION:

Always turn off the gas supply before cleaning.
This appliance is not water proof.
Do not use water jet spray to clean this appliance.

NOTE: Parts protected by the manufacturer or his agent are not to be adjusted by the installer, unless the installer is an authorized service agent.

To keep your Char-broiler clean and operating at peak efficiency, follow the procedures shown below:-

INITIAL CLEANING:

Prior to operating your new char-broiler, thoroughly wash the exterior with a mild detergent or soap solution. Do not use abrasive cleaners, since this might damage the cabinet finish. If the stainless steel surfaces become discolored, scrub by rubbing only in the direction of the finished grain.

When the char-broiler is first heated, it will smoke until oil used in manufacturing, preservation and dust from storage and shipping are burned off. An hour at "max." on all burners is usually sufficient.

DAILY CLEANING:

Remove the grease pan, empty and wash it.

Grate "burn off. The grease buildup on the grates should be cleaned daily (more often as needed).

A. **Caution:** When handling grates or radiants, always use insulated gloves to prevent burns.

B. **Warning:** Do not cover the top of the grates during a burn off operation. Restricting the airflow by covering the grates may cause them to warp. It will also cause damage to the valves, the knobs and the front panel.

C. Place grates on char-broiler, with grid bars horizontal, facing down.

D. Turn the char-broiler on for approximately 45 minutes.

E. Turn off the char-broiler and allow it to cool for 20 Minutes.

F. Clean top and bottom surfaces of the grates with a wire brush to remove animal fats and carbonized grease.

G. Clean channels on grates with a scraper.

H. Remove grates from char-broiler. Clean top surface of radiants with the wire brush. They may be cleaned in place.

NOTE:

- If the Char-broiler usage is very high, we recommend that the weekly cleaning procedure is carried out on a more frequent basis.
- Ensure that protective gloves are worn during the cleaning process.
- DO NOT use harsh abrasive detergents, strong solvents or caustic detergents as they will damage the grate and burners.
- Allow these items castings to cool and remove for cleaning.
- Parts protected by the manufacturer or his agent are not to be adjusted by the installer, unless the installer is an authorized service agent.

Periodic Maintenance

NOTE: All maintenance operations should only be carried out by a qualified service person.

To achieve the best results cleaning must be regular and thorough and all controls and mechanical parts should be checked and adjusted periodically by a qualified service person. If any small faults occur, have them attended to promptly. Don't wait until they cause a complete breakdown.

Trouble shooting

This section provides an easy reference guide to the more common problems that may occur during the operation of your equipment. The fault finding guide in this section is intended to help you correct, or at least accurately diagnose problems with your equipment.

Although this section covers the most common problems reported, you may encounter a problem not covered in this section. In such instances, please contact your local authorized service agent who will make every effort to help you identify and resolve the problem. Please note that the service agent will require the following information:

- **The Model Trade Name and the Serial Number of the Appliance. (Both of them can be found on the Rating label located on the appliance.)**

PROBLEM	POSSIBLE CAUSE
Heat does not come on when valve is turned on.	Pilot burner not lit.
	Gas valve is bad.
Pilot burner will not light.	Obstructed pilot orifice.
	Pilot valve turned off.
Pilot burner will not stay lit.	Obstructed pilot orifice.
	Gas supply is not purged of air.
	Air is blowing pilot light out.
Fat appears to smoke excessively.	Heat is set too high.
	Moisture in the food may be turning into steam.
Food sticks to grates.	Heat is set too high.
	Char Broiler surface needs cleaning and/or seasoning.
	Surface under food may not have been covered with enough cooking oil.
Food is undercooked inside.	Heat is set too high.
	Food may not have been cooked for long enough time.
Food tastes greasy or has objectionable off-flavor.	Food itself may have off flavor.
	Food may have been stored improperly before cooking.
	Too much fat used.
	Heat is set too low.

NOTE: Components having adjustments protected by the manufacturer, are only allowed to be adjusted by an authorized service agent. They are not to be adjusted by an unqualified service person.

Replacement Parts List

IMPORTANT:

Only genuine authorized replacement parts should be used for the servicing and repair of this appliance. The instructions supplied with the parts should be followed when replacing components.

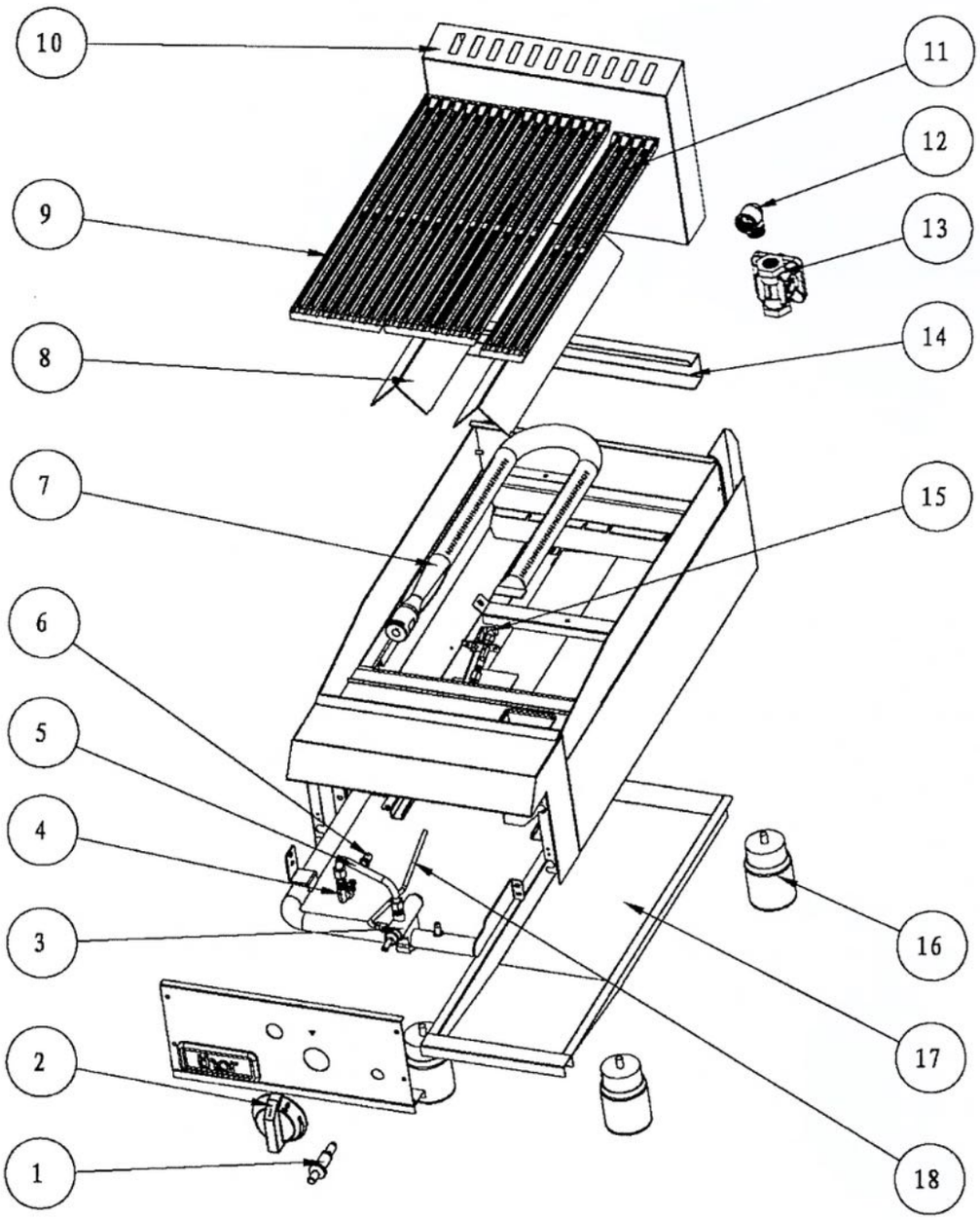
For further information and servicing instructions, contact your nearest authorized service branch.

When ordering replacement parts, please quote the part number and the description listing below. If the part required is not listed below, request the part by description and quote model number and serial number which is shown on the rating plate.

CAUTION: Please replace the corresponding warning label that shows the gas type operated when the qualified person will convert to another gas in order to not cause death or injury or damage.

Explosion drawing

TR-CBR15F



Square Parts List

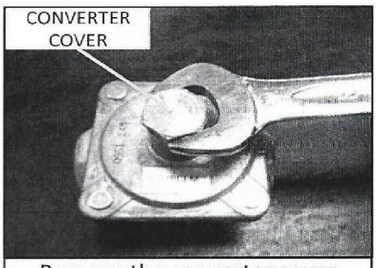
NO.	DESCRIPTION	MODEL	CODE	QTY
1	Piezo Igniter	TR-CBR15F	03.00.1290152	1
2	Dial	TR-CBR15F	06.05.1471455	1
3	Safety Valve	TR-CBR15F	01.20.1068524	1
4	L Connector For Orifice	TR-CBR15F	01.18.1067404	1
5	Main Pipe Assy.0Left	TR-CBR15F	06.05.1471982	1
6	Orifice For LPG	TR-CBR15F	01.20.1068652	1
	Orifice For NG		01.20.1068537	1
7	U Burner	TR-CBR15F	06.05.1470384	1
8	Tent Radiant	TR-CBR15F	01.03.1015048	2
9	Cast Grate	TR-CBR15F	01.03.1015028	2
10	Flue Assy.	TR-CBR15F	06.05.1472727	1
11	Cast Grate-3”	TR-CBR15F	01.03.101.5045	1
12	L Connector For Manifold	TR-CBR15F	01.02.1005351	1
13	Regulator	TR-CBR15F	01.22.1069526	1
14	Grate Holder	TR-CBR15F	01.05.1029400	1
15	Flame Device System (No Include Injector)	TR-CBR15F	01.22.1069541	1
	ODS Injector-0.20 For LPG		01.20.1068546	1
	ODS Injector-0.40 For NG		01.20.1068547	1
	Thermocouple		03.11.1250051	1
16	Foot	TR-CBR15F	01.02.1005187	4
17	Tray	TR-CBR15F	01.05.1029822	1
18	Pilot Pipe Assy.-Left	TR-CBR15F	06.05.1471981	1

GAS REGULATOR CONVERSION INSTRUCTION:

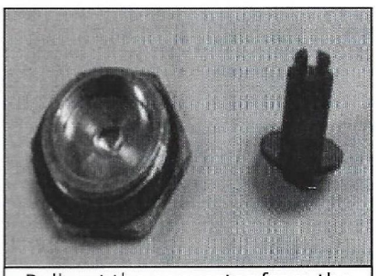
thor

CONVERTING FROM LPG TO NG AND VICE-VERSA:

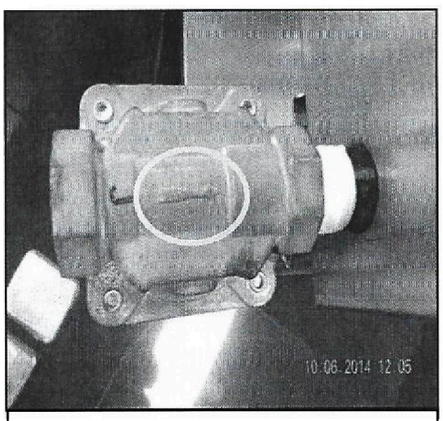
1. Turn-off the pilot.
2. Shut-off the main isolation valve and follow the lock-out/tag-out procedure.
3. Remove the gas regulator.
4. Remove the converter cover from the regulator. Use a 22mm spanner.
5. Pull-out the converter and position it to your desired gas type, FIG. 1 for LPG and FIG. 2 for Natural Gas.
6. Install the converter cover to the regulator.
7. Re-install the regulator to the unit. Follow the direction of the arrow on the regulator when installing.
8. Adjust the gas pressure according to the new gas type to be used.
9. After converting the unit, make sure to post on the equipment an appropriate label of the new gas type used.



Remove the converter cover from the regulator



Pull-out the converter from the cover



Gas Regulator's arrow direction should be pointing towards the product.

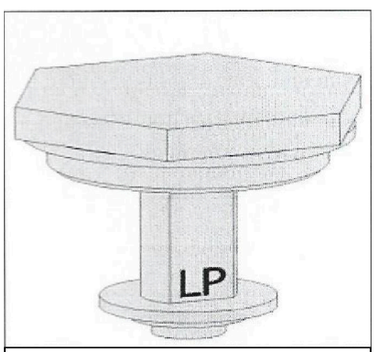


FIG. 1 Position of converter When using **LPG**

CAUTION: Please replace the corresponding nameplate or label that shows the gas type operated, after a qualified person converted to another gas type, in order to prevent injury, death and damage to property.

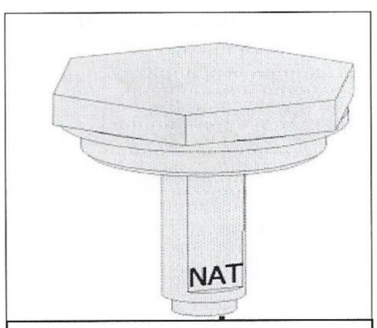


FIG. 2 Position of converter when using **Natural Gas**

Ver. 1 (2015-04-09)