

MASTERRANGE

THE WORLD'S FINEST MONGOLIAN COOKING EQUIPMENT
MONGOLIAN BARBECUE OWNER'S MANUAL
MBR-48, MBR-60, MBR-60C, MBR-72, MBR-72C, MBR-84, MBR84C
SECTION I: INSTALLATION INSTRUCTIONS



FOR YOUR SAFETY

DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS AND LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

Quick Start Instructions
See Page 6

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.

NOTE

OWNER MUST OBTAIN EMERGENCY PROCEDURES FROM LOCAL GAS SUPPLIER TO BE FOLLOWED IN THE EVENT OF A GAS LEAK. THESE PROCEDURES MUST BE PROMINENTLY DISPLAYED.



KEEP THIS BOOKLET HANDY FOR FUTURE REFERENCE



FOOD SERVICE EQUIPMENT CO., INC.
72 Beadel St. Brooklyn, NY 11222
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(718)388-5650
(718)388-5860 fax

MBR-48 through MBR-84 MONGOLIAN BARBECUE INSTALLATION INSTRUCTIONS

FOLLOW THESE INSTRUCTIONS CAREFULLY!

INSTALLATION AREA MUST BE FREE AND CLEAR FROM COMBUSTIBLES

UNCRATING AND PREPARING MBR-48/84 FOR INSTALLATION

We recommend a licensed rigger be used to set up this equipment. It has been shipped in two crates:

Crate A: Main cooking unit.

Crate B: Cook Top

The bottom of the main unit has a set of parallel rails designed to be engaged by a pallet jack or a forklift. The main unit with the top mounted weighs approximately 1500-2100 pounds. We do not recommend moving the unit after the top has been mounted. Use a lifting device rated in excess of that amount to lift the load. OSHA standards for equipment handling must be adhered to. Be sure that the fork rails are properly mated with the jack and/or the forks or serious damage and/or injury may result when the unit is lifted.

1. Uncrate the main unit and the top.
2. Place the main unit in the position it will occupy. Be sure to locate your unit with the clearances away from combustible construction as indicated on the nameplate of the unit. Remove packing materials. Check gas burners that may have shifted in transit and resecure them if required. Turn all gas valve lever handles to "OFF" position. Check to insure that all burner pipe nipples are aligned and fully inserted into air mixers. Tighten air mixer set screws if necessary.
3. Clearances for noncombustible construction are the same as combustible clearances. All MBRs are suitable only for installation on noncombustible floors.
4. Level the body before the cook top is mounted. Leveling of the top is done using directions that follow after the cook top has been placed on the body and the gas connection has been made.

When the unit is in final operating position confirm that all the of the top support lugs are the same height AFF. Each bullet leg must touch the floor. **BODY MUST BE LEVEL IN FINAL POSITION BEFORE CONNECTING GAS.**

BODY INSTALLATION

1. We recommend the use of a 2" gas line to feed the unit. Minimum line size is 1½". Large MBR units will not perform as designed if an insufficiently sized gas line is attached.
2. The installation must conform with the National Fuel Gas Code, ANSI Z223.1, Natural Gas Installation Code, CAN/CGA-B149.1 or the Propane Installation Code, CAN/CGA-B149.2, as applicable, including:
 - a. The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psi (3.45 kPa). NOTE: This individual shut-off valve is a MASTER VALVE that shuts off the gas to the entire unit and must be installed to meet Code requirements listed above.
 - b. The appliance must be isolated from the gas supply piping system by closing its individual manual valve during any pressure testing of the gas supply piping system at test pressures equal or less than ½ psig (3.45 kPa).

3. Local regulations governing gas appliance installations must be complied with.
4. This equipment must be installed underneath a hood to ensure adequate ventilation.
5. MBR-48/84 installation is generally in the center of a cooking area with clear access on all sides.
6. Materials such as wood, compressed paper and plant fibers that will ignite and burn, Must Not Be Exposed Near this Range. Local safety codes should be complied with in respect to fire hazard avoidance.
7. Use the Town supplied appliance gas pressure regulator with vent limiting device or an approved ANSI/CGA equivalent. The regulator must be installed in a location where it remains cool and is accessible for pressure adjustment (ANSI Z83.11-1996 sect. 1.15.5). NEVER MOUNT REGULATOR INSIDE GRILL BODY. (Town supplies an RV-61 1¼" NPT.)
 - a) If this unit is installed in a building with a 2 PSI gas system, a "pounds to inches" line regulator must be installed upstream of the appliance regulator. This regulator is to be supplied by the installing company/ contractor.
8. The unit must be kept clear to avoid restriction of air supply for combustion.
9. The unit must be installed in an area or room with sufficient fresh air supply to ensure proper combustion.
10. There must be adequate clearance for air openings into the combustion chamber.
11. This equipment must be installed with adequate clearance for servicing and proper operation.
12. This unit should be operated only with drip pan in place.

TOP INSTALLATION

NOTE:

1. There are leveling screws on the top of the main body. The height of the screws has been adjusted at the factory to ensure proper combustion. Do not change the settings except in order to adjust the leveling of the top.
2. NEVER place any part of your body between the cook top and the main unit. Never place your hands underneath the top or in the gap between cook top and the main unit.
3. If you have a model with a scrap chute, we recommend mounting the scrap chute after the top is in position.
4. After verifying that the adjusting screws are locked in place, lift the top into position over the main cooking unit by using an ANSI approved Sling (fabric or chain) that engages a minimum of three places on the outside perimeter of the cook top. If your unit has a scrap chute, use a second ANSI sling to engage the central inner hole of the cook top in three places thereby giving six points of support to the top as it is lifted into place.
5. Lower the top slowly so that the leveling screws are all located underneath the top. This alignment must be done manually. Line up the top so that it is equidistant on all sides from the scrap shelf. It is recommend that several persons assist during the set up operation. When the top is in position there will be a gap between the top and the base of the unit. This is normal. It allows airflow for proper combustion.

TOP INSTALLATION, con't.

6. Level the Cook Top. Use two carpenter levels; place them on the top at right angles to each other at opposite ends of the top. Use the adjustment screws to level the top. When top is level move the levels 90° and level again. Move levels as necessary until the entire top is level to the floor. The nominal height from the top to the scrap ring is 8-9".
7. Remove the slings from the cook top.
8. As a final check, measure the height from the top of the cook top to the floor. The size should measure 37-1/2" (+/- 1/2").
9. All units: place the scrap cups into position.
10. Top must be properly seasoned (see page 11).

LIGHTING AND SHUT DOWN INSTRUCTIONS

Always use the following lighting and shutdown instructions below when operating your MBR-72/84. A five minute complete shut off period is required before lighting or relighting an MBR. See diagrams below.

1. Before allowing gas to flow to the MBR, insure all MBR gas valves are **OFF** by turning each handle counter clockwise. Check for leaks using soapy water or other suitable leak detector. **DO NOT USE AN OPEN FLAME FOR TESTING.**
2. Use a gas match to light the burner pilots. See #3, 4, 5, & 6 below and reference TS-11 sheet.
3. Main burner valves shall be in **OFF** position (figure 1). An ignition port is provided for each pilot burner. Use a flashlight to locate each prior to inserting a lighting device. Until one is familiar with lighting the unit, it is recommended one person light the pilots and the second to locate and hold the red button on each safety control.
4. Starting at Scrap Bin Access Door, insert the ignited lighter through the ignition port and light the pilot burner as you push and hold the RED button on the safety control (figure 2).

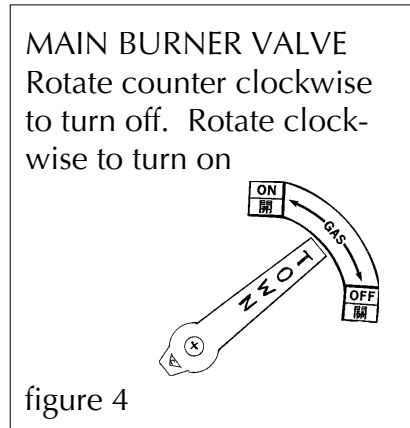
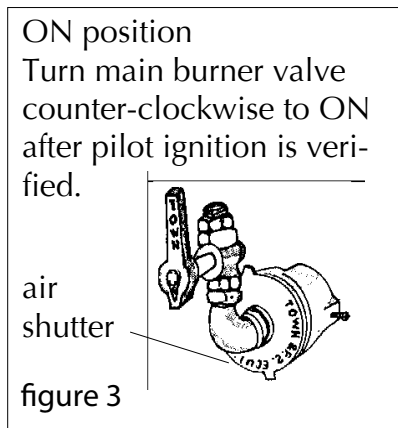
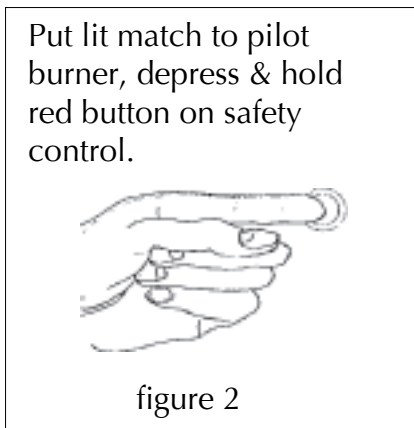
Note: On initial startup, allow five to fifteen minutes for air trapped in the gas lines to bleed while holding the safety control ignition button. A qualified gas service technician can bleed the line from the pressure test port. It is located on the manifold to the left of the front access door.

5. The pilot should light. Continue to hold the button for one minute as in figure 2 or until the pilot stays lit. Repeat the above step until all pilots are lit.
6. With all pilots lit, turn each main burner valve counterclockwise to **ON** position (figure 3). Observe through the ports that all burners are lit with a clear, blue flame about 2" long. Each burner has an adjustable air mixer that has been preset at the factory but may need to be adjusted depending on altitude and gas composition.
To adjust air/gas mixture, loosen air shutter locking nut. Turn burner valve to full "ON" position as in figure 3 below. Adjust air shutter until proper blue flame is burning on both rings. Resecure locking nut on air shutter after making adjustments and turn off the burner. All units are equipped with fixed orifices which cannot be adjusted for gas flow.

- When unit is not in use, turn main burner valves clockwise to OFF position (figure 1).
- In the event of power failure, blackout or loss of gas do not attempt to operate this unit.
- In the event a complete shutdown is required the main service valve must be closed in the **OFF** position. The service should be performed only by a qualified gas service mechanic.

IMPORTANT

- The natural gas unit is designed for 6" W.C. A minimum of 5½" W.C. must be maintained or performance of the unit will not meet specifications. The LP unit is designed for 10" W.C. operational gas pressure at the outlet. A minimum of 9½" W.C. must be maintained or performance of the unit will not meet specifications.
- There is a 1/8" test tap in the front left section of the manifold behind the access door. Using a manometer or similar device, operating pressure should be verified by a qualified gas mechanic.



OPERATION GUIDE

- The top should come to full operating temperature in approximately 60 minutes after all burners have been lit. Use a high temperature thermometer to verify that the cook surface has reached a minimum operating temperature of 500°F.
- When the unit reaches operating temperature TURN OFF every other burner on all units from MBR-48 up. Seven burners on the MBR-84 and six on the MBR-72 are sufficient to maintain operating temperature except during extreme duty cycles when additional burners may be necessary.

Quick Start Guide for your MBR

The MBR Grill will give you optimal service provided it is installed and maintained properly. This is a brief overview of key points that must be observed during the installation and operation of the unit. Please refer to the Owner's Manual for more detailed information. If you have any general installation or service questions please call Town at (718)388-5650 Monday to Friday, 9 AM to 5PM.

INSTALLATION: A licensed plumber familiar with commercial kitchen gas equipment should install this appliance. The following is only an overview. Town assumes no responsibility for improper installation or testing. If you have any problems consult your installer and/ or your local gas company.

1. The supplied regulator must be installed on the outside of the unit, NEVER install the regulator in the interior tub of the MBR. The supplied vent limiter must be attached to the regulator and not be blocked from venting. A main gas valve to shut off the gas to the unit must be installed before the pressure regulator. A drip leg must be installed at the gas feed. The pilot safety system is sensitive to gas line debris, which is common in new commercial installations. **Failure to install the trap will void the warranty on the safety control(s).**



2. We recommend a 2" gas supply line. Minimum line size is 1½". Large MBR units will not perform as designed if an undersized gas line is used. It will not provide adequate supply volume.
3. After installation and leak testing the unit can be lit (see directions in owners manual). **With all gas appliances ON and all burners of the MBR turned ON, measure the pressure at the test tap in the MBR.** The 1/8" test tap is located on the manifold section above the access doors. **Natural gas pressure should be 6" WC.** If less than 6" WC is measured, check to insure the regulator is properly set. If you cannot obtain a reading of 6" WC the unit will not deliver maximum performance. The pressure regulator can be adjusted by removing the brightly finished cap screw located at the top of the regulator revealing a white nylon adjusting screw. Turn this shaft down to increase pressure.
4. With all burners ignited, check for proper combustion indicated by a clear blue flame. The unit is pre-set at the factory. However, regional gas blends and movement in transit may necessitate on-site adjustment. See page 4 for instructions on how to adjust the air/gas mixture. Check that pilot and thermocouples are properly positioned and have not shifted during shipment of the unit. Tip of thermocouple should be 3/8" above the pilot flame. The body of the thermocouple should be engulfed by the pilot flame.
5. Follow the instructions in the Owners' Manual to season the cooktop before using. This begins the procedure to create a non-stick surface.
6. The MBR requires a pre-heat period of up to 60 minutes to achieve operating temperatures. When proper operating temperature is reached, turn OFF every other burner. Use of all burners during operation will shorten the life span of the thermocouples, safety controls and cook top.



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SECTION 2: OPERATING AND MAINTENANCE INSTRUCTIONS



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OPERATING INSTRUCTIONS

1. Materials such as wood, compressed paper, and plant fibers that will ignite and burn **must not be exposed near this unit**. Local safety codes should be complied with in respect to fire avoidance.
2. The area around the unit must be kept clear to avoid restriction of air supply for combustion or ventilation for exhaust.
3. The equipment must be installed with adequate clearance for air openings into the combustion chamber, servicing and proper operation.
4. This appliance is designed and certified for use with either Natural Gas or LP gas. Verify gas type is correct and matches the label plate on the unit.
5. The installation must conform with the National Fuel Gas Code, ANSI Z223.1, Natural Gas Installation Code, CAN/CGA-B149.1 or the Propane Installation Code, CAN/CGA-B149.2, as applicable, including:
 - a. The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of ½ psi (3.45 kPa).
 - b. The appliance must be isolated from the gas supply piping system by closing its individual manual valve during any pressure testing of the gas supply piping system at test pressures equal or less than ½ psig (3.45 kPa).
6. The gas supply line must be of adequate size to insure maximum efficiency of the unit and conform with the National Fuel Gas Code, ANSI-Z223.1.
7. Provision must be made to assure adequate supply of fresh air to this unit. This unit cannot operate safely without sufficient air supply.
8. MBR installation is generally in a clear area as this unit is specifically designed for demonstration cooking. It is suitable for installation only on noncombustible floors that will tolerate very high temperatures.
9. Your MBR must be operated under a hood to ensure adequate ventilation.
10. **This unit should be operated only with bottom grease pans and scrap collector bin (/C models only) in place.**
11. **DO NOT THROW AWAY THESE INSTRUCTIONS.** This manual must remain with the unit for future reference.

LIGHTING AND SHUT DOWN INSTRUCTIONS

Always use the following lighting and shutdown instructions below when operating your MBR-72/84. A five minute complete shut off period is required before lighting or relighting an MBR. See diagrams below.

1. Before allowing gas to flow to the MBR, insure all MBR gas valves are **OFF** by turning each handle counter clockwise. Check for leaks using soapy water or other suitable leak detector. **DO NOT USE OPEN FLAME FOR TESTING.**
2. Use a gas match to light the pilots.
3. Main burner valves shall be in **OFF** position (figure 1). An ignition port is provided for each pilot burner. Use a flashlight to locate each prior to inserting the lighting torch. Until one is familiar with lighting the unit, it is recommended one person light the pilots and the second to locate and hold the red button on each safety control.
4. Starting at Scrap Bin Access Door, insert the ignited match through the ignition port and light the pilot burner as you push and hold the RED button on the safety control (figure 2).



figure 1

MAIN BURNER VALVE
Rotate counter clockwise to turn off. Rotate clockwise to turn on

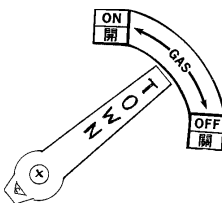


figure 4

Put lit match to pilot burner, depress & hold red button on safety control.



figure 2

ON position
Turn main burner valve counter-clockwise to ON after pilot ignition is verified.

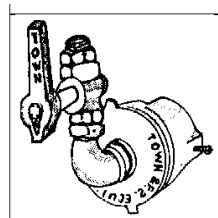


figure 3

air shutter

LIGHTING AND SHUT DOWN INSTRUCTIONS, continued:

Note: On initial start-up, allow five to fifteen minutes for air trapped in the gas lines to bleed while holding the safety control ignition button. A qualified gas service technician can bleed the line from the pressure test port located on the manifold to the left of the access door.

6. The pilot should light. Continue to hold the button for one minute as in figure 2 (previous page) or until the pilot stays lit. Repeat the above step until all pilots are lit.
7. With all pilots lit, turn each main burner valve counterclockwise to **ON** position (figure 3, previous page). Observe through the ports that all burners are lit with a clear, blue flame about 2" long. Each burner has an adjustable air mixer that has been preset at the factory but may need to be adjusted depending on altitude and gas composition.

To adjust air/gas mixture, loosen air shutter locking nut. Turn burner valve to full "ON" position as in figure 3 below. Adjust air shutter until proper blue flame is burning on both rings. Tighten locking nut on air shutter after making adjustments and turn off the burner.

All units are equipped with fixed orifices which **cannot** be adjusted for gas flow.

8. When unit is not in use, turn main burner valves clockwise to **OFF** position (figure 1).
9. In the event of power failure, blackout or loss of gas do not attempt to operate this unit.
10. In the event of a complete shutdown the main service valve must be closed in the **OFF** position. The service should be performed only by a qualified gas service mechanic.

IMPORTANT

1. The natural gas unit is designed for 6" W.C. operating pressure. A minimum of 5½" W.C. must be maintained or performance of the unit will not meet specifications. The LP unit is designed for 10" W.C. operating pressure. A minimum of 9½" W.C. must be maintained or performance of the unit will not meet specifications.
2. There is a 1/8" test tap in the front left section of the manifold behind the access door. Using a manometer or similar device, adequate pressure should be verified by a qualified gas mechanic after installation and normal operation confirmed.

OPERATION GUIDE

1. The top should come to full operating temperature in approximately 60 minutes after all burners have been lit. Use a high temperature thermometer to verify that the cook surface has reached a minimum operating temperature of 500°F.
2. On reaching operating temperature TURN OFF every other burner. Seven burners on the MBR-84 and six on the MBR-72 are sufficient to maintain operating temperature except during extreme duty cycles when additional burners may be necessary

OPERATIONAL OVERVIEW

The MBR Series Mongolian Barbecues are high performance griddle-style units. Multiple burners are equally spaced under the top with individual valves and safety controls. Depending on the size of the top up to four chefs can cook simultaneously as they sauté vegetables, fish, meat and poultry as guests watch. The MBR is similar to a tepanyaki griddle but much more powerful.

SEASONING

The first time you use the unit the top must be seasoned. This must be done while the ventilation system is in operation. Wash the top with soapy water to remove all grease and oil from the manufacturing process. Rinse the top immediately. Using the procedure described earlier, fire up the unit and get the top hot. Turn down the heat and wipe the surface with a towel coated with cooking oil. With repeated heating and wiping, the top will attain a nonstick finish. Do not use soap again to clean the top but rather a griddle scraper to keep the top free from carbon build-ups.

COOKING

This unit is similar to a high-speed griddle. Intense heat generated by the burners heats the top to achieve the searing temperatures of wok-style cooking. Techniques similar to stir-fry are used. The MBR is designed for use with implements such as our MBR Swords and MBR Veggie Sticks. Like a wok or cast iron fry pan, the top must be re-seasoned periodically. Food should not be allowed to remain on the top as this will cause the top to pit or otherwise deteriorate.

CAUTION: DO NOT CRASH THE TEMPERATURE OF THE TOP!

POURING COLD WATER ON THE TOP WHILE STILL HOT, COULD CAUSE THE CAST IRON TO CRACK. The MBR has manual valves and is not thermostatically controlled. Do not allow all burners to operate at full on after the top has reached operating temperature. HALF of the burners on in a staggered arrangement should provide satisfactory surface temperature of 500°F.

MAINTENANCE

Due to the extreme temperatures generated by the MBR, it is recommended the user keep a supply of thermocouples and at least two safety controls at all times. This may save downtime if these parts are needed. Replacing all thermocouples once every three months and safety controls annually is recommended. Access to service the unit is through the doors in the body and should be done when the unit is cold.

OPERATIONAL NOTES:

1. Allow the top to cool down before cleaning if a liquid cleaner is used. Do not use any abrasive cleaners. We recommend using a blade type grill scraper to clean the top.
2. Do not allow any water to spray on the thermocouples or safety controls during cleaning. If the thermocouples get wet they will fail prematurely.
3. This unit operates at high temperatures causing unit expansion and contraction. MBR should be checked monthly and loose fittings should be tightened as necessary.
4. The burners and pilot assemblies should be checked monthly and cleaned as necessary.

When installing the top, extreme caution must be taken to prevent a pinch point accident. The end user/installer must take precautions to prevent a pinch point accident by supporting the raised top with additional bracing of sufficient strength to sustain the load and prevent the top from slipping off its locator pins while it is being installed or maintenance is performed on the unit.

MAINTENANCE, continued:

Other than cleaning the exterior the unit should need minimal maintenance. If any major work needs to be done the cook top should be fully removed for service.

CLEANING

Your MBR should be cleaned each evening after use. Wash the stainless steel scrap gutter and body with a brush and solution of mild grease dissolver with water. Rinse with water. Remove and clean the scrap cups. Open the access door and roll the Scrap Bin out to be emptied and cleaned. The Scrap Chute should be removed for cleaning only after the top has sufficiently cooled. The safety controls and valves below the unit should be kept dry during the washing process.

Do not use soaps on the cast iron cooking surface. Lightly scrub the surface with a stainless steel scraper and water, then heat the top and re-season with cooking oil. The surface must be seasoned to prevent rust and maintain the nonstick nature.

SPARE PARTS

All MBR 48/84 units require periodic service. Parts subject to replacement include:

249011	Safety Control	249012	Pilot Burner, natural gas
252238	Heavy Duty Thermocouple	249009	Pilot Burner, propane
226102F	Main Burner Valve, brass		

REPAIR AND SPARE PARTS

The MBR will experience difficulties if not properly installed and/or maintained. Reported difficulties have been caused by pressure regulators, gas line debris becoming trapped in safety controls, and thermocouple or control failure due to excessive water exposure. We do not warranty repairs due to abuse or improper operation. Warranty is available upon notification to our Service Department. Call 718-388-5650 Monday to Friday- 8:30 AM –4 PM EST. Service will generally be provided during normal (9AM-5PM) business hours. We suggest that you locate a local repair company that can provide emergency service as necessary.

CAST IRON MONGOLIAN COOK TOP CARE AND MAINTENANCE

These are suggested standard operating procedures to prepare your top for use and maintain it thereafter. The cast iron top of a Mongolian range should be viewed as a large cast iron skillet. It must be washed and seasoned when new. The seasoning must be maintained to keep the black shiny surface that acts as a non-stick surface.

INITIAL SEASONING

When new, wash the top very thoroughly with warm soapy water. The top is coated with rust inhibiting protective oil at time of manufacture. All traces of manufacturing oil must be removed prior to seasoning. Follow these steps for initial seasoning:

1. Remove all traces of manufacturing oil using warm soapy water and brushes, cloths, and/or mildly abrasive scrubbers such as stainless sponges.
2. After all traces of manufacturing oil have been removed, dry the top using clean wipes.
3. After the pilots are lit, turn the gas valves to full ON position. Refer to the diagram earlier in Operating Instructions.
4. The top will slowly begin to become hot. When a drop of water boils on the surface of the top, wipe the top with a thin coat of oil. Immediately wipe the top with a dry cloth to remove any excess oil. Avoid oil build ups.
5. Wait an additional five to ten minutes to allow the top to continue to heat. The top will have started to become darker. Apply another coat of oil and wipe dry as above.

INITIAL SEASONING, cont'd.

- Continue to apply oil and wipe dry in approximately five minute cycles. The top should gradually darken and become black. When a black shiny surface has been achieved, the top is seasoned and ready for use. Reduce heat or turn valves to OFF if finished.

DAILY USE

We recommend the top be kept clean at all times. Visible food residue should be scraped off using a long handled griddle scraper. Apply cooking oil after scraping food residue and wipe with oil to make an even coating. Sauces containing sugar will caramelize and stick to the top requiring more work to scrape it clean. Try to apply sauces to the meal after it is plated or at within the final 30 seconds of the cooking cycle. If saucing on the grill, try to use oil based sauces without sugar.

- Scrape the grill as soon as food residue is visible.
- Oil the grill after scraping or before the next meal is cooked.
- Try to use water from a squeeze bottle on the meal as it cooks so the food is steamed and fried at the same time.
- Allow the grill to cool at the end of the day, then scrape the top clean and apply a light coat of oil.

ANNUAL TOP MAINTENANCE

If the top has visible excessive burned on food, it may become necessary to season the top almost as new. Heat the top and clean with abrasives as described above. Then polish the top using griddle screens and bricks. Then give successive seasonings as outlined above to regain the shiny black surface.

Mongolian Barbecue parts

no.	size/description
252238	H.D. 36" thermocouple
249011H	Replacement safety head only
249011	3/8" IPS Safety, pilot out, TS11K
226102F	3/8" x 3/8" Main gas valve
252239	"L" pilot with bracket (nat. or LP)
226224	24" x 1/4" compression pilot tubing



Mongolian Barbecue Utensils

no.	size/description
MBRS-2	s/s cooking sword
MBR-VS2	s/s Veggie Stick/meal separator



MBRS-2



MBR-VS2

TROUBLE SHOOTING

Pilot burner will not stay lit. This could be caused by one (or more) of three problems:

1. Loose connection at thermocouple to the safety control.
2. Worn out thermocouple.
3. Worn out safety control.

To remedy the problem, first check to see if the thermocouple is snug in the safety control.



1. Remove the valve/control cover
2. Using a $\frac{3}{8}$ " wrench, insure the thermocouple is snug in the body of the safety control. A good rule is giving a $\frac{1}{8}$ turn after finger tightening. **DO NOT OVERTIGHTEN** as it will damage the control.
3. Light the pilot burner. If the pilot burner stays lit, then the problem was a loose connection at the thermocouple.

The thermocouple is snug but the pilot burner will not stay lit.

Thermocouples require replacement as often as three months due to the extremely high temperatures in the combustion chamber of the MBR. To change a thermocouple, wait for the unit to cool. Then:



1. Using a $\frac{3}{8}$ " wrench, remove the thermocouple from the control.
2. Using a $\frac{7}{16}$ " wrench, remove and replace the thermocouple from the pilot burner bracket. When installing the new thermocouple, be sure to thread the adjusting nut up to the top of its travel.
3. After the thermocouple is installed at the pilot burner, thread the brass fitting into the safety body. It should be snug, but not too tight. A good rule is giving a $\frac{1}{8}$ turn after finger tightening. **DO NOT OVERTIGHTEN** as it will damage the control. Light pilot.

The thermocouple was replaced, is snug but the pilot burner will still not stay lit.

If all else fails, change the head on the safety control. This procedure should be performed only by a qualified gas service mechanic or licensed gas plumber. Gas to the unit must be shut off before attempting this procedure.



1. Remove the valve/control cover



2. Using a $\frac{3}{8}$ " wrench, remove the brass thermocouple fitting from the safety control.



3. Using a $\frac{7}{16}$ " wrench, remove the brass fitting from the pilot gas line.



4. Remove the screws from the safety head.



5. Remove the safety head.



6. Remove brass adaptor attached to the safety head and install on the new head.



7. Remove and replace the spring/magnet assembly.



8. New spring/magnet assembly installed.



9. Install the new safety head with the new gasket provided (discard old gasket.)



10. Mount the safety head and replace the screws.



11. Carefully thread the brass fitting from the pilot gas line into the body and tighten using a 7/16" wrench.



12. Thread the thermocouple fitting into the body by hand. When you can no longer tighten by hand, use a 3/8" wrench to make snug. A good rule is giving a 1/8 turn after finger tightening. **DO NOT OVERTIGHTEN** as it will damage the control. Turn on gas, check for leaks, and relight pilot.



The gas burner orifices are fixed, but the amount of air can be adjusted..

A blue flame is generally a good indicator of proper combustion. A yellow flame indicates poor combustion and often results in carbon buildup. This leads to poor performance.

To adjust the air/gas mixture, use an adjustable wrench. Loosen the locknut in front of the air shutter. Turn the air shutter counter-clockwise to increase the amount of air. Look for a clear blue flame, and then secure locknut against the air shutter.



The air mixer should be cleaned once every six months.

Dust is pulled into the air mixer and becomes trapped between the air mixer body and the air shutter. If you notice that the burner flames are becoming yellow after a period of time, the air mixers may require clearing.

Insert a small brush or pipe cleaner between the air shutter and air mixer body. Remove any accumulations of dirt or dust. This is a very simple procedure that, if performed regularly, assures excellent performance.