

# Broil King®

## INFRARED SIDE BURNER

---

### OWNER'S AND ASSEMBLY MANUAL

FOR USE WITH BUTANE OR PROPANE GAS

CATEGORY I<sub>3+</sub>(28-30/37), CATEGORY I<sub>3B/P</sub>(30)

CATEGORY I<sub>3B/P</sub>(37), CATEGORY I<sub>3P</sub>(50)

FOR USE WITH NATURAL GAS

CATEGORY I<sub>2E</sub>(20), CATEGORY I<sub>2H</sub>(20)

### CONTENTS

SAFETY .....	2
LEAK TESTING .....	3
LIGHTING.....	4
OPERATION .....	5
COOKING TECHNIQUES.....	5
MAINTENANCE .....	6
TROUBLE SHOOTING .....	7
ASSEMBLY .....	8
PARTS LISTING .....	19
WARRANTY.....	20

#### FITS:

Broil King® Imperial™ XLS, Imperial™ XL, Imperial™ 590, Imperial™ 490

Broil King® Regal™ XL, Regal™ S 590 Pro, Regal™ 590, Regal™ S 490 Pro, Regal™ 490, Regal™ S 440 Pro, Regal™ 440

Broil King® Baron™ 590, Baron™ 490, Baron™ 440, Baron™ 340

---

READ ALL INSTRUCTIONS CAREFULLY BEFORE OPERATING.  
RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE.

---



SINCE 1906  
585 KUMPF DRIVE  
WATERLOO, ONTARIO, CANADA  
N2V 1K3

20094-IREU REV A 01/19

# SAFETY

This appliance is designed in accordance with CE Standards.

Use outdoors only.

Read the instructions before using the appliance.

**Warning:** accessible parts may be very hot. Keep young children away.

Do not move the appliance during use.

Use caution when handling or transporting this product. Metal edges can present a hazard. Use appropriate gloves when lifting or handling.

Turn off the gas supply after use.

Use protective gloves when handling hot components.

Any modification of the appliance may be dangerous. In the event of a gas leak, shut off gas supply.

**If you smell gas:**

1. Shut off gas to the appliance.
2. Extinguish any open flame.
3. If odor continues, immediately call your gas supplier.

## SPECIFICATIONS

MODEL	TOTAL HEAT INPUT Kw	TOTAL HEAT INPUT g/h	JET SIZE
18672	2.7 Kw	196 g/h	0.74mm
18673	2.7 Kw	196 g/h	0.79mm
18676	2.7 Kw	196 g/h	1.09mm

## SPECIFICATIONS

FOR USE IN	CATEGORY	SUPPLY PRESSURE BUTANE	SUPPLY PRESSURE PROPANE	SUPPLY PRESSURE NATURAL GAS
BE	I <sub>3+</sub> (28-30/37)	28-30 mbar	37 mbar	
CH	I <sub>3+</sub> (28-30/37)	28-30 mbar	37 mbar	
ES	I <sub>3+</sub> (28-30/37)	28-30 mbar	37 mbar	
FR	I <sub>3+</sub> (28-30/37)	28-30 mbar	37 mbar	
GB	I <sub>3+</sub> (28-30/37)	28-30 mbar	37 mbar	
IE	I <sub>3+</sub> (28-30/37)	28-30 mbar	37 mbar	
IS	I <sub>3+</sub> (28-30/37)	28-30 mbar	37 mbar	
IT	I <sub>3+</sub> (28-30/37)	28-30 mbar	37 mbar	
PT	I <sub>3+</sub> (28-30/37)	28-30 mbar	37 mbar	
CZ	I <sub>3B/P</sub> (30)	30 mbar	30 mbar	
DK	I <sub>3B/P</sub> (30)	30 mbar	30 mbar	
FI	I <sub>3B/P</sub> (30)	30 mbar	30 mbar	
GR	I <sub>3B/P</sub> (30)	30 mbar	30 mbar	
HU	I <sub>3B/P</sub> (30)	30 mbar	30 mbar	
LT	I <sub>3B/P</sub> (30)	30 mbar	30 mbar	
LU	I <sub>3B/P</sub> (30)	30 mbar	30 mbar	
LV	I <sub>3B/P</sub> (30)	30 mbar	30 mbar	
NL	I <sub>3B/P</sub> (30)	30 mbar	30 mbar	
NO	I <sub>3B/P</sub> (30)	30 mbar	30 mbar	
RO	I <sub>3B/P</sub> (30)	30 mbar	30 mbar	
SE	I <sub>3B/P</sub> (30)	30 mbar	30 mbar	
PL	I <sub>3B/P</sub> (37)	37 mbar	37 mbar	
DE	I <sub>3P</sub> (50)		50 mbar	
DE	I <sub>2E</sub> (20)			20 mbar
AT	I <sub>2H</sub> (20)			20 mbar
CH	I <sub>2H</sub> (20)			20 mbar
CZ	I <sub>2H</sub> (20)			20 mbar
DK	I <sub>2H</sub> (20)			20 mbar
ES	I <sub>2H</sub> (20)			20 mbar
FI	I <sub>2H</sub> (20)			20 mbar
GB	I <sub>2H</sub> (20)			20 mbar
GR	I <sub>2H</sub> (20)			20 mbar
IE	I <sub>2H</sub> (20)			20 mbar
IT	I <sub>2H</sub> (20)			20 mbar
NO	I <sub>2H</sub> (20)			20 mbar
PT	I <sub>2H</sub> (20)			20 mbar
SE	I <sub>2H</sub> (20)			20 mbar

# LEAK TESTING

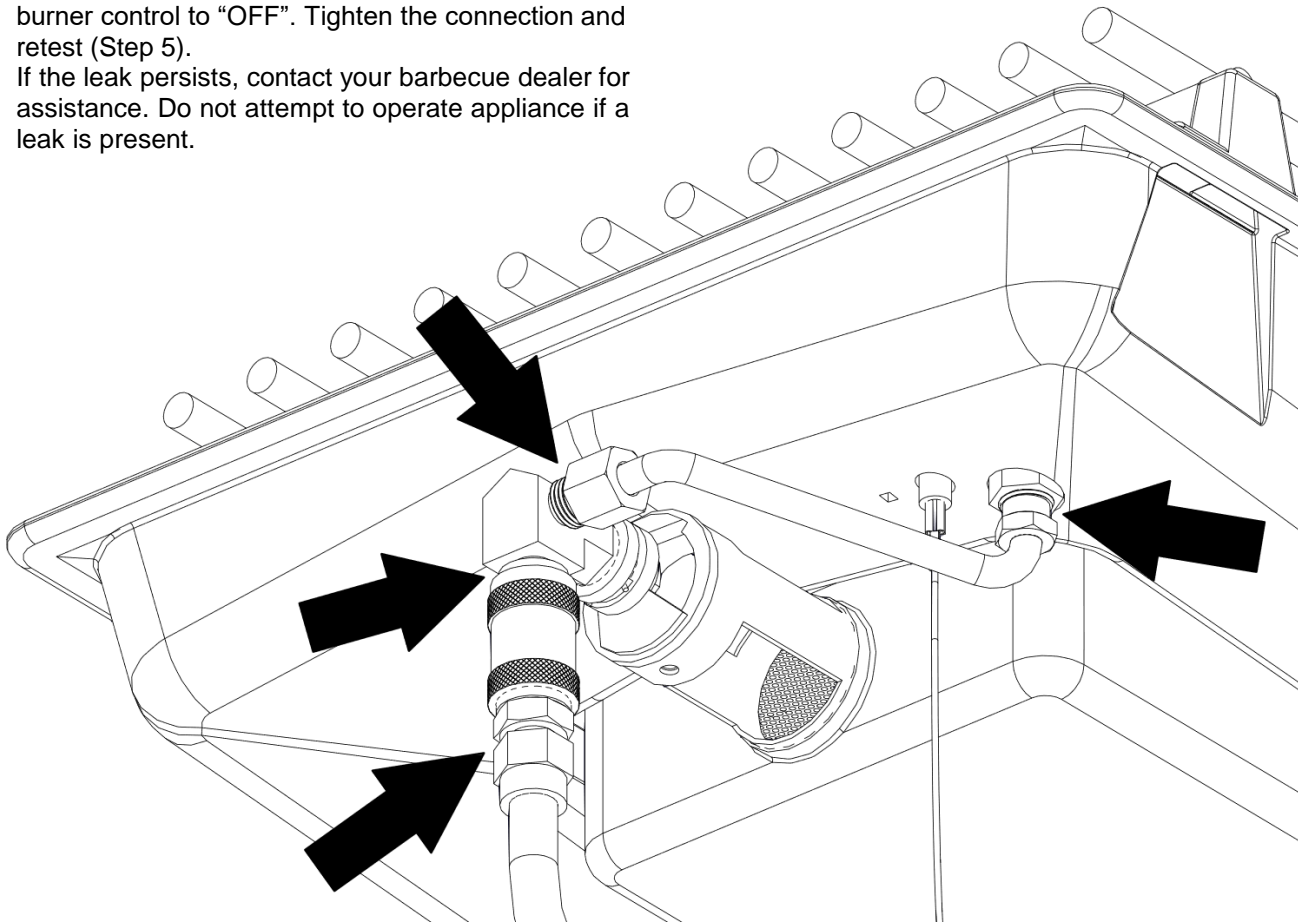
All factory-made connections have been thoroughly tested for gas leaks and the burner has been flame tested. However, shipping and handling may have loosened a gas fitting.

## AS A SAFETY PRECAUTION:

- **TEST ALL FITTINGS FOR LEAKS BEFORE USING YOUR INFRARED SIDE BURNER.**
- **TEST THE CYLINDER VALVE FOR LEAKS EACH TIME THE CYLINDER IS FILLED.**
- **TEST FOR LEAKS EVERY TIME YOU DISCONNECT AND RECONNECT A GAS FITTING.**
- **DO NOT SMOKE!**
- **NEVER TEST FOR LEAKS WITH A LIGHTED MATCH OR OPEN FLAME.**
- **TEST FOR LEAKS OUTDOORS.**

## TO TEST FOR LEAKS

1. Assemble the infrared side burner per the assembly instructions. See page 8.
2. Check that all control knobs are turned to "OFF".
3. Prepare a soap solution of one-part water, one-part liquid detergent.
4. Open gas source.
5. Light the infrared side burner. See lighting on page 4.
6. Brush the soap solution on each connection.
7. A leak is identified by a flow of bubbles from the area of the leak.
8. If a leak is detected, close the gas source, turn side burner control to "OFF". Tighten the connection and retest (Step 5).
9. If the leak persists, contact your barbecue dealer for assistance. Do not attempt to operate appliance if a leak is present.



# LIGHTING

## LIGHTING INSTRUCTIONS

- **The infrared side burner must be assembled and installed as per the assembly and installation instructions. See page 8.**
  - Ensure the grill is properly connected to the LP or Natural Gas supply.
  - Ensure there are no gas leaks in the gas supply system. See: "Leak Testing." (Page 3).
  - Ensure that ignition wire is connected.
  - Check that the battery has been installed in the electronic ignition.
  - Carefully review all instructions on the information plate attached to the gas grill.
1. **Open lid before lighting.**
  2. **Do not lean over gas grill while lighting.**
  3. Set control knobs to "OFF" and turn on the gas supply.

## LIGHTING THE INFRARED SIDE BURNER:

### To light burner with the Ignitor:

4. Push and turn side burner control knob to "HIGH."
5. Push and hold the ignitor button.
6. Burner should ignite within 5 seconds.

### To light burner with a match:

4. Apply lit match to burner ports.
5. Push in the side burner control knob and turn to "HIGH."
6. Burner should ignite within 5 seconds.

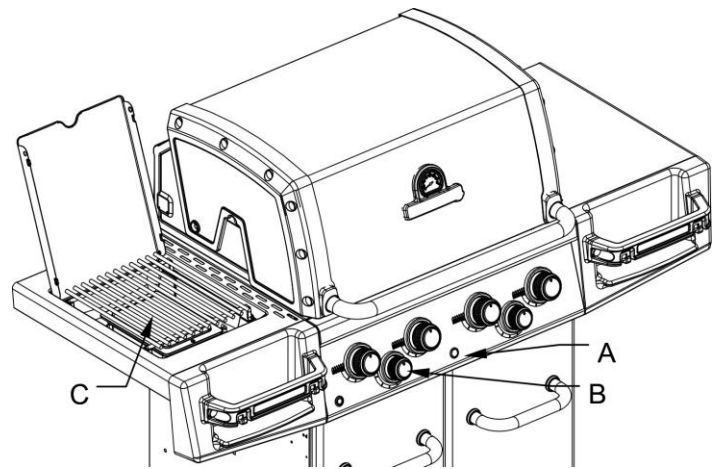
Note: Pots on the side burner must not be less than 1" (2.5 cm) or exceed 9" (23 cm) in diameter or 15 lbs. (7 kg) in weight.

## IF BURNER DOES NOT IGNITE:

- Push and turn control knob to "OFF." Wait 5 minutes then try again with control knob set at "MEDIUM."
- If burner will not light, see "Troubleshooting" on page 7. If problem persists, do not attempt to operate the appliance; contact OMC, your dealer or an approved service center.

## SHUTDOWN:

1. Turn off cylinder valve.
2. Turn control knobs to "OFF."



- A. IGNITOR
- B. SIDE BURNER CONTROL
- C. SIDE BURNER

# OPERATION

## First Time Use

Before cooking on your infrared side burner for the first time, clean the components and preheat the appliance to rid it of any odors or foreign matter in the following manner:

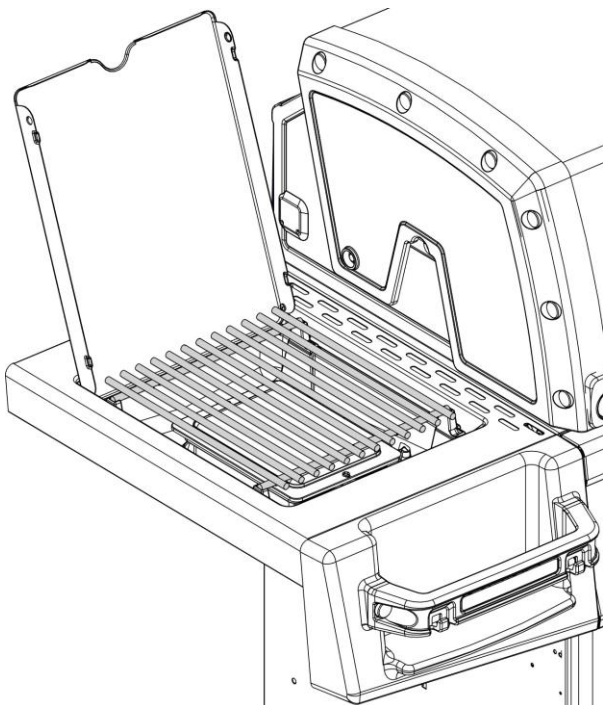
- Remove and clean the cooking grid with mild soap and water.
- With cooking grid removed, light the infrared side burner following lighting instructions (see Page 4) and operate the infrared side burner for **10 minutes**. Next, turn gas source off then turn side burner control knob to the "OFF" position.
- Season the cooking grid by coating grid with an organic cold processed cooking oil with a high smoke point, light the grill and operate on Med/Low for 30 minutes.
- Recommended cooking oils:
  - Avocado Oil – smoke point (260C/500F)
  - Rice Bran Oil – smoke point (255C/490F)
  - Canola Oil – smoke point (204C/400F)
- You are ready to grill. Proceed to "Preheating."

## Preheating

- **Preheat the infrared side burner on HIGH** for 5 minutes.
- Clean cold grids with a nylon grill brush (Item # 65643) or hot grids with a stainless steel wire grill brush (Item #'s 65225, 64014, 64034) and carefully inspect to ensure there are no broken bristles left on the grid.
- Coat the grid with a high smoke point cooking oil.
- Adjust heat as appropriate for what you are grilling.

**Lid Position. The infrared side burner lid must always remain open during cooking.** Keep the lid closed when infrared side burner is not in use. Allow the infrared side burner to cool down before closing lid.

**Grid Position. The infrared side burner grid must always remain in the upper position during cooking.**



# COOKING TECHNIQUES

## INFRARED COOKING:

Broil King's infrared side burner technology gives you the ability to sear and grill delicious foods quickly and efficiently.

The infrared burner is designed to focus the gas flame onto the ceramic tile comprised of thousands of microscopic holes. This converts the heat of the flame into infrared energy generating consistent even heat across the entire surface. Traditional gas burners heat the air surrounding the burner through combustion which rises to the cooking surface. In contrast, the infrared burners direct heat radiates to the cooking surface with more intensity to allow for higher grilling temperatures than a traditional gas burner.

## DIRECT GRILLING

The direct grilling method involves cooking the food on the grid directly over the infrared burner. Direct grilling is the most popular method for most single serving items such as steaks and chops.

1. Prepare food in advance to avoid delay and timing problems. If using marinade or spices, they should be applied before placing meat on the cooking grid. If basting with sauces, they should be applied in the last 2-4 minutes of grilling to avoid burning.
2. Organize the area around the gas grill to include tongs, oven mitts, sauces and seasonings to allow you to stay in the vicinity of the gas grill while cooking.
3. Bring meat to room temperature just prior to grilling. Trim excess fat from meat to minimize the "flare-ups" that are caused by dripping grease.
4. Coat the grid with a high smoke point oil to prevent food from sticking to the grid.
5. Hold the salt when cooking meats on the infrared side burner. The meat will stay juicier if the salt is added after cooking.
6. Learn to test when the meat is done by time and feel. Meat firms up as it cooks. When the meat is soft it is rare. When it is firm, it is well done.
7. Go online to see great infrared grilling recipes. [www.broilkingbbq.com](http://www.broilkingbbq.com)

# MAINTENANCE

## REGULAR MAINTENANCE

To ensure optimal performance and safety, the following components should be inspected and cleaned as required before use of your infrared side burner.

### COOKING GRIDS - HEAVY ROD STAINLESS

BROIL KING® Heavy Rod stainless grids provide maximum durability and good heat retention and good grilling performance.

For optimum performance:

- Before first use and after long periods of storage, wash grids using a light detergent and water and then rinse and dry with paper towel; never air dry grids or use a dishwasher.
- Immediately after washing, season cooking grids by coating grids with an organic cold pressed cooking oil with a high smoke point, light the grill and operate on Med/Low for 30 minutes. Recommended cooking oils:
  - Avocado Oil – smoke point (260C/500F)
  - Rice Bran Oil – smoke point (255C/490F)
  - Canola Oil – smoke point (204C/400F)
- Before and after each use, brush grids with a good quality stainless steel bristle brush (Item #'s 65225, 64014, 64034) and lightly coat with a high smoke point cooking oil. This will continue the seasoning process.
- Avoid applying sugar based marinades or salt to meat before grilling, apply sugar based marinades at end of grilling and salt after grilling.
- Use oil based marinades, avoid water based marinades.
- Lightly coat food with cooking oil of your choice before grilling.
- Ensure the surface of the grid is always coated with a light layer of oil. This helps prevent rust and deterioration and improves the grids non-stick performance.
- If rust does occur, Burn-Off the grid, brush with a stainless steel bristle brush and re-season.
- Keep infrared side burner cover closed when not in use.

During long periods of inactivity, grid should be **seasoned**, then stored in a dry place. The grid may be wrapped in protective plastic food wrap. After periods of storage, Burn-Off grid, wash, dry with paper towel and re-season with a high smoke point cooking oil.

#### **Warning:**

**If the infrared side burner is hot, use caution and oven mitts while handling the stainless steel bristle brush. Inspect the grid carefully after brushing to ensure there are no broken bristles left on the grid.**

### GREASE PAN

The grease pan is located at the rear under the shelf. Clean regularly.

### GENERAL CLEANING

Perform a Burn-Off (see below).

When infrared side burner is cool, remove grid.

Clean the interior of the infrared side burner as necessary by scraping the sides and bottom of the with the grid lifter and vacuum residue.

Rust is a natural oxidation process and may appear on internal stainless steel parts. Rust will not affect performance of your infrared side burner.

### BURN-OFF

Ignite the burner as per "Lighting" (page 4).

Operate infrared side burner on HIGH for 10 minutes maximum.

Turn the gas source off then turn control knob to OFF.

## ANNUAL MAINTENANCE

The following components should be inspected and cleaned at least once a year or after any period of storage over 30 days to ensure optimal performance, safety and efficiency.

### BURNER

Inspect for cracks and deterioration. Clean venturi tubes using a pipe cleaner or venturi brush to eliminate any blockages. While the burner is removed, clean the interior by scraping the sides and bottom and vacuuming.

### HOSE

Inspect and replace if necessary.

### REPLACEMENT PARTS

If a problem is found with the regulator, hose, burner, or control valves, do not attempt repair. See your dealer, approved service center, or contact the factory for repairs or replacement parts. To ensure optimum performance, use only original BROIL KING® replacement parts.

### LEAK TEST

When reconnecting a gas cylinder on propane models, be sure to check for leaks. See "Leak Testing." (Page 3)

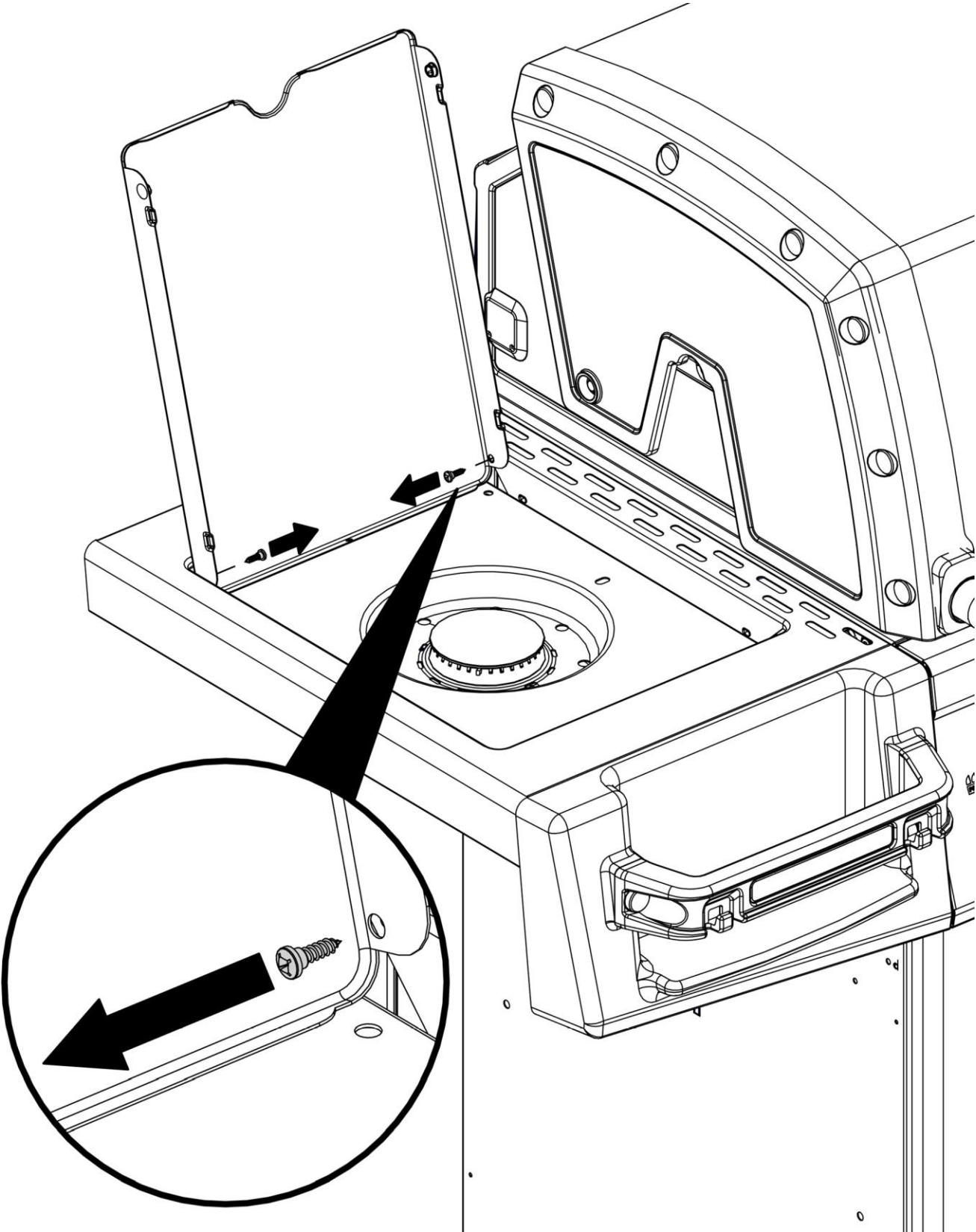
# TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
<b>SMELL OF GAS</b>	<b>SHUT OFF LP CYLINDER VALVE AT ONCE. DO NOT USE THE APPLIANCE UNTIL LEAK IS SEALED.</b>	
Leak detected at cylinder, regulator or other connection.	<ol style="list-style-type: none"> <li>1. Regulator fitting loose.</li> <li>2. Gas leak in hose/regulator or control valves.</li> </ol>	<ol style="list-style-type: none"> <li>1. Tighten fitting and "Leak Test." (page 3)</li> <li>2. See authorized service center.</li> </ol>
Flickering Burner Flame or Low Temperatures on HIGH Setting	<ol style="list-style-type: none"> <li>1. Excess flow safety device has been activated in connection between cylinder and barbecue.</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn LP cylinder valve off then turn all burners to OFF position. Disconnect the regulator from the cylinder. Wait two minutes. Re-attach regulator to the cylinder. Open the cylinder valve slowly. Wait one minute. Light grill as per "Lighting" (page 4)</li> </ol>
Burner Not Lighting	<ol style="list-style-type: none"> <li>1. Out of LP Gas.</li> <li>2. Ignitor issue.</li> <li>3. Excess flow safety device has been activated.</li> <li>4. Regulator is not fully connected to the cylinder valve.</li> <li>5. A leak in the system causing the excess flow device to activate.</li> <li>6. Orifice(s) blocked.</li> <li>7. Hose is twisted.</li> </ol>	<ol style="list-style-type: none"> <li>1. Refill LP Gas Cylinder.</li> <li>2. Try manually lighting burner with a match. See "Lighting" (page 4). If burner lights successfully, it is an ignitor issue. See "Ignitor not Working" below</li> <li>3. Follow "Flickering Flame or Low Temperatures on HIGH setting" solution above.</li> <li>4. Tighten the regulator hand wheel.</li> <li>5. Leak test connections to determine loose fitting. Tighten fitting. Leak test system.</li> <li>6. Remove burner, clean orifices with a pin or fine wire. Do not drill orifices.</li> <li>7. Straighten hose.</li> </ol>
Ignitor Not Working	<ol style="list-style-type: none"> <li>1. Ignitor battery is dead</li> <li>2. Ignitor wire(s) not connected</li> <li>3. Electrode misaligned on burner</li> <li>4. Ignitor malfunction</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace battery</li> <li>2. Ensure main burner and side burner electrode wires are all connected</li> <li>3. Realign electrode and clear any surrounding debris from area</li> <li>4. Use "Match Lighting" procedure. (Page 4)</li> </ol>
Decreasing Heat, "Popping Sound"	<ol style="list-style-type: none"> <li>1. Out of LP Gas.</li> <li>2. Venturi blocked.</li> </ol>	<ol style="list-style-type: none"> <li>1. Refill LP Gas Cylinder.</li> <li>2. Remove burner, clean venturi.</li> </ol>
Regulator Humming Noise	<ol style="list-style-type: none"> <li>1. Cylinder valve opened too quickly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Open cylinder valve slowly.</li> </ol>
Cooking Grid Rusting	<ol style="list-style-type: none"> <li>1. Porcelain enamel has been chipped</li> </ol>	<ol style="list-style-type: none"> <li>1. See "Maintenance" (page 6) for help</li> </ol>



# ASSEMBLY

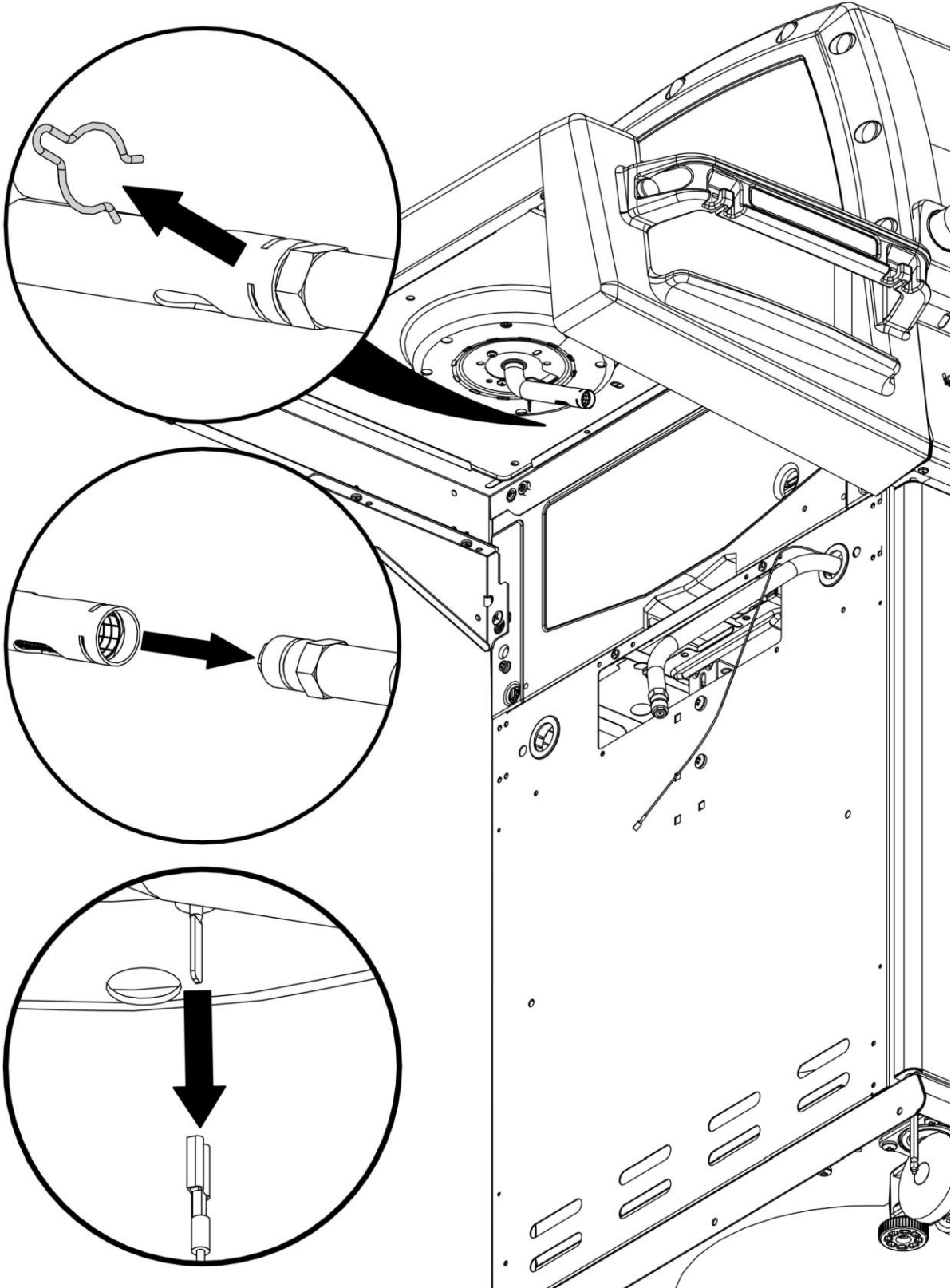
<b>1</b>	
----------	--





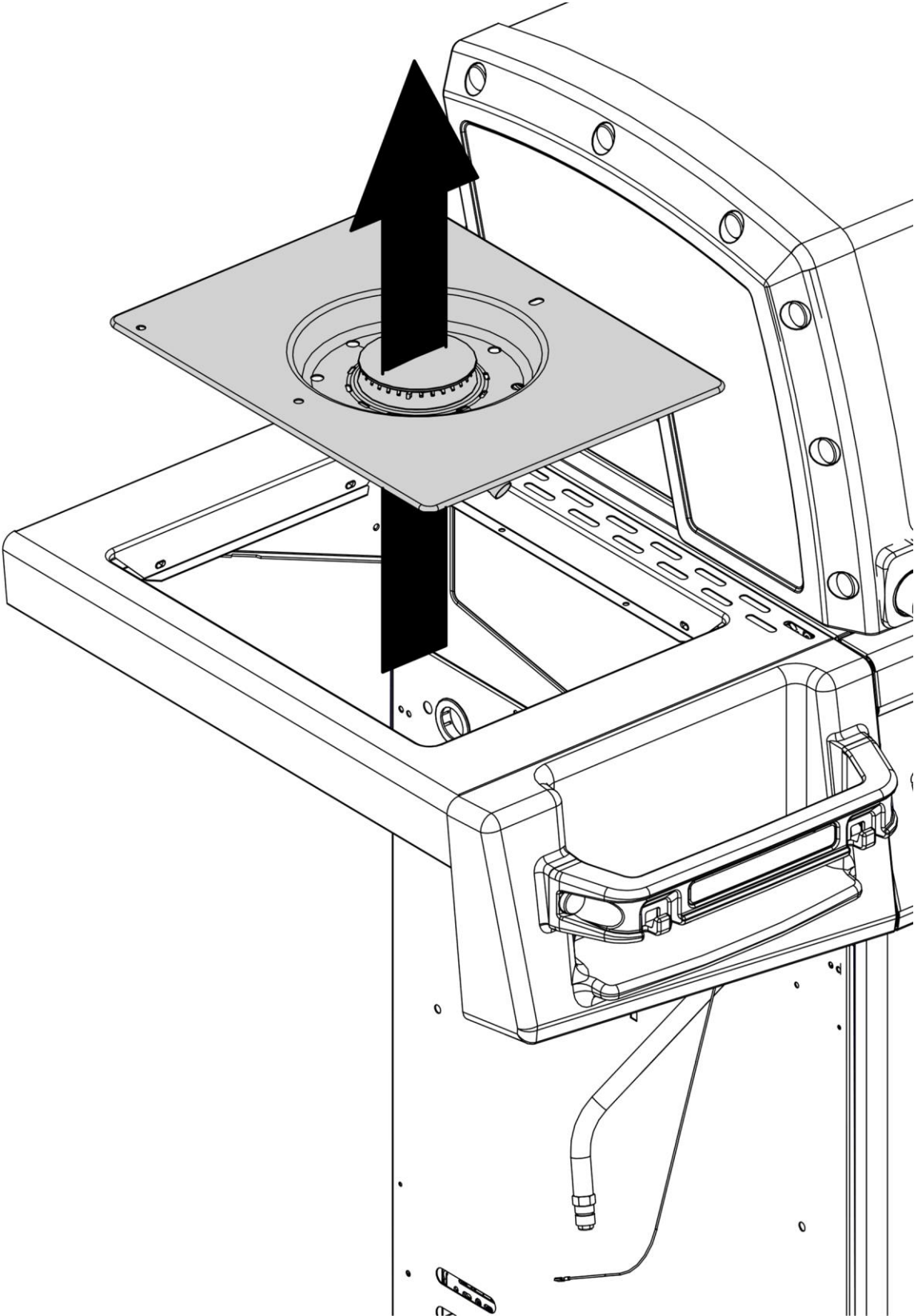
# ASSEMBLY

**2**




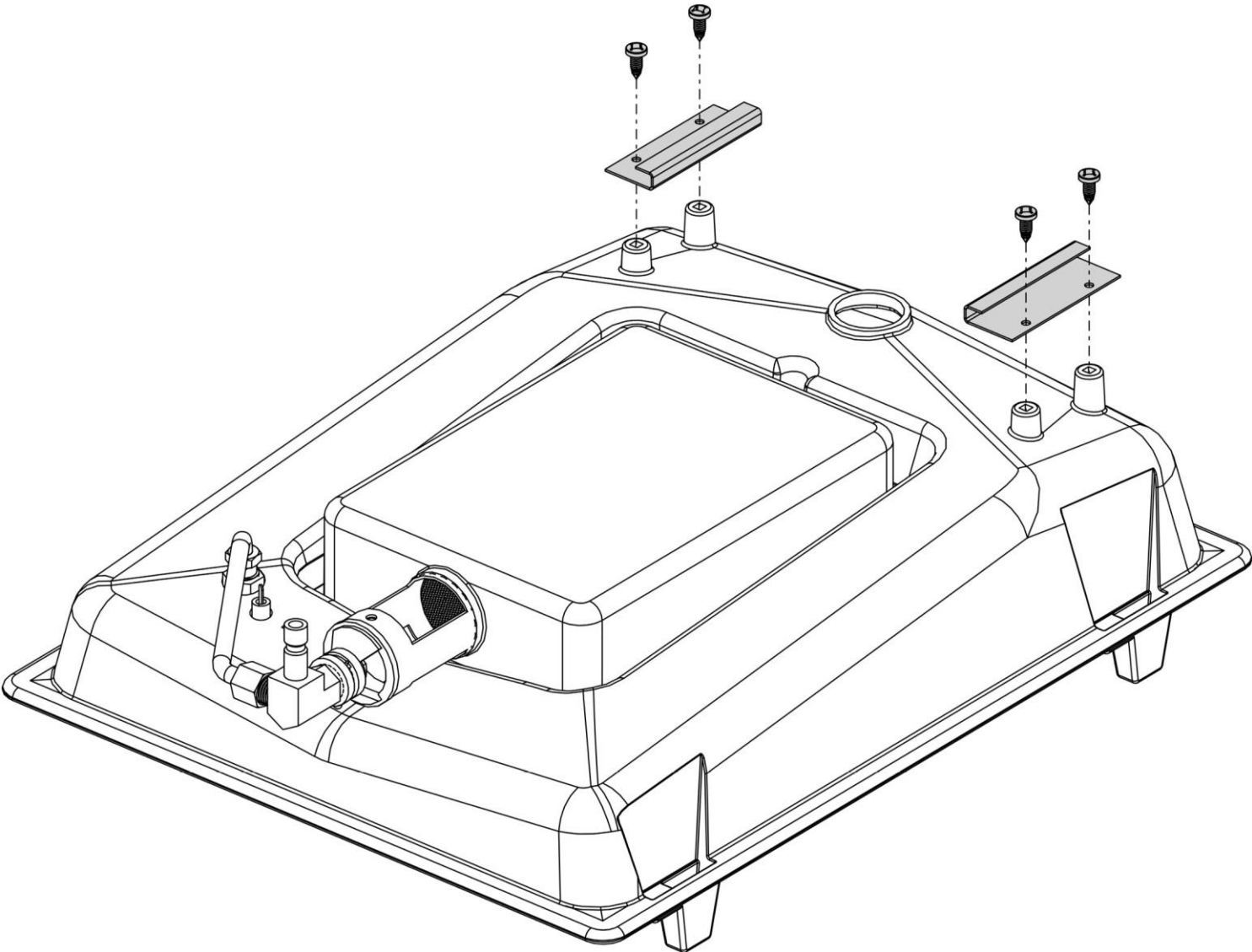
# ASSEMBLY

<b>3</b>	
----------	--





# ASSEMBLY

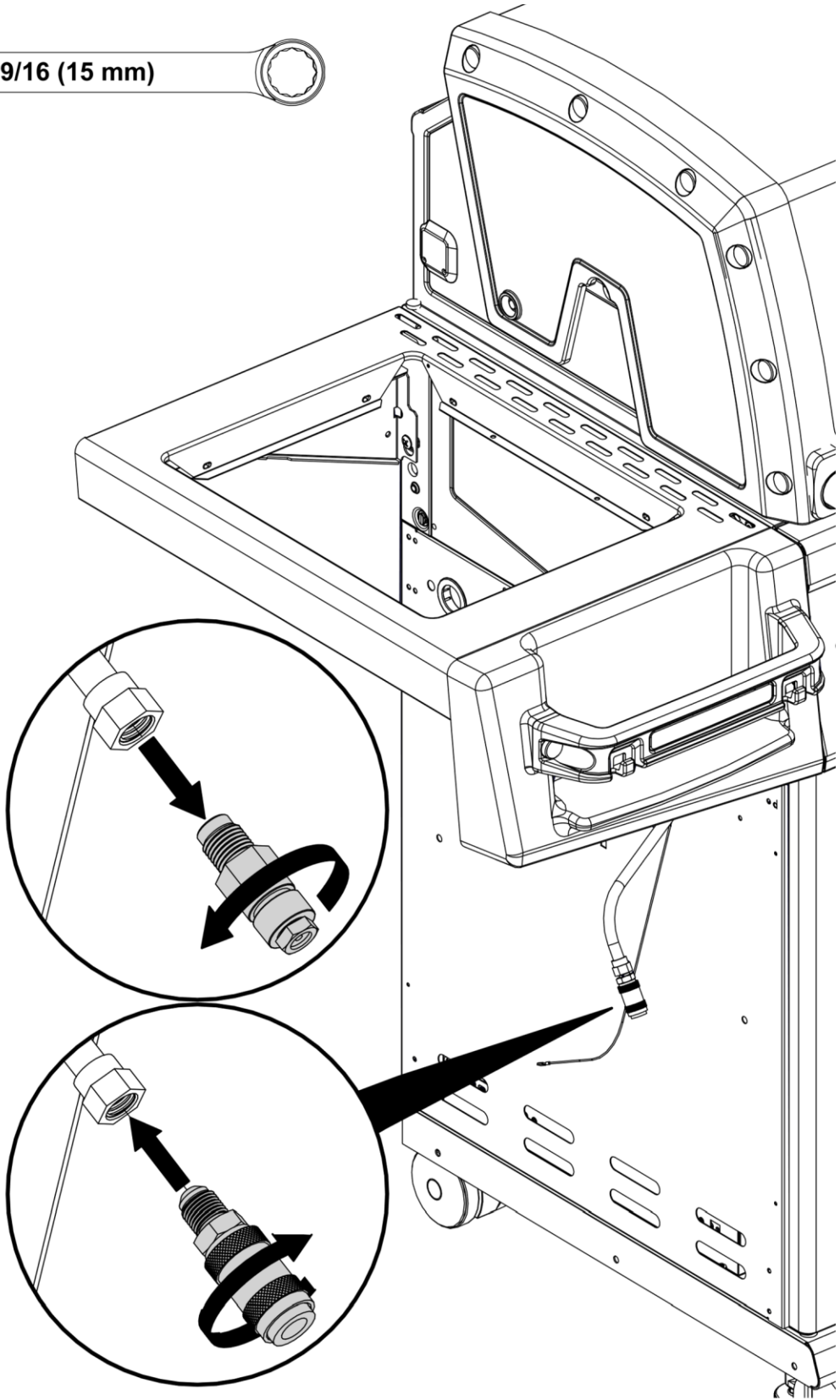
<b>4</b>	(4) 
----------	---



# ASSEMBLY

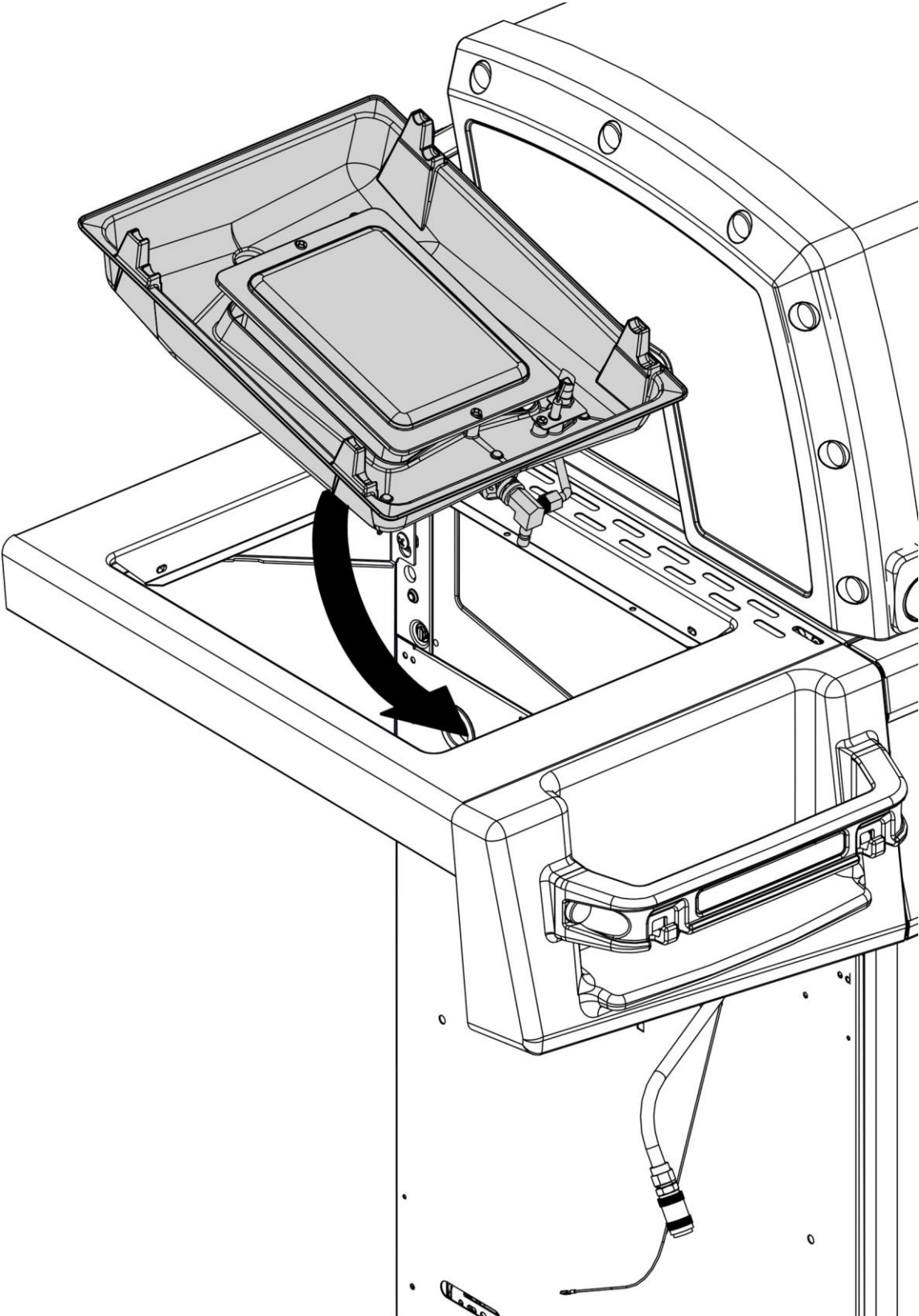
<h1>5</h1>	<p>(1)</p> 
------------	--

2X  9/16 (15 mm) 



# ASSEMBLY

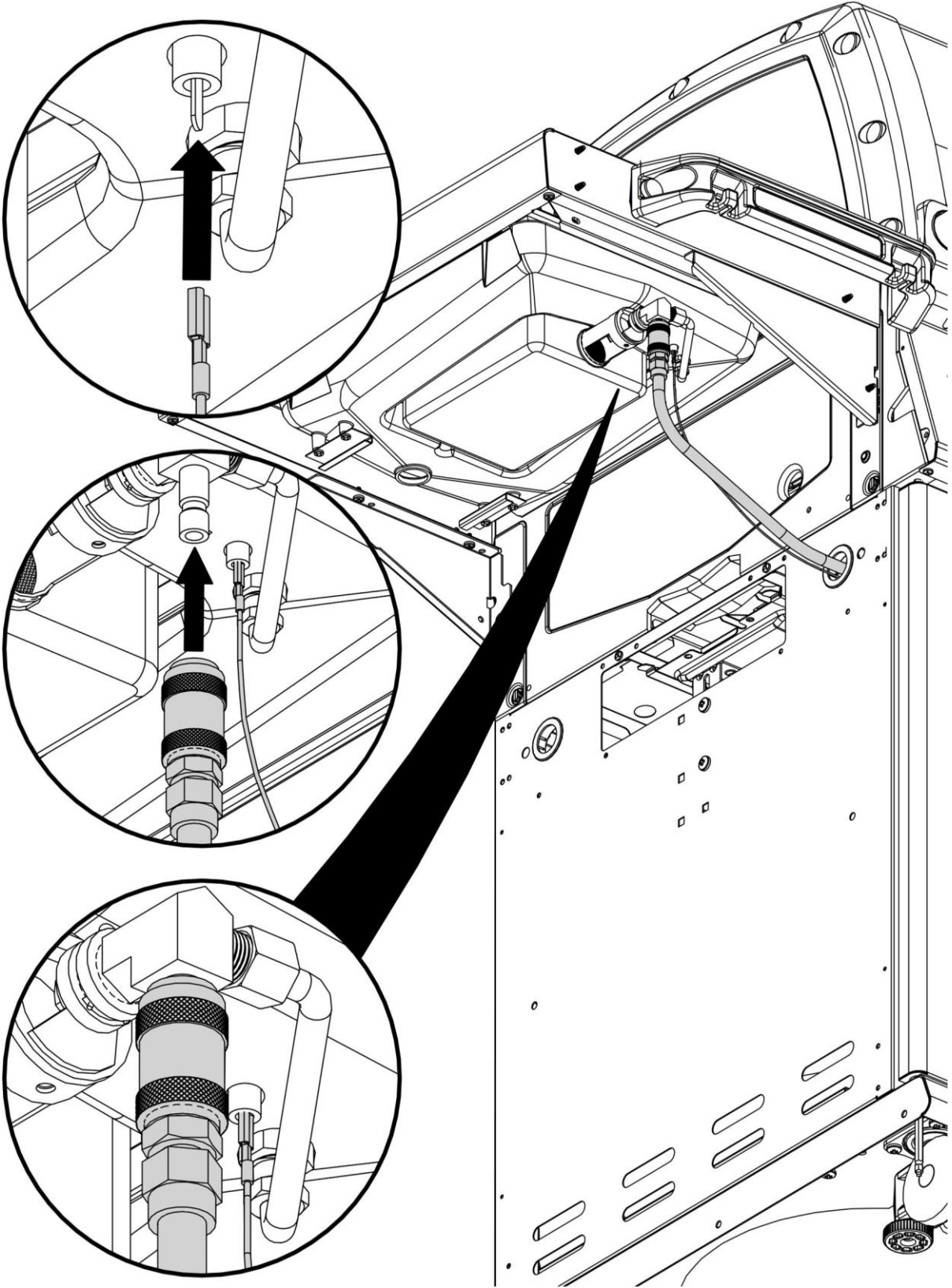
**6**





# ASSEMBLY

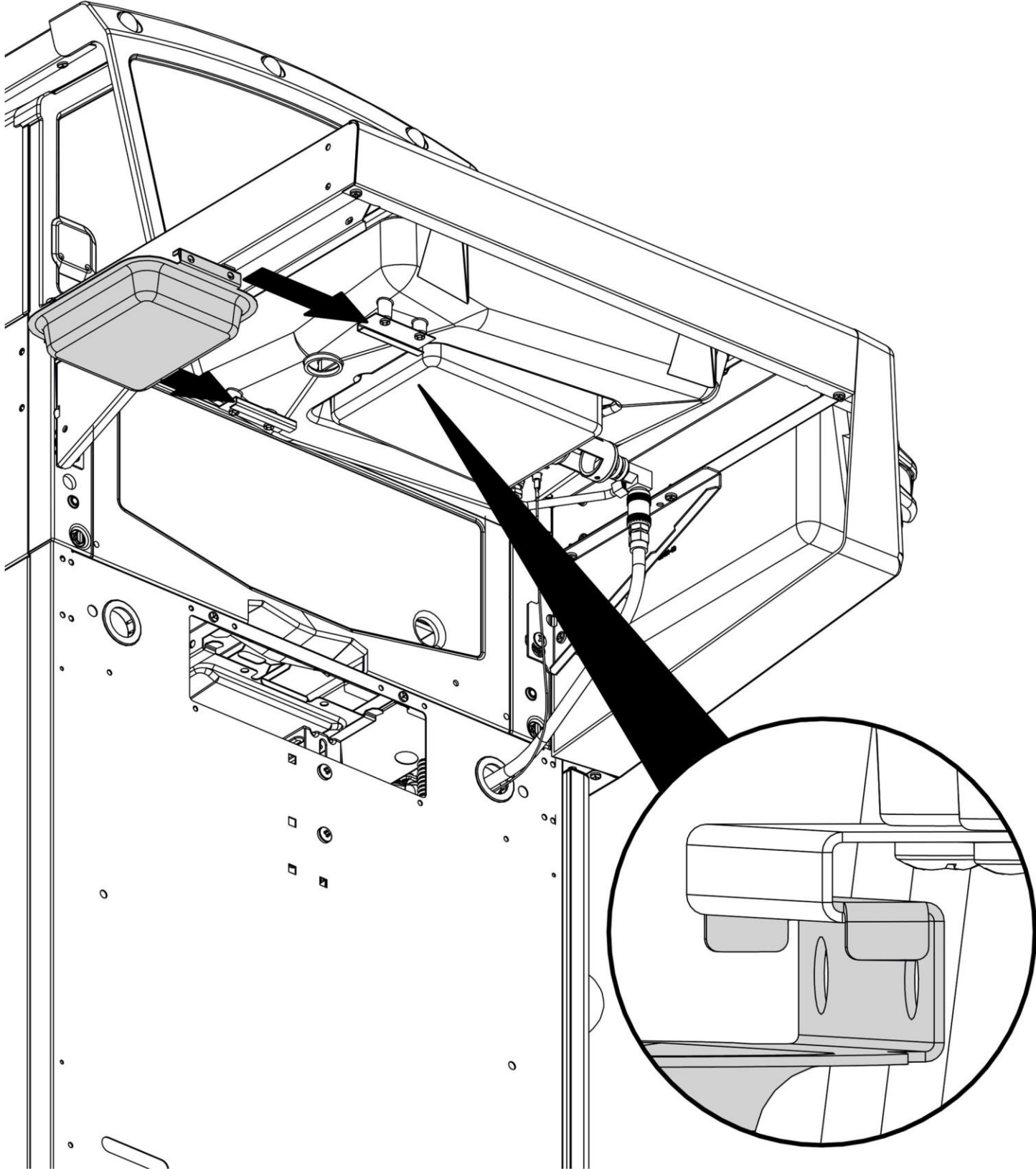
**7**





# ASSEMBLY

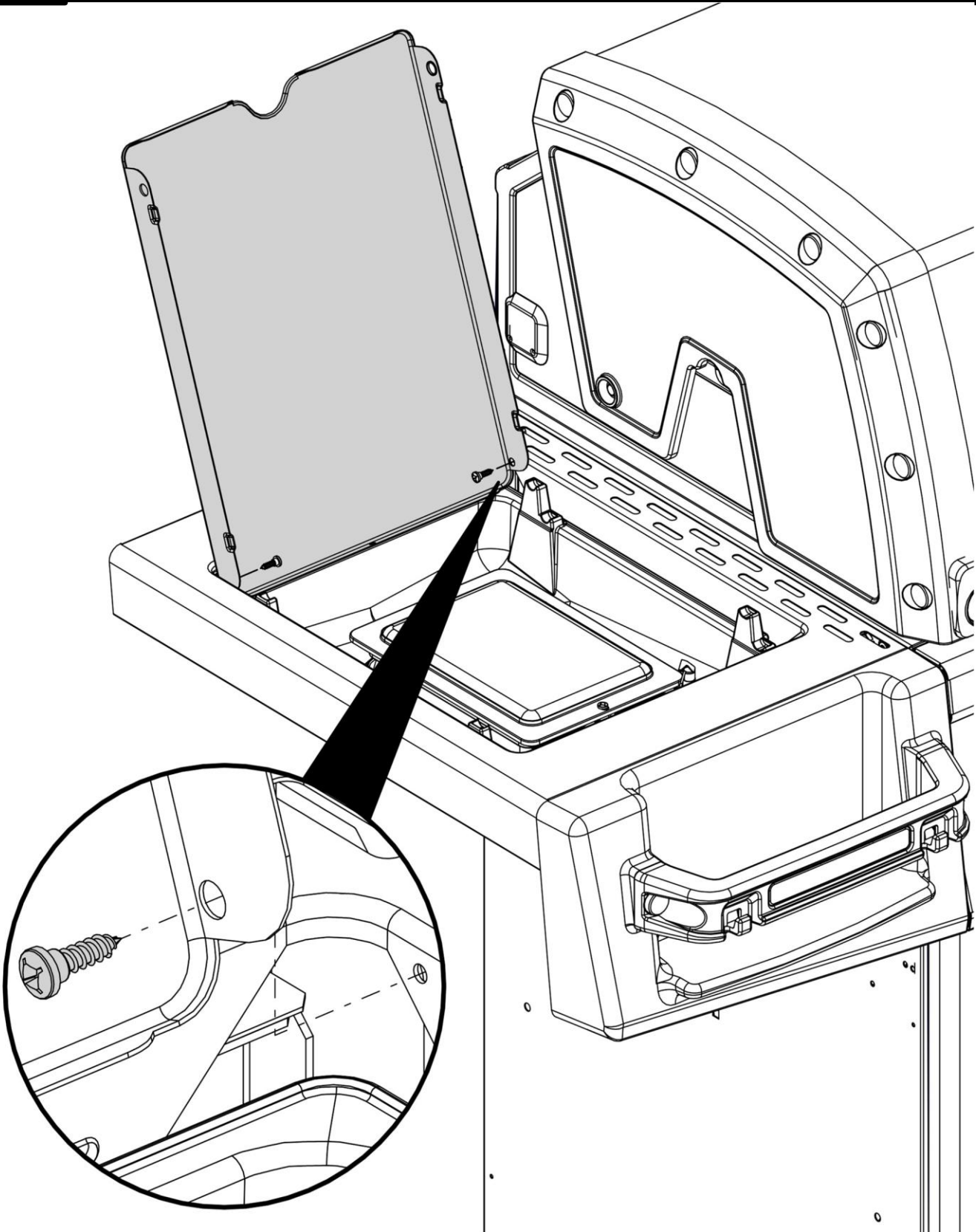
**8**



# ASSEMBLY

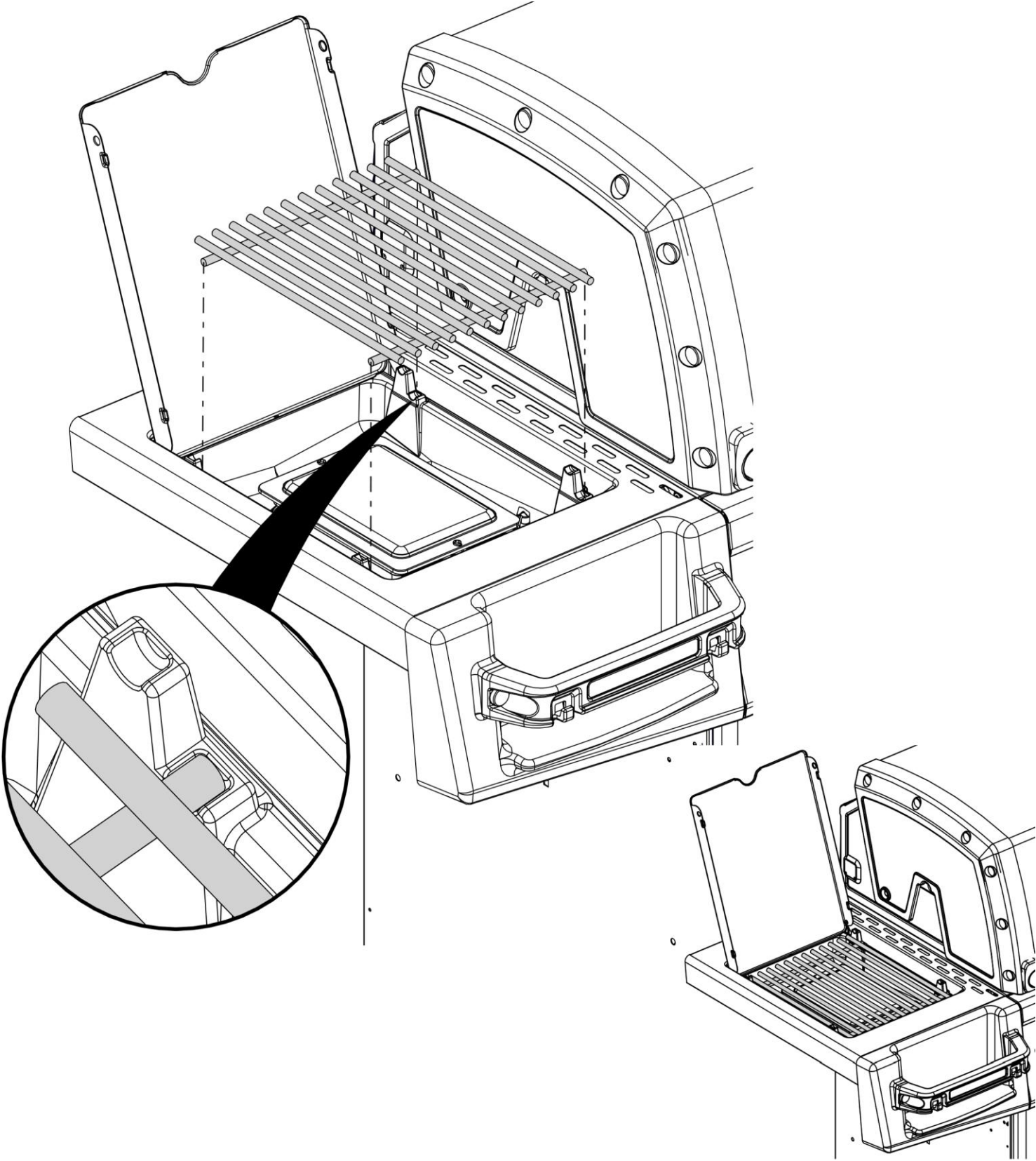
**9**

(2) 



ASSEMBLY

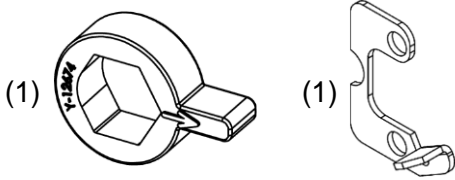
10



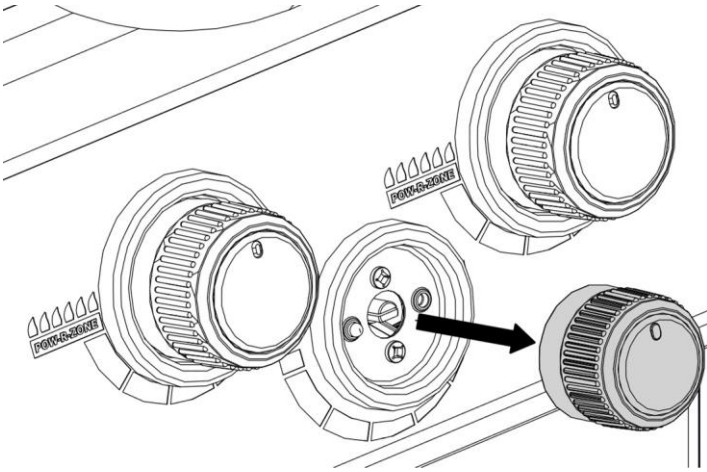


# ASSEMBLY

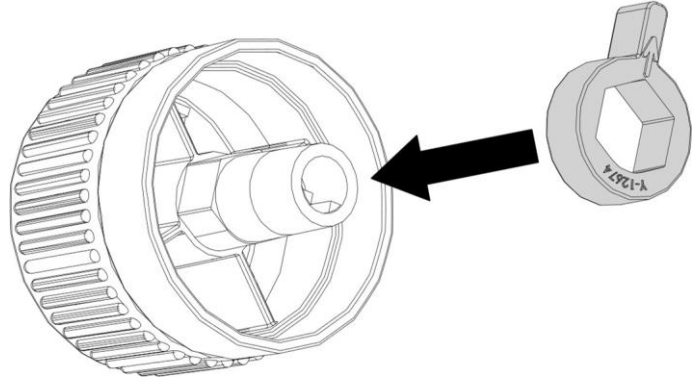
# 11



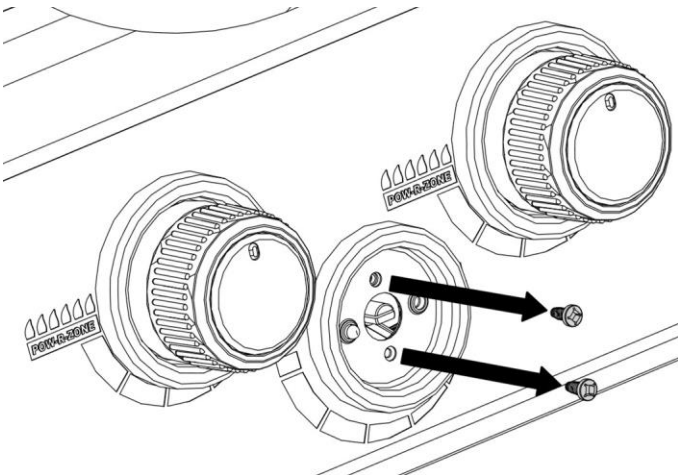
1



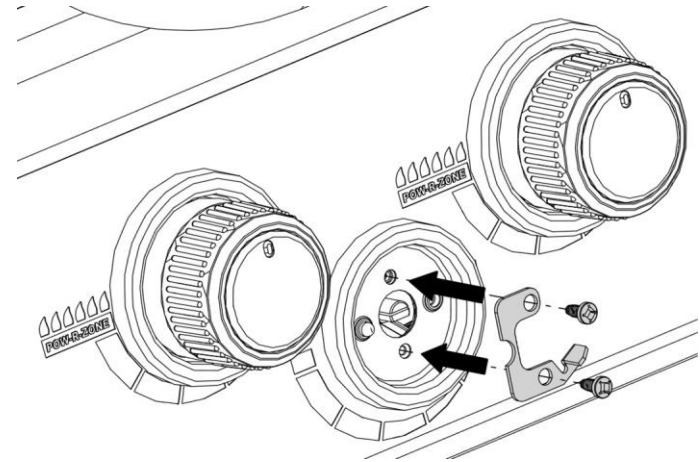
2



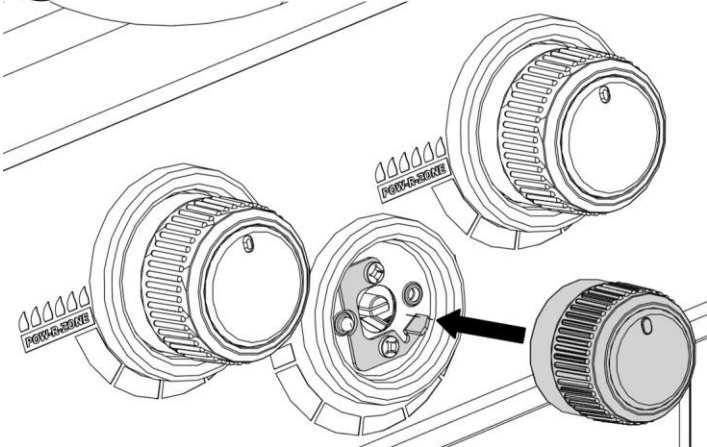
3



4

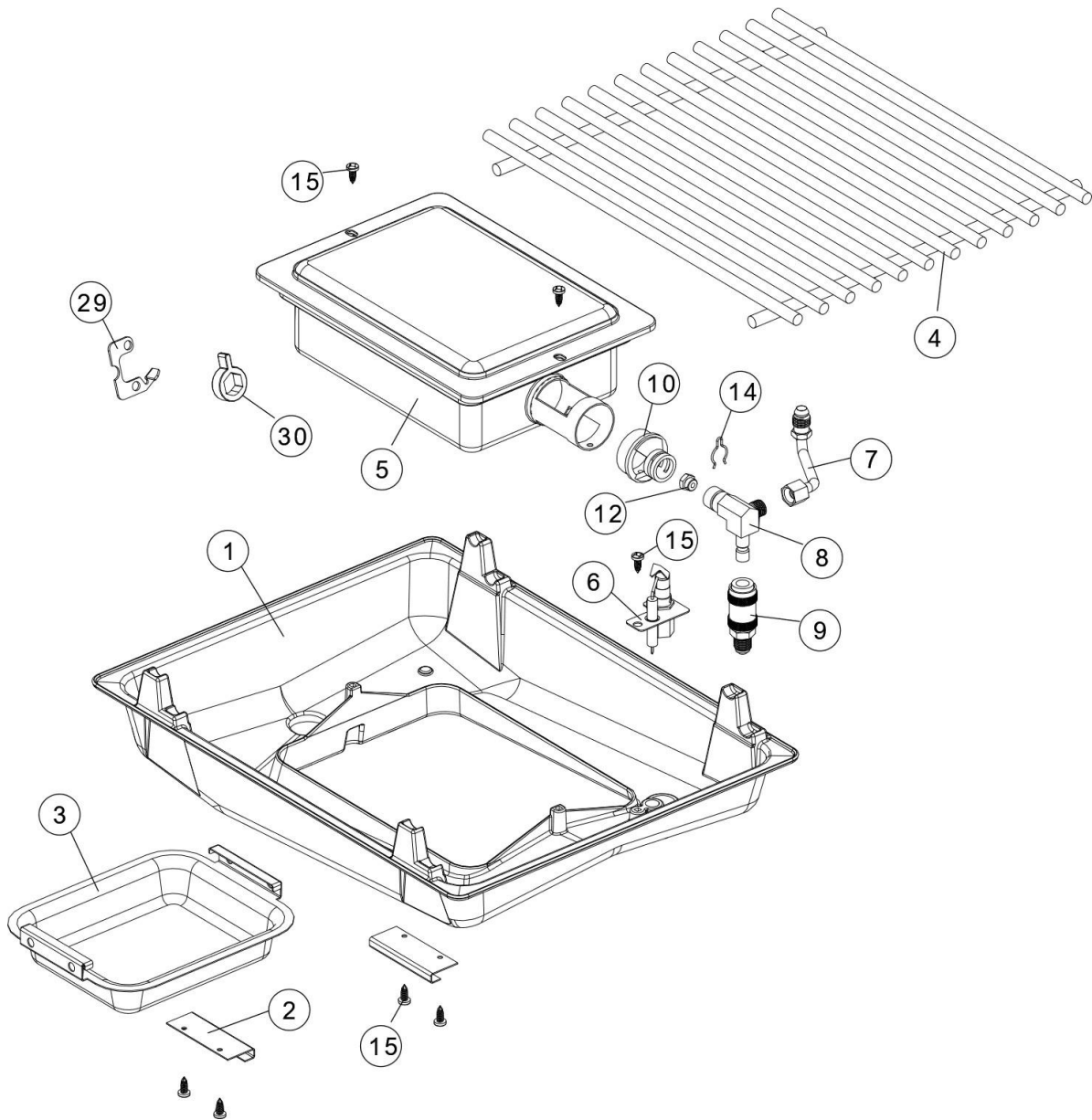


5



# PARTS LISTING

KEY#	ITEM #	DESCRIPTION	18672	18673	18676
1	23090-27	SIDE BURNER BODY	1	1	1
2	23039-274	GREASE PAN SUPPORT	2	2	2
3	22009-901	GREASE PAN	1	1	1
4	23001-79	GRID	1	1	1
5	20390-74	INFRARED BURNER	1	1	1
6	S15517-011	ELECTRODE ASSEMBLY	1	1	1
7	10110-74	GAS TUBE	1	1	1
8	10153-79	GAS FITTING	1	1	1
9	10153-93	QUICK CONNECT FITTING	1	1	1
10	20153-64	BURNER ADAPTER	1	1	1
12	10693-074	ORIFICE SPUD	1	•	•
	10693-079	ORIFICE SPUD	•	1	•
	10693-109	ORIFICE SPUD	•	•	1
14	Y-11230	COTTER PIN	1	1	1
15	S21127S	SCREW #8-32 X 7/16	5	5	5
29	Y-12678	BEZEL STOP	1	1	1
30	Y-12674	KNOB ADAPTER	1	1	1



# WARRANTY

The BROIL KING® Warranty is effective from date of purchase and is limited to the repair or replacement of parts at no charge which prove to be defective under normal domestic use.

In Canada and the United States replacement is FOB Factory.

In all other countries replacement is FOB BROIL KING® Distributor. (consult your Dealer for name of BROIL KING® Distributor).

All other costs are the responsibility of the owner.

This warranty is extended only to the original purchaser as indicated on the warranty registration and applies only to products sold at retail and only when used in country where purchased. (Different types of gas used in different countries require appropriate valves, orifices and regulators.)

## WHAT IS COVERED

<b>CAST ALUMINUM COMPONENTS</b>	5 Years
<b>SS GRIDS</b>	5 Years
<b>INFRARED BURNER</b>	5 Years
<b>REMAINING PARTS AND PAINT</b>	2 Years

## WHAT IS NOT COVERED

Any failures or operating difficulties due to accident, abuse, misuse, alteration, misapplication, vandalism, improper installation or improper maintenance or service, or failure to perform normal and routine maintenance, including but not limited to damage caused by insects within the burner tubes, as set out in the owner's manual.

Deterioration or damage due to severe weather conditions such as hail, hurricanes, earthquakes or tornadoes, discoloration due to exposure to chemicals either directly or in the atmosphere.

Shipping or transportation costs.

Removal or re-installation costs.

Labor costs for installation and repair.

Cost of service calls.

Liability for indirect, or consequential damages.

## BURNERS

The life of BROIL KING® burners depends almost entirely on proper use, cleaning and maintenance. This warranty does not cover failure due to improper use and maintenance.

## PORCELAIN COOKING GRIDS

Most BROIL KING® cooking grids are coated with a durable porcelain enamel to assist in cleaning and reduce the tendency of food from sticking to the grid. Porcelain is essentially a glass coating. Some chipping may occur if mishandled. This will not affect the use or performance of the grids. The grids are not warranted against chipping or rusting due to mishandling. If some rust appears, remove the rust with a scrub pad and coat the grid with cooking oil.

## LP GAS CYLINDER

BROIL KING® does not manufacture LP Gas Cylinders. The LP Gas Cylinder manufacturer is responsible for the materials, workmanship and performance of the cylinder. If the cylinder has a defect, malfunctions, or you have a question regarding the cylinder, contact your dealer or the cylinder manufacturer.

## REPLACEMENT PARTS

"Genuine BROIL KING® Gas Barbecue Parts" must always be used for replacement. Use of any other parts will automatically nullify the above warranty.

## WARRANTY CLAIMS

All warranty is handled directly by the BROIL KING® distributor in your country. Contact your dealer for the name of your BROIL KING® distributor.

Name		Model #	
Address		Serial #	
City, State/Province		Date of purchase	
Postal/Zip Code		Name of dealer	
Phone #		Part # (see assembly manual)	
Fax #			
Problem			