

Gas Supply Conversion and Orifice Replacement Guide

PURPOSE:

If a barbeque or side burner unit is to be operated with a different gas supply other than the one provided by the factory, a conversion kit is required. This change must be done in order to ensure that:

- The unit is safe to operate.
- The unit has correct combustion of gas.
- The unit outputs the expected heat (BTUH's).
- Your warranty is maintained.

By changing from Natural Gas (NG) to Liquid Propane (LP) or vice versa, the heat output as well as the regulating pressure and oxygen content of the gas/air mixture also changes. Therefore a change in orifice (gas injector) size is required, (usually larger or smaller depending on the application), as well as a change in the main pressure regulator setting to allow for proper gas pressure to the valves and burners.

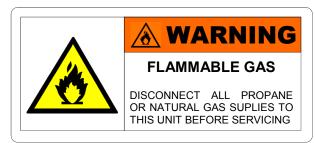
On the next pages you will find the necessary information to replace orifices, adjust burners and convert pressure regulators to suit your application. This information is generalized due to the different models manufactured, nevertheless it applies to all of them in the same fashion as it indicates the location and how to access orifices and regulators.

For additional information, all conversion kit numbers and components are listed at the end of this guide in the appendix section.

WARNING:

As the unit will be partially disassembled during gas supply conversion and orifice replacement, it is necessary to remove all power sources to the unit (including but not limited to: barbeques lights, rotisserie motor and igniter module batteries) as well as all gas supplies (Natural gas or Liquid propane).





Alfresco Gourmet Grills recommends a qualified gas technician to perform this service.

HOW TO OBTAIN SERVICE:

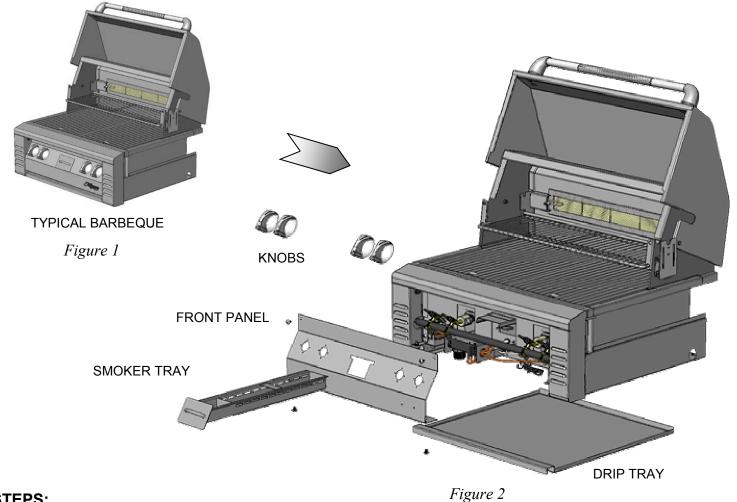
For warranty, service, contact your local Alfresco Gourmet authorized service agency. Provide him with the Model # and Serial # (located under drip pan), date of installation, and a brief description of the problem. If you need assistance in locating the authorized service agency in your area, contact your local dealer. He will have a listing of authorized service agents in you area.

We want you to remain a satisfied customer. If a problem occurs that cannot be resolved to your satisfaction, please us know. Write Alfresco Gourmet Grills. Customer Service Department. 7039 East Slauson Ave, Commerce, CA 90040. Or call Customer Service/Parts at (888) 383-8800 or (323) 722-7900 or fax us at (323) 726-4700. Visit us at: www.alfrescogrills.com Page 2

BARBEQUES:

A typical barbeque unit will have the following burner components:

MODEL:	BURNER QUANTITIES:					
WODEL.	SMOKER	"U" BURNER	SEAR-ZONE™	ROTISSERIE	SIDE BURNER	
AGBQ-30	1	2	~	1	~	
AGBQ-30SZ	1	1	1	1	~	
AGBQ-30IR	1	~	2	1	~	
AGBQ-42	1	3	~	1	~	
AGBQ-42SZ	1	2	1	1	~	
AGBQ-56	1	3	~	1	2	
AGBQ-56SZ	1	2	1	1	2	
AGBQ-56BFG	1	3	1	1	~	
AGSB-2	~	~	~	~	2	
AGSB-SZ	~	~	1	~	~	

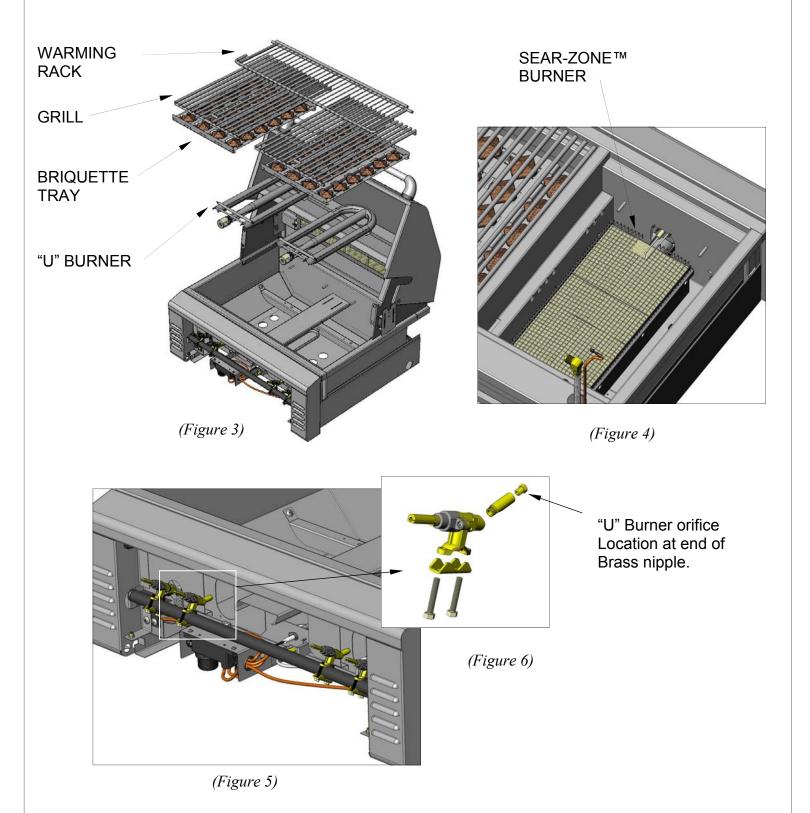


STEPS:

- 1– Remove the knobs from the valve stems by pulling them straight out of the valve stems.
- 2– Remove the smoker and drip trays.
- 3– Remove the front panel screws (4) located at each corner (2 facing down and 2 on the upper corners)
- 4– Remove the front panel to expose valves, gas manifold and igniter assembly. (Figure 2)

Barbeques cont.

- 5– Remove warming rack, grills, briquette trays and "U" burners from the barbeque unit. (Figure 3)
- 6– Should your barbeque unit be equipped with a Sear-Zone™ burner, also remove it. (Figure 4)



7– Now that the gas manifold and valves are exposed (*Figure 5*), remove and replace each valve's orifice for the proper gas supply, Natural Gas or Liquid Propane. Standard "U" burners have an angled valve with an orifice located in the valve's body, on the back at the end of an adapter nipple. (*Figure 6*)

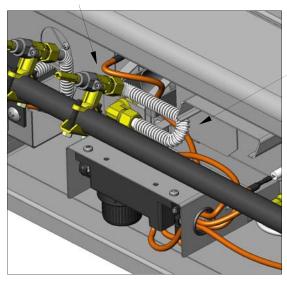
Page 4

Barbeques cont.

8– If your unit is equipped with a Sear-Zone™ burner, the valve has an orifice mounted externally to the valve body. The orifice is directly attached to the barbeque fire box with a bracket and connected to the valve with a flexible stainless tube. (Figure 7)

It is mounted on this bracket along with the Sear-Zone™ igniter electrode. Remove and replace this orifice from the inside of the firebox. (Figure 8)

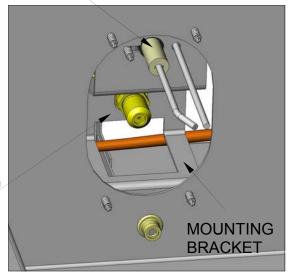
VALVE BODY



ELECTRODE

FLEXIBLE PIPING

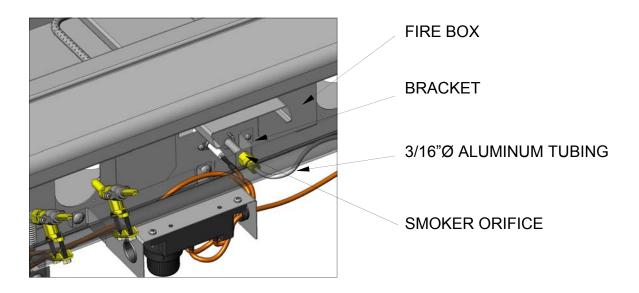
SEAR-ZONE™ **ORIFICE**



(Figure 8)

(Figure 7)

9- The smoker unit's orifice is also mounted externally from the control valve body. It is connected with a small 3/16" Ø aluminum tube. The orifice is mounted on a bracket attached to the fire box. To replace this orifice, remove the mounting bracket from the fire box and gently bend the aluminum tubing outward to prevent kinks. After replacement, re-install bracket / orifice assembly back into the fire box. (Figure 9)



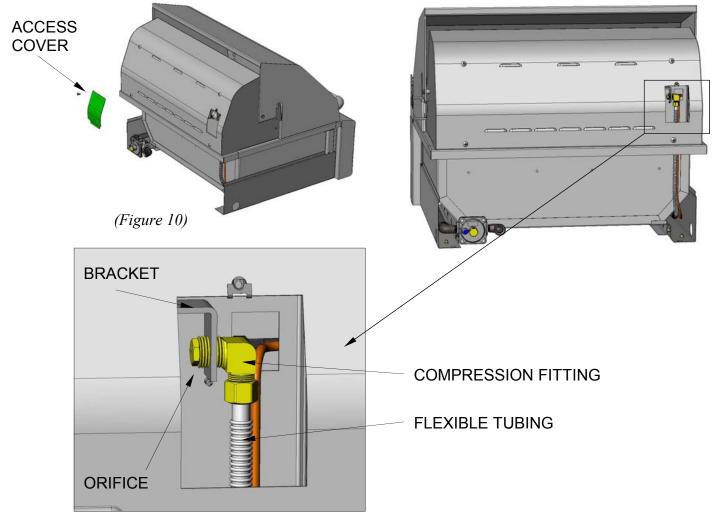
(Figure 9)

Barbeques cont.

10– To replace the rotisserie orifice, it must be accessed from the back of your barbeque unit.

Just like the Sear-Zone™ and the smoker unit, the rotisserie unit has an externally mounted orifice connected to the valve body with a long flexible stainless tube.

Remove the rear rotisserie access plate (Figure 10) and locate the orifice on the compression fitting that is mounted on the burner bracket (Figure 11). Replace orifice and re-install the access cover.



(*Figure 11*)

SIDE BURNERS:

Side burners can be found as separate units such as AGSB-2 (2 burner unit) and AGSB-SZ (Sear-Zone™ unit) or built within the frame of the barbeque such as our AGBQ-56 model Deluxe Grill.

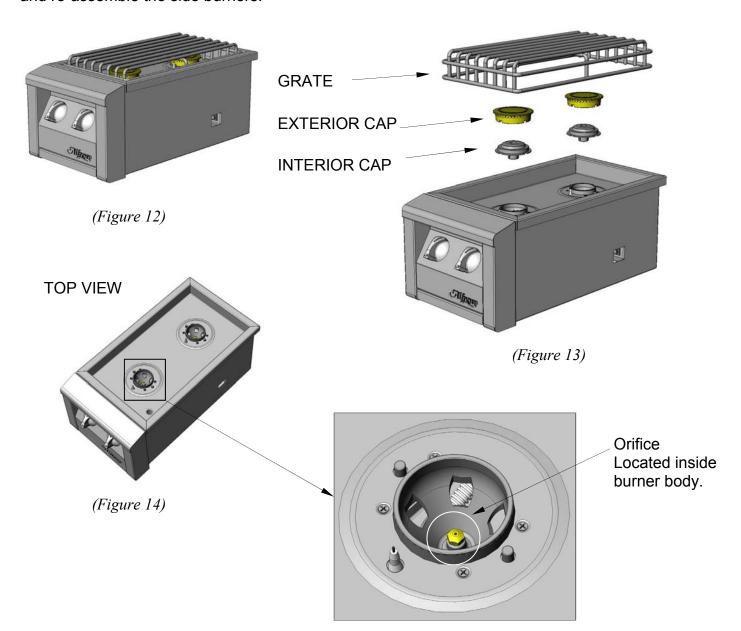
In either case, their respective orifices are installed and accessed in the same fashion. If a side burner is part of a barbeque such as the Deluxe Grill, gas will be supplied to the burner from the same manifold that feeds the main unit. All Individual units have their own pressure regulators.

If the side burner is part of a Deluxe Grill, the manifold will be accessed in the same fashion as shown on page# 4 — item # 7. For all other side burners, follow the next few steps.

AGSB-2 Dual Side Burner

STEPS:

- 1- A dual side burner unit AGSB-2 (*Figure 12*) has the orifices readily available. Simply remove the top grate, burner external brass caps and inner aluminum caps. (*Figure 13*)
- 2– Orifices are accessible directly from the top(Figure 14). Remove and replace each orifice as required and re-assemble the side burners.

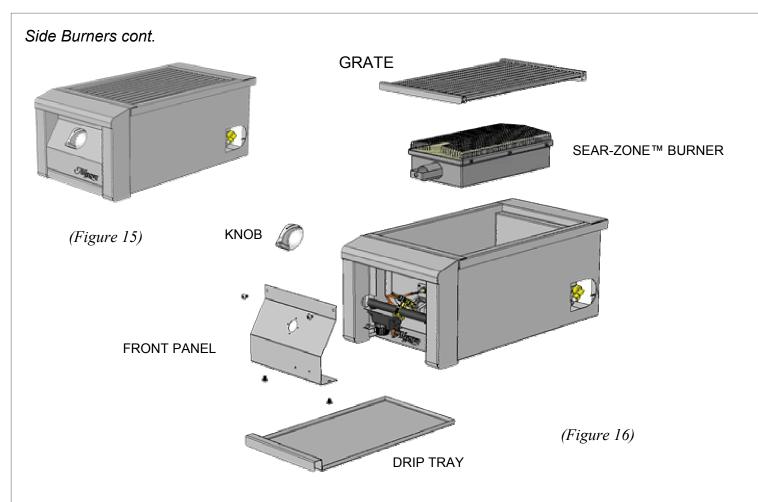


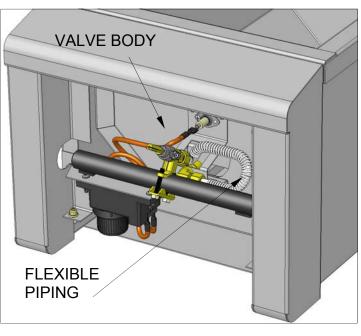
AGSB-SZ Sear-Zone™ Side Burner

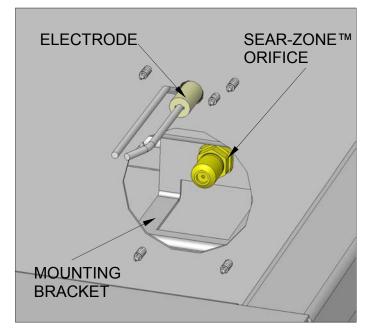
STEPS:

1- A Sear-Zone[™] side burner unit AGSB-SZ (*Figure 15*) has the orifice located inside the firebox assembly in the same configuration as a barbeque grill. To access the orifice remove the top grate, Sear-Zone[™] burner, knob, drip tray and front control panel (*Figure 16*)

Page 7







(Figure 17) (Figure 18)

2– Once the front panel is removed the Sear-Zone[™] orifice will be viewable (*Figure 17*). It is located externally from the control valve in similar configuration as the barbeque unit. (*Refer to page 5 point 8*).

It is however, easier to reach the orifice from the inside of the fire box assembly as it is mounted on a support bracket next to the electrode assembly. (Figure 18). Remove and replace.

Re-assemble the unit.

Page 8

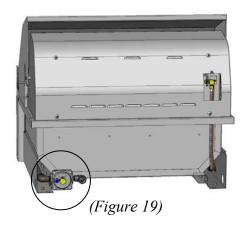
PRESSURE REGULATORS:

Your barbeque grill as well as side burner unit is equipped with a dual gas supply (NG or LP supply) pressure regulator standard from the factory. It is necessary however, to reverse an internal plunger within the regulator to allow for correct pressure to flow to the gas manifold.

Also, when converting from natural gas (NG) to liquid propane (LP) your conversion kit will include a 1/2"Ø MPT to 3/8"Ø Male Compression adapter nipple. This nipple is required to connect your regulator to a standard propane tank and hose kit.

All pressure regulators are located on the back of the units and on the left side. (Figures 19, 20 & 21)

BARBEQUE GRILL

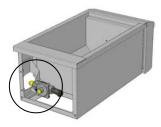






(Figure 20)

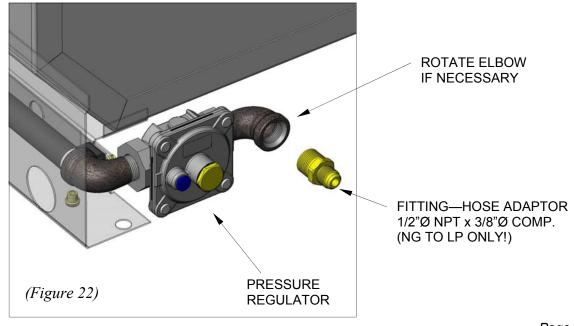
AGSB-SZ SIDE BURNER



(Figure 21)

STEPS:

1– Locate the inlet elbow (1/2" Ø black pipe elbow) and attach the hose regulator nipple using gas approved gas plumbing seal of yellow Teflon® tape. (This step only applies to NG to LP conversion) (Figure 22)



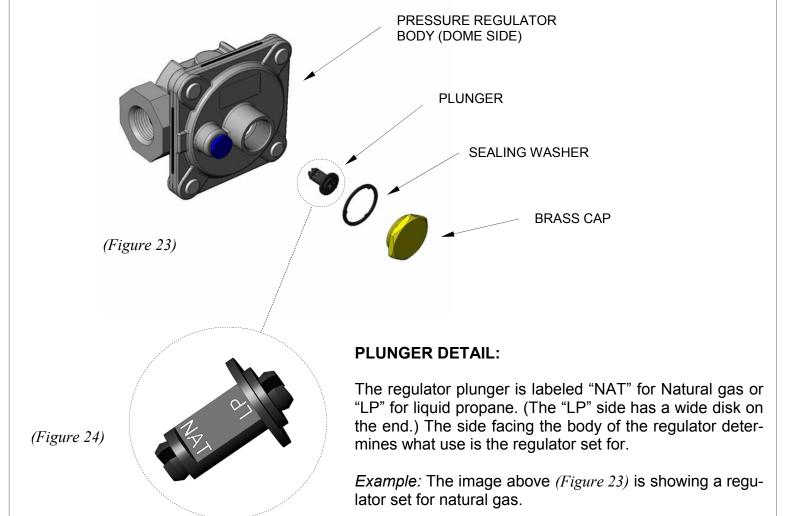
Pressure Regulators cont.

- 2- To convert to pressure regulator from NG to LP (or vice-versa), remove the brass cap located on the large round dome of regulator body. The cap has a sealing washer; do not lose or damage this sealling washer as it is required for a gas tight seal. (Figure 23)
- 3– Located on the cap is also a black plastic plunger. This plunger provides the correct pressure to a spring located inside the body of the regulator. It is necessary to **reverse** the direction of the plunger so it provides the right amount of pressure to

the spring inside the body of the regulator.

To **reverse** the plunger pull it out of the brass cap by pushing it sideways until it snaps and pops out.

4– The plunger is labeled "NAT" or "LP" for natural gas or liquid propane. (Figure 24). The regulator is set to the correct pressure according to the way the plunger faces the regulator body. If the plunger label reads "NAT" towards" the body of the regulator, it will be set for natural gas. If it reads "LP" it will be set for liquid propane.



5- Once the regulator plunger has been reversed for it's appropriate use and snapped back into the brass cap, re-install the cap with the sealing washer back into the body or the regulator.

Your barbeque grill or side burner is now converted to it's new gas supply. Re-check all orifices and seals for proper tightness before applying power, gas supply and lighting your unit to adjust burners.

BURNER ADJUSTMENT:

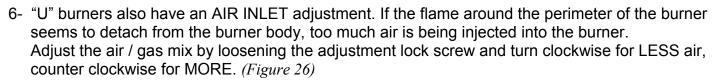
As a final step it is now necessary to adjust some burners for the correct air / gas mixture. All burners operate in the same fashion with the exception of the gas valves.

Gas valves for Sear-Zone™ and Rotisserie burners have a direct feeding valves. Gas valves for "U" shaped and Smoker burners have "idling" valves. "Idling" valves permit adjustment for the "LOW" setting in the valve to prevent the flame from going out, so they require adjustment when changing the gas supply type.

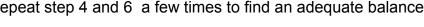
"Direct" feed valves do not have a "LOW" adjustment because they are designed for high BTUH and high gas flow operation such a the one required on Sear-Zone™ and Rotisserie burners. These burners will not go out even on their lowest setting. They are designed to run always on HIGH setting, so there is no adjustment necessary after a gas supply change.

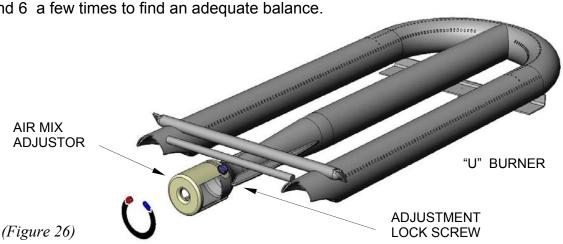
To adjust idling valves on "U" burners and Smoker burners follow the next steps:

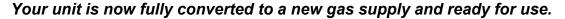
- 1– Verify that all burner holes are clean and free of debris.
- 2– Turn the valve to "HI" and light up the burner by pressing the igniter button. Let the unit "WARM UP" for 10 minutes.
- 3– Once the burner is lit and warmed up, turn to "LOW" setting. If the flame starts to go out you must adjust the "IDLE" port inside the valve.
- 4– Using a small flat screwdriver, insert the screwdriver blade through the stem of the valve and adjust. Counter clockwise for MORE gas flow, clockwise for less. (Figure 25)
- 5– Adjust the flame so the burner is fully lit around the perimeter when the knob is in the LOW position.

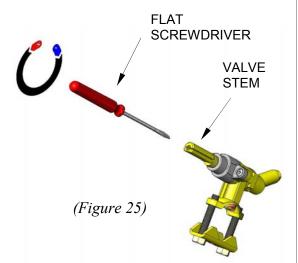


If the flame turns yellow in color, there is not enough AIR into the gas mixture. Adjust the air inlet until the flame is light blue in color with small yellow tips for proper burning. You might need to repeat step 4 and 6 a few times to find an adequate balance.



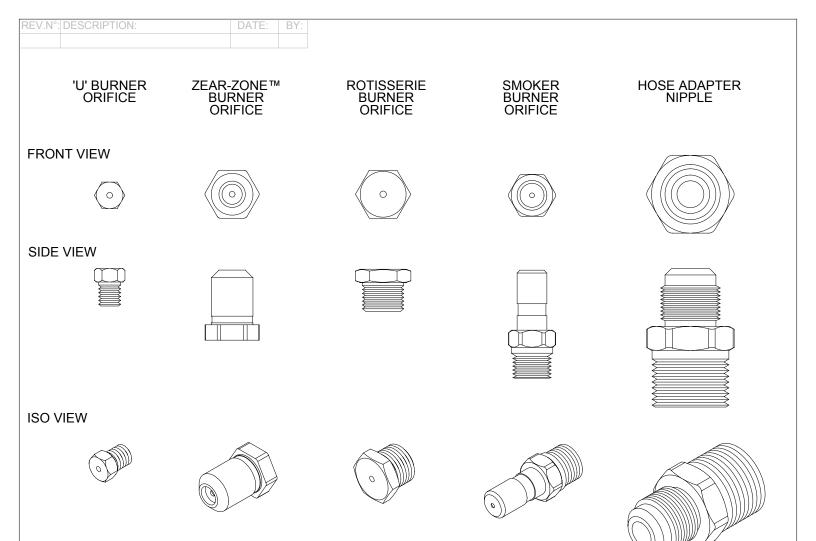






APPENDIX:

•	ORIFICE CONVERSION KITS	PAGE 1	13 ~20
•	PROPANE KIT # 1 (BARBEQUES WITH AND W/O SIDE BURNERS)	PAGE 2	21
•	PROPANE KIT # 2 (SIDE BURNERS UNITS ONLY)	PAGE 2	22



MODELS:	USE:	NG → LP		
AGBQ-30	KIT DESCRIPTION:		AGCK-30/N	NG-LP
AGBQ-30SZ	KIT NUMBER:		190	0-0007
AGBQ-30IR	ITEM	ORIFICE	PART #	QTY:
	"U" BURNER - LP	1.55 mm	220-0282	2
	SEAR-ZONE™ - LP	52 GA.	220-0290	2
	ROTISSERIE - LP	57 GA	220-0284	1
	SMOKER - LP	65 GA	220-0288	1
	HOSE ADAPTER NIP	PLE	220-0275	1



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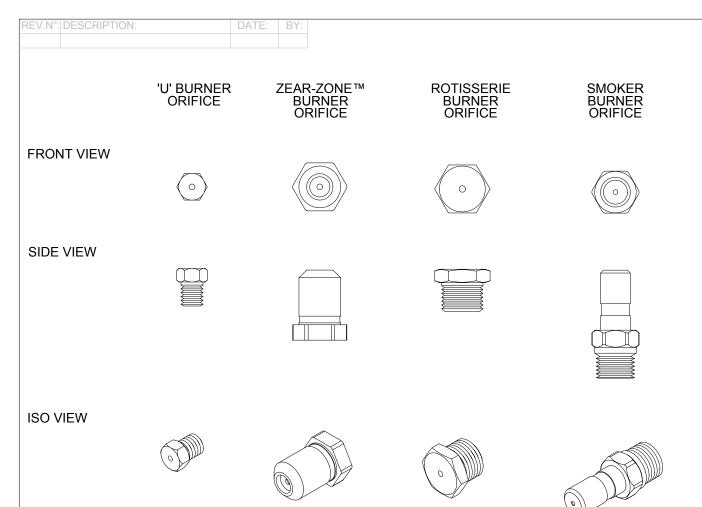
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DRAWING TITLE:

AGCK-30/NG-LP CONVERSION KIT

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DRAWING NO.: **190-0007**



MODELS:	USE:	LP → NG		
AGBQ-30	KIT DESCRIPTION:		AGCK-30/L	P-NG
AGBQ-30SZ	KIT NUMBER:		190	8000-0
AGBQ-30IR	ITEM	ORIFICE	PART #	QTY:
	"U" BURNER - NG	2.55 mm	220-0281	2
	SEAR-ZONE™ - NG	39 GA.	220-0891	2
	ROTISSERIE - NG	50 GA	220-0283	1
	SMOKER - NG	60 GA	220-0287	1



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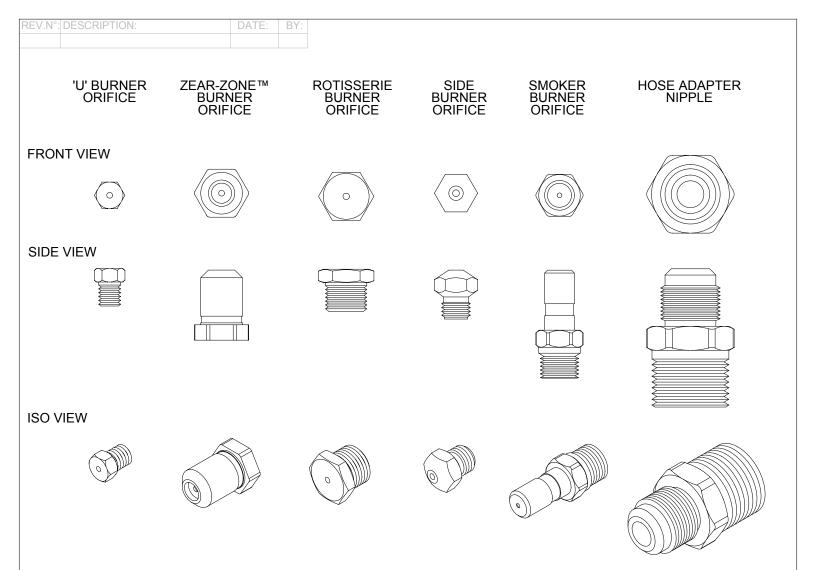
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AGCK-30/LP-NG CONVERSION KIT

DRAWING NO.: 190-0008

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SHEET 1 OF 1



MODELS:	USE:	NG → LP		
AGBQ-42	KIT DESCRIPTION:	AG	CK-42/56/N	NG-LP
AGBQ-42SZ	KIT NUMBER:		190	0-0009
AGBQ-56	ITEM	ORIFICE	PART #	QTY:
AGBQ-56SZ	"U" BURNER - LP	1.55 mm	220-0282	3
	SEAR-ZONE™ - LP	52 GA.	220-0290	1
	ROTISSERIE - LP	56 GA	220-0286	1
	SIDE BURNER - LP	1.15 mm	220-0292	2
	SMOKER - LP	65 GA	220-0288	1
	HOSE ADAPTER NIPPLE		220-0275	1



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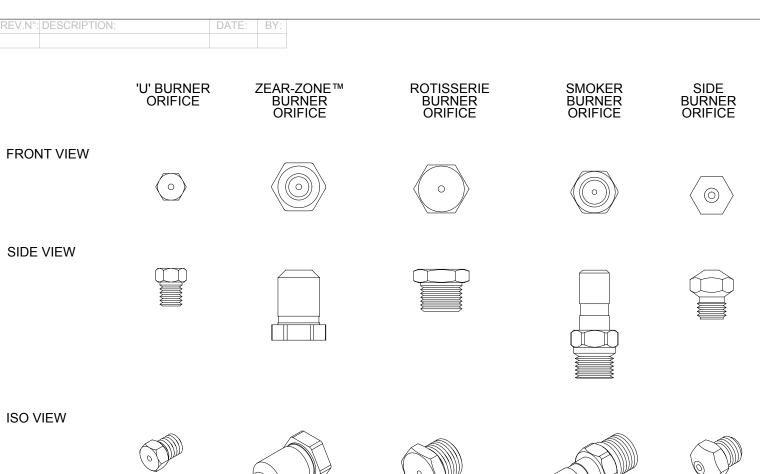
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AGCK-42/56/NG-LP CONVERSION KIT

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MODELS:	USE:	LP → NG		
AGBQ-42	KIT DESCRIPTION:	AG	CK-42/56/L	P-NG
AGBQ-42SZ	KIT NUMBER:		190-	00010
AGBQ-56	ITEM	ORIFICE	PART #	QTY:
AGBQ-56SZ	"U" BURNER - NG	2.55 mm	220-0281	3
	SEAR-ZONE™ - NG	39 GA.	220-0891	1
	ROTISSERIE - NG	48 GA	220-0285	1
	SIDE BURNER - NG	1.78 mm	220-0291	2
	SMOKER - NG	60 GA	220-0287	1



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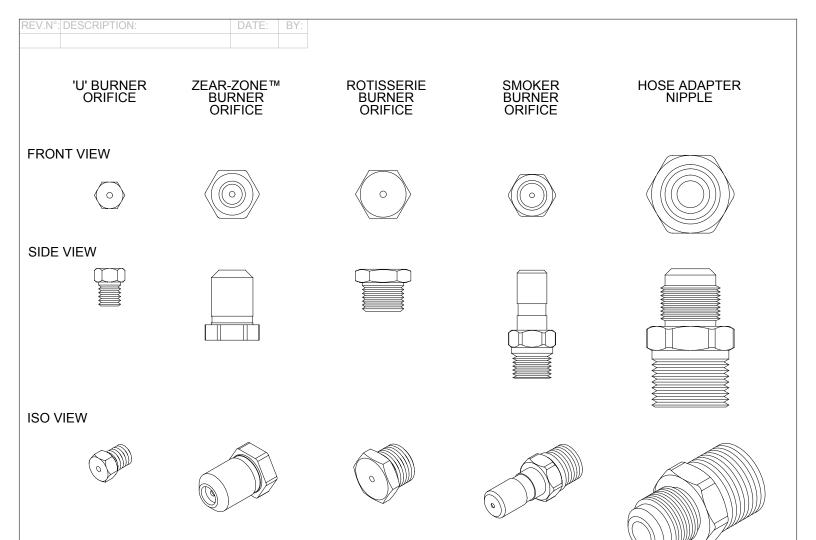
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DRAWING TITLE:

AGCK-42/56/LP-NG CONVERSION KIT

DRAWING NO.: 190-0010



MODEL:	USE:	NG → LP		
AGBQ-56BFG	KIT DESCRIPTION: AGCK-56BFG/NG		NG-LP	
	KIT NUMBER:		190)-0011
	ITEM	ORIFICE	PART #	QTY:
	"U" BURNER - LP	1.55 mm	220-0282	3
	SEAR-ZONE™ - LP	52 GA.	220-0290	1
	ROTISSERIE - LP	57 GA	220-0284	2
	SMOKER - LP	65 GA	220-0288	1
	HOSE ADAPTER NIPPLE		220-0275	1



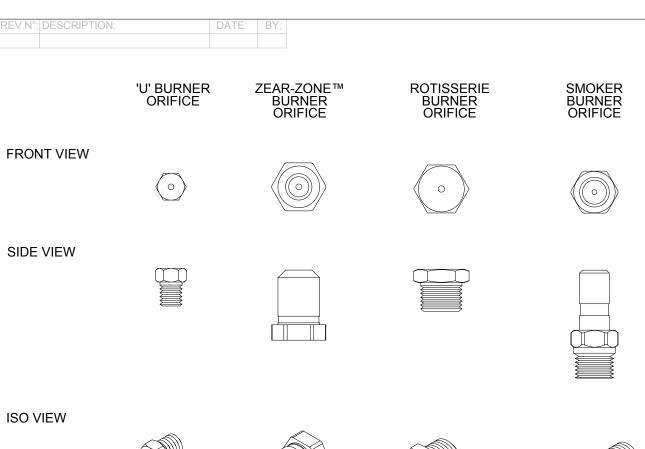
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AGCK-56BFG/NG-LP CONVERSION KIT

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MODEL:	USE:	LP → NG		
AGBQ-56BFG	KIT DESCRIPTION:	AGC	K-56BFG/L	P-NG
	KIT NUMBER:		190	0-0012
	ITEM	ORIFICE	PART #	QTY:
	"U" BURNER - NG	2.55 mm	220-0281	3
	SEAR-ZONE™ - NG	39 GA.	220-0891	1
	ROTISSERIE - NG	50 GA	220-0283	2
	SMOKER - NG	60 GA	220-0287	1



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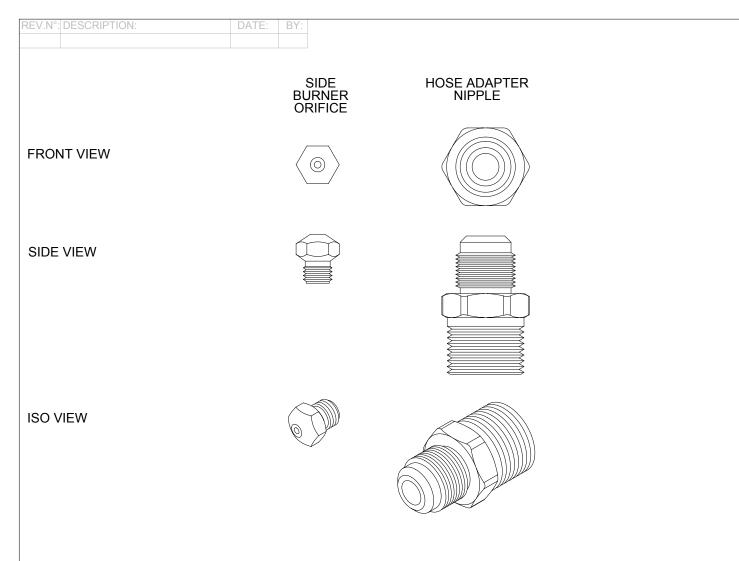
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SHEET 1 OF 1



MODEL:	USE:	NG ←→ LP		
AGSB-2	KIT DESCRIPTION:	AGCK-SB-2/NG/LP		NG/LP
	KIT NUMBER:		190	0-0013
	ITEM	ORIFICE	PART #	QTY:
	SIDE BURNER - NG	1.78 mm	220-0291	2
	SIDE BURNER - LP	1.15 mm	220-0292	2
	HOSE ADAPTER NIPPLE		220-0275	1



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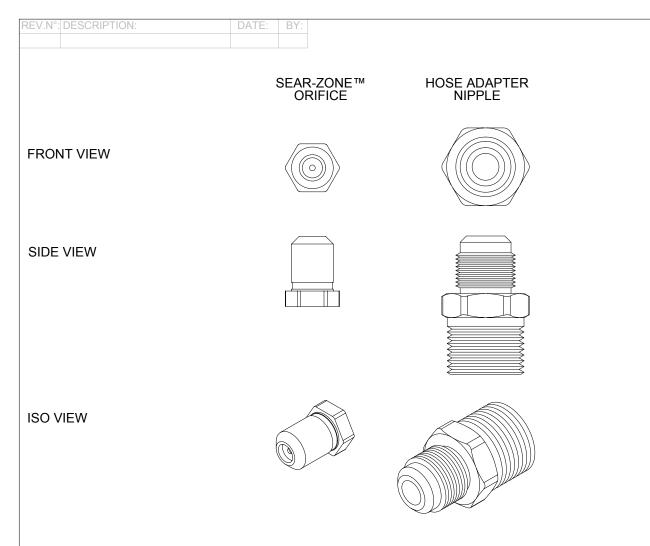
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AGCK-SB-2/NG/LP CONVERSION KIT

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SHEET 1 OF 1



MODEL:	USE:	NG ←→ LP		
AGSB-SZ	KIT DESCRIPTION:	AGCK-SB-SZ/NG/LP		NG/LP
	KIT NUMBER:	190-001		0-0014
	ITEM	ORIFICE	PART #	QTY:
	SEAR-ZONE™ - NG	39 GA.	220-0891	1
	SEAR-ZONE™ - LP	52 GA.	220-0290	1
	HOSE ADAPTER NIP	PLF	220-0275	1



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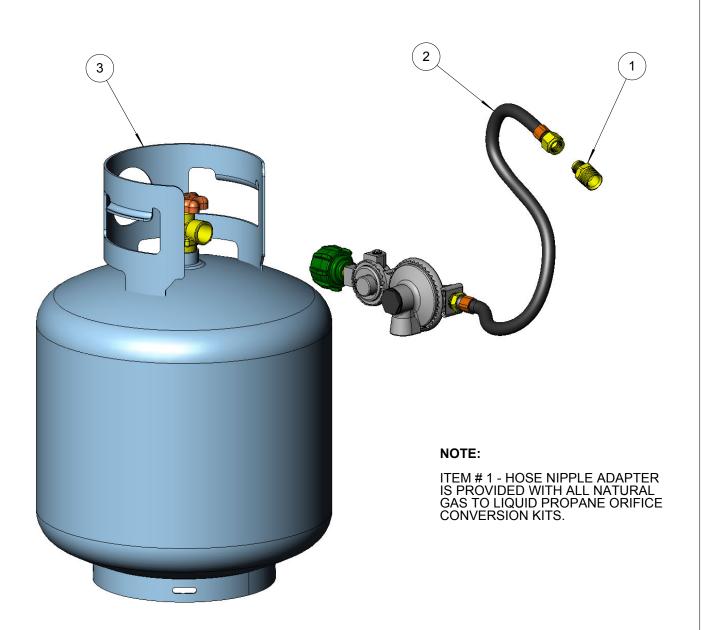
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AGCK-SB-SZ/NG/LP CONVERSION KIT

DRAWING NO.: **190-0014**

REV.N°:	DESCRIPTION:	DATE:	BY:

BILL OF MATERIAL - PORPANE KIT FOR BARBEQUES WITH OR W/0 SIDE BURNERS			
NO.	PART NUMBER	DESCRIPTION	QTY.
1	220-0275	NIPPLE - 1/2" MPT X 3/8" MPT	1
2	220-0300	REGULATOR / HOSE KIT FOR LP GAS	1
3	NONE	PROPANE TANK - GENERIC - CUSTOMER SUPPLIED	1



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PROJECT TITLE:	PROPANE KITS
DRAWING TITLE:	

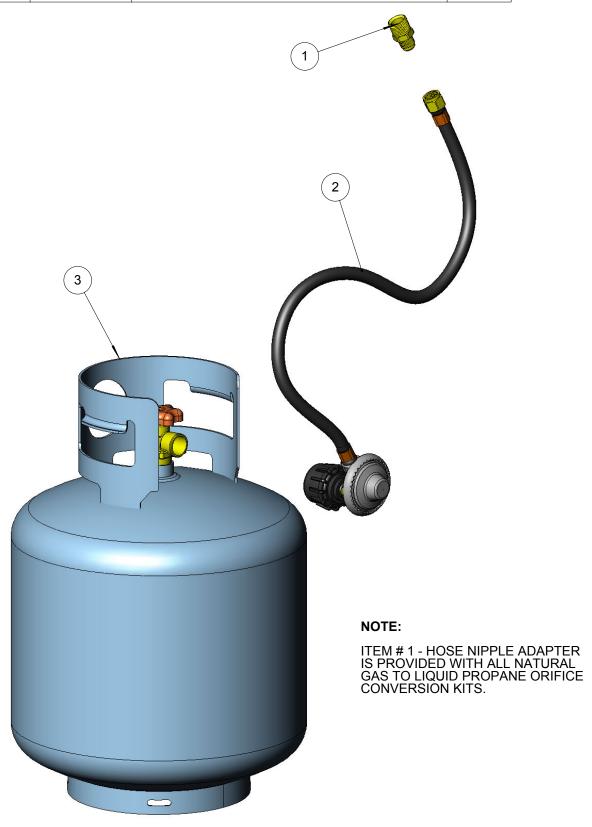
DRAWING NO.: PROP-KIT-01

PROPANE KIT FOR BBQ UNITS

I:\DWGS\Alfresco\CONV.KITS\PROPANE KITS\

REV.N°:	DESCRIPTION:	DATE:	BY:

BILL OF MATERIAL - PROPANE KIT FOR SIDE BURNERS ONLY			
NO.	PART NUMBER	DESCRIPTION	QTY.
1	220-0275	NIPPLE - 1/2" MPT X 3/8" MPT	1
2	220-0301	LP GAS - REGULATOR / HOSE KIT	1
3	NONE	PROPANE TANK - GENERIC - CUSTOMER SUPPLIED	1





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DRAWN BY: ADRIAN CRISCI CREATED: April 11, 2005 9:29:49 AM

PROJECT TITLE:	PROPANE KITS

DRAWING TITLE:

PROPANE KIT FOR SIDE BURNERS ONLY

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DRAWING NO.: PROP-KIT-02

SHEET 1 OF 1