

Gas Rotisserie Oven

MODEL DRG-40

Service Manual

Serial Numbers 120170 and Higher



Fresh ideas in foodservice equipment

BKI LIMITED WARRANTY

2812 Grandview Dr. • Simpsonville, SC 29680 • USA
(864) 963-3471 • Toll Free: (800) 927-6887 • Fax: (864) 963-5316

WHAT IS COVERED	<p>This warranty covers defects in material and workmanship under normal use, and applies only to the original purchaser providing that:</p> <ul style="list-style-type: none">☐ The equipment has not been accidentally or intentionally damaged, altered or misused;☐ The equipment is properly installed, adjusted, operated and maintained in accordance with national and local codes, and in accordance with the installation and operating instructions provided with this product.☐ The serial number rating plate affixed to the equipment has not been defaced or removed.
WHO IS COVERED	<p>This warranty is extended to the original purchaser and applies only to equipment purchased for use in the U.S.A.</p>
COVERAGE PERIOD	<ul style="list-style-type: none">☐ Warranty claims must be received in writing by BKI within one (1) year from date of installation or within one (1) year and three (3) months from data of shipment from the factory, whichever comes first.☐ COB Models: One (1) Year limited parts and labor.☐ COM Models: Two (2) Year limited parts and labor. COM convection ovens also have a two (2) year door warranty.☐ CO1 Models: Two (2) Year limited parts and labor. Five (5) Year limited door warranty.☐ BevLes Products: Two (2) Year limited parts and labor.☐ Warranty period begins the date of dealer invoice to customer or ninety (90) days after shipment date from BKI, whichever comes first.
WARRANTY COVERAGE	<p>This warranty covers on-site labor, parts and reasonable travel time and travel expenses of the authorized service representative up to (100) miles round trip and (2) hours travel time and performed during regular, weekday business hours.</p>
EXCEPTIONS	<p>Any exceptions must be pre-approved in advance and in writing by BKI. The extended door warranty on convection ovens years 3 through 5 is a parts only warranty and does not include labor, travel, mileage or any other charges.</p>
EXCLUSIONS	<ul style="list-style-type: none">☐ Negligence or acts of God,☐ Thermostat calibrations after (30) days from equipment installation date,☐ Air and gas adjustments,☐ Light bulbs,☐ Glass doors and door adjustments,☐ Fuses,☐ Adjustments to burner flames and cleaning of pilot burners,☐ Tightening of screws or fasteners,☐ Failures caused by erratic voltages or gas suppliers,☐ Unauthorized repair by anyone other than a BKI Factory Authorized Service Center,☐ Damage in shipment,☐ Alteration, misuse or improper installation,☐ Thermostats and safety valves with broken capillary tubes,☐ Freight - other than normal UPS charges,☐ Ordinary wear and tear,☐ Failure to follow installation and/or operating instructions,☐ Events beyond control of the company.
INSTALLATION	<p>Leveling, as well as proper installation and check out of all new equipment - per appropriate installation and use materials - is the responsibility of the dealer or installer, not the manufacturer.</p>
REPLACEMENT PARTS	<p>BKI genuine Factory OEM parts receive a (90) day materials warranty effective from the date of installation by a BKI Factory Authorized Service Center.</p>

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Introduction

Your DRG-40 is a computer controlled gas fired rotisserie oven. It utilizes a double revolving rotor system to ensure even product cooking. The unit contains a single stage cook and hold computer with 5 customizable cook programs. Electrical controls are provided for powering the unit, turning on inside lights, igniting upper/lower burners, turning the rotors, filling the water bath and resetting the unit. A manual lever is supplied for draining water from the water bath. The rotor system is removable to allow for easy maintenance and cleaning.

The **BKI** name and trademark on this unit assures you of the finest in design and engineering -- that it has been built with care and dedication -- using the best materials available. Attention to the operating instructions regarding proper installation, operation, and maintenance will result in long lasting dependability to ensure the highest profitable return on your investment.

NOTICE

PLEASE READ THIS ENTIRE MANUAL BEFORE OPERATING THE UNIT. If you have any questions, please contact your **BKI** Distributor. If they are unable to answer your questions, contact the **BKI** Technical Service Department, toll free: 1-800-927-6887. Outside the U.S., call 1-864-963-3471.

Safety Precautions

Always follow recommended safety precautions listed in this manual. Below is the safety alert symbol. When you see this symbol on your equipment, be alert to the potential for personal injury or property damage.



Safety Signs and Messages

The following Safety signs and messages are placed in this manual to provide instructions and identify specific areas where potential hazards exist and special precautions should be taken. Know and understand the meaning of these instructions, signs, and messages. Damage to the equipment, death or serious injury to you or other persons may result if these messages are not followed.

⚠ DANGER

This message indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING

This message indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.

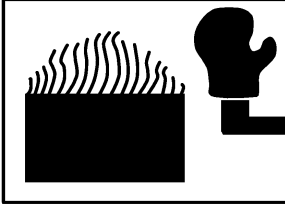
⚠ CAUTION

This message indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTICE

This message is used when special information, instructions or identification are required relating to procedures, equipment, tools, capacities and other special data.

Safe Work Practices



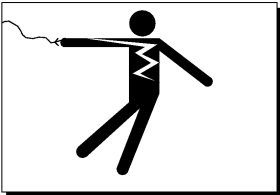
Wear Safe Clothing Appropriate To Your Job

Always wear your insulated mitts when handling hot racks or touching any hot metal surface. If you lose or damage your mitts, you can buy new ones at your local restaurant equipment supply store or from your local **BKI** Distributor.

Always wear non-skid shoes when working around the oven or any other equipment.

Never wear loose clothing such as neckties or scarves while operating this equipment. Keep loose hair tied back or in a hair net while operating this equipment.

Always wear appropriate personal protection equipment during the cleaning process to guard against possible injury from hot cleaning solution.



Beware of High Voltage

This equipment uses high voltage. Serious injury can occur if you or any untrained or unauthorized person installs, services, or repairs this equipment. Always Use an Authorized Service agent to Service Your Equipment.



Keep this manual with the Equipment

This manual is an important part of your equipment. Always keep it near for easy access. If you need to replace this manual, contact:

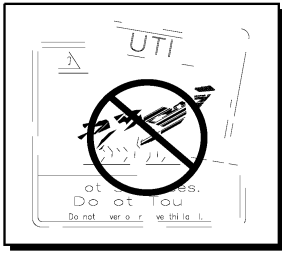
BKI
Technical Services Department
2812 Grandview Drive
Simpsonville, S.C. 29680
Or call toll free: 1-800-927-6887
Outside the U.S., call 864-963-3471



Protect Children

Keep children away from this equipment. Children may not understand that this equipment is dangerous for them and others.

NEVER allow children to play near or operate your equipment.



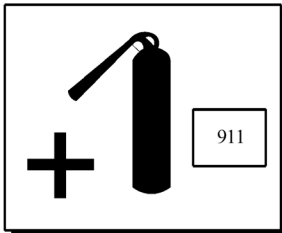
Keep Safety Labels Clean and in Good Condition

Do not remove or cover any safety labels on your equipment. Keep all safety labels clean and in good condition. Replace any damaged or missing safety labels. Refer to the Safety Labels section for illustration and location of safety labels on this unit. If you need a new safety label, obtain the number of the specific label illustrated on page 6, then contact:

BKI

Technical Services Department
2812 Grandview Drive
Simpsonville, S.C. 29680
Or call toll free: 1-800-927-6887

Outside the U.S., call 864-963-3471

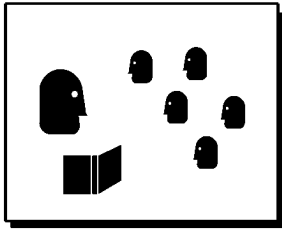


Be Prepared for Emergencies

Be prepared for fires, injuries, or other emergencies.

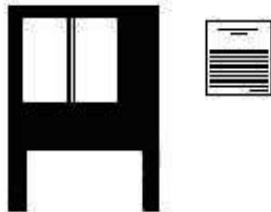
Keep a first aid kit and a fire extinguisher near the equipment. You must use a 40-pound Type BC fire extinguisher and keep it within 25 feet of your equipment.

Keep emergency numbers for doctors, ambulance services, hospitals, and the fire department near your telephone.



Know your responsibilities as an Employer

- Make certain your employees know how to operate the equipment.
- Make certain your employees are aware of the safety precautions on the equipment and in this manual.
- Make certain that you have thoroughly trained your employees about operating the equipment safely.
- Make certain the equipment is in proper working condition. If you make unauthorized modifications to the equipment, you will reduce the function and safety of the equipment.



Use Gas Safely-- Avoid Danger

Gas can be a dangerous fuel if not handled safely.

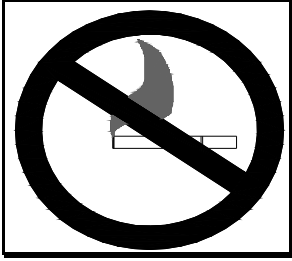
Make sure to ventilate the oven properly. If the oven is not properly ventilated, carbon monoxide can be released around the oven. Asphyxiation or suffocation can occur if gas is not ventilated properly.

Before using this appliance for the first time, contact your local gas supplier for instructions about what to do if you smell gas. Post those instructions somewhere near the oven, so that everyone who uses or works near the oven knows what to do if they smell gas.



Clearance to Combustibles

Observe proper clearance to combustibles as noted on the oven rating tag. Never place anything on top of the oven. The flues on top of the oven should be a minimum horizontal distance of 6 inches from any combustible material. Never place any combustible materials above the top of the oven. Never use any solvents near the oven. The open flame inside the oven could ignite solvent fumes, resulting in a fire or explosion.



Do Not Smoke Near The Oven

This oven uses combustible fuels to operate. Smoking near this oven could possibly cause a fire. Do not allow anyone to smoke near this oven.

Safety Labels

N0202 (ON SIDE COVERS)

DANGER
HIGH VOLTAGE.
Turn power off before servicing.
May have more than one disconnect switch.
Do not cover or remove label. N0202

N0166

CAUTION
Do not use harsh cleaners when cleaning this unit.
Do not cover or remove this label. N-0166

N0350

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.
N0350

N0202 (ON SIDE COVERS)

DANGER
HIGH VOLTAGE.
Turn power off before servicing.
May have more than one disconnect switch.
Do not cover or remove label. N0202

N0319

NOTICE
This appliance is supplied with casters and is to be mounted only on the casters affixed to the machine. This appliance must be installed with a connector complying with ANSI Z21.69 (CAN 1 6.10 M88) and a quick disconnect device complying with ANSI Z21.41 (CAN 1 6.9 M79). It must also be installed with restraining means to guard against transmission of strain to the connector as specified in the appliance manufacturer's instructions.
N0319

N0200

CAUTION
Hot surface can cause severe burns.
Do not touch.
Do not cover or remove label. N0200

N0158

WARNING
CONNECT ONLY TO APPROVED 3 PRONG GROUNDED CIRCUIT. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY.
DO NOT COVER OR REMOVE THIS LABEL N0158

WARNING
CONNECT ONLY TO APPROVED 3 PRONG GROUNDED CIRCUIT. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY.

N0391

IMPORTANT
Lubricate BKI Rotisserie gears with BKI lubricant each day after cleaning. Failure to clean and lubricate the gears can damage your oven's motor and warp the gear assembly.
N0391



NORMAL OPERATION - OPÉRATION NORMALE

1. Turn the main POWER switch On. From cold, the controller will display "too Cool".
Mettez le contact "alimentation PRINCIPALE" en marche. Du froid, le contrôleur montrera le "too Cool".
2. Press the ITEM SELECT button to select the desired program.
Appuyez sur le bouton CHOISI d'ARTICLE pour choisir le programme désiré.
3. Turn the ROTOR switch On.
Mettez le commutateur de ROTOR en marche.
4. Turn the LOWER FLAME switch On.
Mettez le commutateur INFÉRIEUR de FLAMME en marche.
5. Turn the HEAT switch On.
Mettez le commutateur de la CHALEUR en marche.
6. Unit will pre-heat. When it reaches the programmed temperature, the controller will display "rEdy".
L'unité préchauffera. Quand elle atteint la température programmée, le contrôleur montrera le "rEdy".
7. Open the doors and load product. Close the doors once product is loaded.
Appuyez sur le bouton CHOISI d'ARTICLE pour choisir le programme désiré.
8. Press the START/STOP button to start the cook cycle.
Appuyez sur le bouton DE DÉBUT ET DE FIN pour commencer le cycle de cuisinier.
9. When the cook cycle ends, press the START/STOP or the HOLD button.
Quand les fins de cycle de cuisinier, appuient sur le bouton DE DÉBUT ET DE FIN ou de PRISE.

NORMAL SHUTOFF - INTERRUPTION NORMALE

1. Turn HEAT and LOWER FLAME switch off. Open doors and allow unit to cool for 5 minutes.
Tournez la CHALEUR et ABAISSEZ le commutateur de FLAMME au loin. Ouvrez les portes et permettez à l'unité de se refroidir pendant 5 minutes.
2. Turn LIGHTS, ROTOR and RAIN POWER switches off.
Arrêtez les contacts de LUMIÈRES, de ROTOR et "alimentation PRINCIPALE".

OPERATION AFTER GAS OR POWER OUTAGE - OPÉRATION APRES PANNE DE GAZ OU DE PUISSANCE

The oven will shut off automatically if the gas supply or electrical power is interrupted. If, either of these conditions occur you should perform the following procedure:

Le four coupera automatiquement si l'offre de gaz ou le courant électrique est interrompue. Si, l'une ou l'autre de ces conditions se produisent vous devriez exécuter le procédé suivant :

1. Place the POWER, HEAT, LOWER FLAME, LIGHTS and ROTOR switches (located on the front panel) in the "OFF" position.
Placez la PUISSANCE, la CHALEUR, les commutateurs INFÉRIEURS de FLAMME, de LUMIÈRES et de ROTOR (situés sur le panneau plan) dans le "OFF" ; placez.
2. Wait at least five minutes to allow any gas that may have accumulated in the burner compartment to escape.
Attente au moins cinq minutes pour permettre tout gaz qui a pu s'être accumulé dans le compartiment de brûleur pour s'échapper.
3. Follow normal operating procedures once electrical power or gas is restored.
Suivez les modes opératoires normaux une fois que le courant électrique ou le gaz est reconstitué.

Installation

Inspection for Shipping Damage

It is the owners' responsibility to file all freight claims with the delivering truck line. Inspect all cartons and crates for damage as soon as they arrive. If damage to cartons or crates is found, or if a shortage is found, note this on the bill of lading (all copies) prior to signing.

If damage is found when the equipment is opened, immediately call the delivering truck line and follow up the call with a written report indicating concealed damage to your shipment. Ask for an immediate inspection of your concealed damage item. Packaging material **MUST** be retained to show the inspector from the truck line.

Preparation

There are several things the installer must know before installing the oven. These are listed below:

NOTICE

When using natural gas, the supply pressure must never drop below 7 inches of water column. If the supply pressure can exceed 14 inches of water column, a pressure regulator must be used. This regulator must be sized to ensure that the pressure never goes below 7 inches of water column while the unit is in operation.

- The oven installation must conform with city or county standards for gas appliances and gas piping. If your area does not have local codes, consult the *National Fuel Gas Code, ANSI Z223.1/NFPA 54*, or the *Natural Gas and Propane Installation Code, CSA B149.1*. In Europe, city and country codes are enforced.

WARNING

Do not attempt to test the gas pressure of your oven. Pressure testing should be done only by an authorized Service Agent.

- During any pressure testing of the gas supply system, the oven must be protected. The oven 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 (3.5 kPa). The oven must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than ½ psi (3.5 kPa).
- The oven must be electrically grounded to conform with the local code of your city or county. If your area does not have local codes, consult the latest version of the *National Electrical Code ANSI/NFPA 70*, or the *Canadian Electrical Code, CSA C22.2*. In EUROPE, city and country codes are enforced.
- A schematic diagram of the unit is located inside the control cabinet.
- The Authorized Service Agent that installs your oven must connect the cord set at the rear of the oven to an electrical source with a voltage matching that stamped on the name and rating tag. Refer to the wiring diagrams in this manual.
- Make sure a connector is used that complies with the Standard for *Connectors for Movable Gas Appliances, ANSI Z21.69 • CSA 6.16*.
- Make sure a quick-disconnect device is used that complies with the Standard for *Quick-Disconnect Devices for Use With Gas Fuel, ANSI Z21.41 • CSA 6.9*.
- In Europe, the installer must supply the gas supply connector.

- Make sure a restraining device is used that complies with the Standard for *Commercial Gas Ranges, ANSI Z83.11/CGA 1.8* (such as BKI part number FT0279) to guard against transmission of strain to the connector.
- The drain on the DRG-40 is a 3/4" ball valve. Under NO circumstances, should this valve be hard plumbed to a drain line. A short nipple may be used to direct the discharge into a 2" drain that should have a bell reducer (to act as a funnel) placed on the end of drain line. The best configuration is to place this bell reducer just below the valve. Using a 3/4" line to come out from under the oven is not recommended, as it would be easy to plug up.
- Retain the manual for future reference.

Location and Clearance

Install your oven in a well-ventilated area. This will ensure that the gas burns properly and will help prevent any fires. When deciding on a location, remember the following:

- All gas-burning appliances need enough fresh air for combustion.
- Locate the oven where it can be vented into an adequate exhaust hood. Your local gas utility must approve your ventilation system. Consult a ventilation or heating company to help you design an adequate system that meets ventilation codes and standards for your city or county. In Europe, install according to local codes.
- Keep the oven away from any combustibles such as curtains, wood paneling, boxes, or towels. The flue riser at the top of the oven should also be kept away from any flammable material.
- Observe proper clearance to combustibles as noted on the oven rating tag. Never place anything on top of the oven. The flues on top of the oven should be a minimum horizontal distance of 6 inches from any combustible material. Never place any combustible materials above the top of the oven. Never use any solvents near the oven. The open flame inside the oven could ignite solvent fumes, resulting in a fire or explosion.
- Keep the work area around the oven free of objects that might block fresh air or that might cause a fire.
- Do not attach an extension to the exhaust stack. This may stop the burner from operating properly, cause the burner to go off, or, cause other dangerous malfunctions. It may also cause a strong draft in the room. A draft can interfere with the burner.
- Do not locate the oven near strong drafts. Keep the oven away from doors that are opened and closed frequently.

Installation Procedure



Ensure that an authorized BKI service agent installs the oven. An authorized BKI service agent should be a qualified gas service technician and a licensed electrician.



Failure to restrain the oven could allow it to move, causing a possible break in the gas line resulting in an explosive condition.

1. Install an ANSI Z83.11/CGA 1.8 compliant restraining device (such as BKI part number FT0279) per the instructions below:
 - a. Mount the wall attachment according the restraining device manufacturer instructions.
 - b. If possible, loop one end of the restraining cable around one of the rear legs and attach the spring-loaded hook to the cable then attach the other spring-loaded hook to the wall attachment.

If you are unable to do this, drill a small ¼" hole through the back flange of the shelf, then follow the restraining device manufacturer instructions to finish the installation.

⚠ WARNING

Use appliance connectors and quick-disconnect devices that are in compliance with the applicable ANSI and CSA standards.

2. Attach an appliance connector to the oven according to the instructions provided by the appliance connector manufacturer.
3. Connect the gas supply to the oven. In Europe, the gas supplier must provide the gas hookup connecting line.
4. Lock the casters so the oven does not move. Every time you use the oven, make sure the casters are locked so the oven cannot move. (In Canada: refer to caster codes CAN 1-6.10 M88 and CAN 1-6.9 M79.)
5. Turn on the gas at the gas supply valve.
6. Check for gas leaks from the gas supply to the oven gas valve using a soap and water solution. If a leak is detected, tighten the connection where the leak occurs.
7. Connect the three-prong (grounded) plug directly into a properly grounded three-prong receptacle.
8. Apply power to the oven.
9. Perform the following procedures provided in the Startup and Checkout section of the *VR8105, VR8205, and VR8305 Direct Ignition Combination Gas Controls Installation Instructions (69-1226-2)*. Refer to Appendix A.
 - Perform Gas Leak Test
 - Turn On System
 - Turn On Main Burner
 - Check and Adjust Gas Input Burner Ignition (for Standard model Pressure Regulator)
10. Place the **HEAT** switch, **LOWER FLAME** switch, and **LIGHTS** switch in the "OFF" position.
11. Wait at least five minutes to allow oven to cool.
12. Place the **POWER** switch and **ROTOR** switch in the "OFF" position.

Gas Conversion Instructions

To convert the gas system from a Natural Gas to LP Gas application or vice versa, contact the BKI Technical Service Department, toll free: 1-800-927-6887. Outside the U.S., call 1-864-963-3471.

Replacement Parts

Use the information in this section to identify replacement parts. To order replacement parts, call your local **BKI** sales and service representative. Before calling, please note the serial number on the rating tag affixed to the unit.

Assemblies

Description	Assembly #	Figure #	Table #
CONTROL PANEL	AN44022900	Figure 1	Table 1
THERMOCOUPLE	AA44012400	Figure 2	Table 2
UPPER GAS PIPING	AB44001100	Figure 3	Table 3
DUAL PASSIVE ROTOR	AB44106400	Figure 4	Table 4
SINGLE/DUAL DRIVE ROTOR	AB44106500	Figure 5	Table 5
SINGLE PASSIVE ROTOR	AB44015500	Figure 6	Table 6
JACKSHAFT	AB44107500	Figure 7	Table 7
DRIVE SIDE DOOR	AB44107800	Figure 8	Table 8
PASSIVE SIDE DOOR	AB44108300	Figure 9	Table 9
WATER PIPE	AN44013500	Figure 10	Table 10

Figure 1. Control Panel (AN44022900)

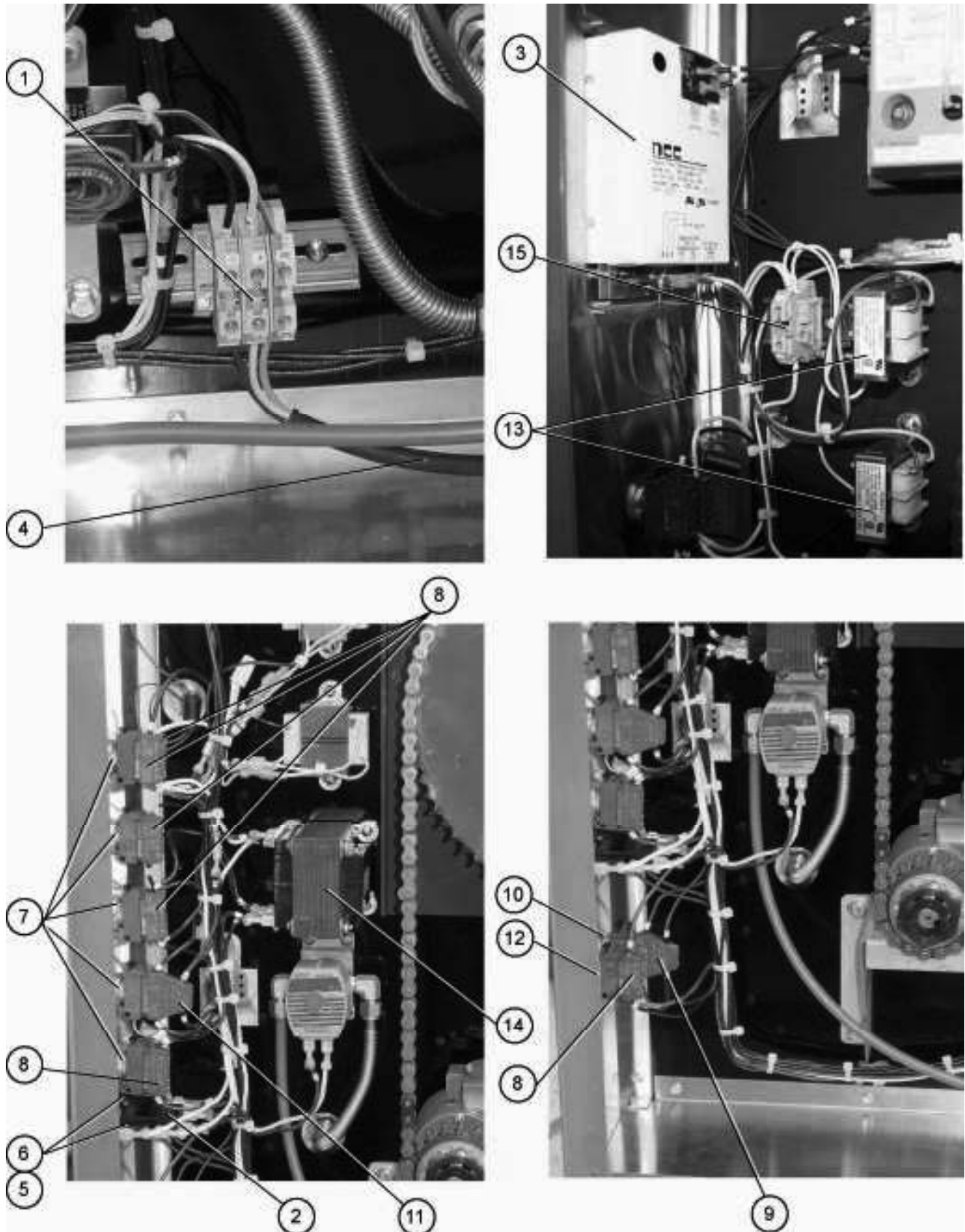


Table 1. Control Panel (AN44022900) Parts

ITEM #	PART #	QTY	DESCRIPTION
1	AB44007200	1	TERM BLOCK ASSY DRG
2	CB0058	1	BREAKER, CIRCUIT 1 AMP 250V
3	CP0022	1	CONTROLLER, DIGT TEMP/TIME
4	CS0005	1	CORD SET, 115V 7'6"
5	F0097	2	FUSE, 15A 300V SC15 TIME DELAY
6	FH0001	2	FUSE HOLDER, 15A 300V HPF-EE
7	S0304	5	SWITCH, 2 POS OPERATOR BLK
8	S0307	6	SWITCH, NO BLOCK GE P9B10VN
9	S0308	1	SWITCH, NO/NC BLOCK GE 9PB11VN
10	S0309	1	SWITCH, MUSHROOM PUSH BLACK
11	S0339	2	SWITCH, CONTACT BLOCK 2 NO
12	S0340	1	SWITCH, PUSH BUTTON BLUE RECESSED
13	TF0005	2	TRANSFORMER, 120-24V LGF
14	TF0045	1	TRANSFORMER, 230/115 PRI 175VA
15	AB44023800	1	TERM BLOCK ASSY NEUTRAL LINES DRG40

Figure 2. Thermocouple (AA44012400)



Table 2. Thermocouple (AA44012400) Parts

ITEM #	PART #	QTY	DESCRIPTION
	F0173	1	FERRITE BEAD
	T0020	0.25	TUBING, HEAT SHRINK 1/4 PLASTIC
	T0085	1	THERMOCOUPLE, TYPE K T-2016
	TU0012	0.25	TUBING, RED SILICONE SRT-110

Figure 3. Upper Gas Piping (AB44001100)

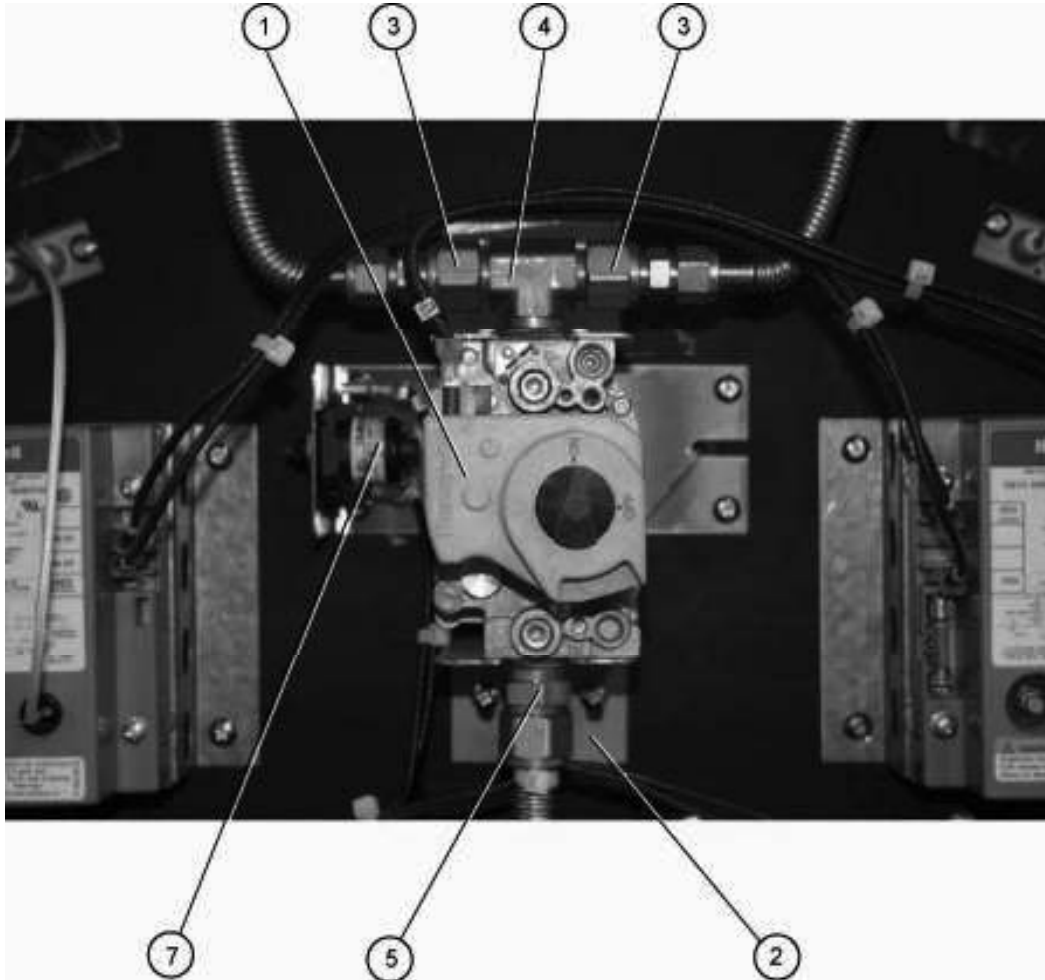


Table 3. Upper Gas Piping (AB44001100) Parts

ITEM #	PART #	QTY	DESCRIPTION
1	C0739	1	VALVE, GAS VR8205A2123
2	FB44007109	2	GAS VALVE MOUNT DRG
3	FT0521	2	REDUCER, TUBE END 1/2-3/8
4	FT0522	1	TEE, MALE BRANCH 1/2-1/2-1/2
5	FT0523	1	CONNECTOR, MALE 1/2 NPT-1/2 COMPRESS
6	SCR280	4	SCREW, 8-32 X 3/8 PHIL TRUSS
7	T0008*	1	THERMOSTAT, HI LIMIT 572°F
8	AN44116100*	3	SURGE SUPPRESSOR (ONE USED ON EACH IGNITION MODULE)
9	MB44115400*	2	IGNITION/SENSE PROBE

* - These components are not part of the Upper Gas Piping Assembly (AB44001100) but are shown here for reference only.

Figure 4. Dual Passive Rotor (AB44106400)

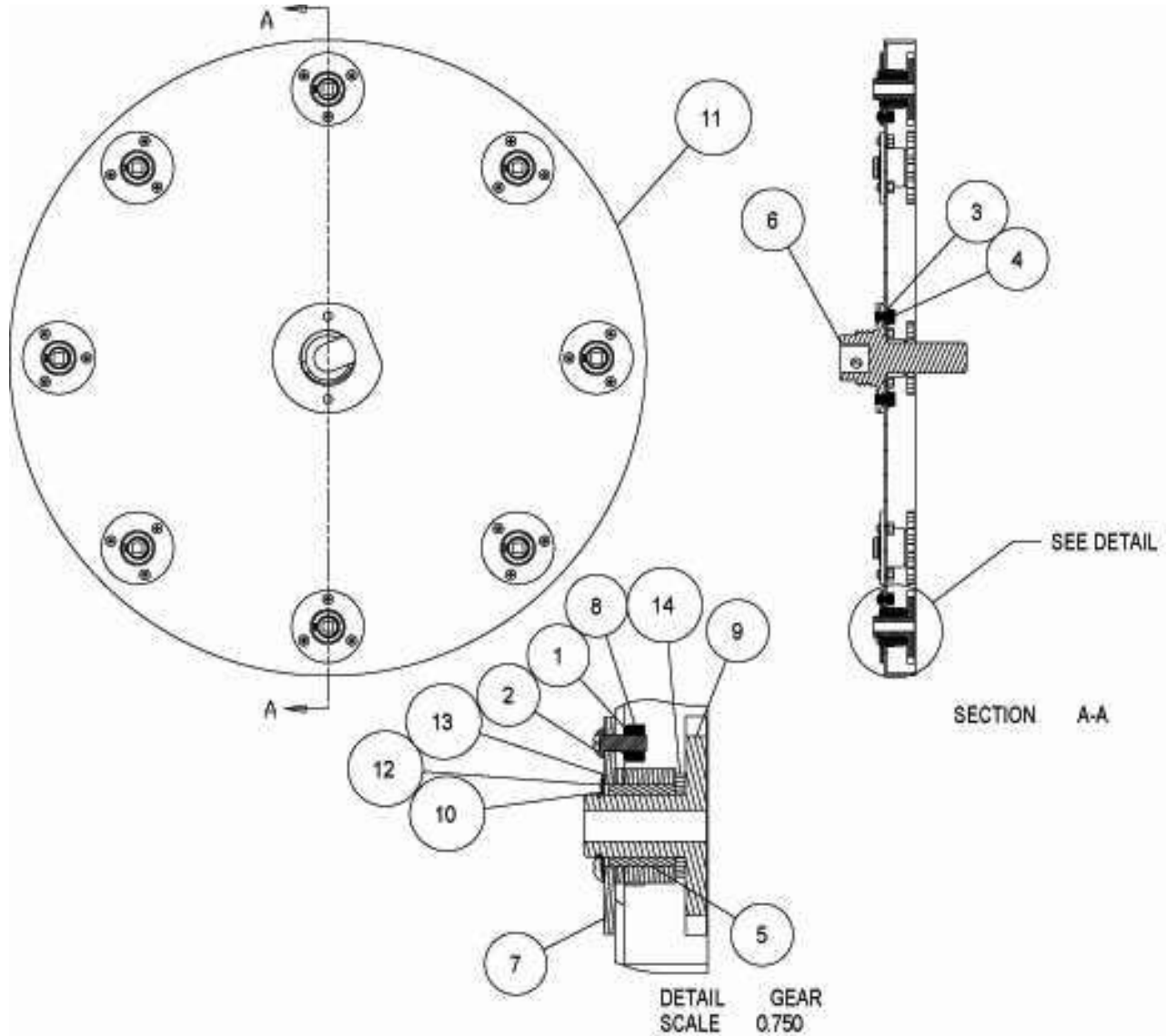


Table 4. Dual Passive Rotor (AB44106400) Parts

ITEM #	PART #	QTY	DESCRIPTION
1	WSH093	24	WASHER, #10 LOCK
2	SCR383	24	SCREW, 10-24 X 1/2" PHIL TRUSS HD
3	WSH260	2	WASHER, 5/16 S/S LOCKWASHER
4	SCR384	2	SCREW, 5/16-18 X 1/2 S/S HEX
5	B0241	8	BEARING, .75 ID X 1. OD .813 L
6	H0106	1	HUB, PASSIVE DUAL DRG
7	H0067	8	HUB, PLANETARY GEAR 951
8	NUT131	24	NUT, 10-24 SS 18-8 HEX
9	G0103	8	GEAR, PLANETARY(5) 6 DIA PITCH
10	FT0366	8	RETAINING RING, PLANETARY GEAR
11	RO0027	1	ROTOR, 23" DIA. ACTIVE DRG40
12	FT0367	8	SHIM, PLANETARY GEAR DR34
13	WSH256	8	WASHER, THRUST .765ID X 1.25OD
14	WSH257	8	WASHER, THRUST .765ID X 1.25OD

Figure 5. Single/Dual Drive Rotor (AB44106500)

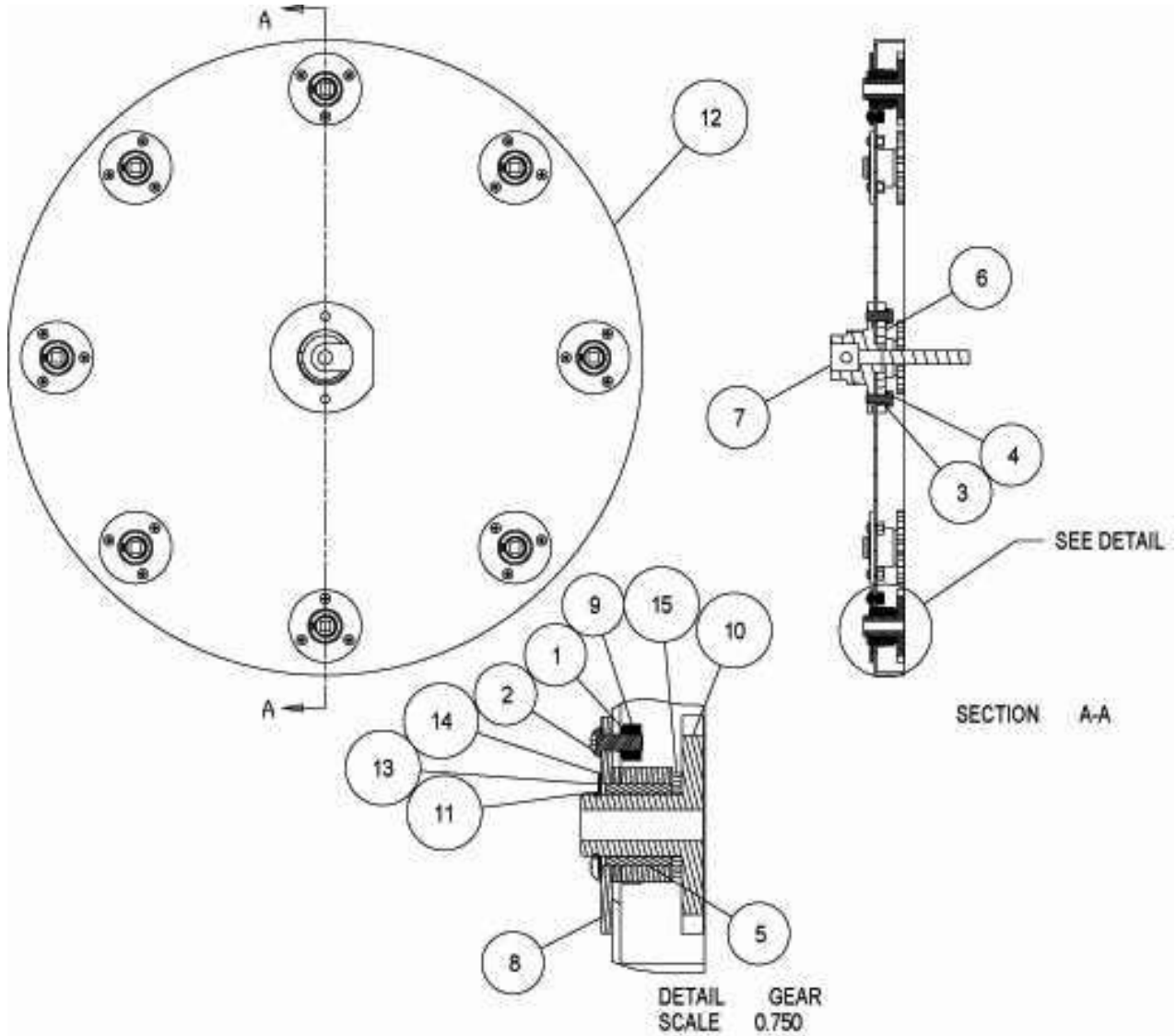


Table 5. Single/Dual Drive Rotor (AB44106500) Parts

ITEM #	PART #	QTY	DESCRIPTION
1	WSH093	24	WASHER, #10 LOCK
2	SCR383	24	SCREW, 10-24 X 1/2" PHIL TRUSS HD
3	WSH260	2	WASHER, 5/16 S/S LOCKWASHER
4	SCR399	2	SCREW, 5/16-18 X 3/4 HEX HD
5	B0241	8	BEARING, .75 ID X 1. OD .813 L
6	MC0054	1	DRIVE COUPLING, MALE DRG40
7	H0104	1	HUB, DRIVE SIDE DRG
8	H0067	8	HUB, PLANETARY GEAR 951
9	NUT131	24	NUT, 10-24 SS 18-8 HEX
10	G0103	8	GEAR, PLANETARY(5) 6 DIA PITCH
11	FT0366	8	RETAINING RING, PLANETARY GEAR
12	RO0027	1	ROTOR, 23" DIA. ACTIVE DRG40
13	FT0367	8	SHIM, PLANETARY GEAR DR34
14	WSH256	8	WASHER, THRUST .765ID X 1.25OD
15	WSH257	8	WASHER, THRUST .765ID X 1.25OD

Figure 6. Single Passive Rotor (AB44015500)

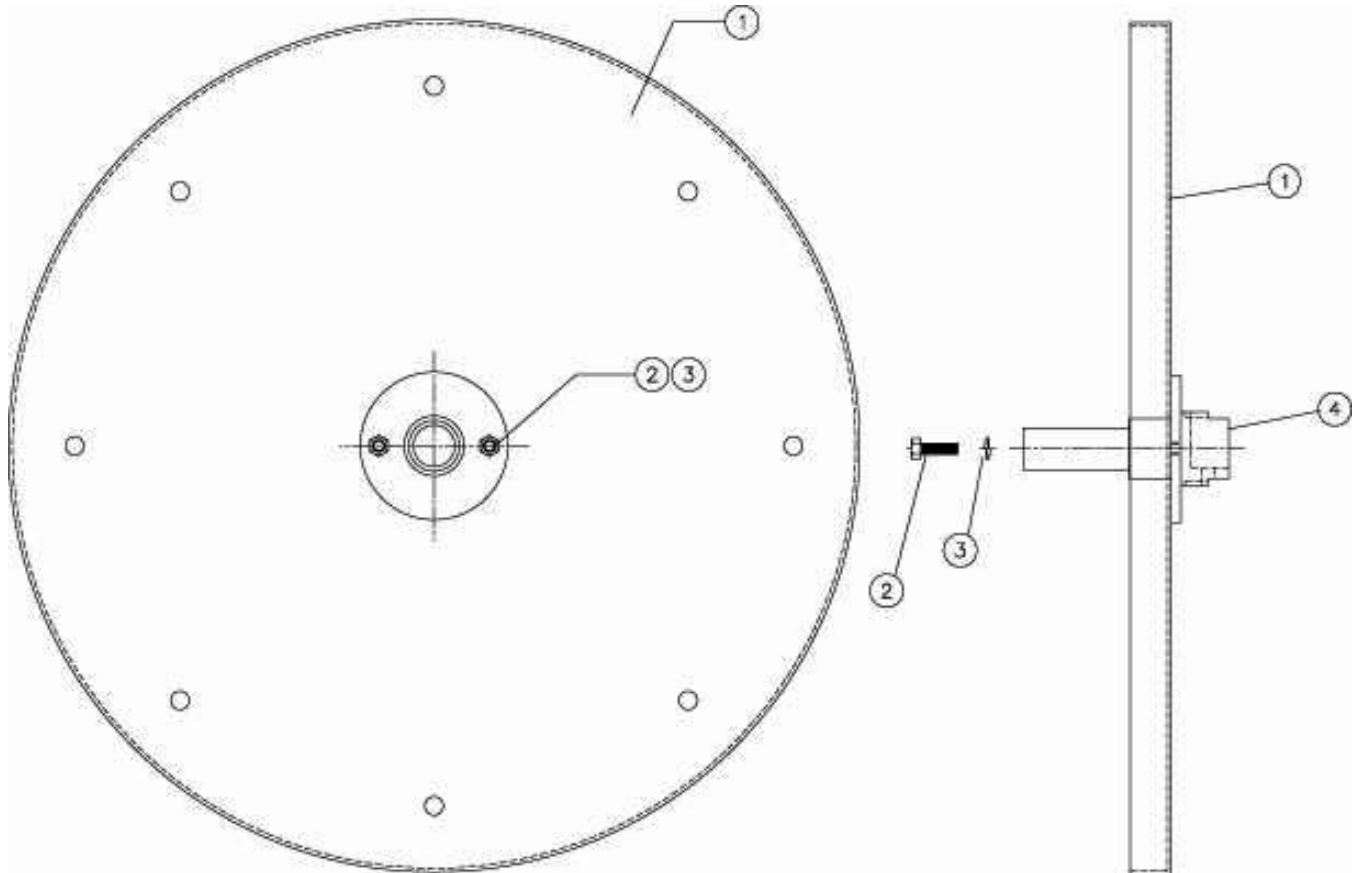


Table 6. Single Passive Rotor (AB44015500) Parts

ITEM #	PART #	QTY	DESCRIPTION
1	RO0028	1	ROTOR, 23" DIA. PASSIVE DRG40
2	SCR384	2	SCREW, 5/16-18 X 1/2 HEX CAP
3	WSH260	2	WASHER, 5/16 S/S LOCKWASHER
4	H0105	1	HUB, PASSIVE SINGLE

Figure 7. Jackshaft (AB44107500)

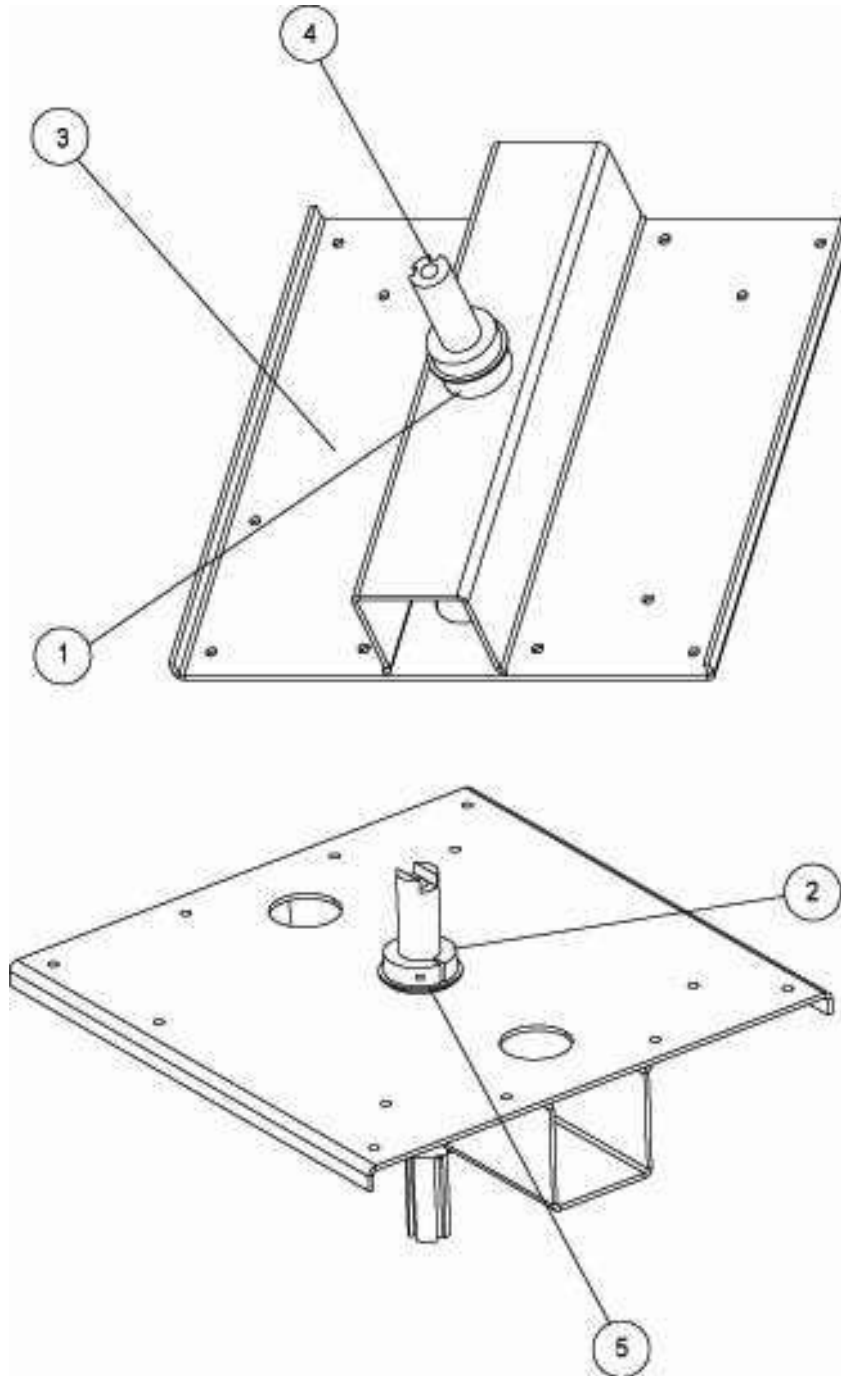


Table 7. Jackshaft (AB44107500) Parts

ITEM #	PART #	QTY	DESCRIPTION
1	B0239	2	BEARING, FCJ16F20-8
2	FT0424	2	CLAMP COLLAR C12L14 1X1.75X.5
3	PN44113800	1	JACKSHAFT MOUNT PAINTED DRG-40
4	SH0104	1	SHAFT, ROTOR MOTOR DRIVE
5	WSH253	2	WASHER, THRUST 1.025X2 PER PRINT

Figure 8. Drive Side Door (AB44107800)

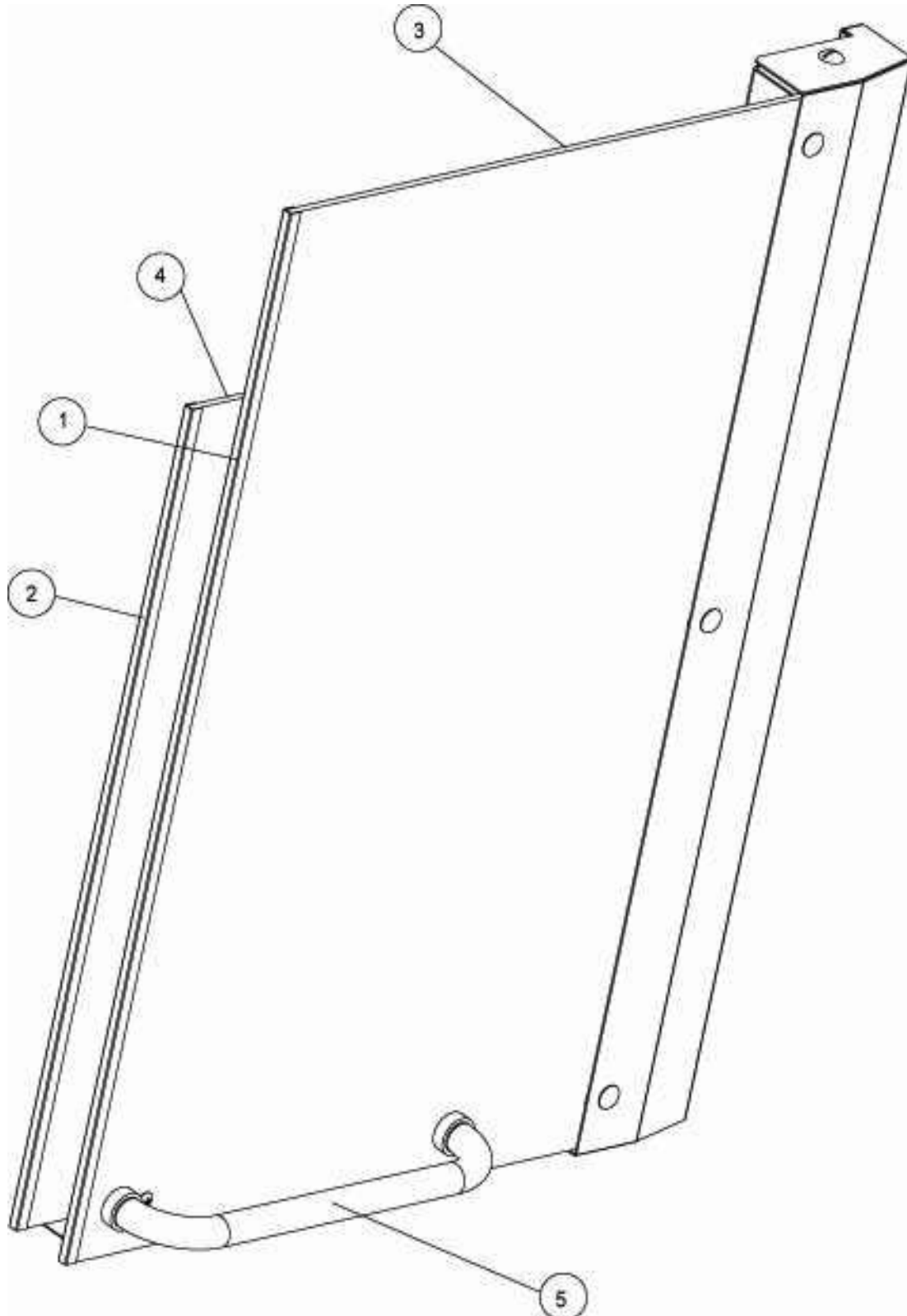


Table 8. Drive Side Door (AB44107800) Parts

ITEM #	PART #	QTY	DESCRIPTION
1	WSH266	2	WASHER, 1/4" FLAT S/S
2	SCR060	2	SCREW, 1/4-20 X 1 HEX CAP
3	BLT252	5	BOLT, 5/16-1 SLTD TRUSS
4	F0136	6	THREAD INSERT 10-24 STEEL HEX
5	BLT250	3	BOLT, 5/16-18 X 3/4 S/S CARRIAGE
6	FB44108803	1	DOOR GLASS LOCK DRG-40
7	MA44109000	1	GLASS TRIM, OUTER DOOR DRG-40
8	MA44109100	1	GLASS TRIM, INNER DOOR DRG-40
9	GL0272	1	GLASS, 25 X 21.625 TEMP
10	GL0271M	1	GLASS, MATRIX RH 32 X 20.188
11	FB44108002	1	INNER DOOR SUPPORT DR.SIDE DRG40
12	WSH044	2	WASHER, 1/4 LOCK ZINC PLTD
13	WSH260	6	WASHER, 5/16 S/S LOCKWASHER
14	NUT132	1	NUT, 10-24 SS 18-8 HEX CAP
15	NUT054	6	NUT, 5/16-18 HEX
16	H0131	1	HANDLE, TUBULAR S/S P47-1012
17	SCR383	1	SCREW, 10-24 X 1/2" PHIL TRUSS HD
18	SP0022	1	SPACER, DELRIN .375 ID X 1" OD
19	SP0041	6	SPACER, PTFE-DOOR GLASS
20	FA44108900	12	WASHER, PTFE DRG-40
21	F0086	2	THREAD INSERT 5/16-18 STEEL
22	WSH258	6	WASHER, FENDER 5/16 X 1 1/2
23	WB44107900	1	DOOR SUPPORT WELD. DRG-40

Figure 9. Passive Side Door (AB44108300)

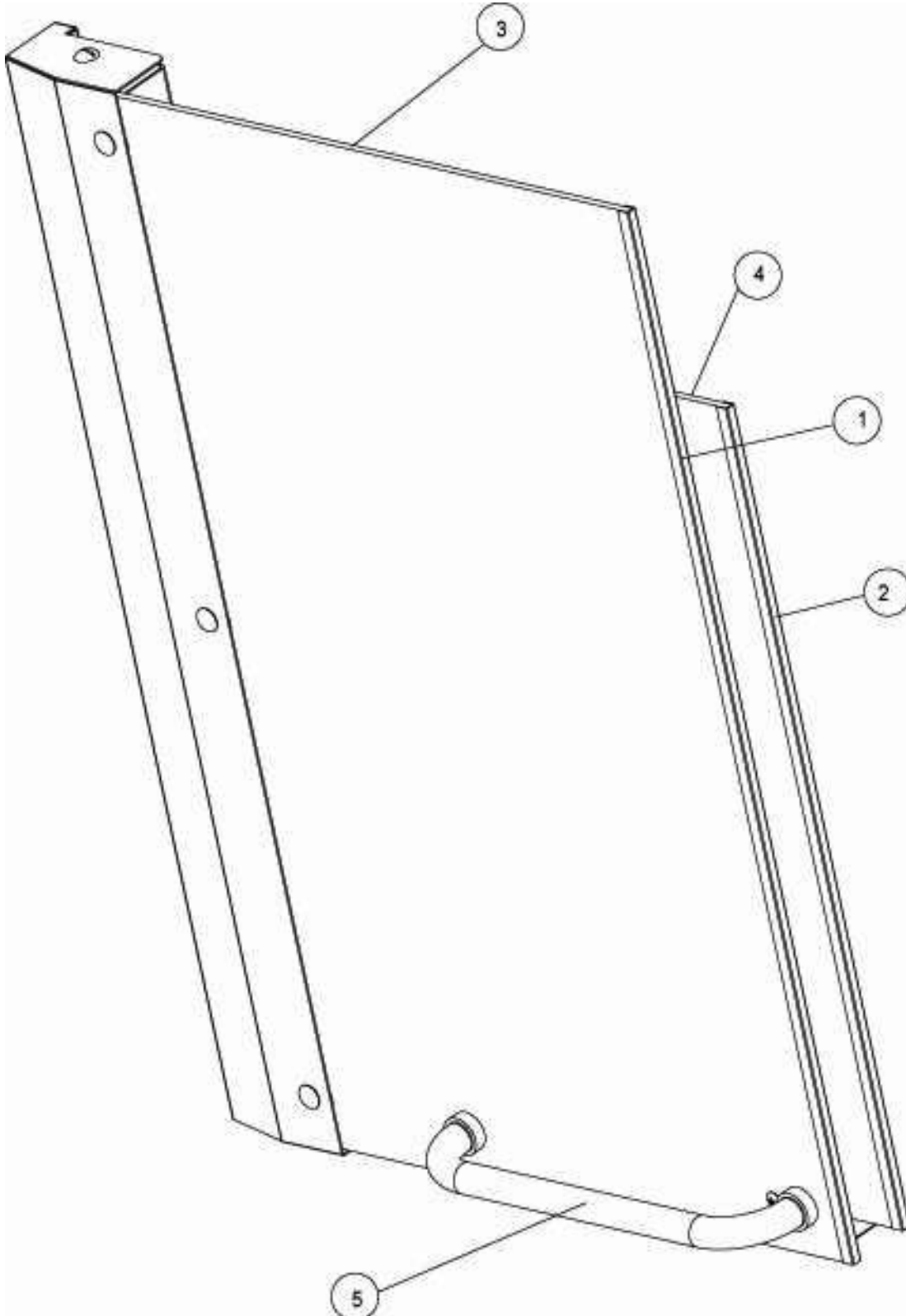


Table 9. Passive Side Door (AB44108300) Parts

ITEM #	PART #	QTY	DESCRIPTION
1	WSH266	2	WASHER, 1/4" FLAT S/S
2	SCR060	2	SCREW, 1/4-20 X 1 HEX CAP
3	BLT252	5	BOLT, 5/16-1 SLTD TRUSS
4	F0136	6	THREAD INSERT 10-24 STEEL HEX
5	BLT250	3	BOLT, 5/16-18 X 3/4 S/S CARRIAGE
6	FB44108803	1	DOOR GLASS LOCK DRG-40
7	MA44109000	1	GLASS TRIM, OUTER DOOR DRG-40
8	MA44109100	1	GLASS TRIM, INNER DOOR DRG-40
9	GL0272	1	GLASS, 25 X 21.625 TEMP
10	GL0270M	1	GLASS, MATRIX LH 32 X 20.188
11	FB44108502	1	INNER DR.SUPPORT PASS.SIDE DRG40
12	WSH044	2	WASHER, 1/4 LOCK ZINC PLTD
13	WSH260	6	WASHER, 5/16 S/S LOCKWASHER
14	NUT132	1	NUT, 10-24 SS 18-8 HEX CAP
15	NUT054	6	NUT, 5/16-18 HEX
16	H0131	1	HANDLE, TUBULAR S/S P47-1012
17	SCR383	1	SCREW, 10-24 X 1/2" PHIL TRUSS HD
18	SP0022	1	SPACER, DELRIN .375 ID X 1" OD
19	SP0041	6	SPACER, PTFE -DOOR GLASS
20	FA44108900	12	WASHER, PTFE DRG-40
21	F0086	2	THREAD INSERT 5/16-18 STEEL
22	WSH258	6	WASHER, FENDER 5/16 X 1 1/2
23	WB44107900	1	DOOR SUPPORT WELD. DRG-40

Figure 10. Water Pipe (AN44013500)

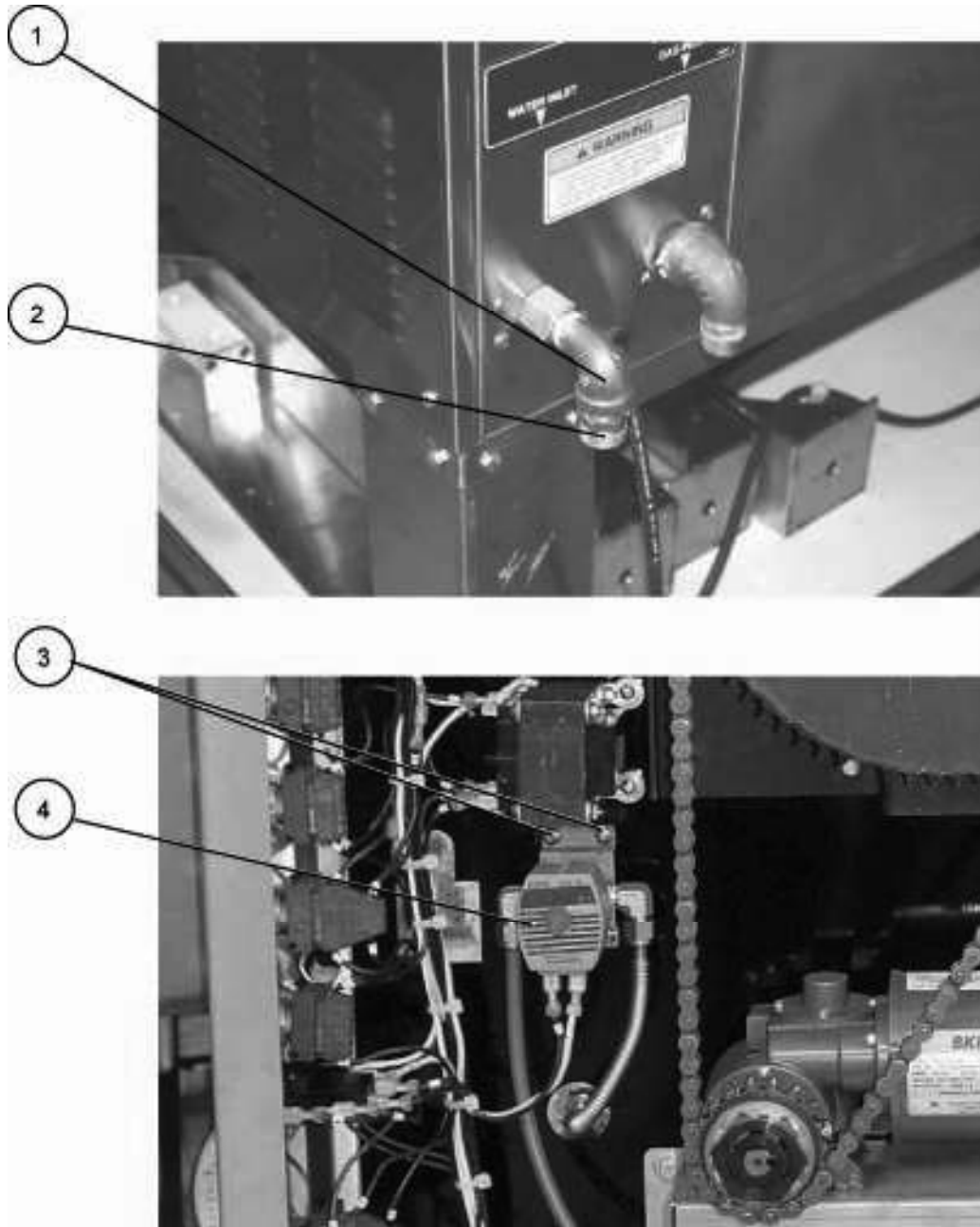


Table 10. Water Pipe (AN44013500) Parts

ITEM #	PART #	QTY	DESCRIPTION
1	FT0272	2	ELBOW, STREET, 90° 1/2" NPT, SS
2	FT0470	1	CONNECTOR, HOSE 3/4" X 1/2"NPT
3	SCR138	2	SCREW, 10 X 1/2 PHIL TR HD
4	SV0010	1	VALVE, SOLENOID 120/60

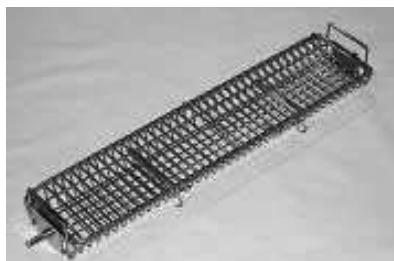
Accessories & Components

Description	Part #	Figure #	Item #
Accessories			
BASKET, MEAT LARGE CLAMSHELL (FOR DUAL SHAFT) BASKET, MEAT LARGE CLAMSHELL (FOR SINGLE SHAFT)	MB0015 MB0021	Figure 11	1
BASKET, MEAT SM CLAMSHELL (FOR DUAL SHAFT) BASKET, MEAT SM CLAMSHELL (FOR SINGLE SHAFT)	MB0011 MB0020	Figure 11	2
VEE SPIT 2 BIRD DRG (FOR DUAL SHAFT) VEE SPIT 3 BIRD DRG (FOR DUAL SHAFT) VEE SPIT 6 BIRD DRG (FOR SINGLE SHAFT)	MF0031 MF0021 MF0028	Figure 11	3
INSULATED MITT 13"	G0052	Figure 11	4
HOSE, 60" GAS CONNECTOR W/ RESTRAINT (FT0279)	H0136	Figure 11	5
RESTRAINT (ONLY)	FT0279	Figure 11	6
PERMATEX INDUST. SUPERLUBE	L0200	Figure 11	7
Components			
LOG, SPLIT BRANCH 9-1/2" (3)	L0500	Figure 11	8
CASTER 5"1/2-13 X 3/4 STUD LOCK	C0425	Figure 11	9
VALVE, GAS VR8205A2123	C0739	Figure 11	10
DIRECT SPARK IGNITION	C0740	Figure 11	11
IGN.PROBE, LOWER BURNER DRG-40	MB44115500	Figure 11	12
IGN.PROBE, UPPER BURNER DRG-40	MB44115400	Figure 11	13
MOTOR, 110-120/220-240 .94/.55 AMP	M0087	Figure 11	14
CHAIN, #40 ROLLER 106 PITCHES	CH0014	Figure 11	15
LAMPHOLDER W/BULB 12V 20W (OSRAM)	LH0024	Figure 11	16
DUAL REMOVABLE SHAFT	AB44106600	Figure 11	17
ROTOR, CENTER DRG (For Dual Rotor Configuration)	RO0031	Figure 11	18
SHAFT ASSY, SGL REMOV DRG	AB44015000	Figure 11	19

Figure 11. Accessories & Components



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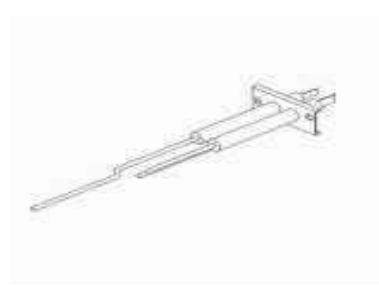
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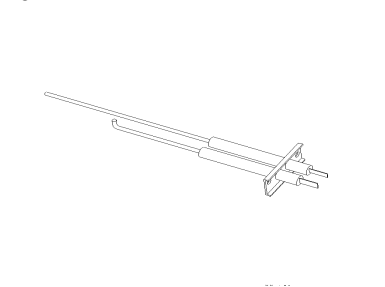
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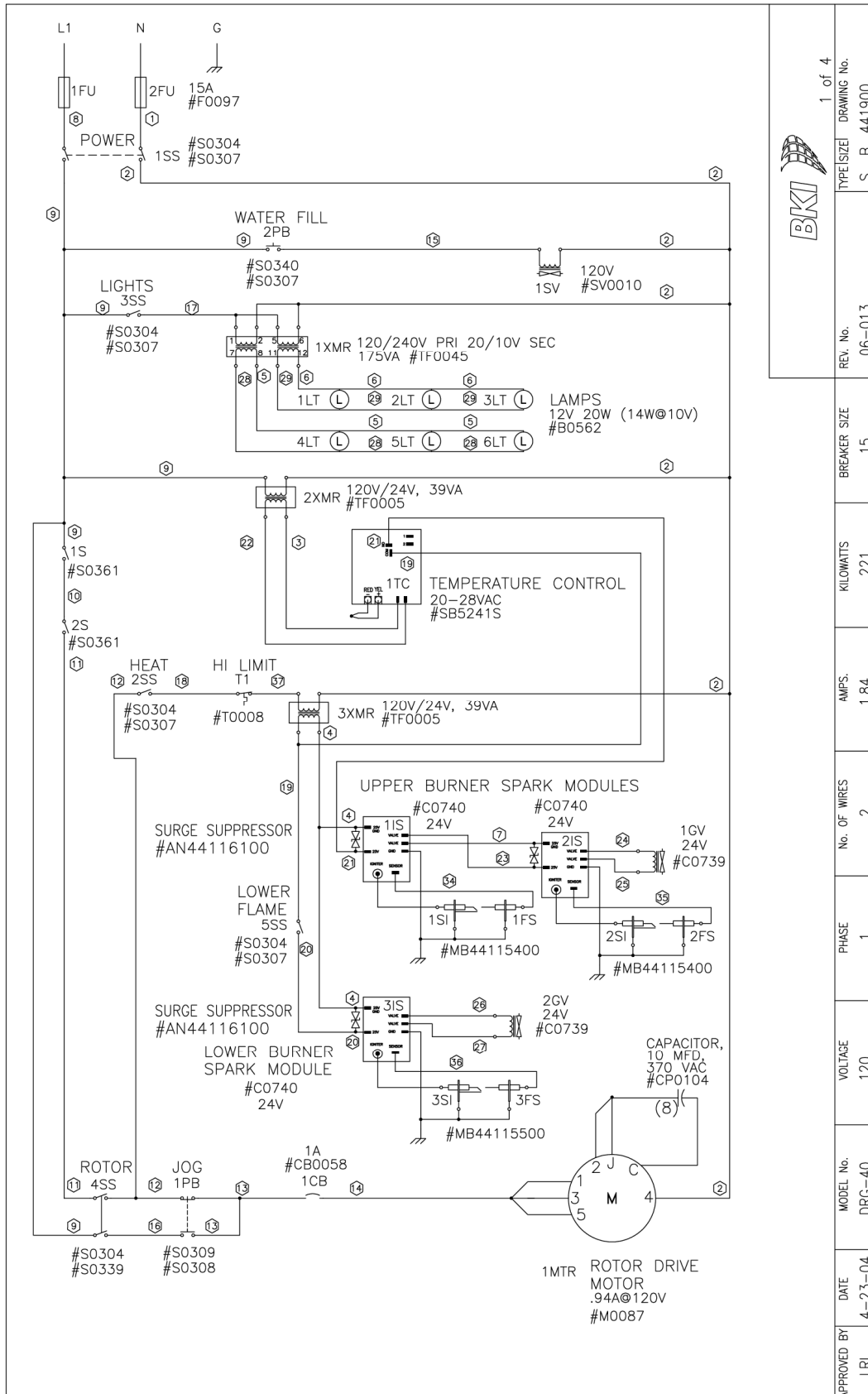


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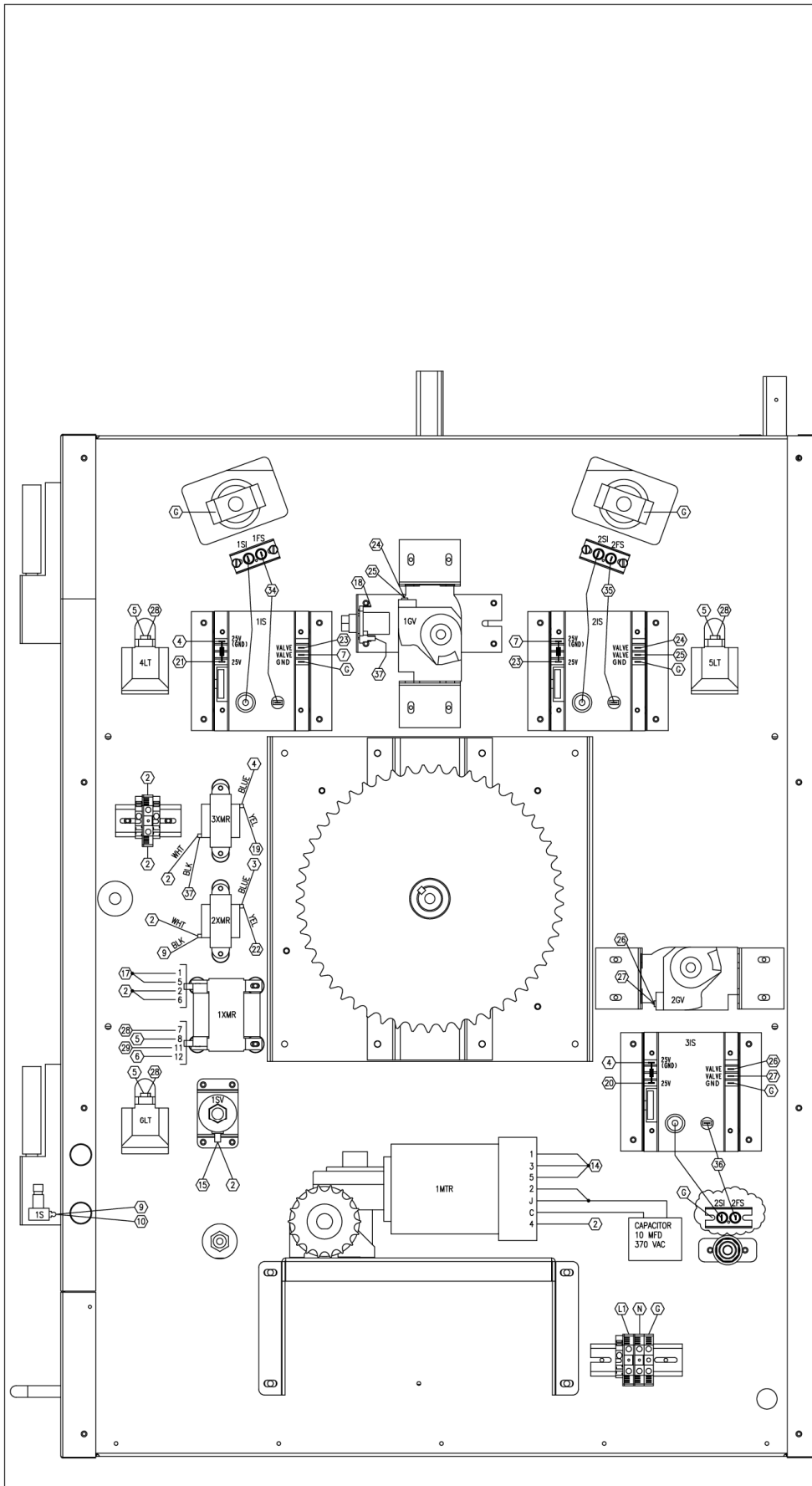


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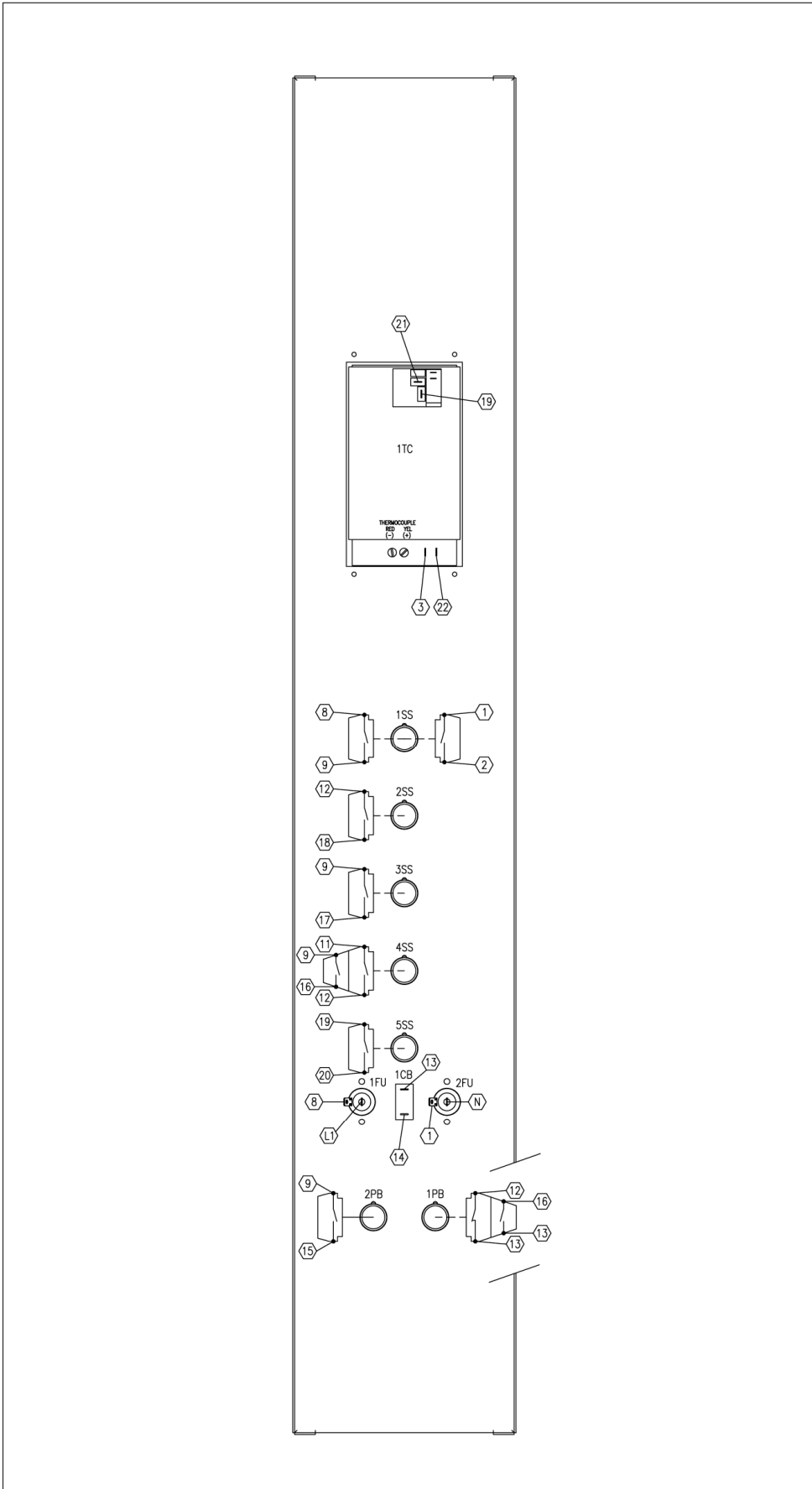
Wiring Diagrams



	1 of 4	TYPE/SIZE/ DRAWING No.	S B 441900
	REV. No.	06-013	
	BREAKER SIZE	15	
	KILOWATTS	.221	
AMPS.	1.84		
No. OF WIRES	2		
PHASE	1		
VOLTAGE	120		
MODEL No.	DRG-40		
DATE	4-23-04		
APPROVED BY	LRL		



	2 of 4
	TYPE/SIZE DRAWING No. S B 441900
REV. No.	06-013
BREAKER SIZE	15
KILOWATTS	.221
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3 of 4
DRAWING No.

TYPE/SIZE
S B 441900

REV. No.
06-013

BREAKER SIZE
15

KILOWATTS
.221

AMPS.
1.84

No. OF WIRES
2

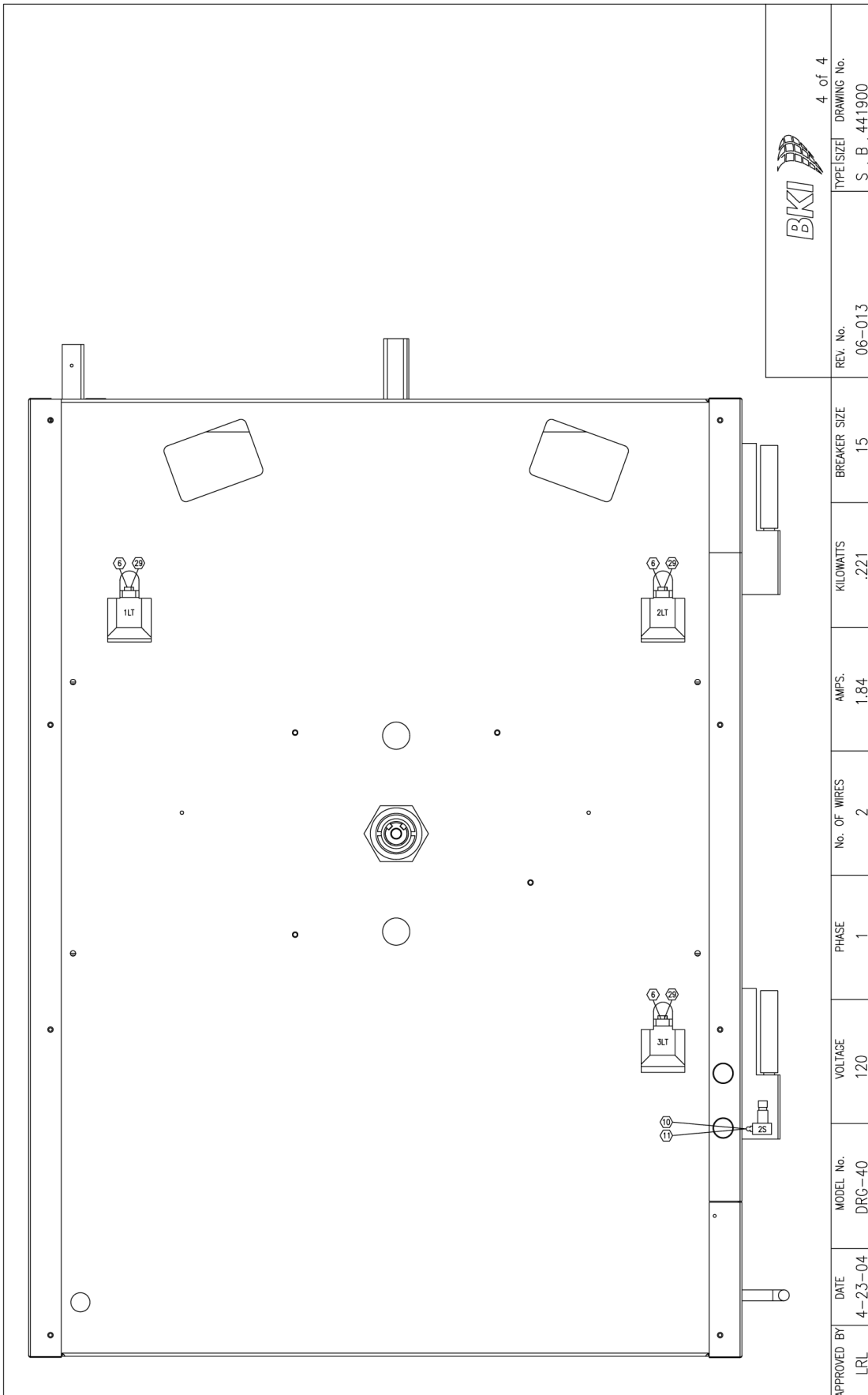
PHASE
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VOLTAGE
120

MODEL No.
DRG-40

DATE
4-23-04

APPROVED BY
LRL



Appendix A

Gas Control Valve Instructions

Notes



2812 Grandview Dr., Simpsonville, S.C. 29680, USA
<http://www.bkideas.com>

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CS-TM-022.01

Revised 3/26/13

REVISION HISTORY

<u>REVISION</u>	<u>DATE</u>	<u>REVISED BY</u>	<u>DESCRIPTION</u>
01	03/26/13	KW	Initial Release-Supersedes all previous releases