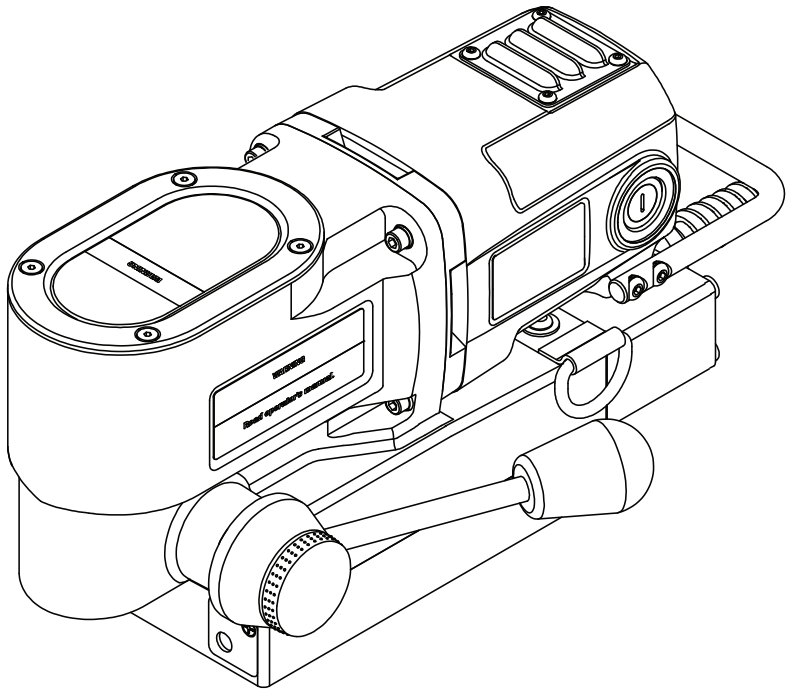
KIMBALL MIDWEST

OPERATOR'S MANUAL

Read through this operator's manual carefully before using the product. Protect yourself and others by observing all safety information, warnings and cautions. Failure to comply with the instructions could result in personal injury and/or damage to product or property. Please retain these instructions for future use.



Part No. 82-4727

ROTO-KUT™ 2 FRAME DRILL

For Use with Roto-Kut™ Auto-Lok Frame Drill Cutters

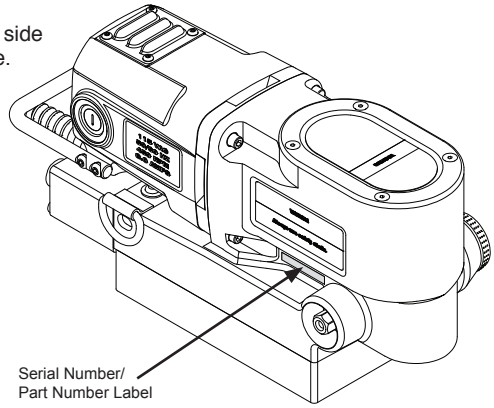
ROTO-KUT™ 2 FRAME DRILL
Part No. 82-4727

Before attempting to operate your new Roto-Kut 2 Frame Drill, please read, and understand, all instructions first.

Congratulations on your purchase of the Roto-Kut™ 2 Frame Drill. Your frame drill is designed to produce holes quickly and efficiently. Kimball Midwest is committed to providing you with tools and products to help you be more productive.

Before attempting to operate your new Roto-Kut™ 2 Frame Drill, please read all instructions first. These include the Operator's Manual and Warning Labels on the unit itself. With proper use, care and maintenance, your model will provide you with long service life and fast hole drilling.

The Roto-Kut™ 2 Frame Drill uses a Serial/Part Number Label located on the side of the housing. Refer to this label to identify the serial number of your machine.



Specifications

Cutter Type.....Roto-Kut™ Cutters
Hole Capacity.....1/2" to 1-3/8"
Depth of Cut.....1"
Motor.....450 RPM, 8A 115V
Net Weight.....23.8 lbs

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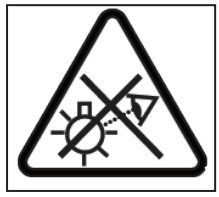
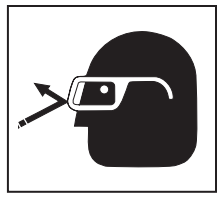
WARNING

Cutters are sharp. Wear gloves when installing or removing a cutter from the arbor. Do not grab a rotating cutter.

To prevent electric shock, do not use power tools near wet areas, or where the power tool may become wet.



Do not stare at the operating light.



Always wear eye protection while using cutting tools, or in the vicinity of cutting.

The slug is ejected at the end of the cut. Do not aim the cutter or arbor so that the ejected slug may hit someone around, or below you.

IMPORTANT SAFETY INSTRUCTIONS

WARNING: **Read all safety warnings, instructions, illustrations and specifications provided with this power tool.** *Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.*

1. Work Area Safety

a) Keep your work area clean and well lit. *Cluttered or dark areas invite accidents.*

b) Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. *Power tools create sparks which may ignite the dust or fumes.*

c) Keep children and bystanders away while operating a power tool. *Distractions can cause you to lose control.*

2. Electrical Safety

a) Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with grounded power tools. *Unmodified plugs and matching outlets will reduce risk of electrical shock.*

b) Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators. *There is an increased risk of electric shock if your body is grounded.*

c) Don't expose power tools to rain or wet conditions. *Water entering a power tool will increase the risk of electric shock.*

d) Do not abuse the cord. Never use the cord for carrying or unplugging the power tool. Keep the cord away from heat, oil, sharp edges or moving parts. *Damaged or entangled cords increase the risk of electric shock.*

e) When operating a power tool outdoors, use an extension cord suitable for outdoor use. *Use of a cord suitable for outdoor use reduces the risk of electric shock.*

f) If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) or ground fault interrupter (GFI) protected supply. *Use of an RCD reduces the risk of electric shock.*

3. Personal Safety

a) Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol, or medication. *A moment of inattention while operating power tools may result in serious personal injury.*

b) Use personal protective equipment. Always wear eye protection. *Protective equipment such as a dust mask, non-skid shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.*

c) Prevent unintentional starting. Ensure the switch is in the off-position before connecting to a power source, picking up or carrying the tool. *Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.*

d) Remove any adjusting keys or wrenches before turning the power tool on. *A wrench or a key that is left attached to a rotating part of the power tool may result in personal injury.*

e) Do not overreach. Keep proper footing and balance at all times. *This enables better control of the power tool in unexpected situations.*

f) Dress properly. Do not wear loose clothing or jewelry. Keep your hair and clothing away from moving parts. *Loose clothes, jewelry or long hair can be caught in moving parts.*

g) If devices are provided for the connection of dust extraction and collection, ensure these are connected and properly used. *Use of dust collection can reduce dust-related hazards.*

h) Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles. *A careless action can cause severe injury within a fraction of a second.*

i) Always use the safety strap. *The magnet can unexpectedly release from the work surface.*

4. Power Tool Use and Care

a) Do not force the power tool. Use the correct power tool for your application. *The correct power tool will do the job better and safer at the rate for which it is designed.*

b) Do not use the power tool if the switch does not turn it on or off. *Any power tool that cannot be controlled with the switch is dangerous and must be repaired.*

c) Disconnect the plug from the power source before making any adjustments, changing accessories or storing power tools. *Such preventative safety measures reduce the risk of starting the tool accidently.*

(Continued on page 4)

Save all warnings and instructions for future reference.

IMPORTANT SAFETY INSTRUCTIONS

d) Store idle power tools out of reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. *Power tools are dangerous in the hands of untrained users.*

e) Maintain power tools and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. *Many accidents are caused by poorly maintained power tools.*

f) Keep cutting tools sharp and clean. *Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.*

g) Use the power tool, accessories and tool cutters etc. in accordance with the instructions, taking into account the working conditions and the work to be performed. *Use of the power tool for operations different from those intended could result in a hazardous situation.*

h) Keep handles and gripping surfaces, clean and free from oil and grease. *Slippery handles and gripping surfaces do not allow for safe handling and control of the tool in unexpected situations.*

5. Service

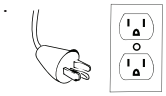
a) Have your power tool serviced by a qualified repair person using only identical replacement parts. *This will ensure that the safety of the power tool is maintained.*

ADDITIONAL SAFETY INSTRUCTIONS

Safe Electrical Connection

Your Drill is rated for use on 115VAC at 50-60Hz. Do not attempt to use the drill on power sources rated other than this.

Plugs and Receptacles



Typical USA 115V

Wet electrical connections are shock hazards. To prevent the cutting fluid from traveling along the cord and contacting the plug or power outlet, tie a drip loop as shown. Also elevate extension cords or gang box connections.

Extension Cords

Use only 3-wire extension cords that have a 3-prong grounding type plug and 3-pole receptacles that accept the tool's plug. Replace or repair damaged cords. Make sure the conductor size is large enough to prevent excessive voltage drop which will cause loss of power and possible motor damage.

LENGTH OF CORD, FEET	RECOMMENDED WIRE GAUGE
	115V MOTOR 10 - 12 AMPS
Up to 25	16
26 - 50	14
51 - 100	10
101 - 200	8
201 - 300	6
301 - 500	4

Outdoor Extension Cord Use

When this tool is used outdoors, use only extension cords that are intended for use outdoors and are so marked.

Additional Safety Precautions

The arbor and cutter should never be used as a handhold or handle. Keep hands and clothing away from all moving parts. Do not use cutters where the ejected slug might cause injury (slug ejected at the end of cut). Also, adhere to all operating instructions. Do not drill through any surface that may contain live electrical wiring. Drilling into a live wire could cause exposed metal parts of the drill to be made live. Remove chips wrapped around cutter and the arbor after each hole. With the motor off and the power disconnected, grasp chips with a leather gloved hand or pliers and pull while rotating counterclockwise. Should the cutter become jammed in the work, stop the unit immediately to prevent personal injury. Disconnect the drill from the power supply and loosen the jammed cutter by turning the arbor counterclockwise. Never attempt to free the jammed cutter by starting the motor. Service at our authorized repair center only.

Operating Near Welding Equipment

DO NOT operate this unit on the same work surface that welding is being performed on. Severe damage to the unit, particularly the power cord, could occur. This could also result in personal injury to the operator.

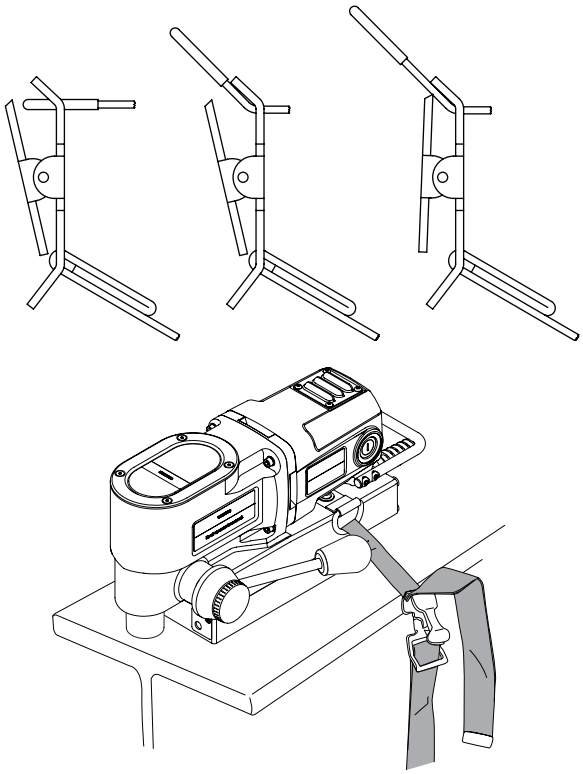
Save all warnings and instructions for future reference.

OPERATING INSTRUCTIONS

1. Place the drill on the material to be drilled (at least 3/8" thick) and align the cutter to the location of the desired hole.

2. Press the magnet switch to "ON".

3. Thread the safety strap through the opening between the motor and the drill housing. Ensure that the strap does not interfere with the operation of the feed handle. Insert the tab of the strap into the buckle. Cinch the strap tight to the material and the drill housing. Check for slack and adjust as needed.



CAUTION:
- Keep the strap clear of the cutting area, chips, and rough edges on the material.
- Inspect the strap periodically for fraying and damage. Do not use a damaged safety strap.

4. Apply a liberal amount of cutting fluid or stick lubricant to the cutter. Additional lubrication may be required to finish the cut.

5. Make certain that the cutter is clear of the workpiece and turn the motor ON by pressing the motor START button.

6. Feed the cutter slowly into the workpiece. Only after the cutting path is established to a depth of about 1/16" can additional force be applied to the feed handles. Ease up on the feed pressure as the cutter starts breaking through the workpiece.

CAUTION: Do not over-feed the cutter. Excessive feed pressure may cause the magnet to break free from the material.

DRILLING MULTI-LAYER MATERIALS:
Second layer penetration may be difficult. Slight additional feed pressure may be required (avoid over-feeding as noted above).

If unable to penetrate the second layer, withdraw the cutter from the material, ejecting the slug, and clean away any remaining chips. Feed the cutter into the hole and continue the cut.

- Turn the motor off when the cut is finished.
- Fully retract the cutter from the material, ejecting the slug.
- Remove the safety strap.

7. Turn the magnet switch to the "OFF" position.
   CAUTION: Retain a firm hold on the drill to prevent dropping it.

The cutter's inside diameter may collect chips, restricting the depth of cut. The cutter should be frequently inspected and any chips or debris removed.

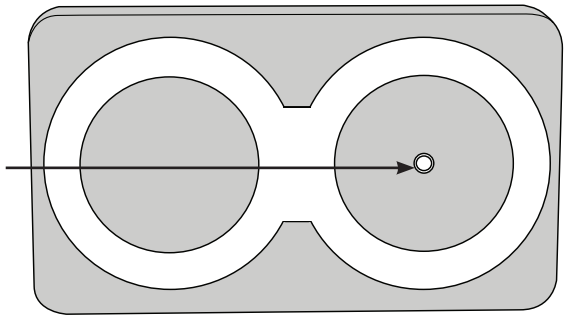
OPERATING THE DRILL WITH THE FEED HANDLE REMOVED:

The feed handle may be removed and the cutter can be fed with these optional methods.
- 1/2" Box Wrench
- Ratchet with a 1/2" Socket

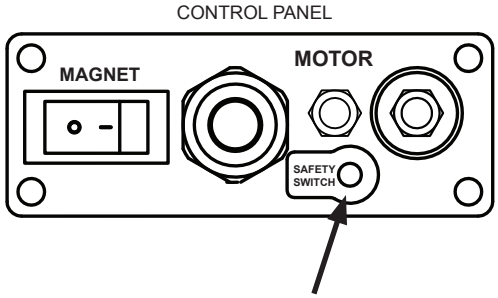
CAUTION! DO NOT USE PLIERS OR AN OPEN END WRENCH (They will damage the feed handle mounting surfaces).

SAFETY SWITCH AND SAFETY SWITCH LIGHT

NOTE: The magnet will stay engaged until you turn off the magnet. It is important to keep this area clean and free from chips. Periodically check this switch for proper function, if it is not working properly, send the unit to our authorized repair center for service.



**** THE SAFETY SWITCH LIGHT WILL COME ON AND REMAIN ON WHILE THE DRILL IS PLUGGED IN ****



If the light is Green:

In normal operation the safety switch light will be green. The motor "on" and "off" switch will function normally.

If the light is Red:

A condition with the safety switch exists that needs to be corrected. Possible causes:

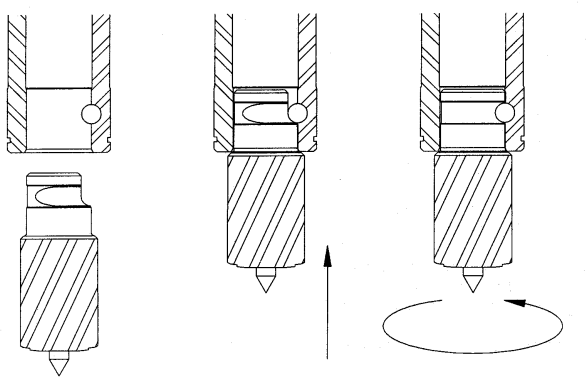
- The safety switch is defective. Have the drill serviced.
- Uneven work surface or material. Check the work surface for flatness.
- Dirt or chips under the magnet. Clean the work surface.

Testing the Safety Switch:

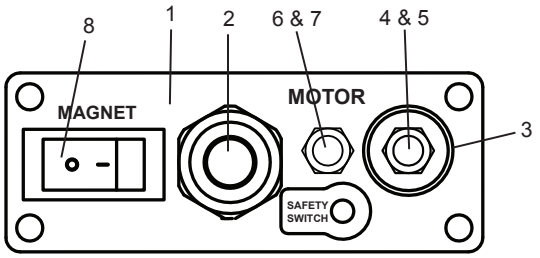
Before operating the drill always test the safety switch. To test the switch, place the drill on the work surface and plug it into the outlet. Rock the drill so that the magnet lifts off the work surface. The safety switch light should change from green to red. If the light stays green or red, a problem exists with the safety switch that must be corrected. Please correct and retest before operating the drill.

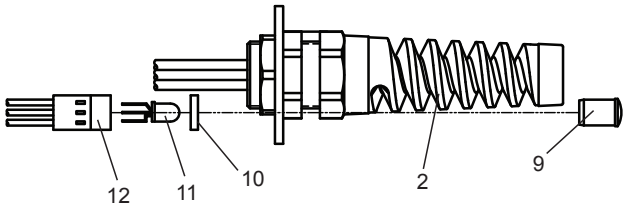
ROTO-KUT™ AUTO-LOK CUTTER INSTALLATION

1. Disconnect the machine from the power source.
2. Insert the pilot pin into the cutter.
3. Align the flat on the shank with the pin in the spindle.
4. Insert the cutter into the spindle.
5. Give the cutter a 1/4 turn in the opposite direction of the flutes.

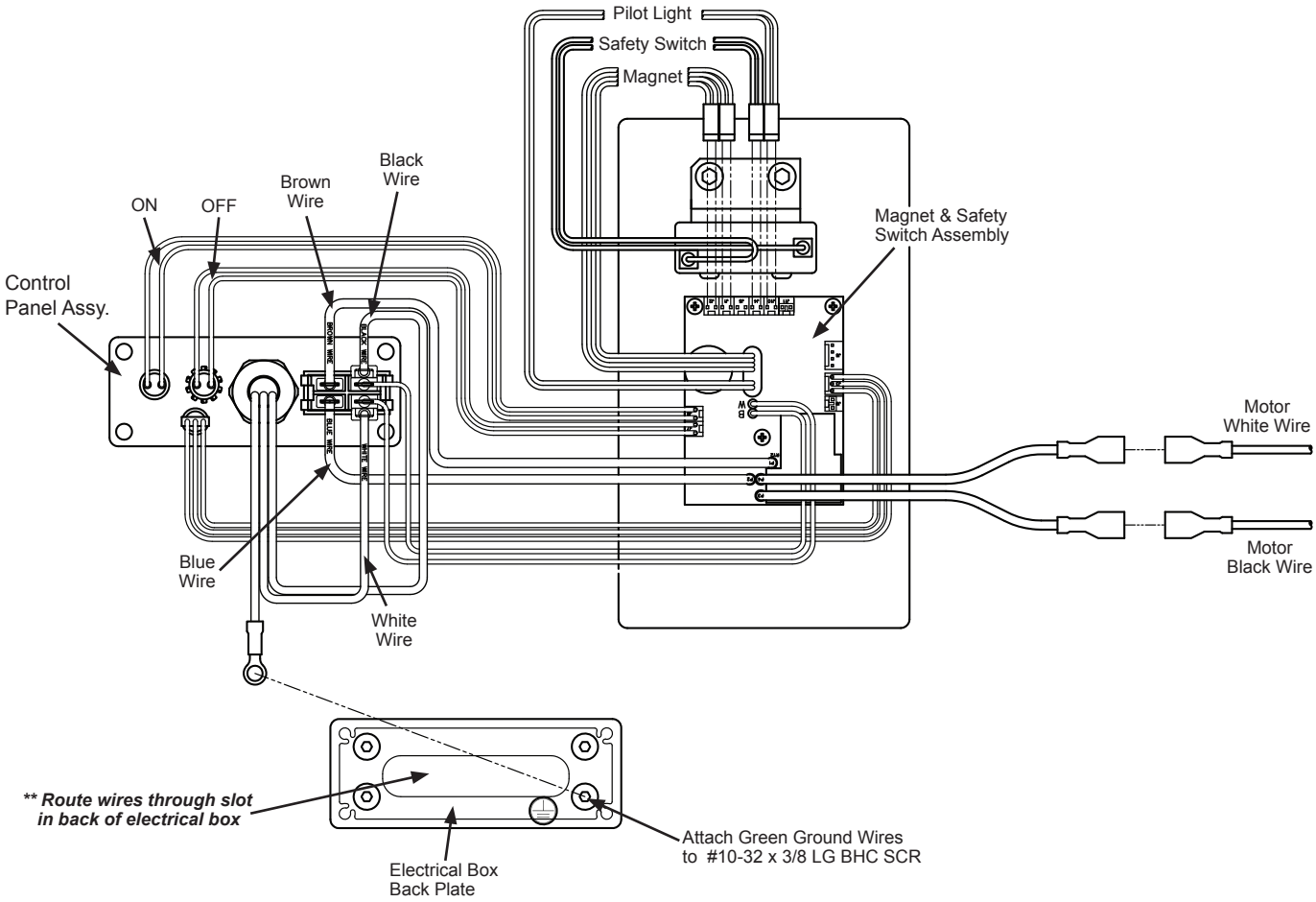


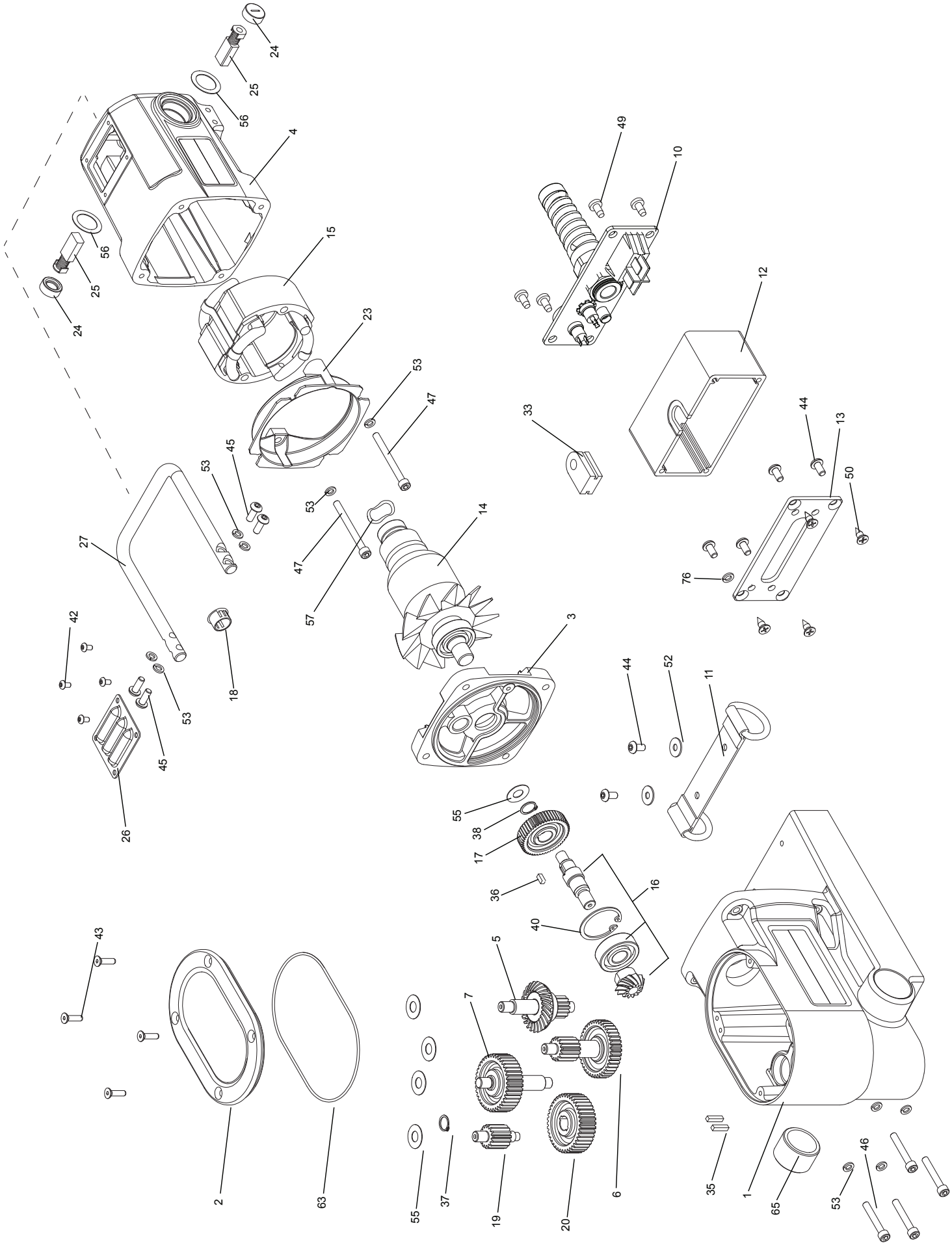
CONTROL PANEL ASSEMBLY





Control Panel Assembly			
Item #	**Reference #**	**Description**	**Qty**
1	**08829**	Faceplate	1
2	**90571**	Power Cord Assembly	1
3	**08831**	Guard - Switch	1
4	**08832**	Switch - Motor On	1
5	**08834**	Cover - Switch Green	1
6	**08833**	Switch - Motor Off	1
7	**08835**	Cover - Switch Red	1
8	**08830**	Switch - Rocker, Illuminated	1
9	**04879**	Lens - LED	1
10	**04878**	Spacer - LED	1
11	**04881**	Bulb - LED	1
12	**04877**	Wire Harness	1

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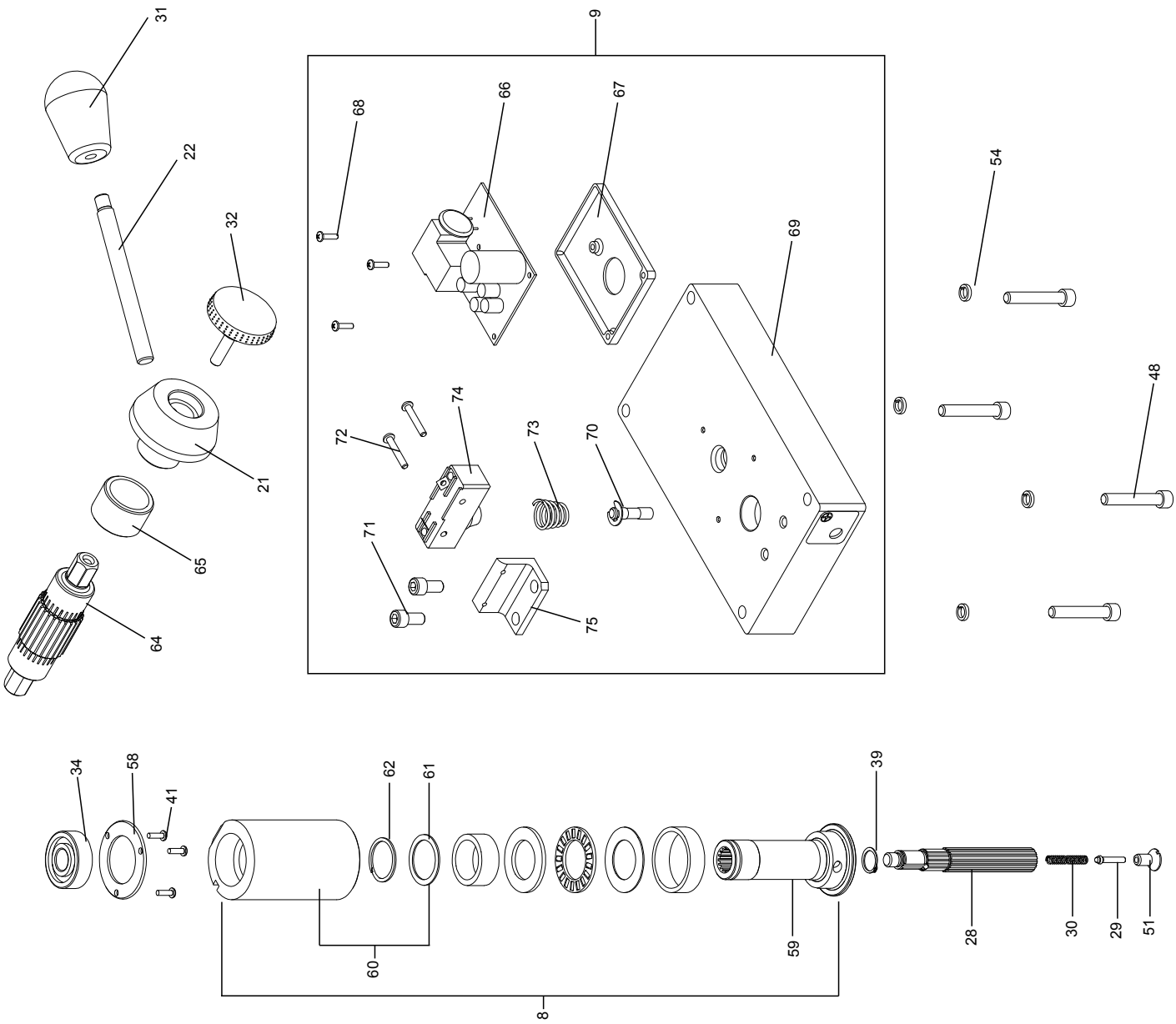
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PARTS LIST

Item #	Reference #	Description	Qty
1	09221	Drill Housing & Label Assembly	1
2	09222	Gear Box Cap	1
3	08428	Gear Box Cover	1
4	09224	Motor Housing Assembly	1
5	08430	Gear Assy, 24 & 14 Tooth	1
6	08431	Gear Assy, 39 & 15 Tooth	1
7	08432	Gear Assy, 39 Tooth	1
8	08433	Quill & Arbor Assembly	1
9	08434	Magnet / Switch Assembly	1
10	08836	Control Panel Assembly	1
11	08436	Safety Strap	1
12	09233	Housing, Electrical Box	1
13	08828	Backplate	1
14	17630	Armature	1
15	08439	Field	1
16	08605	Spindle Assembly	1
17	08441	Spur Gear #2 - 50 Tooth	1
18	07216	Hole Plug	1
19	08443	Spur Gear #7 - 15 Tooth, 24 PD	1
20	08444	Spur Gear #8 - 40 Tooth, 24 PD	1
21	08445	Feed Hub	1
22	08511	Feed Handle .370 x 4.0	1
	08512	Feed Handle .370 x 2.5	1
23	07846	Baffle	1
24	17622	Cap - Brush Holder	2
25	17621	Carbon Brush	1
26	07848	Cover, Brush Access	1
27	08447	Handle	1
28	08606	Spline Shift	1
29	08513	Plunger	1
30	17492	Spring - Comp, ø.18 x 1.o FL	1
31	17021	Knob - Oval	1
32	08449	Knob - Rubber Grip	1
33	08674	Grommet - Vibration	1
34	17270	Bearing	2
35	17277	Key - 1/8 SQ x .53 LG	2
36	08451	Key - 1/8 SQ x 5/32 LG	1
37	08456	Ring - Retaining .406 Shaft	1
38	08452	Ring - Retaining 7/16 Shaft	1

Item #	Reference #	Description	Qty
39	17475	Ring - Retaining 12mm shaft	1
40	08453	Ring - Retaining, Int 1.259 Bore	1
41	04718	SCR PAN HD #4-40 x 3/8 LG	3
42	02385	SCR BHC #6-32 x 1/4	4
43	90448	SCR FHC #8-32 x 5/8 LG	4
44	41044	SCR BHC #10-32 x 3/8 LG	6
45	90077	SCR BHC #10-32 x 1/2 LG	4
46	51044	SCR SHC #10-32 x 1-1/4	4
47	07849	SCR SHC #10-32 x 2 LG	2
48	40078	SCR SHC 1/4-20 x 1-1/2 LG	4
49	24081	SCR Self Tap Pan HD #10 x 3/8	4
50	17459	SCR FHC - Tapping #10 x 1/2	4
51	17493	SCR FHC - Altered 1/4-28	1
52	90237	Washer - Flat #10	2
53	50038	Washer - Lock Helical #10	10
54	04721	Washer - Lock 1/4 Hi-Collar	4
55	17610	Washer - Flat 8mm	5
56	17632	Washer - Fiber	2
57	08000	Washer - Spring	1
58	08454	Washer - Bearing Retainer	1
59	08481	Arbor Assembly	1
60	08482	Quill Assembly	1
61	08483	Washer - Thrust	1
62	24164	Ring - Retaining	1
63	08467	O-Ring	1
64	08463	Gear - Feed 24 Tooth 1.00 PD	1
65	40231	Bronze Bushing	1
66	08646	Circuit Board - 115V	1
67	08493	Spacer - Circuit Board	1
68	08494	SCR - PAN HD #4-40 x 7/16	3
69	08491	Magnet - Winding Assembly	1
70	08492	Plunger Assembly	1
71	10971	SCR SHC 1/4-20 x 1/2	2
72	10972	SCR BHC 6-32 x 7/8	2
73	17271	Spring	1
74	04885	Safety Switch Assembly	1
75	04909	Bracket - Safety Switch	1
76	10560	Lock Washer	1

ROTO-KUT™ AUTO-LOK CUTTERS

The Roto-Kut™ Auto-Lok Cutters are made specifically for the 82-4727 Roto-Kut™ 2 Frame Drill. They are equipped with a 5/8" tool-less Bayonet-style twist-and-lock shank, available in 3/4" and 1" depth of cut. They are made of premium high speed steel and available in diameters from 1/2" up to 1-3/8".

Roto-Kut™ Auto-Lok Cutters 3/4" D.O.C.

Use with Pilot Pin 82-4728	
82-4432	1/2"
82-4436	9/16"
82-4440	5/8"
82-4444	11/16"
82-4448	3/4"
82-4452	13/16"
82-4456	7/8"
82-4460	15/16"
82-4464	1"
82-4468	1-1/16"

Roto-Kut™ Auto-Lok Cutters 1" D.O.C.

Use with Pilot Pin 82-4728	
82-5632	1/2"
82-5636	9/16"
82-5640	5/8"
82-5644	11/16"
82-5648	3/4"
82-5652	13/16"
82-5656	7/8"
82-5660	15/16"
82-5664	1"
82-5668	1-1/16"
82-5672	1-1/8"
82-5676	1-3/16"
82-5680	1-1/4"
82-5684	1-5/16"
82-5688	1-3/8"

WARRANTY

LIMITED WARRANTY:

Kimball Midwest warrants to the original buyer (“Buyer”) all parts and accessories purchased by it from Kimball Midwest against defects in material or workmanship.

Kimball Midwest will repair or replace, at no charge to the buyer, this tool which, after examination by Kimball Midwest, is determined to be defective within a period of one (1) year from receipt.

Coverage under this warranty will be provided only if the defective tool has been submitted to Kimball Midwest for inspection.

This warranty does not cover any damage to this tool due to alteration, modification, improper installation, accident, post-installation misuse, abuse, negligence, inadequate maintenance, or malfunction of associated parts or equipment not supplied by Kimball Midwest.

This warranty is in lieu of any other warranty, expressed or implied, including any warranty of merchantability or fitness for a particular purpose. Replacement or repair as provided under this warranty is the exclusive remedy of the buyer. Kimball Midwest shall not be liable for any incidental or consequential damages resulting from breach of this warranty. Kimball Midwest neither assumes, nor authorizes any person to assume for it, any other liability in connection with the sale of its products.

If this Kimball Midwest Product proves defective in material or workmanship within one (1) year after purchase, contact the Kimball Midwest Quality Assurance Department at:
All-QualityAssurance@kimballmidwest.com

OMKM130
Printed in the U.S.A.

Made in the U.S.A.

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