

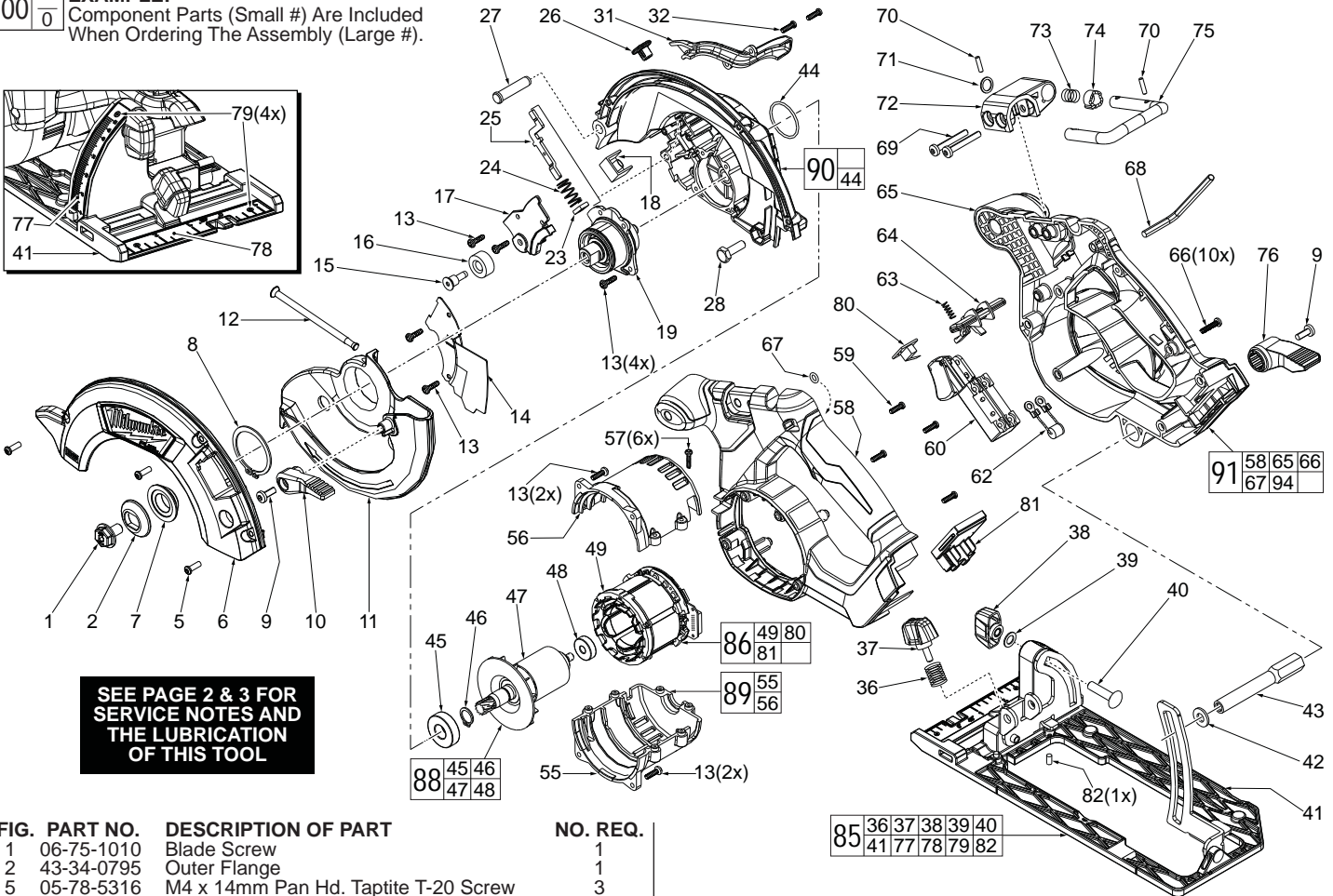
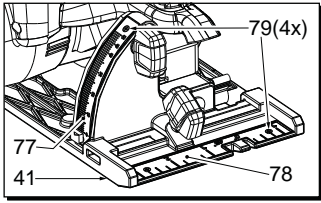


SERVICE PARTS LIST

**BULLETIN NO.
54-40-2650**

SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS		REVISED BULLETIN	DATE
Cordless M18 FUEL™ Circular Saw			Sept. 2013
CATALOG NO. 2730-20	STARTING SERIAL NO. F31A	WIRING INSTRUCTION See Page Four	

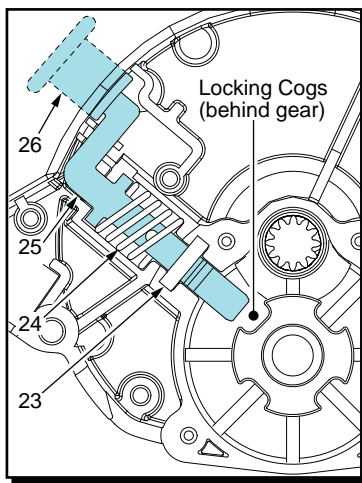
EXAMPLE:
Component Parts (Small #) Are Included
When Ordering The Assembly (Large #).



**SEE PAGE 2 & 3 FOR
SERVICE NOTES AND
THE LUBRICATION
OF THIS TOOL**

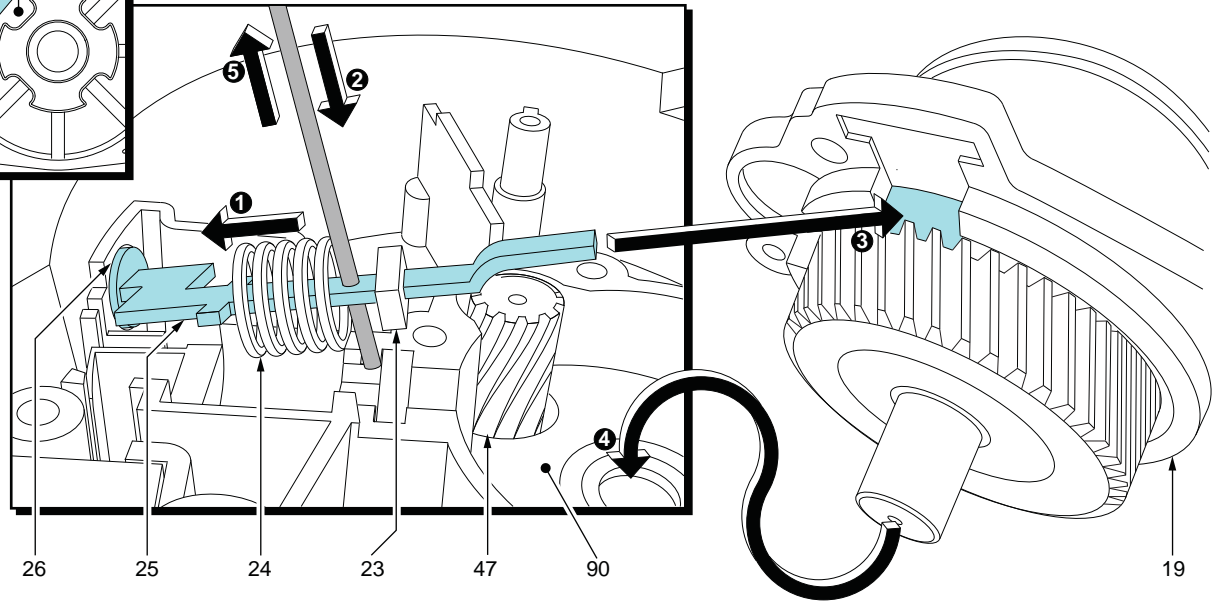
FIG. PART NO.	DESCRIPTION OF PART	NO. REQ.
1	06-75-1010 Blade Screw	1
2	43-34-0795 Outer Flange	1
5	05-78-5316 M4 x 14mm Pan Hd. Taptite T-20 Screw	3
6	28-20-0025 Upper Guard Cover Assembly	1
7	43-34-0790 Inner Flange	1
8	34-60-0860 Retaining Ring	1
9	06-82-5314 10-24 x 1/2" Pan Hd. Taptite T-25 Screw	2
10	44-10-0005 Lower Guard Lever	1
11	28-41-0100 Lower Guard	1
12	40-50-0045 Lower Guard Spring	1
13	06-82-5285 6-32 x 1/2" Pan Hd. Taptite T-15 Screw	12
14	44-66-0395 Retaining Plate	1
15	45-04-0485 10-32 x 13/16" Bumper Screw	1
16	42-38-0222 Rubber Bumper	1
17	31-15-0260 Spindle and LED Cover	1
18	22-06-2730 LED Assembly	1
19	38-50-0155 Output Shaft Assembly	1
23	45-06-0720 Felt Seal	1
24	40-50-8046 Spindle Lock Spring	1
25	44-20-0651 Spindle Lock Plate	1
26	42-42-1030 Spindle Lock Button	1
27	44-60-0741 Pivot Pin	1
28	06-75-2010 1/4-20 x 3/4" Left Hand Hex Hd. Screw	1
31	31-05-0250 Dust Blower	1
32	06-82-2660 M3.5-0.6 x 8mm Pan Hd. Taptite T-10 Screw	2
36	40-50-0650 Rip Fence Spring	1
37	43-98-0605 Rip Fence Knob	1
38	43-98-0705 Bevel Adjustment Knob	1
39	45-88-1560 Washer	1
40	06-10-0110 M6 x 28mm Carriage Bolt	1
41	Shoe	1
42	45-88-1515 Washer	1
43	45-08-0155 Depth Shaft	1
44	34-40-0360 O-Ring	1
45	02-04-0795 Ball Bearing	1
46	34-60-0610 Retaining Ring	1
47	Rotor	1
48	02-04-5382 Ball Bearing	1
49	Stator with PCBA	1
55	23-16-0095 Motor Insulator - Bottom	1
56	23-16-0090 Motor Insulator - Top	1
57	06-82-1080 M3.0 x 14mm Pan Hd. T-10 ST Screw	6
58	31-44-0984 Housing Support - Left Housing Halve	1
59	05-88-5380 M3.5 x 12mm T-10 Screw	4

FIG. PART NO.	DESCRIPTION OF PART	NO. REQ.
60	23-66-2635 Switch	1
62	23-38-2840 Diode Assembly with Terminals	1
63	40-50-1760 Switch Lock-Out Spring	1
64	42-42-0345 Switch Lock-Out Button	1
65	31-44-0985 Housing Cover - Right Housing Halve	1
66	06-82-7470 6-19 x 11/16" Pan Hd. Plastite T-15 Screw	10
67	34-40-4480 O-Ring	1
68	49-96-0600 Hex Key	1
69	06-82-0052 M6 x 2.69 x 32mm T-25 PT Screw	2
70	44-60-0565 Saw Hook Pin	2
71	45-88-2200 Washer	1
72	43-76-0025 Saw Hook Housing	1
73	40-50-0985 Saw Hook Spring	1
74	45-22-1000 Detent Sleeve	1
75	43-74-0060 Saw Hook Bar	1
76	44-10-0007 Depth Lever	1
77	31-51-0125 Bevel Scale	1
78	31-51-0130 Front Scale	1
79	06-81-0015 M2.5 x 3.175 Phillips Screw	4
80	Micro Switch	1
81	Battery Connector Block	1
82	06-83-1600 Set Screw	1
85	14-74-0500 Shoe Assembly	1
86	23-58-7110 Stator / Electronics Assembly	1
88	23-40-7110 Rotor Assembly	1
89	23-16-0005 Motor Insulator Assembly	1
90	28-14-0170 Upper Guard Gearcase Assy. w/ Needle Bearing	1
91	14-38-0015 Housing Assembly	1
92	48-55-3500 Contractors Bag (Not Shown)	1
93	49-22-1005 Rip Fence (Not Shown)	1
94	12-20-2636 Service Nameplate (Not Shown)	1
95	10-20-0359 Warning Label (Not Shown)	1



Detail 'A'

Detail 'A' shows Spindle Lock Spring (24) and Felt Seal (23) in place in the respective cavities of the Upper Guard Gearcase Assembly (90).
NOTE: The spindle hub and gear of the Output Shaft Assembly (19) are not shown for clarity, so the four Locking Cogs of the Lock Block can be seen.



**ASSEMBLING OUTPUT SHAFT ASSEMBLY (19)
 INTO UPPER GUARD GEARCASE ASSEMBLY (90)**

To prevent damage to the Felt Seal (23) it is recommended to temporarily remove the felt seal until steps 1 and 2 are completed.

1. With the use of both hands, compress the Spindle Lock Spring (24) back on the Spindle Lock Plate (25) past the small hole on the plate.
2. While holding the spring back with one hand, quickly insert a thin metal instrument into the small hole on the plate. The metal instrument should capture the entire spring (all coils should be behind that tool).

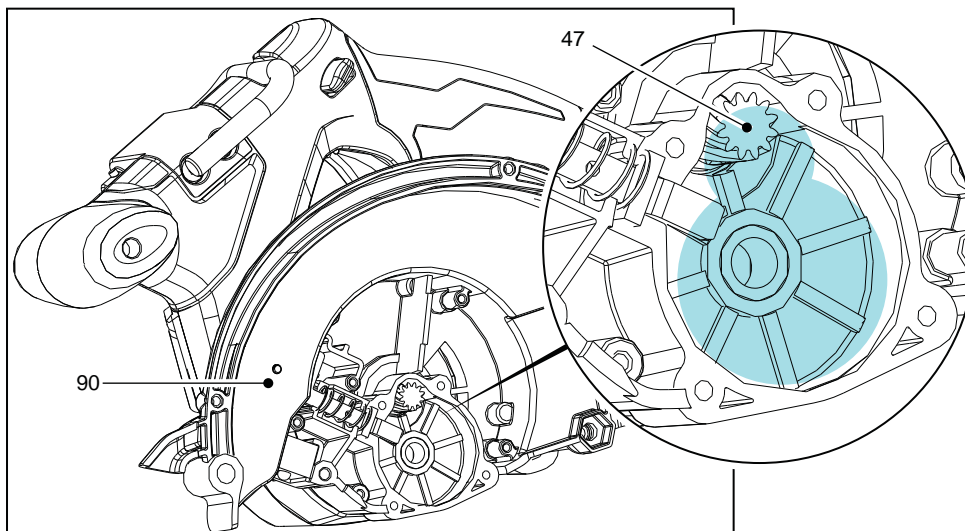
With the spindle lock spring trapped behind the small hole on the spindle lock plate, slide the felt seal back onto the spindle lock plate. Position the felt seal above the corresponding cavity in the Upper Guard Gearcase.

3. Insert the open end of the spindle lock plate (25) into the opening of the Output Shaft Assembly (19) behind the gear, as shown.

4. Insert the bearing shaft portion of the output shaft assembly into the needle bearing of the upper guard gearcase assembly. Carefully wiggle the entire output shaft assembly until the gearing of the output shaft assembly engages with the pinion gearing of the Rotor (47) and the output shaft assembly slides into place.

Secure the output shaft assembly to the upper guard gearcase assembly with the use of four screws (#13, 06-82-5285, not shown). It is recommended to alternate the tightening of the screws.

5. Remove the thin metal instrument. Check for the proper functioning of the spindle locking mechanism. Rotate the spindle shaft and depress the Spindle Lock Button (26) at the same time. The spindle lock plate should drop into one of four cogs that lock the spindle. Spindle lock mechanism must return briskly when released from engagement in the lock block cog.

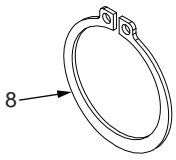


LUBRICATION

Type 'Y' Grease, No. 49-08-5270

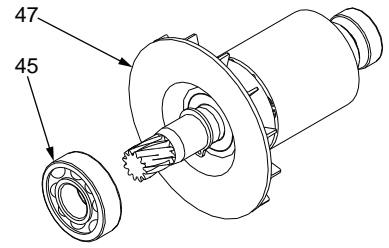
Apply 3.0 grams (.10 oz) of 'Y' Grease to the gear bore in Upper Guard Gearcase (90). The grease should be directed toward the pinion end of the rotor (47).

When servicing, remove 90-95% of the existing grease prior to installing Type 'Y'. Original grease may be similar in color but not compatible with 'Y'.



Retaining Ring (8) has a side with edges that are slightly rounded compared to the other side. When installing on the tool, position retaining ring with the rounded edge facing the lower guard.

Orient Ball Bearing (45) so that the seal faces the fan of the Rotor (47) and the open side faces the gearcase.



IMPORTANT:

- **Strong magnetic force.** Care must be taken when installing the Rotor (47) into the Stator Assembly (49). Do not allow rotor bearing or balancing bushing to hit PCBA on the back end of the stator. This could cause damage to the PCBA. See figure 1.
- Insert the rotor/stator assembly into pinion bore of the Upper Guard Gearcase Assembly (90). Carefully wiggle and push the rotor/stator until the ball bearing in front of the fan is fully seated in the bearing bore of the gearcase. See figure 2.
NOTE: As an aid to installation, apply a light film of lubricant to the bearing bore of the gearcase before assembling the rotor/stator.
- Place the Bottom and Top Motor Insulators (55,56) in place around the rotor/stator assembly. Secure the halves with six Screws (57). A light tapping on the back of the assembled insulator halves may be necessary to completely seat the insulator halves onto the upper guard gearcase. Fasten the insulator halves to the gearcase with four Screws (13). See figure 3. When tightening, alternate the screws to assure square, even pressure.

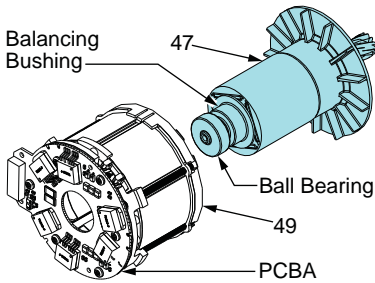


Figure 1

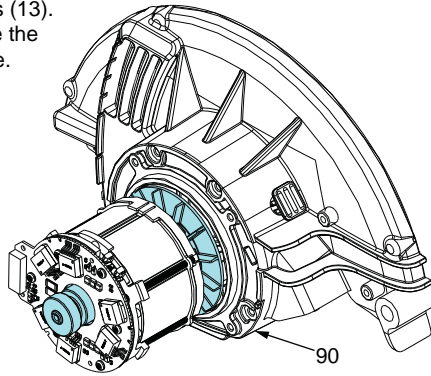


Figure 2

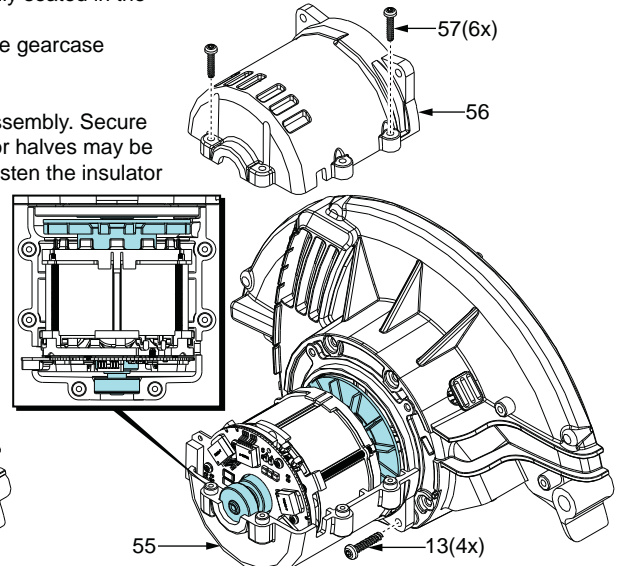
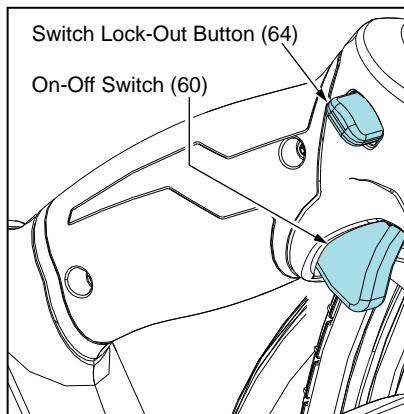


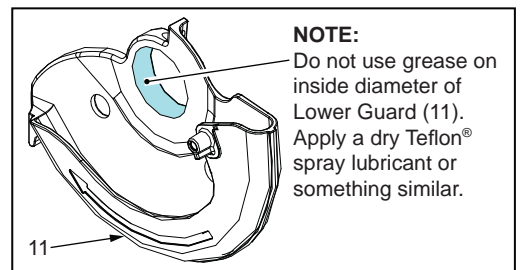
Figure 3



Functionally check Switch Lock-Out (64) by attempting to turn on tool by applying a reasonable amount of force, up to 8 lbs., to the switch trigger (60). The tool must not turn on.

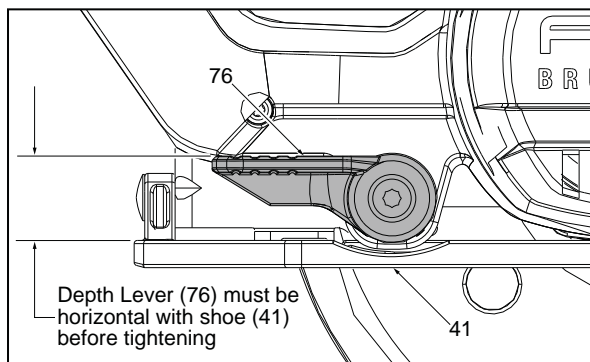
Release trigger. Actuate the lock-out lever and apply a reasonable amount of force to the switch trigger. The tool must turn on. While the trigger is still in the "ON" position, release the lock-out. Release the trigger. The tool must stop and the lock-out lever must again prevent the actuation of the Switch.

Repeat the switch check two more times.

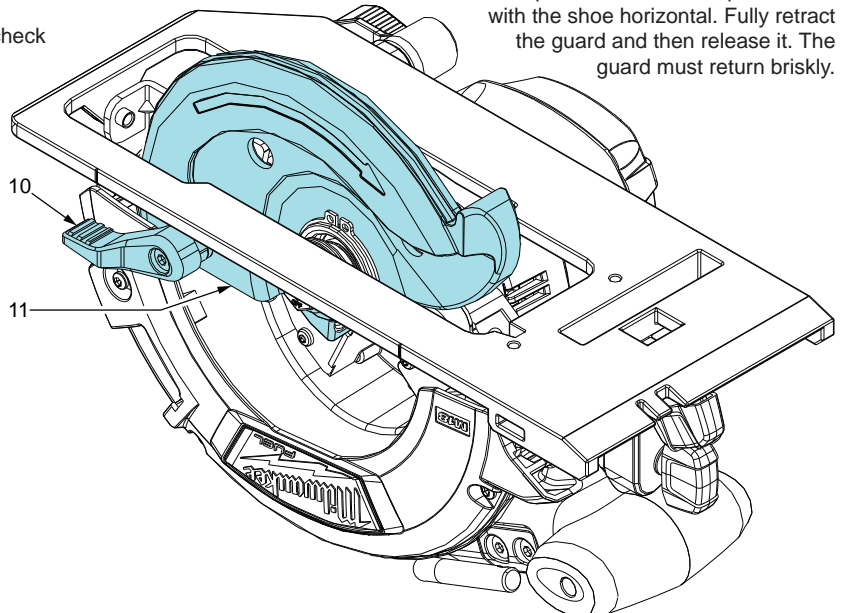


NOTE: Do not use grease on inside diameter of Lower Guard (11). Apply a dry Teflon® spray lubricant or something similar.

Functionally check the Lower Guard (11), with the saw set at full depth. Place the saw upside down with the shoe horizontal. Fully retract the guard and then release it. The guard must return briskly.

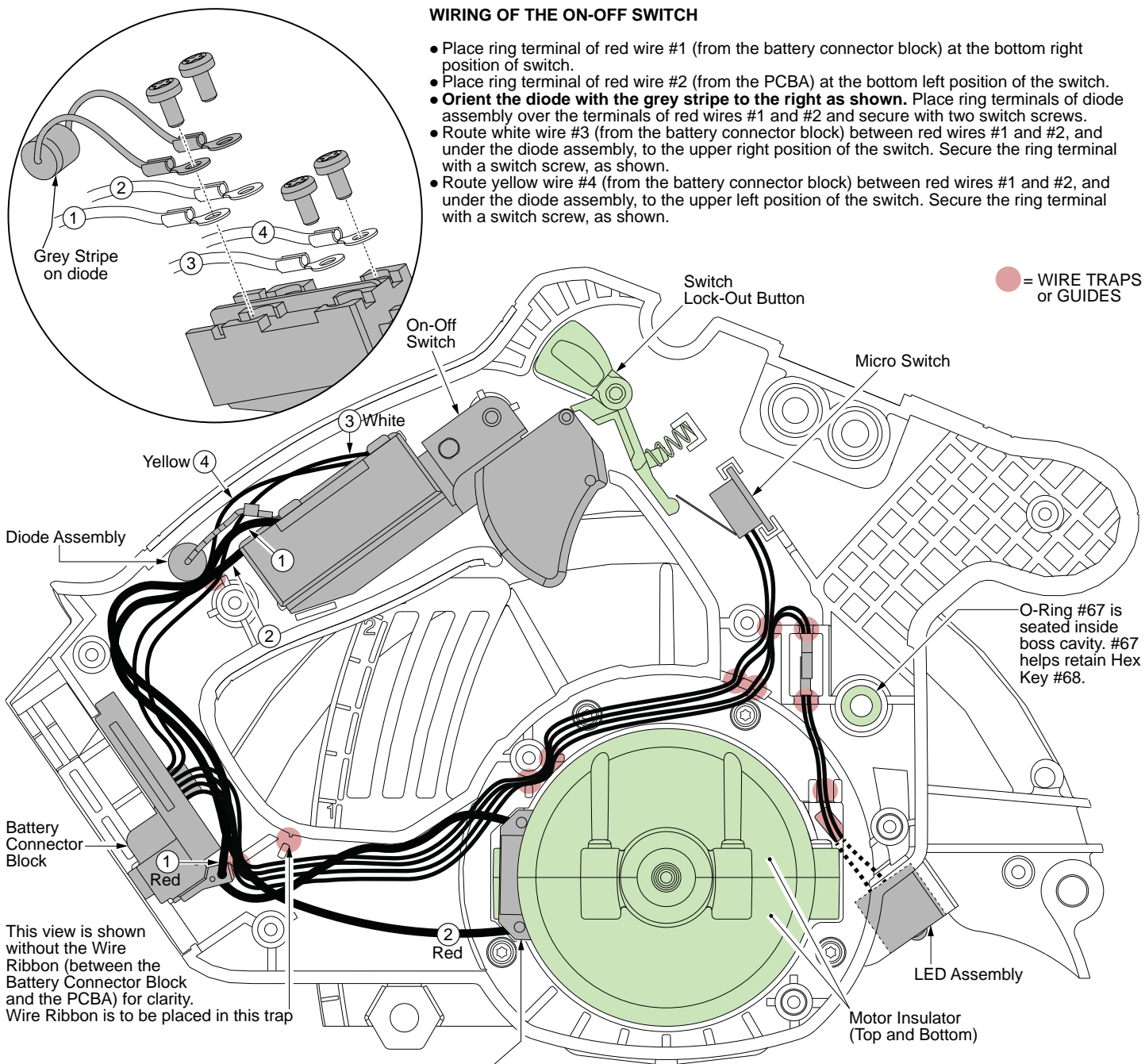


Depth Lever (76) must be horizontal with shoe (41) before tightening



WIRING OF THE ON-OFF SWITCH

- Place ring terminal of red wire #1 (from the battery connector block) at the bottom right position of switch.
- Place ring terminal of red wire #2 (from the PCBA) at the bottom left position of the switch.
- **Orient the diode with the grey stripe to the right as shown.** Place ring terminals of diode assembly over the terminals of red wires #1 and #2 and secure with two switch screws.
- Route white wire #3 (from the battery connector block) between red wires #1 and #2, and under the diode assembly, to the upper right position of the switch. Secure the ring terminal with a switch screw, as shown.
- Route yellow wire #4 (from the battery connector block) between red wires #1 and #2, and under the diode assembly, to the upper left position of the switch. Secure the ring terminal with a switch screw, as shown.



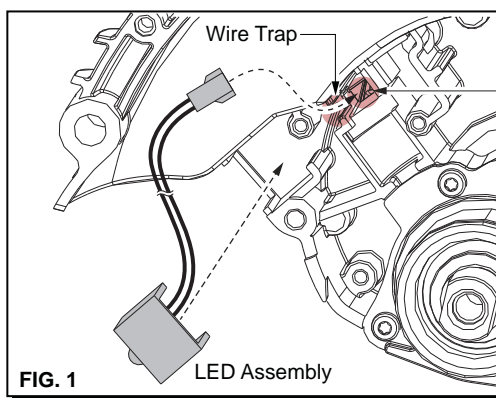
Stator / Electronics Assembly (Encased in the Motor Insulator Halves)
Containing: Stator, PCBA, Battery Connector Block and Micro Switch

Figure 1: Shown without the Spindle Lock Assembly for clarity.

- Insert the LED Assembly into cavity of Upper Guard Gearcase as shown.
- Route male connector and wires through the openings in the Gearcase and Housing Support.
- Be sure that LED wires are in Gearcase trap and pull taut.

Figure 2:

- Connect the male connector of the LED Assembly with the Female connector from Battery Connector Block.



Opening in Gearcase

FIG. 2

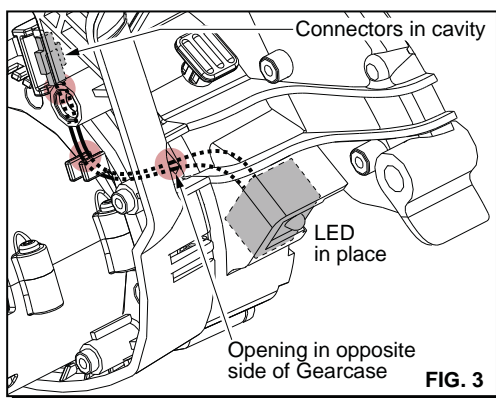


FIG. 3

Figure 3:

- Place the joined connectors in the Housing Support cavity and route all wires in the appropriate wire traps as shown in main illustration.