



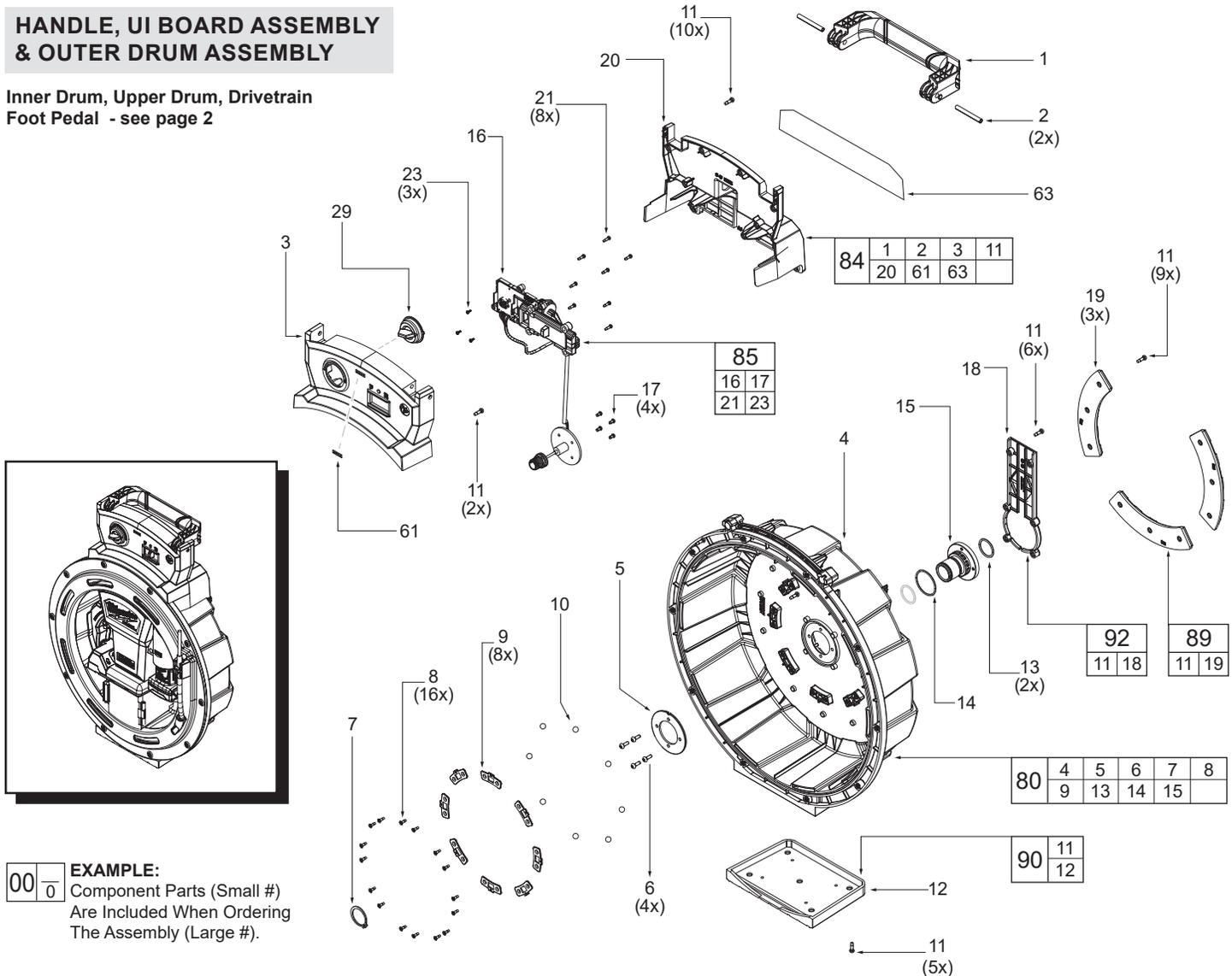
SERVICE PARTS LIST

BULLETIN NO.
PN0002528

SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS		REVISED BULLETIN	DATE
M12 FUEL™ High Speed CHAIN SNAKE			Feb. 2025
CATALOG NO. 2519-20	SERIAL NO. R06A	WIRING INSTRUCTION See Page 5-6	

HANDLE, UI BOARD ASSEMBLY & OUTER DRUM ASSEMBLY

Inner Drum, Upper Drum, Drivetrain
Foot Pedal - see page 2



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

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
1	-----	Carry Handle	(1)
2	-----	Coil Pin, 2 inch	(2)
3	-----	Handle Support	(1)
4	-----	Stationary Outer Drum	(1)
5	-----	Drum Shaft Support Stamping	(1)
6	05-88-1206	M4 x 12mm Pan Hd. T-20 M Screw	(4)
7	-----	Retaining Ring for Drum Shaft	(1)
8	05-74-0477	M3 x 10mm Flat Hd. Torx T-10 Screw	(16)
9	-----	Stamping	(8)
10	-----	8mm Steel Ball	(8)
11	05-88-5375	M4 x 13.5mm Pan Hd. Torx T-20 Screw	(32)
12	-----	Rubber Pad	(1)
13	-----	O-Ring, Drum Shaft Seal	(2)
14	-----	O-Ring, Drum Shaft Flange	(1)
15	-----	Drum Shaft	(1)
16	-----	PCB for HMI Board	(1)
17	06-82-1090	M3.5 x 7mm Pan Hd. T-10 Screw	(4)
18	-----	Slip Ring Cap	(1)
19	-----	Rubber Back Pad	(3)
20	-----	Handle Cover	(1)
21	05-81-0005	M3 x 11mm AEG Screw	(8)

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
23	05-88-0106	M2 x 5.5mm Pan Hd T-8 PT Screw	(3)
29	43-98-0110	Flex Shaft Speed Knob	(1)
61	10-22-1719	Gauge Label	(1)
63	12-20-0422	Service Nameplate	(1)
80	14-46-0681	Outer Drum Assembly	(1)
84	14-46-0686	Handle Kit	(1)
85	14-46-0687	UI Board Assembly	(1)
89	14-46-0691	Rubber Back Pad Kit	(1)
90	14-46-0692	Rubber Foot Pad Kit	(1)
92	14-46-0694	Cap for BG Side Kit	(1)
100	45-22-0082	39ft Cable Sheath for 2519-20 (not shown)	(1)

FIG. 63 SERVICE NOTES
A clean, dry surface is essential for proper performance for any adhesive system. The area intended for application of any adhesive label or nameplate must be prepared by cleaning with isopropyl alcohol. The solvent is to be applied with a clean, lint free applicator and the surface allowed to dry before applying the label or nameplate.

SERVICE BILL OF MATERIAL (BOM) LISTING - Cont'd

Inner Drum • Upper Drum • Drivetrain • Foot Pedal

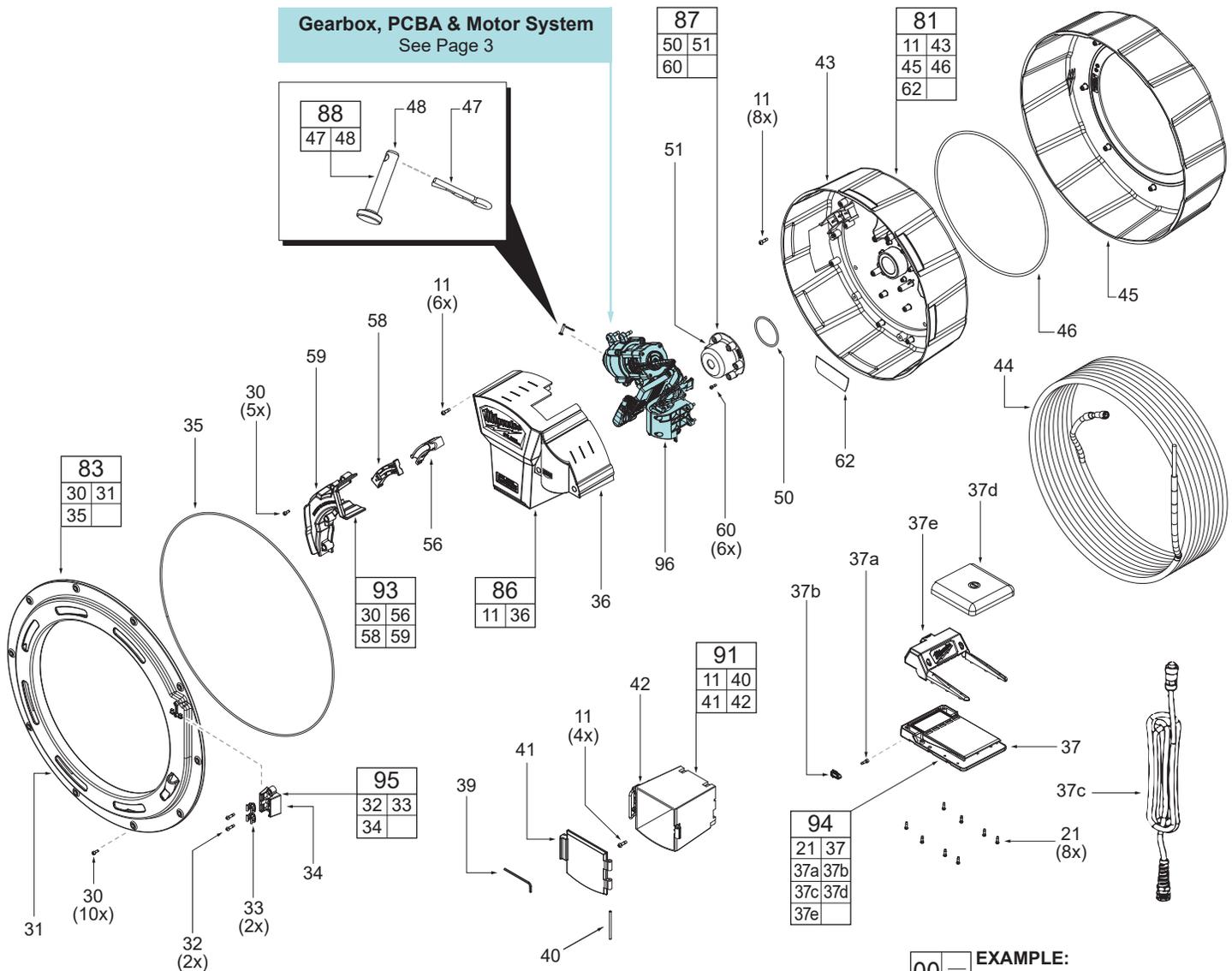


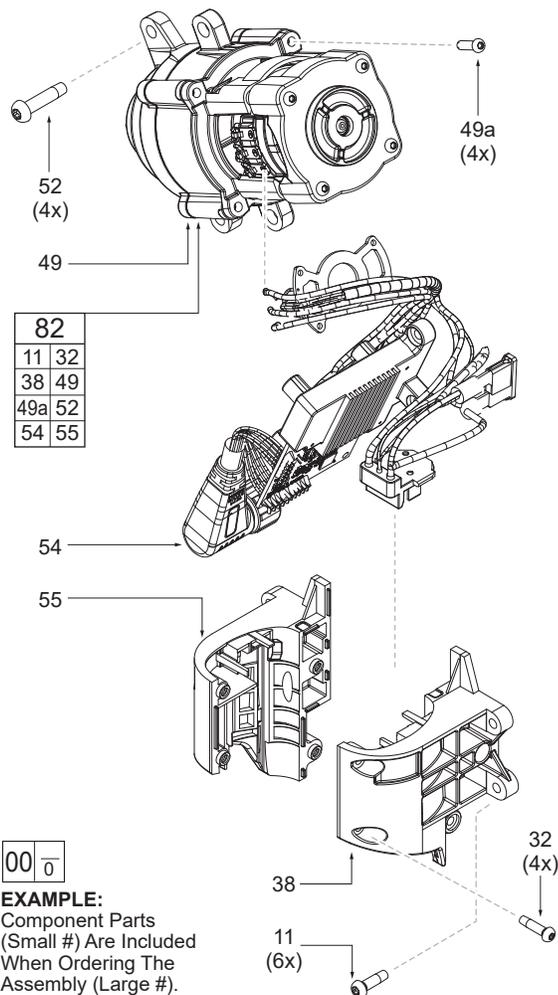
FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
11	05-88-5375	M4 x 13.5mm Pan Hd. Torx T-20 Screw	(18)
21	05-81-0005	M3 x 11mm AEG Screw	(8)
30	05-84-0005	M3 x 8mm Cap Hd Hexagon M Screw	(15)
31	-----	Upper Drum Cover	(1)
32	05-81-5383	M3.5 x 14mm PH Torx T-10 B Screw	(2)
33	-----	Cable Clip - Urinal	(2)
34	-----	Cable Clip Housing	(1)
35	-----	O-Ring, Upper Drum Cover	(1)
36	-----	Drivetrain Cover	(1)
37	-----	Foot Pedal	(1)
37a	05-74-0203	M3 x 11mm CH Hexagon Recess Screw	(1)
37b	-----	Micro Switch	(1)
37c	-----	Foot Pedal Power Cord	(1)
37d	-----	Foot Pedal Outer Cover	(1)
37e	-----	Foot Pedal Top Cover	(1)
39	49-96-0045	M2.5 Hex Key	(1)
40	-----	Coil Pin, 55mm long	(1)
41	-----	Door for Chain Knocker Storage	(1)
42	-----	Accessory Storage	(1)
43	-----	Inner Rotating Drum	(1)
44	48-53-2519	Flexible Shaft (Accessory)	(1)

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
45	-----	Outer Rotating Drum	(1)
46	-----	O-Ring in Drum Seal	(1)
47	-----	Snap Pin	(1)
48	-----	Cable Connection Pin	(1)
50	-----	O-Ring, for Slip Ring Cap	(1)
51	-----	Slip Ring Waterproof Cap	(1)
56	-----	Sheath Retainer Support	(1)
58	-----	Sheath Retainer Cover	(1)
59	-----	Cable Sheath Cover	(1)
60	06-82-3002	M3 x 10mm PH Torx T-10 ST Screw	(6)
62	10-22-6125	Warning Label	(1)
81	14-46-0682	Inner Drum Assembly	(1)
83	14-46-0684	Upper Drum Cover Kit	(1)
86	14-46-0688	Drivetrain Cover Kit	(1)
87	14-46-0690	Waterproof Cap Kit	(1)
88	14-46-0689	Cable Connection Pin Kit	(1)
91	14-46-0693	Storage Assembly	(1)
93	14-46-0695	Cable Sheath Cover Kit	(1)
94	14-02-0000	Foot Pedal Assembly	(1)
95	14-46-0696	Cable Clip Kit	(1)
96	-----	Gearbox, PCBA & Motor System	(1)

SERVICE BILL OF MATERIAL (BOM) LISTING - Cont'd

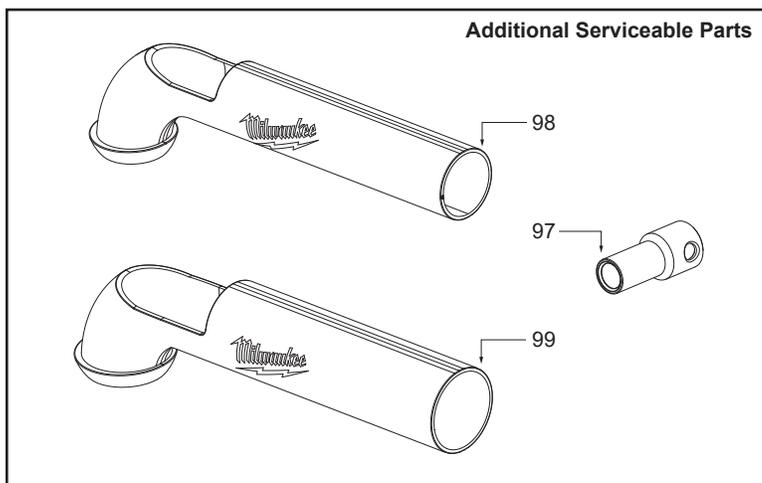
Gearcase and PCBA Service Assembly

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
11	05-88-5375	M4 x 13.5mm Pan Hd. Torx T-20 Screw	(6)
32	05-81-5383	M3.5 x 14mm Pan Hd. Torx T-10 B Screw	(4)
38	-----	Battery Interface Right Side	(1)
49	-----	Gearbox and Motor System Assy	(1)
49a	05-78-1010	M3.5 x 12mm PH Torx T-10 Screw	(4)
52	06-82-0152	M5 x 22mm Pan Hd. Torx T-25 Screw	(4)
54	-----	PCBA	(1)
55	-----	Battery Interface Left Side	(1)
82	14-46-0683	Gearcase and PCBA Assembly	(1)
97	43-56-0056	Cable Connector	(1)
98	43-62-0058	1.25" P-Trap Pipe	(1)
99	43-62-0059	1.50" P-Trap Pipe	(1)



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



SCREW TORQUE SPECIFICATIONS

FIG.	PART NO.	DESCRIPTION OF FASTENER	QTY	WHERE USED	SEAT TORQUE	
					(kgf-cm)	(lb-in)
6	05-88-1206	M4 x 12mm Pan Hd. T-20 M Screw	4	Drum Shaft Support Washer to Drum Shaft	31 ± 3	26 ± 2.6
8	05-74-0477	M3 x 10mm Flat Hd. Torx T-10 Screw	16	Rotating Ball to Stationary Outer Drum	6 ± 1	5 ± 1
11	05-88-5375	M4 x 13.5mm Pan Hd. Torx T-20 Screw	5	Rubber Pad to Stationary Outer Drum	11 ± 1	10 ± 1
		BG Side Slip Ring Cap to Stationary Outer Drum	6	8 ± 1	7 ± 1	
		Rubber Back Pad to Stationary Outer Drum	9	11 ± 1	10 ± 1	
		Cover Handle to Support Handle	6	10 ± 1	9 ± 1	
		Cover Handle to Stationary Outer Drum	4	8 ± 1	7 ± 1	
		Stationary Outer Drum to Support Handle	2	10 ± 1	9 ± 1	
		Drivetrain Cover to Inner Rotating Drum	6	8 ± 1	7 ± 1	
		Battery Interface to Inner Rotating Drum	4	8 ± 1	7 ± 1	
		Accessory Storage to Inner Rotating Drum	4	8 ± 1	7 ± 1	
		Inner Rotating Drum to Outer Rotating Drum	8	8 ± 1	7 ± 1	
Heat Sink to Inner Rotating Drum	2	10 ± 1	9 ± 1			
17	06-82-1090	M3.5 x 7mm Pan Hd. T-10 Screw	4	Slip Ring to Drum Shaft	11 ± 1	10 ± 1
21	05-81-0005	M3 x 11mm AEG Taptite Screw	4	Switch Housing to Support Handle	4 ± 1	3 ± 1
		UI Housing to Support Handle	4	4 ± 1	3 ± 1	
		Foot Pedal Base to Top Cover	8	4 ± 1	3 ± 1	
23	05-88-0106	M2 x 5.5mm Pan Hd T-8 PT Screw	3	UI Board to UI Housing	2.5 ± 0.5	2.2 ± 0.4
30	05-84-0005	M3 x 8mm Cap Hd Hexagon M Screw	10	Upper Drum Cover to Stationary Outer Drum	8 ± 1	7 ± 1
		Cable Sheath Cover to Inner Rotating Drum	5	8 ± 1	7 ± 1	
32	05-81-5383	M3.5 x 14mm PH Torx T-10 B Screw	2	Cable Clip to Upper Drum Cover	14 ± 1	12 ± 1
		Battery Interface Left Side to Right Side	4	9 ± 1	8 ± 1	
37a	05-74-0203	M3 x 11mm CH Hexagon Recess Screw	1	Micro Switch to Foot Pedal Top Cover	4 ± 1	3 ± 1
49a	05-78-1010	M3.5 x 12mm PH Torx T-10 Screw	4	1st Gearcase to 2nd Gearcase	16 ± 1	14 ± 1
52	06-82-0152	M5 x 22mm Pan Hd. Torx T-25 Screw	4	Gearbox to Inner Rotating Drum	20 ± 1	17 ± 1
60	06-82-3002	M3 x 10mm PH Torx T-10 ST Screw	6	Slip Ring Waterproof Cap to Inner Rotating Drum	3 ± 0.5	2.6 ± 0.4

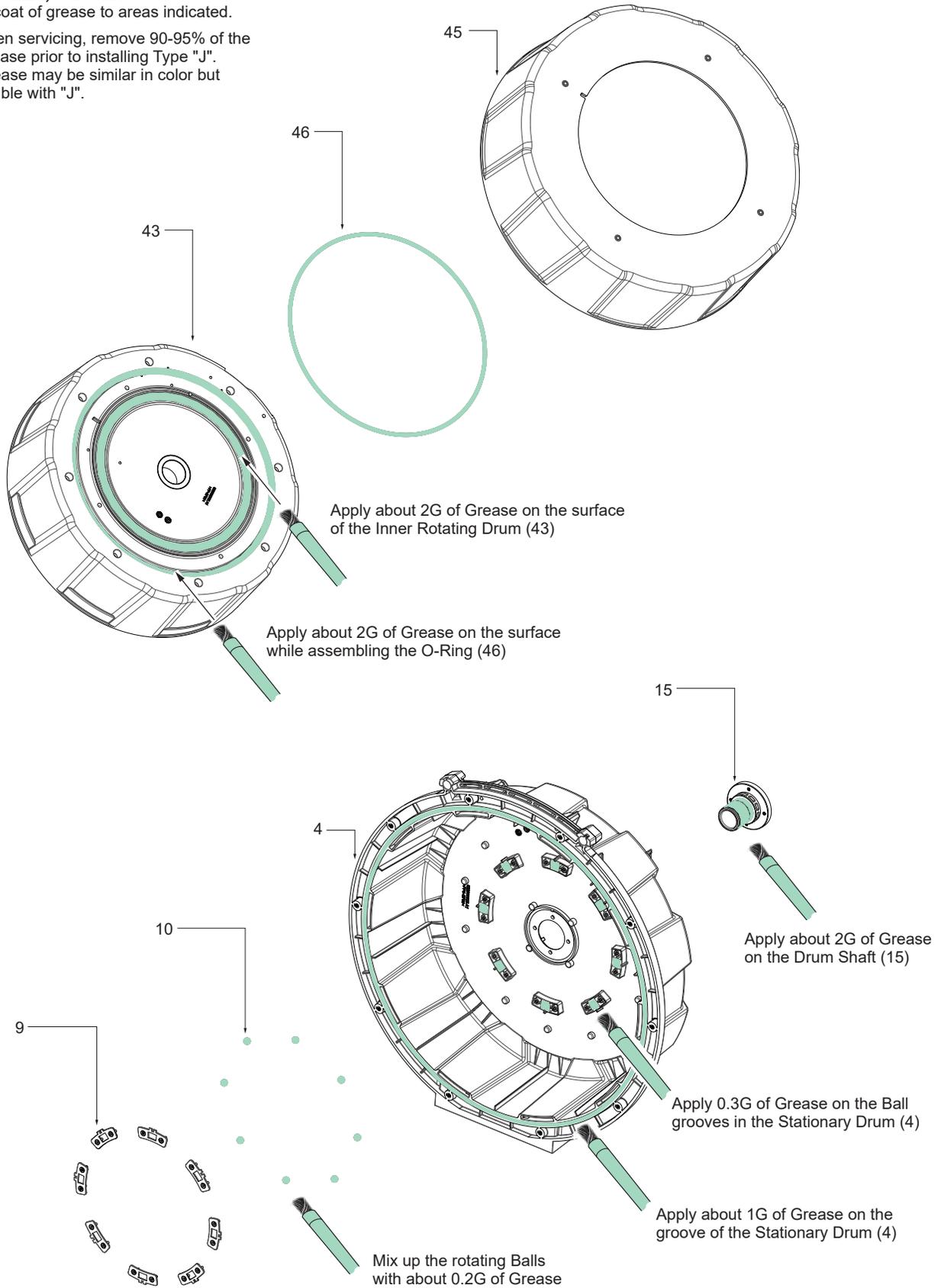
LUBRICATION INSTRUCTIONS

► Type "J" Grease

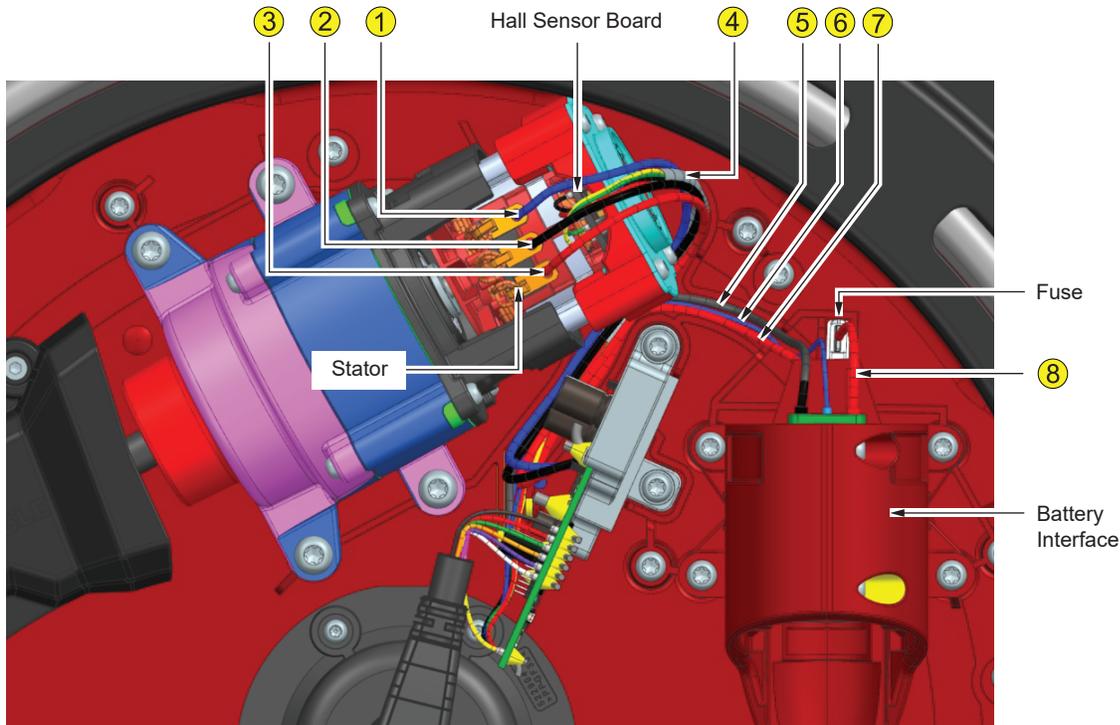
No. 49-08-4220, 1 lb can

Apply thin coat of grease to areas indicated.

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



WIRING INSTRUCTIONS



Wire Routing Steps:

- (1) Put the Fuse into the groove, then lock the Battery Interface.
- (2) Put the Terminal Wires (#5, #6, #7) at the bottom of the groove.
- (3) Put the Hall Sensor Wire (#4) into the same groove.
- (4) Put the Stator Wires (#1, #2, #3) into the top of the groove.

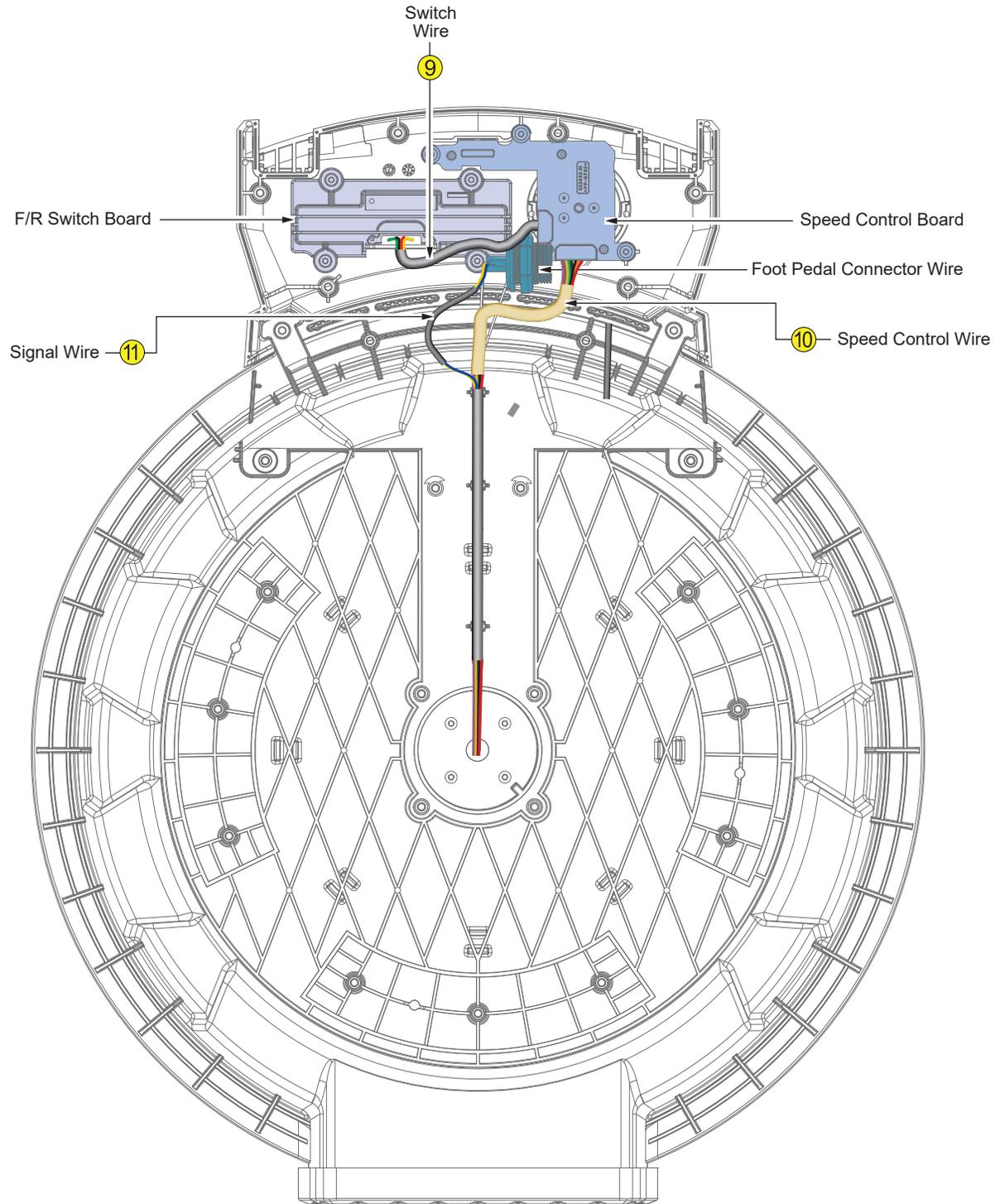
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WIRE SPECIFICATION			
ITEM	WIRE NAME	DESTINATION DESIGNATOR	WIRE COLOR
1	Stator Wire	Control Board ---> Stator	Blue
2	Stator Wire	Control Board ---> Stator	Black
3	Stator Wire	Control Board ---> Stator	Red
4	Hall Sensor Wire	Control Board ---> Hall Sensor Board	White
5	Terminal Wire	Control Board ---> Battery Interface	Black
6	Terminal Wire	Control Board ---> Battery Interface	Blue
7	Terminal Wire	Control Board ---> Fuse	Red
8	Terminal Wire	Fuse ---> Battery Interface	Red

WARNING

- Take notice of wire routing and position in wire guides and traps while dismantling tool.
- Be sure that all components of the electronics kit are seated firmly and squarely in housing recesses.
- Avoid pinched wires, be sure all wires and sleeves are pressed completely down in wire guides and traps.
- Prior to installing housing cover onto handle support, be sure that there are no interferences.
- Be sure to check for C functionality of switches and buttons after housing halves have been secured.

Wiring continued on next page



WIRE SPECIFICATION

ITEM	WIRE NAME	DESTINATION DESIGNATOR	WIRE COLOR
9	Switch Wire	F/R Switch Board ----> UI Board	BLACK - Contains 4 smaller wires: (green, black, red, yellow)
10	Speed Control Wire	UI Board ----> Slip Ring	WHITE - Contains 9 smaller wires: (white, purple, brown, tan, green, gray, orange, red, black)
11	Signal Wire	Foot Pedal Connector ----> Slip Ring	BLACK - Contains 2 smaller wires: (blue, yellow)