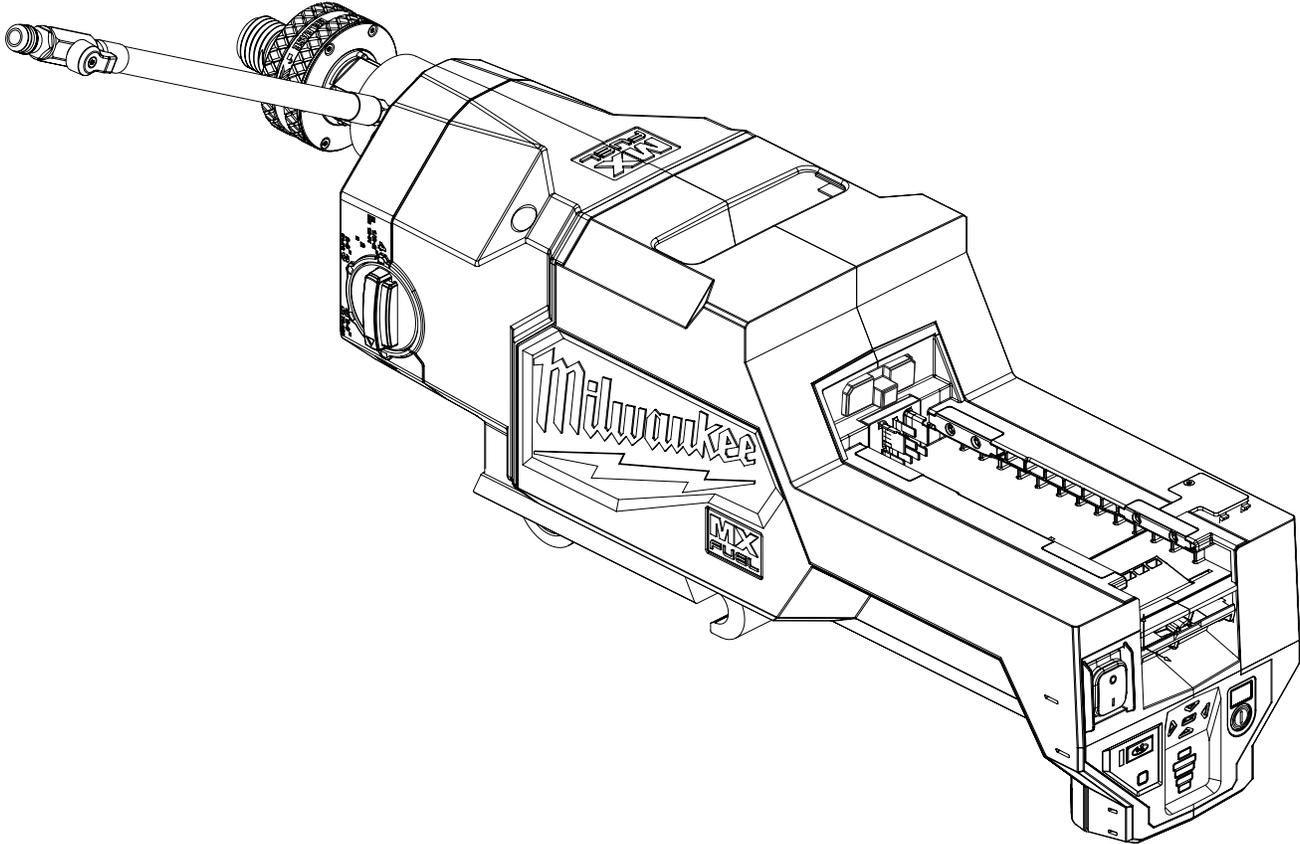




SERVICE PARTS LIST

BULLETIN NO.
54-16-9010

SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS				REVISED BULLETIN	DATE
MX FUEL™ Super Core Drill					Jan. 2025
CATALOG NO.	MXF302	SERIAL NO.	M45A	WIRING INSTRUCTION See Page 6	



This product is to be serviced **ONLY** by personnel authorized by MILWAUKEE TOOL. Do **NOT** attempt to purchase parts and install them yourself. Installation by anyone other than an authorized MILWAUKEE personnel could void your warranty.

For service, parts, or inquiries, contact us:

- Customer Service at 1.800.SAWDUST (1.800.729.3878)
- E-Service tool repair at: www.milwaukeetool.com/e-service
- Find a local authorized MILWAUKEE service location at Milwaukeetool.com
- Find a MILWAUKEE *factory* Service Center Location or MILWAUKEE *factory* Central Repair Center at Milwaukeetool.com. Send the following, posted paid and insured:
 - Your name, address, and phone number
 - Description of the issues
 - Copy of the proof of purchase
 - Tool, charger, and batteries involved with the issues

MILWAUKEE *factory* Central Repair Centers:

MILWAUKEE TOOL
Central Repair
1401 Sycamore Avenue
Greenwood, MS 38930

MILWAUKEE TOOL
Central Repair
2198 Southtech Drive
Greenwood, IN 46143

MXF Core Drill Housing

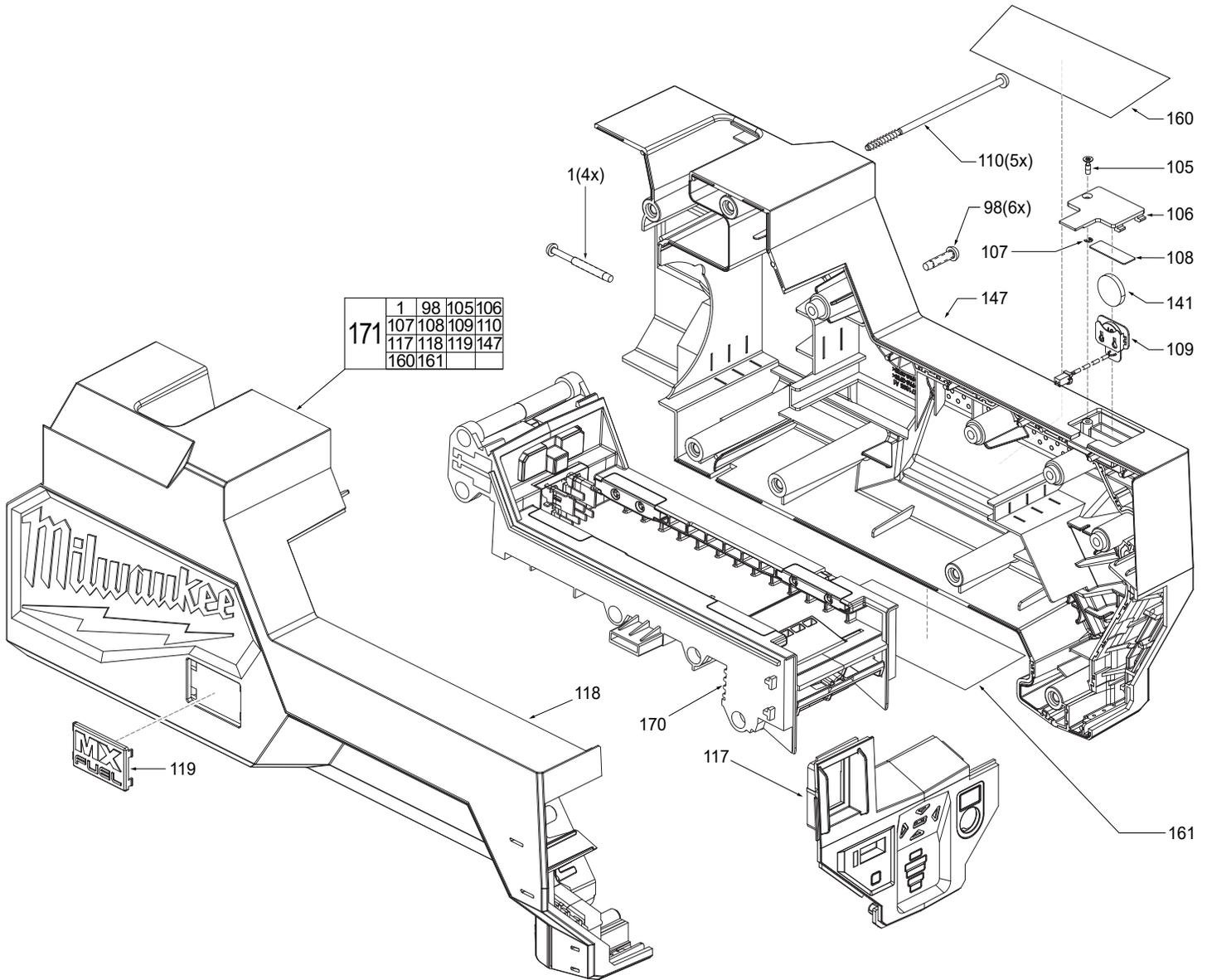


FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.	FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
1	06-82-0004	M5x1.8 PH Torx T25 Screw	(4)	117	23-35-0620	UI Panel	(1)
98	06-82-0152	M5 x 1.588 PH Torx T25 Screw	(6)	118	-----	Housing Support	(1)
105	-----	Drop Off Screw	(1)	119	44-22-0012	MX Badge	(1)
106	42-92-7095	Coin Cell Cover	(1)	147	-----	Housing Cover	(1)
107	-----	C-Ring	(1)	160	12-20-9842	Service Nameplate	(1)
108	45-06-0014	Anti-Static Seal	(1)	161	10-20-9957	Warning Label	(1)
109	22-09-6610	Coin Cell Board	(1)	170	14-46-9805	Battery Rail Service Assembly	(1)
110	05-88-0087	M5 x 2.24 PH Torx T20 Screw	(5)	171	14-38-7065	Housing Service Kit	(1)

MXF Core Drill Electronics

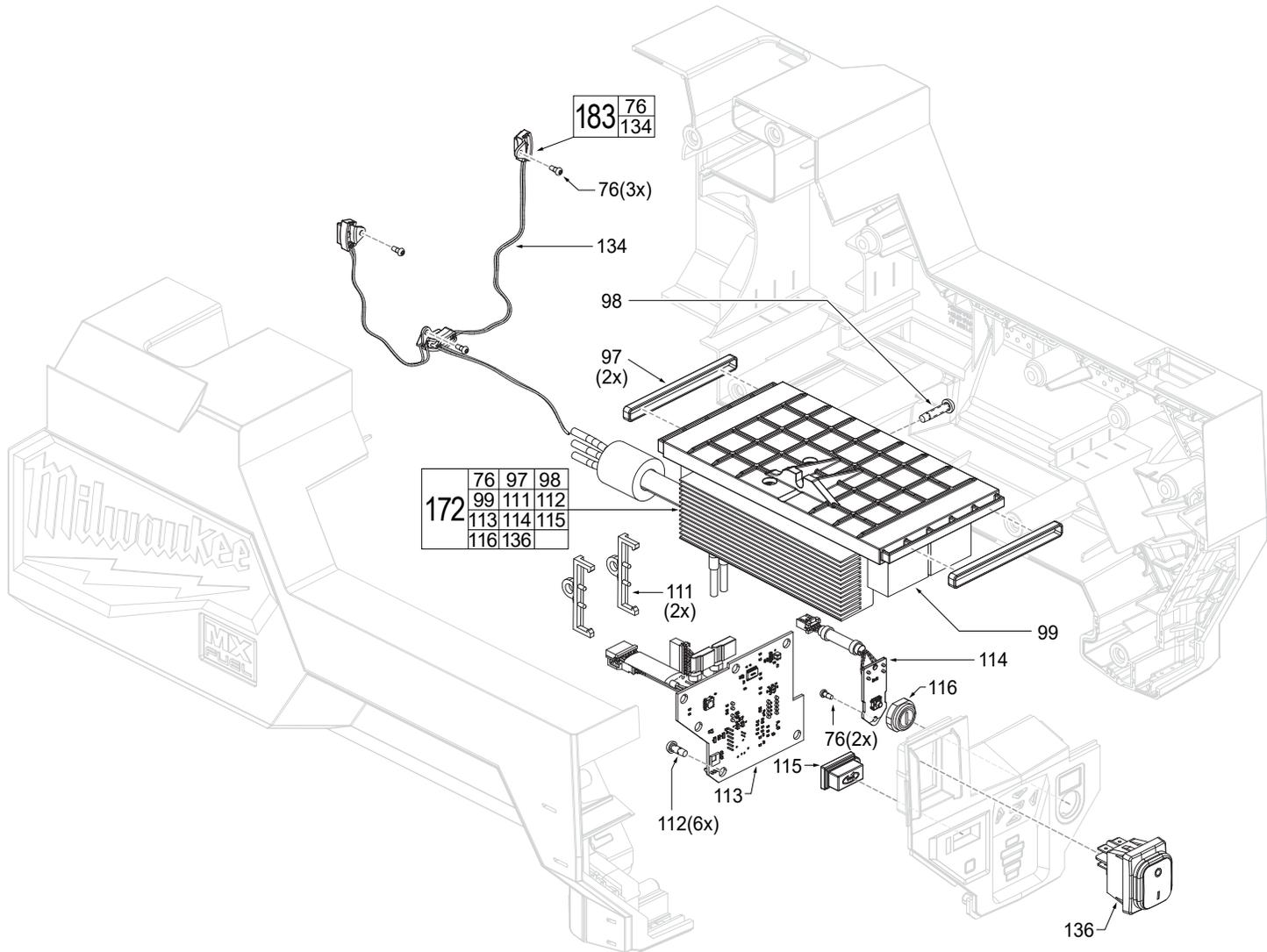
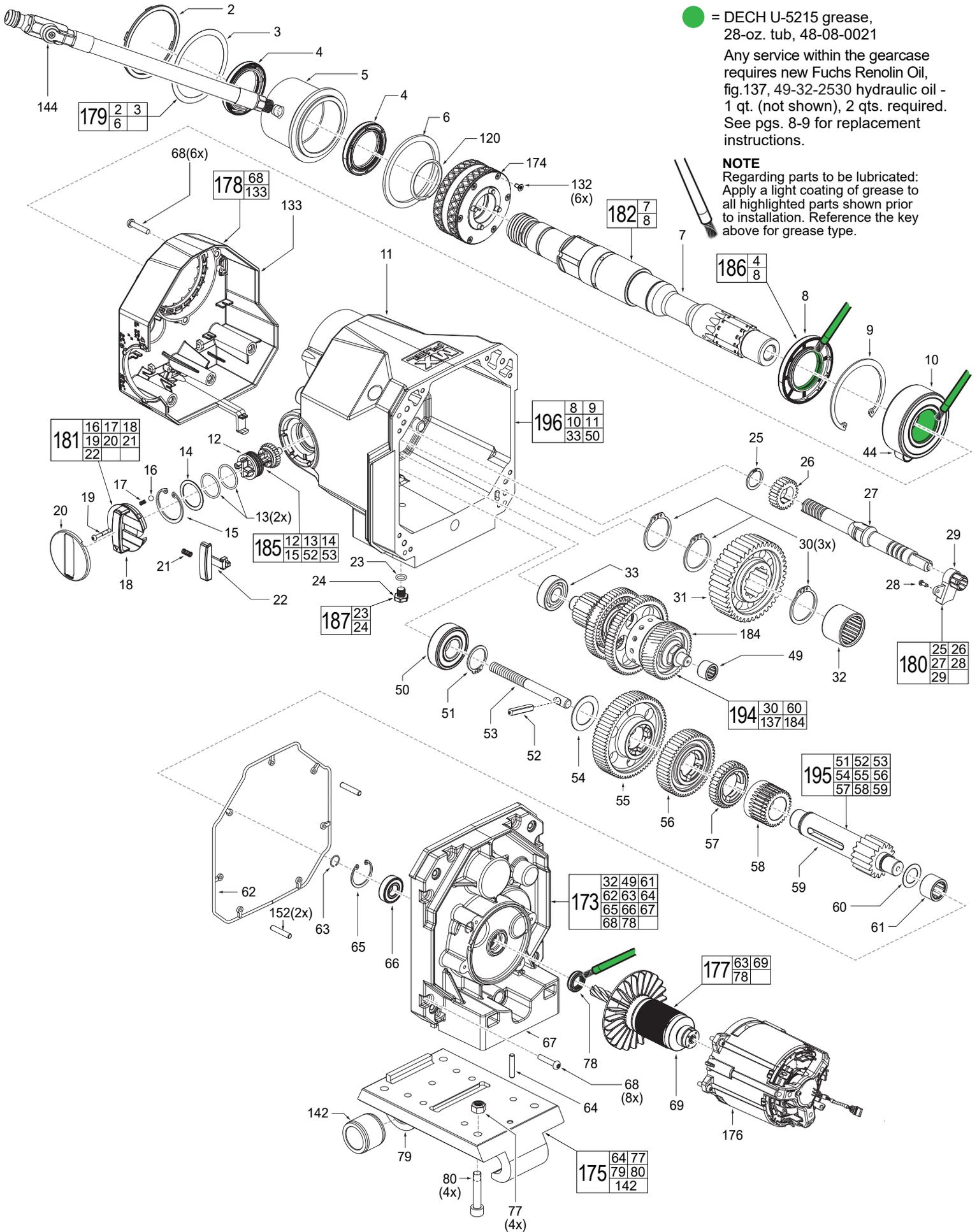


FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
76	06-82-0196	M2.5 x 1.058 PH Torx T8 Screw	(5)
97	-----	PCBA Rubber Cushion	(2)
98	06-82-0152	M5 x 1.588 PH Torx T25 Screw	(1)
99	-----	Main PCBA	(3)
111	42-86-0020	Connector Clip	(2)
112	05-88-1220	M4 x 10 PH Torx T-20 Screw	(6)
113	-----	PCBA (User Interface)	(1)

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
114	-----	PCBA (Arming Button)	(1)
115	14-20-9295	Easy Hole Start Button	(1)
116	42-42-8015	Arm Button	(1)
134	-----	LED lens	(1)
136	23-66-6570	On/Off Switch	(1)
172	14-20-9275	PCBA Service Kit	(1)
183	14-20-9280	LED Lens Service Kit	(1)

MXF Core Drill Gear Case



● = DECH U-5215 grease, 28-oz. tub, 48-08-0021

Any service within the gearcase requires new Fuchs Renolin Oil, fig.137, 49-32-2530 hydraulic oil - 1 qt. (not shown), 2 qts. required. See pgs. 8-9 for replacement instructions.

NOTE
Regarding parts to be lubricated: Apply a light coating of grease to all highlighted parts shown prior to installation. Reference the key above for grease type.

MXF Core Drill Gear Case

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.	FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
2	-----	Rubber Gasket	(1)	57	-----	Gear (Speed 3)	(1)
3	-----	Shim	(1)	58	-----	Gear (Speed 4)	(1)
4	-----	Main Spindle Water Seal	(2)	59	-----	Jack Shaft	(1)
5	45-06-0105	Water Jacket Shell	(1)	60	-----	Washer	(1)
6	-----	Shim	(1)	61	-----	Needle Bearing	(1)
7	-----	Output Shaft	(1)	62	34-40-8115	Gear Case Seal	(1)
8	-----	Main Spindle Oil Seal	(1)	63	-----	Wire Retaining Ring	(1)
9	34-80-5395	Bevel Retaining Ring	(1)	64	-----	Pin	(1)
10	-----	Ball Bearings	(1)	65	05-92-1055	Retaining Ring	(1)
11	-----	Gear Case	(1)	66	-----	Ball Bearings	(1)
12	-----	Shifter Shaft	(1)	67	-----	Diaphragm	(1)
13	-----	O-Ring	(2)	68	06-82-0058	M5 x .8 PH Torx T25 Screw	(14)
14	-----	Washer	(1)	69	-----	Rotor	(1)
15	-----	Retaining Ring	(1)	77	06-57-7515	M8 Nut	(4)
16	-----	Steel Ball	(1)	78	-----	Motor Seal	(1)
17	-----	Spring	(1)	79	-----	Carrier Mount	(1)
18	-----	Mode Selector Knob	(1)	80	06-82-9855	M8 x 1.25 CH Hex Recess Screw	(4)
19	-----	M3.5x1.27 PH Torx T10 Screw	(1)	120	34-60-5315	Retaining Ring	(1)
20	-----	Shift Knob Cover	(1)	132	05-80-0025	M3 x .5 FH Torx T-10 Screw	(6)
21	-----	Spring	(1)	133	-----	Gear Case Cover	(1)
22	-----	Gear Shift Slide	(1)	137	49-32-2530	Hydraulic Oil -1 liter (not shown)	(2)
23	-----	O-Ring	(1)	142	-----	Bronze Bushing	(1)
24	-----	M8x1.25 Screw	(1)	144	14-46-9840	Water Delivery System Service Kit	(1)
25	-----	Inverted Retaining Ring	(1)	173	14-46-9810	Diaphragm Service Kit	(1)
26	-----	Oiler Gear	(1)	174	14-46-9815	Easy Bit Removal Assembly	(1)
27	-----	Oiler Shaft	(1)	175	14-46-9820	Tool Mount Service Kit	(1)
28	-----	M3x.5 Phillips PH Screw	(1)	176	14-46-9825	Motor Stator Service Assembly	(1)
29	-----	Oiler Fitting	(1)	177	14-46-9845	Rotor Service Kit	(1)
30	44-90-0265	Retaining Ring	(3)	178	14-30-6290	Gearcase Cover Service Kit	(1)
31	32-40-5360	Output Gear	(1)	179	14-46-9830	Gasket Service Kit	(1)
32	-----	Needle Bearing	(1)	180	14-46-9835	Oil Shaft Service Kit	(1)
33	-----	Ball Bearings	(1)	181	43-98-7075	Mode Selector Knob Service Kit	(1)
44	-----	Bushing	(1)	182	14-73-1650	Output Shaft Service Kit	(1)
49	-----	Needle Bearing	(1)	184	-----	Clutch Assembly	(1)
50	-----	Ball Bearings	(1)	185	14-46-0457	Shifter Shaft Service Kit	(1)
51	-----	Snap Ring	(1)	186	14-46-0458	Output Shaft Seal Service Kit	(1)
52	-----	Rack Rod	(1)	187	14-46-0459	Oil Seal Service Kit	(1)
53	-----	Shifter Pin	(1)	194	14-08-0260	Clutch Service Kit	(1)
54	-----	Jack Shaft Washer	(1)	195	14-46-9935	Jack Shaft Service Kit	(1)
55	-----	Gear (Speed 1)	(1)	196	14-29-9030	Gearcase Service Kit	(1)
56	-----	Gear (Speed 2)	(1)				

SCREW TORQUE SPECIFICATIONS

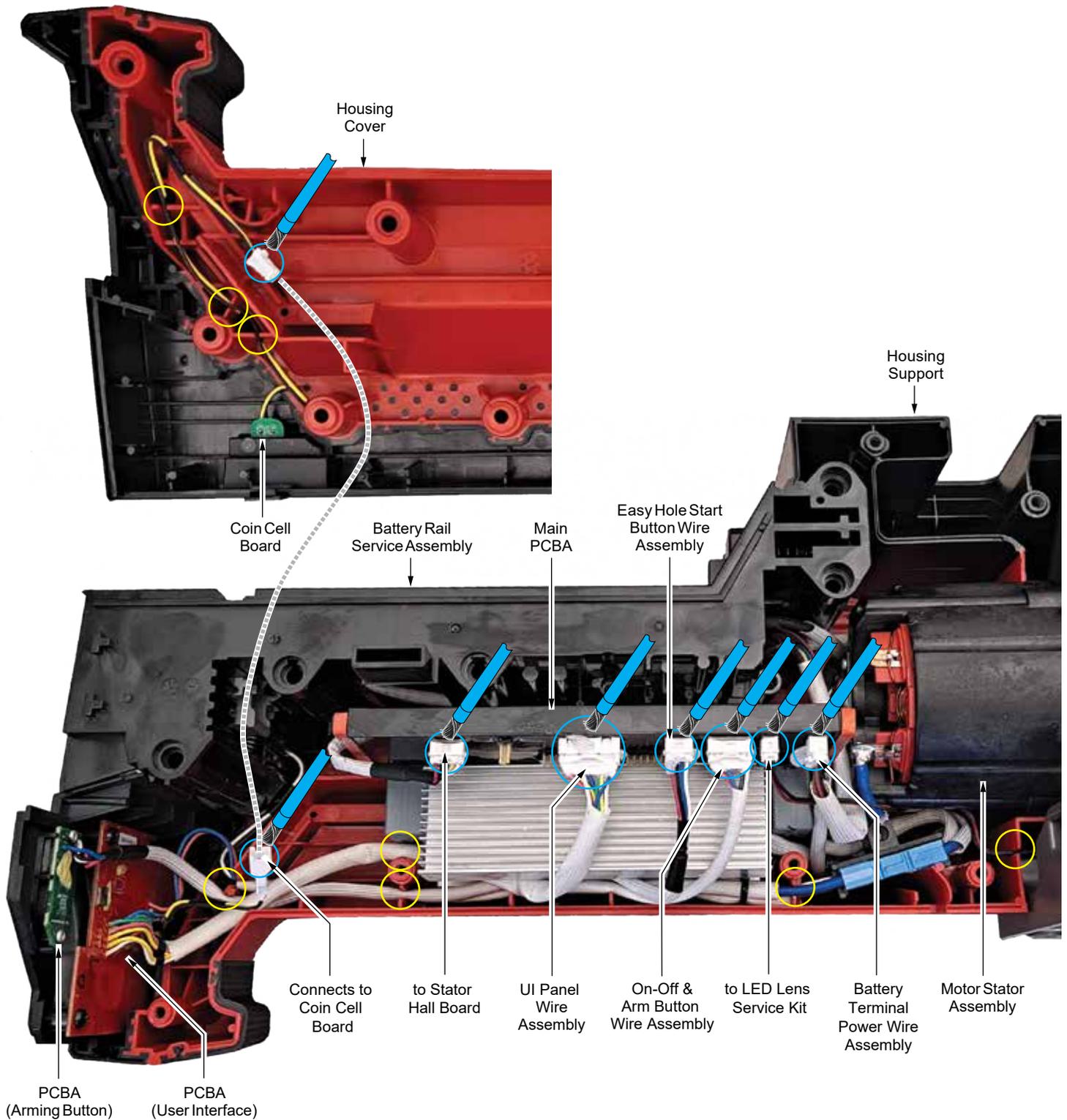
FIG.	PART NO.	WHERE USED	SEAT TORQUE	
			(kgf-cm)	(lb-in)
1	06-82-0004	Housing Kit	35±5	30±4
19	-----	Mode Selector Knob	8±1	7±1
24	05-85-0080	Oil Seal	20±3	17±2
28	-----	Oiler Shaft	8±1	7±1
68a	06-82-0058	Gear Case Diaphragm	35±5	30±4
68b	06-82-0058	Gear Case Cover	20±3	17±2
76	06-82-0196	LED Lens Kit	3±1	3±1
80	06-82-9855	Tool Mount	100±10	87±9
98a	06-82-0152	PCBA	20±3	17±2
98b	06-82-0152	Housing Kit	25±3	22±3
105	06-82-9280	Coin Cell Cover	5±1	4±1
110	05-81-0233	Housing Kit	25±3	22±3
112	05-88-1220	User Interface PCBA	12±2	10±2

MXF Core Drill Wiring

Install the electronics assembly as shown. Route wires around screw bosses and into wire traps (shown with yellow circles). Be sure all components are seated squarely and firmly in place. Be sure there is no interference when installing the housing cover.

 = Dielectric Type "X" grease, 2-oz. tube, 49-08-5000

NOTE
Regarding parts to be lubricated: Apply a light coating of grease to all highlighted parts shown prior to installation. Reference the key above for grease type.



MXF Core Drill Clutch Replacement (pg.1)

A) Remove screws (4x) from bottom of gearcase and B) screws (11x) from handles. Remove cover.

A) Disconnect the coin cell connector. B) Disconnect the two wire sets from the PCBA (circled in yellow).

A) Carefully pull gearcase away from handles. B) Remove retaining clips and disconnect motor connectors. Set aside handle.

A) Flip the gearcase to orientation shown and remove M8 bolts (4x) and nuts holding the mounting bracket to the gearcase and set aside. B) Remove the oil plug and drain the oil from the gearcase. Once oil is drained, return plug and tighten.

A) Place gearcase in a vise in the orientation shown. B) Remove T25 screws (8x) from the gearcase (circled in yellow).

Remove the diaphragm plate (top of the gearcase) and set aside. Beware of the LED wire that run through the gearcase, you will need to pull it through the diaphragm plate. Let it set face up to prevent oil from coating your work surface. **Do not adjust the gear select while the gearcase is open.**

A) Remove the two washers (circled in yellow) from the shafts and set aside. B) Remove the retaining ring from the top of the output shaft.

A) Remove the output shaft gear from the shaft and set aside. B) Pull the entire clutch and primary shaft assembly out of gearcase. Set aside.

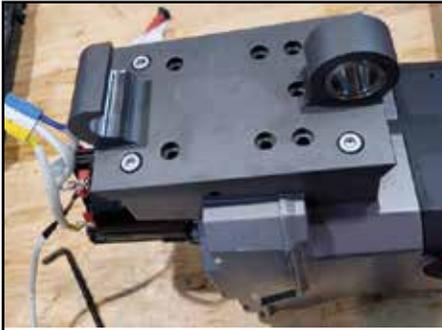
A) Install the new clutch and primary shaft, ensure the shaft is fully installed. To check installation, rotate the shaft. The gear teeth should mesh cleanly if the shaft is fully installed. B) Replace the motor gear to the shaft and the retaining ring to the groove.

Return the two washers onto the other two shafts. Ensure there is only one washer per shaft. Fill the gearcase with 2 quarts of oil 49-32-2530.

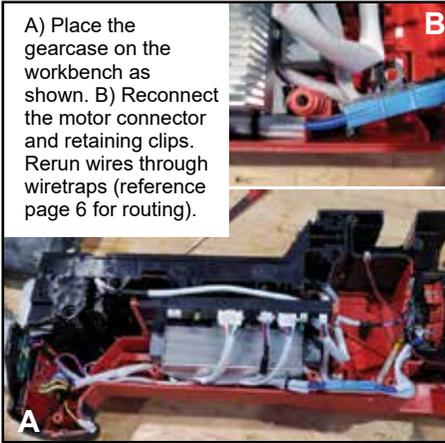
A) Replace the O-ring seal on diaphragm plate. B) Fish the LED Wire through the hole in the diaphragm plate and replace the diaphragm plate. **Be careful not to pinch wire.**

Replace screws (8x) to the gearcase and tighten them to (30 +/-4in-lbs). Follow a star pattern to ensure equal compression of the seal. Wipe outer gearcase clean of oil around seal.

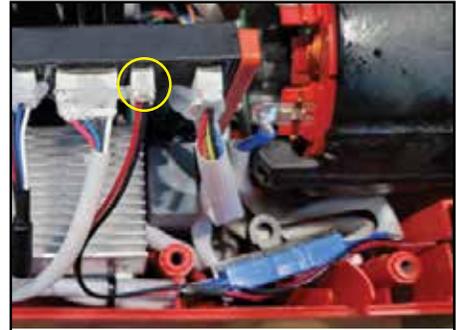
MXF Core Drill Clutch Replacement (pg.2)



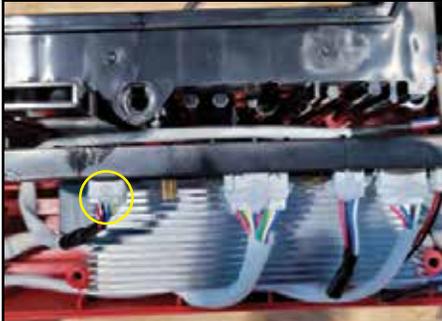
Return nuts (4x) to the gearcase and tighten M8 bolts (4x), installing the tool mount to the gearcase (torque to 87 ± 9 in-lbs).



A) Place the gearcase on the workbench as shown. B) Reconnect the motor connector and retaining clips. Rerun wires through wiretraps (reference page 6 for routing).



Slide handle down to sit closer to gearcase and capture the LED wires in the wire trap. Reconnect the LED wire to the PCBA.



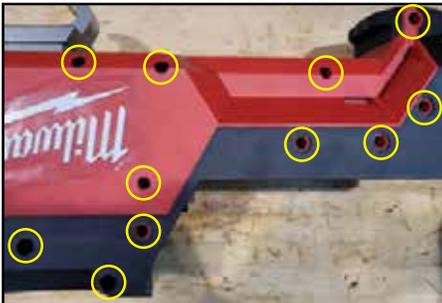
Run the Hall sensor wires from the top of the motor between the battery rail assembly and the PCBA to the top of the board and reconnect the wire to the PCBA on the top.



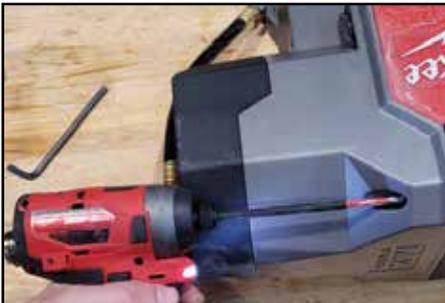
Reconnect coin cell wire from the housing cover to the housing support.



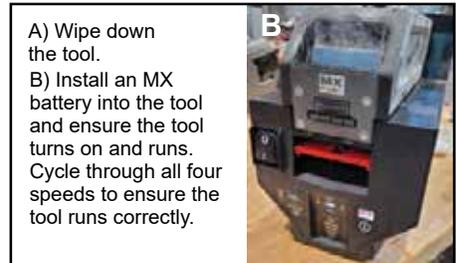
Place housing cover back onto housing support. **Careful not to pinch the coin cell wire.**



Slide the handle back onto the gearcase and return the screws (11x) into handles and tighten (torque to 22 ± 3 in-lbs).



Return the screws (4x) to the bottom of the gearcase and tighten (torque to 30 ± 4 in-lbs).



A) Wipe down the tool.
B) Install an MX battery into the tool and ensure the tool turns on and runs. Cycle through all four speeds to ensure the tool runs correctly.



A