M18 FMDP

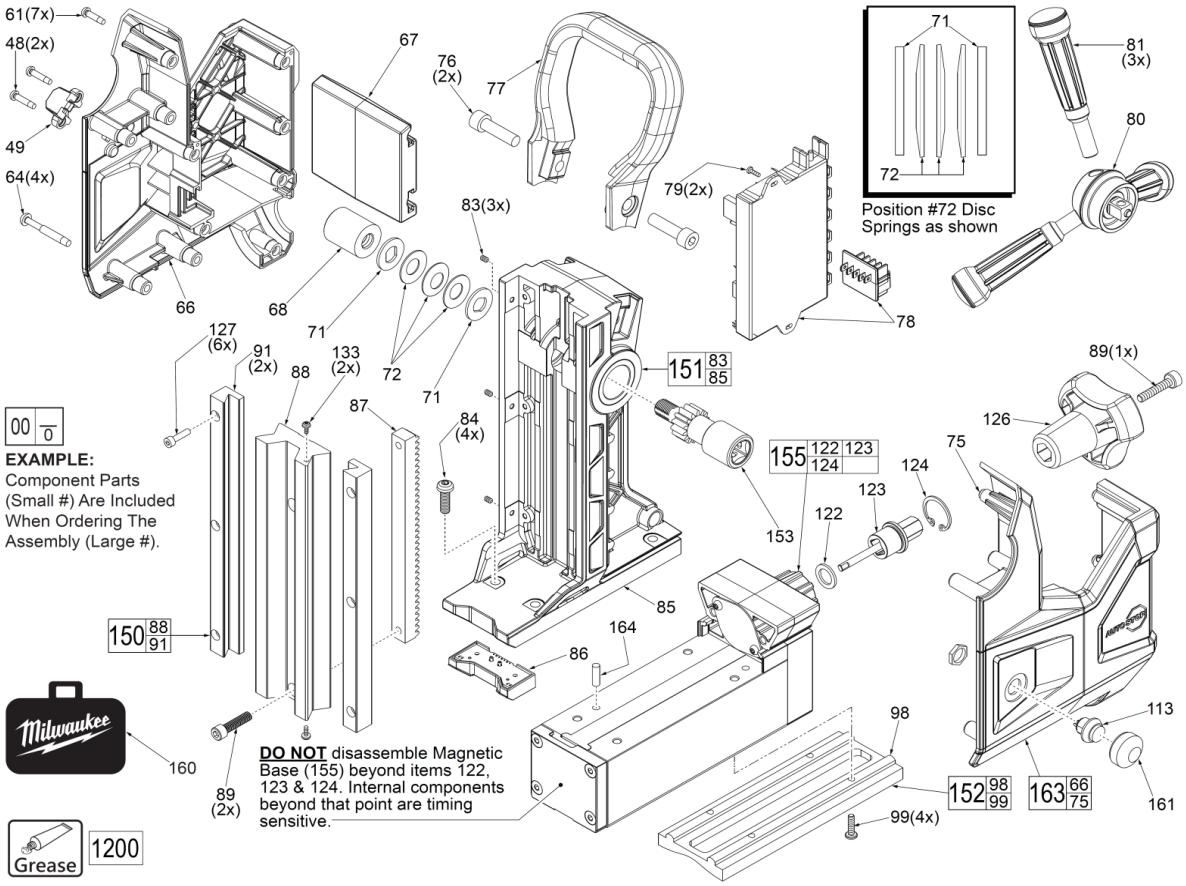
SERVICE PARTS DIAGRAM

TTI Model Number: 018 127 010, 011, 012, 013

M18 FUEL™ MAGNETIC DRILL PRESS

Bulletin Date:
Nov-17

Starting Serial Number:
VERSION A - C2016



M18 FMDP

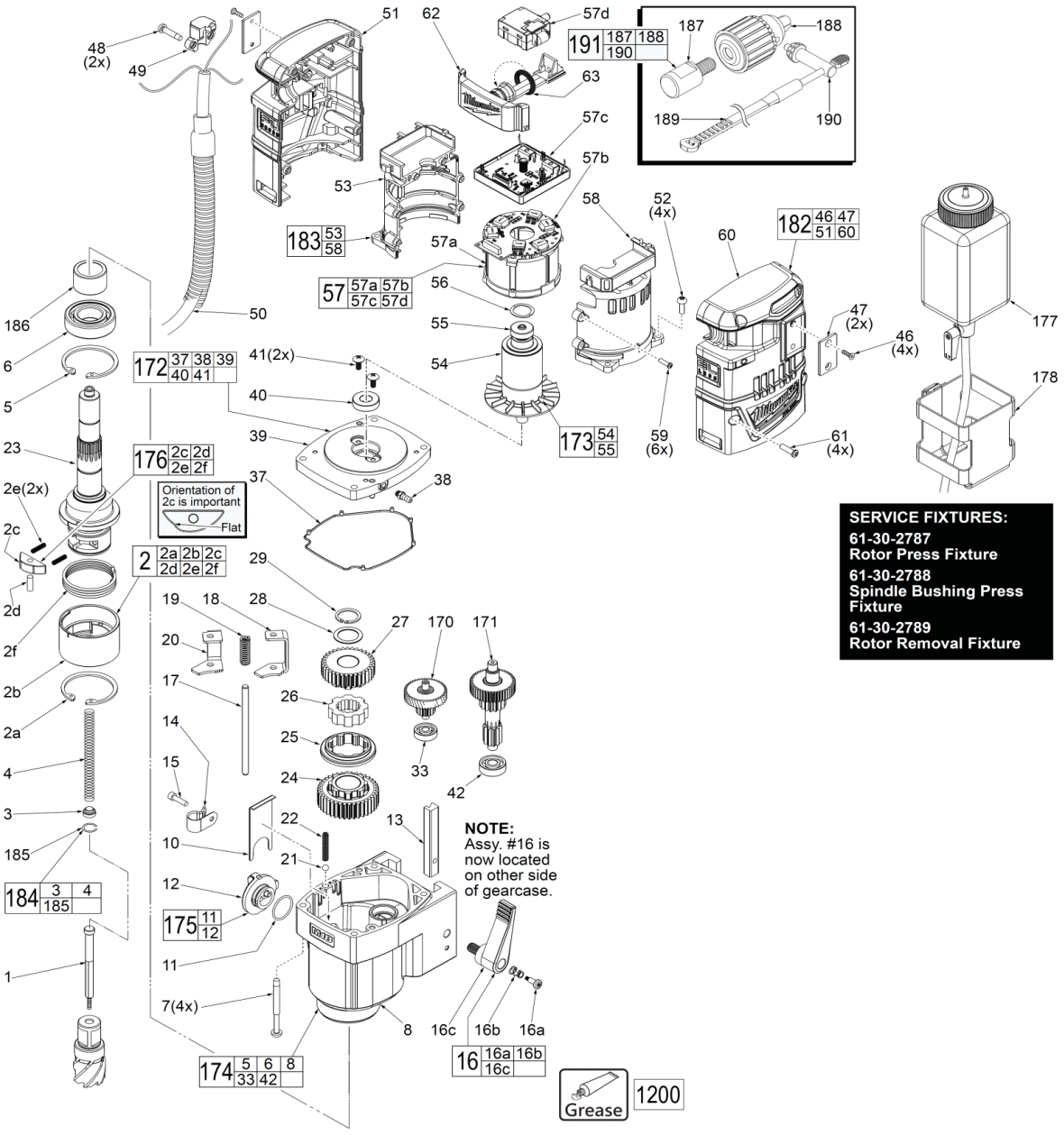
SERVICE PARTS DIAGRAM

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M18 FUEL™ MAGNETIC DRILL PRESS

Bulletin Date:
Nov-17

Starting Serial Number:
VERSION A - C2016



SERVICE FIXTURES:

61-30-2787
Rotor Press Fixture

61-30-2788
Spindle Bushing Press Fixture

61-30-2789
Rotor Removal Fixture

M18 FMDP

SERVICE PARTS LIST

TTI Model Number: 018 127 010, 011, 012, 013

M18 FUEL™ MAGNETIC DRILL PRESS

Bulletin Date: Nov-17

Starting Serial Number:

VERSION A - C2016

ITEM	PART NUMBER	PART DISCRIPTION	QTY (PCS)
1	203536002	EJECTOR PIN ASSEMBLY	1
2	203537002	CHUCK COLLAR	1
2a	694381001	RETAINING RING	1
2b	612378001	SPINDLE COLLAR	1
2c	612407001	SPINDLE KEY	1
2d	694201001	PIN	1
2e	694181001	SPRING	2
2f	694180001	TORSION SPRING	1
3	–	SPINDLE PLUG	1
4	–	SPRING	1
5	681907001	RETAINING RING	1
6	680733003	BALL BEARING	1
7	662214001	M5 X 55MM SCREW	4
8	–	GEARCASE	1
10	636158001	SHIFT KNOB RETAINER	1
11	562705001	O-RING	1
12	–	SPEED KNOB	1
13	621719001	DOVETAIL LOCK BLOCK	1
14	528216001	CORD CLAMP	1
15	660414009	M4 X 16MM SCREW	1
16	203538002	ADJUSTMENT LEVER ASSEMBLY	1
16a	–	SCREW	1
16b	–	SPRING	1
16c	–	ADJUSTMENT LEVER	1
17	694192001	GUIDE ROD	1
18	694191001	SHIFT BRACKET A	1
19	694193001	SPRING	1
20	694190001	SHIFT BRACKET B	1
21	670219004	STEEL BALL	1
22	694270001	SPRING	1
23	203845002	SPINDLE	1
24	612409001	3RD INTERMEDIATE GEAR, LOW	1
25	612412001	COUPLER	1
26	612411001	DRIVE HUB	1
27	612410001	3RD INTERMEDIATE GEAR, HIGH	1
28	680335077	WASHER	1

M18 FMDP

SERVICE PARTS LIST

TTI Model Number: 018 127 010, 011, 012, 013

M18 FUEL™ MAGNETIC DRILL PRESS

Bulletin Date: Nov-17

Starting Serial Number:

VERSION A - C2016

ITEM	PART NUMBER	PART DISCRIPTION	QTY (PCS)
29	694189001	RETAINING RING	1
33	681160001	BALL BEARING	1
37	563567001	GASKET	1
38	307458001	LUBE HOSE FITTING WITH O-RING	1
39	-	DIAPHRAGM WITH PINS	1
40	681737001	BALL BEARING	1
41	662218001	M4 X 8MM SCREW	2
42	692025002	BALL BEARING	1
46	662217001	6-32 X 3/16" SCREW	6
47	636255001	METAL PLATE	2
48	660024020	M4 X 18MM SCREW	4
49	528071001	CORD CLAMP	2
50	730146004	POWER CABLE WITH TERMINALS	1
51	-	MOTOR HOUSING SUPPORT	1
52	661233001	M4 X 12MM SCREW	4
53	-	INSULATOR SUPPORT	1
54	-	ROTOR	1
55	681400001	BALL BEARING	1
56	633081001	WAVE WASHER	1
57	203539002	ELECTRONICS ASSEMBLY	1
57a	-	STATOR ASSEMBLY	1
57b	-	LOWER PCBA	1
57c	-	UPPER PCBA	1
57d	-	ON-OFF SWITCH	1
58	-	INSULATOR COVER	1
59	660570005	M3 X 14MM SCREW	6
60	-	MOTOR HOUSING COVER	1
61	660024021	M4 X 20MM SCREW	11
62	203532002	SWITCH BUTTON ASSEMBLY	1
63	694297001	GARTER SPRING	1
64	662213001	M5 X 40MM SCREW	4
66	-	HOUSING COVER	1
67	563601001	BATTERY PAD	1
68	694308001	HANDLE SQUARE DRIVER	1
71	636080001	WASHER	2
72	694271001	DISC SPRING	3

M18 FMDP

SERVICE PARTS LIST

TTI Model Number: 018 127 010, 011, 012, 013

M18 FUEL™ MAGNETIC DRILL PRESS

Bulletin Date: Nov-17

Starting Serial Number:

VERSION A - C2016

ITEM	PART NUMBER	PART DISCRIPTION	QTY (PCS)
75	–	HOUSING SUPPORT	1
76	662215001	M8 X 25MM SCREW	2
77	307943001	CARRYING HANDLE	1
78	280160085	PCBA/BATTERY CONNECTOR BLOCK ASSEMBLY	1
79	661630001	M2.5 X 7/32" SCREW	2
80	203549002	QUICK CONNECT HUB ASSEMBLY	1
81	307944001	FEED HANDLE	3
83	660439002	2MM HEX SET SCREW	3
84	662272001	1/4-20 X 1" SCREW	4
85	–	MAGSTAND BASE WITH BUSHINGS	1
86	290804084	LOWER CONTROL BOARD WITH LED	1
87	694219001	RACK	1
88	–	DOVETAIL	1
89	662271001	1/4-20 X 3/4" SCREW	3
91	–	DOVETAIL RAIL	2
98	–	INSERT ADAPTER	1
99	–	8-32 SCREW	4
113	290804085	LED SWITCH ASSEMBLY	1
122	563595001	RUBBER WASHER	1
123	307148001	SPINDLE LOCK SHAFT	1
124	634352001	RETAINING RING	1
126	528046003	MAGNET CONTROL KNOB	1
127	662317001	M4 X 16MM SCREW	6
133	662314001	M4 X 8MM SCREW	2
150	203550002	DOVETAIL AND RAIL KIT	1
151	203551002	MAGSTAND BASE ASSEMBLY	1
152	203552002	PIPE ADAPTER INSERT KIT (ACCESSORY)	1
153	203553002	RACK/GEAR SHAFT ASSEMBLY	1
155	203612002	MAGNETIC BASE/REAR GEARCASE ASSEMBLY	1
160	307154003	BLOW MOLDED CARRYING CASE	1
161	563759001	RUBBER SWITCH COVER	1
163	203613002	HOUSING ASSEMBLY	1
164	673376001	ALIGNMENT PIN	1
170	203541002	PINION/1ST INTERMEDIATE GEAR ASSEMBLY	1
171	203542002	PINION/2ND INTERMEDIATE GEAR ASSEMBLY	1
172	203543002	DIAPHRAGM ASSEMBLY W/BEARINGS AND SEAL	1

M18 FMDP

SERVICE PARTS LIST

TTI Model Number: 018 127 010, 011, 012, 013

M18 FUEL™ MAGNETIC DRILL PRESS

Bulletin Date:
Nov-17

Starting Serial Number:
VERSION A - C2016

ITEM	PART NUMBER	PART DISCRIPTION	QTY (PCS)
173	203544002	ROTOR ASSEMBLY	1
174	203540002	GEARCASE ASSEMBLY	1
175	203530002	SPEED KNOB ASSEMBLY	1
176	203533002	SPRING/KEY KIT	1
177	203545002	LUBRICANT CONTAINER ASSEMBLY	1
178	203546002	CONTAINER BRACKET ASSEMBLY	1
182	203614002	MOTOR HOUSING ASSEMBLY	1
183	203615002	INSULATOR ASSEMBLY	1
184	203618002	EJECTOR SPRING KIT	1
185	694813001	RETAINER	1
186	694834001	BUSHING	1
187	–	CHUCK ADAPTER	1
188	670694001	1/2" KEYED CHUCK (WITH KEY)	1
189	561712001	KEY HOLDER	1
190	672481001	CHUCK KEY	1
191	001999037	3/4" WELDON TO 1/2" CHUCK ADAPTER W/KEY	1
–	941048059	RATING LABEL	1
1200	–	TYPE Y GREASE 6oz/170g TUBE	1
2000	61-30-2787	ROTOR PRESS FIXTURE	1
2001	61-30-2788	SPINDLE BUSHING PRESS FIXTURE	1
2002	61-30-2789	ROTOR REMOVAL FIXTURE	1

M18 FMDP

SERVICE INSTRUCTION

TTI Model Number: 018 127 010, 011, 012, 013

M18 FUEL™ MAGNETIC DRILL PRESS

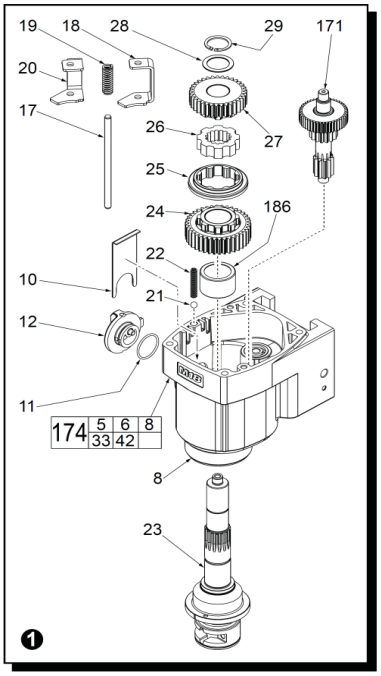
Bulletin Date:
Nov-17

Starting Serial Number:
VERSION A - C2016

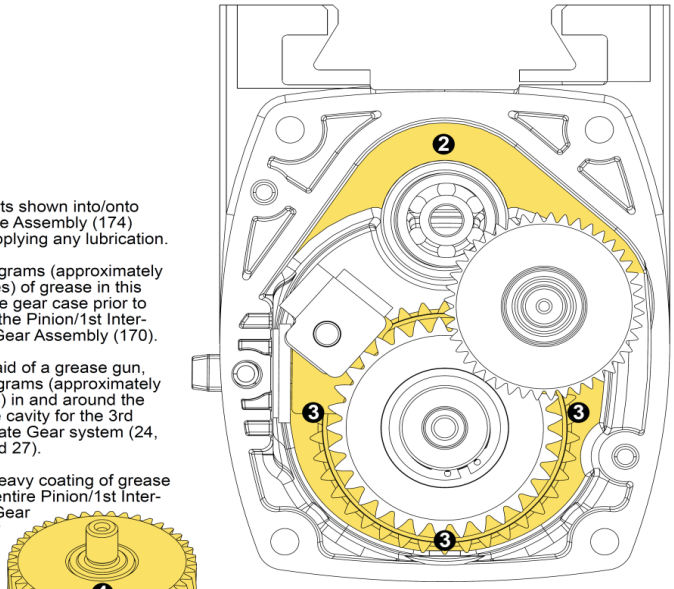
LUBRICATION:

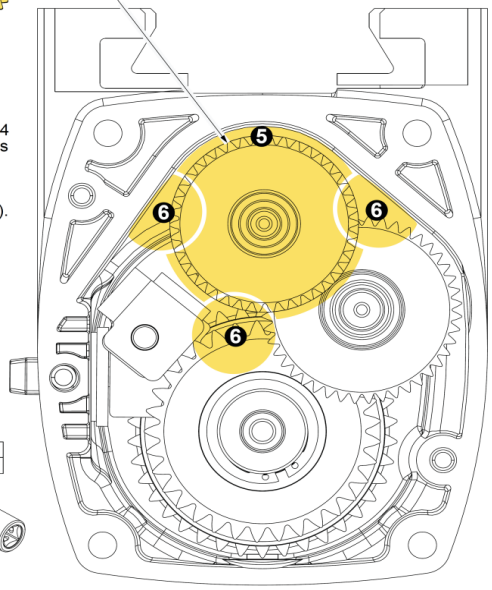
Type "Y" Grease, Item 1200 (170g / 6 oz. tube)
Use approximately 85 grams, 3 ounces

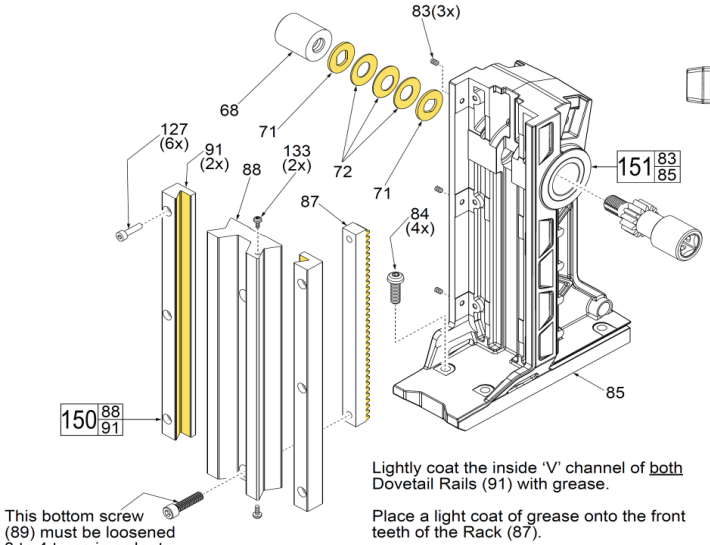
LUBRICATION NOTE: When servicing the drill motor, 90-95% of old grease must be removed prior to new grease being added.



1. Install parts shown into/onto Gear Case Assembly (174) prior to applying any lubrication.
2. Apply 13 grams (approximately .45 ounces) of grease in this area of the gear case prior to installing the Pinion/1st Intermediate Gear Assembly (170).
3. With the aid of a grease gun, place 26 grams (approximately .9 ounces) in and around the gear case cavity for the 3rd Intermediate Gear system (24, 25, 26 and 27).
4. Apply a heavy coating of grease over the entire Pinion/1st Intermediate Gear Assembly (170).
5. Install the assembly (170) into gear case and place 5-8 grams (.17-.28 ounces) fully around gear space.
6. This step will require 39 grams (1.4 ounces) of grease. Place 13 grams (approximately .45 ounces) of grease <u>at each of three positions</u> over and around the Pinion/1st Intermediate Gear Assembly (170).







This bottom screw (89) must be loosened 3 to 4 turns in order to remove the Slide (88) and the Rack (87).

Lightly coat the inside 'V' channel of <u>both</u> Dovetail Rails (91) with grease.

Place a light coat of grease onto the front teeth of the Rack (87).

Lightly coat both sides of the two Washers (71) and three Disc Springs (72).

M18 FMDP

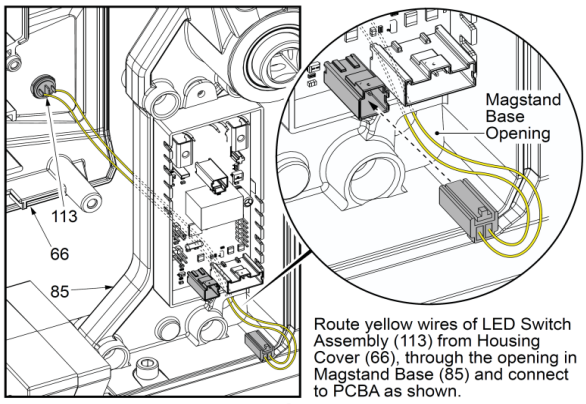
SERVICE INSTRUCTION

TTI Model Number: 018 127 010, 011, 012, 013

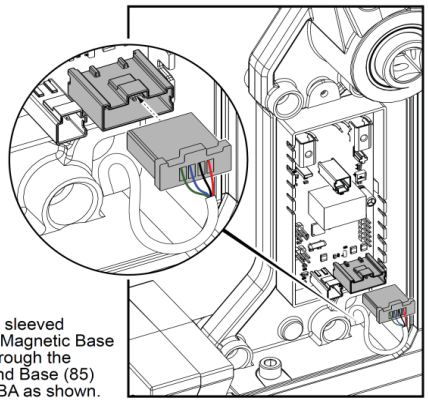
M18 FUEL™ MAGNETIC DRILL PRESS

Bulletin Date:
Nov-17

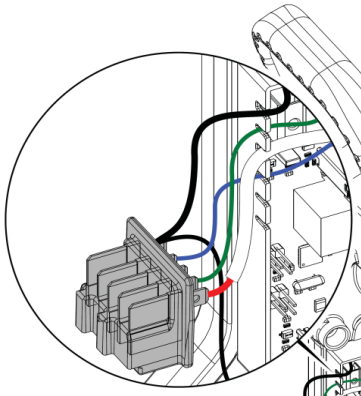
Starting Serial Number:
VERSION A - C2016



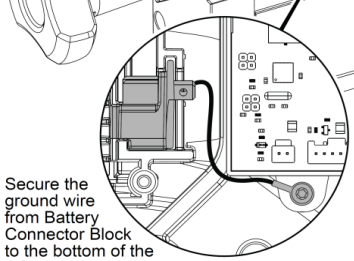
Route yellow wires of LED Switch Assembly (113) from Housing Cover (66), through the opening in Magstand Base (85) and connect to PCBA as shown.



Route the four wire sleeved assembly from the Magnetic Base Assembly (155), through the opening in Magstand Base (85) and connect to PCBA as shown.



Be sure the wires between the PCBA and Battery Connector Block are places securely in wire traps on the side of PCBA boat as shown.



Secure the ground wire from Battery Connector Block to the bottom of the PCBA boat.

Route the wires from the Power Cable (50) from drill motor through the opening in the Housing Support (75). Secure the black and red wires to PCBA with a lock washer and screw at each terminal. Connect the remaining brown/blue wire assembly as shown. Secure Power Cable to the Housing Cover (66) with Cord Clamp (49) and two Screws (48).

M18 FMDP

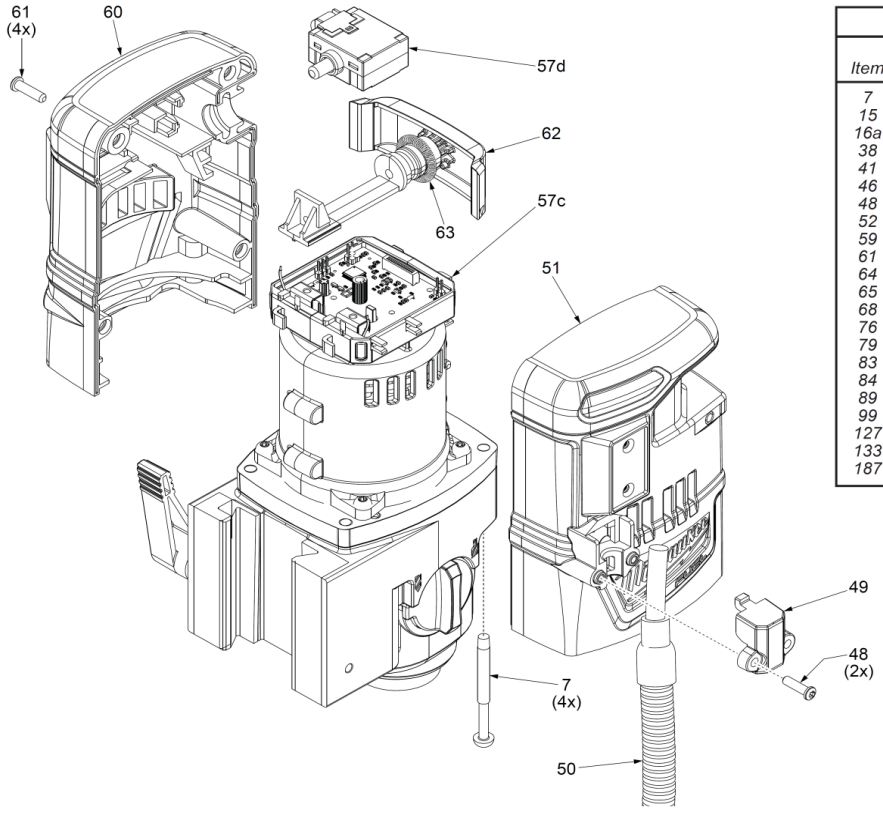
SERVICE INSTRUCTION

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M18 FUEL™ MAGNETIC DRILL PRESS

Bulletin Date:
Nov-17

Starting Serial Number:
VERSION A - C2016



SCREW TORQUE CHART

Item	Part Number	Seat Torque (Kg./cm.)	Seat Torque (Nm)
7	662214001	28-33	2.71-3.16
15	660414009	4-6	0.34-0.57
16a	----------	6-10	0.57-0.90
38	307458001	4-8	0.34-0.79
41	662218001	15-20	1.47-1.92
46	662217001	7-10	0.68-0.90
48	660024020	13-17	1.24-1.92
52	661233001	12-18	1.13-1.70
59	660570005	10-15	0.90-1.47
61	660024021	15-20	1.47-1.92
64	662213001	28-33	2.71-3.16
65	----------	15-20	1.47-1.92
68	694308001	460	45.09
76	662215001	35-40	3.39-3.84
79	661630001	3-7	0.23-0.68
83	660439002	4	0.34
84	662272001	28-33	2.71-3.16
89	662271001	28-33	2.71-3.16
99	----------	20-25	1.92-2.37
127	662271001	25-30	2.37-2.94
133	662314001	10-15	0.90-1.47
187	----------	50-75	4.86-7.35

Connect the wires from the Power Cable (50) to the drill motor as shown. Secure the terminated red and black wires with a lock washer and screw at each terminal location on the Upper PCBA (57c). Insert the male connector with the thin brown and blue wires from the Power Cable to the corresponding female connector on the Upper PCBA. With the Switch Button Assembly (62) and Garter Spring (63) in place, assemble together two motor housing halves (51 and 60) and secure with screws (61 and 7). Secure Power Cable to the Motor Housing Support (51) with Cord Clamp (49) and two Screws (48).

