



SERVICE PARTS LIST

BULLETIN NO.
54-24-3310

SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS		REVISED BULLETIN	DATE
M12™ FUEL™ 1/2" (13mm) HAMMER-DRILL			Sept. 2017
CATALOG NO.	2504-20	WIRING INSTRUCTION	
STARTING SERIAL NO.	J17A	See Reverse Side	

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

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
1	05-88-0202	Chuck Screw	(1)
2	42-66-0020	1/2" (13mm) Keyless Chuck	(1)
3	06-82-6351	M3 x 16mm Pan Hd. ST T-10 Screw	(4)
4	14-29-2504	Gear Case Assembly	(1)
4a	05-81-0542	M2.3 x 4.5mm Phillips Washer Screw	(2)
4b	44-10-0195	Speed Selector Lever	(1)
5	45-24-0230	Speed Selector Slide Assembly	(1)
6	16-01-2503	Rotor	(1)
7	42-42-0355	Forward/Reverse Shuttle	(1)
8	14-20-2500	Electronics Assembly	(1)

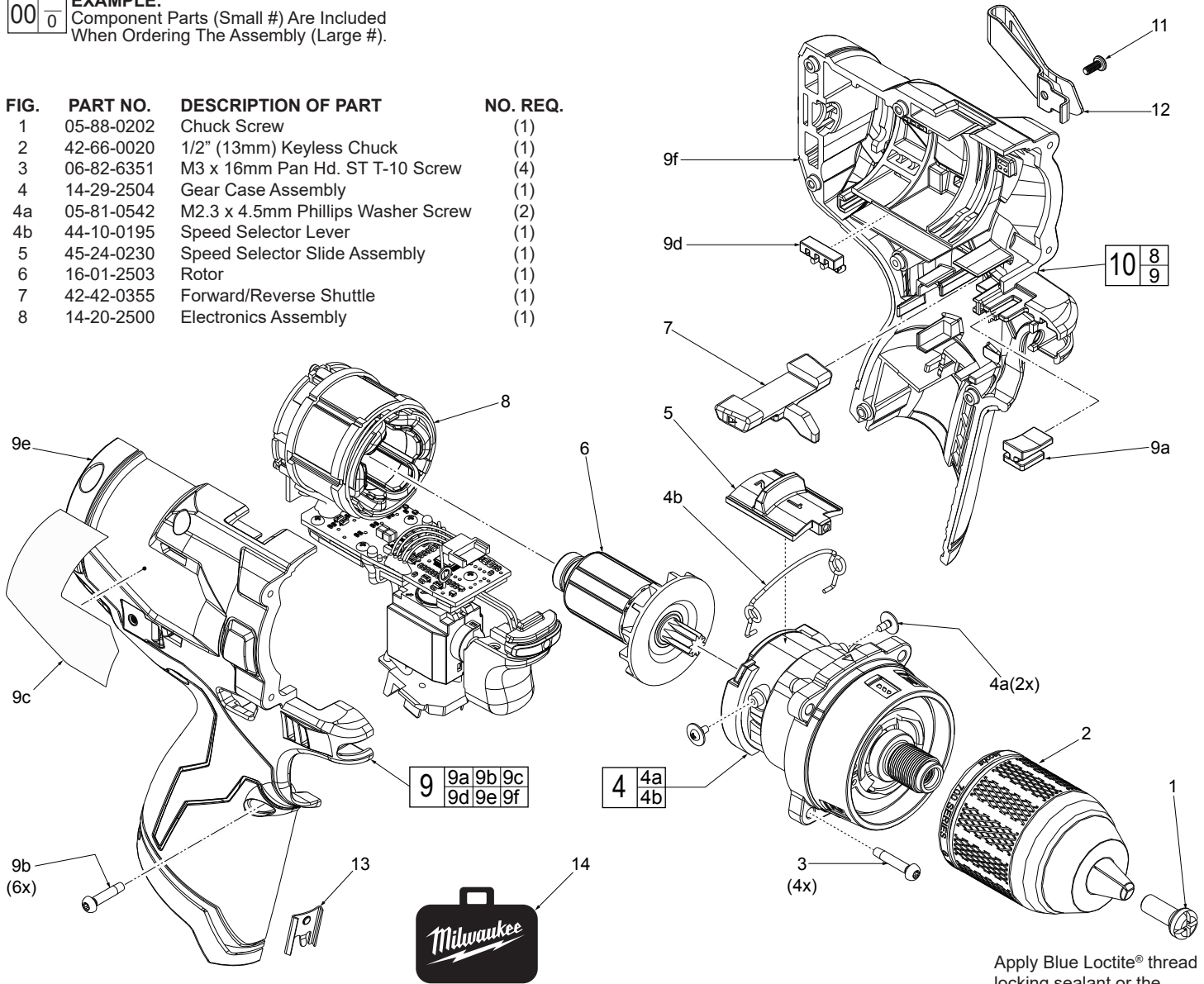
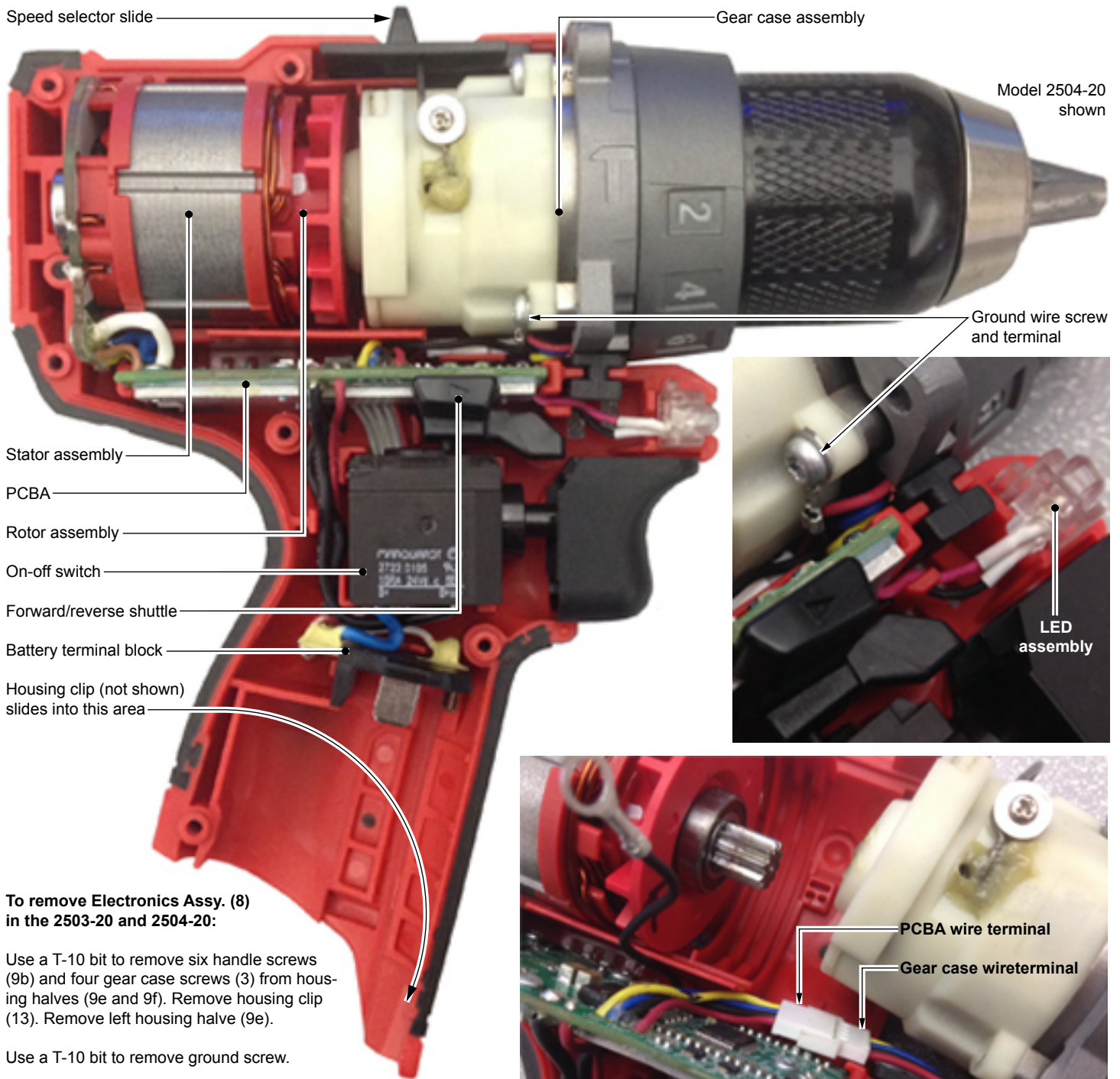


FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
9	31-44-2503	Housing Kit	(1)
9a	45-30-0066	Sealing Pad	(1)
9b	06-82-1080	M3 x 14mm Pan Hd. ST T-10 Screw	(6)
9c	12-20-2500	Service Nameplate	(1)
9d	23-28-0165	Light Pipe	(1)
9e	-----	Housing Cover - Right Housing Halve	(1)
9f	-----	Housing Support - Left Housing Halve	(1)
10	14-20-2501	Electronics/Housing Assembly	(1)
11	05-88-1015	M2.5 x 6mm Pan Hd. Phillips Mach. Scr.	(1)
12	42-70-0117	Belt Clip	(1)
13	42-70-0058	Housing Clip	(1)
14	42-55-2503	Blow Molded Carrying Case	(1)

Apply Blue Loctite® thread locking sealant or the equivalent to the threads of the chuck screw (1) before securing chuck to the gearcase spindle.

SCREW TORQUE SPECIFICATION CHART			
FIG.	PART NO.	DESCRIPTION	SEATING TORQUE (IN-LBS)
1	05-88-0202	Chuck Screw	33±2.5
3	06-82-6351	Gearcase Assembly Screw	7.0±2.5
4a	05-81-0542	Speed Selector Lever Screw	3.5±1
9b	06-82-1080	Right Housing Halve Screw	7.0±2.5
11	05-88-1015	Belt Clip	Hand Tighten



To remove Electronics Assy. (8) in the 2503-20 and 2504-20:

Use a T-10 bit to remove six handle screws (9b) and four gear case screws (3) from housing halves (9e and 9f). Remove housing clip (13). Remove left housing half (9e).

Use a T-10 bit to remove ground screw.

Gently wiggle front end to separate gear case assembly (4) from pinion of rotor assembly (6). Carefully disconnect male/female wire terminals to separate gear case assembly from PCBA.

Lift stator from left housing cavity and carefully remove rotor assembly from the stator.

Lift old electronics assembly out of left housing half, paying attention to wire routing and trapping.

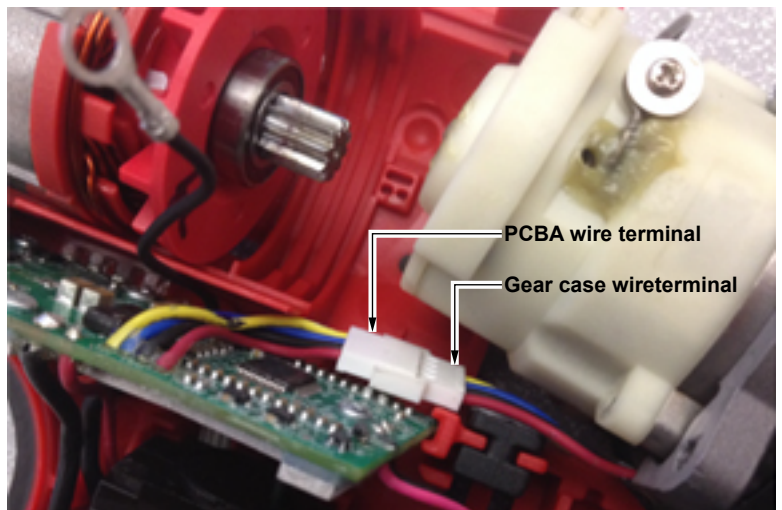
To install new Electronics Assembly (8) in the 2503-20 and 2504-20:

Carefully place existing rotor (6) into stator of new electronics assembly.

Connect female wire terminal of gear case assembly (4) with male wire terminal of the PCBA.

Place stator/rotor and PCBA firmly and squarely into corresponding channels and cavities of left housing half (9e).

Insert the rotor pinion into rear of gear case assembly, meshing the gears and seating the rotor bearing. At this point install two gear case screws (3), partially securing electronics assembly and gear case assembly.



Be sure connected wire terminals are trapped between a small tab in the housing half (above the PCBA) and below the gear case. Put ground screw through ground wire terminal and install onto gear case. Be sure terminal connector wires and ground wire are tucked back into left housing half.

Place LED assembly, on-off switch and battery terminal block firmly and squarely into the corresponding channels and cavities of the left housing half. Be sure all wires are routed and tucked down in channels and traps as illustrated above.

Re-install speed selector slide (5) and forward/reverse shuttle (7).

Carefully place right handle half onto left handle half. Check for any component interference or pinched wires. Re-install remaining screws and housing clip. Check for proper functionality of on-off switch, forward/reverse shuttle and speed selector.

Install battery and check for the proper operation of tool.