

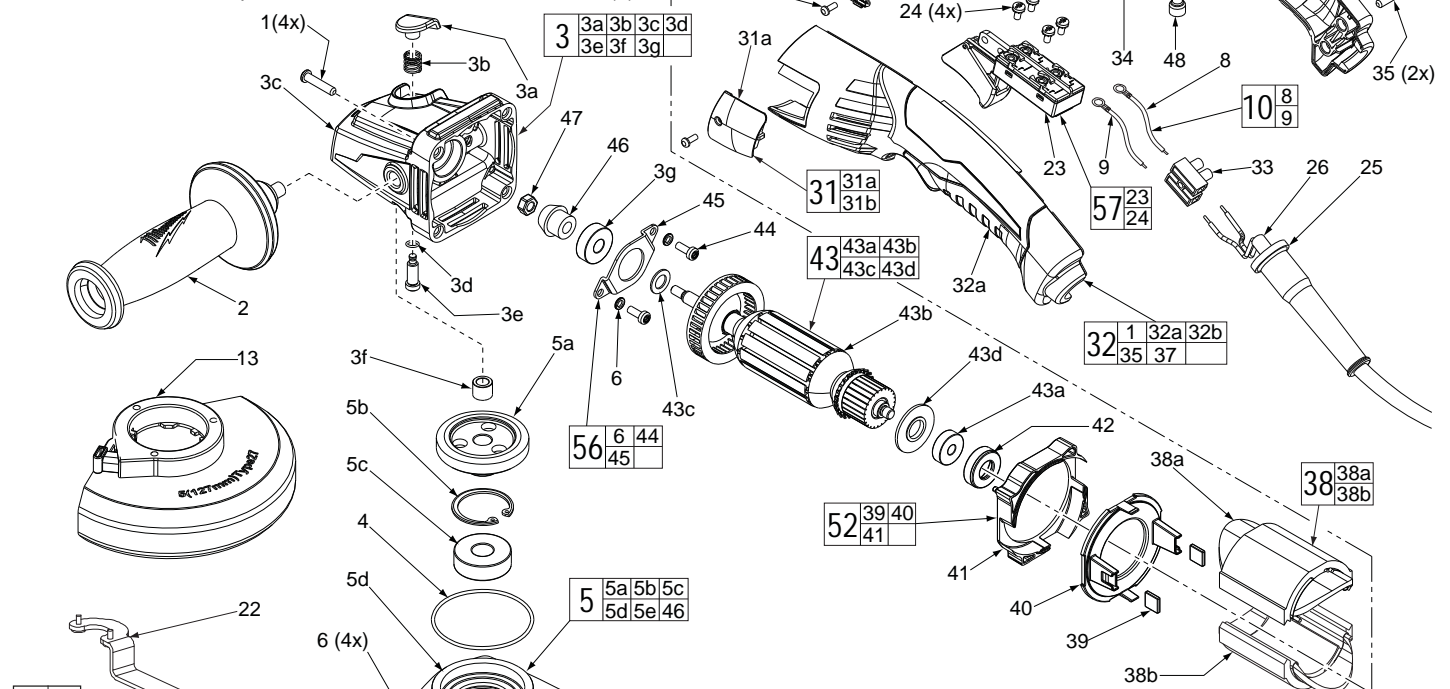


## SERVICE PARTS LIST

**BULLETIN NO.**  
**54-38-2160**

SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS			REVISED BULLETIN	DATE
4.5" COMPACT RAT-TAIL ANGLE GRINDER				Mar. 2016
CAT. NO.	6121-31	STARTING SERIAL NUMBER	WIRING INSTRUCTION See Reverse Side	
		C97A		

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
1	05-88-1650	M4 x 25mm Pan Hd. ST Screw T-20	(7)
2	42-62-0120	Side Handle Assembly	(1)
3	14-30-1155	Gearcase Assembly	(1)
3a	-----	Spindle Lock Button	(1)
3b	-----	Spindle Lock Spring	(1)
3c	-----	Gearcase	(1)
3d	-----	O-Ring	(1)
3e	-----	Spindle Lock Pin	(1)
3f	-----	Needle Bearing	(1)
3g	02-04-0620	Ball Bearing	(1)
4	34-40-0560	O-Ring	(1)
5	14-46-0417	5/8" Spindle Hub Kit	(1)
5a	-----	Spiral Bevel Gear	(1)



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

**\*LUBRICATION NOTE:**  
When servicing the Gears (5a & 46)  
or the Gearcase (3c), 90-95% of the  
old grease must be removed prior  
to new grease being added.

**FIG. LUBRICATION\***  
5a,46 Type "Y" Grease, No. 49-08-5270,  
Must Be Applied To All Gear Teeth.

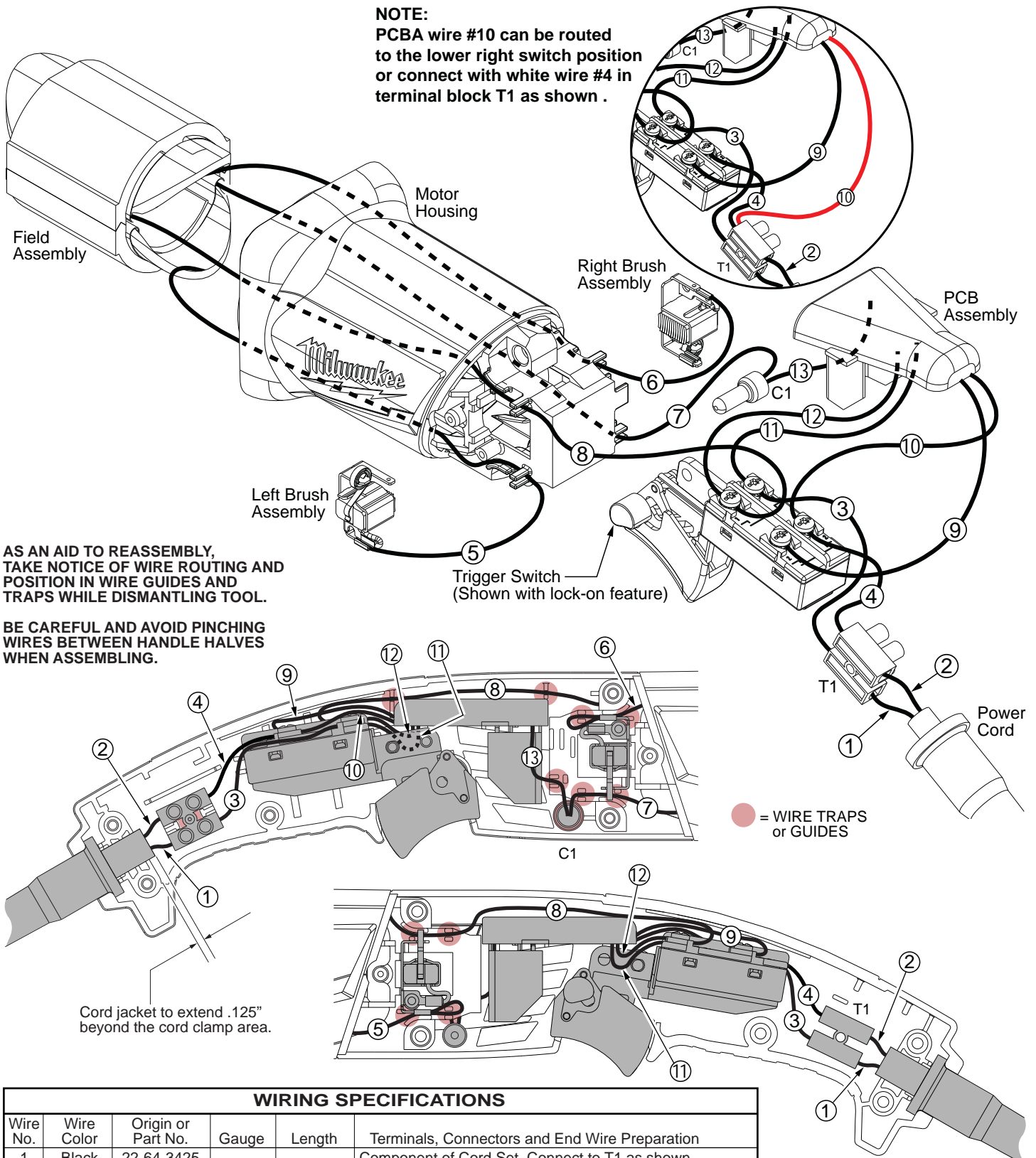
5b	-----	Retaining Ring	(1)
5c	-----	Ball Bearing	(1)
5d	-----	Spindle Hub	(1)
5e	-----	5/8" Spindle	(1)
6	05-90-0225	Spring Washer	(6)
7	05-88-1210	M4 x 14mm T-20	(4)
8	-----	Leadwire - Black	(1)
9	-----	Leadwire - White	(1)
10	23-94-0345	Leadwire Assy. Kit	(1)
13	14-32-0210	4.5" Type 27 Guard Assembly (Shown)	(1)
13	43-54-0920	4.5" Type 1 Guard Assy. (Not Shown)	(1)
15	-----	O-Ring	(1)
16	-----	Wavey Spring	(1)
17	-----	Flange with Ramps	(1)
18	-----	Retaining Ring	(1)
19	43-34-0935	Inner Disc Flange	(1)
21	44-40-0035	Outer Flange Nut	(1)
22	49-96-7205	Spanner Wrench	(1)
23	23-66-2685	Trigger Switch	(1)
24	05-78-0305	M3.5 x 7mm Pan Hd. Phil. Switch Scr.	(1)
25	44-76-0095	Cord Protector	(1)
26	22-64-3425	Power Cord	(1)

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
27	05-88-0030	M3 x 8.5mm Pan Hd. ST Screw T-10	(2)
28	22-18-2240	Carbon Brush Assembly (Set of 2)	(1)
29	31-50-0695	Motor Housing	(1)
30	06-82-2395	M2.6 x 10mm Pan Hd. ST Screw T-9	(2)
31	31-15-1005	Brush Cover Assembly (Set of 2)	(1)
31a	-----	Brush Cover - Left	(1)
31b	-----	Brush Cover - Right	(1)
32	31-44-0655	Rear Handle Set	(1)
32a	-----	Handle Halve - Left	(1)
32b	-----	Handle Halve - Right	(1)
33	22-56-0475	Terminal Connector Block	(1)
34	22-09-1825	PCB Assembly	(1)
35	05-88-1255	M4 x 22mm Pan Hd. ST T-20	(2)
37	06-82-1020	M4 x 14mm Pan Hd. ST T-20	(1)
38	18-07-0285	Field Assembly	(1)
38a	-----	Field Halve	(1)
38b	-----	Field Halve	(1)
39	42-28-0085	Rubber Block	(2)
40	-----	Baffle Foot	(1)
41	-----	Baffle	(1)
42	42-96-0016	Rubber Bearing Cap	(1)
43	16-10-0850	Armature Assembly	(1)
43a	02-04-2110	Ball Bearing	(1)
43b	-----	Armature	(1)
43c	45-88-0406	Washer	(1)
43d	31-86-0090	Plastic Disc	(1)
44	05-88-1280	M4 x 10mm Pan Hd. Mach. Screw T-20	(2)
45	44-86-0155	Bearing Retainer	(1)
46	-----	Pinion	(1)
47	05-55-0620	M5 Hex Nut	(1)
48	22-56-0150	Close End Connector	(1)
50	14-46-6105	Flange with Ramps Assembly	(1)
52	42-14-0520	Baffle Assembly	(1)
56	44-86-0145	Bearing Retaining Plate Assembly	(1)
57	14-78-0525	Trigger Switch Assembly	(1)

**MILWAUKEE ELECTRIC TOOL CORPORATION**  
13135 W. Lisbon Road, Brookfield, WI 53005  
Drwg. 8

**NOTE:**

PCBA wire #10 can be routed to the lower right switch position or connect with white wire #4 in terminal block T1 as shown .

**WIRING SPECIFICATIONS**

Wire No.	Wire Color	Origin or Part No.	Gauge	Length	Terminals, Connectors and End Wire Preparation
1	Black	22-64-3425	--	--	Component of Cord Set. Connect to T1 as shown.
2	White	22-64-3425	--	--	Component of Cord Set. Connect to T1 as shown.
3	Black	23-94-0345	--	--	Comp. of Leadwire Assembly Kit. Connect to Switch and T1 as shown.
4	White	23-94-0345	--	--	Comp. of Leadwire Assembly Kit. Connect to Switch and T1 as shown.
5	Black	18-07-0285	--	--	Comp. of Field. Connect to Left Brush Assy. as shown.
6	Black	18-07-0285	--	--	Comp. of Field. Connect to Right Brush Assy. as shown.
7	Black	18-07-0285	--	--	Comp. of Field. Connect to Wire #13 with C1 as shown.
8	Black	18-07-0285	--	--	Component of Field. Connect to Switch as shown.
9	White	22-09-1825	--	--	Comp. of PCB Assembly. Connect to Switch as shown.
10	White	22-09-1825	--	--	Comp. of PCB Assy. Connect to Switch or T1 as shown.
11	Black	22-09-1825	--	--	Comp. of PCB Assembly. Connect to Switch as shown.
12	Blue	22-09-1825	--	--	Comp. of PCB Assembly. Connect to Switch as shown.
13	Red	22-09-1825	--	--	Comp. of PCB Assembly. Connect to Wire #7 with C1.

**BULK LEAD WIRE - BULLETIN 58-01-0003****NOTE:**

All leads must be held to  $\pm 1/16"$ .  
All lead lengths are before strip-

**TERMINAL DESCRIPTION**

Code	Part No.	Qty.
T1	22-56-0475	1

**CONNECTOR DESCRIPTION**

C1	22-56-0150	1
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