

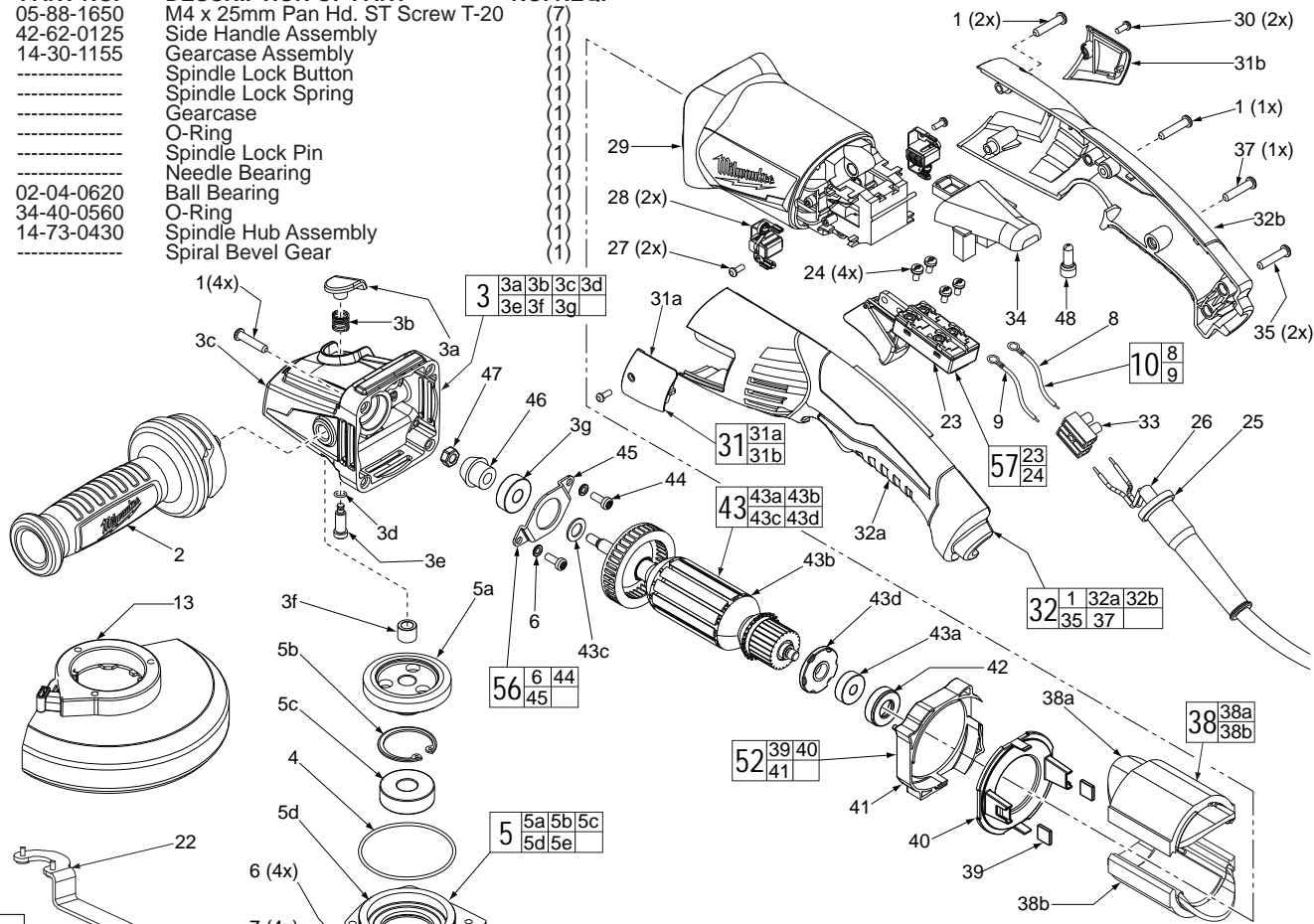


# SERVICE PARTS LIST

**BULLETIN NO.**  
54-38-2191

SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS		REVISED BULLETIN 54-38-2190	DATE Mar. 2013
<b>5" HP RAT-TAIL ANGLE GRINDER</b>			
<b>CAT. NO.</b>	<b>6124-31</b>	<b>STARTING SERIAL NUMBER</b>	<b>D01B</b>
		<b>WIRING INSTRUCTION</b> <b>See Reverse Side</b>	

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
1	05-88-1650	M4 x 25mm Pan Hd. ST Screw T-20	(7)
2	42-62-0125	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	14-73-0430	Spindle Hub Assembly	(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.

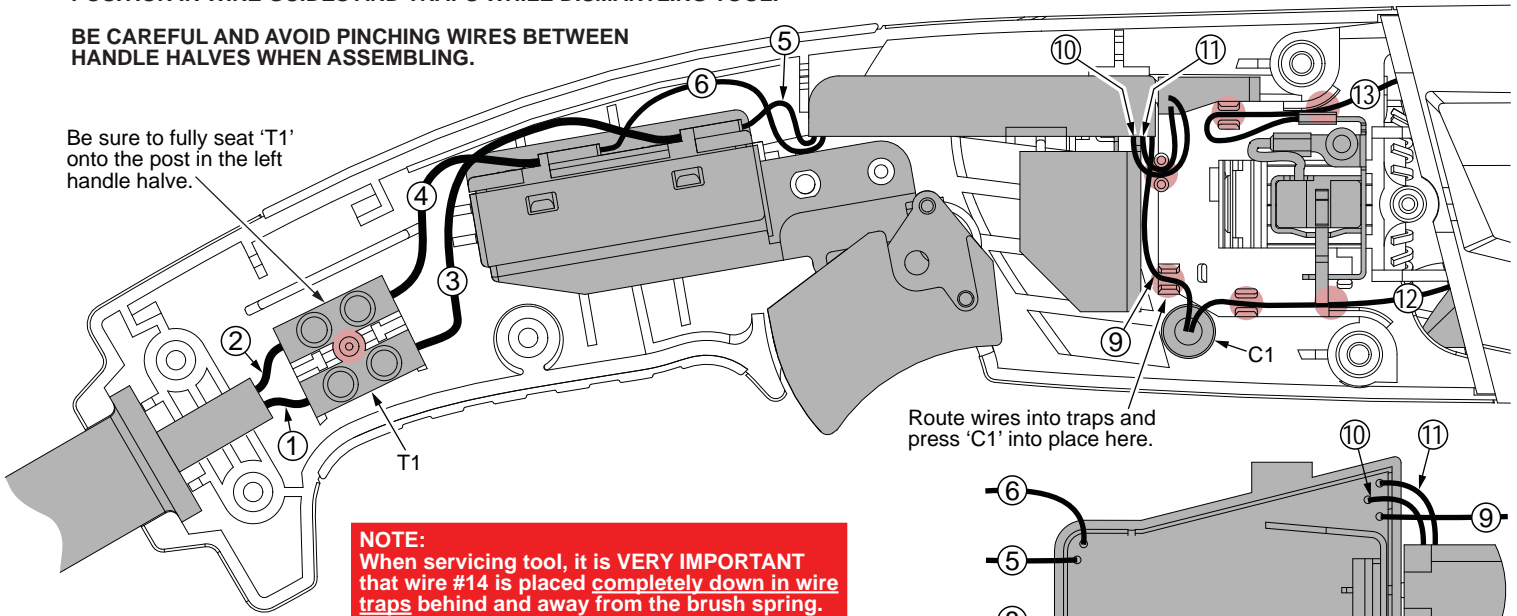
5b	-----	Retaining Ring	(1)
5c	-----	Ball Bearing	(1)
5d	-----	Spindle Hub	(1)
5e	-----	5/8" Spindle	(1)
6	05-90-0225	Spring Washer	(6)
7	05-88-1210	M4 x 14mm T-20	(4)
8	-----	Leadwire - Black	(1)
9	-----	Leadwire - White	(1)
10	23-94-0345	Leadwire Assy. Kit	(1)
13	14-32-0215	5" Type 27 Guard Assembly	(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.	(4)
25	44-76-0095	Cord Protector	(1)
26	22-64-3425	Power Cord	(1)
27	05-88-0030	M3 x 8.5mm Pan Hd. ST Screw T-10	(2)
28	22-18-2250	Carbon Brush Assembly (Set of 2)	(1)
29	31-50-2140	Motor Housing	(1)

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
30	06-82-2395	M2.6 x 10mm Pan Hd. ST Screw T-9	(2)
31	31-15-1010	Brush Cover Assembly (Set of 2)	(1)
31a	-----	Brush Cover - Left	(1)
31b	-----	Brush Cover - Right	(1)
32	31-44-0715	Rear Handle Set	(1)
32a	-----	Handle Halve - Left	(1)
32b	-----	Handle Halve - Right	(1)
33	22-56-0470	Terminal Connector Block	(1)
34	22-09-1850	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	18-07-0310	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	16-10-0845	Armature Assembly	(1)
43a	02-04-2110	Ball Bearing	(1)
43b	-----	Armature	(1)
43c	45-88-0406	Washer	(1)
43d	-----	Magnetic Disc	(1)
44	05-88-1280	M4 x 10mm Pan Hd. Mach. Screw T-20	(2)
45	44-86-0155	Bearing Retainer	(1)
46	32-60-0305	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	42-14-0515	Baffle Assembly	(1)
56	44-86-0145	Bearing Retaining Plate Assembly	(1)
57	14-78-0525	Trigger Switch Assembly	(1)
	12-20-1560	Service Nameplate (Not Shown)	(1)
	10-20-2225	Bi-Lingual Warning Label (Not Shown)	(1)

AS AN AID TO REASSEMBLY, TAKE NOTICE OF WIRE ROUTING AND POSITION IN WIRE GUIDES AND TRAPS WHILE DISMANTLING TOOL.

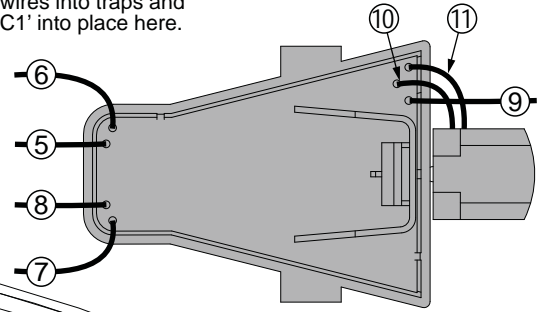
BE CAREFUL AND AVOID PINCHING WIRES BETWEEN HANDLE HALVES WHEN ASSEMBLING.

Be sure to fully seat 'T1' onto the post in the left handle half.

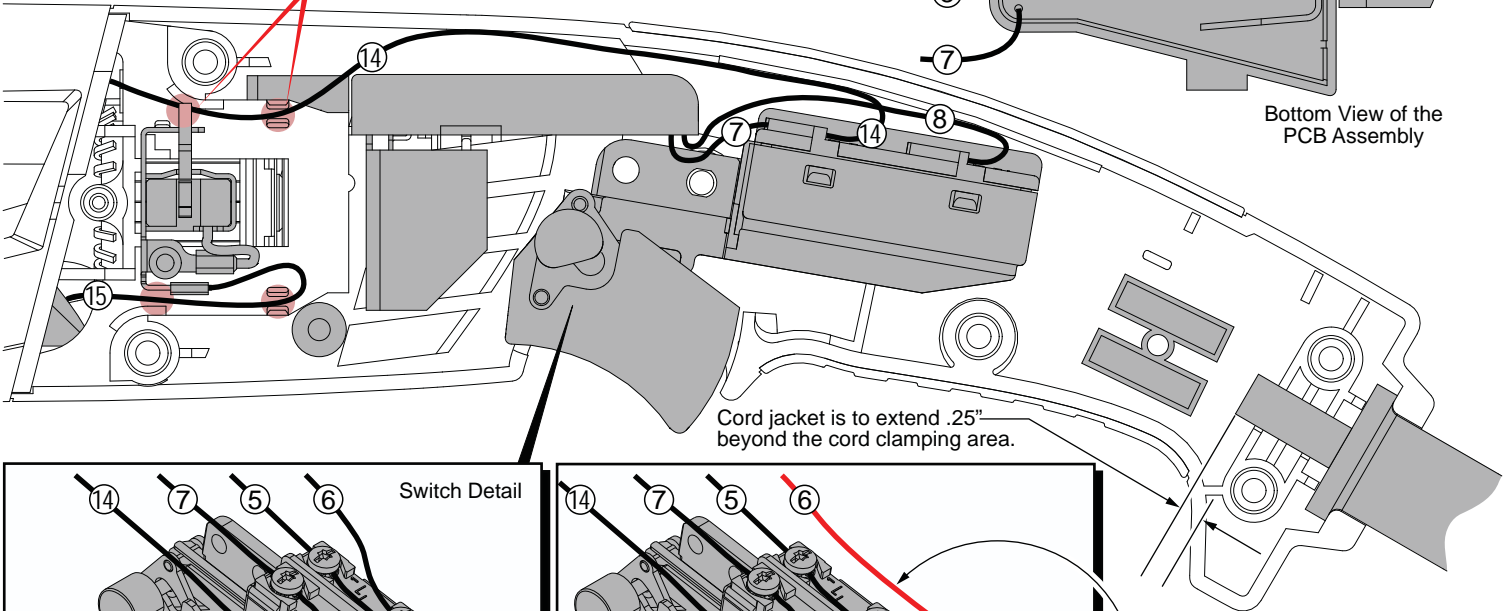


Route wires into traps and press 'C1' into place here.

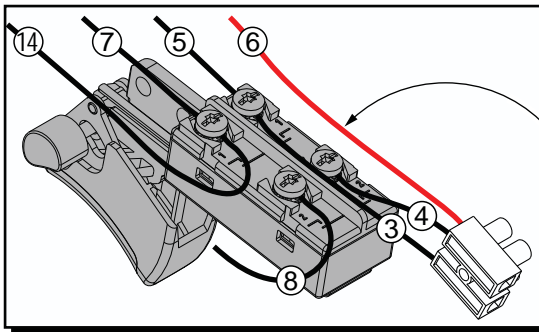
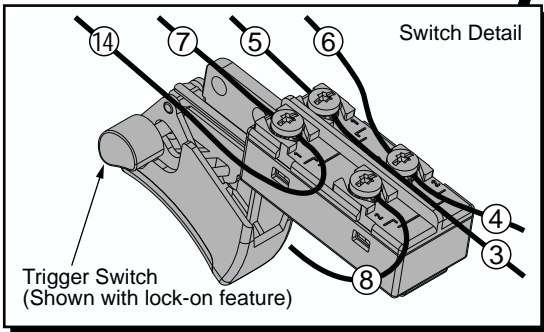
**NOTE:**  
When servicing tool, it is VERY IMPORTANT that wire #14 is placed completely down in wire traps behind and away from the brush spring.



Bottom View of the PCB Assembly



Cord jacket is to extend .25" beyond the cord clamping area.



● = WIRE TRAPS or GUIDES

**NOTE:**  
PCBA wire #6 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	22-09-1850	--	--	Comp. of PCB Assembly. Connect to Switch as shown.
6	White	22-09-1850	--	--	Comp. of PCB Assembly. Connect to Switch as shown.
7	Black	22-09-1850	--	--	Comp. of PCB Assembly. Connect to Switch as shown.
8	White	22-09-1850	--	--	Comp. of PCB Assembly. Connect to Switch as shown.
9	Red	22-09-1850	--	--	Comp. of PCB Assembly. Connect to Wire #12 with C1.
10	Black	22-09-1850	--	--	Component of PCB Assembly.
11	White	22-09-1850	--	--	Component of PCB Assembly.
12	Black	18-07-0310	--	--	Comp. of Field. Connect to Wire #9 with C1 as shown.
13	Black	18-07-0310	--	--	Comp. of Field. Connect to Right Brush Assy. as shown.
14	Black	18-07-0310	--	--	Component of Field. Connect to Switch as shown.
15	Black	18-07-0310	--	--	Comp. of Field. Connect to Left Brush Assy. as shown.

BULK LEAD WIRE - BULLETIN 58-01-0003

**NOTE:**  
All leads must be held to ± 1/16".  
All lead lengths are before strip-

TERMINAL DESCRIPTION		
Code	Part No.	Qty.
T1	22-56-0470	1
CONNECTOR DESCRIPTION		
C1	22-56-0150	1