

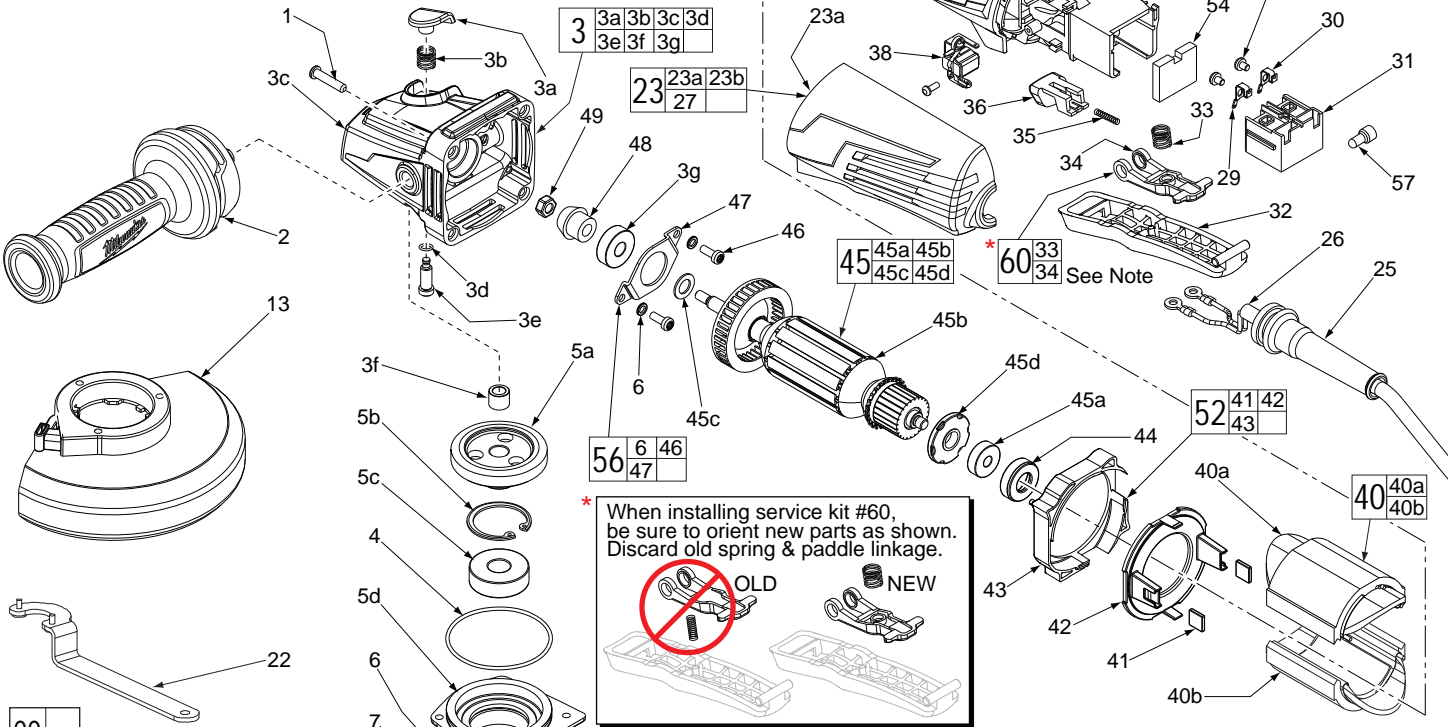


# SERVICE PARTS LIST

**BULLETIN NO.**  
54-38-2100

SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS		REVISED BULLETIN	DATE
5" HP ANGLE GRINDER with PADDLE SWITCH with lock-on			Aug. 2013
CAT. NO.	6117-30	STARTING SERIAL NUMBER	C91A
		WIRING INSTRUCTION <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	(4)
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)



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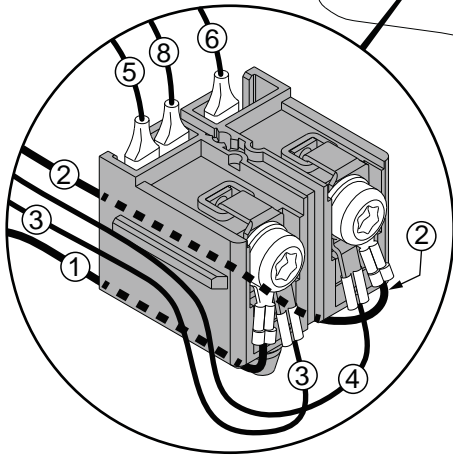
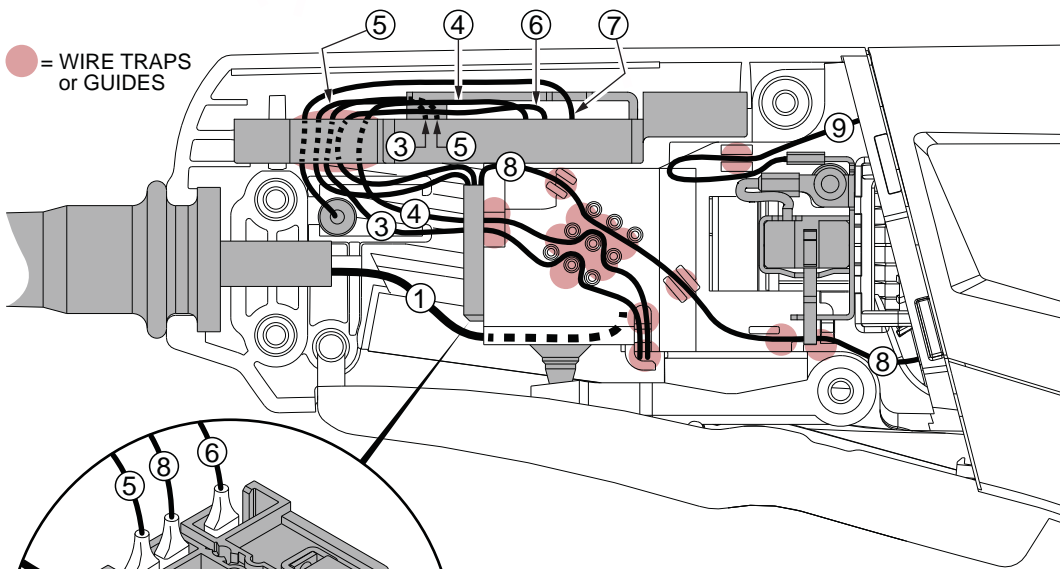
**EXAMPLE:**  
Component Parts (Small #)  
Are Included When Ordering  
The Assembly (Large #).

**\*LUBRICATION NOTE:**  
When servicing the Gears (5a & 48)  
or the Gearcase (3c), 90-95% of the  
old grease must be removed prior  
to new grease being added.

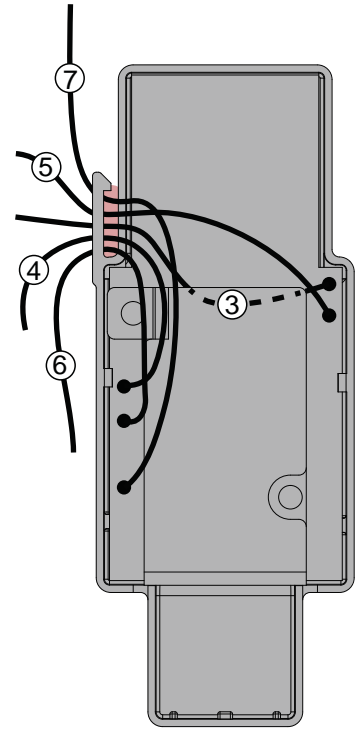
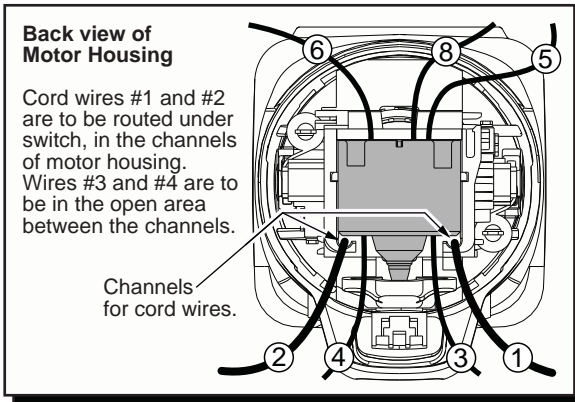
**FIG. LUBRICATION\***  
5a,48 Type "Y" Grease, No. 49-08-5270,  
Must Be Applied To All Gear Teeth.

4	34-40-0560	O-Ring	(1)
5	14-73-0425	Spindle Hub Assembly	(1)
5a	-----	Spiral Bevel Gear	(1)
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 Pan Hd. Mach. Screw T-20	(4)
13	14-32-0215	5" Type 27 Guard Assembly (Shown)	(1)
13	43-54-0925	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	31-44-0645	Rear Handle Set	(1)
23a	-----	Left Handle Half	(1)
23b	-----	Right Handle Half	(1)
25	44-76-0095	Cord Protector	(1)
26	22-64-3430	Power Cord	(1)
27	05-88-1300	M4 x 28mm Pan Hd. ST Screw T-20	(4)

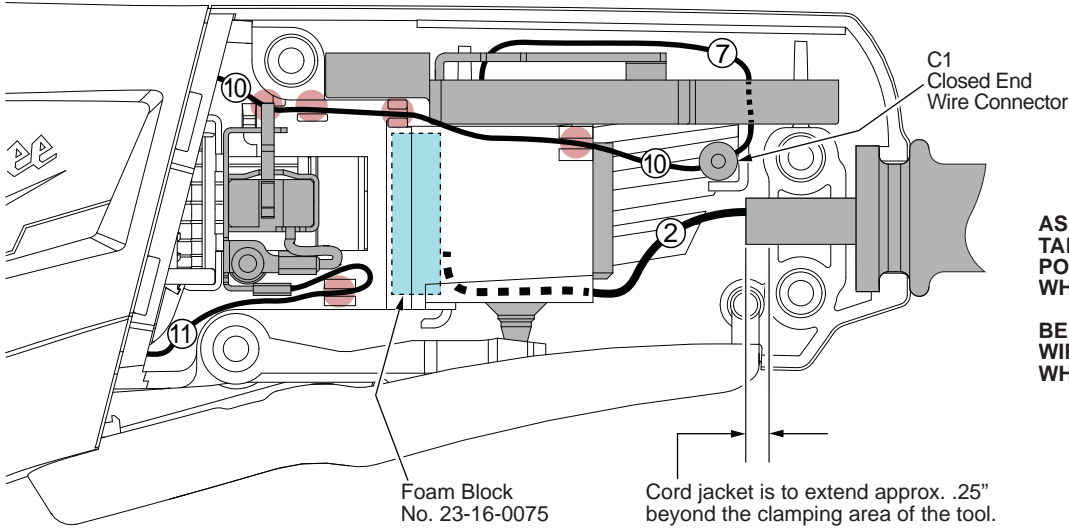
FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
28	22-09-1865	PCB Assembly	(1)
29	23-74-1620	Terminal	(1)
30	23-74-1615	Terminal	(1)
31	23-66-2665	On-Off Switch	(1)
32	31-92-0275	Paddle Trigger	(1)
33	-----	Paddle Trigger Spring	(1)
34	-----	Paddle Linkage	(1)
35	40-50-1155	Lock Button Spring	(1)
36	42-42-0495	Lock-On Button	(1)
37	05-88-0030	M3 x 8.5mm Pan Hd. ST Screw T-10	(2)
38	22-18-2250	Carbon Brush Assembly (Set of 2)	(1)
39	31-50-2165	Motor Housing	(1)
40	18-07-0300	Field Assembly	(1)
40a	-----	Field Halve	(1)
40b	-----	Field Halve	(1)
41	42-28-0085	Rubber Block	(2)
42	-----	Baffle Foot	(1)
43	-----	Baffle	(1)
44	42-96-0016	Rubber Bearing Cap	(1)
45	16-10-0845	Armature Assembly	(1)
45a	02-04-2110	Ball Bearing	(1)
45b	-----	Armature	(1)
45c	45-88-0406	Washer	(1)
45d	-----	Magnetic Disc	(1)
46	05-88-1280	M4 x 10mm Pan Hd. Mach. Screw T-20	(2)
47	44-86-0155	Bearing Retainer	(1)
48	32-60-0310	Pinion	(1)
49	05-55-0620	M5 Hex Nut	(1)
50	14-46-6105	Flange with Ramps Assembly	(1)
52	42-14-0515	Baffle Assembly	(1)
53	05-78-0305	M3.5 x 7mm Pan Hd. Phil. Switch Scr.	(2)
54	23-16-0075	Foam Block	(1)
56	44-86-0145	Bearing Retaining Plate Assembly	(1)
57	22-56-0150	Closed End Wire Connector	(1)
60	14-46-6100	Paddle Linkage/Spring Service Kit	(1)
	12-20-1560	Service Nameplate (Not Shown)	(1)
	10-20-2225	Bi-Lingual Warning Label (Not Shown)	(1)



Attach all wires to the switch as shown prior to inserting switch into the motor housing. Be sure that foam block is seated in the switch opening of motor housing before switch is installed.



Top view of PCB Assembly



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.

**WIRING SPECIFICATIONS**

Wire No.	Wire Color	Origin or Part No.	Gauge	Length	Terminals, Connectors and End Wire Preparation
1	Black	22-64-3430	--	--	Component of Cord Set. Connect to Switch.
2	White	22-64-3430	--	--	Component of Cord Set. Connect to Switch.
3	Black	22-09-1865	--	--	Component of PCBA. Connect to Switch.
4	White	22-09-1865	--	--	Component of PCBA. Connect to Switch.
5	Black	22-09-1865	--	--	Component of PCBA. Connect to Switch.
6	White	22-09-1865	--	--	Component of PCBA. Connect to Switch.
7	Red	22-09-1865	--	--	Component of PCBA. Connect to C1 with wire #10.
8	Black	18-07-0300	--	--	Component of Field. Connect to Switch.
9	Black	18-07-0300	--	--	Component of Field. Connect to Right Brush Assy.
10	Black	18-07-0300	--	--	Component of Field. Connect to C1 with wire #7.
11	Black	18-07-0300	--	--	Component of Field. Connect to Left Brush Assy.

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.

**CONNECTOR DESCRIPTION**

C1	22-56-0150	1
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# SERVICE PARTS LIST

**BULLETIN NO.**  
54-38-2102

SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS		REVISED BULLETIN 54-38-2101	DATE Jan. 2017
<b>5" HP ANGLE GRINDER with PADDLE SWITCH with lock-on</b>		WIRING INSTRUCTION <b>See Reverse Side</b>	
<b>CAT. NO.</b>	<b>6117-30</b>	STARTING SERIAL NUMBER	<b>C91C</b>

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
★ 1	05-88-1650	M4 x 25mm Pan Hd. ST Screw T-20	(4)
2	42-62-0125	Side Handle Assembly	(1)
★ 3	14-30-1156	Gearcase Assembly	(1)
3g	02-04-0620	Ball Bearing	(1)
4	34-40-0560	O-Ring	(1)
★ 5	14-73-0475	5/8"-11 Spindle Hub Kit	(1)
★ 5b	-----	Steel Pin	(1)
★ 5c	-----	Spring	(1)
★ 5d	44-20-0155	Guard Locking Tang	(1)
★ 5e	05-81-0020	M3 x 5mm Pan Hd. ST T-8 Screw	(1)

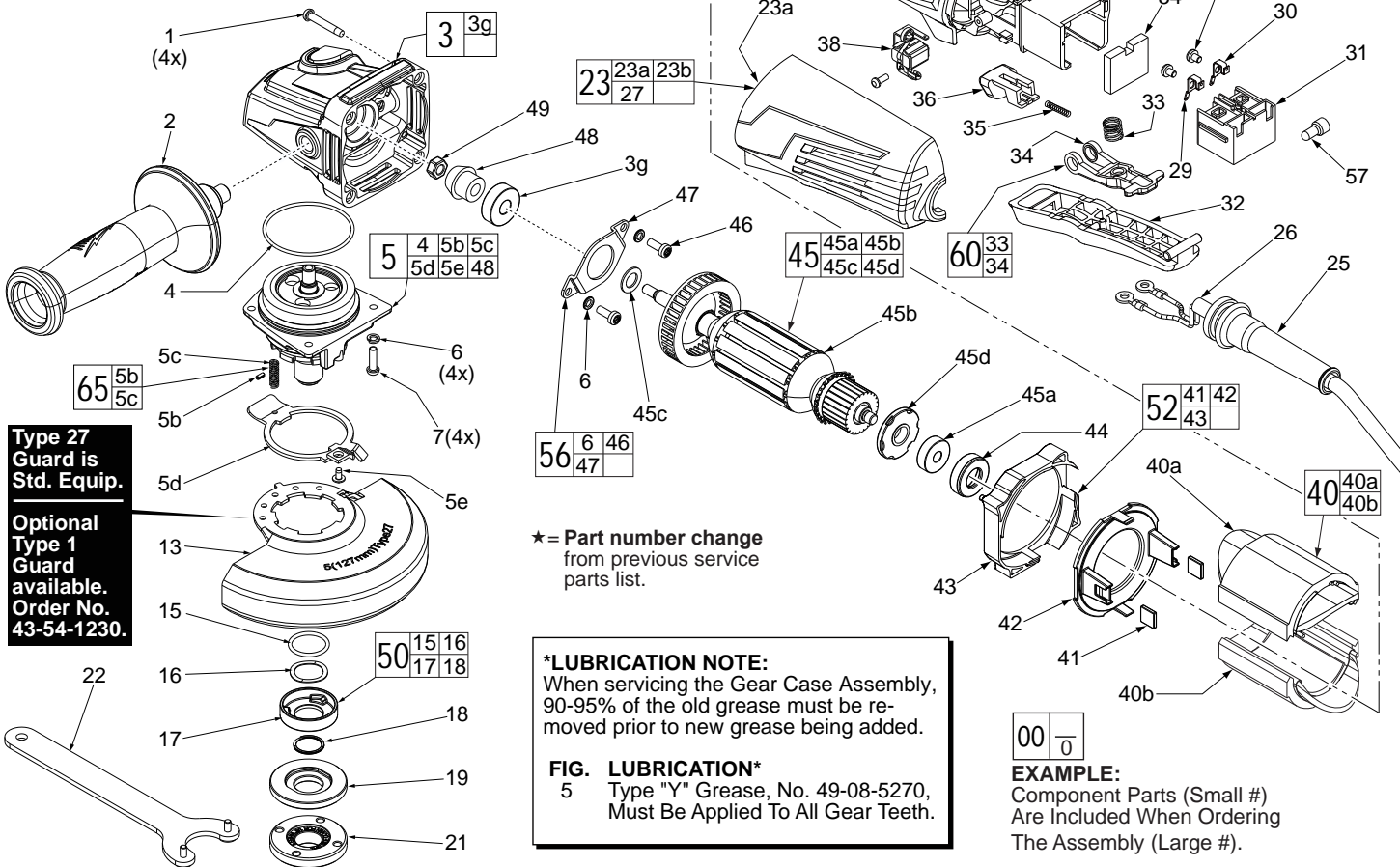
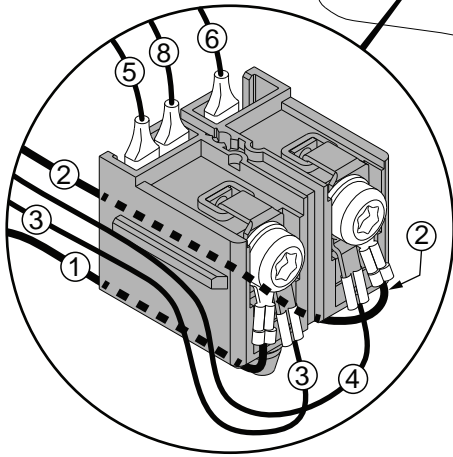
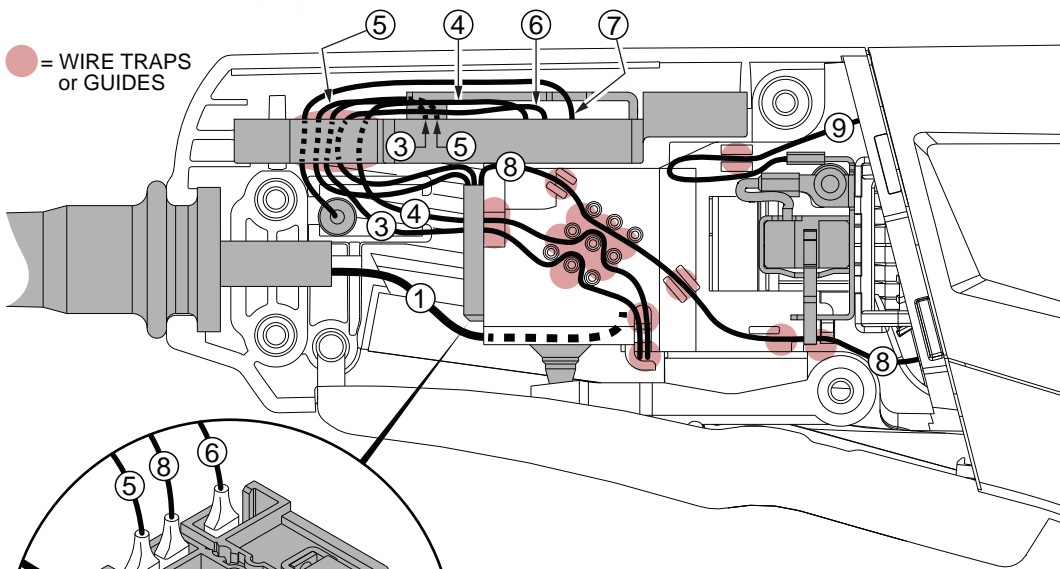


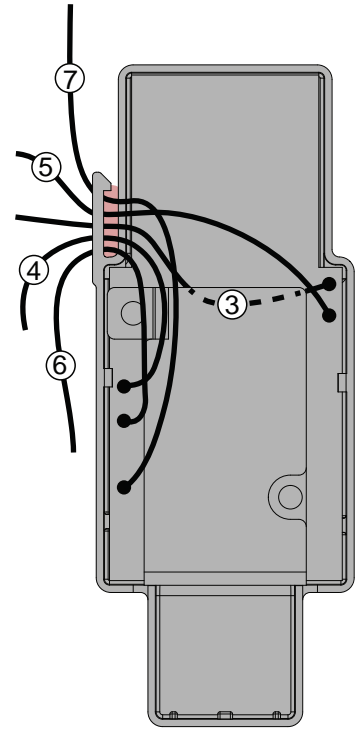
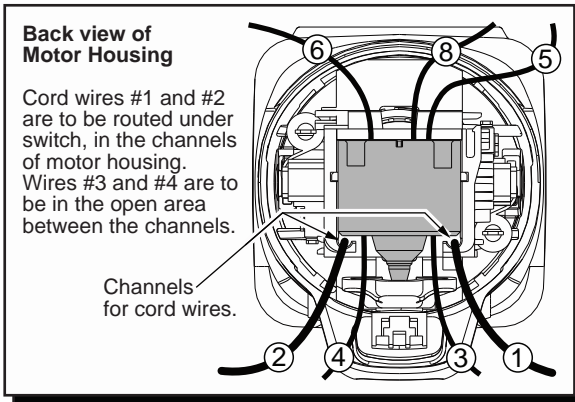
FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
6	05-90-0225	Spring Washer	(6)
7	05-78-5316	M4 x 14mm Pan Hd. Tapt. Screw T-20	(4)
★ 13	43-54-1220	5" Type 27 Guard (Standard Equip.)	(1)
★ 13	43-54-1230	5" Type 1 Guard (Optional, Not Shown)	(1)
15	-----	O-Ring	(1)
16	-----	Wavy Spring	(1)
17	-----	Flange with Ramps	(1)
18	-----	Retaining Ring	(1)
19	43-34-0935	Inner Disc Flange	(1)
21	44-40-0035	Outer Flange Nut	(1)
★ 22	49-96-7215	Spanner Wrench	(1)
23	31-44-0645	Rear Handle Set	(1)
23a	-----	Left Handle Halve	(1)
23b	-----	Right Handle Halve	(1)
25	44-76-0095	Cord Protector	(1)
26	22-64-3430	Power Cord	(1)
27	05-88-1300	M4 x 28mm Pan Hd. ST Screw T-20	(4)
28	22-09-1865	PCB Assembly	(1)
29	23-74-1620	Terminal	(1)
30	23-74-1615	Terminal	(1)
31	23-66-2665	On-Off Switch	(1)
32	31-92-0275	Paddle Trigger	(1)
33	-----	Paddle Trigger Spring	(1)
34	-----	Paddle Linkage	(1)
35	40-50-1155	Lock Button Spring	(1)
36	42-42-0495	Lock-On Button	(1)
37	05-88-0030	M3 x 8.5mm Pan Hd. ST Screw T-10	(2)
38	22-18-2250	Carbon Brush Assembly (Set of 2)	(1)
39	31-50-2165	Motor Housing	(1)
40	18-07-0300	Field Assembly	(1)

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
40a	-----	Field Halve	(1)
40b	-----	Field Halve	(1)
41	42-28-0085	Rubber Block	(2)
42	-----	Baffle Foot	(1)
43	-----	Baffle	(1)
44	42-96-0016	Rubber Bearing Cap	(1)
45	16-10-0845	Armature Assembly	(1)
45a	02-04-2110	Ball Bearing	(1)
45b	-----	Armature	(1)
45c	45-88-0406	Washer	(1)
45d	-----	Magnetic Disc	(1)
46	05-78-0105	M4 x 10mm Pan Hd. Tapt. Screw T-20	(2)
47	44-86-0155	Bearing Retainer	(1)
★ 48	-----	Pinion	(1)
49	05-55-0620	M5 Hex Nut	(1)
50	14-46-6105	Flange with Ramps Assembly	(1)
52	42-14-0515	Baffle Assembly	(1)
53	05-78-0305	M3.5 x 7mm Pan Hd. Phil. Switch Scr.	(2)
54	23-16-0075	Foam Block	(1)
56	44-86-0145	Bearing Retaining Plate Assembly	(1)
57	22-56-0150	Closed End Wire Connector	(1)
60	14-46-6100	Paddle Linkage/Spring Service Kit	(1)
★ 65	14-46-0241	Spring/Pin Kit	(1)
-----	12-20-1560	Service Nameplate (Not Shown)	(1)
-----	10-20-2225	Bi-Lingual Warning Label (Not Shown)	(1)

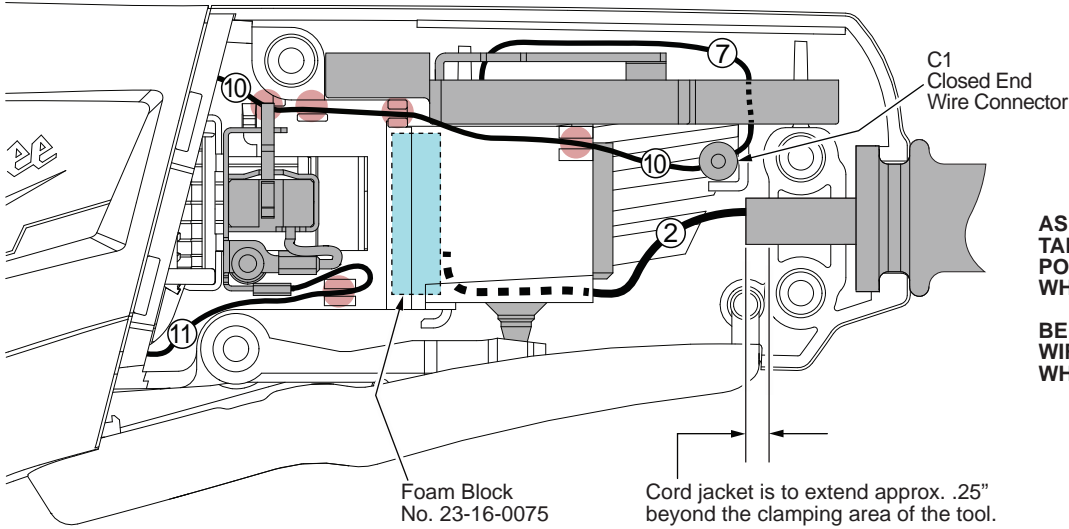




Attach all wires to the switch as shown prior to inserting switch into the motor housing. Be sure that foam block is seated in the switch opening of motor housing before switch is installed.



Top view of PCB Assembly



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.

**WIRING SPECIFICATIONS**

Wire No.	Wire Color	Origin or Part No.	Gauge	Length	Terminals, Connectors and End Wire Preparation
1	Black	22-64-3430	--	--	Component of Cord Set. Connect to Switch.
2	White	22-64-3430	--	--	Component of Cord Set. Connect to Switch.
3	Black	22-09-1865	--	--	Component of PCBA. Connect to Switch.
4	White	22-09-1865	--	--	Component of PCBA. Connect to Switch.
5	Black	22-09-1865	--	--	Component of PCBA. Connect to Switch.
6	White	22-09-1865	--	--	Component of PCBA. Connect to Switch.
7	Red	22-09-1865	--	--	Component of PCBA. Connect to C1 with wire #10.
8	Black	18-07-0300	--	--	Component of Field. Connect to Switch.
9	Black	18-07-0300	--	--	Component of Field. Connect to Right Brush Assy.
10	Black	18-07-0300	--	--	Component of Field. Connect to C1 with wire #7.
11	Black	18-07-0300	--	--	Component of Field. Connect to Left Brush Assy.

BULK LEAD WIRE - BULLETIN 58-01-0003

**NOTE:**

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

**TERMINAL DESCRIPTION**

Code	Part No.	Qty.

**CONNECTOR DESCRIPTION**

C1	22-56-0150	1
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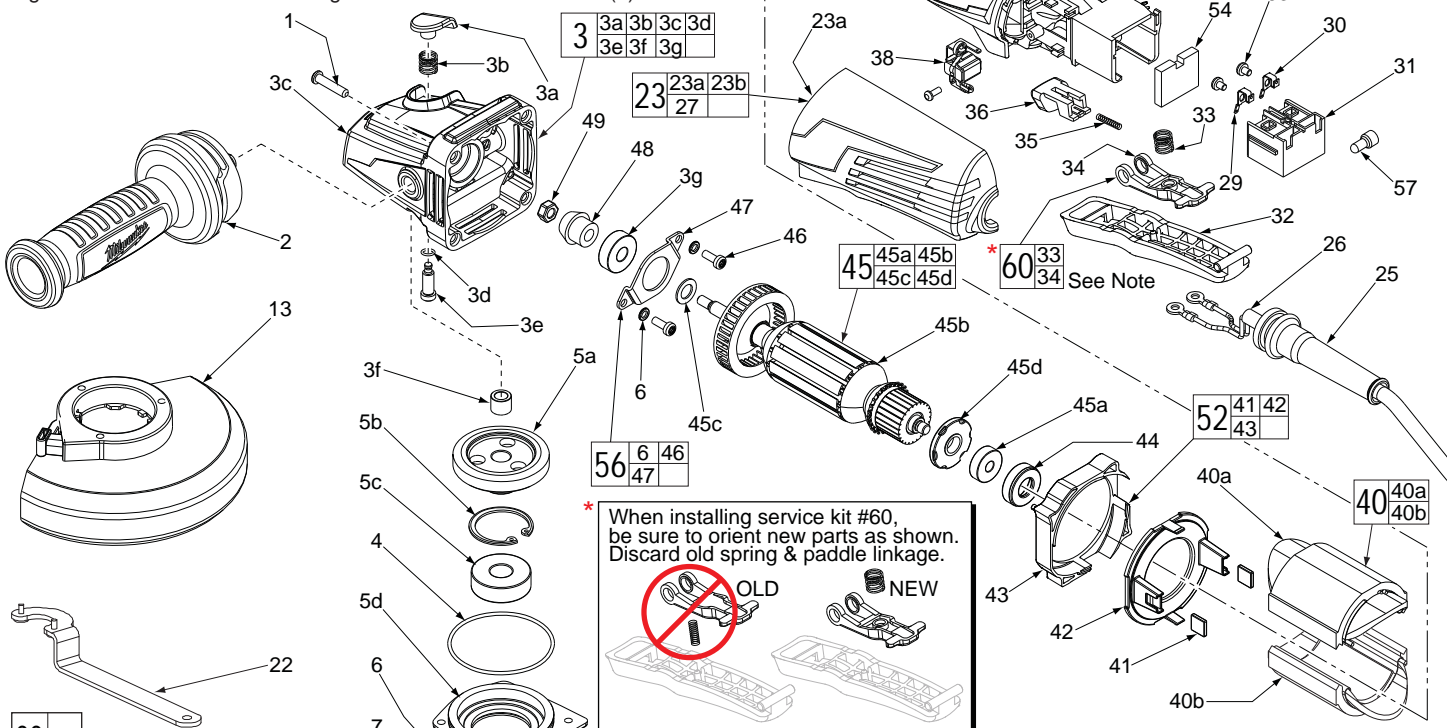


# SERVICE PARTS LIST

**BULLETIN NO.**  
54-38-2110

SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS		REVISED BULLETIN	DATE
<b>5" HP ANGLE GRINDER with PADDLE SWITCH</b>			Aug. 2013
CAT. NO.	<b>6117-31</b>	STARTING SERIAL NUMBER	<b>C92A</b>
		WIRING INSTRUCTION <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	(4)
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)



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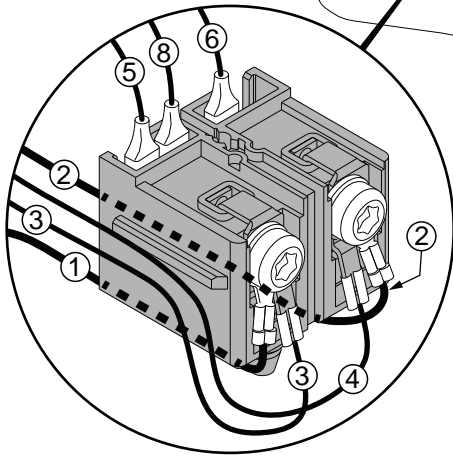
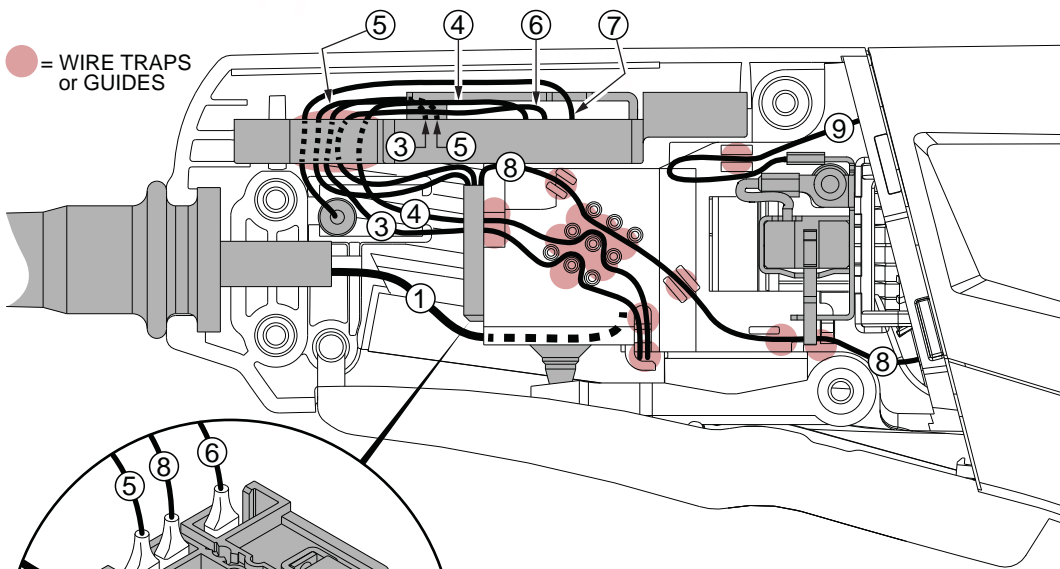
**EXAMPLE:**  
Component Parts (Small #)  
Are Included When Ordering  
The Assembly (Large #).

**\*LUBRICATION NOTE:**  
When servicing the Gears (5a & 48)  
or the Gearcase (3c), 90-95% of the  
old grease must be removed prior  
to new grease being added.

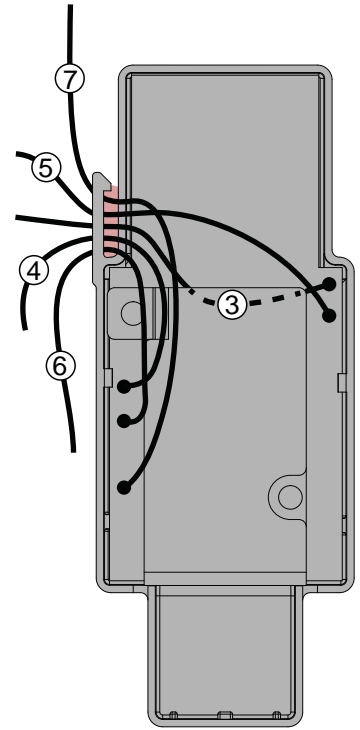
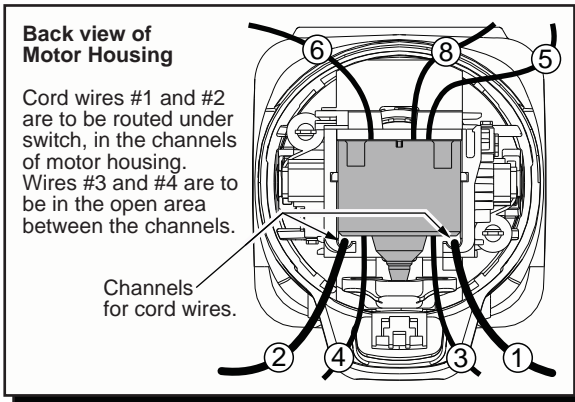
**FIG. LUBRICATION\***  
5a,48 Type "Y" Grease, No. 49-08-5270,  
Must Be Applied To All Gear Teeth.

4	34-40-0560	O-Ring	(1)
5	14-73-0425	Spindle Hub Assembly	(1)
5a	-----	Spiral Bevel Gear	(1)
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 Pan Hd. Mach. Screw T-20	(4)
13	14-32-0215	5" Type 27 Guard Assembly (Shown)	(1)
13	43-54-0925	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	31-44-0645	Rear Handle Set	(1)
23a	-----	Left Handle Halve	(1)
23b	-----	Right Handle Halve	(1)
25	44-76-0095	Cord Protector	(1)
26	22-64-3430	Power Cord	(1)

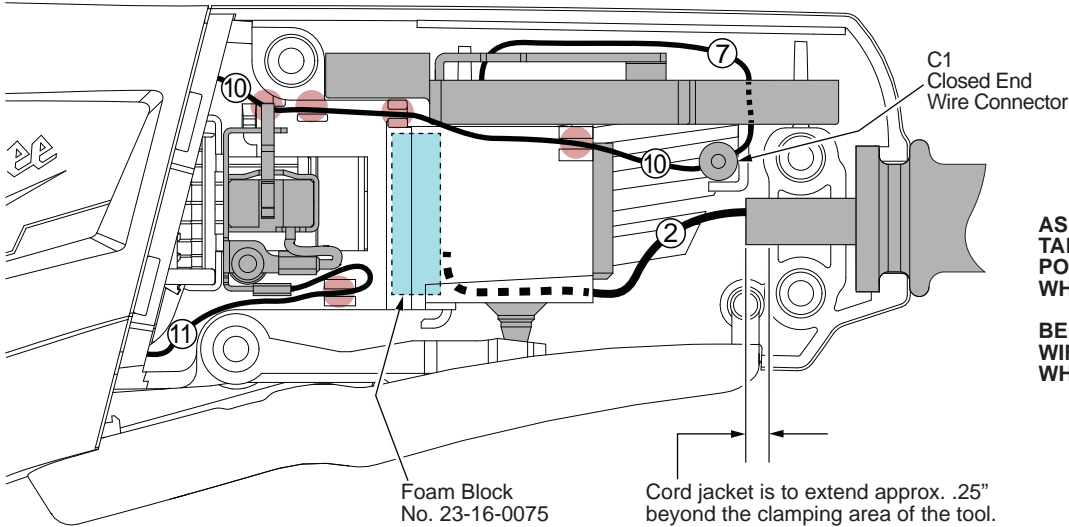
FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
27	05-88-1300	M4 x 28mm Pan Hd. ST Screw T-20	(4)
28	22-09-1865	PCB Assembly	(1)
29	23-74-1620	Terminal	(1)
30	23-74-1615	Terminal	(1)
31	23-66-2665	On-Off Switch	(1)
32	31-92-0285	Paddle Trigger	(1)
33	-----	Paddle Trigger Spring	(1)
34	-----	Paddle Linkage	(1)
35	40-50-1155	Lock Button Spring	(1)
36	42-42-0495	Lock-On Button	(1)
37	05-88-0030	M3 x 8.5mm Pan Hd. ST Screw T-10	(2)
38	22-18-2250	Carbon Brush Assembly (Set of 2)	(1)
39	31-50-2165	Motor Housing	(1)
40	18-07-0300	Field Assembly	(1)
40a	-----	Field Halve	(1)
40b	-----	Field Halve	(1)
41	42-28-0085	Rubber Block	(2)
42	-----	Baffle Foot	(1)
43	-----	Baffle	(1)
44	42-96-0016	Rubber Bearing Cap	(1)
45	16-10-0845	Armature Assembly	(1)
45a	02-04-2110	Ball Bearing	(1)
45b	-----	Armature	(1)
45c	45-88-0406	Washer	(1)
45d	-----	Magnetic Disc	(1)
46	05-88-1280	M4 x 10mm Pan Hd. Mach. Screw T-20	(2)
47	44-86-0155	Bearing Retainer	(1)
48	32-60-0310	Pinion	(1)
49	05-55-0620	M5 Hex Nut	(1)
50	14-46-6105	Flange with Ramps Assembly	(1)
52	42-14-0515	Baffle Assembly	(1)
53	05-78-0305	M3.5 x 7mm Pan Hd. Phil. Switch Scr.	(2)
54	23-16-0075	Foam Block	(1)
56	44-86-0145	Bearing Retaining Plate Assembly	(1)
57	22-56-0150	Closed End Wire Connector	(1)
60	14-46-6100	Paddle Linkage/Spring Service Kit	(1)
	12-20-1560	Service Nameplate (Not Shown)	(1)
	10-20-2225	Bi-Lingual Warning Label (Not Shown)	(1)



Attach all wires to the switch as shown prior to inserting switch into the motor housing. Be sure that foam block is seated in the switch opening of motor housing before switch is installed.



Top view of PCB Assembly



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.

**WIRING SPECIFICATIONS**

Wire No.	Wire Color	Origin or Part No.	Gauge	Length	Terminals, Connectors and End Wire Preparation
1	Black	22-64-3430	--	--	Component of Cord Set. Connect to Switch.
2	White	22-64-3430	--	--	Component of Cord Set. Connect to Switch.
3	Black	22-09-1865	--	--	Component of PCBA. Connect to Switch.
4	White	22-09-1865	--	--	Component of PCBA. Connect to Switch.
5	Black	22-09-1865	--	--	Component of PCBA. Connect to Switch.
6	White	22-09-1865	--	--	Component of PCBA. Connect to Switch.
7	Red	22-09-1865	--	--	Component of PCBA. Connect to C1 with wire #10.
8	Black	18-07-0300	--	--	Component of Field. Connect to Switch.
9	Black	18-07-0300	--	--	Component of Field. Connect to Right Brush Assy.
10	Black	18-07-0300	--	--	Component of Field. Connect to C1 with wire #7.
11	Black	18-07-0300	--	--	Component of Field. Connect to Left Brush Assy.

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.

**CONNECTOR DESCRIPTION**

C1	22-56-0150	1
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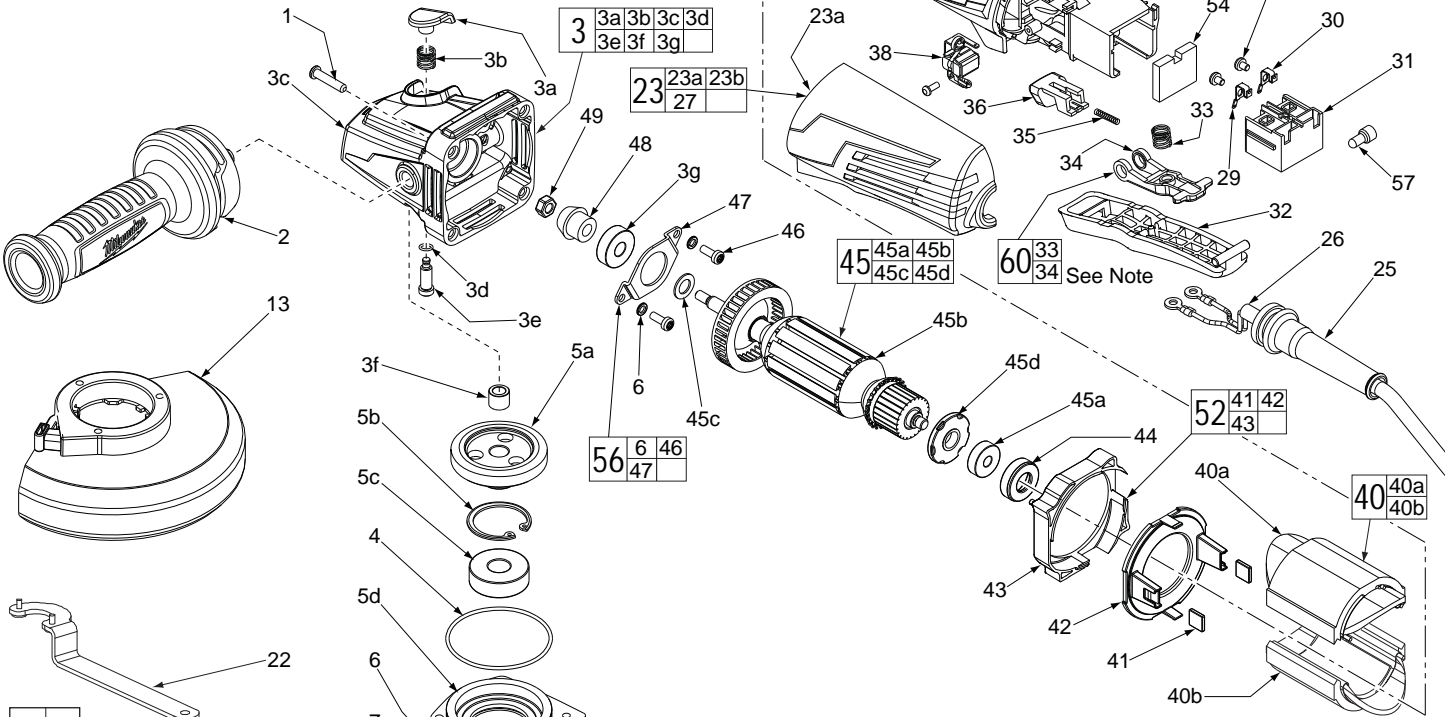


# SERVICE PARTS LIST

**BULLETIN NO.**  
54-38-2111

SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS		REVISED BULLETIN 54-38-2110	DATE Feb. 2016
<b>5" HP ANGLE GRINDER with PADDLE SWITCH</b>		WIRING INSTRUCTION <b>See Reverse Side</b>	
<b>CAT. NO.</b>	<b>6117-31</b>	<b>STARTING SERIAL NUMBER</b>	<b>C92B</b>

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
1	05-88-1650	M4 x 25mm Pan Hd. ST Screw T-20	(4)
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)



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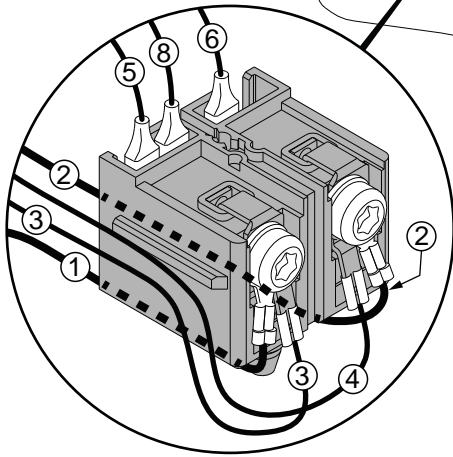
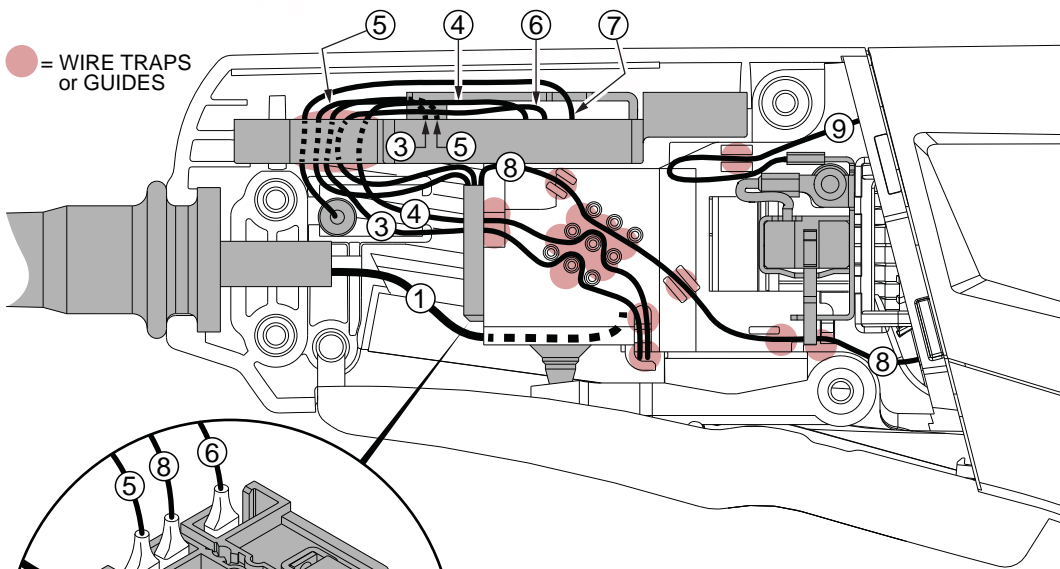
**EXAMPLE:**  
Component Parts (Small #)  
Are Included When Ordering  
The Assembly (Large #).

**\*LUBRICATION NOTE:**  
When servicing the Gears (5a & 48)  
or the Gearcase (3c), 90-95% of the  
old grease must be removed prior  
to new grease being added.

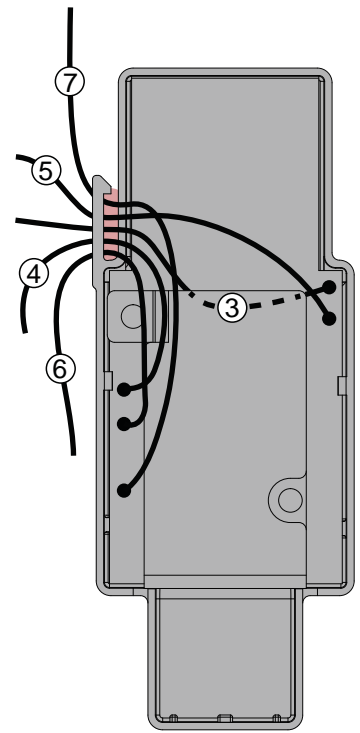
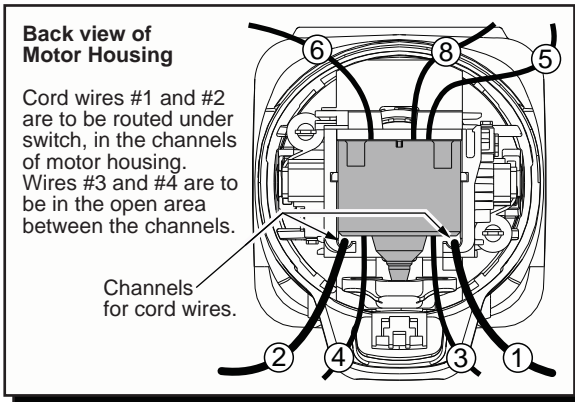
**FIG. LUBRICATION\***  
5a,48 Type "Y" Grease, No. 49-08-5270,  
Must Be Applied To All Gear Teeth.

4	34-40-0560	O-Ring	(1)
★ 5	14-73-0426	Spindle Hub Assembly	(1)
5a	-----	Spiral Bevel Gear	(1)
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 Pan Hd. Mach. Screw T-20	(4)
13	14-32-0215	5" Type 27 Guard Assembly (Shown)	(1)
13	43-54-0925	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	31-44-0645	Rear Handle Set	(1)
23a	-----	Left Handle Halve	(1)
23b	-----	Right Handle Halve	(1)
25	44-76-0095	Cord Protector	(1)
26	22-64-3430	Power Cord	(1)

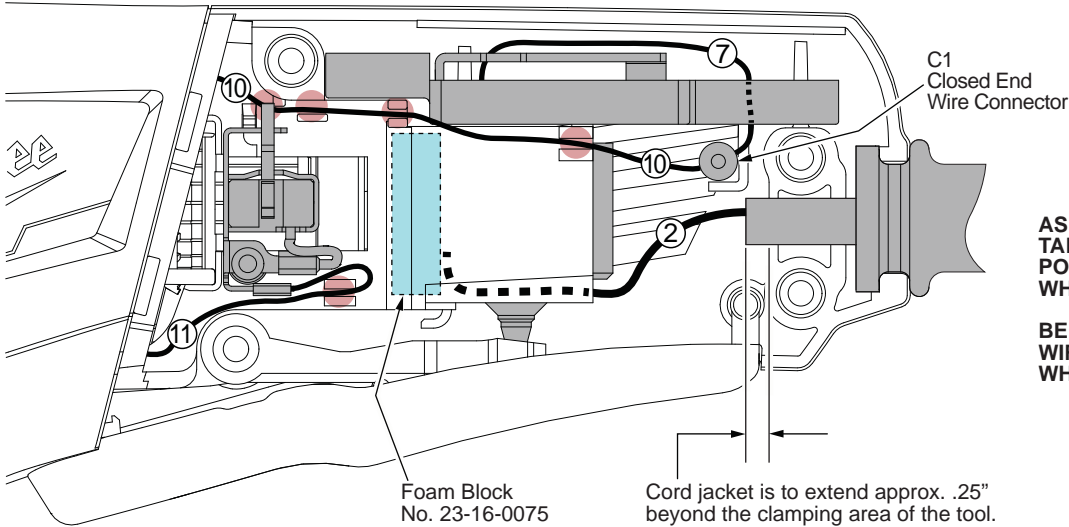
FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
27	05-88-1300	M4 x 28mm Pan Hd. ST Screw T-20	(4)
28	22-09-1865	PCB Assembly	(1)
29	23-74-1620	Terminal	(1)
30	23-74-1615	Terminal	(1)
31	23-66-2665	On-Off Switch	(1)
32	31-92-0285	Paddle Trigger	(1)
33	-----	Paddle Trigger Spring	(1)
34	-----	Paddle Linkage	(1)
35	40-50-1155	Lock Button Spring	(1)
36	42-42-0495	Lock-On Button	(1)
37	05-88-0030	M3 x 8.5mm Pan Hd. ST Screw T-10	(2)
38	22-18-2250	Carbon Brush Assembly (Set of 2)	(2)
39	31-50-2165	Motor Housing	(1)
40	18-07-0300	Field Assembly	(1)
40a	-----	Field Halve	(1)
40b	-----	Field Halve	(1)
41	42-28-0085	Rubber Block	(2)
42	-----	Baffle Foot	(1)
43	-----	Baffle	(1)
44	42-96-0016	Rubber Bearing Cap	(1)
45	16-10-0845	Armature Assembly	(1)
45a	02-04-2110	Ball Bearing	(1)
45b	-----	Armature	(1)
45c	45-88-0406	Washer	(1)
45d	-----	Magnetic Disc	(1)
46	05-88-1280	M4 x 10mm Pan Hd. Mach. Screw T-20	(2)
47	44-86-0155	Bearing Retainer	(1)
★ 48	32-60-0311	Pinion	(1)
49	05-55-0620	M5 Hex Nut	(1)
50	14-46-6105	Flange with Ramps Assembly	(1)
52	42-14-0515	Baffle Assembly	(1)
53	05-78-0305	M3.5 x 7mm Pan Hd. Phil. Switch Scr.	(2)
54	23-16-0075	Foam Block	(1)
56	44-86-0145	Bearing Retaining Plate Assembly	(1)
57	22-56-0150	Closed End Wire Connector	(1)
60	14-46-6100	Paddle Linkage/Spring Service Kit	(1)
	12-20-1560	Service Nameplate (Not Shown)	(1)
	10-20-2225	Bi-Lingual Warning Label (Not Shown)	(1)



Attach all wires to the switch as shown prior to inserting switch into the motor housing. Be sure that foam block is seated in the switch opening of motor housing before switch is installed.



Top view of PCB Assembly



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.

**WIRING SPECIFICATIONS**

Wire No.	Wire Color	Origin or Part No.	Gauge	Length	Terminals, Connectors and End Wire Preparation
1	Black	22-64-3430	--	--	Component of Cord Set. Connect to Switch.
2	White	22-64-3430	--	--	Component of Cord Set. Connect to Switch.
3	Black	22-09-1865	--	--	Component of PCBA. Connect to Switch.
4	White	22-09-1865	--	--	Component of PCBA. Connect to Switch.
5	Black	22-09-1865	--	--	Component of PCBA. Connect to Switch.
6	White	22-09-1865	--	--	Component of PCBA. Connect to Switch.
7	Red	22-09-1865	--	--	Component of PCBA. Connect to C1 with wire #10.
8	Black	18-07-0300	--	--	Component of Field. Connect to Switch.
9	Black	18-07-0300	--	--	Component of Field. Connect to Right Brush Assy.
10	Black	18-07-0300	--	--	Component of Field. Connect to C1 with wire #7.
11	Black	18-07-0300	--	--	Component of Field. Connect to Left Brush Assy.

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.

**CONNECTOR DESCRIPTION**

C1	22-56-0150	1
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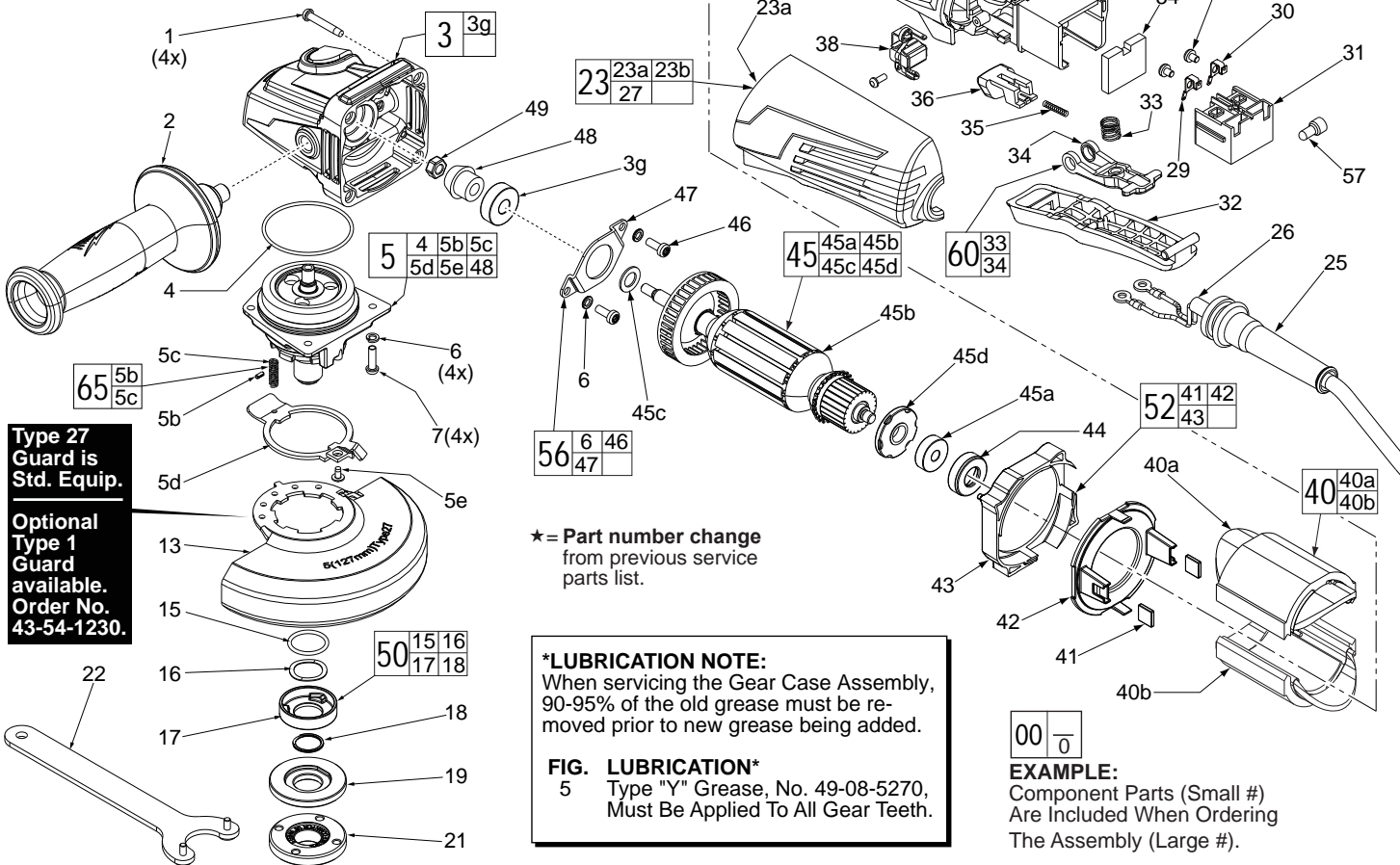


# SERVICE PARTS LIST

**BULLETIN NO.**  
54-38-2112

SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS		REVISED BULLETIN 54-38-2111	DATE Jan. 2017
<b>5" HP ANGLE GRINDER with PADDLE SWITCH</b>		WIRING INSTRUCTION <b>See Reverse Side</b>	
CAT. NO.	6117-31	STARTING SERIAL NUMBER	C92C

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
★ 1	05-88-1650	M4 x 25mm Pan Hd. ST Screw T-20	(4)
2	42-62-0125	Side Handle Assembly	(1)
★ 3	14-30-1156	Gearcase Assembly	(1)
3g	02-04-0620	Ball Bearing	(1)
4	34-40-0560	O-Ring	(1)
★ 5	14-73-0475	5/8"-11 Spindle Hub Kit	(1)
★ 5b	-----	Steel Pin	(1)
★ 5c	-----	Spring	(1)
★ 5d	44-20-0155	Guard Locking Tang	(1)
★ 5e	05-81-0020	M3 x 5mm Pan Hd. ST T-8 Screw	(1)



**Type 27 Guard is Std. Equip.**

**Optional Type 1 Guard available. Order No. 43-54-1230.**

★ = Part number change from previous service parts list.

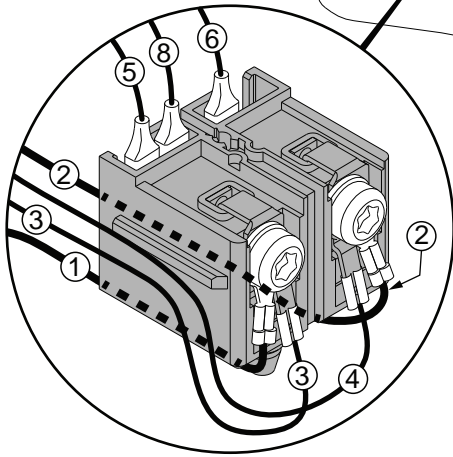
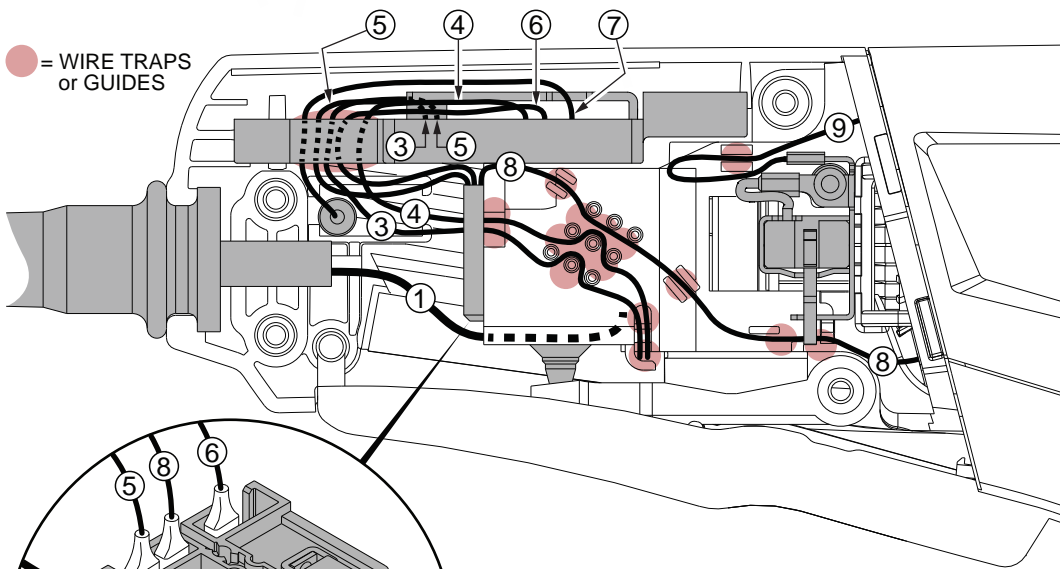
**\*LUBRICATION NOTE:**  
When servicing the Gear Case Assembly, 90-95% of the old grease must be removed prior to new grease being added.

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

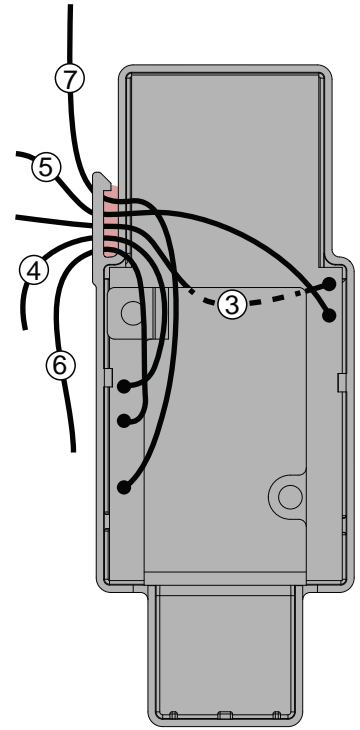
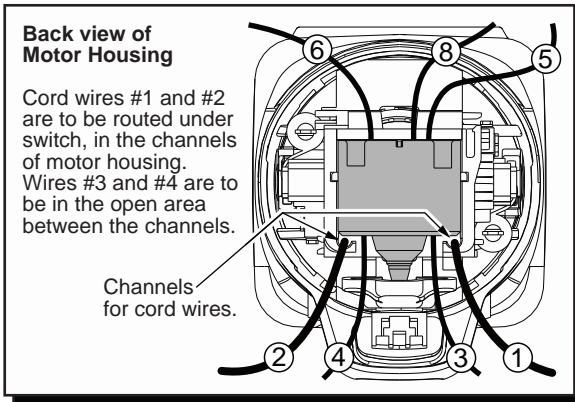
**EXAMPLE:**  
Component Parts (Small #) Are Included When Ordering The Assembly (Large #).

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
6	05-90-0225	Spring Washer	(6)
7	05-78-5316	M4 x 14mm Pan Hd. Tapt. Screw T-20	(4)
★ 13	43-54-1220	5" Type 27 Guard (Standard Equip.)	(1)
★ 13	43-54-1230	5" Type 1 Guard (Optional, Not Shown)	(1)
15	-----	O-Ring	(1)
16	-----	Wavy 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	49-96-7215	Spanner Wrench	(1)
23	31-44-0645	Rear Handle Set	(1)
23a	-----	Left Handle Halve	(1)
23b	-----	Right Handle Halve	(1)
25	44-76-0095	Cord Protector	(1)
26	22-64-3430	Power Cord	(1)
27	05-88-1300	M4 x 28mm Pan Hd. ST Screw T-20	(4)
28	22-09-1865	PCB Assembly	(1)
29	23-74-1620	Terminal	(1)
30	23-74-1615	Terminal	(1)
31	23-66-2665	On-Off Switch	(1)
32	31-92-0285	Paddle Trigger	(1)
33	-----	Paddle Trigger Spring	(1)
34	-----	Paddle Linkage	(1)
35	40-50-1155	Lock Button Spring	(1)
36	42-42-0495	Lock-On Button	(1)
37	05-88-0030	M3 x 8.5mm Pan Hd. ST Screw T-10	(2)
38	22-18-2250	Carbon Brush Assembly (Set of 2)	(1)
39	31-50-2165	Motor Housing	(1)
40	18-07-0300	Field Assembly	(1)

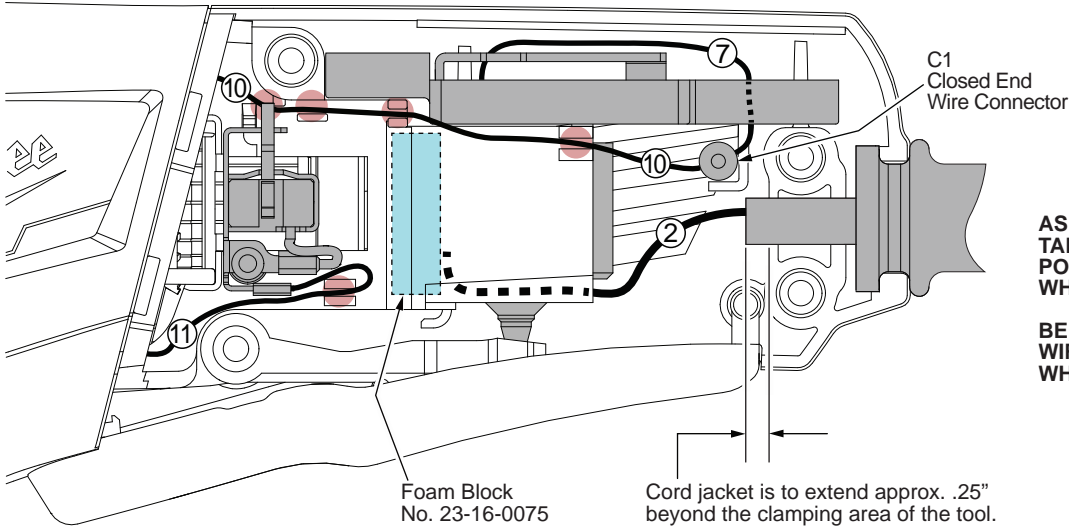
FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
40a	-----	Field Halve	(1)
40b	-----	Field Halve	(1)
41	42-28-0085	Rubber Block	(2)
42	-----	Baffle Foot	(1)
43	-----	Baffle	(1)
44	42-96-0016	Rubber Bearing Cap	(1)
45	16-10-0845	Armature Assembly	(1)
45a	02-04-2110	Ball Bearing	(1)
45b	-----	Armature	(1)
45c	45-88-0406	Washer	(1)
45d	-----	Magnetic Disc	(1)
46	05-78-0105	M4 x 10mm Pan Hd. Tapt. Screw T-20	(2)
47	44-86-0155	Bearing Retainer	(1)
★ 48	-----	Pinion	(1)
49	05-55-0620	M5 Hex Nut	(1)
50	14-46-6105	Flange with Ramps Assembly	(1)
52	42-14-0515	Baffle Assembly	(1)
53	05-78-0305	M3.5 x 7mm Pan Hd. Phil. Switch Scr.	(2)
54	23-16-0075	Foam Block	(1)
56	44-86-0145	Bearing Retaining Plate Assembly	(1)
57	22-56-0150	Closed End Wire Connector	(1)
60	14-46-6100	Paddle Linkage/Spring Service Kit	(1)
★ 65	14-46-0241	Spring/Pin Kit	(1)
-----	12-20-1560	Service Nameplate (Not Shown)	(1)
-----	10-20-2225	Bi-Lingual Warning Label (Not Shown)	(1)



Attach all wires to the switch as shown prior to inserting switch into the motor housing. Be sure that foam block is seated in the switch opening of motor housing before switch is installed.



Top view of PCB Assembly



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.

**WIRING SPECIFICATIONS**

Wire No.	Wire Color	Origin or Part No.	Gauge	Length	Terminals, Connectors and End Wire Preparation
1	Black	22-64-3430	--	--	Component of Cord Set. Connect to Switch.
2	White	22-64-3430	--	--	Component of Cord Set. Connect to Switch.
3	Black	22-09-1865	--	--	Component of PCBA. Connect to Switch.
4	White	22-09-1865	--	--	Component of PCBA. Connect to Switch.
5	Black	22-09-1865	--	--	Component of PCBA. Connect to Switch.
6	White	22-09-1865	--	--	Component of PCBA. Connect to Switch.
7	Red	22-09-1865	--	--	Component of PCBA. Connect to C1 with wire #10.
8	Black	18-07-0300	--	--	Component of Field. Connect to Switch.
9	Black	18-07-0300	--	--	Component of Field. Connect to Right Brush Assy.
10	Black	18-07-0300	--	--	Component of Field. Connect to C1 with wire #7.
11	Black	18-07-0300	--	--	Component of Field. Connect to Left Brush Assy.

BULK LEAD WIRE - BULLETIN 58-01-0003

**NOTE:**

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

**TERMINAL DESCRIPTION**

Code	Part No.	Qty.

**CONNECTOR DESCRIPTION**

C1	22-56-0150	1
----	------------	---

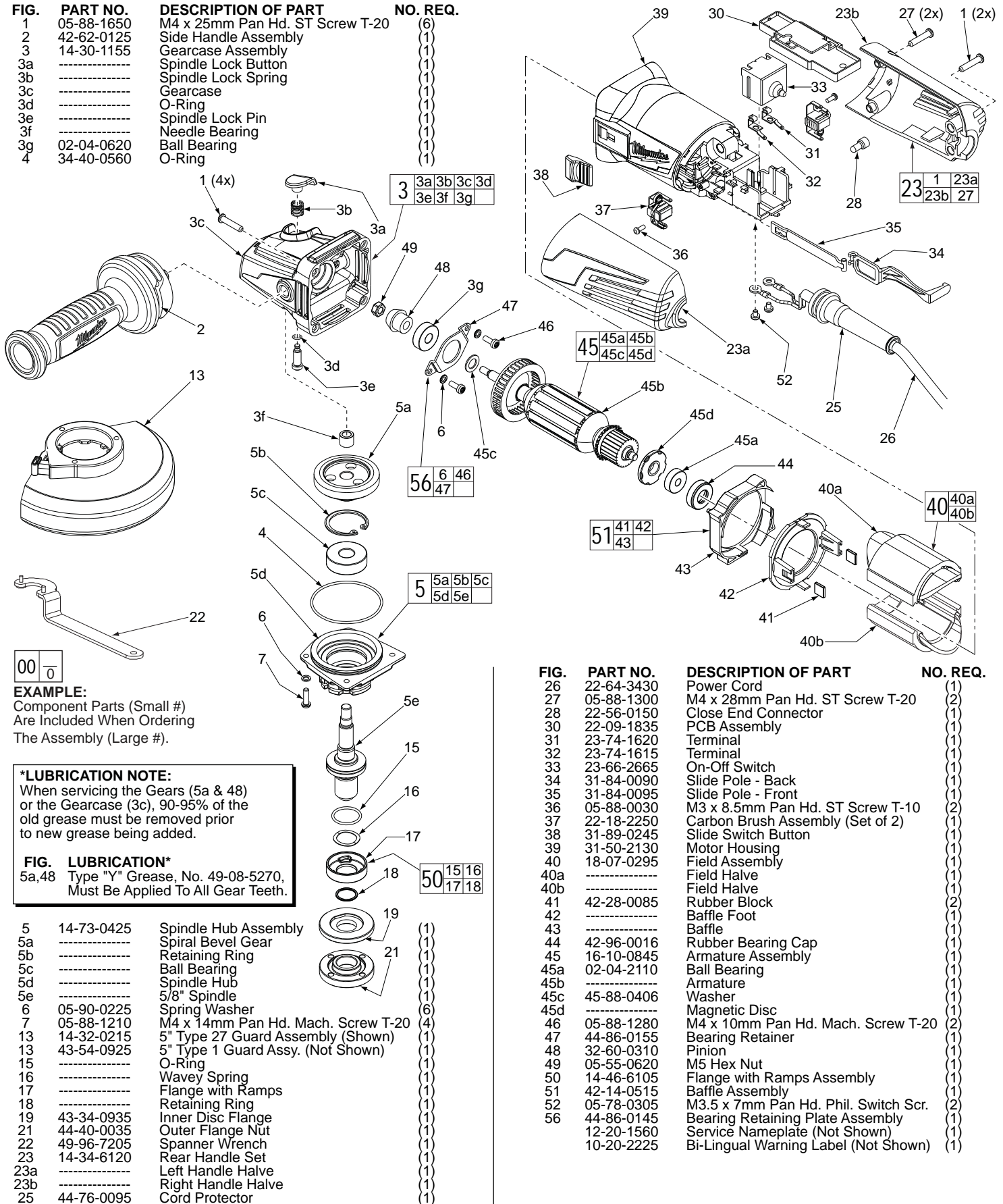


# SERVICE PARTS LIST

**BULLETIN NO.**  
54-38-2130

SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS		REVISED BULLETIN	DATE
<b>5" HP ANGLE GRINDER with SLIDE SWITCH</b>			Mar. 2012
CAT. NO.	6117-33	STARTING SERIAL NUMBER	C94A
		WIRING INSTRUCTION <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	(6)
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)



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

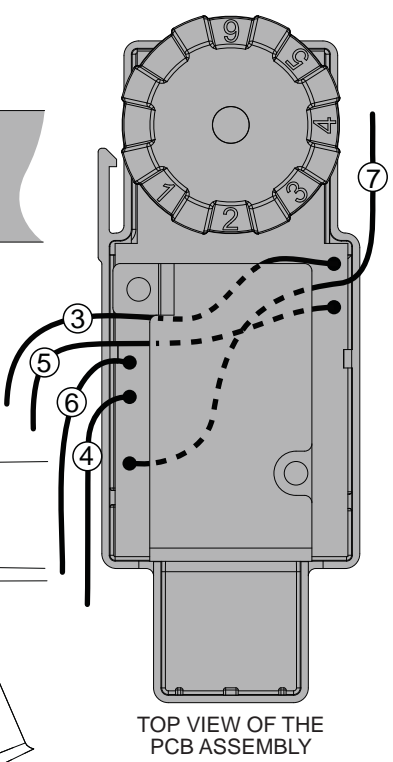
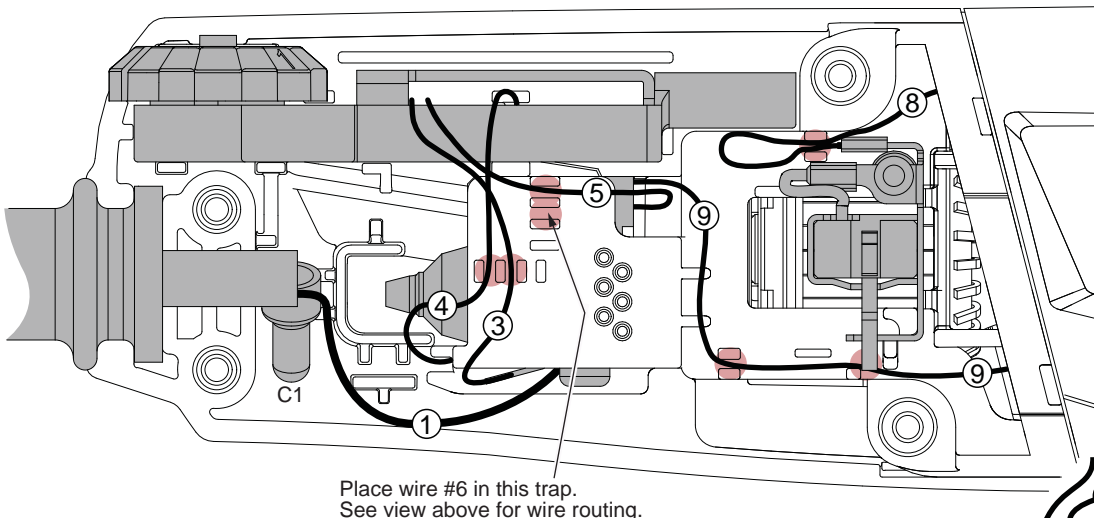
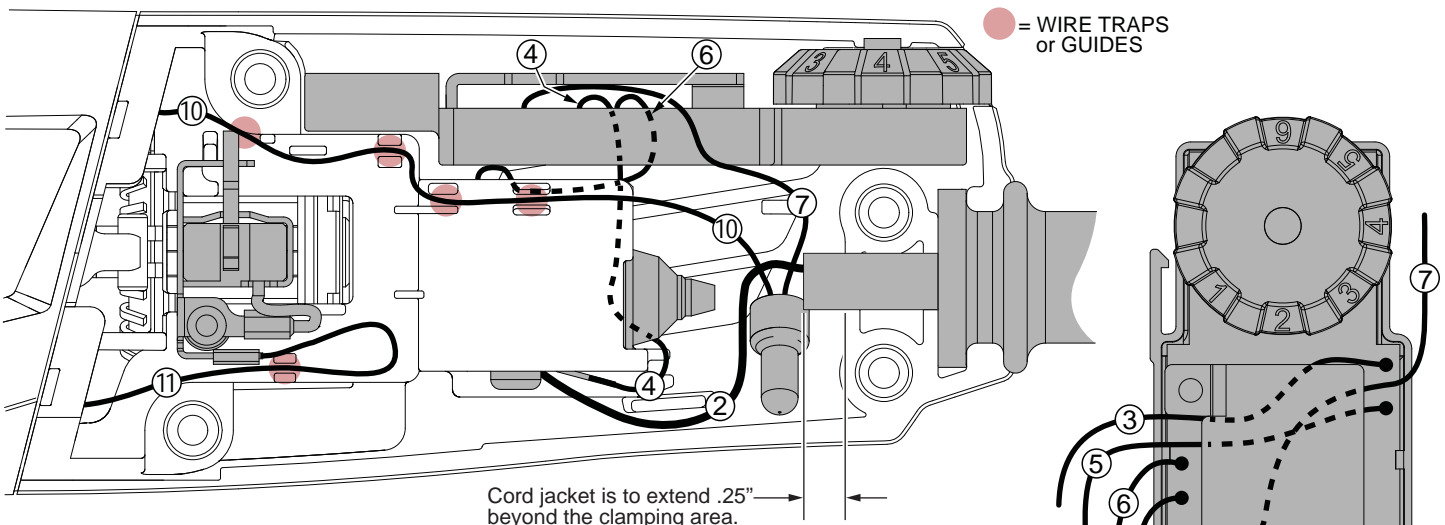
**\*LUBRICATION NOTE:**  
When servicing the Gears (5a & 48)  
or the Gearcase (3c), 90-95% of the  
old grease must be removed prior  
to new grease being added.

**FIG. LUBRICATION\***  
5a,48 Type "Y" Grease, No. 49-08-5270,  
Must Be Applied To All Gear Teeth.

5	14-73-0425	Spindle Hub Assembly	(1)
5a	-----	Spiral Bevel Gear	(1)
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 Pan Hd. Mach. Screw T-20	(4)
13	14-32-0215	5" Type 27 Guard Assembly (Shown)	(1)
13	43-54-0925	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	14-34-6120	Rear Handle Set	(1)
23a	-----	Left Handle Halve	(1)
23b	-----	Right Handle Halve	(1)
25	44-76-0095	Cord Protector	(1)

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
26	22-64-3430	Power Cord	(1)
27	05-88-1300	M4 x 28mm Pan Hd. ST Screw T-20	(2)
28	22-56-0150	Close End Connector	(1)
30	22-09-1835	PCB Assembly	(1)
31	23-74-1620	Terminal	(1)
32	23-74-1615	Terminal	(1)
33	23-66-2665	On-Off Switch	(1)
34	31-84-0090	Slide Pole - Back	(1)
35	31-84-0095	Slide Pole - Front	(1)
36	05-88-0030	M3 x 8.5mm Pan Hd. ST Screw T-10	(2)
37	22-18-2250	Carbon Brush Assembly (Set of 2)	(1)
38	31-89-0245	Slide Switch Button	(1)
39	31-50-2130	Motor Housing	(1)
40	18-07-0295	Field Assembly	(1)
40a	-----	Field Halve	(1)
40b	-----	Field Halve	(1)
41	42-28-0085	Rubber Block	(2)
42	-----	Baffle Foot	(1)
43	-----	Baffle	(1)
44	42-96-0016	Rubber Bearing Cap	(1)
45	16-10-0845	Armature Assembly	(1)
45a	02-04-2110	Ball Bearing	(1)
45b	-----	Armature	(1)
45c	45-88-0406	Washer	(1)
45d	-----	Magnetic Disc	(1)
46	05-88-1280	M4 x 10mm Pan Hd. Mach. Screw T-20	(2)
47	44-86-0155	Bearing Retainer	(1)
48	32-60-0310	Pinion	(1)
49	05-55-0620	M5 Hex Nut	(1)
50	14-46-6105	Flange with Ramps Assembly	(1)
51	42-14-0515	Baffle Assembly	(1)
52	05-78-0305	M3.5 x 7mm Pan Hd. Phil. Switch Scr.	(2)
56	44-86-0145	Bearing Retaining Plate Assembly	(1)
	12-20-1560	Service Nameplate (Not Shown)	(1)
	10-20-2225	Bi-Lingual Warning Label (Not Shown)	(1)



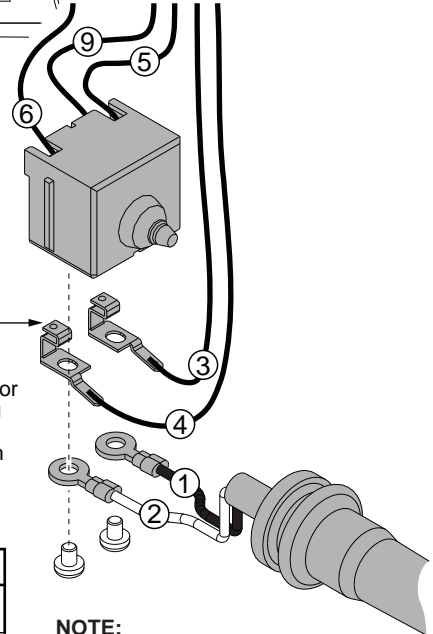


**NOTE- ILLUSTRATIONS ABOVE DEPICT A TOOL WITH A SPEED DIAL ON THE PCB ASSEMBLY. MODELS THAT DO NOT HAVE THE SPEED DIAL FEATURE ON THE PCBA ARE WIRED EXACTLY THE SAME.**

**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.**

**NOTE:**  
Install the two terminals onto switch and slide the switch down into the motor housing prior to installing cord wires 1 and 2 and PCBA wires 3 and 6 from under motor housing.



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

WIRING SPECIFICATIONS					
Wire No.	Wire Color	Origin or Part No.	Gauge	Length	Terminals, Connectors and End Wire Preparation
1	Black	22-64-3430	--	--	Component of Cord Set. Connect to Switch.
2	White	22-64-3430	--	--	Component of Cord Set. Connect to Switch.
3	Black	22-09-1835	--	--	Component of PCBA. Connect to Switch.
4	White	22-09-1835	--	--	Component of PCBA. Connect to Switch.
5	Black	22-09-1835	--	--	Component of PCBA. Connect to Switch.
6	White	22-09-1835	--	--	Component of PCBA. Connect to Switch.
7	Red	22-09-1835	--	--	Component of PCBA. Connect to C1 with wire #10.
8	White	18-07-0295	--	--	Component of Field. Connect to Right Brush Assy.
9	White	18-07-0295	--	--	Component of Field. Connect to Switch.
10	White	18-07-0295	--	--	Component of Field. Connect to C1 with wire #7.
11	White	18-07-0295	--	--	Component of Field. Connect to Left Brush Assy.

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

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

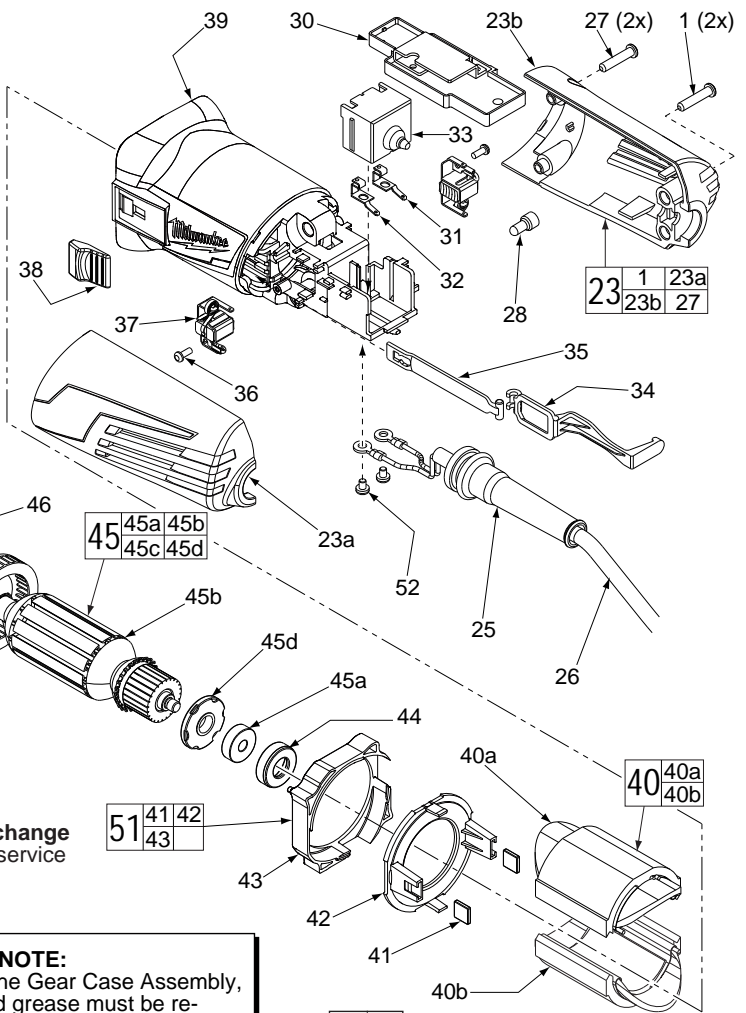
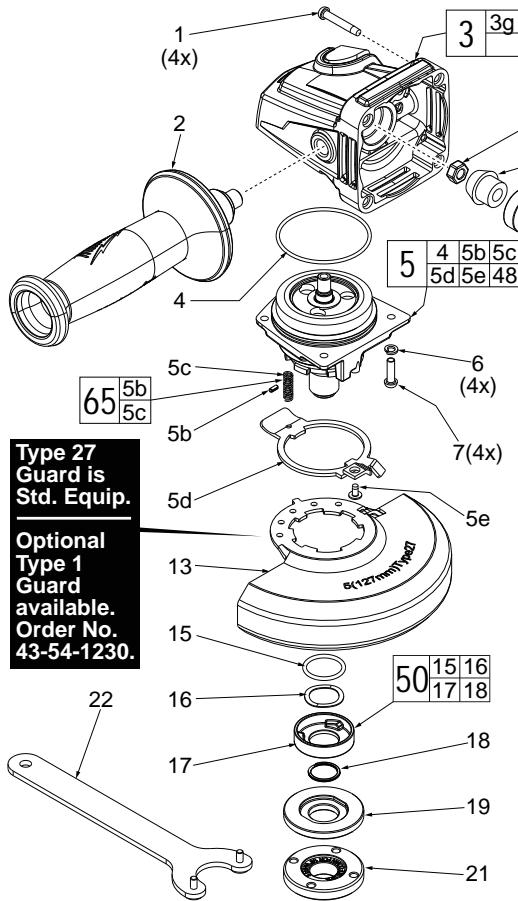


# SERVICE PARTS LIST

**BULLETIN NO.**  
54-38-2132

SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS		REVISED BULLETIN 54-38-2131	DATE Jan. 2017
<b>5" HP ANGLE GRINDER with SLIDE SWITCH</b>		WIRING INSTRUCTION <b>See Reverse Side</b>	
CAT. NO.	6117-33	STARTING SERIAL NUMBER	C94C

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
★ 1	05-88-1650	M4 x 25mm Pan Hd. ST Screw T-20	(6)
★ 2	42-62-0125	Side Handle Assembly	(1)
★ 3	14-30-1156	Gearcase Assembly	(1)
3g	02-04-0620	Ball Bearing	(1)
4	34-40-0560	O-Ring	(1)
★ 5	14-73-0475	5/8-11 Spindle Hub Kit	(1)
★ 5b	-----	Steel Pin	(1)
★ 5c	-----	Spring	(1)
★ 5d	44-20-0155	Guard Locking Tang	(1)
★ 5e	05-81-0020	M3 x 5mm Pan Hd. ST T-8 Screw	(1)



**Type 27 Guard is Std. Equip.**

**Optional Type 1 Guard available. Order No. 43-54-1230.**

★ = Part number change from previous service parts list.

**\*LUBRICATION NOTE:**  
When servicing the Gear Case Assembly, 90-95% of the old grease must be removed prior to new grease being added.

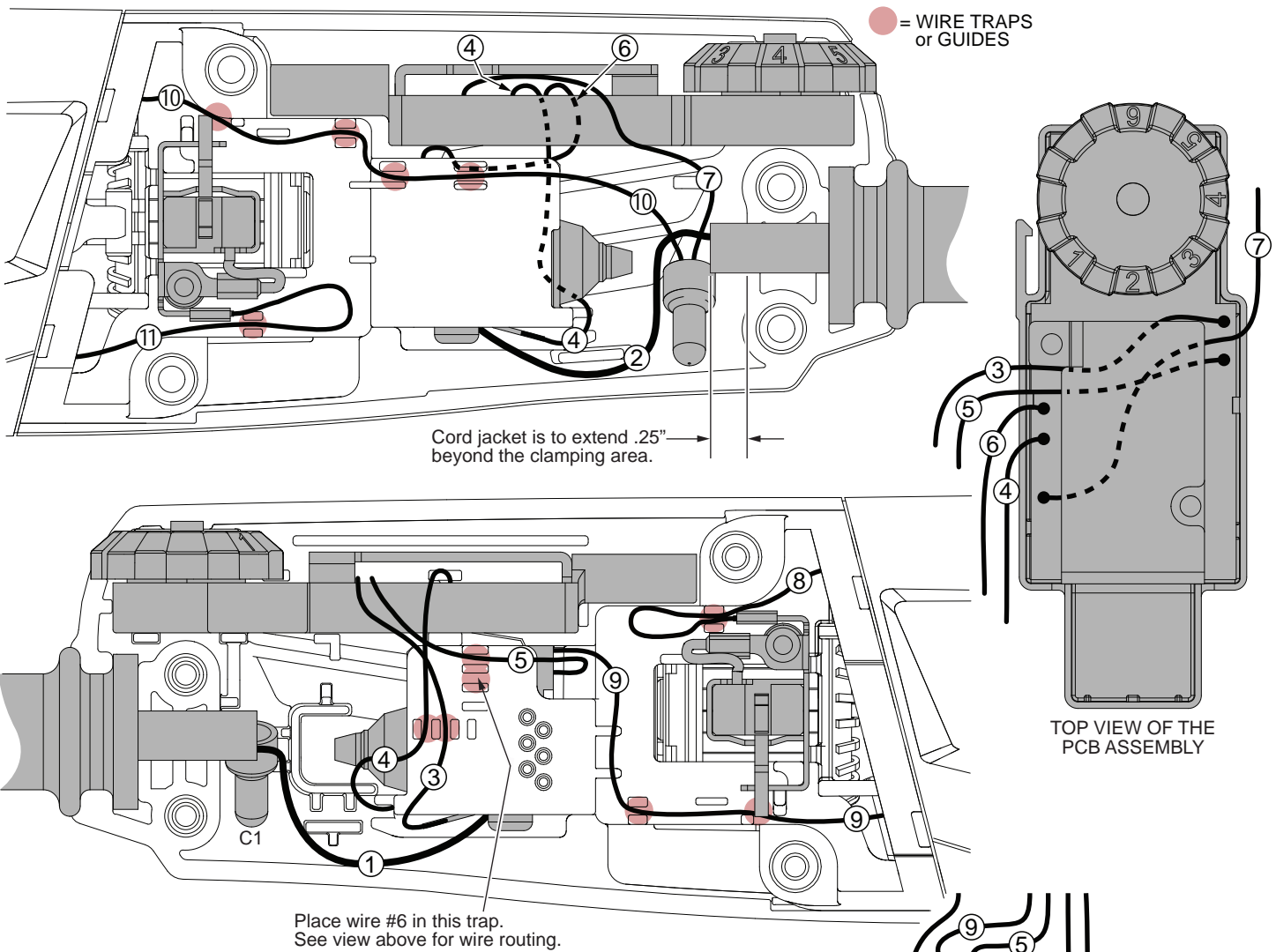
**FIG. LUBRICATION\***  
5 Type "Y" Grease, No. 49-08-5270, Must Be Applied To All Gear Teeth.

00 0

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

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
6	05-90-0225	Spring Washer	(6)
7	05-78-5316	M4 x 14mm Pan Hd. Tapt. Screw T-20	(4)
★ 13	43-54-1220	5" Type 27 Guard (Standard Equip.)	(1)
★ 13	43-54-1230	5" Type 1 Guard (Optional, Not Shown)	(1)
15	-----	O-Ring	(1)
16	-----	Wavy 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	49-96-7215	Spanner Wrench	(1)
23	14-34-6120	Rear Handle Set	(1)
23a	-----	Left Handle Halve	(1)
23b	-----	Right Handle Halve	(1)
25	44-76-0095	Cord Protector	(1)
26	22-64-3430	Power Cord	(1)
27	05-88-1300	M4 x 28mm Pan Hd. ST Screw T-20	(2)
28	22-56-0150	Close End Connector	(1)
30	22-09-1835	PCB Assembly	(1)
31	23-74-1620	Terminal	(1)
32	23-74-1615	Terminal	(1)
33	23-66-2665	On-Off Switch	(1)
34	31-84-0090	Slide Pole - Back	(1)
35	31-84-0095	Slide Pole - Front	(1)
36	05-88-0030	M3 x 8.5mm Pan Hd. ST Screw T-10	(2)
37	22-18-2250	Carbon Brush Assembly (Set of 2)	(1)
38	31-89-0245	Slide Switch Button	(1)
39	31-50-2130	Motor Housing	(1)

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
40	18-07-0295	Field Assembly	(1)
40a	-----	Field Halve	(1)
40b	-----	Field Halve	(1)
41	42-28-0085	Rubber Block	(2)
42	-----	Baffle Foot	(1)
43	-----	Baffle	(1)
44	42-96-0016	Rubber Bearing Cap	(1)
45	16-10-0845	Armature Assembly	(1)
45a	02-04-2110	Ball Bearing	(1)
45b	-----	Armature	(1)
45c	45-88-0406	Washer	(1)
45d	-----	Magnetic Disc	(1)
46	05-78-0105	M4 x 10mm Pan Hd. Tapt. Screw T-20	(2)
47	44-86-0155	Bearing Retainer	(1)
★ 48	-----	Pinion	(1)
49	05-55-0620	M5 Hex Nut	(1)
50	14-46-6105	Flange with Ramps Assembly	(1)
51	42-14-0515	Baffle Assembly	(1)
52	05-78-0305	M3.5 x 7mm Pan Hd. Phil. Switch Scr.	(2)
56	44-86-0145	Bearing Retaining Plate Assembly	(1)
★ 65	14-46-0241	Spring/Pin Kit	(1)
-----	12-20-1560	Service Nameplate (Not Shown)	(1)
-----	10-20-2225	Bi-Lingual Warning Label (Not Shown)	(1)



**NOTE- ILLUSTRATIONS ABOVE DEPICT A TOOL WITH A SPEED DIAL ON THE PCB ASSEMBLY. MODELS THAT DO NOT HAVE THE SPEED DIAL FEATURE ON THE PCBA ARE WIRED EXACTLY THE SAME.**

**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.**

**NOTE:**  
Install the two terminals onto switch and slide the switch down into the motor housing prior to installing cord wires 1 and 2 and PCBA wires 3 and 6 from under motor housing.

WIRING SPECIFICATIONS					
Wire No.	Wire Color	Origin or Part No.	Gauge	Length	Terminals, Connectors and End Wire Preparation
1	Black	22-64-3430	--	--	Component of Cord Set. Connect to Switch.
2	White	22-64-3430	--	--	Component of Cord Set. Connect to Switch.
3	Black	22-09-1835	--	--	Component of PCBA. Connect to Switch.
4	White	22-09-1835	--	--	Component of PCBA. Connect to Switch.
5	Black	22-09-1835	--	--	Component of PCBA. Connect to Switch.
6	White	22-09-1835	--	--	Component of PCBA. Connect to Switch.
7	Red	22-09-1835	--	--	Component of PCBA. Connect to C1 with wire #10.
8	White	18-07-0295	--	--	Component of Field. Connect to Right Brush Assy.
9	White	18-07-0295	--	--	Component of Field. Connect to Switch.
10	White	18-07-0295	--	--	Component of Field. Connect to C1 with wire #7.
11	White	18-07-0295	--	--	Component of Field. Connect to Left Brush Assy.

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

**NOTE:**  
All leads must be held to  $\pm 1/16"$ .  
All lead lengths are before stripping.

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



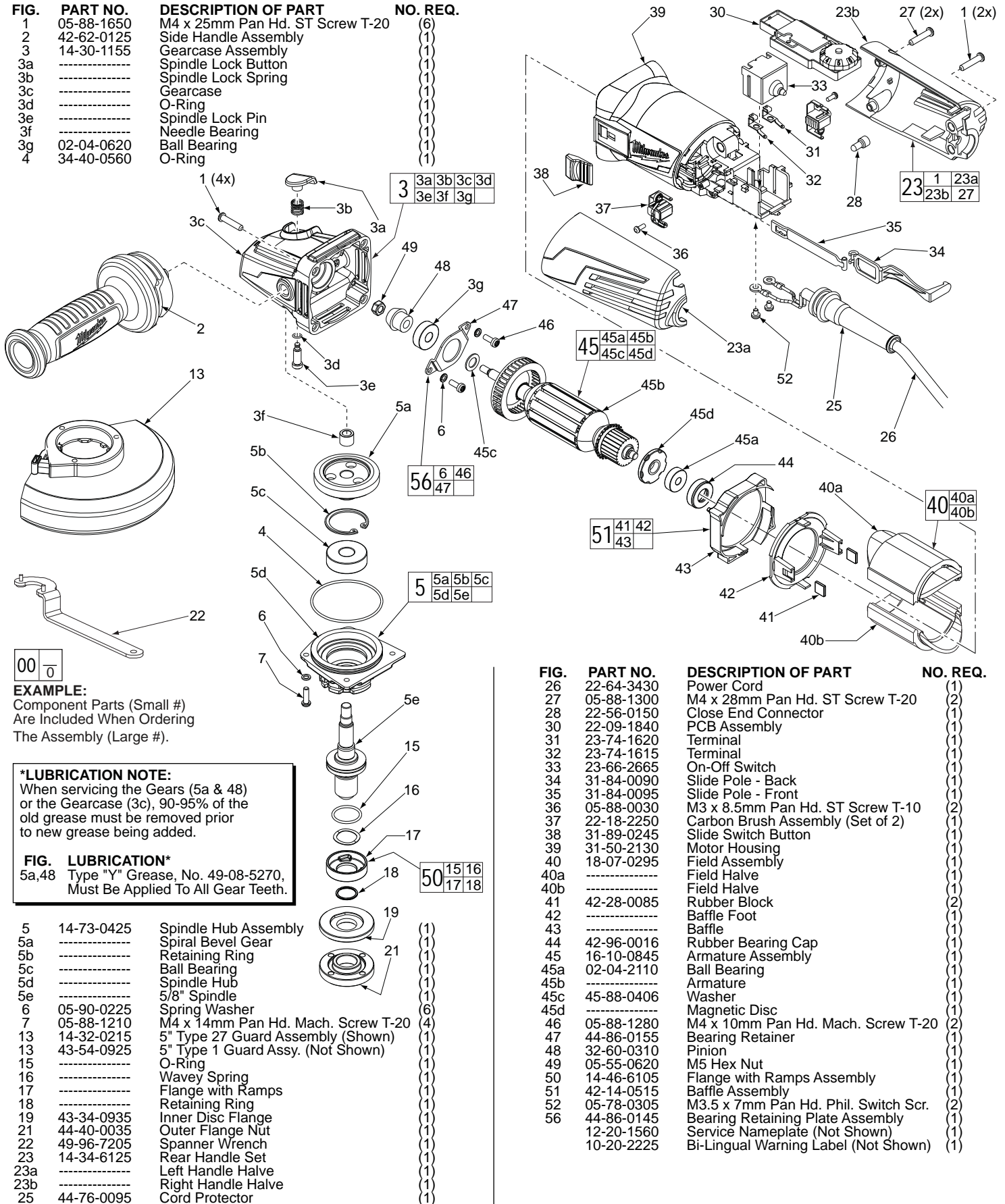


# SERVICE PARTS LIST

**BULLETIN NO.**  
54-38-2140

SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS		REVISED BULLETIN	DATE
<b>5" HP ANGLE GRINDER with SLIDE SWITCH &amp; Speed Dial</b>			Mar. 2012
CAT. NO.	6117-33D	STARTING SERIAL NUMBER	C95A
		WIRING INSTRUCTION <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	(6)
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)



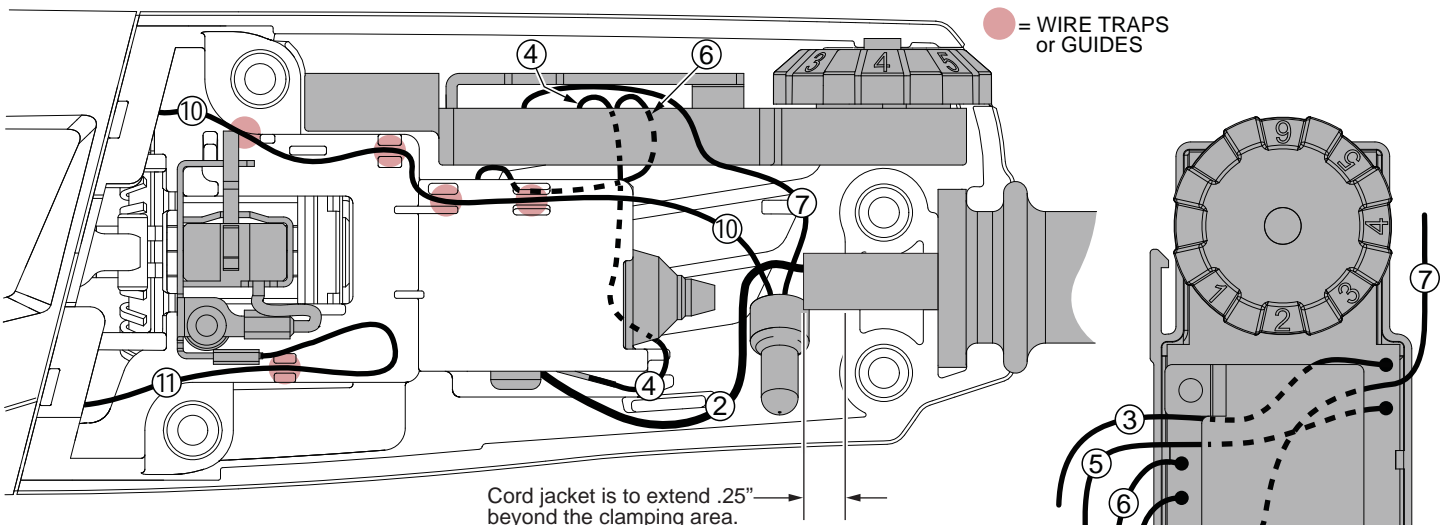
**EXAMPLE:**  
Component Parts (Small #)  
Are Included When Ordering  
The Assembly (Large #).

**\*LUBRICATION NOTE:**  
When servicing the Gears (5a & 48)  
or the Gearcase (3c), 90-95% of the  
old grease must be removed prior  
to new grease being added.

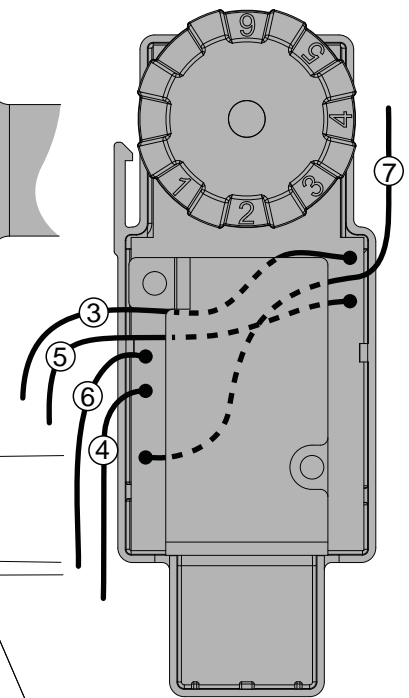
**FIG. LUBRICATION\***  
5a,48 Type "Y" Grease, No. 49-08-5270,  
Must Be Applied To All Gear Teeth.

5	14-73-0425	Spindle Hub Assembly	(1)
5a	-----	Spiral Bevel Gear	(1)
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 Pan Hd. Mach. Screw T-20	(4)
13	14-32-0215	5" Type 27 Guard Assembly (Shown)	(1)
13	43-54-0925	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	14-34-6125	Rear Handle Set	(1)
23a	-----	Left Handle Halve	(1)
23b	-----	Right Handle Halve	(1)
25	44-76-0095	Cord Protector	(1)

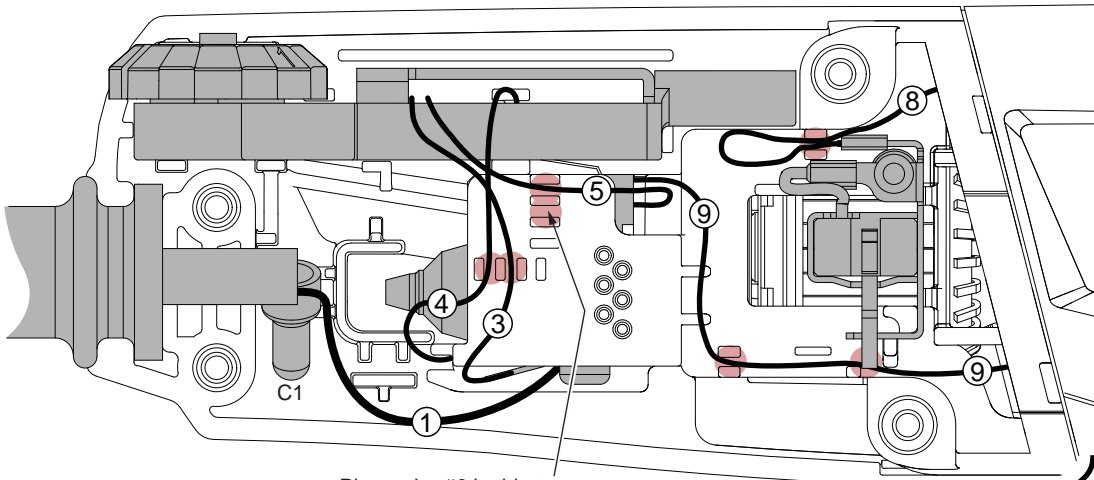
FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
26	22-64-3430	Power Cord	(1)
27	05-88-1300	M4 x 28mm Pan Hd. ST Screw T-20	(2)
28	22-56-0150	Close End Connector	(1)
30	22-09-1840	PCB Assembly	(1)
31	23-74-1620	Terminal	(1)
32	23-74-1615	Terminal	(1)
33	23-66-2665	On-Off Switch	(1)
34	31-84-0090	Slide Pole - Back	(1)
35	31-84-0095	Slide Pole - Front	(1)
36	05-88-0030	M3 x 8.5mm Pan Hd. ST Screw T-10	(2)
37	22-18-2250	Carbon Brush Assembly (Set of 2)	(1)
38	31-89-0245	Slide Switch Button	(1)
39	31-50-2130	Motor Housing	(1)
40	18-07-0295	Field Assembly	(1)
40a	-----	Field Halve	(1)
40b	-----	Field Halve	(1)
41	42-28-0085	Rubber Block	(2)
42	-----	Baffle Foot	(1)
43	-----	Baffle	(1)
44	42-96-0016	Rubber Bearing Cap	(1)
45	16-10-0845	Armature Assembly	(1)
45a	02-04-2110	Ball Bearing	(1)
45b	-----	Armature	(1)
45c	45-88-0406	Washer	(1)
45d	-----	Magnetic Disc	(1)
46	05-88-1280	M4 x 10mm Pan Hd. Mach. Screw T-20	(2)
47	44-86-0155	Bearing Retainer	(1)
48	32-60-0310	Pinion	(1)
49	05-55-0620	M5 Hex Nut	(1)
50	14-46-6105	Flange with Ramps Assembly	(1)
51	42-14-0515	Baffle Assembly	(1)
52	05-78-0305	M3.5 x 7mm Pan Hd. Phil. Switch Scr.	(2)
56	44-86-0145	Bearing Retaining Plate Assembly	(1)
	12-20-1560	Service Nameplate (Not Shown)	(1)
	10-20-2225	Bi-Lingual Warning Label (Not Shown)	(1)



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



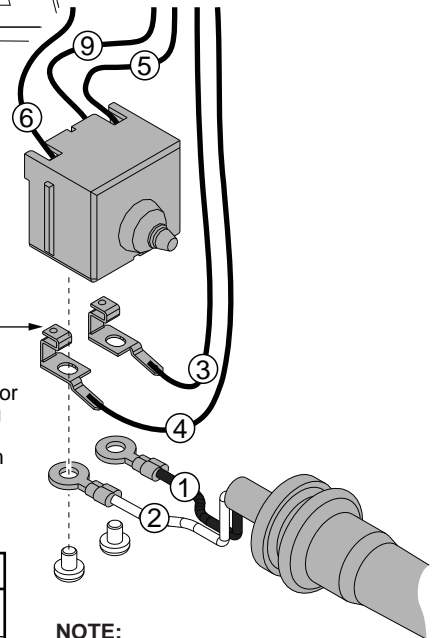
TOP VIEW OF THE PCB ASSEMBLY



Place wire #6 in this trap. See view above for wire routing.

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.



**NOTE:**  
Install the two terminals onto switch and slide the switch down into the motor housing prior to installing cord wires 1 and 2 and PCBA wires 3 and 6 from under motor housing.

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

**WIRING SPECIFICATIONS**

Wire No.	Wire Color	Origin or Part No.	Gauge	Length	Terminals, Connectors and End Wire Preparation
1	Black	22-64-3430	--	--	Component of Cord Set. Connect to Switch.
2	White	22-64-3430	--	--	Component of Cord Set. Connect to Switch.
3	Black	22-09-1840	--	--	Component of PCBA. Connect to Switch.
4	White	22-09-1840	--	--	Component of PCBA. Connect to Switch.
5	Black	22-09-1840	--	--	Component of PCBA. Connect to Switch.
6	White	22-09-1840	--	--	Component of PCBA. Connect to Switch.
7	Red	22-09-1840	--	--	Component of PCBA. Connect to C1 with wire #10.
8	White	18-07-0295	--	--	Component of Field. Connect to Right Brush Assy.
9	White	18-07-0295	--	--	Component of Field. Connect to Switch.
10	White	18-07-0295	--	--	Component of Field. Connect to C1 with wire #7.
11	White	18-07-0295	--	--	Component of Field. Connect to Left Brush Assy.

BULK LEAD WIRE - BULLETIN 58-01-0003

**TERMINAL DESCRIPTION**

Code	Part No.	Qty.

**CONNECTOR DESCRIPTION**

C1	22-56-0150	1
----	------------	---

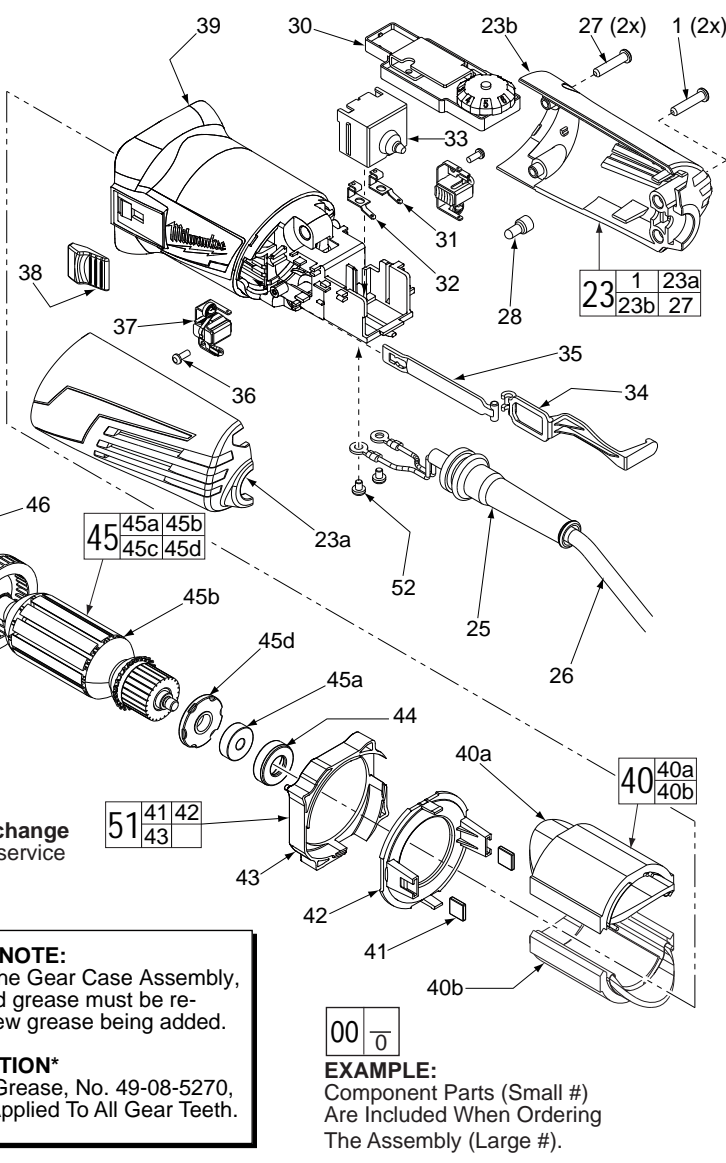
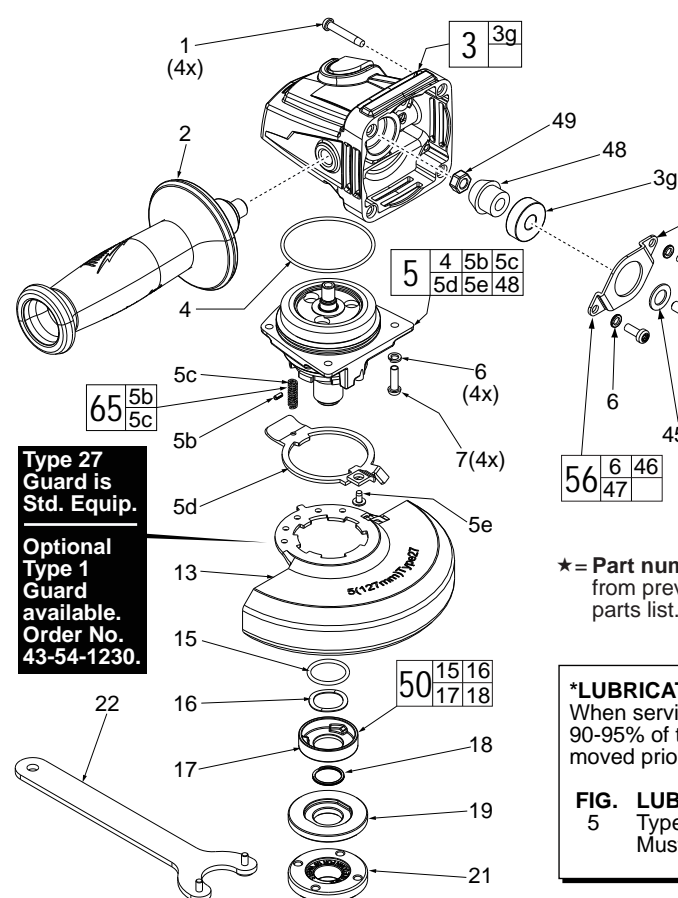


# SERVICE PARTS LIST

**BULLETIN NO.**  
54-38-2142

SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS		REVISED BULLETIN 54-38-2141	DATE Jan. 2017
<b>5" HP ANGLE GRINDER with SLIDE SWITCH &amp; Speed Dial</b>		WIRING INSTRUCTION <b>See Reverse Side</b>	
CAT. NO.	6117-33D	STARTING SERIAL NUMBER	C95C

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
★ 1	05-88-1650	M4 x 25mm Pan Hd. ST Screw T-20	(6)
★ 2	42-62-0125	Side Handle Assembly	(1)
★ 3	14-30-1156	Gearcase Assembly	(1)
3g	02-04-0620	Ball Bearing	(1)
4	34-40-0560	O-Ring	(1)
★ 5	14-73-0475	5/8-11 Spindle Hub Kit	(1)
★ 5b	-----	Steel Pin	(1)
★ 5c	-----	Spring	(1)
★ 5d	44-20-0155	Guard locking Tang	(1)
★ 5e	05-81-0020	M3 x 5mm Pan Hd. ST T-8 Screw	(1)
6	05-90-0225	Spring Washer	(6)



**Type 27 Guard is Std. Equip.**

**Optional Type 1 Guard available. Order No. 43-54-1230.**

★ = Part number change from previous service parts list.

**\*LUBRICATION NOTE:**  
When servicing the Gear Case Assembly, 90-95% of the old grease must be removed prior to new grease being added.

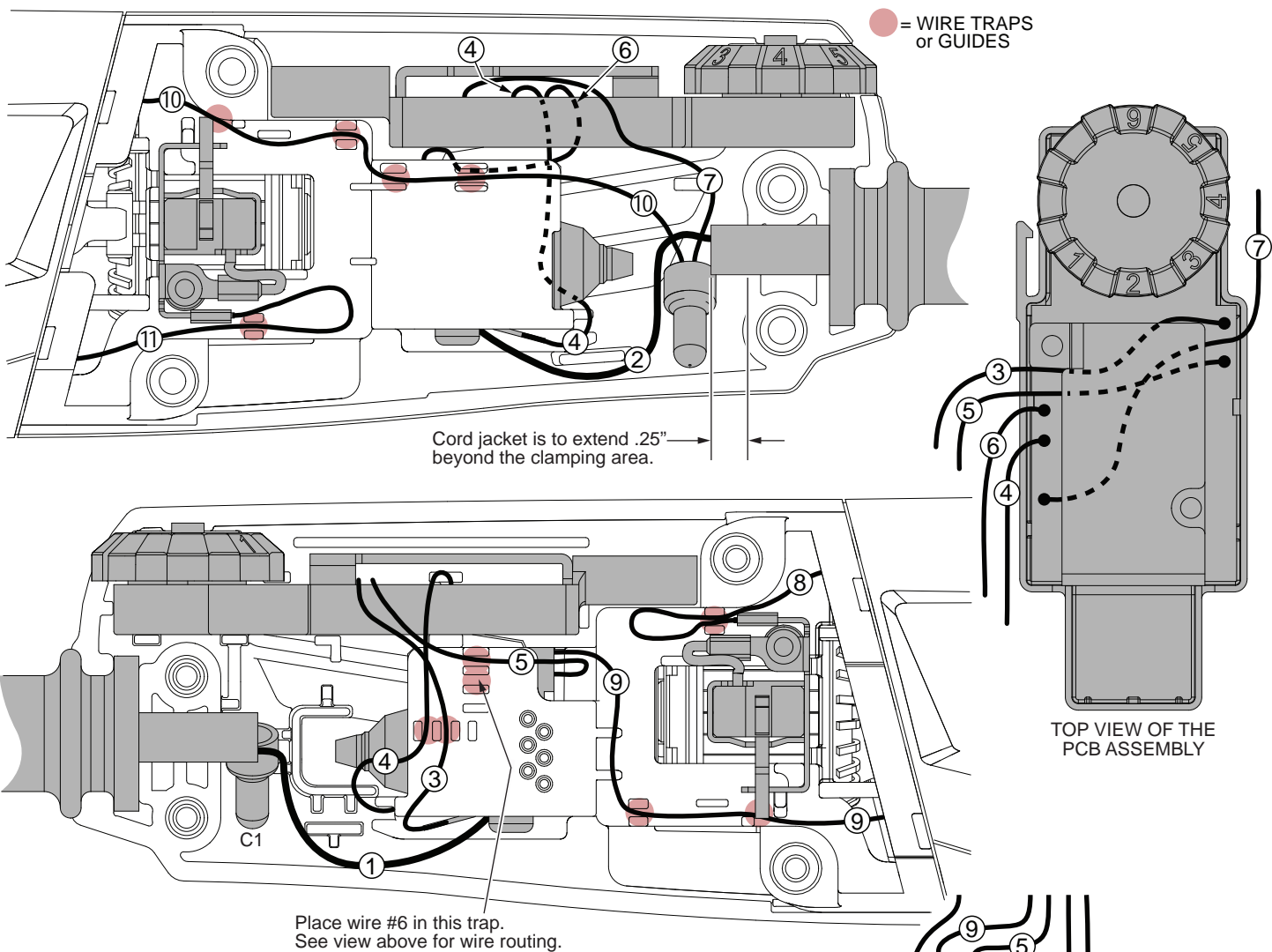
**FIG. LUBRICATION\***  
5 Type "Y" Grease, No. 49-08-5270, Must Be Applied To All Gear Teeth.

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

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
7	05-78-5316	M4 x 14mm Pan Hd. Tapt. Screw T-20	(4)
★ 13	43-54-1220	5" Type 27 Guard (Standard Equip.)	(1)
★ 13	43-54-1230	5" Type 1 Guard (Optional, 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	49-96-7215	Spanner Wrench	(1)
23	14-34-6125	Rear Handle Set	(1)
23a	-----	Left Handle Halve	(1)
23b	-----	Right Handle Halve	(1)
25	44-76-0095	Cord Protector	(1)
26	22-64-3430	Power Cord	(1)
27	05-88-1300	M4 x 28mm Pan Hd. ST Screw T-20	(2)
28	22-56-0150	Close End Connector	(1)
30	22-09-1840	PCB Assembly	(1)
31	23-74-1620	Terminal	(1)
32	23-74-1615	Terminal	(1)
33	23-66-2665	On-Off Switch	(1)
34	31-84-0090	Slide Pole - Back	(1)
35	31-84-0095	Slide Pole - Front	(1)
36	05-88-0030	M3 x 8.5mm Pan Hd. ST Screw T-10	(2)
37	22-18-2250	Carbon Brush Assembly (Set of 2)	(1)
38	31-89-0245	Slide Switch Button	(1)
39	31-50-2130	Motor Housing	(1)
40	18-07-0295	Field Assembly	(1)

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
40a	-----	Field Halve	(1)
40b	-----	Field Halve	(1)
41	42-28-0085	Rubber Block	(2)
42	-----	Baffle Foot	(1)
43	-----	Baffle	(1)
44	42-96-0016	Rubber Bearing Cap	(1)
45	16-10-0845	Armature Assembly	(1)
45a	02-04-2110	Ball Bearing	(1)
45b	-----	Armature	(1)
45c	45-88-0406	Washer	(1)
45d	-----	Magnetic Disc	(1)
46	05-78-0105	M4 x 10mm Pan Hd. Tapt. Screw T-20	(2)
47	44-86-0155	Bearing Retainer	(1)
★ 48	-----	Pinion	(1)
49	05-55-0620	M5 Hex Nut	(1)
50	14-46-6105	Flange with Ramps Assembly	(1)
51	42-14-0515	Baffle Assembly	(1)
52	05-78-0305	M3.5 x 7mm Pan Hd. Phil. Switch Scr.	(2)
56	44-86-0145	Bearing Retaining Plate Assembly	(1)
★ 65	14-46-0241	Spring/Pin Kit	(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.

**NOTE:**  
Install the two terminals onto switch and slide the switch down into the motor housing prior to installing cord wires 1 and 2 and PCBA wires 3 and 6 from under motor housing.

WIRING SPECIFICATIONS					
Wire No.	Wire Color	Origin or Part No.	Gauge	Length	Terminals, Connectors and End Wire Preparation
1	Black	22-64-3430	--	--	Component of Cord Set. Connect to Switch.
2	White	22-64-3430	--	--	Component of Cord Set. Connect to Switch.
3	Black	22-09-1840	--	--	Component of PCBA. Connect to Switch.
4	White	22-09-1840	--	--	Component of PCBA. Connect to Switch.
5	Black	22-09-1840	--	--	Component of PCBA. Connect to Switch.
6	White	22-09-1840	--	--	Component of PCBA. Connect to Switch.
7	Red	22-09-1840	--	--	Component of PCBA. Connect to C1 with wire #10.
8	White	18-07-0295	--	--	Component of Field. Connect to Right Brush Assy.
9	White	18-07-0295	--	--	Component of Field. Connect to Switch.
10	White	18-07-0295	--	--	Component of Field. Connect to C1 with wire #7.
11	White	18-07-0295	--	--	Component of Field. Connect to Left Brush Assy.

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

**NOTE:**  
All leads must be held to  $\pm 1/16"$ .  
All lead lengths are before stripping.

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