



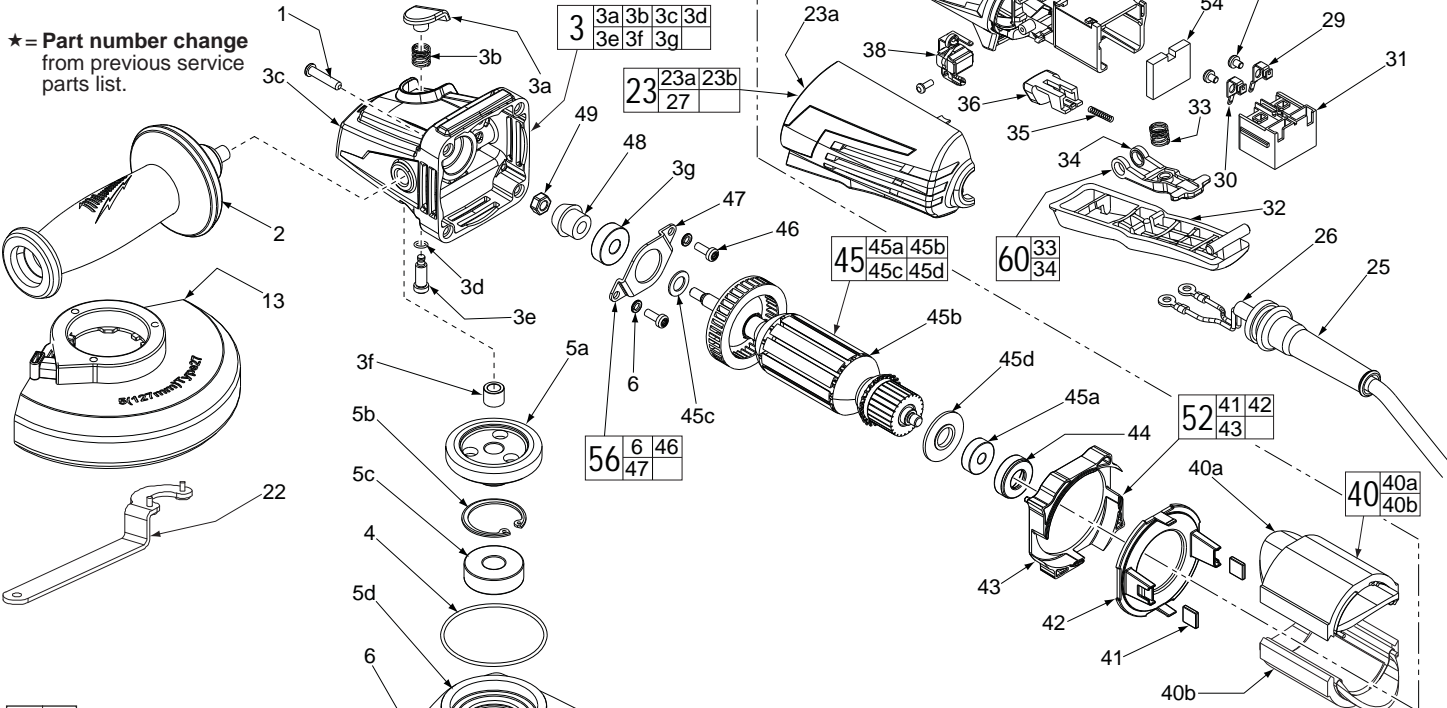
# SERVICE PARTS LIST

**BULLETIN NO.**  
54-38-2211

|                                                        |                |                                               |                   |
|--------------------------------------------------------|----------------|-----------------------------------------------|-------------------|
| SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS |                | REVISED BULLETIN<br>58-38-2210                | DATE<br>Jan. 2014 |
| <b>4.5" COMPACT ANGLE GRINDER with PADDLE SWITCH</b>   |                | WIRING INSTRUCTION<br><b>See Reverse Side</b> |                   |
| CAT. NO.                                               | <b>6146-31</b> | STARTING SERIAL NUMBER                        | <b>D03B</b>       |

| FIG. | PART NO.   | DESCRIPTION OF PART             | NO. REQ. |
|------|------------|---------------------------------|----------|
| 1    | 05-88-1650 | M4 x 25mm Pan Hd. ST Screw T-20 | (4)      |
| 2    | 42-62-0120 | 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)      |

★ = Part number change from previous service parts list.



00/0

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

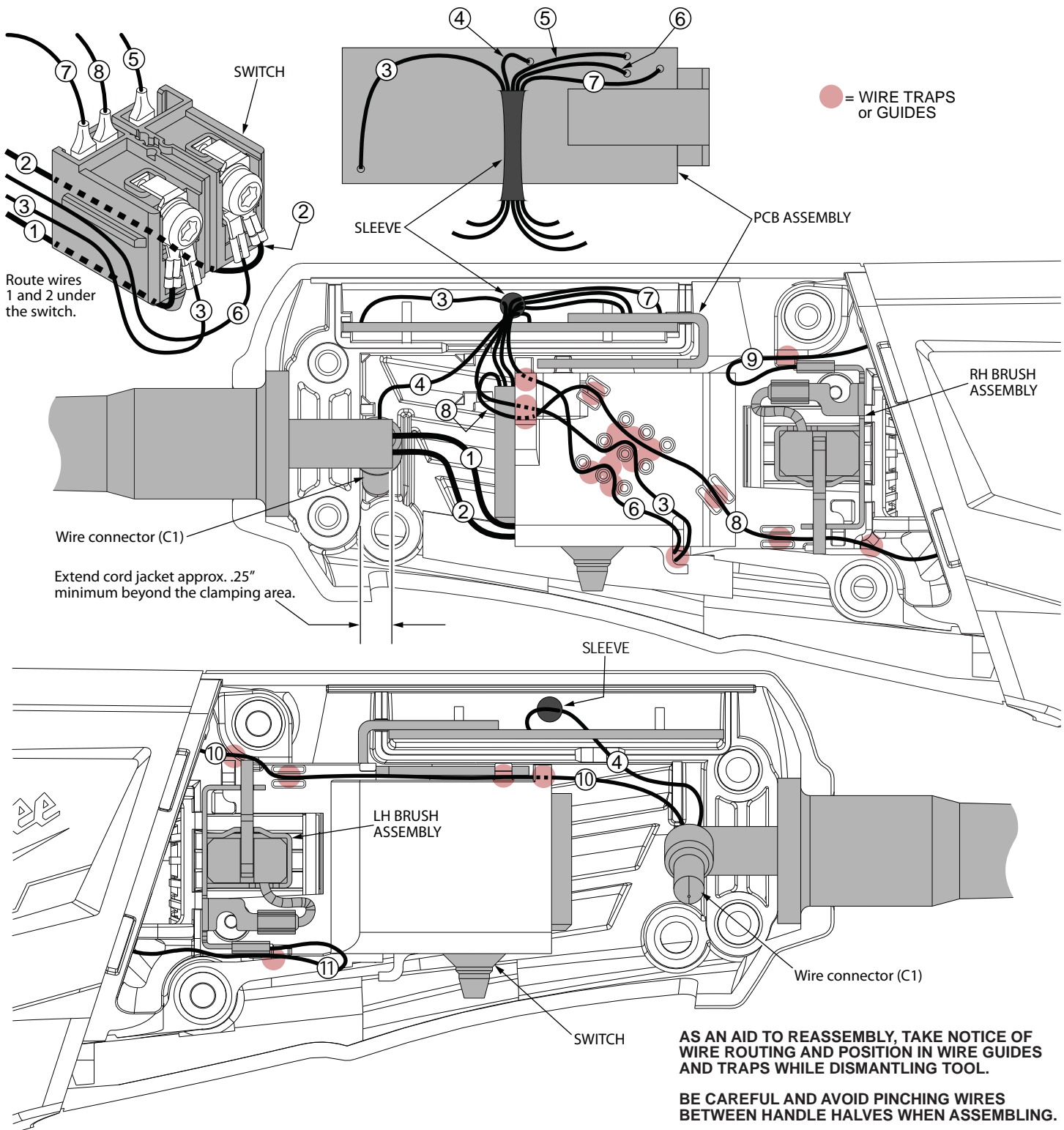
**\*LUBRICATION NOTE:**  
When servicing the Gears (5a & 48)  
or the Gearcase (3c), 90-95% of the  
old grease must be removed prior  
to new grease being added.

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

|      |            |                                     |     |
|------|------------|-------------------------------------|-----|
| ★ 5  | 14-73-0416 | 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                       | (4) |
| 7    | 05-88-1210 | M4 x 14mm Pan Hd. Mach. Screw T-20  | (6) |
| 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   | 14-34-6100 | 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   | 22-09-1820 | PCB Assembly                         | (1)      |
| 29   | 23-74-1620 | Terminal                             | (1)      |
| 30   | 23-74-1615 | Terminal                             | (1)      |
| 31   | 23-66-2665 | On-Off Switch                        | (1)      |
| 32   | 31-92-0265 | 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   | 22-18-2240 | Carbon Brush Assembly (Set of 2)     | (1)      |
| 39   | 31-50-0685 | Motor Housing                        | (1)      |
| 40   | 18-07-0315 | 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   | 16-10-0850 | Armature Assembly                    | (1)      |
| 45a  | 02-04-2110 | Ball Bearing                         | (1)      |
| 45b  | -----      | Armature                             | (1)      |
| 45c  | 45-88-0406 | Washer                               | (1)      |
| 45d  | 31-86-0090 | Plastic Disc                         | (2)      |
| 46   | 05-88-1280 | M4 x 10mm Pan Hd. Mach. Screw T-20   | (2)      |
| 47   | 44-86-0155 | Bearing Retainer                     | (1)      |
| ★ 48 | 32-60-0301 | Pinion                               | (1)      |
| 49   | 05-55-0620 | M5 Hex Nut                           | (1)      |
| 50   | 14-46-6105 | Flange with Ramps Assembly           | (1)      |
| 51   | 22-56-0150 | Close End Connector                  | (1)      |
| 52   | 42-14-0520 | Baffle Assembly                      | (1)      |
| 53   | 05-78-0305 | M3.5 x 7mm Pan Hd. Phil. Switch Scr. | (2)      |
| 54   | 23-16-0075 | Foam Block                           | (1)      |
| 55   | 12-20-1560 | Service Nameplate (Not Shown)        | (1)      |
| 56   | 44-86-0145 | Bearing Retaining Plate Assembly     | (1)      |
| 60   | 14-46-6100 | Paddle Linkage/Spring Service Kit    | (1)      |

**MILWAUKEE ELECTRIC TOOL CORPORATION**  
13135 W. Lisbon Road, Brookfield, WI 53005  
Drwg. 1



**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      | 22-09-1820         | --    | --     | Component of PCBA. Connect to Switch.            |
| 4        | Red        | 22-09-1820         | --    | --     | Component of PCBA. Connect to C1 with wire #10.  |
| 5        | White      | 22-09-1820         | --    | --     | Component of PCBA. Connect to Switch.            |
| 6        | White      | 22-09-1820         | --    | --     | Component of PCBA. Connect to Switch.            |
| 7        | Black      | 22-09-1820         | --    | --     | Component of PCBA. Connect to Switch.            |
| 8        | Black      | 18-07-0315         | --    | --     | Component of Field. Connect to Switch.           |
| 9        | Black      | 18-07-0315         | --    | --     | Component of Field. Connect to Right Brush Assy. |
| 10       | Black      | 18-07-0315         | --    | --     | Component of Field. Connect to C1 with wire #4.  |
| 11       | Black      | 18-07-0315         | --    | --     | Component of Field. Connect to Left Brush Assy.  |

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

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

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