



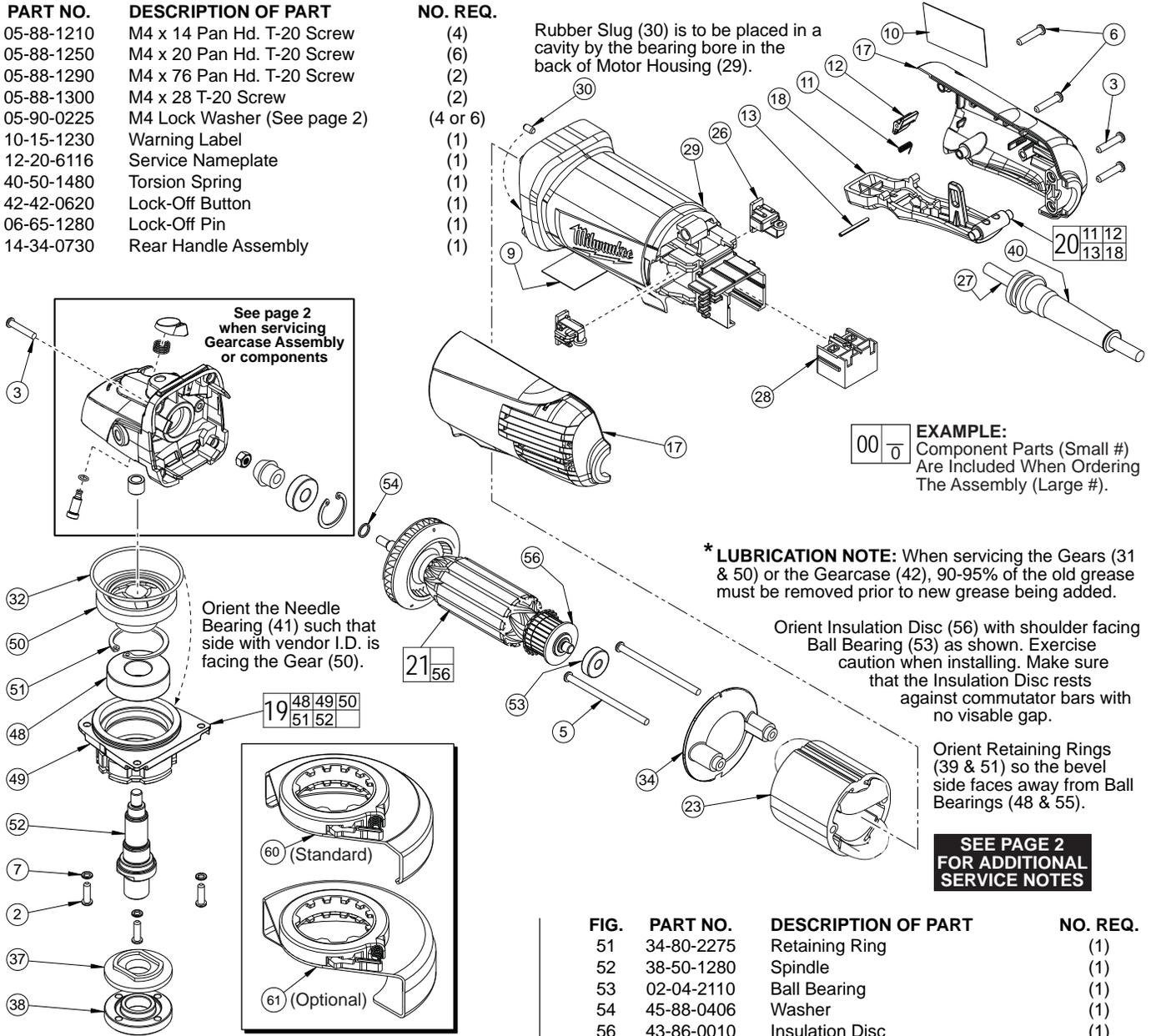
# SERVICE PARTS LIST

**BULLETIN NO.**  
**54-38-1801**

<b>SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS</b>		REVISED BULLETIN 54-38-1800	DATE Oct. 2012
<b>4.5" ANGLE GRINDER with PADDLE SWITCH</b>		WIRING INSTRUCTION <b>See Page 3</b>	
<b>CATALOG NO. 6148-31</b>	STARTING SERIAL NUMBER <b>B72B</b>		

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
2	05-88-1210	M4 x 14 Pan Hd. T-20 Screw	(4)
3	05-88-1250	M4 x 20 Pan Hd. T-20 Screw	(6)
5	05-88-1290	M4 x 76 Pan Hd. T-20 Screw	(2)
6	05-88-1300	M4 x 28 T-20 Screw	(2)
7	05-90-0225	M4 Lock Washer (See page 2)	(4 or 6)
9	10-15-1230	Warning Label	(1)
10	12-20-6116	Service Nameplate	(1)
11	40-50-1480	Torsion Spring	(1)
12	42-42-0620	Lock-Off Button	(1)
13	06-65-1280	Lock-Off Pin	(1)
17	14-34-0730	Rear Handle Assembly	(1)

Rubber Slug (30) is to be placed in a cavity by the bearing bore in the back of Motor Housing (29).



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

**\* LUBRICATION NOTE:** When servicing the Gears (31 & 50) or the Gearcase (42), 90-95% of the old grease must be removed prior to new grease being added.

Orient Insulation Disc (56) with shoulder facing Ball Bearing (53) as shown. Exercise caution when installing. Make sure that the Insulation Disc rests against commutator bars with no visible gap.

Orient Retaining Rings (39 & 51) so the bevel side faces away from Ball Bearings (48 & 55).

**SEE PAGE 2 FOR ADDITIONAL SERVICE NOTES**

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
18	31-92-0420	Paddle	(1)
19	14-73-0410	Spindle/Hub Assembly	(1)
20	14-78-0500	Paddle Assembly	(1)
21	16-10-7020	Service Armature Assembly	(1)
23	18-07-2300	Service Field	(1)
26	22-22-1560	Carbon Brush Assembly	(2)
27	22-64-2020	Cord	(1)
28	23-66-2665	Switch	(1)
29	31-50-2420	Motor Housing	(1)
30	31-53-0240	Rubber Slug	(1)
32	34-40-0180	O-Ring	(1)
34	42-14-0475	Fan Baffle	(1)
37	43-34-0036	Inner Disk Flange	(1)
38	44-40-0035	Outer Flange Nut	(1)
40	44-76-0210	Strain Relief	(1)
48	02-04-1150	Ball Bearing	(1)
49	28-53-0410	Lower Gearcase Hub	(1)
50	32-05-1310	Bevel Gear	(1)

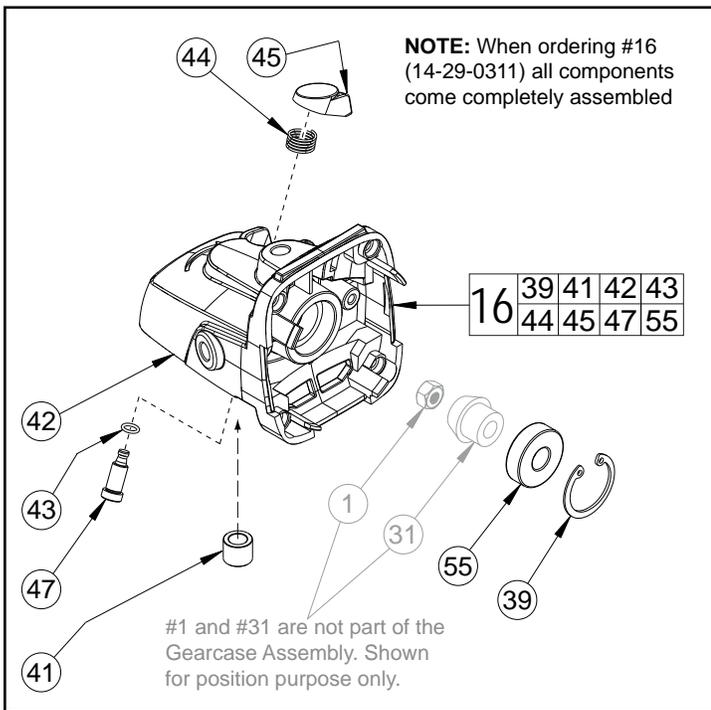
FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
51	34-80-2275	Retaining Ring	(1)
52	38-50-1280	Spindle	(1)
53	02-04-2110	Ball Bearing	(1)
54	45-88-0406	Washer	(1)
56	43-86-0010	Insulation Disc	(1)
60	43-54-1070	4.5" T27 Guard Assembly (Standard)	(1)
61	43-54-1090	4.5" T1 Guard Assembly (Optional)	(1)
	42-62-0100	Side Handle (Not Shown)	(1)
	49-96-7215	Spanner Wrench (Not Shown)	(1)

**FIG. LUBRICATION** (\*See lubrication note above):

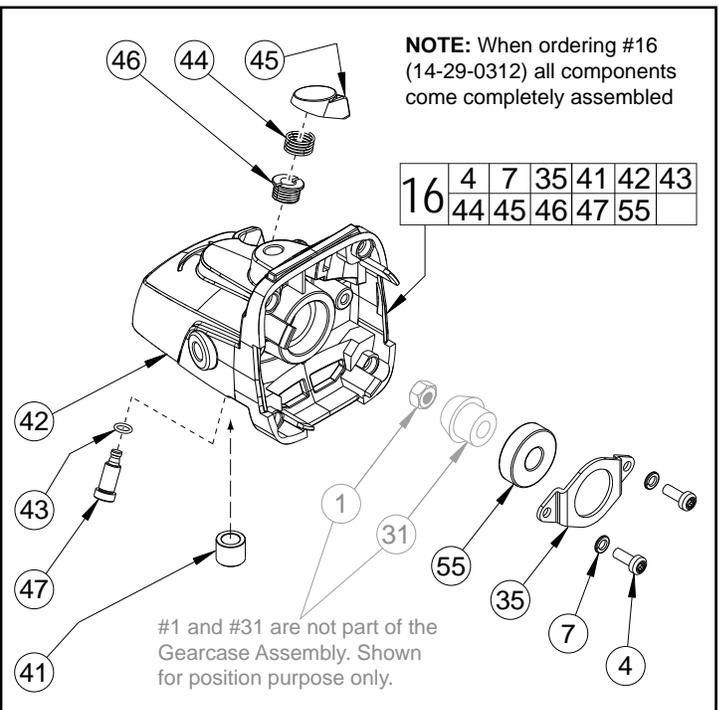
31,50 Type "Y" Grease, No. 49-08-5270, Must Be Applied To All Gear Teeth.

32,42 Lightly coat with grease O-Ring and bearing bore in Gearcase.

42 .3 - .4 Ounces (9-12 Grams) Type "Y" Grease, No. 49-08-5270.



**#16 14-29-0311 GEARCASE ASSEMBLY**



**#16 14-29-0312 GEARCASE ASSEMBLY**

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
1	05-55-0620	M5 Armature Hex Nut	(1)
16	14-29-0311	Gearcase Assembly	(1)
31	32-60-1310	Bevel Pinion	(1)
39	34-80-1001	Retaining Ring	(1)
41	02-50-0025	Needle Bearing	(1)
42	-----	Gearcase	(1)
43	34-40-0450	O-Ring	(1)
44	40-50-1330	Compression Spring	(1)
45	42-42-0590	Spindle Lock Button	(1)
47	42-60-1660	Spindle Lock Pin	(1)
55	02-04-0620	Ball Bearing	(1)

**FIG. NOTE:**

- 1 Torque Armature Nut (1) to 47 in/lbs, 55 kg/cm.
- 41 Orient the Needle Bearing (41) such that the side with the vendor I.D. is facing the Gear (50).
- 47,50 Functionally check Spindle Lock mechanism. Spindle Lock Pin (47) must return briskly when released from engagement in Gear (50), reference illustration on first page.

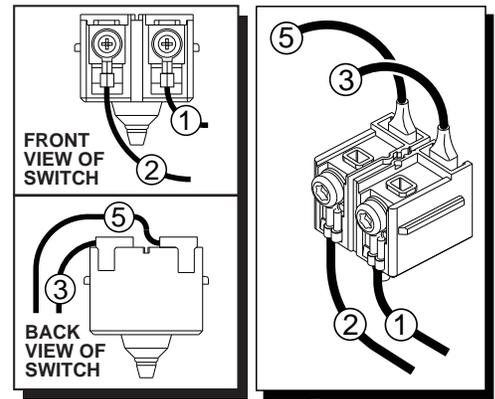
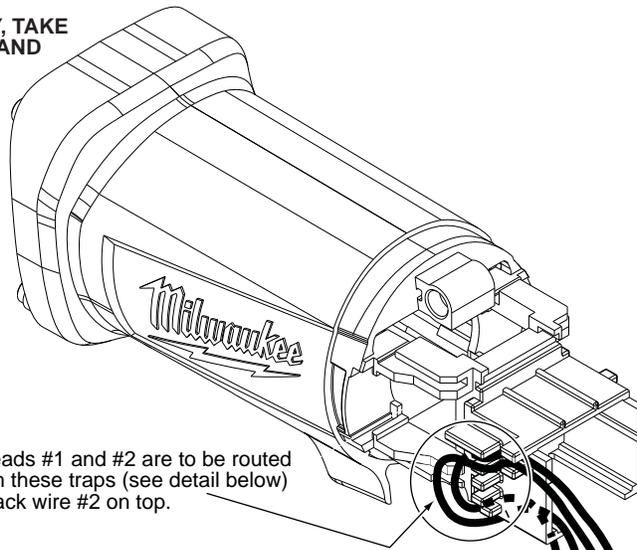
FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
1	05-55-0620	M5 Armature Hex Nut	(1)
4	05-88-1280	M4 x 10 Pan Hd. T-20 Screw	(2)
7	05-90-0225	M4 Lock Washer (2 of 6)	(6)
16	14-29-0312	Gearcase Assembly	(1)
31	32-60-1310	Bevel Pinion	(1)
35	44-66-0450	Bearing Retainer	(1)
41	02-50-0025	Needle Bearing	(1)
42	-----	Gearcase	(1)
43	34-40-0450	O-Ring	(1)
44	40-50-1330	Compression Spring	(1)
45	42-42-0590	Spindle Lock Button	(1)
46	42-42-0580	Spindle Lock Tube	(1)
47	42-60-1660	Spindle Lock Pin	(1)
55	02-04-0620	Ball Bearing	(1)

**FIG. NOTE:**

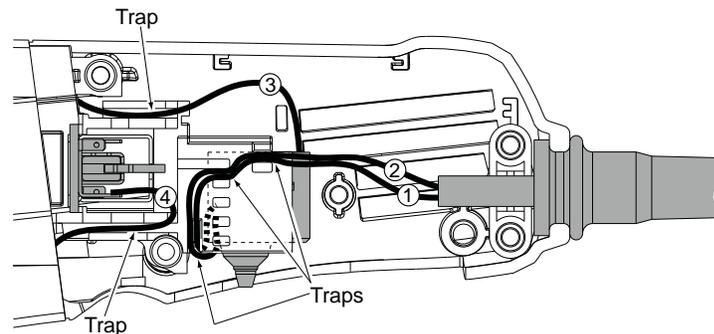
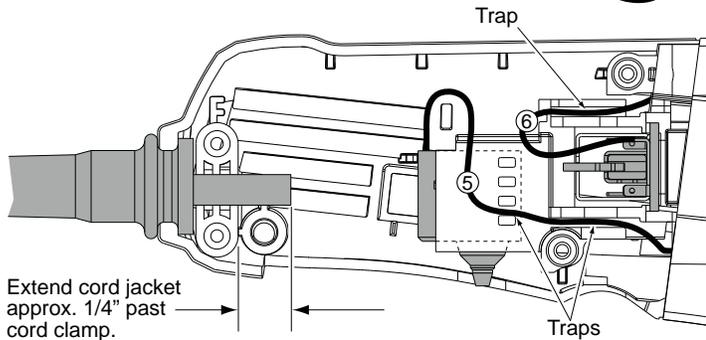
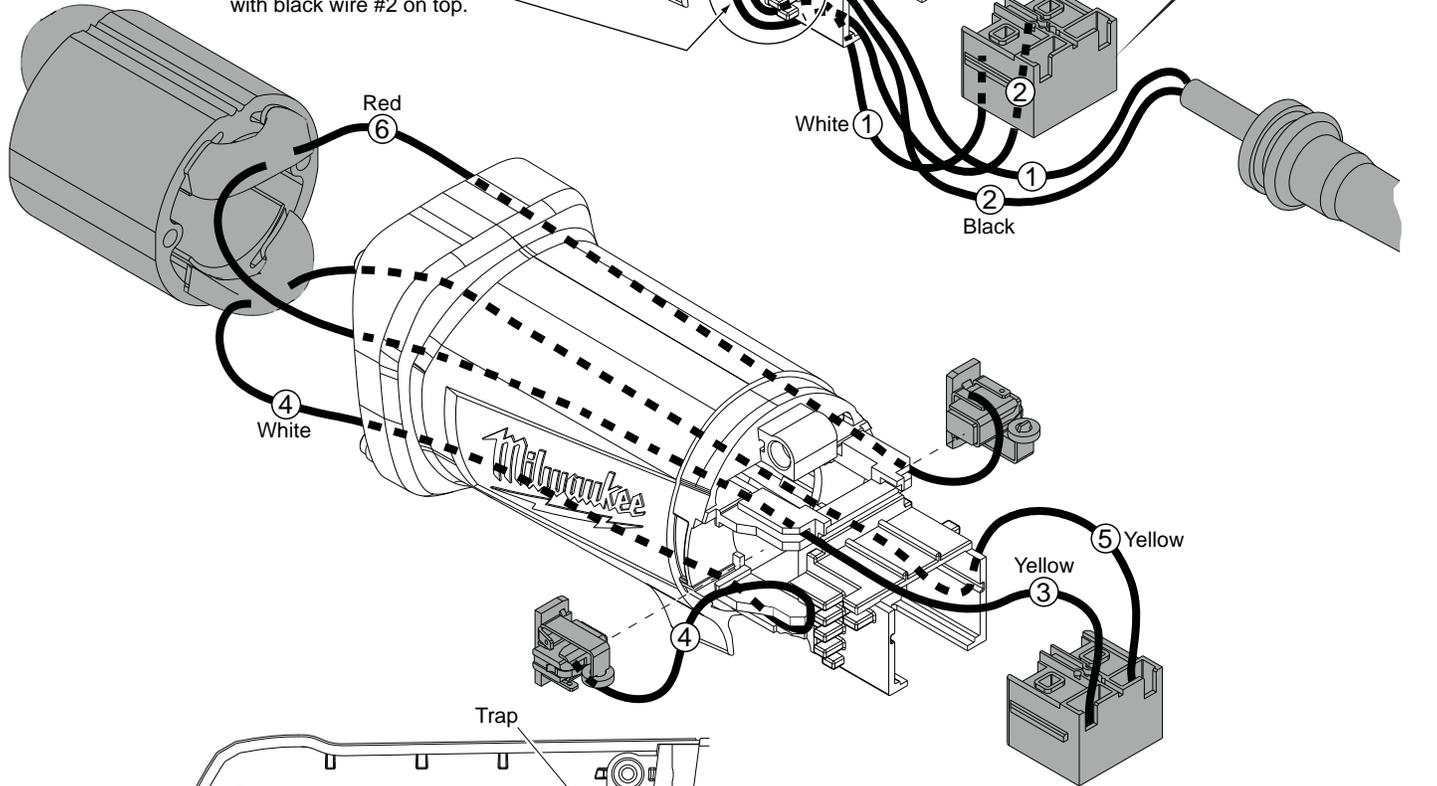
- 1 Torque Armature Nut (1) to 47 in/lbs, 55 kg/cm.
- 7 There are 2 Lock Washers (7) that are utilized in the 14-29-0312 Gearcase Assembly (13). There are 4 Lock Washers used to help secure the Lower Gearcase Hub (49). There is a total quantity of 6. Reference illustration above and on page 1.
- 41 Orient the Needle Bearing (41) such that the side with the vendor I.D. is facing the Gear (50).
- 46 When replacing Spindle Lock Tube (46), apply a few drops of thread locking sealant to outside threads prior to installation. Torque Spindle Lock Tube to 12 in/lbs, 14 kg/cm.
- 47,50 Functionally check Spindle Lock mechanism. Spindle Lock Pin (47) must return briskly when released from engagement in Gear (50), reference illustration on first page.

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.



Cord leads #1 and #2 are to be routed through these traps (see detail below) with black wire #2 on top.



Be sure to push all trapped wires to the bottom of traps.

### WIRING SPECIFICATIONS

Wire No.	Wire Color	Origin or Part No.	Gauge	Length	Terminals, Connectors and End Wire Preparation
1	White	22-64-2020	--	--	Component of cord set.
2	Black	22-64-2020	--	--	Component of cord set.
3	Yellow	18-07-2300	--	--	Component of field.
4	White	18-07-2300	--	--	Component of field.
5	Yellow	18-07-2300	--	--	Component of field.
6	Red	18-07-2300	--	--	Component of field.

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		