

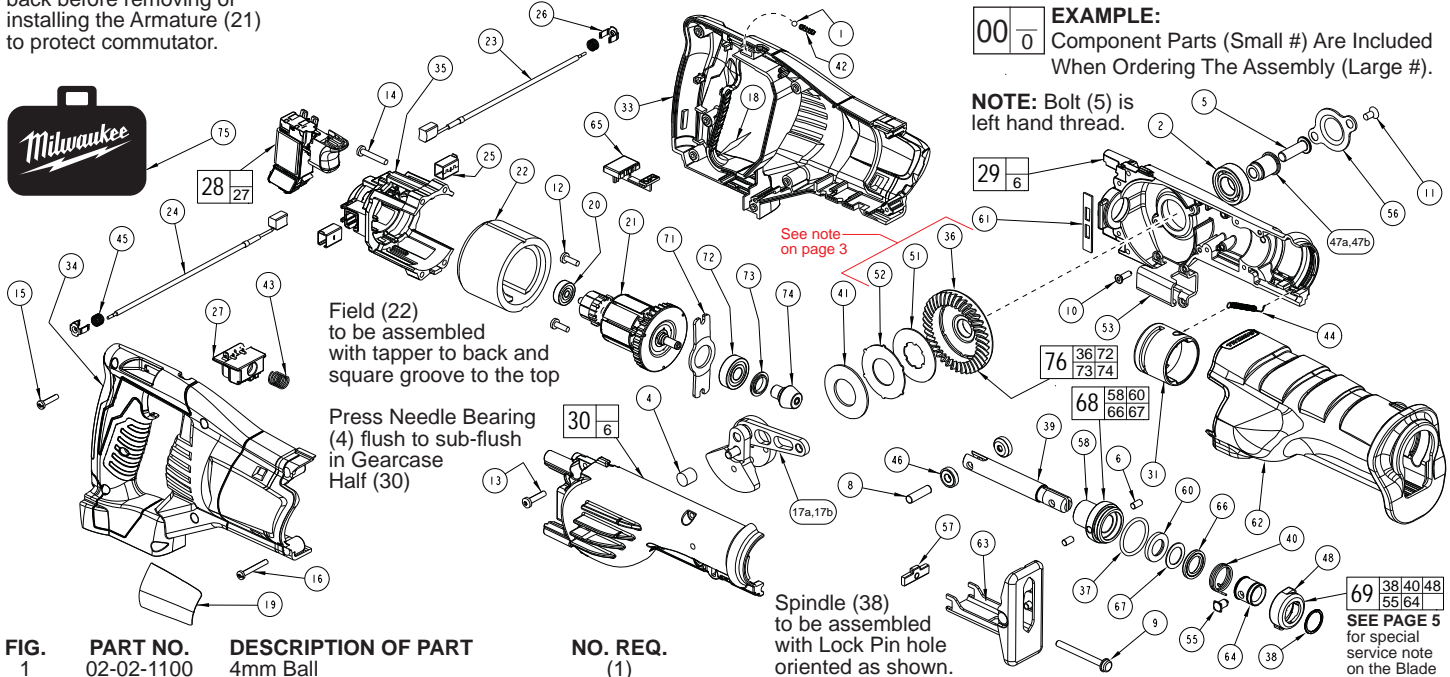


SERVICE PARTS LIST

BULLETIN NO.
54-40-2620

| | | | |
|--|---------|--|-----------|
| SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS | | REVISED BULLETIN | DATE |
| 18 Volt Sawzall® | | | Feb. 2011 |
| CATALOG NO. | 2620-20 | STARTING SERIAL NO. | B58A |
| | | WIRING INSTRUCTION SEE REVERSE SIDE | |

NOTE: Pull Brush Tubes (25) back before removing or installing the Armature (21) to protect commutator.

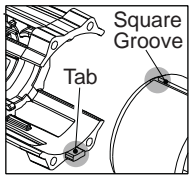


| FIG. | PART NO. | DESCRIPTION OF PART | NO. REQ. |
|------|------------|---|----------|
| 1 | 02-02-1100 | 4mm Ball | (1) |
| 2 | 02-04-1516 | Ball Bearing | (1) |
| 4 | 02-50-1640 | Needle Bearing | (1) |
| 5 | 06-08-0015 | 3/16" Hex Drive Hub Bolt - LH Thread | (1) |
| 6 | ----- | Pivot Pin | (2) |
| 8 | 06-65-2995 | Pin | (1) |
| 9 | 06-81-0065 | 10-32 x 2" Bolt | (1) |
| 10 | 06-82-3830 | 8-32 x 1/2" Csk Macine Screw | (3) |
| 11 | 06-82-3900 | 3/8" DG50 Thread Form Screw | (2) |
| 12 | 06-82-5316 | 8-32 x 1/2" Pan Hd. Taptite T-20 Screw | (2) |
| 13 | 06-82-5346 | 8-32 x 3/4" Pan Hd. Taptite T-20 Screw | (5) |
| 14 | 06-82-5362 | 8-32 x 1" Pan Hd. Taptite T-20 Screw | (4) |
| 15 | 06-82-7261 | 6-19 x 11/16" Pan Hd. Slit. Plast. T-15 | (6) |
| 16 | 06-82-7290 | 6-19 x 1-1/8" Pan Hd. Slit. Plast. T-15 | (2) |
| 17a | ----- | Crank Assembly with flat surface on Drive Hub - Left Hand Thread (Order Service Kit No. 14-09-0181) | (1) |
| 17b | 14-09-0182 | Crank Assembly with counterbore in Drive Hub - Left Hand Thread | (1) |
| 18 | 10-15-0955 | Warning Label | (1) |
| 19 | 12-20-2620 | Service Nameplate Kit | (1) |
| 20 | 02-04-5130 | Ball Bearing | (1) |
| 21 | 16-01-0025 | Service Armature with Fan | (1) |
| 22 | 18-01-0070 | Service Field | (1) |
| 23 | 22-18-0110 | Carbon Brush Assembly - Black | (1) |
| 24 | 22-18-0135 | Carbon Brush Assembly - Red | (1) |
| 25 | 22-20-0860 | Brush Tube | (2) |
| 26 | 22-32-0400 | Brush Spring Clip | (2) |
| 27 | 22-56-0025 | Terminal Block Assembly | (1) |
| 28 | 23-66-0284 | Switch | (1) |
| 29 | 28-14-0035 | Gearcase Assembly - Left | (1) |
| 30 | 28-14-0060 | Gearcase Assembly - Right | (1) |
| 31 | 31-11-0105 | Barrel Cam | (1) |
| 33 | 31-44-2620 | Handle - Left | (1) |
| 34 | 31-44-2625 | Handle - Right | (1) |
| 35 | 31-50-0040 | Motor Cage | (1) |
| 36 | ----- | Spiral Bevel Gear | (1) |
| 37 | 34-40-0035 | O-Ring | (1) |
| 38 | 34-60-3700 | Retaining Ring | (1) |
| 39 | 38-50-0260 | Spindle | (1) |
| 40 | ----- | Torsion Spring | (1) |
| 41 | 40-50-0595 | Disc Spring | (1) |
| 42 | 40-50-0930 | Compression Spring | (1) |
| 43 | 40-50-1090 | Compression Spring | (1) |
| 44 | 40-50-8805 | Extension Spring | (1) |
| 45 | 40-50-8840 | Brush Spring | (2) |
| 46 | 42-40-0020 | Spindle Pin Bushing | (2) |
| 47a | ----- | Spacer with flat surface (Order Service Kit No. 14-09-0181) | (1) |
| 47b | 42-40-0076 | Spacer with shoulder | (1) |
| 48 | ----- | Front Cam | (1) |
| 51 | 43-06-0025 | Metal Plate | (1) |

SPECIAL SERVICE NOTICE: When replacing Crank Assembly (17) and/or Spacer (47) be sure parts are compatible!

| Crank Assembly Drive Hub and Spacer with FLAT SURFACE | Crank Assembly Drive Hub with COUNTERBORE and Spacer with shoulder to fit |
|--|---|
| <p>Drive Hub Spacer (47a)</p> | <p>Drive Hub Spacer (47b)</p> |
| Individual parts not available. Order Service Kit No. 14-09-0181. | Individual parts (17b and 47b) can be ordered separately. |

| FIG. | PART NO. | DESCRIPTION OF PART | NO. REQ. |
|------|------------|-----------------------------------|----------|
| 52 | 43-06-0030 | Metal Plate | (1) |
| 53 | 43-56-0035 | Orbit Slot | (1) |
| 55 | 44-60-1750 | Lock Pin | (1) |
| 56 | 44-66-0280 | Bearing Retaining Plate | (1) |
| 57 | 44-66-0285 | Retaining Plate | (1) |
| 58 | ----- | Front Bushing Carrier | (1) |
| 60 | ----- | Felt Seal | (1) |
| 61 | 45-06-0790 | Seal | (1) |
| 62 | 45-12-0025 | Gearcase Insulator | (1) |
| 63 | 45-16-0025 | Shoe Assembly | (1) |
| 64 | 45-22-0175 | Sleeve | (1) |
| 65 | 45-24-0045 | Shuttle Switch | (1) |
| 66 | ----- | Bushing Cap | (1) |
| 67 | ----- | Washer | (1) |
| 68 | 38-50-6490 | Front Bushing Carrier Assembly | (1) |
| 69 | 42-68-1200 | Blade Clamp Assembly (See Page 5) | (1) |
| 71 | 44-66-5335 | Bearing Retainer Plate | (1) |
| 72 | 02-04-0999 | Ball Bearing | (1) |
| 73 | 45-28-0025 | Grease Slinger | (1) |
| 74 | ----- | Pinion Gear | (1) |
| 75 | 42-55-2620 | Accessory Carrying Case | (1) |
| 76 | 14-29-0360 | Gear Assembly | (1) |



IMPORTANT

Field (22) to be assembled with taper to back and square groove to the top.

Motor Cage (35) must be oriented with tab to the bottom.

Caution: When removing Right Handle Half (34), not shown. The 4mm Steel Ball (1) may be dislodged from Switch Shuttle (65) by Spring (42).

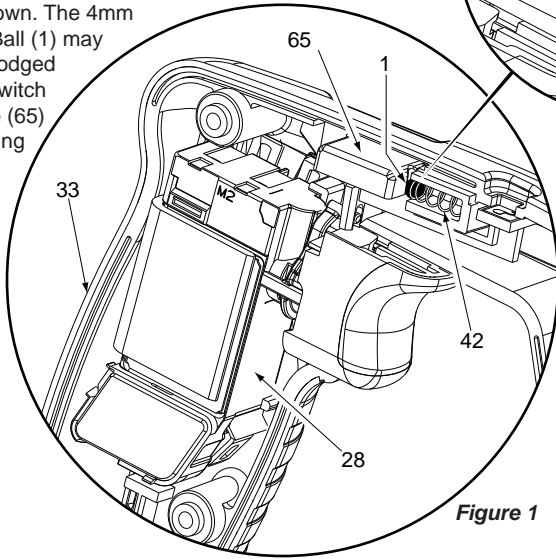
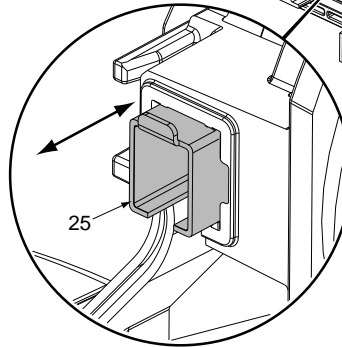
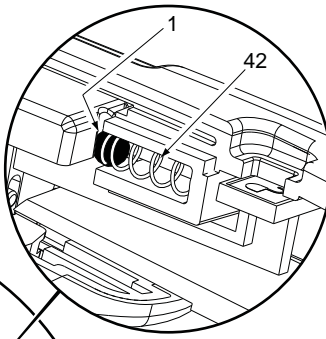


Figure 1



Before installing or removing Armature, to prevent damage to the brush tubes or commutator, push / move Brush Tubes (25) flush to inside brush tube openings of Motor Cage (35) prior to removing the Armature from Motor Cage (25) / Field (22).

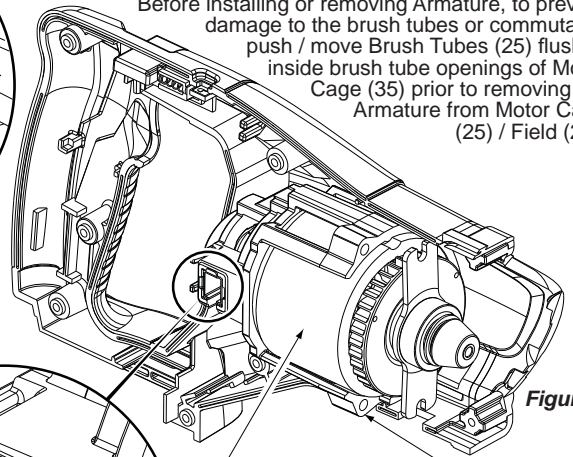
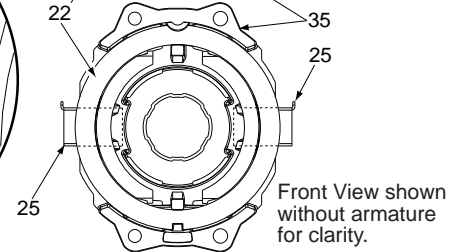
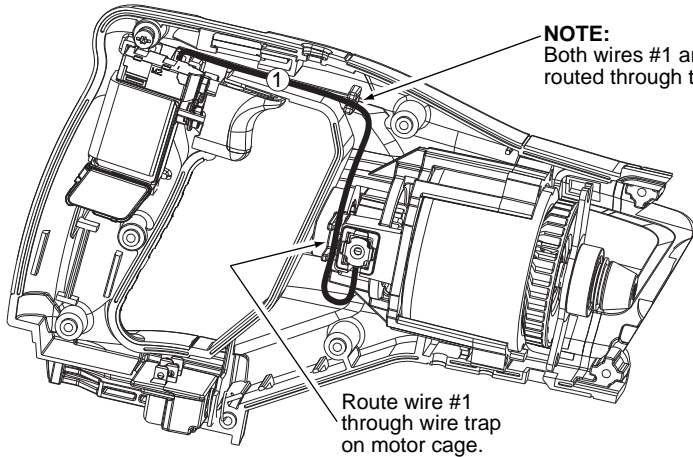


Figure 2



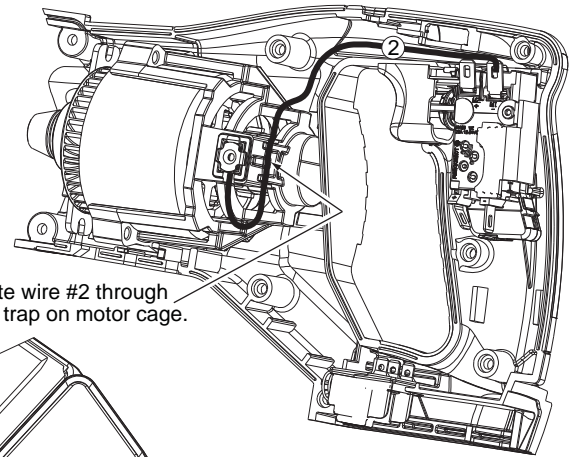
Front View shown without armature for clarity.

WIRING INSTRUCTIONS

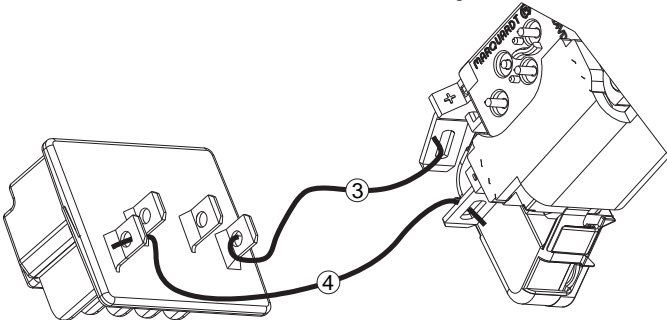


Route wire #1 through wire trap on motor cage.

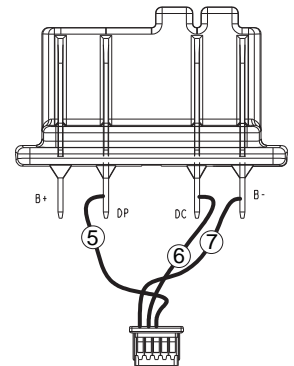
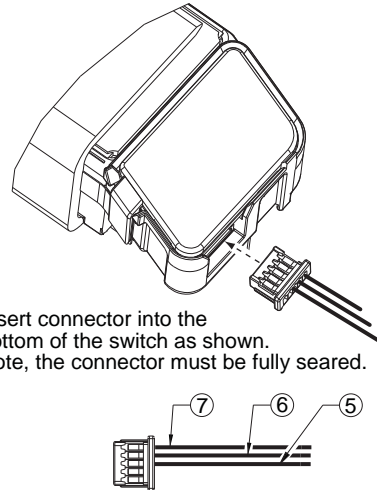
NOTE: Both wires #1 and #2 are to be routed through this wire trap.



Route wire #2 through wire trap on motor cage.



Insert connector into the bottom of the switch as shown. Note, the connector must be fully seated.



WIRING SPECIFICATIONS

| Wire No. | Wire Color | Origin or Gauge | Length | Terminals, Connectors and 1 or 2 End Wire Preparation |
|----------|------------|-----------------|--------|---|
| 1 | Red | 22-18-0135 | ----- | Carbon Brush Assembly - right side. |
| 2 | Black | 22-18-0110 | ----- | Carbon Brush Assembly - left side. |
| 3 | Red | 22-56-0025 | ----- | Component of the Terminal Block Assembly. |
| 4 | Black | 22-56-0025 | ----- | Component of the Terminal Block Assembly. |
| 5 | White | 22-56-0025 | ----- | Component of the Terminal Block Assembly. |
| 6 | Red | 22-56-0025 | ----- | Component of the Terminal Block Assembly. |
| 7 | Black | 22-56-0025 | ----- | Component of the Terminal Block 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.

NOTE:
Crank Assembly Pin (7) is sub flush to top of Counter Balance (50) in Crank Shaft Assembly (17).

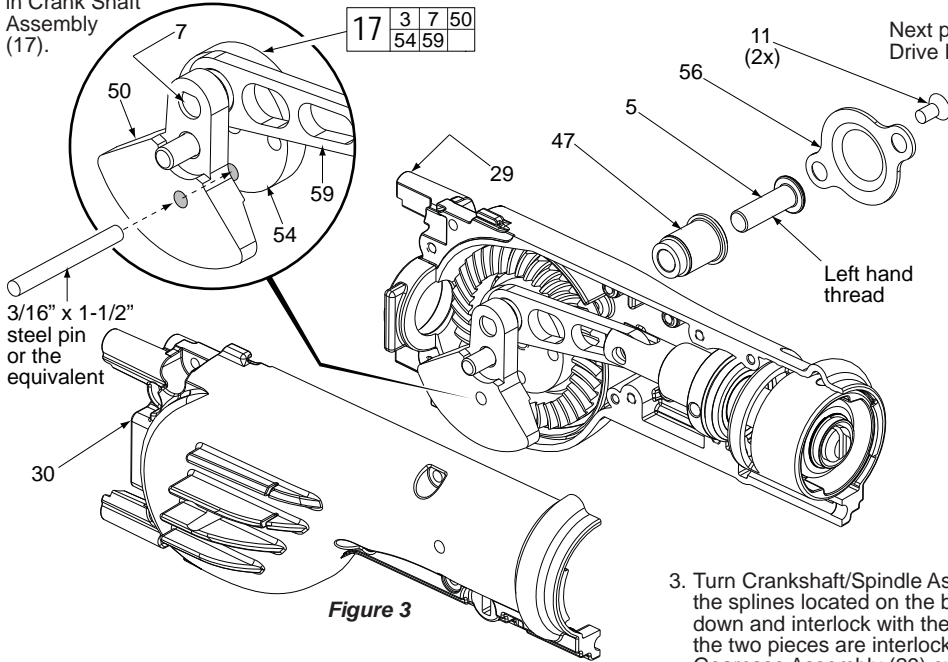


Figure 3

Remove Crank Assembly (17) from Left Gearcase Assembly (29) by separating / removing Right Housing Half (30). Remove Bearing Retaining Plate Screws (11) and Bearing Plate (56) from Left Gearcase Assembly (29). Place a 3/16" diameter x 1-1/2" long steel rod down through the opening in the Counter Balance Assembly (50) until it bottoms out through the 3/16" hole in the Drive Hub (54).

Next place a 3/16 hex key into Drive Hub Bolt (5) and turn Drive Hub Bolt slowly in a clockwise direction until 3/16" steel pin rest against Connecting Rod (59). 3/16" hex key can now be turned clockwise to loosen and remove Left Hand Drive Hub Bolt (5).

When reinstalling / tightening Left Hand Drive Hub Bolt (5):

1. Place lubricated Gear Assembly (36, 41, 51 & 52) into Left Gearcase Assembly (29). See Figure 2 on page 2 for assembly instructions with correct Disc/Plate orientation).
2. Position assembled Spindle/Crank Assembly (17, 39, 8, 46, 53, 68, 37 & 69) into Left Gearcase. (Spindle components should be pre-lubricated with a light coating of grease prior to reassembly). *It is also beneficial to have the Barrel Cam (31) and Extension Spring (44) installed in Left Gearcase (29).* Once the Spindle/Crank Assembly is in the Left Gearcase, position/seat the Front Bushing Carrier (58) over Pivot Pin (6) that's pressed into Left Gearcase Assembly. Secure Orbit Slot (53) to the Left Gearcase Assembly using the three Screws (10) removed in disassembly.

3. Turn Crankshaft/Spindle Assembly by hand, applying a downward pressure until the splines located on the bottom of the Crank Assembly Drive Hub (54) drop down and interlock with the splined notches in the I.D. of Metal Plate (51). Once the two pieces are interlocked together, hold the assembly down tight and turn Gearcase Assembly (29) over to enable the Left Handed Drive Bolt (5) and Spacer (47) to be slid through Ball Bearing (2). (*Before installing Drive Hub Bolt (5) be sure to apply Blue Loctite® to bolt threads.*) Place the 3/16" x 1-1/2" long steel rod used in disassembly, back through the Counter Balance of Crankshaft Assembly (17) and slowly turn Left Handed Drive Bolt (5) in a counter-clockwise direction until 3/16" long steel rod rests against Connecting Rod (59). Before tightening Drive Hub Bolt (5), make sure the raised notches located on the O.D. of Metal Plate (52) are engaged with corresponding recess in Spiral Bevel Gear (36), see Figure 4. Using an inch pound torque wrench and a 3/16" hex key, torque Drive Hub Bolt (5) to 190 in./lbs. or bolt can be tightened using a foot pound torque wrench to 15-16 ft./lbs.

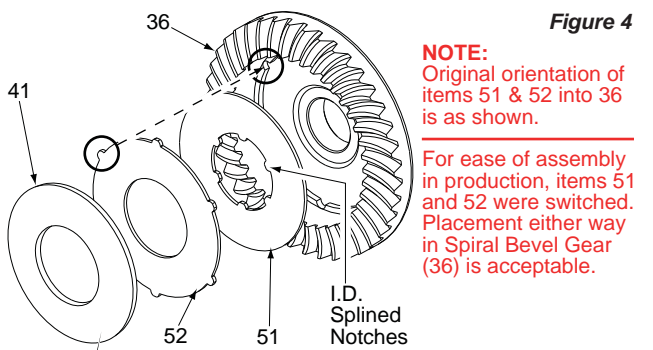
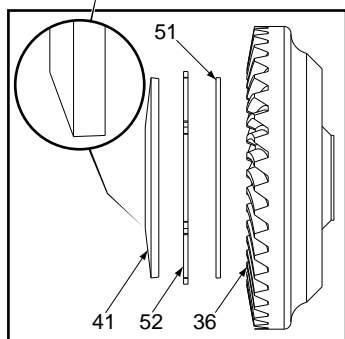


Figure 4

NOTE:
Original orientation of items 51 & 52 into 36 is as shown.

For ease of assembly in production, items 51 and 52 were switched. Placement either way in Spiral Bevel Gear (36) is acceptable.



IMPORTANT:
Concave side of Disc Spring (41) must face toward Metal Plates (51,52) and Gear (36).

Be sure that notches on Metal Plate (52) engage with corresponding recesses in Spiral Gear (36).

NOTE:
Do not wash Crank Assembly (17) in solvent solutions; wipe off only using a clean, dry lint free Cloth.

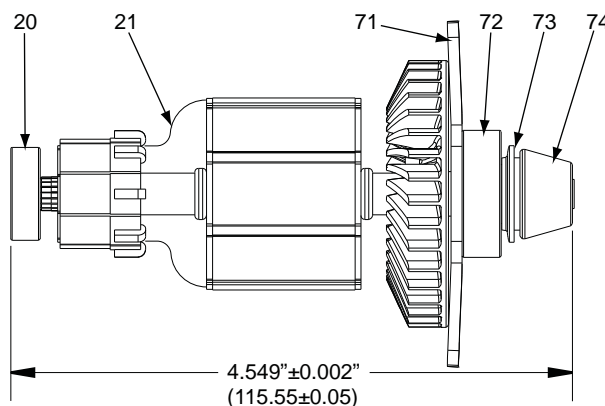
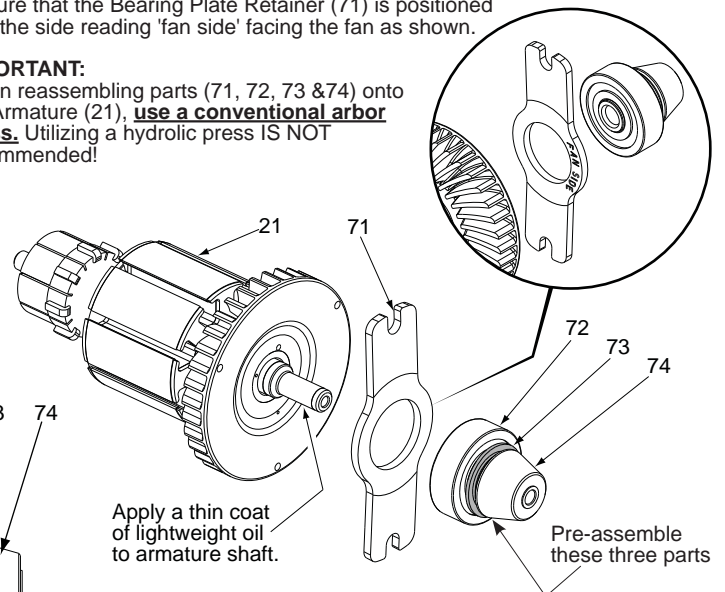
NOTE:

To achieve the proper press dimension shown below, pre-assemble / press together Ball Bearing (72), Grease Slinger (73) and Pinion Gear (74) prior to assembly onto the Armature (21).

Place a thin coat of lightweight oil onto the fan end of the armature shaft to aid in the pressing of the pre-assembled parts. Prior to assembly with the Armature, be sure that the Bearing Plate Retainer (71) is positioned with the side reading 'fan side' facing the fan as shown.

IMPORTANT:

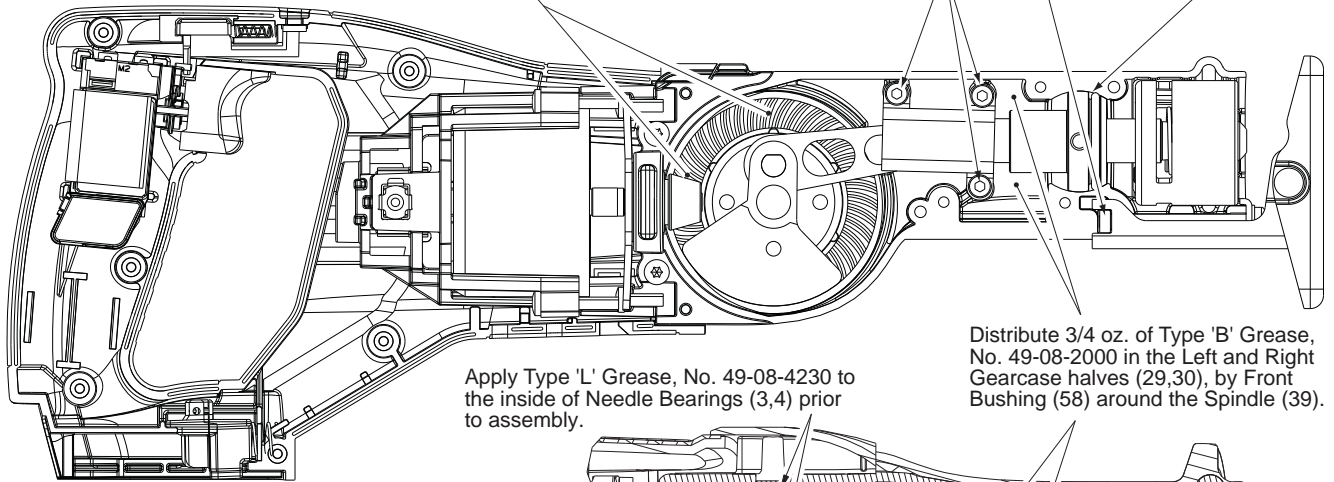
When reassembling parts (71, 72, 73 & 74) onto the Armature (21), use a conventional arbor press. Utilizing a hydraulic press IS NOT recommended!



Coat front bushing pocket area in both Gearcase Halves (29,30) with a light film of Type 'B' Grease prior to assembly.

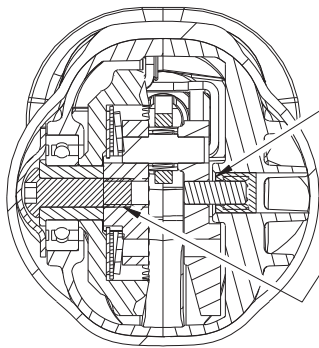
Distribute 1 oz. of Type 'L' Grease on top of Spiral Bevel Gear (36) and at Gear/Connection Rod (59) interface.

Apply Green Loctite® 620 or equivalent to threads of Orbit Slot Screws (10) and inside threads of Retaining Plate (57).



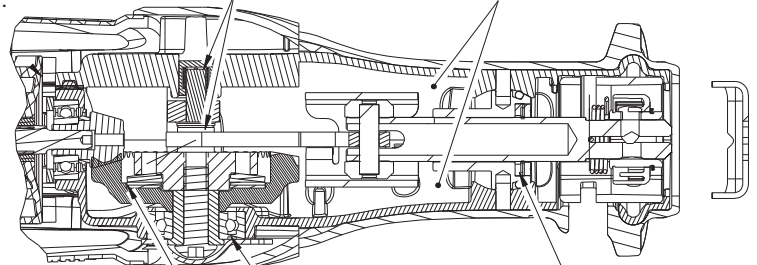
Apply Type 'L' Grease, No. 49-08-4230 to the inside of Needle Bearings (3,4) prior to assembly.

Distribute 3/4 oz. of Type 'B' Grease, No. 49-08-2000 in the Left and Right Gearcase halves (29,30), by Front Bushing (58) around the Spindle (39).



Press Needle Bearing (4) .030" minimum subflush.

Apply Green Loctite® 620 or equivalent to threads of LH Drive Hub Bolt (5).

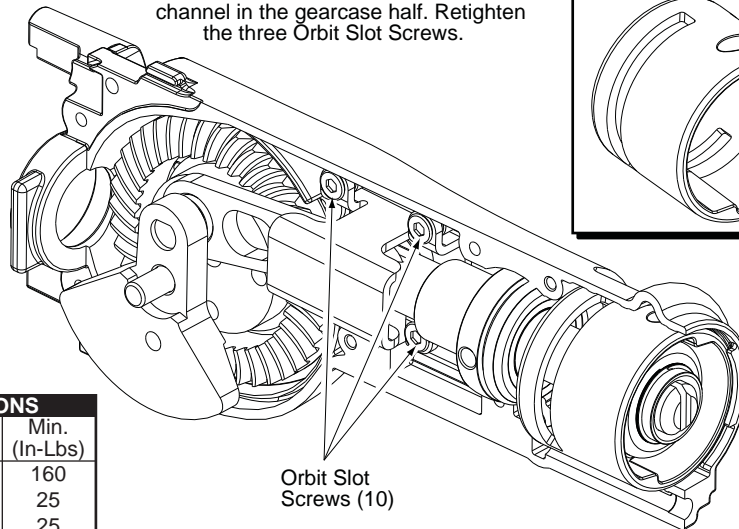
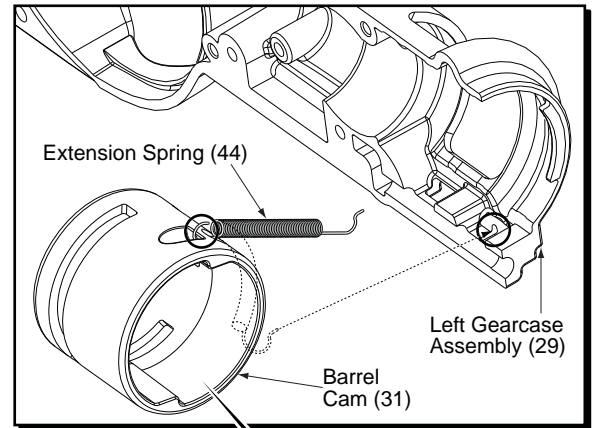


Bearing seal direction

Apply Type 'L' Grease to all rubbing surfaces in clutch: Disc Spring (41) and Metal Plates (51,52).

Prior to assembly, saturate the Felt Seal (60) with a lightweight oil.

As an aid to install Extension Spring (44), assemble gearcase components as shown. Loosen but do not remove the three Orbit Slot Screws (10). This will allow for the front end assembly, including the Barrel Cam (31) to pivot away from the Left Gearcase (29). There should be enough room to attach the Extension Spring to the top recess area in the Barrel Cam and small hole in the bottom front of the Left Gearcase. Spring should wrap around the side of the Barrel Cam and rest inside channel in the gearcase half. Retighten the three Orbit Slot Screws.



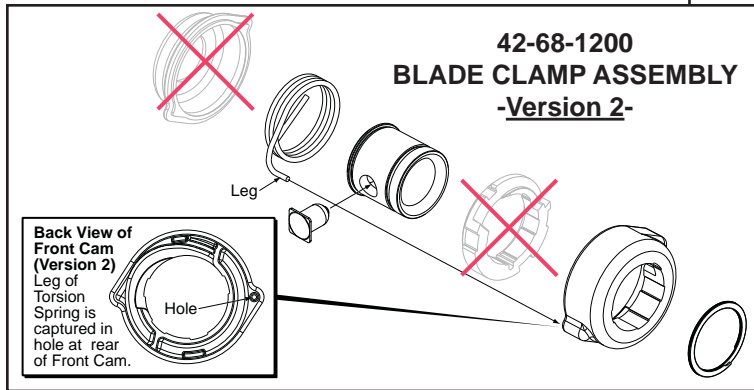
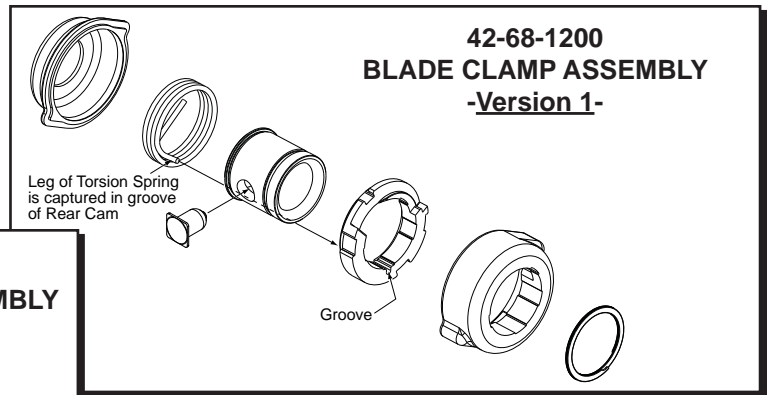
Orbit Slot Screws (10)

TORQUE SPECIFICATIONS

| Fig. | Part No. | Max. (In-Lbs) | Min. (In-Lbs) |
|------|------------|---------------|---------------|
| 5 | 06-08-0015 | 190 | 160 |
| 9 | 06-81-0065 | 30 | 25 |
| 10 | 06-82-3830 | 35 | 25 |
| 11 | 06-82-3900 | 40 | 30 |
| 12 | 06-82-5316 | 35 | 25 |
| 13 | 06-82-5346 | 35 | 25 |
| 14 | 06-82-5362 | 15 | 10 |
| 15 | 06-82-7261 | 20 | 10 |
| 16 | 06-82-7290 | 20 | 10 |

SERVICE NOTE:

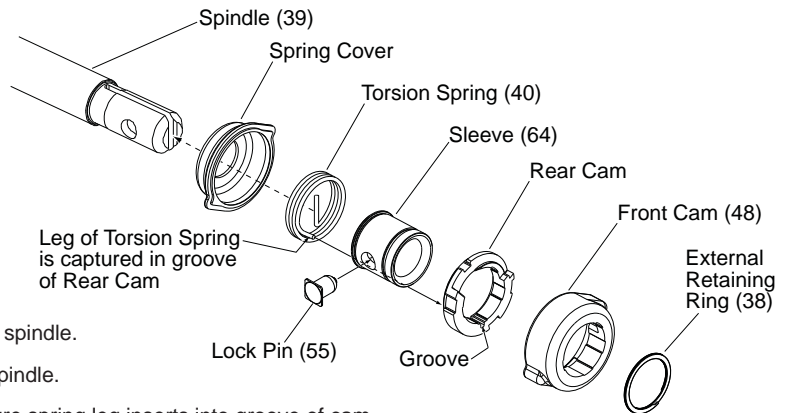
There are two versions of the 42-68-1200 Blade Clamp Assembly. Although Version 2 has two fewer parts, Version 1 and Version 2 are completely interchangeable.

**REMOVING THE STEEL QUIK-LOK® BLADE CLAMP - VERSION 1**

- Remove external retaining ring (38) and pull front cam (48) off.
- Pull lock pin (55) out and remove remainder of parts and discard.

REASSEMBLY OF THE STEEL QUIK-LOK® BLADE CLAMP

- Coat new lock pin with powdered graphite.
- Hold tool in a vertical position.
- Place spring cover onto spindle.
- Slide torsion spring (40) onto spindle with spring leg on hole side of spindle.
- Slide sleeve (64) onto spindle aligning hole on sleeve with hole in spindle.
- Slide rear cam over sleeve until it bottoms on sleeve shoulder, ensure spring leg inserts into groove of cam.
- Rotate rear cam in the direction of the arrows located on spring cover until there is clearance for lock pin (55) to be inserted into sleeve/spindle holes. Insert lock pin.
- Align front cam (48) inner ribs with rear cam outer slots and slide front cam onto sleeve until it bottoms. Retaining ring groove should be completely visible.
- Attach retaining ring (38) by separating coils and inserting end of ring into groove, then wind remainder of ring into groove. Ensure ring is seated in groove.
- Blade clamp should rotate freely. During normal usage, debris may not allow blade clamp to rotate freely. The use of spray lubricant can help free blade clamp. In extreme conditions, follow these instructions to remove, clean and reassemble blade clamp.

**REMOVING THE STEEL QUIK-LOK® BLADE CLAMP - VERSION 2**

- Remove external retaining ring (38) and pull front cam (48) off.
- Pull lock pin (55) out and remove remainder of parts and discard.

REASSEMBLY OF THE STEEL QUIK-LOK® BLADE CLAMP

- Coat new lock pin with powdered graphite.
- Hold tool in a vertical position.
- Slide torsion spring (40) onto spindle with spring leg on hole side of spindle.
- Slide sleeve (64) onto spindle aligning hole on sleeve with hole in spindle.
- Insert lock pin.
- Slide front cam (48) onto sleeve and insert leg of spring (40) into small hole in the back of the cam (see detail above) until it bottoms. Retaining ring groove on the sleeve (64) should be completely visible.
- Attach retaining ring (38) by separating coils and inserting end of ring into groove, then wind remainder of ring into groove. Ensure ring is seated in groove.
- Blade clamp should rotate freely. During normal usage, debris may not allow blade clamp to rotate freely. The use of spray lubricant can help free blade clamp. In extreme conditions, follow these instructions to remove, clean and reassemble blade clamp.

