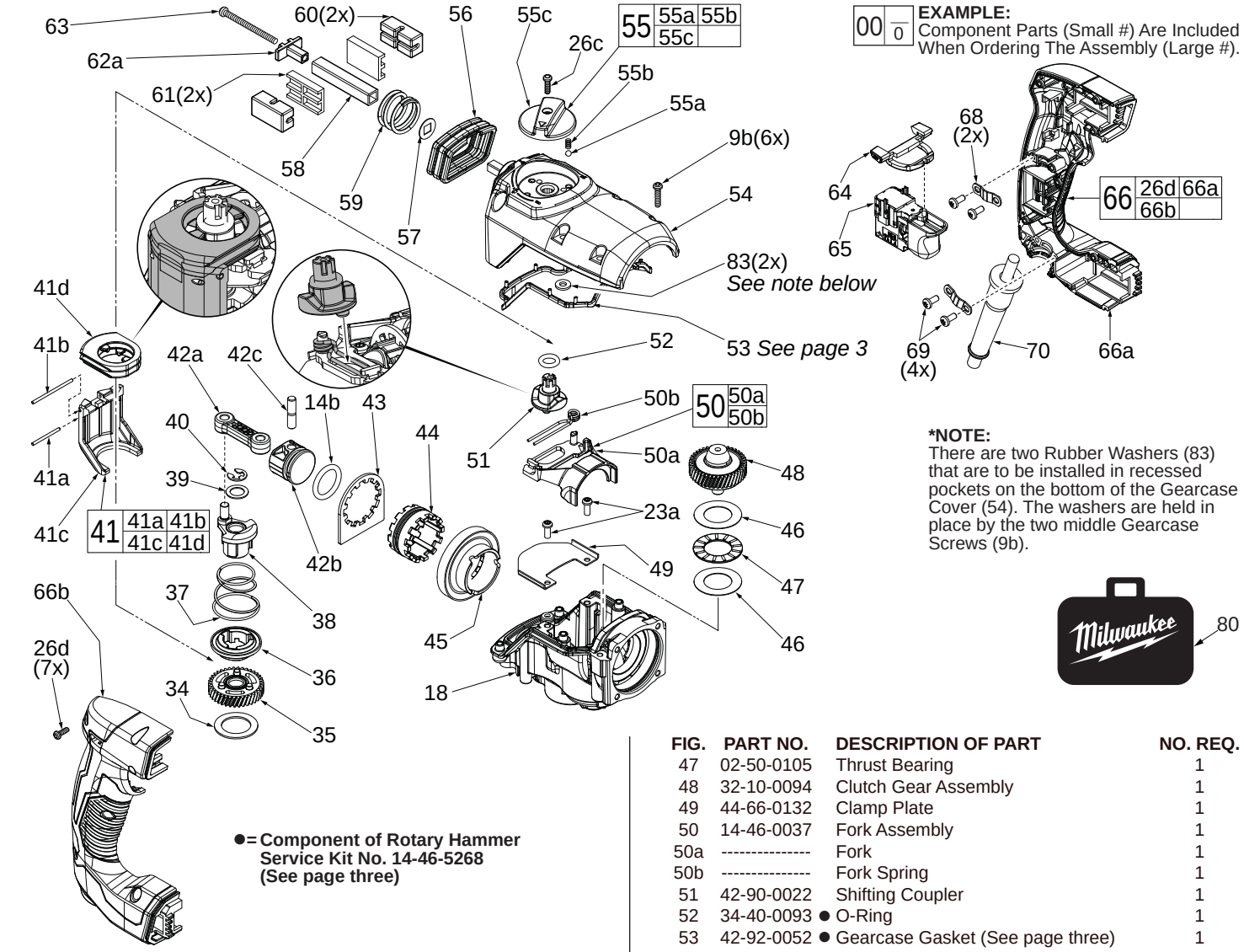
# SERVICE PARTS LIST

**BULLETIN NO. 54-24-0075**

| SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS | REVISED BULLETIN | |
|---|---|---|
| **1-1/8" (3Kg) SDS Rotary Hammer** | | |
| **CATALOG NO. 5268-21** STARTING SERIAL NO. **F82A** | WIRING INSTRUCTION **SEE PAGE 5** | |

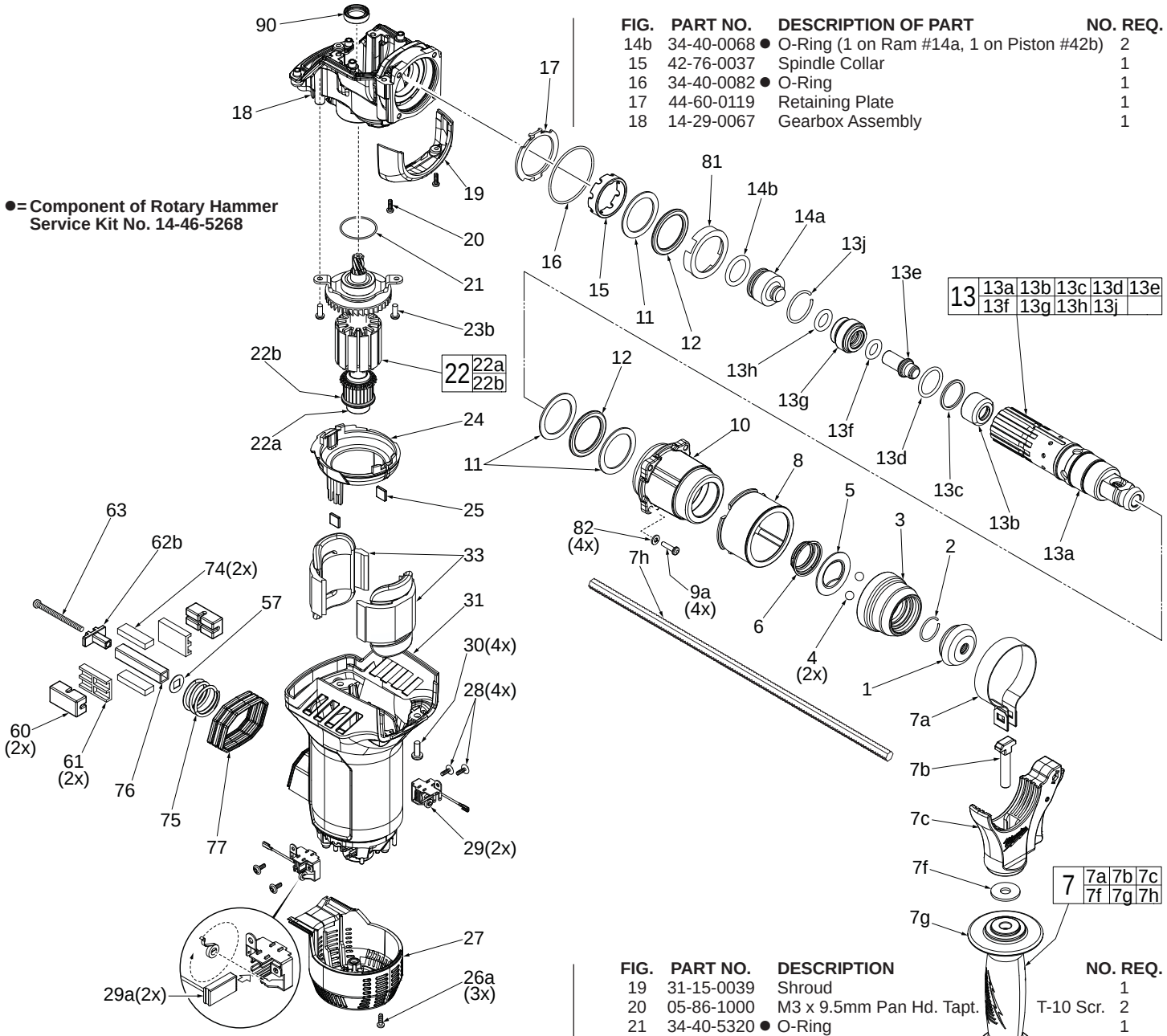



***NOTE:**
There are two Rubber Washers (83) that are to be installed in recessed pockets on the bottom of the Gearcase Cover (54). The washers are held in place by the two middle Gearcase Screws (9b).

**●= Component of Rotary Hammer Service Kit No. 14-46-5268 (See page three)**

| FIG. | PART NO. | DESCRIPTION OF PART | NO. REQ. |
|---|---|---|---|
| 9b | 06-75-2408 | M4 x 17mm Pan Hd. Taptite T-20 w/Nylok | 6 |
| 14b | 34-40-0068 | O-Ring (1 on Piston #42b, 1 on Ram #14a) | 2 |
| 18 | 14-29-0067 | Gearbox Assembly | 1 |
| 23a | 05-78-0105 | M4 x 10mm Pan Hd. Taptite Screw | 2 |
| 26c | 06-82-2025 | M3.5 x 16mm Pan Hd. Plastite T-10 Screw | 1 |
| 26d | 05-88-1610 | M3.5 x 10mm Pan Hd. Plastite T-10 Screw | 7 |
| 34 | 45-88-0106 | Washer | 1 |
| 35 | 32-60-0042 | Crank Gear Assembly with Needle Bearing | 1 |
| 36 | 44-90-0152 | Crank Shift Ring | 1 |
| 37 | 40-50-0107 | Crank Spring | 1 |
| 38 | 14-09-0110 | Crank Assembly | 1 |
| 39 | 44-66-0122 | Crank Shim | 1 |
| 40 | 42-70-5268 ● | Retaining E-Ring | 1 |
| 41 | 14-46-0117 | Chisel Shifter Assembly | 1 |
| 41a | ---------- | M2 x 27mm Dowel Pin | 1 |
| 41b | ---------- | M2 x 40mm Dowel Pin | 1 |
| 41c | ---------- | Chisel Bracket | 1 |
| 41d | ---------- | Chisel Shift Driver | 1 |
| 42a | 44-94-0022 | Connecting Rod | 1 |
| 42b | 44-62-0302 | Piston | 1 |
| 42c | 44-60-0147 | Wrist Pin | 1 |
| 43 | 44-66-0303 | Locking Plate | 1 |
| 44 | 44-90-0127 | Shift Ring | 1 |
| 45 | 32-05-0202 | Bevel Gear | 1 |
| 46 | 45-88-0112 | Thrust Washer | 2 |

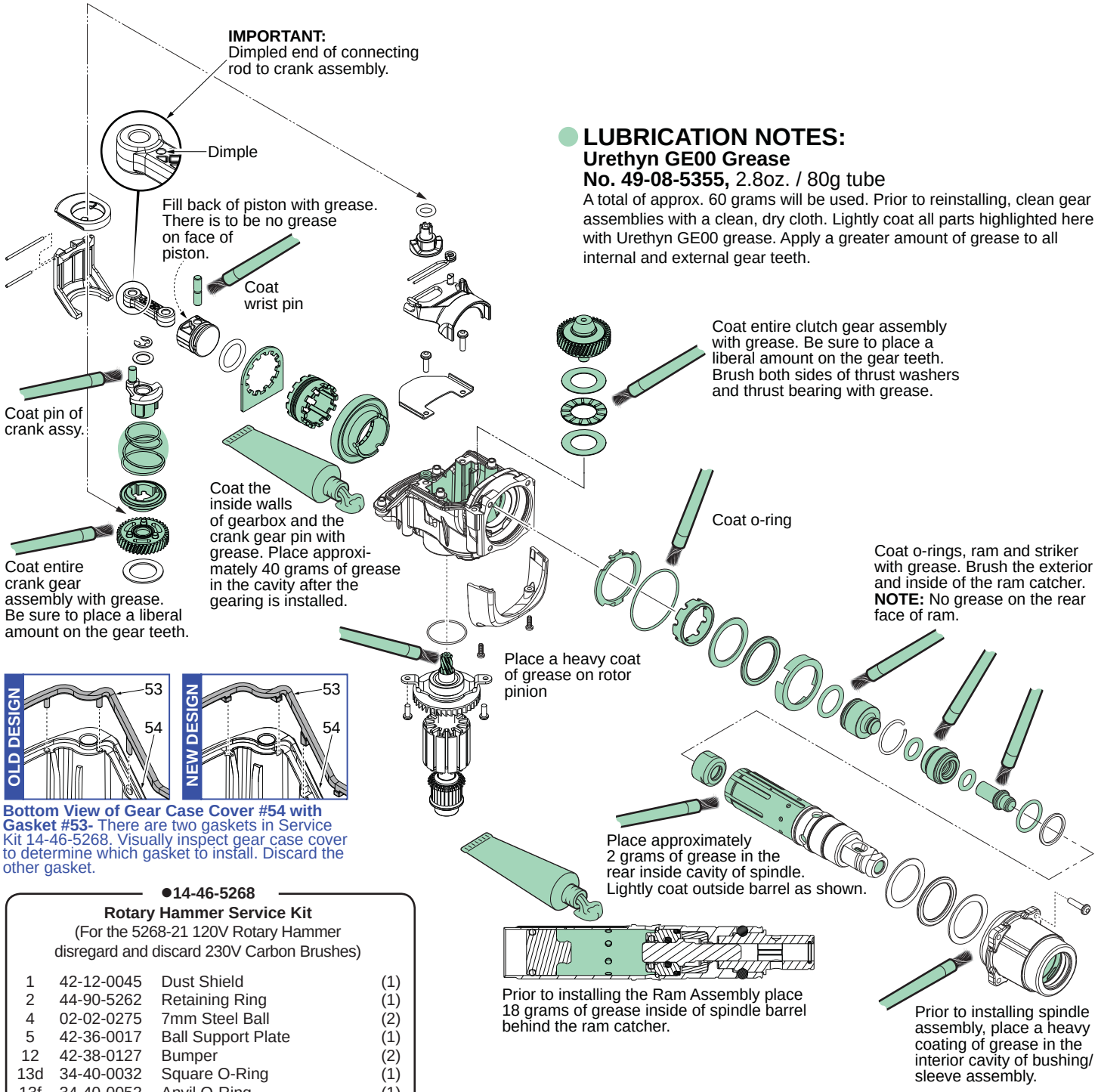
| FIG. | PART NO. | DESCRIPTION OF PART | NO. REQ. |
|---|---|---|---|
| 47 | 02-50-0105 | Thrust Bearing | 1 |
| 48 | 32-10-0094 | Clutch Gear Assembly | 1 |
| 49 | 44-66-0132 | Clamp Plate | 1 |
| 50 | 14-46-0037 | Fork Assembly | 1 |
| 50a | ---------- | Fork | 1 |
| 50b | ---------- | Fork Spring | 1 |
| 51 | 42-90-0022 | Shifting Coupler | 1 |
| 52 | 34-40-0093 ● | O-Ring | 1 |
| 53 | 42-92-0052 ● | Gearcase Gasket (See page three) | 1 |
| 54 | 28-20-0182 | Gearcase Cover | 1 |
| 55 | 44-10-0057 | Selector Knob Assembly | 1 |
| 55a | ---------- | Selector Ball | 1 |
| 55b | ---------- | Selector Spring | 1 |
| 55c | ---------- | Selector Knob | 1 |
| 56 | 22-90-0132 | Top Grommet | 1 |
| 57 | 45-88-0152 | Vibration Washer (1 each for top & bottom AVS) | 2 |
| 58 | 44-20-0141 | Top AVS Square Guide Pipe | 1 |
| 59 | 40-50-0211 | Top AVS Spring | 1 |
| 60 | 42-38-0077 | Vibration Bumper (2 each for top & bottom AVS) | 4 |
| 61 | 42-38-0137 | Bumper Holder (2 each for top & bottom AVS) | 4 |
| 62a | 42-36-0032 | Retaining Plate (Top AVS) | 1 |
| 63 | 05-78-0012 | M4 x 52mm Scr. (1 each for top & bottom AVS) | 2 |
| 64 | 42-42-0053 | Forward/Reverse Button | 1 |
| 65 | 23-66-0027 | On-Off Switch | 1 |
| 66 | 14-34-0107 | Handle Assembly | 1 |
| 66a | ---------- | Left Handle Halve | 1 |
| 66b | ---------- | Right Handle Halve | 1 |
| 68 | 42-68-0601 | Power Cord Clamp | 2 |
| 69 | 05-78-5313 | M4 x 9.5mm Pan Hd. Plastite T-15 Screw | 4 |
| 70 | 22-64-0032 | 120V Power Cord Assembly | 1 |
| 80 | 42-55-5268 | Blow Molded Carrying Case | 1 |
| 83 | 45-88-0014 ● | Rubber Washer | 2 |




● = Component of Rotary Hammer Service Kit No. 14-46-5268

| FIG. | PART NO. | DESCRIPTION OF PART | NO. REQ. |
|---|---|---|---|
| 1 | 45-12-0045 ● | Dust Shield | 1 |
| 2 | 44-90-5262 ● | Retaining Ring | 1 |
| 3 | 45-22-0062 | Collar with Steel Insert | 1 |
| 4 | 02-02-0275 ● | 7mm Steel Ball | 2 |
| 5 | 42-36-0017 ● | Ball Support Plate | 1 |
| 6 | 40-50-0082 | Conical Spring | 1 |
| 7 | 14-34-0015 | Side Handle Assembly | 1 |
| 7a | 44-66-0072 | Clamp Collar | 1 |
| 7b | 05-81-5376 | M8 x 53mm Screw | 1 |
| 7c | ---------- | Side Handle Carrier Assembly | 1 |
| 7f | 45-88-5377 | Washer | 1 |
| 7g | 31-05-5383 | Side Handle | 1 |
| 7h | 44-94-5381 | Depth Rod | 1 |
| 8 | 45-22-0045 | Side Handle Sleeve | 1 |
| 9a | 05-78-5316 | M4 x 14mm Pan Hd. Taptite T-20 Screw | 4 |
| 10 | 42-40-0027 | Bushing Sleeve Assembly with Seals | 1 |
| 11 | 45-88-0157 | Washer | 3 |
| 12 | 42-38-0127 ● | Bumper | 2 |
| 13 | 14-46-0197 | Spindle Assembly | 1 |
| 13a | 38-50-0052 | Spindle | 1 |
| 13b | 43-06-0060 | Brake Ring | 1 |
| 13c | 44-66-0203 | Anvil Ring | 1 |
| 13d | 34-40-0032 ● | Square O-Ring | 1 |
| 13e | 42-06-0027 | Anvil/Striker | 1 |
| 13f | 34-40-0052 ● | Anvil O-Ring | 1 |
| 13g | 42-06-0067 | Ram Catcher | 1 |
| 13h | 44-90-0032 ● | Back Pressure Ring | 1 |
| 13j | 34-60-0027 ● | Anvil Retaining Ring | 1 |
| 14a | 45-56-0065 | Ram | 1 |
| 14b | 34-40-0068 ● | O-Ring (1 on Ram #14a, 1 on Piston #42b) | 2 |
| 15 | 42-76-0037 | Spindle Collar | 1 |
| 16 | 34-40-0082 ● | O-Ring | 1 |
| 17 | 44-60-0119 | Retaining Plate | 1 |
| 18 | 14-29-0067 | Gearbox Assembly | 1 |

| FIG. | PART NO. | DESCRIPTION | NO. REQ. |
|---|---|---|---|
| 19 | 31-15-0039 | Shroud | 1 |
| 20 | 05-86-1000 | M3 x 9.5mm Pan Hd. Tapt. T-10 Scr. | 2 |
| 21 | 34-40-5320 ● | O-Ring | 1 |
| 22 | 14-50-0052 | 120V Armature Assembly | 1 |
| 22a | 02-04-5382 | Ball Bearing | 1 |
| 22b | 23-16-0092 | Commutator Insulator Disc | 1 |
| 23b | 05-78-0105 | M4 x 10mm Pan Hd. Taptite Screw | 2 |
| 24 | 31-05-0057 | Baffle | 1 |
| 25 | 42-28-0085 | Field Isolation Block | 2 |
| 26a | 05-88-1610 | M3.5 x 10mm Pan Hd. Plastite T-10 Screw | 3 |
| 27 | 23-44-0063 | Motor Housing/Brush Cover | 1 |
| 28 | 06-82-0062 | M3 x 8mm Pan Hd. Washer T-10 Screw | 4 |
| 29 | 22-20-0019 | 120V Carbon Brush Assembly | 2 |
| 29a | 22-18-5268 ● | 120V Carbon Brush (Set of 2) | 1 |
| 30 | 05-74-0990 | M5 x 15mm Pan Hd. Taptite T-25 Screw | 4 |
| 31 | 28-50-0107 | Motor Housing Assembly | 1 |
| 33 | 18-07-0097 | 120V Split Field | 1 |
| 57 | 45-88-0152 | Vibration Washer | 2 |
| 60 | 42-38-0077 | Vibration Bumper | 4 |
| 61 | 42-38-0137 | Bumper Holder | 4 |
| 62b | 44-66-0131 | Retaining Plate (Bottom AVS) | 1 |
| 63 | 05-78-0012 | M4 x 52mm Scr. (1 each for top & bottom AVS) | 2 |
| 74 | 44-52-0052 | Foam Block | 2 |
| 75 | 40-50-0138 | Bottom AVS Spring | 1 |
| 76 | 44-68-0155 | Bottom AVS Square Guide Pipe | 1 |
| 77 | 22-90-0152 | Bottom Grommet | 1 |
| 78 | 12-20-5268 | Service Nameplate (Not Shown) | 1 |
| 81 | 45-88-0042 | Bumper/Washer Holder | 1 |
| 82 | 05-90-0225 | Lock Washer | 4 |
| 90 | 45-06-0042 | Motor Seal | 1 |




## LUBRICATION NOTES:

**Urethyn GE00 Grease**
**No. 49-08-5355,** 2.8oz. / 80g tube

A total of approx. 60 grams will be used. Prior to reinstalling, clean gear assemblies with a clean, dry cloth. Lightly coat all parts highlighted here with Urethyn GE00 grease. Apply a greater amount of grease to all internal and external gear teeth.




**Bottom View of Gear Case Cover #54 with Gasket #53-** There are two gaskets in Service Kit 14-46-5268. Visually inspect gear case cover to determine which gasket to install. Discard the other gasket.

**●14-46-5268**
**Rotary Hammer Service Kit**
(For the 5268-21 120V Rotary Hammer disregard and discard 230V Carbon Brushes)

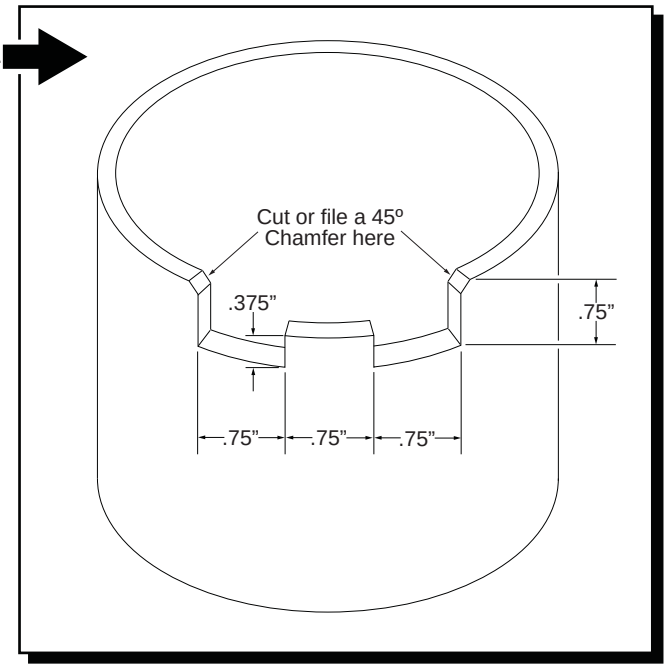
| | | | |
|---|---|---|---|
| 1 | 42-12-0045 | Dust Shield | (1) |
| 2 | 44-90-5262 | Retaining Ring | (1) |
| 4 | 02-02-0275 | 7mm Steel Ball | (2) |
| 5 | 42-36-0017 | Ball Support Plate | (1) |
| 12 | 42-38-0127 | Bumper | (2) |
| 13d | 34-40-0032 | Square O-Ring | (1) |
| 13f | 34-40-0052 | Anvil O-Ring | (1) |
| 13h | 44-90-0032 | Back Pressure Ring | (1) |
| 13j | 34-60-0027 | Anvil Retaining Ring | (1) |
| 14b | 34-40-0068 | O-Ring | (2) |
| 16 | 34-40-0082 | O-Ring | (1) |
| 21 | 34-40-5320 | O-Ring | (1) |
| 29a | 22-18-5268 | 120V Carbon Brush (Set of 2) For model 5268-21. | (1) |
| 29a | 22-18-5269 | 230V Carbon Brush (Set of 2) For model 5268-50. DISCARD | (1) |
| 40 | 42-70-5268 | Retaining E-Ring | (1) |
| 52 | 34-40-0093 | O-Ring | (1) |
| **53** | **42-92-0052** | **Gearcase Gasket** (See detail above) | **(1)** |
| **53** | **42-92-0053** | **Gearcase Gasket** (See detail above) | **(1)** |
| 83 | 45-88-0014 | Rubber Washer | (2) |
| | 58-22-5268 | Instruction Sheet | (1) |
| | 49-08-5355 | Urethyn GE00 Grease 60 grams required- (80 gram, 2.8oz tube) | (1) |

**NOTE:** It is recommended to order Motor Seal #90 (45-06-0042) at the same time that Rotary Hammer Service Kit No. 14-46-5268 is installed.

**SCREW TORQUE SPECIFICATIONS**

| FIG. | PART NO. | WHERE USED | SEAT TORQUE (KG/CM) | SEAT TORQUE (IN/LBS) |
|---|---|---|---|---|
| 9a | 05-78-5316 | Bushing Sleeve Assembly | 26 | 22.5 |
| 9b | 06-75-2408 | Gearcase Cover (4) Rear and Middle | 32 | 27.8 |
| 9b | 06-75-2408 | Gearcase Cover (2) Front | 32 | 27.8 |
| 20 | 05-86-1000 | Shroud | 12 | 10.5 |
| 23a | 05-78-0105 | Clamp Plate | 26 | 22.5 |
| 23b | 05-78-0105 | Rotor Bearing Plate | 33 | 28.5 |
| 26a | 05-88-1610 | Motor Housing/Brush Cover | 6.5 | 5.5 |
| 26c | 06-82-2025 | Selector Knob | 8.5 | 7.5 |
| 26d | 05-88-1610 | Right Handle Halve | 6.5 | 5.5 |
| 28 | 06-82-0062 | Carbon Brush Assembly | 5 | 4.5 |
| 30 | 05-74-0990 | Motor Housing Assembly | 33 | 28.5 |
| 63 | 05-78-0012 | Retaining Plate (Top and Bottom) | 20 | 17 |
| 69 | 05-78-5313 | Cord Clamps (Power Cord) | 14 | 12 |
| 69 | 05-78-5313 | Cord Clamps (Glass Fiber Tube) | 11 | 9.5 |
| | | Switch Screws | 5.5 | 4.5 |

**NOTE:** As an aid to working on the gearcase and spindle assemblies, a bench top fixture can be made from a 3.25" piece of 4" PVC pipe. The contour of the pipe can be cut according to dimensions in the illustration.



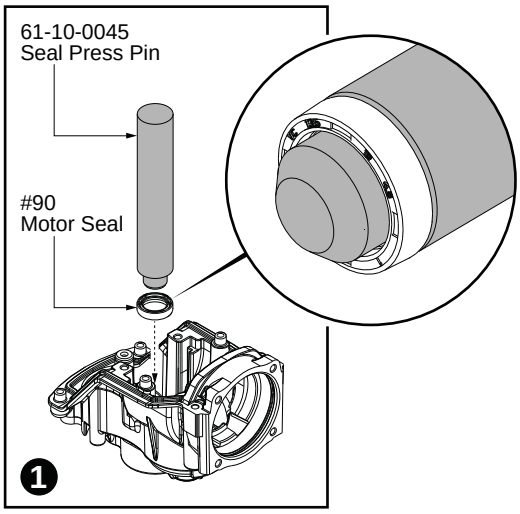

**SERVICE TOOLS:**

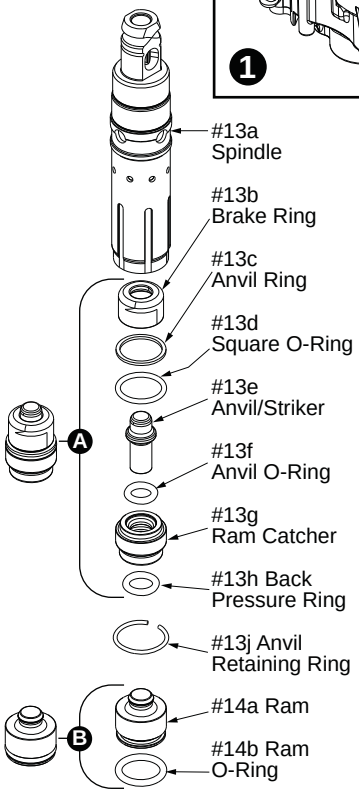
**61-10-0041**
Ring Expander Cone

**61-10-0043**
Push Sleeve

**61-10-0045**
Seal Press Pin

**61-10-0049**
Anvil Sleeve Snap Ring Bar



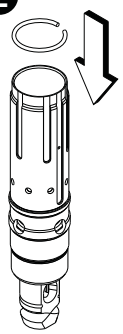

**1** Prior to installing internal spindle components, lightly grease the inside cavity of spindle.

Place the assembled internal spindle components Ⓐ into cavity end of service tool 61-10-0049 (Anvil Sleeve Snap Ring Bar).

Push components into the spindle until parts bottom out. Use a rubber mallet to the end of the service tool to assure that the inside components are properly seated.

61-10-0049 Anvil Sleeve Snap Ring Bar

**2**

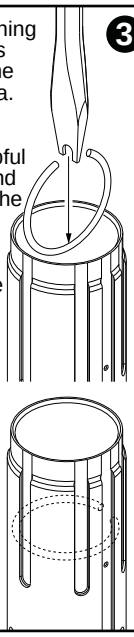


Secure the parts inside the Anvil with Retaining Ring #13j. See figures 3 and 4 for an installation aid.

**3** Place Retaining Ring #13j as shown on the spindle #13a.

As an aid, it may be helpful to file or grind a notch on the bottom flat of a screwdriver to accomodate the round of the ring. As force is applied, the open end of the ring will close in on screwdriver.

Once deep enough in the cavity, rotate ring horizontally.

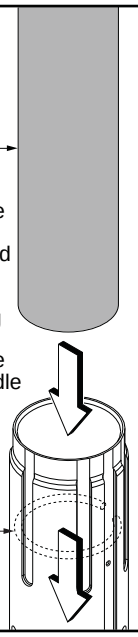


**4**

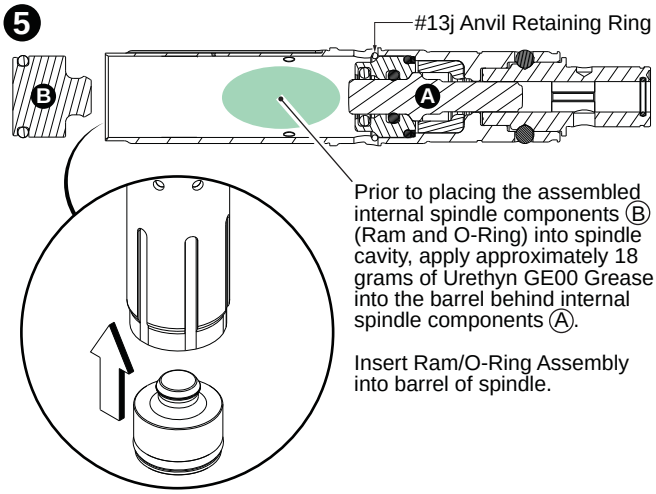
61-10-0049 Anvil Sleeve Snap Ring Bar

Insert service tool into rear of spindle and push downward. Slide retaining ring into internal slot to secure internal spindle components Ⓐ.

#13j Anvil Retaining Ring

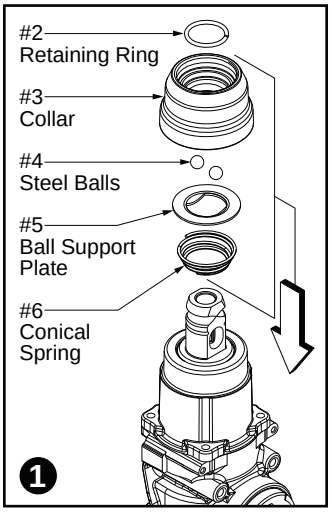


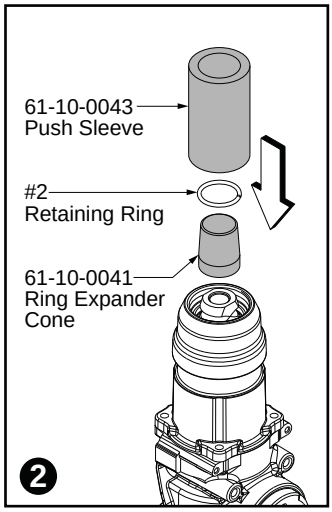
**5**




Prior to placing the assembled internal spindle components Ⓑ (Ram and O-Ring) into spindle cavity, apply approximately 18 grams of Urethyn GE00 Grease into the barrel behind internal spindle components Ⓐ.

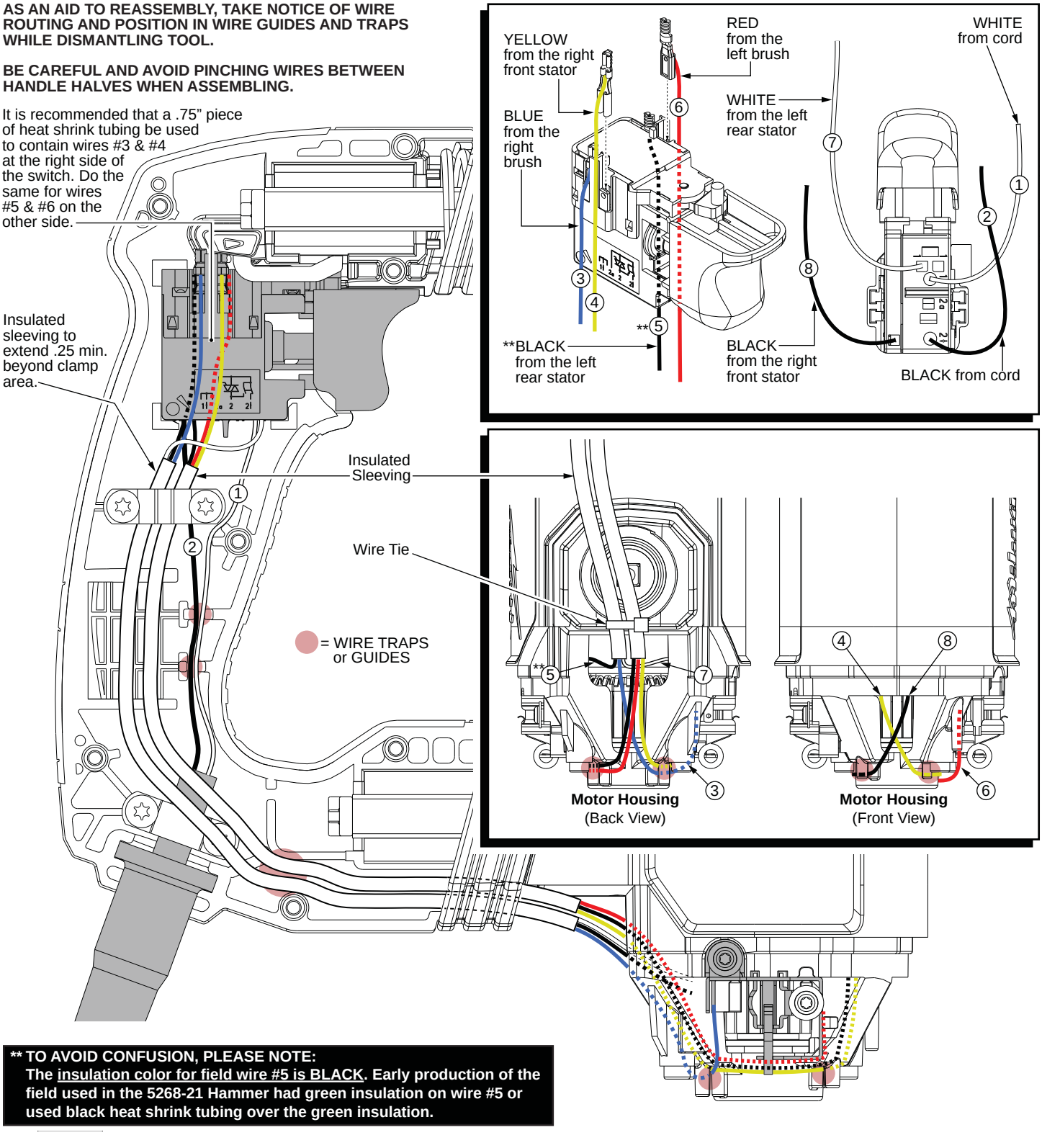
Insert Ram/O-Ring Assembly into barrel of spindle.



**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.**




**** TO AVOID CONFUSION, PLEASE NOTE:**
**The insulation color for field wire #5 is BLACK. Early production of the field used in the 5268-21 Hammer had green insulation on wire #5 or used black heat shrink tubing over the green insulation.**

## WIRING SPECIFICATIONS

| Wire No. | Wire Color | Origin or Gauge | Length | Terminals, Connectors and 1 or 2 End Wire Preparation |
|---|---|---|---|---|
| 1 | White | 22-64-0032 | ----- | Component of cord set. Connect to position 1↓ on bottom of switch as shown. |
| 2 | Black | 22-64-0032 | ----- | Component of cord set. Connect to position 2↓ on bottom of switch as shown. |
| 3 | Blue | 23-94-0072 | ----- | Blue Leadwire Assembly. Connect to position 7 on switch and left brush holder as shown. |
| 4 | Yellow | 18-07-0097 | ----- | Component of split field (front halve). Connect to position 6 on switch as shown. |
| 5 | Black** | 18-07-0097 | ----- | Component of split field (rear halve). Connect to position 5 on switch as shown. |
| 6 | Red | 23-94-0062 | ----- | Red Leadwire Assembly. Connect to position 8 on switch and right brush holder as shown. |
| 7 | White | 18-07-0097 | ----- | Component of split field (rear halve). Connect to position 1 on the bottom of switch as shown. |
| 8 | Black | 18-07-0097 | ----- | Component of split field (front halve). Connect to position 2 on bottom of switch as shown. |

# SERVICE PARTS LIST

**BULLETIN NO. 54-24-0076**

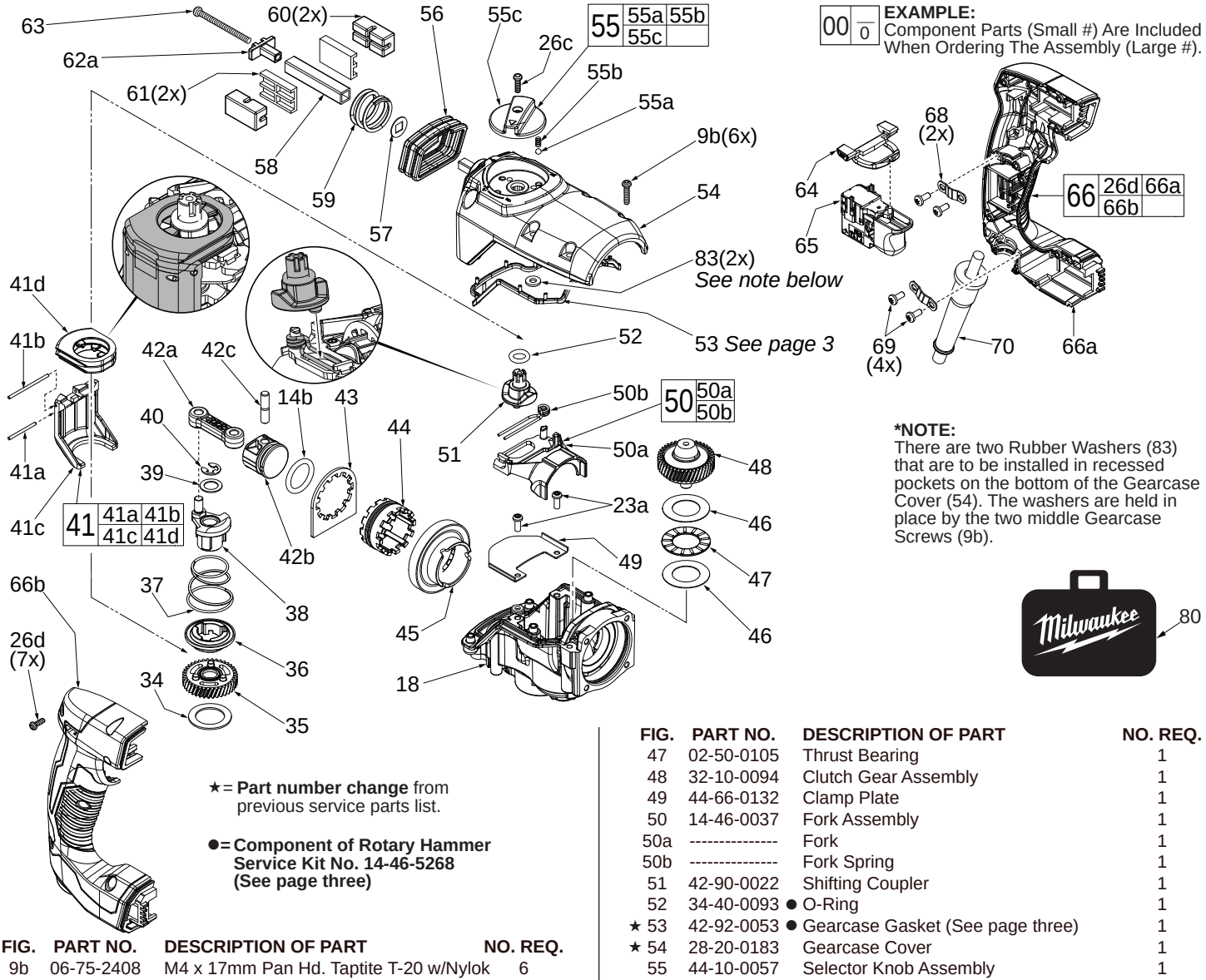
**SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS**

## 1-1/8" (3Kg) SDS Rotary Hammer

**CATALOG NO. 5268-21** | STARTING SERIAL NO. **F82B**

REVISED BULLETIN 54-24-0075

WIRING INSTRUCTION **SEE PAGE 5**

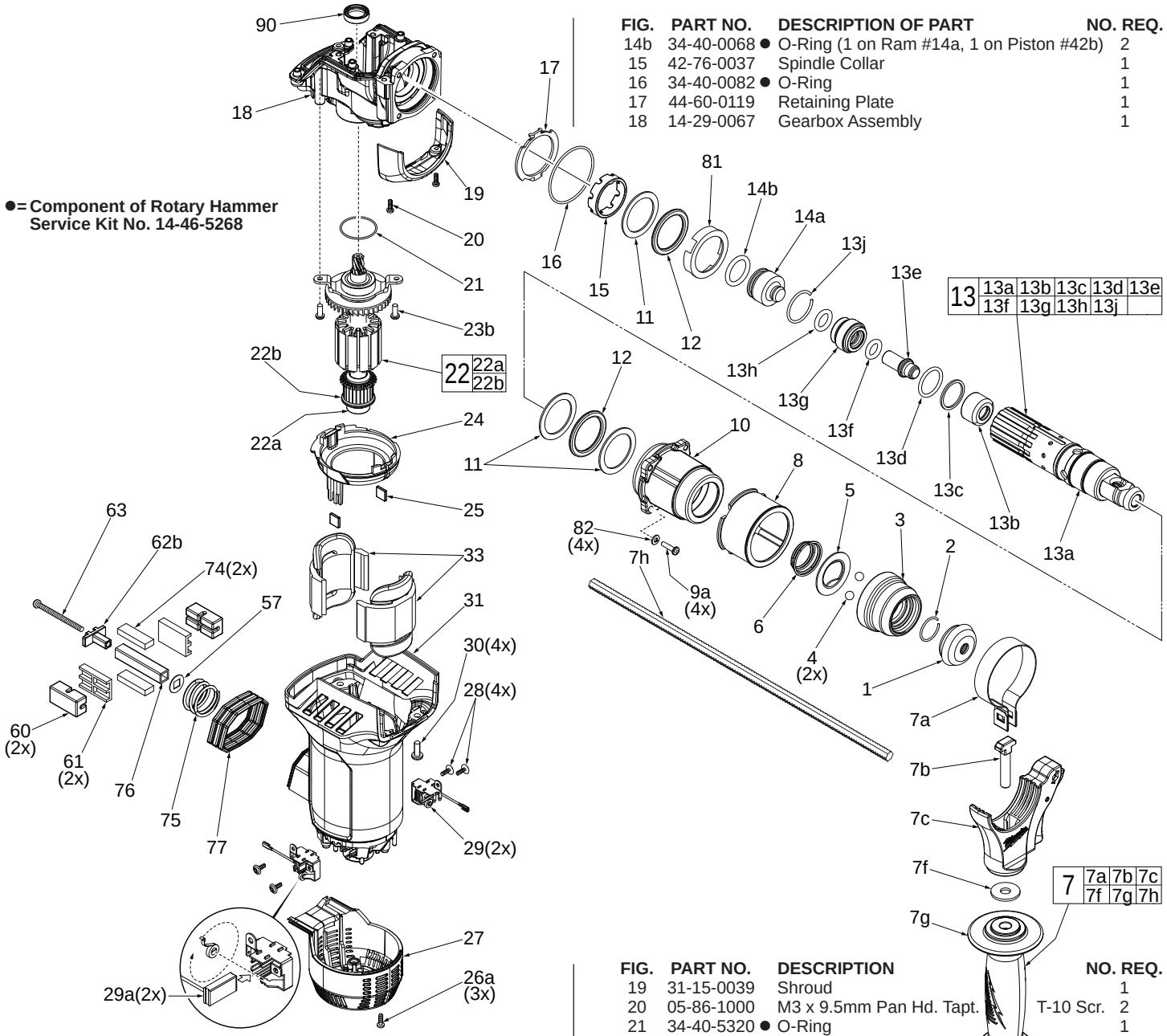



★ = **Part number change** from previous service parts list.

● = **Component of Rotary Hammer Service Kit No. 14-46-5268 (See page three)**

| FIG. | PART NO. | DESCRIPTION OF PART | NO. REQ. |
|---|---|---|---|
| 9b | 06-75-2408 | M4 x 17mm Pan Hd. Taptite T-20 w/Nylok | 6 |
| 14b | 34-40-0068 | O-Ring (1 on Piston #42b, 1 on Ram #14a) | 2 |
| 18 | 14-29-0067 | Gearbox Assembly | 1 |
| 23a | 05-78-0105 | M4 x 10mm Pan Hd. Taptite Screw | 2 |
| 26c | 06-82-2025 | M3.5 x 16mm Pan Hd. Plastite T-10 Screw | 1 |
| 26d | 05-88-1610 | M3.5 x 10mm Pan Hd. Plastite T-10 Screw | 7 |
| 34 | 45-88-0106 | Washer | 1 |
| 35 | 32-60-0042 | Crank Gear Assembly with Needle Bearing | 1 |
| 36 | 44-90-0152 | Crank Shift Ring | 1 |
| 37 | 40-50-0107 | Crank Spring | 1 |
| 38 | 14-09-0110 | Crank Assembly | 1 |
| 39 | 44-66-0122 | Crank Shim | 1 |
| 40 | 42-70-5268 ● | Retaining E-Ring | 1 |
| 41 | 14-46-0117 | Chisel Shifter Assembly | 1 |
| 41a | ---------- | M2 x 27mm Dowel Pin | 1 |
| 41b | ---------- | M2 x 40mm Dowel Pin | 1 |
| 41c | ---------- | Chisel Bracket | 1 |
| 41d | ---------- | Chisel Shift Driver | 1 |
| 42a | 44-94-0022 | Connecting Rod | 1 |
| 42b | 44-62-0302 | Piston | 1 |
| 42c | 44-60-0147 | Wrist Pin | 1 |
| 43 | 44-66-0303 | Locking Plate | 1 |
| 44 | 44-90-0127 | Shift Ring | 1 |
| 45 | 32-05-0202 | Bevel Gear | 1 |
| 46 | 45-88-0112 | Thrust Washer | 2 |

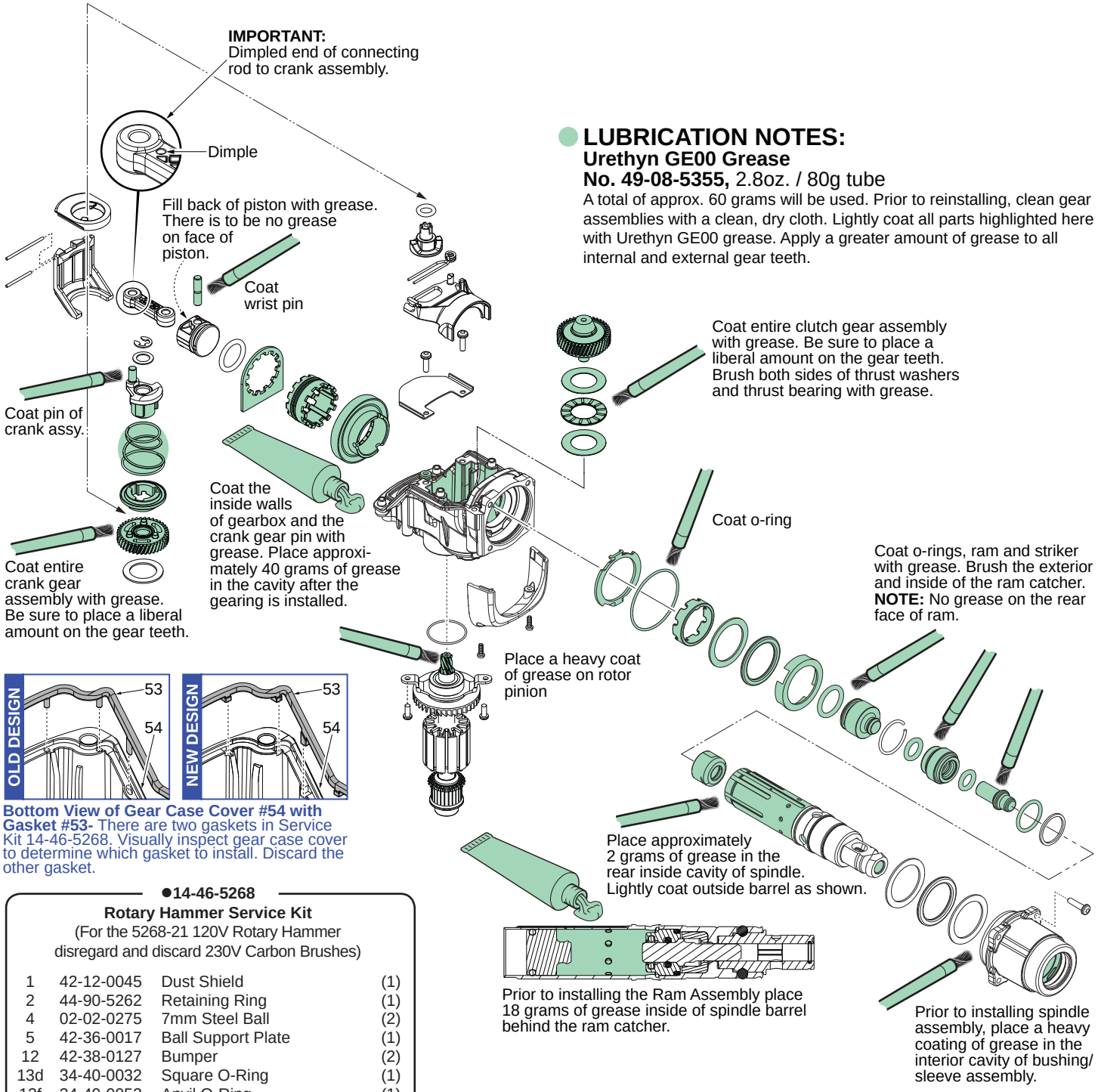
| FIG. | PART NO. | DESCRIPTION OF PART | NO. REQ. |
|---|---|---|---|
| 47 | 02-50-0105 | Thrust Bearing | 1 |
| 48 | 32-10-0094 | Clutch Gear Assembly | 1 |
| 49 | 44-66-0132 | Clamp Plate | 1 |
| 50 | 14-46-0037 | Fork Assembly | 1 |
| 50a | ---------- | Fork | 1 |
| 50b | ---------- | Fork Spring | 1 |
| 51 | 42-90-0022 | Shifting Coupler | 1 |
| 52 | 34-40-0093 ● | O-Ring | 1 |
| ★ 53 | 42-92-0053 ● | Gearcase Gasket (See page three) | 1 |
| ★ 54 | 28-20-0183 | Gearcase Cover | 1 |
| 55 | 44-10-0057 | Selector Knob Assembly | 1 |
| 55a | ---------- | Selector Ball | 1 |
| 55b | ---------- | Selector Spring | 1 |
| 55c | ---------- | Selector Knob | 1 |
| 56 | 22-90-0132 | Top Grommet | 1 |
| 57 | 45-88-0152 | Vibration Washer (1 each for top & bottom AVS) | 2 |
| 58 | 44-20-0141 | Top AVS Square Guide Pipe | 1 |
| 59 | 40-50-0211 | Top AVS Spring | 1 |
| 60 | 42-38-0077 | Vibration Bumper (2 each for top & bottom AVS) | 4 |
| 61 | 42-38-0137 | Bumper Holder (2 each for top & bottom AVS) | 4 |
| 62a | 42-36-0032 | Retaining Plate (Top AVS) | 1 |
| 63 | 05-78-0012 | M4 x 52mm Scr. (1 each for top & bottom AVS) | 2 |
| 64 | 42-42-0053 | Forward/Reverse Button | 1 |
| 65 | 23-66-0027 | On-Off Switch | 1 |
| 66 | 14-34-0107 | Handle Assembly | 1 |
| 66a | ---------- | Left Handle Halve | 1 |
| 66b | ---------- | Right Handle Halve | 1 |
| 68 | 42-68-0601 | Power Cord Clamp | 2 |
| 69 | 05-78-5313 | M4 x 9.5mm Pan Hd. Plastite T-15 Screw | 4 |
| 70 | 22-64-0032 | 120V Power Cord Assembly | 1 |
| 80 | 42-55-5268 | Blow Molded Carrying Case | 1 |
| 83 | 45-88-0014 ● | Rubber Washer | 2 |




● = Component of Rotary Hammer Service Kit No. 14-46-5268

| FIG. | PART NO. | DESCRIPTION OF PART | NO. REQ. |
|---|---|---|---|
| 1 | 45-12-0045 ● | Dust Shield | 1 |
| 2 | 44-90-5262 ● | Retaining Ring | 1 |
| 3 | 45-22-0062 | Collar with Steel Insert | 1 |
| 4 | 02-02-0275 ● | 7mm Steel Ball | 2 |
| 5 | 42-36-0017 ● | Ball Support Plate | 1 |
| 6 | 40-50-0082 | Conical Spring | 1 |
| 7 | 14-34-0015 | Side Handle Assembly | 1 |
| 7a | 44-66-0072 | Clamp Collar | 1 |
| 7b | 05-81-5376 | M8 x 53mm Screw | 1 |
| 7c | ---------- | Side Handle Carrier Assembly | 1 |
| 7f | 45-88-5377 | Washer | 1 |
| 7g | 31-05-5383 | Side Handle | 1 |
| 7h | 44-94-5381 | Depth Rod | 1 |
| 8 | 45-22-0045 | Side Handle Sleeve | 1 |
| 9a | 05-78-5316 | M4 x 14mm Pan Hd. Taptite T-20 Screw | 4 |
| 10 | 42-40-0027 | Bushing Sleeve Assembly with Seals | 1 |
| 11 | 45-88-0157 | Washer | 3 |
| 12 | 42-38-0127 ● | Bumper | 2 |
| 13 | 14-46-0197 | Spindle Assembly | 1 |
| 13a | 38-50-0052 | Spindle | 1 |
| 13b | 43-06-0060 | Brake Ring | 1 |
| 13c | 44-66-0203 | Anvil Ring | 1 |
| 13d | 34-40-0032 ● | Square O-Ring | 1 |
| 13e | 42-06-0027 | Anvil/Striker | 1 |
| 13f | 34-40-0052 ● | Anvil O-Ring | 1 |
| 13g | 42-06-0067 | Ram Catcher | 1 |
| 13h | 44-90-0032 ● | Back Pressure Ring | 1 |
| 13j | 34-60-0027 ● | Anvil Retaining Ring | 1 |
| 14a | 45-56-0065 | Ram | 1 |
| 14b | 34-40-0068 ● | O-Ring (1 on Ram #14a, 1 on Piston #42b) | 2 |
| 15 | 42-76-0037 | Spindle Collar | 1 |
| 16 | 34-40-0082 ● | O-Ring | 1 |
| 17 | 44-60-0119 | Retaining Plate | 1 |
| 18 | 14-29-0067 | Gearbox Assembly | 1 |

| FIG. | PART NO. | DESCRIPTION | NO. REQ. |
|---|---|---|---|
| 19 | 31-15-0039 | Shroud | 1 |
| 20 | 05-86-1000 | M3 x 9.5mm Pan Hd. Tapt. T-10 Scr. | 2 |
| 21 | 34-40-5320 ● | O-Ring | 1 |
| 22 | 14-50-0052 | 120V Armature Assembly | 1 |
| 22a | 02-04-5382 | Ball Bearing | 1 |
| 22b | 23-16-0092 | Commutator Insulator Disc | 1 |
| 23b | 05-78-0105 | M4 x 10mm Pan Hd. Taptite Screw | 2 |
| 24 | 31-05-0057 | Baffle | 1 |
| 25 | 42-28-0085 | Field Isolation Block | 2 |
| 26a | 05-88-1610 | M3.5 x 10mm Pan Hd. Plastite T-10 Screw | 3 |
| 27 | 23-44-0063 | Motor Housing/Brush Cover | 1 |
| 28 | 06-82-0062 | M3 x 8mm Pan Hd. Washer T-10 Screw | 4 |
| 29 | 22-20-0019 | 120V Carbon Brush Assembly | 2 |
| 29a | 22-18-5268 ● | 120V Carbon Brush (Set of 2) | 1 |
| 30 | 05-74-0990 | M5 x 15mm Pan Hd. Taptite T-25 Screw | 4 |
| 31 | 28-50-0107 | Motor Housing Assembly | 1 |
| 33 | 18-07-0097 | 120V Split Field | 1 |
| 57 | 45-88-0152 | Vibration Washer | 2 |
| 60 | 42-38-0077 | Vibration Bumper | 4 |
| 61 | 42-38-0137 | Bumper Holder | 4 |
| 62b | 44-66-0131 | Retaining Plate (Bottom AVS) | 1 |
| 63 | 05-78-0012 | M4 x 52mm Scr. (1 each for top & bottom AVS) | 2 |
| 74 | 44-52-0052 | Foam Block | 2 |
| 75 | 40-50-0138 | Bottom AVS Spring | 1 |
| 76 | 44-68-0155 | Bottom AVS Square Guide Pipe | 1 |
| 77 | 22-90-0152 | Bottom Grommet | 1 |
| 78 | 12-20-5268 | Service Nameplate (Not Shown) | 1 |
| 81 | 45-88-0042 | Bumper/Washer Holder | 1 |
| 82 | 05-90-0225 | Lock Washer | 4 |
| 90 | 45-06-0042 | Motor Seal | 1 |




## LUBRICATION NOTES:

**Urethyn GE00 Grease**
**No. 49-08-5355,** 2.8oz. / 80g tube

A total of approx. 60 grams will be used. Prior to reinstalling, clean gear assemblies with a clean, dry cloth. Lightly coat all parts highlighted here with Urethyn GE00 grease. Apply a greater amount of grease to all internal and external gear teeth.




**Bottom View of Gear Case Cover #54 with Gasket #53-** There are two gaskets in Service Kit 14-46-5268. Visually inspect gear case cover to determine which gasket to install. Discard the other gasket.

**●14-46-5268**

**Rotary Hammer Service Kit**
(For the 5268-21 120V Rotary Hammer disregard and discard 230V Carbon Brushes)

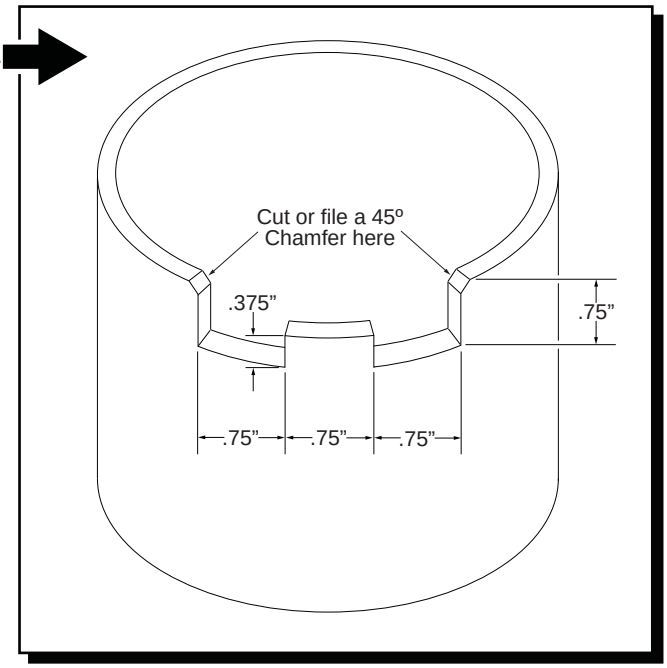
| | | | |
|---|---|---|---|
| 1 | 42-12-0045 | Dust Shield | (1) |
| 2 | 44-90-5262 | Retaining Ring | (1) |
| 4 | 02-02-0275 | 7mm Steel Ball | (2) |
| 5 | 42-36-0017 | Ball Support Plate | (1) |
| 12 | 42-38-0127 | Bumper | (2) |
| 13d | 34-40-0032 | Square O-Ring | (1) |
| 13f | 34-40-0052 | Anvil O-Ring | (1) |
| 13h | 44-90-0032 | Back Pressure Ring | (1) |
| 13j | 34-60-0027 | Anvil Retaining Ring | (1) |
| 14b | 34-40-0068 | O-Ring | (2) |
| 16 | 34-40-0082 | O-Ring | (1) |
| 21 | 34-40-5320 | O-Ring | (1) |
| 29a | 22-18-5268 | 120V Carbon Brush (Set of 2) For model 5268-21. | (1) |
| 29a | 22-18-5269 | 230V Carbon Brush (Set of 2) For model 5268-50. DISCARD | (1) |
| 40 | 42-70-5268 | Retaining E-Ring | (1) |
| 52 | 34-40-0093 | O-Ring | (1) |
| **53** | **42-92-0052** | **Gearcase Gasket** (See detail above) | **(1)** |
| **53** | **42-92-0053** | **Gearcase Gasket** (See detail above) | **(1)** |
| 83 | 45-88-0014 | Rubber Washer | (2) |
| | 58-22-5268 | Instruction Sheet | (1) |
| | 49-08-5355 | Urethyn GE00 Grease 60 grams required- (80 gram, 2.8oz tube) | (1) |

**NOTE:** It is recommended to order Motor Seal #90 (45-06-0042) at the same time that Rotary Hammer Service Kit No. 14-46-5268 is installed.

**SCREW TORQUE SPECIFICATIONS**

| FIG. | PART NO. | WHERE USED | SEAT TORQUE (KG/CM) | SEAT TORQUE (IN/LBS) |
|---|---|---|---|---|
| 9a | 05-78-5316 | Bushing Sleeve Assembly | 26 | 22.5 |
| 9b | 06-75-2408 | Gearcase Cover (4) Rear and Middle | 32 | 27.8 |
| 9b | 06-75-2408 | Gearcase Cover (2) Front | 32 | 27.8 |
| 20 | 05-86-1000 | Shroud | 12 | 10.5 |
| 23a | 05-78-0105 | Clamp Plate | 26 | 22.5 |
| 23b | 05-78-0105 | Rotor Bearing Plate | 33 | 28.5 |
| 26a | 05-88-1610 | Motor Housing/Brush Cover | 6.5 | 5.5 |
| 26c | 06-82-2025 | Selector Knob | 8.5 | 7.5 |
| 26d | 05-88-1610 | Right Handle Halve | 6.5 | 5.5 |
| 28 | 06-82-0062 | Carbon Brush Assembly | 5 | 4.5 |
| 30 | 05-74-0990 | Motor Housing Assembly | 33 | 28.5 |
| 63 | 05-78-0012 | Retaining Plate (Top and Bottom) | 20 | 17 |
| 69 | 05-78-5313 | Cord Clamps (Power Cord) | 14 | 12 |
| 69 | 05-78-5313 | Cord Clamps (Glass Fiber Tube) | 11 | 9.5 |
| | | Switch Screws | 5.5 | 4.5 |

**NOTE:** As an aid to working on the gearcase and spindle assemblies, a bench top fixture can be made from a 3.25" piece of 4" PVC pipe. The contour of the pipe can be cut according to dimensions in the illustration.



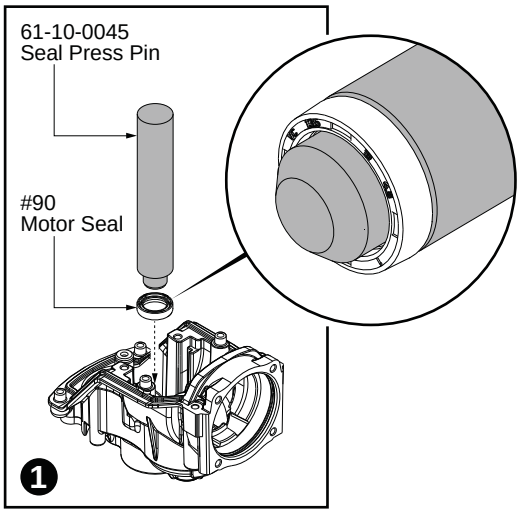

**SERVICE TOOLS:**

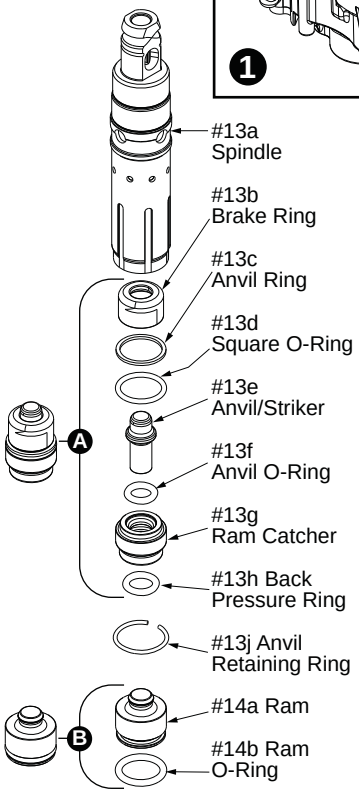
**61-10-0041**
Ring Expander Cone

**61-10-0043**
Push Sleeve

**61-10-0045**
Seal Press Pin

**61-10-0049**
Anvil Sleeve Snap Ring Bar



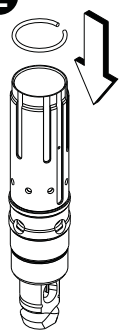

**1** Prior to installing internal spindle components, lightly grease the inside cavity of spindle.

Place the assembled internal spindle components Ⓐ into cavity end of service tool 61-10-0049 (Anvil Sleeve Snap Ring Bar).

Push components into the spindle until parts bottom out. Use a rubber mallet to the end of the service tool to assure that the inside components are properly seated.

61-10-0049 Anvil Sleeve Snap Ring Bar

**2**

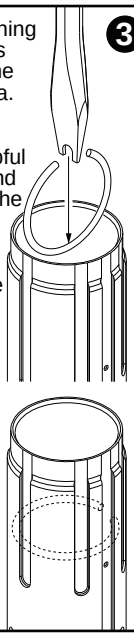


Secure the parts inside the Anvil with Retaining Ring #13j. See figures 3 and 4 for an installation aid.

**3** Place Retaining Ring #13j as shown on the spindle #13a.

As an aid, it may be helpful to file or grind a notch on the bottom flat of a screwdriver to accomodate the round of the ring. As force is applied, the open end of the ring will close in on screwdriver.

Once deep enough in the cavity, rotate ring horizontally.

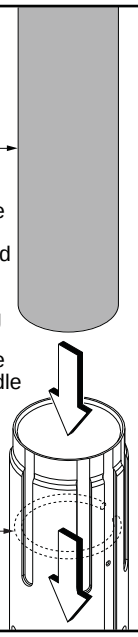


**4**

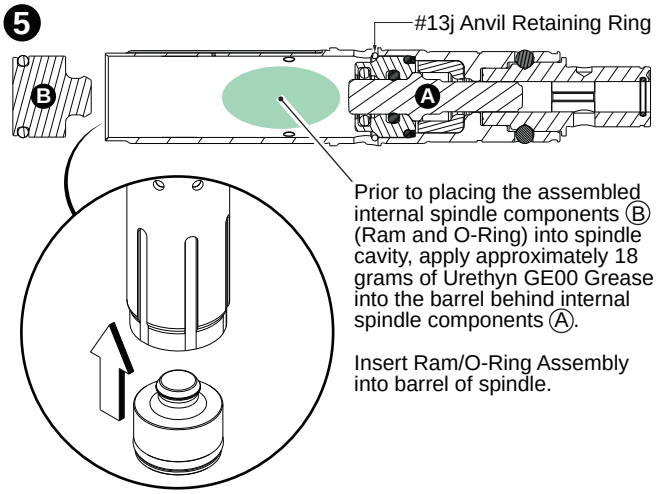
61-10-0049 Anvil Sleeve Snap Ring Bar

Insert service tool into rear of spindle and push downward. Slide retaining ring into internal slot to secure internal spindle components Ⓐ.

#13j Anvil Retaining Ring

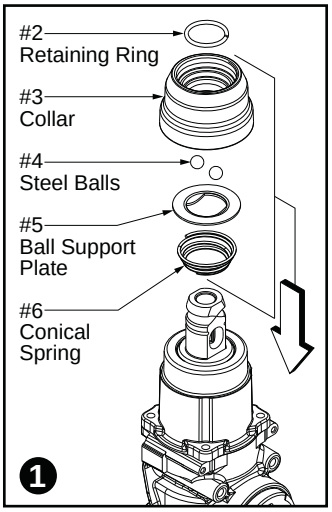


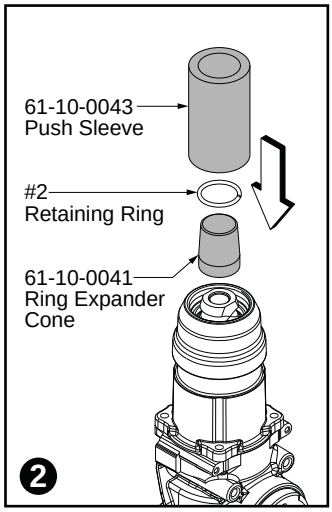
**5**




Prior to placing the assembled internal spindle components Ⓑ (Ram and O-Ring) into spindle cavity, apply approximately 18 grams of Urethyn GE00 Grease into the barrel behind internal spindle components Ⓐ.

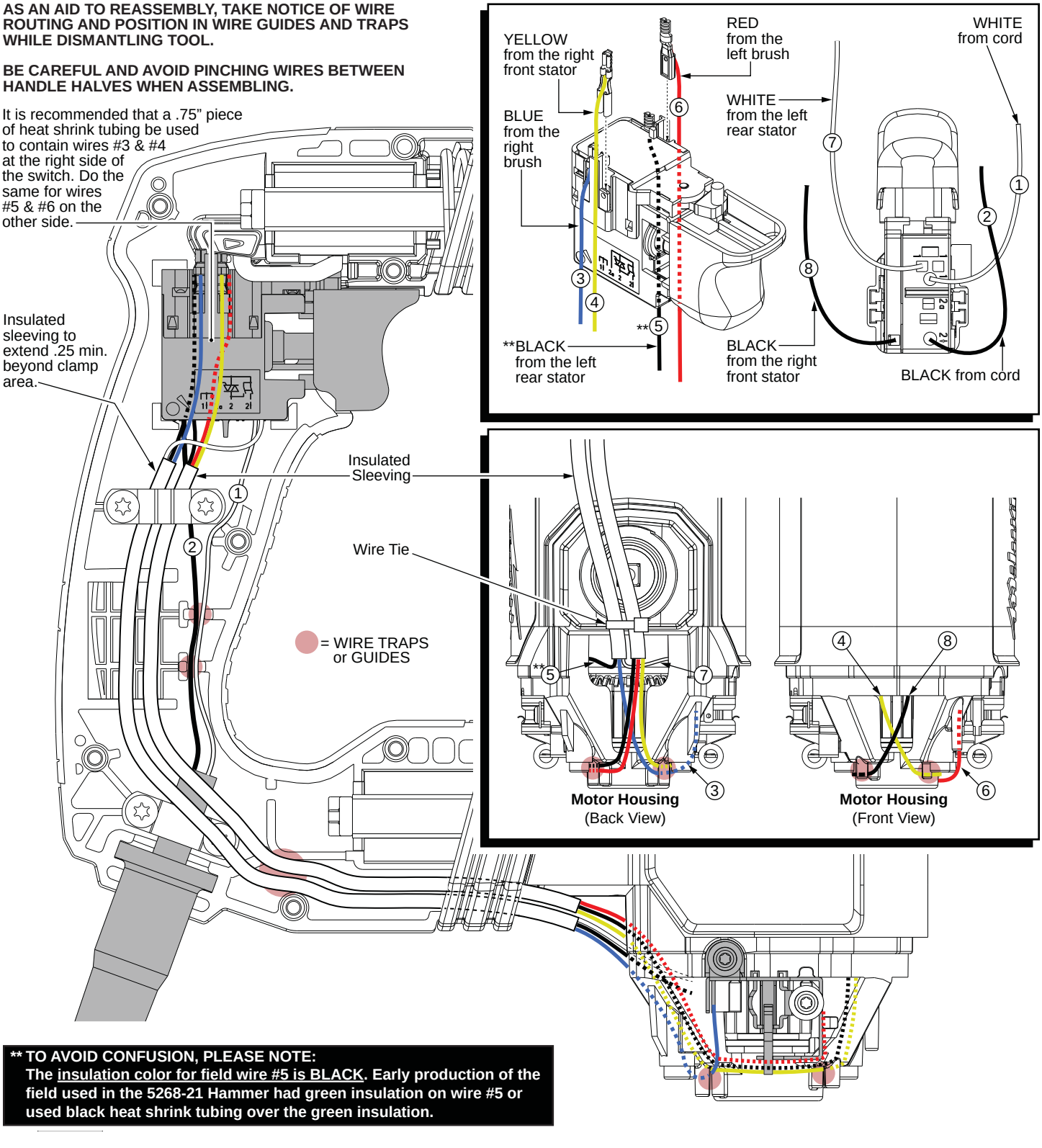
Insert Ram/O-Ring Assembly into barrel of spindle.



**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.**




**** TO AVOID CONFUSION, PLEASE NOTE:**
**The insulation color for field wire #5 is BLACK. Early production of the field used in the 5268-21 Hammer had green insulation on wire #5 or used black heat shrink tubing over the green insulation.**

## WIRING SPECIFICATIONS

| Wire No. | Wire Color | Origin or Gauge | Length | Terminals, Connectors and 1 or 2 End Wire Preparation |
|---|---|---|---|---|
| 1 | White | 22-64-0032 | ----- | Component of cord set. Connect to position 1↓ on bottom of switch as shown. |
| 2 | Black | 22-64-0032 | ----- | Component of cord set. Connect to position 2↓ on bottom of switch as shown. |
| 3 | Blue | 23-94-0072 | ----- | Blue Leadwire Assembly. Connect to position 7 on switch and left brush holder as shown. |
| 4 | Yellow | 18-07-0097 | ----- | Component of split field (front halve). Connect to position 6 on switch as shown. |
| 5 | Black** | 18-07-0097 | ----- | Component of split field (rear halve). Connect to position 5 on switch as shown. |
| 6 | Red | 23-94-0062 | ----- | Red Leadwire Assembly. Connect to position 8 on switch and right brush holder as shown. |
| 7 | White | 18-07-0097 | ----- | Component of split field (rear halve). Connect to position 1 on the bottom of switch as shown. |
| 8 | Black | 18-07-0097 | ----- | Component of split field (front halve). Connect to position 2 on bottom of switch as shown. |

BULLETIN NO.
**54-24-5000**

# SERVICE PARTS LIST

**SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS**

## 1-1/8" ROTARY HAMMER

**CATALOG NO. 5359-21** | SERIAL NUMBER **409A (See Service Note)**

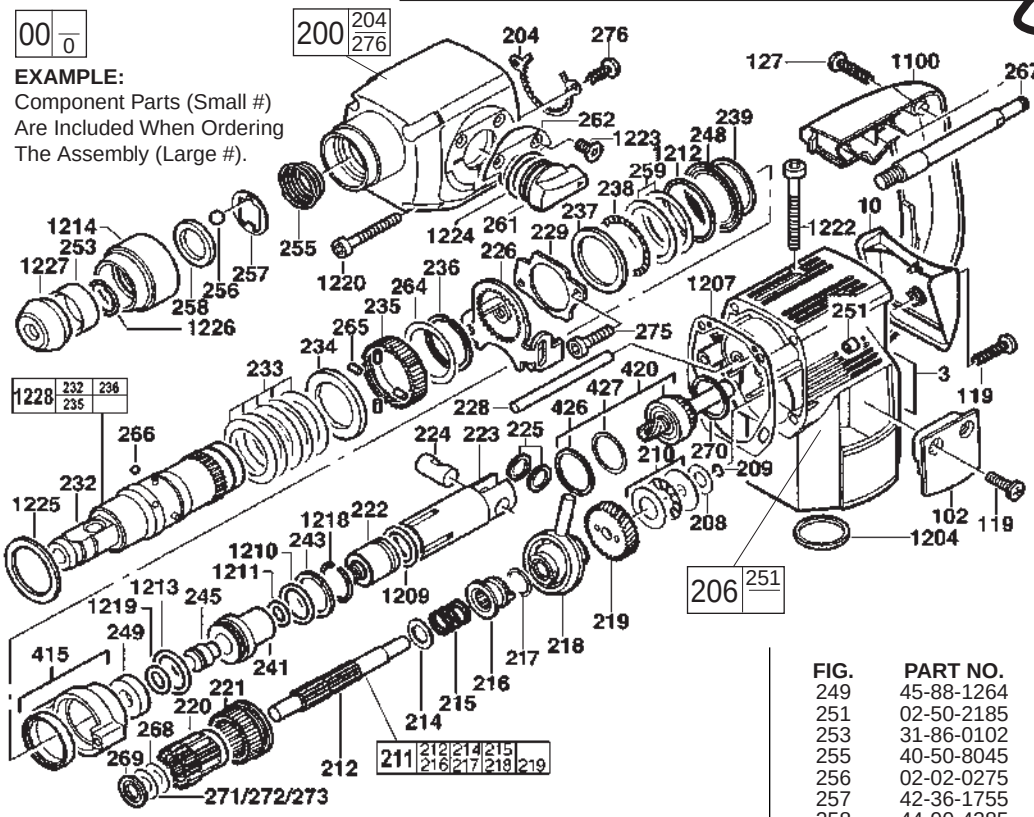
REVISED BULLETIN

WIRING INSTRUCTION **58-01-1860**

00 | 0

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

200 | 204 276




***SERVICE NOTE:*** *When servicing a 5359-21 Rotary Hammer with a serial number starting with 409A, first identify the series being serviced (Series I or Series II).*
***Series I*** *has a small taper on the strain relief. Use this bulletin, 54-24-5000, to order parts and service Series I tools.*
***Series II*** *has a large taper on the strain relief. Use bulletin 54-24-5001 (listed under serial number 409B) to order parts and service Series II tools.*



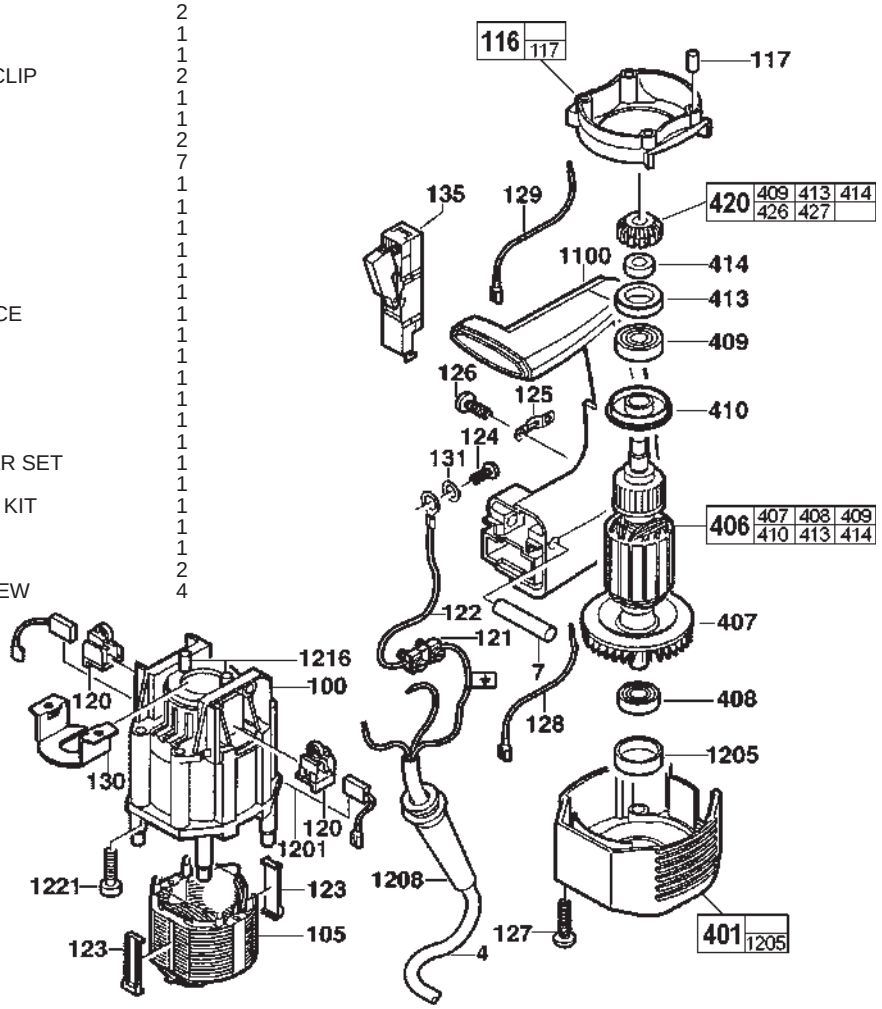
*Call Tech Support if you need help determining the Series*

| FIG. | PART NO. | DESCRIPTION OF PART | QTY. |
|---|---|---|---|
| 3 | 12-20-5359 | SERVICE NAMEPLATE KIT | 1 |
| 8 | 45-88-1245 | WASHER | 1 |
| 9 | 44-90-0340 | SNAP RING (EXT.) | 1 |
| 10 | 31-15-0257 | CRANKCASE COVER | 1 |
| 102 | 31-15-0255 | BRUSH COVER | 2 |
| 119 | 05-78-0745 | TAPTITE SCREW | 5 |
| 127 | 05-78-0715 | SCREW | 7 |
| 200 | 31-40-0042 | GEARCASE | 1 |
| 204 | 44-86-0625 | SPLINED RETAINER | 1 |
| 206 | 31-15-0307 | CRANKCASE | 1 |
| 208 | 45-88-8825 | WASHER *(ADD AS REQUIRED)* | 1 |
| 209 | 34-40-4440 | O-RING | 1 |
| 210 | 02-80-6025 | THRUST BEARING SET | 1 |
| 211 | 14-73-0247 | WOBBLE SHAFT ASSEMBLY | 1 |
| 212 | 36-66-3162 | REDUCTION GEAR SHAFT | 1 |
| 214 | 45-88-1250 | WASHER | 1 |
| 215 | 40-50-8897 | SPRING | 1 |
| 216 | 45-22-0302 | COUPLING SLEEVE | 1 |
| ★ 217 | 45-88-8414 | WASHER | 1 |
| 218 | 36-92-0747 | WOBBLE PLATE | 1 |
| 219 | 32-60-2622 | REDUCTION GEAR | 1 |
| 220 | 32-60-2157 | OFFSET GEAR | 1 |
| 221 | 32-60-2165 | INTERNAL GEAR | 1 |
| 222 | 44-82-0192 | RAM | 1 |
| 223 | 44-62-0157 | PISTON | 1 |
| 224 | 44-60-1405 | WRIST PIN | 1 |
| 225 | 45-88-1180 | WASHER | 2 |
| 226 | 44-90-4500 | SHIFT RING | 1 |
| 228 | 44-60-1485 | PIN | 1 |
| 229 | 44-66-6055 | RETAINING PLATE | 1 |
| ★ 232 | ---------- | SDS SPINDLE | 1 |
| 233 | 40-50-7977 | BELLEVILLE SPRING | 5 |
| 234 | 45-88-7767 | STOP WASHER | 1 |
| ★ 235 | ---------- | SPINDLE GEAR | 1 |
| ★ 236 | ---------- | RETAINING RING (EXT.) | 1 |
| 237 | 45-88-1255 | WASHER | 1 |
| 238 | 02-80-0150 | THRUST BEARING | 1 |
| 239 | 45-88-0775 | RETAINING RING | 1 |
| 241 | 44-82-0089 | RAM CATCHER | 1 |
| 243 | 42-76-0727 | THRUST COLLAR | 1 |
| 245 | 45-56-2537 | STRIKER | 1 |
| 248 | 45-88-1265 | WASHER | 1 |

| FIG. | PART NO. | DESCRIPTION OF PART | QTY. |
|---|---|---|---|
| 249 | 45-88-1264 | STOP WASHER | 1 |
| 251 | 02-50-2185 | NEEDLE BEARING | 2 |
| 253 | 31-86-0102 | SPACER | 1 |
| 255 | 40-50-8045 | SPRING | 1 |
| 256 | 02-02-0275 | BALL | 1 |
| 257 | 42-36-1755 | SUPPORT PLATE | 1 |
| 258 | 44-90-4285 | HOLDING RING | 1 |
| 259 | 45-88-1270 | WASHER | 2 |
| 261 | 44-10-0077 | SHIFT LEVER | 1 |
| ★ 262 | 44-66-0101 | PLATE | 1 |
| 264 | ---------- | WASHER | 1 |
| 265 | 44-96-0101 | ROLLER | 4 |
| 266 | 02-02-0110 | BALL | 4 |
| 267 | 05-77-0030 | BOLT | 1 |
| 268 | 45-88-1182 | WASHER | 1 |
| 269 | 45-88-1183 | WASHER | 1 |
| 270 | 44-90-0115 | RING | 1 |
| 271 | 45-88-1184 | WASHER | 1 |
| 272 | 45-88-1185 | WASHER | 1 |
| 273 | 45-88-1186 | WASHER | 1 |
| 275 | 05-74-0700 | SCREW | 2 |
| 276 | 05-74-0717 | SCREW | 2 |
| 415 | 45-60-0511 | BEARING ASSY | 1 |
| 420 | 36-66-4267 | INTERMEDIATE GEAR SET | 1 |
| 426 | 45-88-1170 | RETAINING RING | 1 |
| 427 | 45-88-1280 | WASHER | 1 |
| 600 | 43-46-0172 | DEPTH GAGE (NOT SHOWN) | 1 |
| 701 | 49-15-5300 | SIDE HANDLE (NOT SHOWN) | 1 |
| 1100 | 31-44-5359 | HANDLE SET | 1 |
| 1204 | 34-40-4454 | O-RING | 1 |
| 1207 | 43-44-0375 | GASKET | 1 |
| 1209 | 34-40-5359 | O-RING | 1 |
| 1210 | 34-40-4452 | O-RING | 1 |
| 1211 | 34-40-4451 | O-RING | 1 |
| 1212 | 34-40-4459 | O-RING | 1 |
| 1213 | 34-40-4456 | O-RING | 1 |
| 1214 | 42-76-0275 | COLLAR | 1 |
| 1215 | 43-87-0080 | ISOLATION BLOCK | 1 |
| 1218 | 44-90-4415 | RETAINING RING | 1 |
| 1219 | 34-40-0130 | O-RING | 1 |
| 1220 | 05-74-0685 | SOCKET HEAD SCREW | 4 |
| 1222 | 05-74-0695 | SOCKET HEAD SCREW | 2 |
| 1223 | 05-74-0697 | SCREW | 2 |
| 1224 | 34-40-0132 | O-RING | 1 |
| 1225 | 45-06-0215 | FELT WASHER | 1 |
| 1226 | 44-90-0375 | SNAP RING | 1 |
| ★ 1227 | 42-52-0065 | DUST CAP | 1 |
| 1228 | 38-50-0011 | SDS SPINDLE KIT | 1 |

| FIG. | PART NO. | DESCRIPTION OF PART | QTY. |
|---|---|---|---|
| 3 | 12-20-5359 | SERVICE NAMEPLATE KIT | 1 |
| 4 | 22-64-0506 | CORD SET | 1 |
| 7 | 44-60-0015 | GROOVED DOWEL PIN | 1 |
| 100 | 31-50-0955 | MOTOR HOUSING | 1 |
| 105 | 18-07-0121 | FIELD -SERVICE | 1 |
| 116 | 31-05-0220 | AIR DEFLECTOR RING | 1 |
| 117 | 45-30-0210 | SLUG | 4 |
| 120 | 22-20-0232 | BRUSH HOLDER | 2 |
| 121 | 31-17-0184 | WIRE CLAMP | 1 |
| 122 | 23-94-1034 | WIRE | 1 |
| 123 | 42-70-1100 | FIELD CENTERING CLIP | 2 |
| 124 | 05-78-0747 | SCREW | 1 |
| 125 | 31-17-0240 | CORD CLAMP | 1 |
| 126 | 05-78-0720 | SCREW | 2 |
| 127 | 05-78-0715 | SCREW | 7 |
| ★128 | 23-94-1042 | WIRE (BLACK) | 1 |
| ★129 | 23-94-1037 | WIRE (YELLOW) | 1 |
| 130 | 42-92-0015 | BEARING COVER | 1 |
| 131 | 45-88-1340 | WASHER | 1 |
| 135 | 23-66-1687 | SWITCH | 1 |
| 401 | 31-15-0442 | MOTOR COVER | 1 |
| 406 | 16-07-0123 | ARMATURE - SERVICE | 1 |
| 407 | 22-84-0940 | FAN | 1 |
| 408 | 02-04-1800 | BALL BEARING | 1 |
| 409 | 02-04-1817 | BALL BEARING | 1 |
| 410 | 43-06-0135 | INSULATING DISC | 1 |
| 413 | 45-22-0465 | SLEEVE | 1 |
| 414 | 45-36-1595 | SPACER | 1 |
| 420 | 36-66-4267 | INTERMEDIATE GEAR SET | 1 |
| 1100 | 31-44-5359 | HANDLE SET | 1 |
| 1201 | 22-18-0942 | BRUSH (2) SERVICE KIT | 1 |
| 1205 | 42-96-0170 | BEARING CUP | 1 |
| 1208 | 44-76-0285 | STRAIN RELIEF | 1 |
| 1216 | 45-30-0220 | SLUG | 2 |
| 1221 | 05-74-0705 | SOCKET HEAD SCREW | 4 |

***SEE BACK PAGE OF THIS BULLETIN FOR ADDITIONAL LUBRICATION AND SERVICE NOTES***




**Service Kit 14-46-5359 Contains:**

| Qty. | Cat. No. | Description |
|---|---|---|
| 4 | 05-74-0685 | Socket Head Screw |
| 2 | 05-74-0695 | Socket Head Screw |
| 2 | 05-74-0697 | Screw |
| 4 | 05-74-0705 | Socket Head Screw |
| 1 | 22-18-0942 | Brush Service Kit (2) |
| 1 | 34-40-0130 | O-Ring |
| 1 | 34-40-0132 | O-Ring |
| 1 | 34-40-4451 | O-Ring |
| 1 | 34-40-4452 | O-Ring |
| 1 | 34-40-4454 | O-Ring |
| 1 | 34-40-4456 | O-Ring |
| 1 | 34-40-4459 | O-Ring |

| Qty. | Cat. No. | Description |
|---|---|---|
| 1 | 42-52-0065 | Dust Cap |
| 1 | 42-76-0275 | Collar |
| 2 | 42-96-0170 | Bearing Cup |
| 1 | 43-44-0375 | Gasket |
| 1 | 43-87-0080 | Isolation Block |
| 1 | 44-76-0285 | Strain Relief |
| 1 | 44-90-0375 | Snap Ring |
| 1 | 44-90-4415 | Retaining Ring |
| 1 | 45-06-0215 | Felt Washer |
| 2 | 45-30-0220 | Slug |
| 2 | 45-88-1180 | Washers |
| 1 | 49-08-4250 | Type “P” Grease (1.5 oz.) |
| 1 | 49-08-4255 | Type “Q” Grease (1.5 oz.) |

**Type "P" Grease (Cat. No. 49-08-4250)**

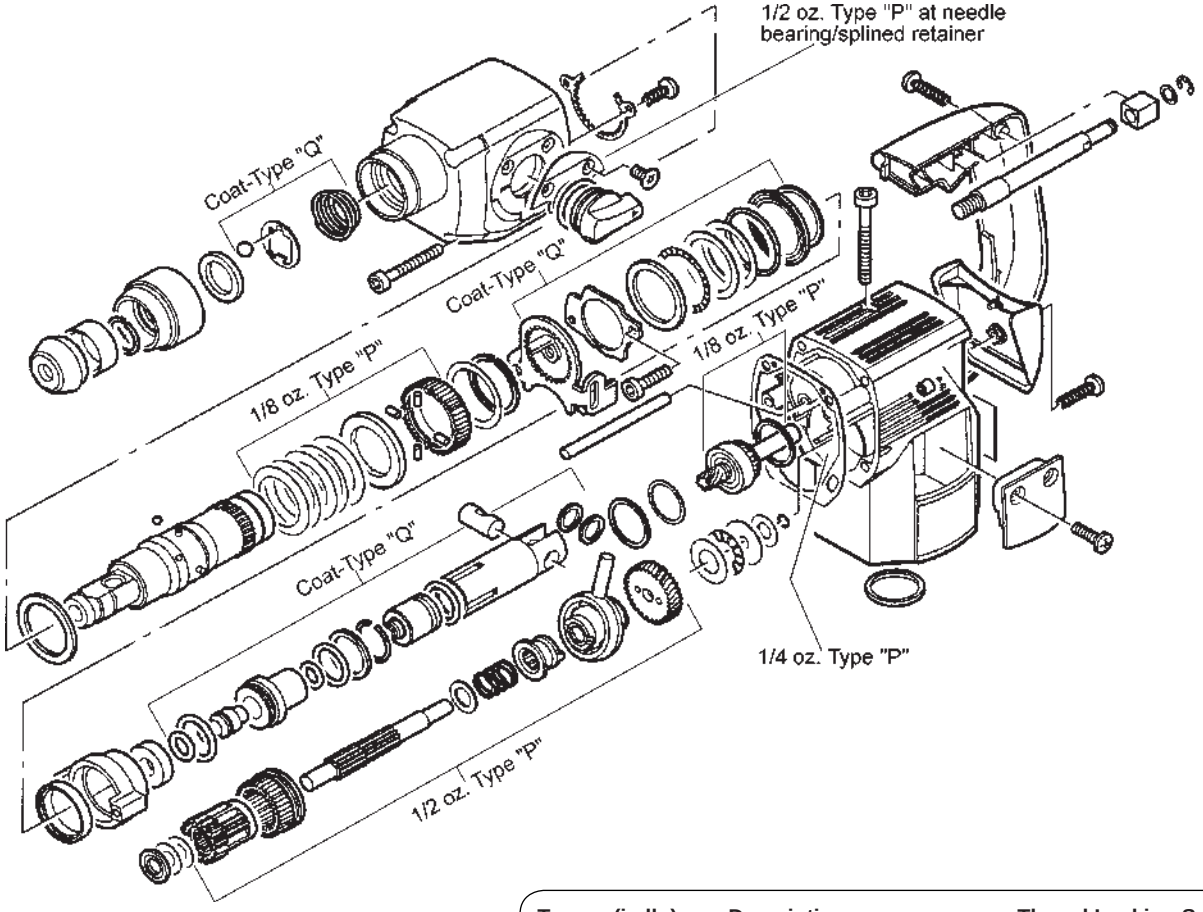
1. Place 1/2 oz. at needle bearing / splined retainer area of gearcase (200).
2. Grease assembled wobble shaft (211) with 1/2 oz. of grease.
3. Place 1/8 oz. in armature pinion / intermediate shaft assembly (420) cavity.
4. Place 1/4 oz. of grease in wobble shaft drive gear cavity of crankcase (206).
5. Grease clutch (235) and clutch springs (233) on spindle (232) with 1/8 oz. of grease.

NOTE: Total amount used; 1 1/2 oz. (one complete tube)

**Type "Q" Grease (Cat. No. 49-08-4255)**

1. Coat the spindle (232) inside and out.
2. Coat all parts assembled on or in spindle except for clutch.
3. Coat piston (223) (inside and out), ram (222), wrist pin (224) and wrist pin washers (225). DO NOT coat the flat face of the ram.

NOTE: Total amount used; 3/4 oz. (1/2 of a full tube)




| Torque (in lb.) | Description | Thread Locking Sealant |
|---|---|---|
| 22 | Motor/armature bolts (2) | None |
| 22 | Motor housing bolts (4) | None |
| 9 | Cord Clamp screws (2) | None |
| 85 | Anti-vibration post (1) | None |
| 10 | Handle screws (3) | None |
| 16 | Motor cover screws (4) | None |
| 50 | Spindle retaining bolts (2) | Blue |
| 22-26 | Gearcase screws (4) | None |

## SERVICE NOTES:

### 5359-21

1. To remove the gearcase (200), remove the retaining ring (1226), shift lever (261), plate (262), screws (1223), dust cap (1227), spacer (253), retainer (1226), sleeve (1214), holding ring (258), ball (256), support plate (257), and spring (255).

2. To remove the spindle (232), the two mounting bolts (275) must be removed with a metric allen wrench.

3. To remove the ram (222), tap the end of the striker (245) with a hammer, this frees the ram from the ram catcher. Ram may be found in piston rather than in ram catcher.

4. To remove the ram catcher (241), striker (245) and stop washer (249) from the spindle (232), remove the internal retaining ring (1218) with a small screwdriver by pushing on the ring through the two small ports in the spindle where the ring is visible. Push the ring in and towards the open end of the spindle, use service tool 61-10-0185 if necessary. Press out all internal parts.

5. To remove the rear thrust bearing (238), remove the spiral lock retaining ring (239) with a screwdriver and then remove the thrust bearing.

6. To remove the spindle gear/clutch (235), press the spindle gear against the disk springs (233) and remove the retaining ring (236) that fits into the gear counter bore. NOTE: Washer (264) is no longer being used with new spindle kit.

7. To remove the wobble shaft assembly (211), turn the shaft so the wobble finger of the wobble plate (218) leans toward the motor housing (100). Pull out on the shaft, tilt and wiggle it to get it to clear the crankcase (206).

8. To disassemble the wobble shaft assembly (211), press the reduction gear (219) off, remove all remaining parts.

9. To remove the bearing housing (415), try turning it by twisting on the lugs by hand. If it can be moved, continue to twist and pull to remove. If it will not move, it must be removed with an internal bearing puller.

10. To remove the handle (1100), push out dowel pin (7), open handle, remove snap ring (9) and washer (8) from the isolation block (1215), disconnect field leads under brush covers (102) and remove handle.

11. To remove motor, remove two screws (1222) from the top of the crankcase (206) and 4 screws (1221) from deep pockets in motor housing (100). Slide motor and motor housing out of crankcase.

12. To remove armature (406) from motor assembly, pull brushes (1201) off of commutator, push back brush holders (120) to provide clearance for insulating disc (410), slide bearing cover (130) from under armature ball bearing (409) and slide armature out.

13. When reassembling bearing housing (415) to crankcase (206) do not press it completely into place before the piston (223) and wobble shaft (211) are in place.

14. When reassembling the wobble shaft assembly (211), a clearance of .001 to .003 inch must be maintained between the reduction gear (219) and the inner race of the wobble plate (218). The ground side of the gear must face the wobble plate.

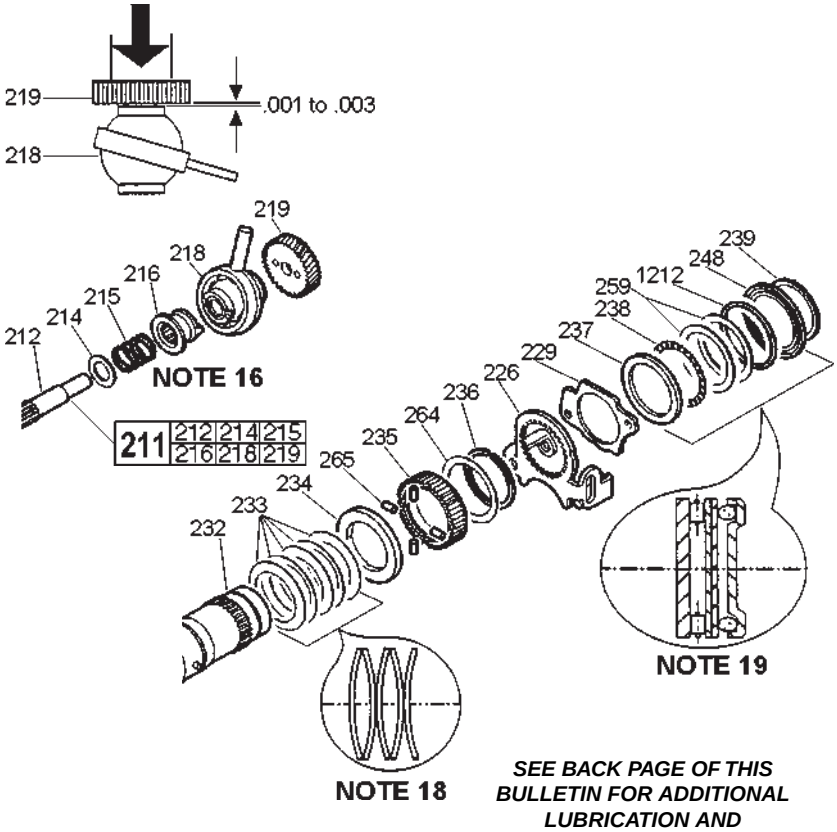
15. When reassembling the clutch be sure to stack the disk springs (233), as shown.

16. Thrust bearing (238) on the spindle (232) must be assembled as shown.

17. To push the internal retaining ring (1218) into the spindle (232) that retains the striker (245), stop washer (249) and ram catcher (241), use an old, used piston. The position of the ring can be visually checked by looking in the removal ports.

18. Check slugs (117 and 1216), replace if worn or missing.

19. Bearing Cup (1205) to be placed in motor cover (401) before assembly.




***SEE BACK PAGE OF THIS BULLETIN FOR ADDITIONAL LUBRICATION AND SERVICE NOTES***

## Service Notes – How to check the Static Slip of Clutch Mechanism

**Note! Before checking the 'static' slip clutch torque a tool's clutch assembly must be dynamically slipped for a minimum of 5 seconds; to dynamically slip the clutch assembly requires drilling with the tool and 'binding a bit in the work' and slipping the clutch faces for 5+ SECONDS.**

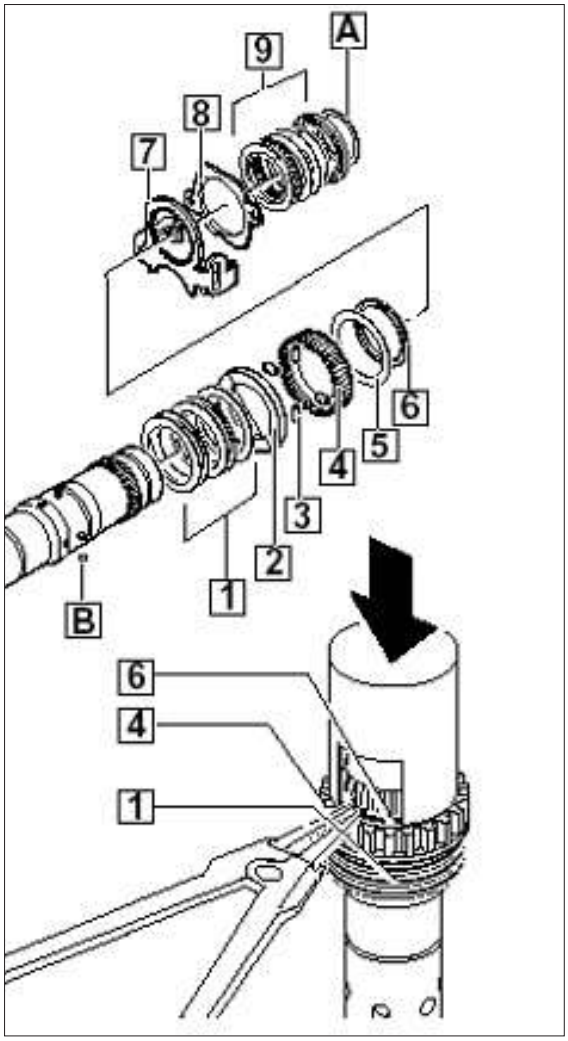
Parts required to check the Static Slip Clutch of the 5359-21 Rotary Hammer are as follows.

- Chuck Adapter # 48-03-3005
- ½" - 20 Hex Nut

Checking 'static' torque — 5359-21

- insert the 48-66-3005 chuck adapter w/ ½"-20 hex nut threaded onto the adapter
- turn / place shifting lever into the "hammer w/rotation mode"
- remove the four (4) screws from the motor cover
- remove the motor cover from the crankcase
- place hammer upside down in a machinist vise and tighten securely
- install ¾" socket onto ft-lbs torque wrench, which corresponds to hex of ½"-20 nut
- hold the armature firm by holding onto the fan
- turn torque wrench in a clockwise direction (as viewed from the bit end of the tool) while holding the armature fan, observe at what value the clutch slips
- 5359-21 — minimum slip torque 20 ft-lbs / maximum slip torque 36 ft-lbs

## Service Notes – Disassembling the spindle – Assembling gear reduction shaft

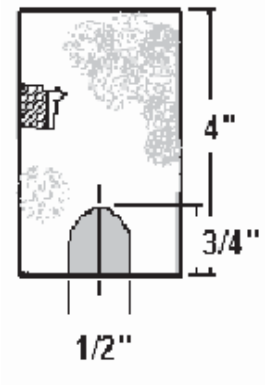


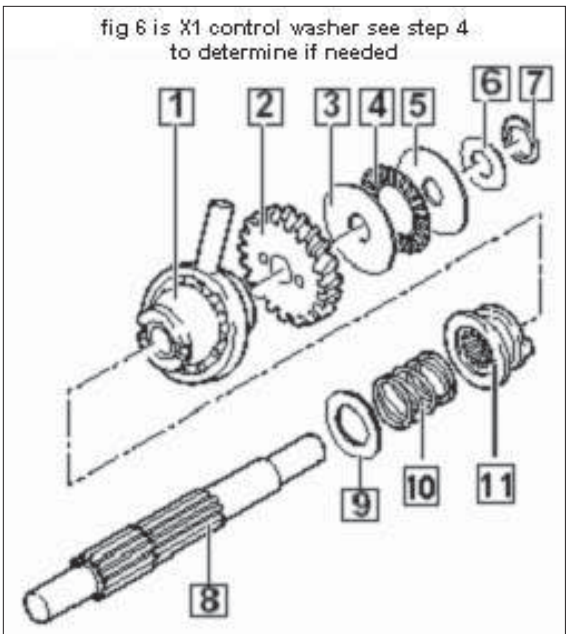

**Disassembling the spindle**

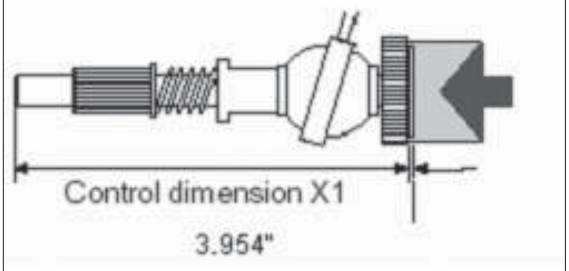
1) remove spiral retaining ring [A]
2) remove
   - washer, o-ring, two (2) thin washers, thrust bearing & thick washer assembly [9]
   - retaining plate [8]
   - shift ring [7]
3) remove spindle gear [4] with the aide of a 90º external snap ring pliers and 61 30 0290 press fixture (see illustration & Product Support Bulletin #271 & #324) - compress the spindle gear against the belleville spring washers [1] while removing retaining ring [6]
4) remove flat washer [5]
5) remove four roller pins [3] and stop washer [2]
6) remove the four (4) steel balls [B] — compress the five (5) belleville spring washers [1] using 'pipe' press fixture to compress the assembly which will allow for removal of steel balls with the help of a magnetized tip screwdriver - press fixture can be made from 1 3/8" pipe (see illustration below) — failure to use press fixture can cause damage to top belleville spring washer or all belleville spring washers – requiring replacement before re-assembling

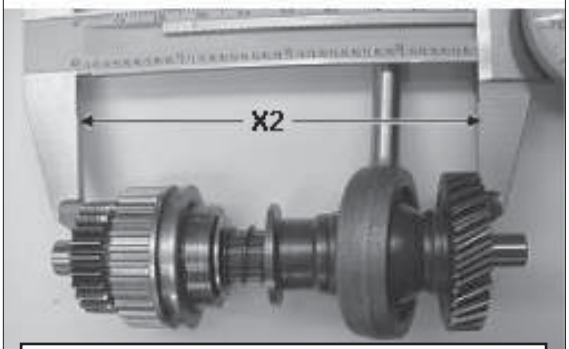

Press Fixture for removal of steel balls made from 1 3/8" Black or Galvanized Pipe cutting four [4] notches 90º from each other.

**NOTE:** Tools having spindle kit 38-50-0011 will not have flat washer #5.





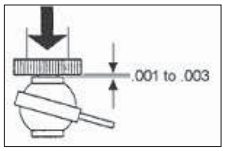




**control dimension X2 — 3.678" – 3.690"**
measured between face of 45-88-1183 washer [15] & face of flat washer [5], see illustration below
add washer(s) [16] to the assembly as needed to obtain X2 control dimension

most, if not all hammers will require control washer(s)

## Assembling the reduction gear shaft

1) assemble the reduction gear shaft [8] with the following parts:
   - washer [9]
   - spring [10]
   - coupling sleeve [11]
   - wobble plate [1]




2) press reduction gear [2] onto reduction gear shaft [8] with the ground face toward wobble plate; a clearance of 0.001" to 0.003" **must be maintained** between the reduction gear [2] and inner race of the wobble plate [1]

3) lightly **grease entire length of reduction gear shaft** [8] and coupling sleeve [11] - lightly grease the thrust bearing assembly [3,4,&5] and place them onto the shaft

4) check for control dimension X1 of 3.954" to 3.980", if < 3.953" **add a single 45-88-8825 0.020" washer** [6] to the assembly

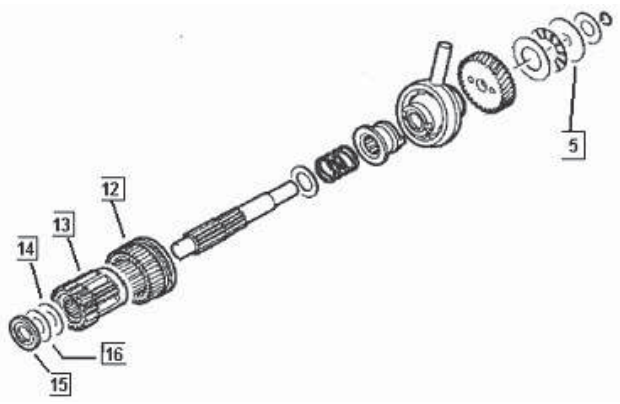
5) place o-ring [7] on shaft, it serves to hold thrust bearing assembly (and if needed the 0.020" washer) in place

6) assemble internal gear [12], offset gear [13] and 45 88-1182 washer [14] and 45-88-1183 washer [15] onto wobble shaft assembly

7) recess of 45-88-1183 washer [15] must face needle bearing / front of gear case

8) check for control dimension **X2**, if it does not fall between 3.678" – 3.690" chose a suitable washer(s) according to chart and add it (them) to the reduction gear shaft assembly - if required place control washer(s) [16] in front of 45 88-1182 washer [14], sandwiching it (them) between 45 88-1182 washer [14] and 45-88-1183 washer [15]

| | | control washer(s) [16] added to the assembly as listed | | |
|---|---|---|---|---|
| control dimension X2 | | 0.039" 45-88-1186 | 0.016" 45-88-1185 | 0.008" 45-88-1184 |
| 3.621 | 3.622 | 1 | - | 1 |
| 3.622 | 3.630 | 1 | 1 | - |
| 3.630 | 3.638 | 1 | - | 1 |
| 3.638 | 3.646 | 1 | - | - |
| 3.646 | 3.654 | - | 2 | - |
| 3.654 | 3.661 | - | 1 | 1 |
| 3.662 | 3.669 | - | 1 | - |
| 3.670 | 3.677 | - | - | 1 |
| 3.678 | 3.690 | - | - | - |



BULLETIN NO.
**54-24-5001**

# SERVICE PARTS LIST

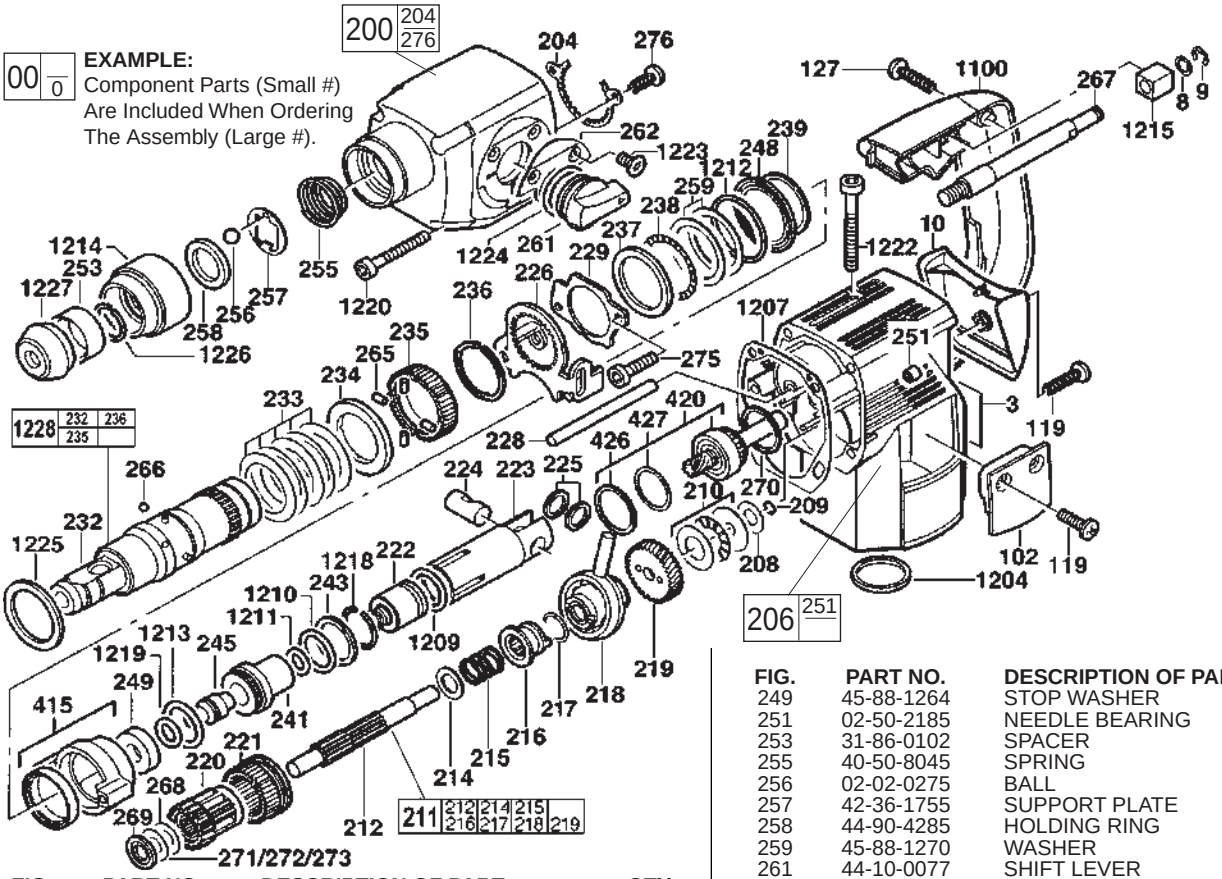
SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS

## 1-1/8" ROTARY HAMMER

CATALOG NO. **5359-21** | SERIAL NUMBER **409B (409A Series II)**

REVISED BULLETIN 54-24-5000

WIRING INSTRUCTION **58-01-1861**

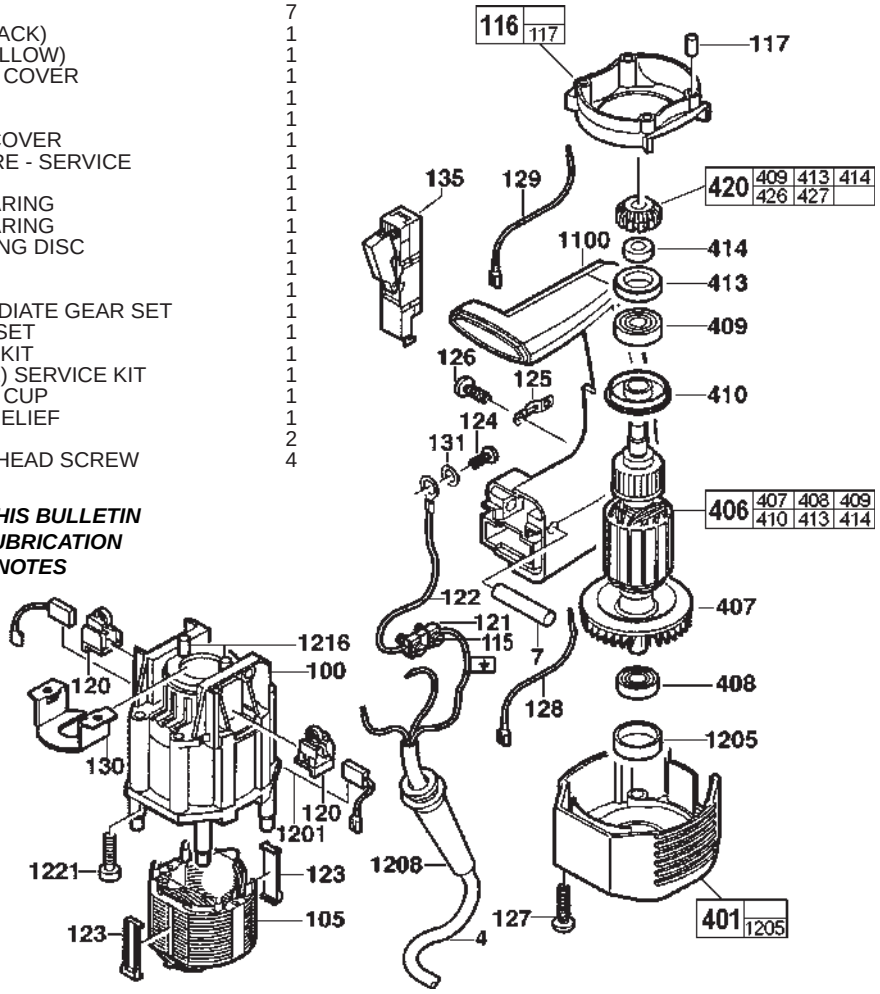



| FIG. | PART NO. | DESCRIPTION OF PART | QTY. |
|---|---|---|---|
| 3 | 12-20-5359 | SERVICE NAMEPLATE KIT | 1 |
| 8 | 45-88-1245 | WASHER | 1 |
| 9 | 44-90-0340 | SNAP RING (EXT.) | 1 |
| 10 | 31-15-0257 | CRANKCASE COVER | 1 |
| 102 | 31-15-0255 | BRUSH COVER | 2 |
| 119 | 05-78-0745 | TAPTITE SCREW | 5 |
| 127 | 05-78-0715 | SCREW | 7 |
| 200 | 31-40-0042 | GEARCASE | 1 |
| 204 | 44-86-0625 | SPLINED RETAINER | 1 |
| 206 | 31-15-0307 | CRANKCASE | 1 |
| 208 | 45-88-8825 | WASHER *(ADD AS REQUIRED)* | 1 |
| 209 | 34-40-4440 | O-RING | 1 |
| 210 | 02-80-6025 | THRUST BEARING SET | 1 |
| 211 | 14-73-0247 | WOBBLE SHAFT ASSEMBLY | 1 |
| 212 | 36-66-3162 | REDUCTION GEAR SHAFT | 1 |
| 214 | 45-88-1250 | WASHER | 1 |
| 215 | 40-50-8897 | SPRING | 1 |
| 216 | 45-22-0302 | COUPLING SLEEVE | 1 |
| ★ 217 | 45-88-8414 | WASHER | 1 |
| 218 | 36-92-0747 | WOBBLE PLATE | 1 |
| 219 | 32-60-2622 | REDUCTION GEAR | 1 |
| 220 | 32-60-2157 | OFFSET GEAR | 1 |
| 221 | 32-60-2165 | INTERNAL GEAR | 1 |
| 222 | 44-82-0192 | RAM | 1 |
| 223 | 44-62-0157 | PISTON | 1 |
| 224 | 44-60-1405 | WRIST PIN | 1 |
| 225 | 45-88-1180 | WASHER | 2 |
| 226 | 44-90-4500 | SHIFT RING | 1 |
| 228 | 44-60-1485 | PIN | 1 |
| ★ 229 | 44-66-6055 | RETAINING PLATE | 1 |
| 232 | 38-50-0058 | SDS SPINDLE | 1 |
| 233 | 40-50-7977 | BELLEVILLE SPRING | 5 |
| ★ 234 | 45-88-7767 | STOP WASHER | 1 |
| ★ 235 | 32-10-0055 | SPINDLE GEAR | 1 |
| 236 | 40-50-8492 | RETAINING RING (EXT.) | 1 |
| 237 | 45-88-1255 | WASHER | 1 |
| 238 | 02-80-0150 | THRUST BEARING | 1 |
| 239 | 45-88-0775 | RETAINING RING | 1 |
| 241 | 44-82-0089 | RAM CATCHER | 1 |
| 243 | 42-76-0727 | THRUST COLLAR | 1 |
| 245 | 45-56-2537 | STRIKER | 1 |
| 248 | 45-88-1265 | WASHER | 1 |

| FIG. | PART NO. | DESCRIPTION OF PART | QTY. |
|---|---|---|---|
| 249 | 45-88-1264 | STOP WASHER | 1 |
| 251 | 02-50-2185 | NEEDLE BEARING | 2 |
| 253 | 31-86-0102 | SPACER | 1 |
| 255 | 40-50-8045 | SPRING | 1 |
| 256 | 02-02-0275 | BALL | 1 |
| 257 | 42-36-1755 | SUPPORT PLATE | 1 |
| 258 | 44-90-4285 | HOLDING RING | 1 |
| 259 | 45-88-1270 | WASHER | 2 |
| 261 | 44-10-0077 | SHIFT LEVER | 1 |
| 262 | 44-66-0101 | PLATE | 1 |
| 265 | 44-96-0101 | ROLLER | 4 |
| 266 | 02-02-0110 | BALL | 4 |
| 267 | 05-77-0030 | BOLT | 1 |
| 268 | 45-88-1182 | WASHER | 1 |
| 269 | 45-88-1183 | WASHER | 1 |
| 270 | 44-90-0115 | RING | 1 |
| 271 | 45-88-1184 | WASHER | 1 |
| 272 | 45-88-1185 | WASHER | 1 |
| 273 | 45-88-1186 | WASHER | 1 |
| 275 | 05-74-0700 | SCREW | 2 |
| 276 | 05-74-0717 | SCREW | 2 |
| 415 | 45-60-0511 | BEARING ASSY | 1 |
| 420 | 36-66-4267 | INTERMEDIATE GEAR SET | 1 |
| 426 | 45-88-1170 | RETAINING RING | 1 |
| 427 | 45-88-1280 | WASHER | 1 |
| 600 | 43-46-0172 | DEPTH GAGE (NOT SHOWN) | 1 |
| 701 | 49-15-5300 | SIDE HANDLE (NOT SHOWN) | 1 |
| ★1100 | 31-44-0011 | HANDLE SET | 1 |
| 1204 | 34-40-4454 | O-RING | 1 |
| 1207 | 43-44-0375 | GASKET | 1 |
| 1209 | 34-40-5359 | O-RING | 1 |
| 1210 | 34-40-4452 | O-RING | 1 |
| 1211 | 34-40-4451 | O-RING | 1 |
| 1212 | 34-40-4459 | O-RING | 1 |
| 1213 | 34-40-4456 | O-RING | 1 |
| 1214 | 42-76-0275 | COLLAR | 1 |
| 1215 | 43-87-0080 | ISOLATION BLOCK | 1 |
| 1218 | 44-90-4415 | RETAINING RING | 1 |
| 1219 | 34-40-0130 | O-RING | 1 |
| 1220 | 05-74-0685 | SOCKET HEAD SCREW | 4 |
| 1222 | 05-74-0695 | SOCKET HEAD SCREW | 2 |
| 1223 | 05-74-0697 | SCREW | 2 |
| 1224 | 34-40-0132 | O-RING | 1 |
| 1225 | 45-06-0215 | FELT WASHER | 1 |
| 1226 | 44-90-0375 | SNAP RING | 1 |
| ★1227 | 42-52-0065 | DUST CAP | 1 |
| 1228 | 38-50-0011 | SDS SPINDLE KIT | 1 |

| FIG. | PART NO. | DESCRIPTION OF PART | QTY. |
|---|---|---|---|
| 3 | 12-20-5359 | SERVICE NAMEPLATE KIT | 1 |
| 4 | 22-64-0506 | CORD SET | 1 |
| 7 | 44-60-0015 | GROOVED DOWEL PIN | 1 |
| 100 | 31-50-0955 | MOTOR HOUSING | 1 |
| 105 | 18-07-0121 | FIELD -SERVICE | 1 |
| ★ 115 | 05-81-0932 | SCREW | 2 |
| 116 | 31-05-0220 | AIR DEFLECTOR RING | 1 |
| 117 | 45-30-0210 | SLUG | 4 |
| 120 | 22-20-0232 | BRUSH HOLDER | 2 |
| ★ 121 | 42-86-0150 | WIRE CLAMP | 1 |
| 122 | 23-94-1034 | WIRE | 1 |
| 123 | 42-70-1100 | FIELD CENTERING CLIP | 2 |
| 124 | 05-78-0747 | SCREW | 1 |
| 125 | 31-17-0240 | CORD CLAMP | 1 |
| 126 | 05-78-0720 | SCREW | 2 |
| 127 | 05-78-0715 | SCREW | 7 |
| ★ 128 | 23-94-0003 | WIRE (BLACK) | 1 |
| ★ 129 | 23-94-1037 | WIRE (YELLOW) | 1 |
| 130 | 42-92-0015 | BEARING COVER | 1 |
| 131 | 45-88-1340 | WASHER | 1 |
| ★ 135 | 23-66-0012 | SWITCH | 1 |
| 401 | 31-15-0442 | MOTOR COVER | 1 |
| 406 | 16-07-0123 | ARMATURE - SERVICE | 1 |
| 407 | 22-84-0940 | FAN | 1 |
| 408 | 02-04-1800 | BALL BEARING | 1 |
| 409 | 02-04-1817 | BALL BEARING | 1 |
| 410 | 43-06-0135 | INSULATING DISC | 1 |
| 413 | 45-22-0465 | SLEEVE | 1 |
| 414 | 45-36-1595 | SPACER | 1 |
| 420 | 36-66-4267 | INTERMEDIATE GEAR SET | 1 |
| ★ 1100 | 31-44-0011 | HANDLE SET | 1 |
| ★ 1200 | 14-46-0007 | SERVICE KIT | 1 |
| ★ 1201 | 22-18-0005 | BRUSH (2) SERVICE KIT | 1 |
| 1205 | 42-96-0170 | BEARING CUP | 1 |
| ★ 1208 | 44-76-0015 | STRAIN RELIEF | 1 |
| 1216 | 45-30-0220 | SLUG | 2 |
| 1221 | 05-74-0705 | SOCKET HEAD SCREW | 4 |

***SEE BACK PAGE OF THIS BULLETIN FOR ADDITIONAL LUBRICATION AND SERVICE NOTES***




**Service Kit 14-46-0007 Contains:**

| Qty. | Cat. No. | Description |
|---|---|---|
| 4 | 05-74-0685 | Socket Head Screw |
| 2 | 05-74-0695 | Socket Head Screw |
| 2 | 05-74-0697 | Screw |
| 4 | 05-74-0705 | Socket Head Screw |
| 1 | 22-18-0005 | Brush Service Kit (2) |
| 1 | 34-40-0130 | O-Ring |
| 1 | 34-40-0132 | O-Ring |
| 1 | 34-40-4451 | O-Ring |
| 1 | 34-40-4452 | O-Ring |
| 1 | 34-40-4454 | O-Ring |
| 1 | 34-40-4456 | O-Ring |
| 1 | 34-40-4459 | O-Ring |

| Qty. | Cat. No. | Description |
|---|---|---|
| 1 | 42-52-0065 | Dust Cap |
| 1 | 42-76-0275 | Collar |
| 2 | 42-96-0170 | Bearing Cup |
| 1 | 43-44-0375 | Gasket |
| 1 | 43-87-0080 | Isolation Block |
| 1 | 44-76-0015 | Strain Relief |
| 1 | 44-90-0375 | Snap Ring |
| 1 | 44-90-4415 | Retaining Ring |
| 1 | 45-06-0215 | Felt Washer |
| 2 | 45-30-0220 | Slug |
| 2 | 45-88-1180 | Washers |
| 1 | 49-08-4250 | Type “P” Grease (1.5 oz.) |
| 1 | 49-08-4255 | Type “Q” Grease (1.5 oz.) |

**Type "P" Grease (Cat. No. 49-08-4250)**

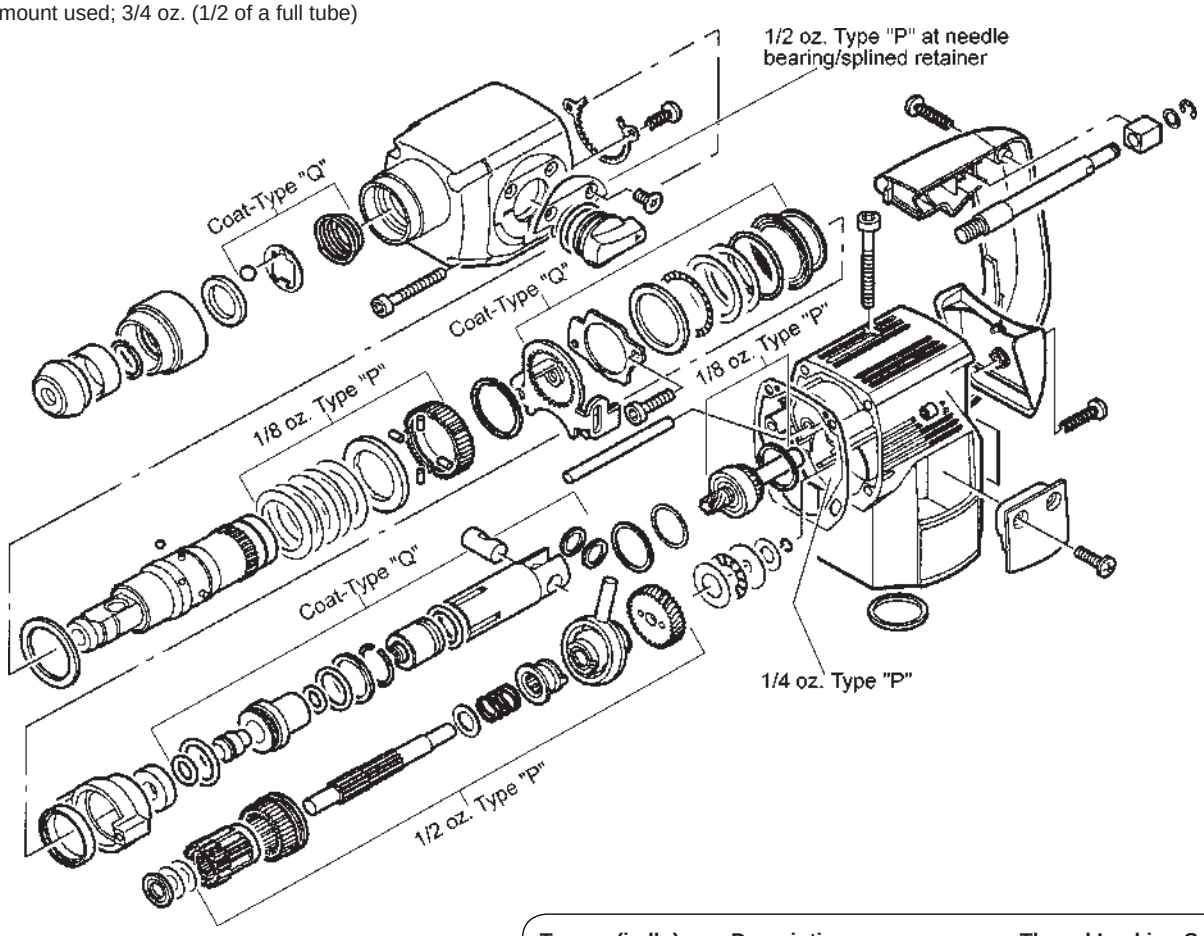
1. Place 1/2 oz. at needle bearing / splined retainer area of gearcase (200).
2. Grease assembled wobble shaft (211) with 1/2 oz. of grease.
3. Place 1/8 oz. in armature pinion / intermediate shaft assembly (420) cavity.
4. Place 1/4 oz. of grease in wobble shaft drive gear cavity of crankcase (206).
5. Grease clutch (235) and clutch springs (233) on spindle (232) with 1/8 oz. of grease.

NOTE: Total amount used; 1 1/2 oz. (one complete tube)

**Type "Q" Grease (Cat. No. 49-08-4255)**

1. Coat the spindle (232) inside and out.
2. Coat all parts assembled on or in spindle except for clutch.
3. Coat piston (223) (inside and out), ram (222), wrist pin (224) and wrist pin washers (225). DO NOT coat the flat face of the ram.

NOTE: Total amount used; 3/4 oz. (1/2 of a full tube)




| Torque (in lb.) | Description | Thread Locking Sealant |
|---|---|---|
| 22 | Motor/armature bolts (2) | None |
| 22 | Motor housing bolts (4) | None |
| 9 | Cord Clamp screws (2) | None |
| 85 | Anti-vibration post (1) | None |
| 10 | Handle screws (3) | None |
| 16 | Motor cover screws (4) | None |
| 50 | Spindle retaining bolts (2) | Blue |
| 22-26 | Gearcase screws (4) | None |

## SERVICE NOTES:

### 5359-21

1. To remove the gearcase (200), remove the retaining ring (1226), shift lever (261), plate (262), screws (1223), dust cap (1227), spacer (253), retainer (1226), sleeve (1214), holding ring (258), ball (256), support plate (257), and spring (255).

2. To remove spindle (232), the two mounting bolts (275) must be removed with a 4 mm allen wrench.

3. To remove ram (222) from ram catcher, tap the end of striker (245) with a screwdriver.

4. To remove ram catcher (241), striker (245) and stop washer (249) from the spindle (232), remove the internal retaining ring (1218) with a small screwdriver by pushing on the ring through the two small ports in the spindle where the ring is visible. Push the ring in and towards the open end of the spindle.

5. To remove spindle gear/clutch (235), press the spindle gear against disk springs (233) and remove the retaining ring (236).

6. To remove wobble shaft assembly (211), turn the wobble shaft so the wobble finger of plate (218) leans toward the gearcase (200). Pull out on the shaft, tilt and pull it to get it to clear the crankcase (206).

7. To disassemble wobble shaft assembly (211), press reduction gear (219) off, remove all remaining parts.

8. To remove bearing housing (415), try turning/twisting on the lugs by hand. If it will not move, use a large flat blade screwdriver.

9. To remove the handle (1100), push out dowel pin (7), open handle, remove snap ring (9) and washer (8) from the isolation block (1215), disconnect field leads and remove handle.

10. To remove motor, remove two screws (1222) from the top of the crankcase (206) and 4 screws (1221). Disconnect field leads and slide motor and motor housing out of crankcase.

11. To remove armature (406) from motor assembly, pull brushes (1201) off of commutator, push back brush holders (120) to provide clearance for insulating disc (410), slide bearing cover (130) from under insulating disc (410) and slide armature out.

12. When reassembling bearing housing (415) to crankcase (206) do not press it completely into place before the piston (223) and wobble shaft (211) are in place.

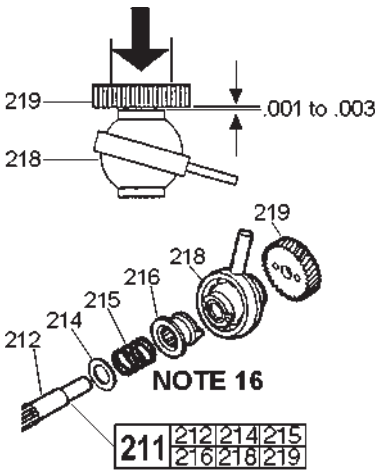
13. When reassembling the wobble shaft assembly (211), a clearance of .001 to .003 inch must be maintained between the reduction gear (219) and the inner race of the wobble plate (218). The ground side of the gear must face the wobble plate.

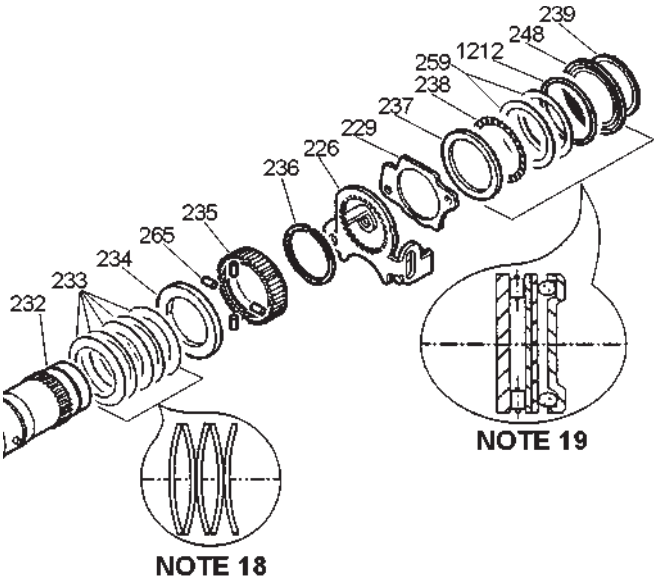
14. When reassembling the clutch be sure to stack the disk springs (233), as shown. (Refer to Note 18)

15. To install internal retaining ring (1218) into spindle (232), use an old, used piston.

16. Check slugs (117 and 1216), replace if worn or missing.

17. Bearing Cup (1205) to be placed in motor cover (401) before assembly.




***SEE BACK PAGE OF THIS BULLETIN FOR ADDITIONAL LUBRICATION AND SERVICE NOTES***

## Service Notes – How to check the Static Slip of Clutch Mechanism

**Note! Before checking the 'static' slip clutch torque a tool's clutch assembly must be dynamically slipped for a minimum of 5 seconds; to dynamically slip the clutch assembly requires drilling with the tool and 'binding a bit in the work' and slipping the clutch faces for 5+ SECONDS.**

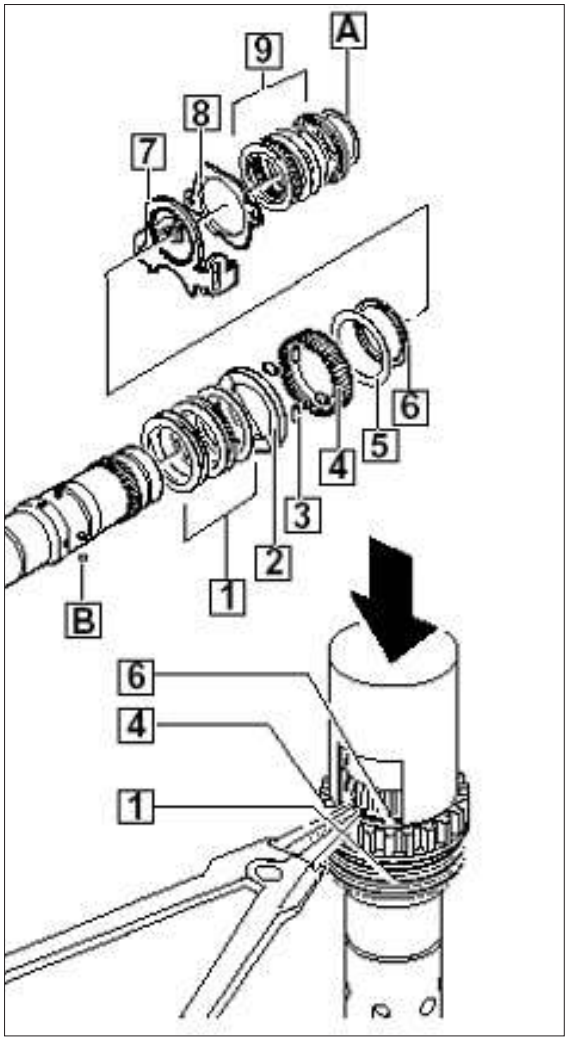
Parts required to check the Static Slip Clutch of the 5359-21 Rotary Hammer are as follows.

- Chuck Adapter # 48-03-3005
- ½" - 20 Hex Nut

Checking 'static' torque — 5359-21

- insert the 48-66-3005 chuck adapter w/ ½"-20 hex nut threaded onto the adapter
- turn / place shifting lever into the "hammer w/rotation mode"
- remove the four (4) screws from the motor cover
- remove the motor cover from the crankcase
- place hammer upside down in a machinist vise and tighten securely
- install ¾" socket onto ft-lbs torque wrench, which corresponds to hex of ½"-20 nut
- hold the armature firm by holding onto the fan
- turn torque wrench in a clockwise direction (as viewed from the bit end of the tool) while holding the armature fan, observe at what value the clutch slips
- 5359-21 — minimum slip torque 20 ft-lbs / maximum slip torque 36 ft-lbs

## Service Notes – Disassembling the spindle – Assembling gear reduction shaft

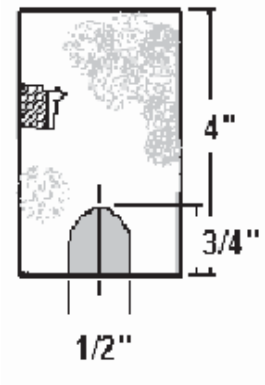


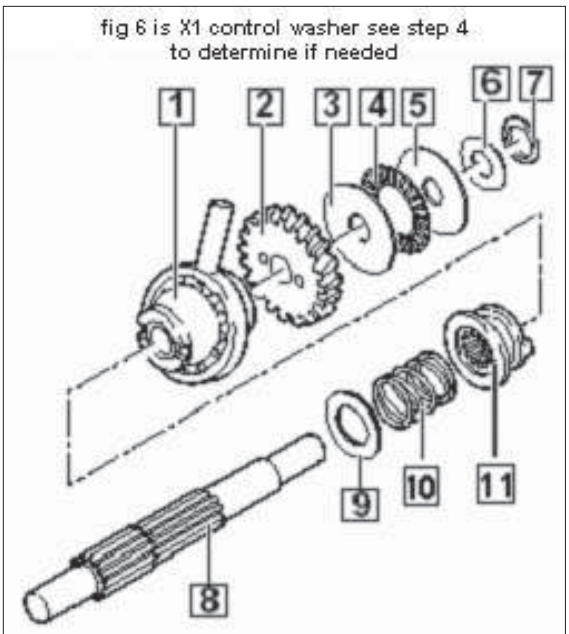

**Disassembling the spindle**

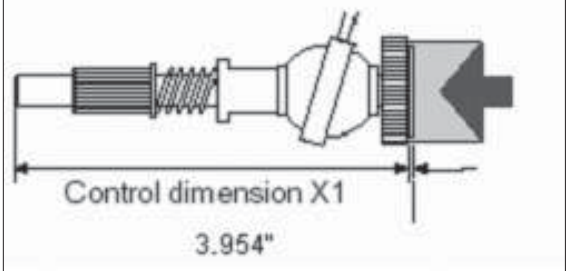
1) remove spiral retaining ring [A]
2) remove
   - washer, o-ring, two (2) thin washers, thrust bearing & thick washer assembly [9]
   - retaining plate [8]
   - shift ring [7]
3) remove spindle gear [4] with the aide of a 90º external snap ring pliers and 61 30 0290 press fixture (see illustration & Product Support Bulletin #271 & #324) - compress the spindle gear against the belleville spring washers [1] while removing retaining ring [6]
4) remove flat washer [5]
5) remove four roller pins [3] and stop washer [2]
6) remove the four (4) steel balls [B] — compress the five (5) belleville spring washers [1] using 'pipe' press fixture to compress the assembly which will allow for removal of steel balls with the help of a magnetized tip screwdriver - press fixture can be made from 1 3/8" pipe (see illustration below) — failure to use press fixture can cause damage to top belleville spring washer or all belleville spring washers – requiring replacement before re-assembling

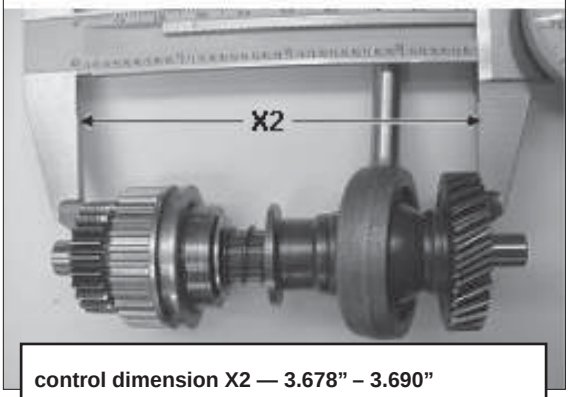

Press Fixture for removal of steel balls made from 1 3/8" Black or Galvanized Pipe cutting four [4] notches 90º from each other.

**NOTE:** Tools having spindle kit 38-50-0011 will not have flat washer #5.





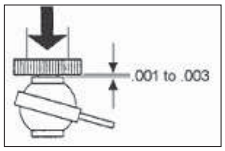




**control dimension X2 — 3.678" – 3.690"**
measured between face of 45-88-1183 washer [15] & face of flat washer [5], see illustration below
add washer(s) [16] to the assembly as needed to obtain X2 control dimension

most, if not all hammers will require control washer(s)

## Assembling the reduction gear shaft

1) assemble the reduction gear shaft [8] with the following parts:
   - washer [9]
   - spring [10]
   - coupling sleeve [11]
   - wobble plate [1]




2) press reduction gear [2] onto reduction gear shaft [8] with the ground face toward wobble plate; a clearance of 0.001" to 0.003" **must be maintained** between the reduction gear [2] and inner race of the wobble plate [1]

3) lightly **grease entire length of reduction gear shaft** [8] and coupling sleeve [11] - lightly grease the thrust bearing assembly [3,4,&5] and place them onto the shaft

4) check for control dimension X1 of 3.954" to 3.980", if < 3.953" **add a single 45-88-8825 0.020" washer** [6] to the assembly

5) place o-ring [7] on shaft, it serves to hold thrust bearing assembly (and if needed the 0.020" washer) in place

6) assemble internal gear [12], offset gear [13] and 45 88-1182 washer [14] and 45-88-1183 washer [15] onto wobble shaft assembly

7) recess of 45-88-1183 washer [15] must face needle bearing / front of gear case

8) check for control dimension **X2**, if it does not fall between 3.678" – 3.690" chose a suitable washer(s) according to chart and add it (them) to the reduction gear shaft assembly - if required place control washer(s) [16] in front of 45 88-1182 washer [14], sandwiching it (them) between 45 88-1182 washer [14] and 45-88-1183 washer [15]

| | | control washer(s) [16] added to the assembly as listed | | |
|---|---|---|---|---|
| control dimension X2 | | 0.039" 45-88-1186 | 0.016" 45-88-1185 | 0.008" 45-88-1184 |
| 3.621 | 3.622 | 1 | - | 1 |
| 3.622 | 3.630 | 1 | 1 | - |
| 3.630 | 3.638 | 1 | - | 1 |
| 3.638 | 3.646 | 1 | - | - |
| 3.646 | 3.654 | - | 2 | - |
| 3.654 | 3.661 | - | 1 | 1 |
| 3.662 | 3.669 | - | 1 | - |
| 3.670 | 3.677 | - | - | 1 |
| 3.678 | 3.690 | - | - | - |