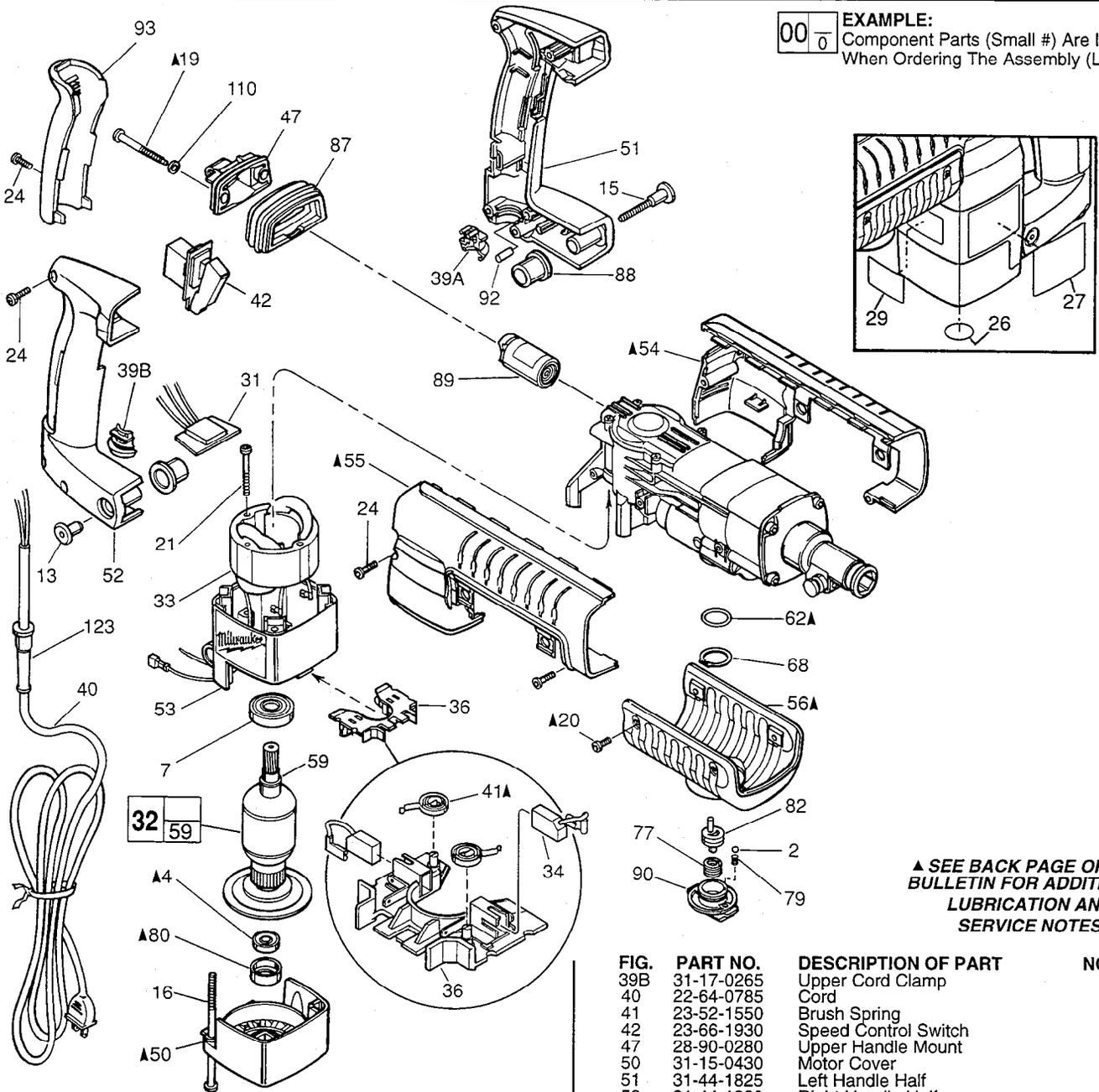




SERVICE PARTS LIST

| | | | |
|--|-------------|---------------------|-------------------|
| SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS | | REVISED BULLETIN | DATE |
| 1-1/2" THUNDERBOLT™ ROTARY HAMMER | | | Jan. '99 |
| CATALOG NO. | 5316 | STARTING SERIAL NO. | 845A |
| | | WIRING INSTRUCTION | 58-01-1555 |

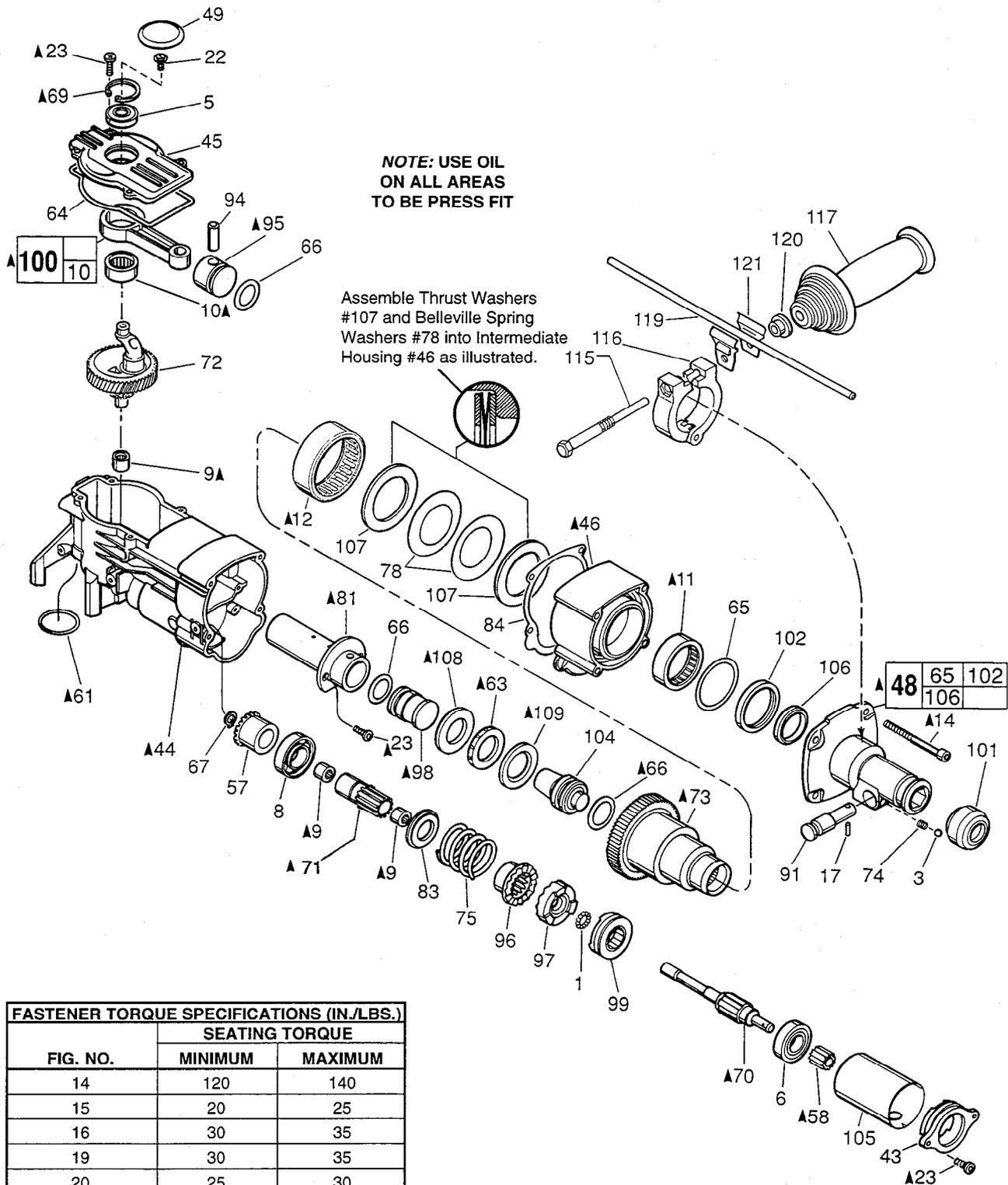
00 **0** **EXAMPLE:**
 Component Parts (Small #) Are Included
 When Ordering The Assembly (Large #).



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

| FIG. | PART NO. | DESCRIPTION OF PART | NO. REQ. |
|------|------------|---|----------|
| 2 | 02-02-0180 | 3/16" Steel Ball | (2) |
| 4 | 02-04-0847 | Ball Bearing | (1) |
| 7 | 02-04-1518 | Ball Bearing | (1) |
| 13 | 05-59-0100 | Pivot Nut | (1) |
| 15 | 05-77-0100 | Pivot Bolt | (1) |
| 16 | 05-81-0920 | M6 x 1.0 x 120 Pan Hd. Slit. Tapt. T-27 | (4) |
| 19 | 06-81-1805 | Special Screw | (2) |
| 20 | 06-82-7252 | 8-32 x 3/8" Pan Hd. Slit. Tapt. T-20 | (4) |
| 21 | 06-82-7425 | 8-16 x 2" Pan Hd. Slit. Plast. T-20 | (2) |
| 24 | 06-95-6290 | M5 x 2.24 x 18 Pan Hd. Slit. PT T-20 | (7) |
| 26 | 10-75-2760 | Milwaukee Label | (1) |
| 27 | 10-98-5316 | Product Label | (1) |
| 29 | 12-20-3300 | Service Nameplate Kit | (1) |
| 31 | 14-20-0725 | Remote Trigger Speed Control | (1) |
| 32 | 16-50-1260 | 120 Volt Armature | (1) |
| 33 | 18-50-0260 | 120 Volt Field | (1) |
| 34 | 22-18-0870 | 120 V Carbon Brush (2) Kit | (1) |
| 36 | 22-22-1480 | Brush Carrier Assembly | (1) |
| 39A | 31-17-0260 | Lower Cord Clamp | (1) |

| FIG. | PART NO. | DESCRIPTION OF PART | NO. REQ. |
|------|------------|---------------------------|----------|
| 39B | 31-17-0265 | Upper Cord Clamp | (1) |
| 40 | 22-64-0785 | Cord | (1) |
| 41 | 23-52-1550 | Brush Spring | (2) |
| 42 | 23-66-1930 | Speed Control Switch | (1) |
| 47 | 28-90-0280 | Upper Handle Mount | (1) |
| 50 | 31-15-0430 | Motor Cover | (1) |
| 51 | 31-44-1825 | Left Handle Half | (1) |
| 52 | 31-44-1830 | Right Handle Half | (1) |
| 53 | 31-50-0530 | Motor Housing | (1) |
| 54 | 31-55-0200 | Left Shroud | (1) |
| 55 | 31-55-0210 | Right Shroud | (1) |
| 56 | 31-55-0220 | Belly Shroud | (1) |
| 59 | 34-60-3620 | Retaining Ring | (1) |
| 62 | 34-40-4160 | O-Ring | (1) |
| 68 | 34-60-3630 | Retaining Ring | (1) |
| 77 | 40-50-8585 | Torsion Spring | (1) |
| 79 | 40-50-8690 | Compression Spring | (2) |
| 80 | 42-96-0130 | Bearing Cup | (1) |
| ★82 | 14-46-0112 | Shift Disk Assembly | (1) |
| 87 | 43-87-0030 | Isolation Bellows | (1) |
| 88 | 43-87-0040 | Pivot Isolator | (2) |
| 89 | 43-87-0060 | Isolation Module Assembly | (1) |
| 90 | 43-98-0470 | Rotostop Knob | (1) |
| 92 | 14-46-1001 | Foam Slug Kit (Bag of 10) | (1) |
| 93 | 44-52-0580 | Handle Cushion | (1) |
| 110 | 45-88-8555 | Rubber Washer | (2) |
| 123 | 44-76-0210 | Cord Protector | (1) |



FASTENER TORQUE SPECIFICATIONS (IN./LBS.)

| FIG. NO. | SEATING TORQUE | |
|----------|----------------|---------|
| | MINIMUM | MAXIMUM |
| 14 | 120 | 140 |
| 15 | 20 | 25 |
| 16 | 30 | 35 |
| 19 | 30 | 35 |
| 20 | 25 | 30 |
| 21 | 20 | 25 |
| 22 | 25 | 30 |
| 23 | 30 | 35 |
| 23 | 20 | 25 |
| 24 | 25 | 30 |
| 24 | 20 | 25 |
| 24 | 6 | 10 |
| 25 | 35 | 45 |

22-18-0870 CARBON BRUSH SERVICE KIT

THIS KIT CONTAINS:

- 2 ----- Carbon Brush

● 14-46-9070 1-1/2" HAMMER SERVICE KIT

THIS KIT CONTAINS:

- 1 31-12-0270 Cap-Cover
- 1 34-40-4310 Rubber Damping Washer
- 1 34-40-4320 Seal-Cover
- 1 34-40-4330 O-Ring
- 3 34-40-4350 O-Ring
- 1 42-96-0130 Bearing Cup
- 1 43-44-0970 Gasket
- 1 45-06-0540 Dust Seal-Hex
- 1 45-06-0550 Dust Seal-Round
- 1 49-08-4230 6 Oz. Tube "N" Grease

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

| FIG. | PART NO. | DESCRIPTION OF PART | NO. REQ. |
|------|------------|---|----------|
| 1 | 02-02-0120 | 1/8" Steel Ball | (12) |
| 3 | 02-02-0250 | 1/4" Steel Ball | (1) |
| 5 | 02-04-0911 | Ball Bearing | (1) |
| 6 | 02-04-1510 | Ball Bearing | (1) |
| 8 | 02-04-2000 | Ball Bearing | (1) |
| 9 | 02-50-2470 | Needle Bearing | (3) |
| 10 | 02-50-4020 | Needle Bearing | (1) |
| 11 | 02-50-9000 | Needle Bearing | (1) |
| 12 | 02-50-9985 | Needle Bearing | (1) |
| 14 | 05-74-0670 | M6 x 1.0 x 70 Skt. Hd. Cap Screw T-27 | (4) |
| 17 | 06-65-0828 | Groove Pin | (1) |
| 22 | 06-82-8842 | 8-32 x 3/8" Pan Hd. Slit. Tapite T-20 | (1) |
| 23 | 06-95-6280 | M4 x 0.7 x 14 Pan Hd. Slit. Tapite T-20 | (8) |
| 43 | 28-12-0360 | Bearing Retainer | (1) |
| 44 | 28-14-2265 | Crankcase | (1) |
| 45 | 28-20-1325 | Crankcase Cover | (1) |
| 46 | 28-50-6445 | Intermediate Housing | (1) |
| 48 | 14-52-0020 | Nose Assembly | (1) |
| 49 | 31-12-0270 | Cap-Cover | (1) |
| 57 | 32-05-2250 | Bevel Gear | (1) |
| 58 | 32-60-2590 | Clutch Pinion | (1) |
| 61 | 34-40-1375 | O-Ring | (1) |
| 63 | 34-40-4310 | Rubber Damping Washer | (1) |
| 64 | 34-40-4320 | Seal-Cover | (1) |
| 65 | 34-40-4330 | O-Ring | (1) |
| 66 | 34-40-4350 | O-Ring | (3) |
| 67 | 34-60-0700 | Retaining Ring | (1) |
| 69 | 34-80-5090 | Retaining Ring-Beveled | (1) |
| 70 | 36-14-0760 | Clutch Shaft | (1) |
| ★ 71 | 36-14-0770 | Hollow Clutch Shaft | (1) |
| 72 | 14-09-0140 | Crankshaft Assembly | (1) |
| 73 | 38-50-6030 | Spindle | (1) |
| 74 | 40-50-8420 | Bit Lock Spring | (1) |
| 75 | 40-50-8575 | Compression Spring | (1) |
| 78 | 40-50-8590 | Belleville Spring | (2) |
| 81 | 42-98-0240 | Barrel | (1) |
| 83 | 43-34-0740 | Spring Flange | (1) |
| 84 | 43-44-0970 | Gasket | (1) |
| 91 | 44-20-0222 | Bit Lock | (1) |
| 94 | 44-60-1400 | Wrist Pin | (1) |
| 95 | 44-62-0210 | Piston | (1) |
| 96 | 44-66-6030 | Splined Clutch Plate | (1) |
| 97 | 44-66-6040 | Fixed Clutch Plate | (1) |
| 98 | 44-82-0170 | Ram | (1) |
| 99 | 44-90-4380 | Shift Ring | (1) |
| 100 | 44-94-0395 | Connecting Rod Assembly | (1) |
| 101 | 49-62-0095 | Dust Seal-Hex (5/pkg.) | (1) |
| | 49-62-0105 | Dust Seal-Round (5/pkg.) | (1) |
| 102 | 45-06-0560 | Oil Seal | (1) |
| 104 | 45-56-2610 | Striker | (1) |
| 105 | 45-76-0420 | Clutch Tube | (1) |
| 106 | 45-88-5176 | Felt Seal | (1) |
| 107 | 45-88-8520 | Thrust Washer | (2) |
| 108 | 45-88-8530 | Barrel Thrust Washer | (1) |
| 109 | 45-88-8535 | Striker Cushion Washer | (1) |
| 115 | 06-14-0030 | Hex Head Cap Screw-Special | (1) |
| 116 | 14-34-0540 | Handle Ring Assembly | (1) |
| 117 | 14-34-0510 | Side Handle Assembly | (1) |
| 119 | 44-94-0165 | Depth Gauge Rod | (1) |
| 120 | 45-36-1570 | Spacer | (1) |
| 121 | 45-60-0600 | Depth Rod Clamp | (2) |

61-10-0670 Nose Service Tool

NOTE: Check the clutch torque. Clutch must slip at 30 to 40 ft.-lbs. at the spindle, checked clockwise as viewed from the front of the tool.

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

LUBRICATION NOTES: (TYPE "N" GREASE, NO. 49-08-4230)

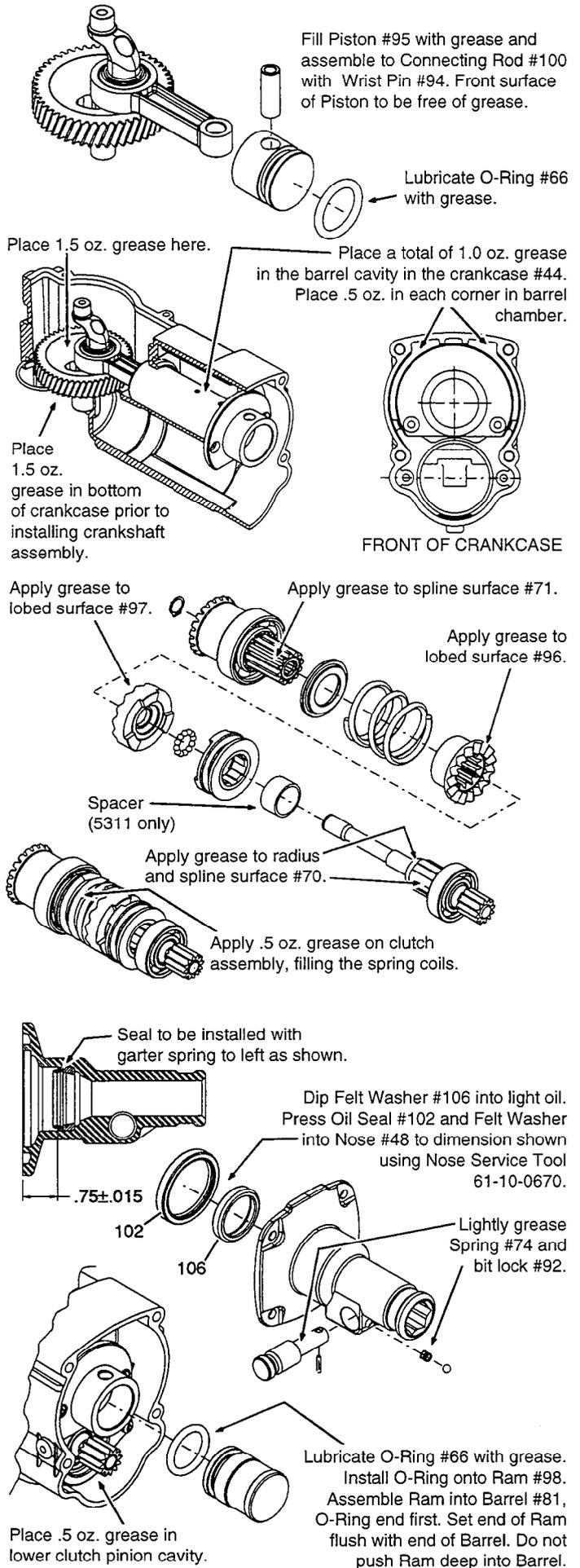
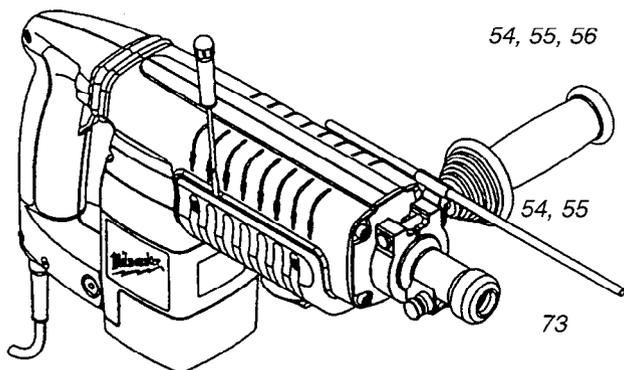


FIG.

▲ NOTES

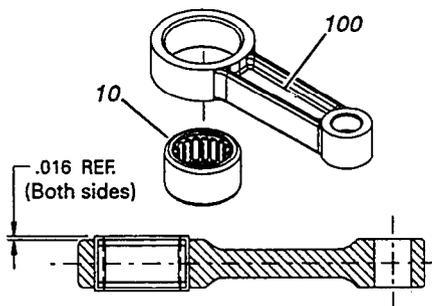


54, 55, 56

TO REMOVE BELLY SHROUD #56 FROM TOOL, INSERT SMALL SCREW DRIVER INTO GROOVE BETWEEN BELLY AND SIDE SHROUDS #54 AND #55, ABOUT 1/3 OF THE WAY FROM THE MOTOR END, AS SHOWN. PRY OUT AND DOWN ON BOTH SIDES OF THE TOOL.

TO INSTALL THE SIDE SHROUDS #54 AND #55, THE TOP HINGE OF THE SHROUDS MUST BE COMPLETELY INTERLOCKED, THEN THE BACK SIDE ROTATED CLOSED AROUND THE TOOL.

LUBRICATE ALL BORES IN SPINDLE #73 WITH A MEDIUM COATING OF GREASE.



63, 108, 109

LUBRICATE RUBBER DAMPING WASHER #63, BARREL THRUST WASHER #108 AND STRIKER CUSHION WASHER #109 WITH A MEDIUM COATING OF GREASE BEFORE ASSEMBLY.

10, 100

PRESS NEEDLE BEARING #10 IN ROD #100 SO THAT THE SAME AMOUNT STICKS OUT ON BOTH SIDES OF THE ROD, AS SHOWN.

9, 71

PRESS (2) NEEDLE BEARINGS #9 INTO HOLLOW CLUTCH SHAFT #71, FLUSH WITH THE ENDS OF THE SHAFT.

58, 70

PRESS CLUTCH PINION #58 FLUSH WITH THE END OF THE CLUTCH SHAFT #70.

11, 12, 46

PRESS NEEDLE BEARINGS #11 AND #12 FLUSH TO THE MACHINED FACES ON BOTH ENDS OF THE INTERMEDIATE HOUSING #46.

9, 44

PRESS NEEDLE BEARING #9 INTO CRANKCASE #44, FLUSH WITH TOP OF BORE, AS SHOWN.

81

LIGHTLY GREASE INSIDE OF BARREL #81 BEFORE ASSEMBLY.

48, 73

SMALL OUTSIDE DIAMETER OF SPINDLE #73 IS TO BE LUBRICATED WITH A LIGHT COAT OF GREASE BEFORE ASSEMBLING THE NOSE ASSEMBLY #48 TO THE TOOL.

48, 73, 102

NOSE ASSEMBLY #48 MUST BE PLACED SQUARELY OVER SPINDLE #73, WHEN ASSEMBLING, TO PREVENT DAMAGE TO OIL SEAL #102.

14, 19, 20, 23

FASTENERS #14, #19, #20 AND #23 ARE TO BE RE-ASSEMBLED USING BLUE LOCTITE.

48, 102

LUBRICATE BORE IN NOSE ASSEMBLY #48 BEFORE PRESSING OIL SEAL #102 INTO PLACE.

61, 62, 66

LUBRICATE O-RINGS #61, #62 AND #66 WITH GREASE.

69

INSTALL BEVEL SNAP RING #69 WITH BEVEL SIDE UP.

4, 50, 80

PLACE BEARING CUP #80 ON SMALL ARMATURE BEARING #4 BEFORE INSTALLING MOTOR COVER #50.

41

BRUSH SPRINGS #41 ARE TO BE WOUND 1/2 TURN TO ENGAGE BRUSHES.

4

RUBBER SEAL SIDE OF BALL BEARING #4 TO FACE FAN.

95, 98

FACES OF PISTON #95 AND RAM #98 ARE TO BE FREE OF GREASE.

