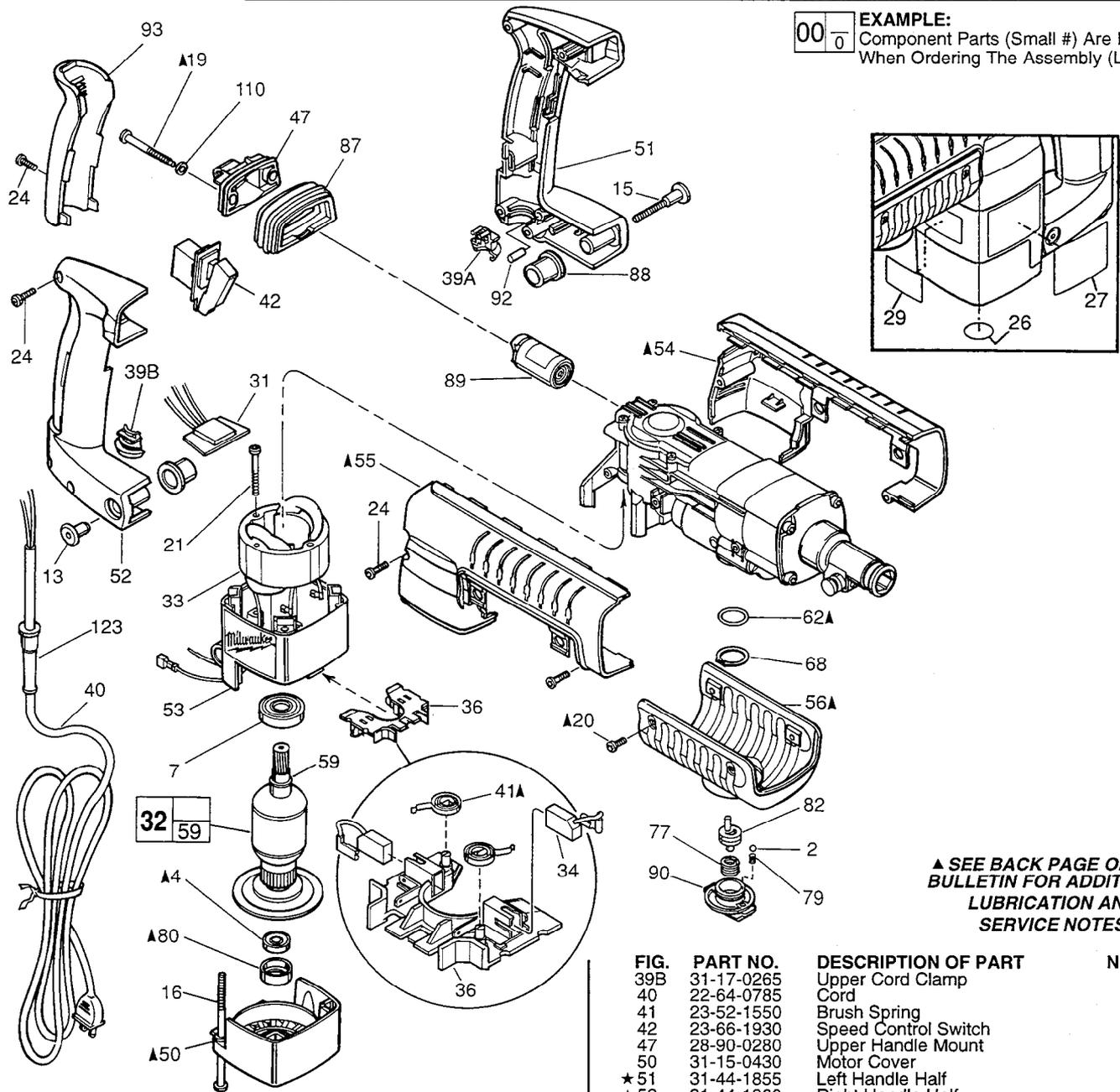




# SERVICE PARTS LIST

SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS		REVISED BULLETIN 54-24-0425	DATE Jan. '99
<b>1-1/2" THUNDERBOLT™ ROTARY HAMMER</b>			
CATALOG NO.	5316	STARTING SERIAL NO.	845B
		WIRING INSTRUCTION <b>58-01-1555</b>	

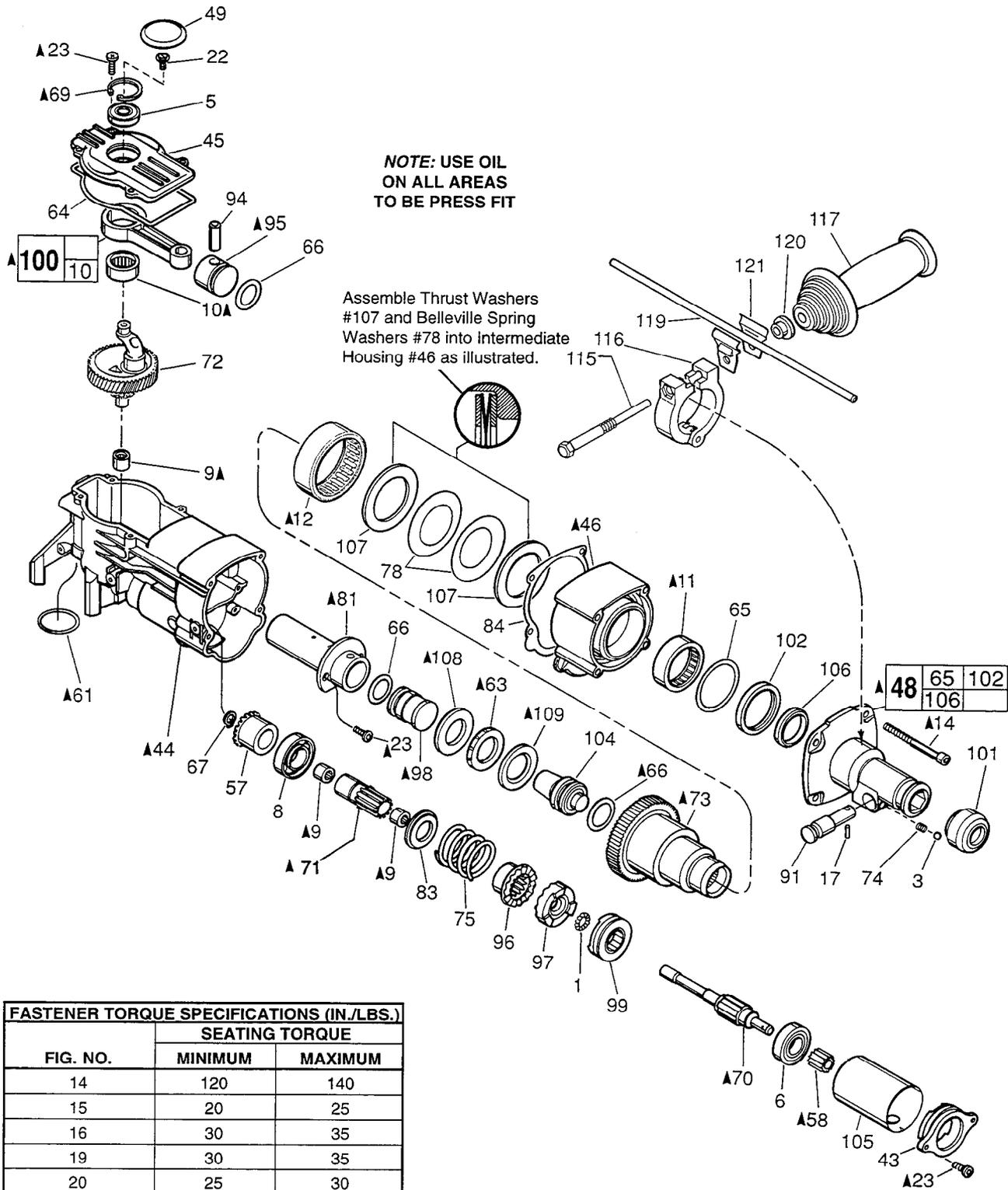
**EXAMPLE:**  
 Component Parts (Small #) Are Included  
 When Ordering The Assembly (Large #).



**▲ 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	31-44-1855 Left Handle Half	(1)
	★ 52	31-44-1860 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	BARREL	30	35
	BEARING RETAINER	20	25
	CRANKCASE COVER	25	30
24	HANDLE HALVES AND SHROUDS	20	25
	CUSHION GRIP	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**

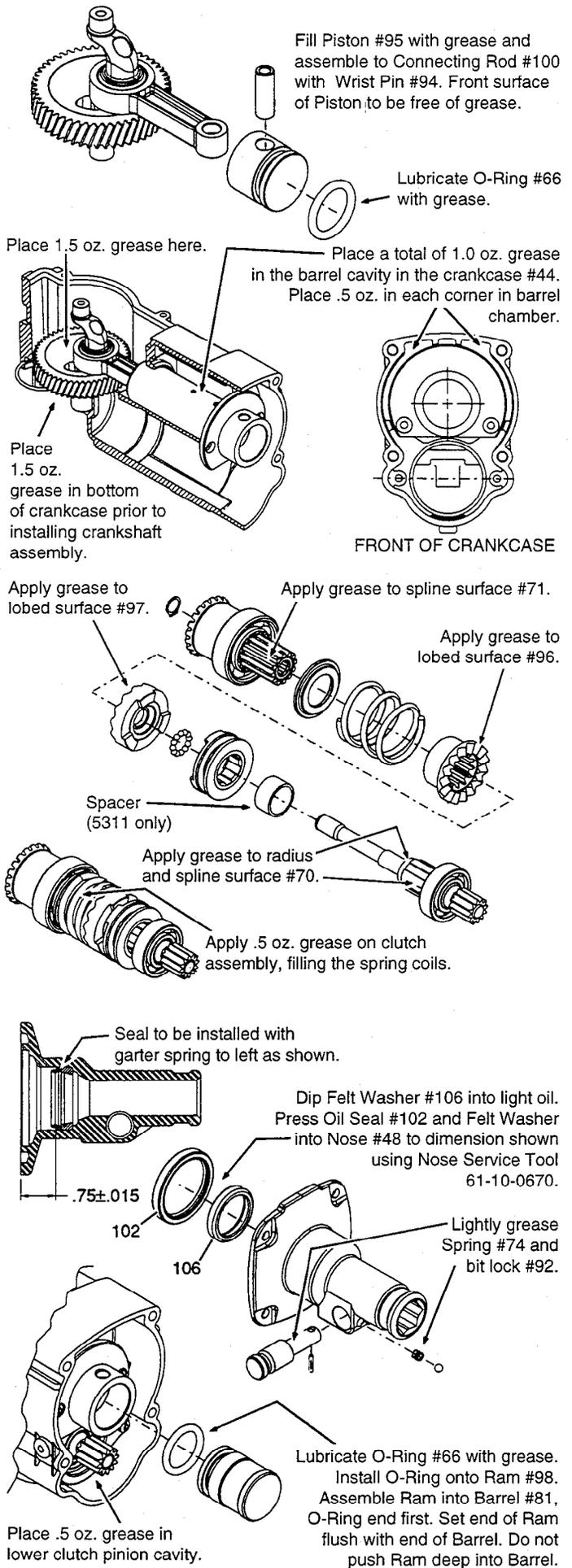
FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
1	02-02-0120	1/8" Steel Ball	(12)
3	02-02-0250	1/4" Steel Ball	(1)
5	02-04-0911	Ball Bearing	(1)
6	02-04-1510	Ball Bearing	(1)
8	02-04-2000	Ball Bearing	(1)
9	02-50-2470	Needle Bearing	(3)
10	02-50-4020	Needle Bearing	(1)
11	02-50-9000	Needle Bearing	(1)
12	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. Taptite T-20	(1)
23	06-95-6280	M4 x 0.7 x 14 Pan Hd. Slit. Taptite 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	44-66-6045	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	45-76-0490	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**

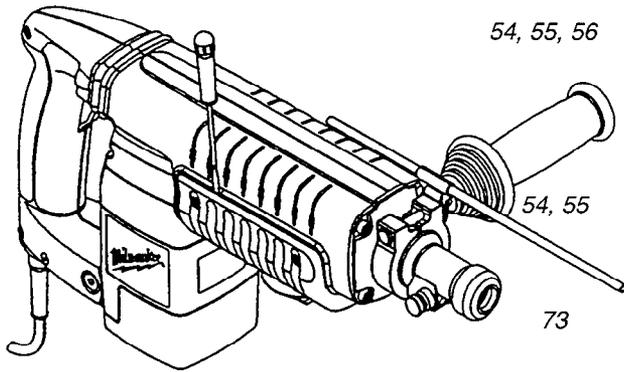
**NOTE:** Check the clutch torque. Clutch must slip at 30 to 40 ft.-lbs. at the spindle, checked clockwise as viewed from the front of the tool.

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

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



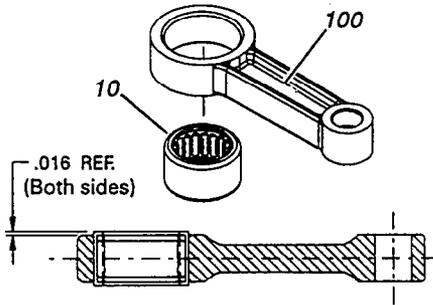
**FIG. ▲ NOTES**



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.

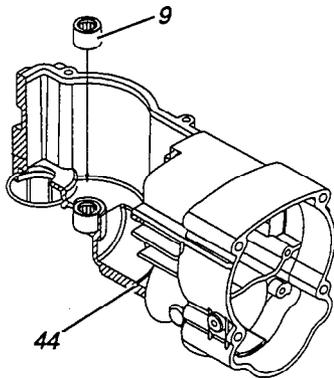


LUBRICATE RUBBER DAMPING WASHER #63, BARREL THRUST WASHER #108 AND STRIKER CUSHION WASHER #109 WITH A MEDIUM COATING OF GREASE BEFORE ASSEMBLY.

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

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

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



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

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

LIGHTLY GREASE INSIDE OF BARREL #81 BEFORE ASSEMBLY.

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.

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

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

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

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

INSTALL BEVEL SNAP RING #69 WITH BEVEL SIDE UP.

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

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

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

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