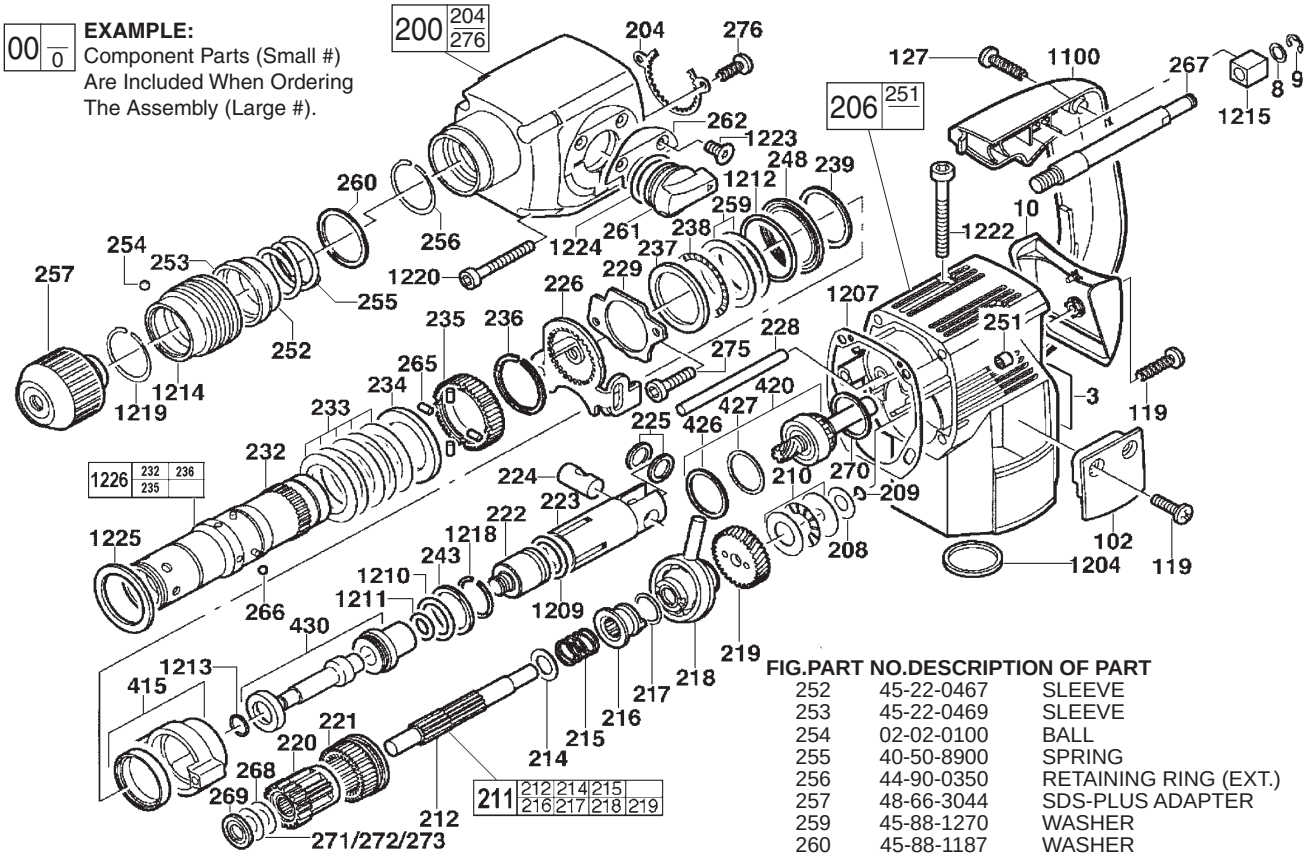
BULLETIN NO.
**54-24-5026**

# SERVICE PARTS LIST

| SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS | REVISED BULLETIN | DATE |
|---|---|---|
| **1-1/8" ROTARY HAMMER** | **54-24-5025** | Aug. 2007 |
| **CATALOG NO. 5360-21** SERIAL NUMBER **410B (410A Series II)** | WIRING INSTRUCTION **58-01-1866** | |

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




| FIG. | PART NO. | DESCRIPTION OF PART | QTY. |
|---|---|---|---|
| 3 | 12-20-5360 | 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 | 38-50-0059 | FIXTEC 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 WASHER | 1 |
| 239 | 45-88-0775 | RETAINING RING | 1 |
| 243 | 42-76-0727 | THRUST COLLAR | 1 |
| 248 | 45-88-1265 | WASHER | 1 |
| 251 | 02-50-2185 | NEEDLE BEARING | 2 |

| FIG. | PART NO. | DESCRIPTION OF PART | QTY. |
|---|---|---|---|
| 252 | 45-22-0467 | SLEEVE | 1 |
| 253 | 45-22-0469 | SLEEVE | 1 |
| 254 | 02-02-0100 | BALL | 6 |
| 255 | 40-50-8900 | SPRING | 1 |
| 256 | 44-90-0350 | RETAINING RING (EXT.) | 1 |
| 257 | 48-66-3044 | SDS-PLUS ADAPTER | 1 |
| 259 | 45-88-1270 | WASHER | 2 |
| 260 | 45-88-1187 | WASHER | 1 |
| 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 |
| 430 | 45-56-2539 | STRIKER ASSEMBLY | 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 | 34-40-4453 | O-RING | 1 |
| 1214 | 42-76-0267 | QUIK CHANGE COLLAR | 1 |
| 1215 | 43-87-0080 | ISOLATION BLOCK | 1 |
| 1218 | 44-90-4415 | RETAINING RING | 1 |
| 1219 | 44-90-0350 | SNAP RING (EXT.) | 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 | 38-50-0013 | FIXTEC SPINDLE KIT | 1 |

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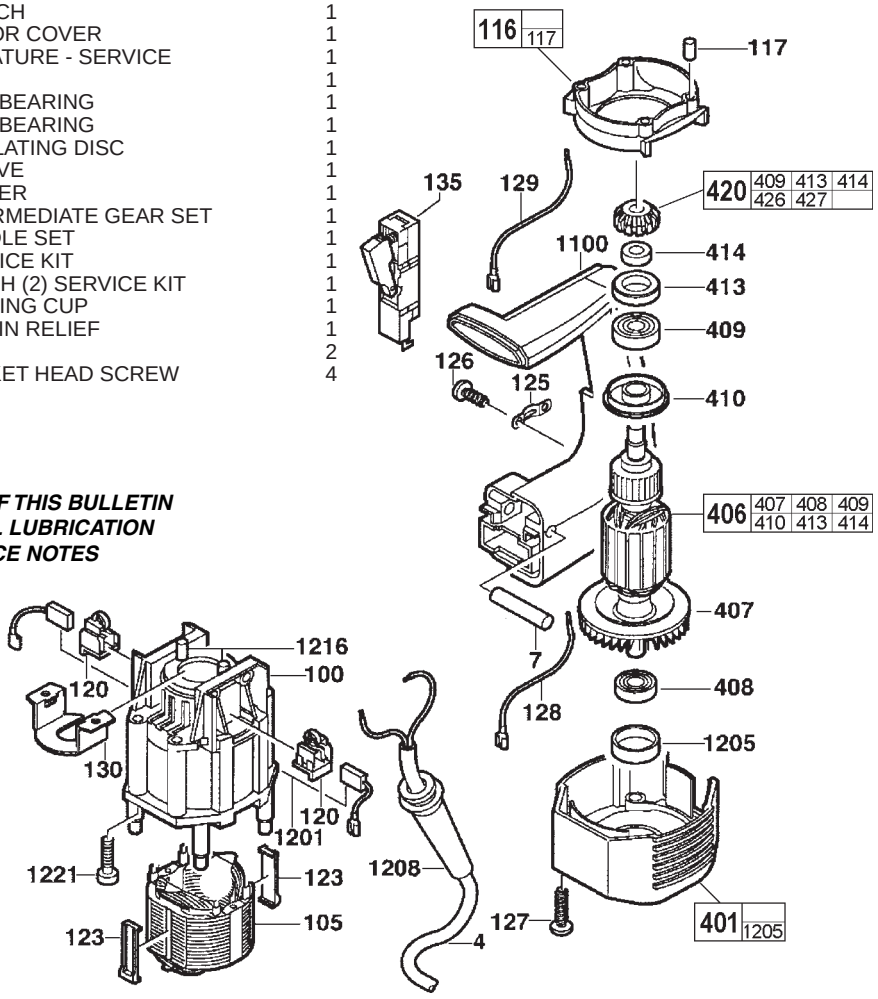
Drwg. 3

| FIG. | PART NO. | DESCRIPTION OF PART | QTY. |
|---|---|---|---|
| 4 | 22-64-0507 | 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 |
| 123 | 42-70-1100 | FIELD CENTERING CLIP | 2 |
| 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 |
| ★ 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 | 14-46-0011 | 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 14-46-0011 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 | 34-40-5359 | 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 | 34-40-4453 | O-Ring |
| 1 | 34-40-4459 | O-Ring |

| Qty. | Cat. No. | Description |
|---|---|---|
| 1 | 42-76-0267 | Quik Change 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.) |

## GREASING INSTRUCTIONS:
## 5360-21

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

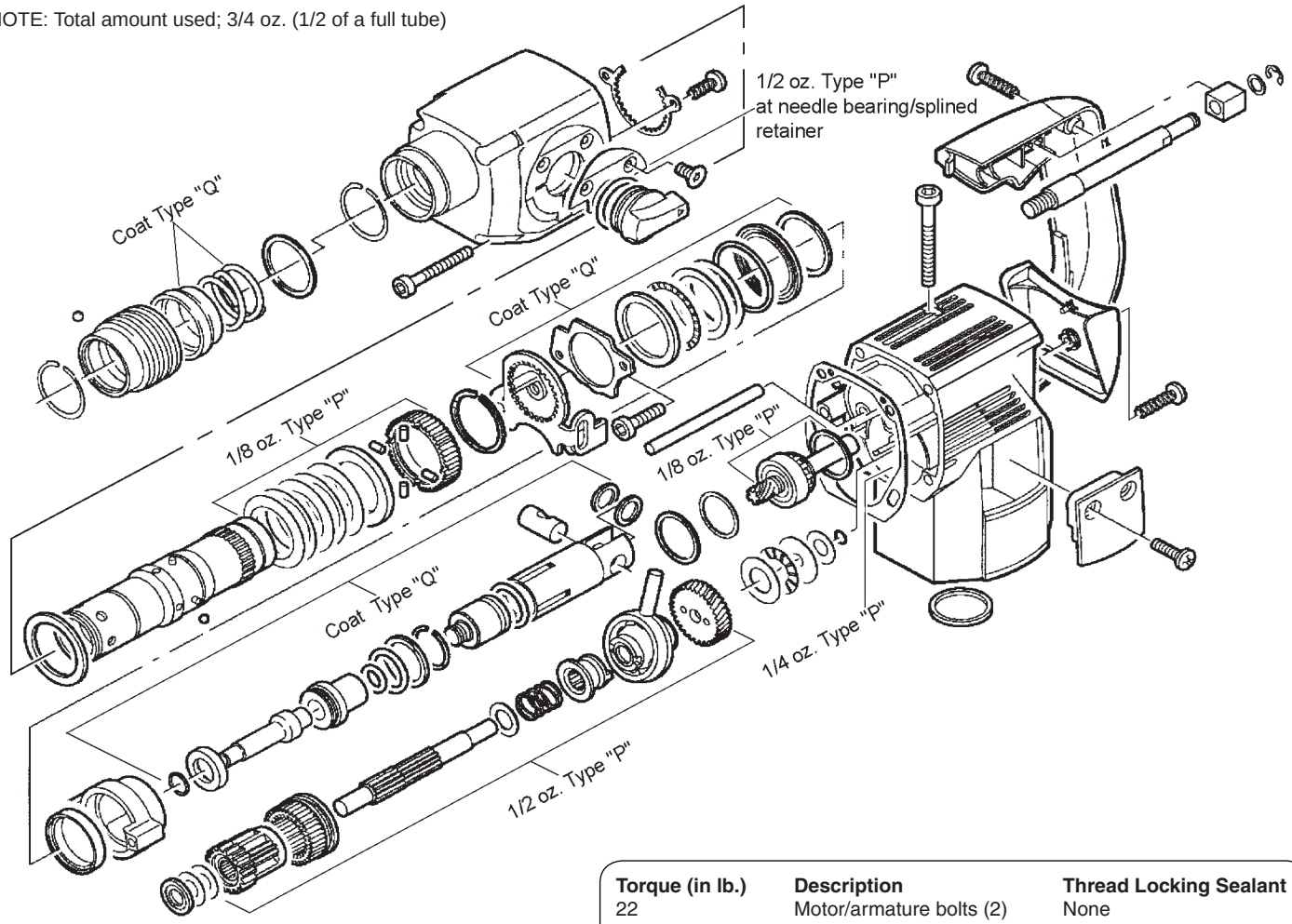
1. Place 1/2 oz. at needle bearing / splined retainer area of gear case (200).
2. Grease assembled wobble shaft assembly (211) with 1/2 oz. of grease.
3. Place 1/8 oz. in armature pinion / intermediate shaft assembly (420) cavity.
4. Place 1/4 oz. of grease in wobble shaft drive gear cavity of crankcase (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:

### 5360-21

1. To remove the gearcase (200), remove the retaining ring (1219, 256), shift lever (261), plate (262), screws (1223), adapter (257), collar (1214), sleeves (252, 253), spring (255) and washer (260).

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

3. To remove ram (222) from the catacher, tap the end of striker assembly (430) with a screwdriver. Ram may be found in piston rather than in ram catcher.

4. To remove striker assembly (430) from spindle (232), remove 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 the disk springs (233) and remove 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 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 ball bearing (409) 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.

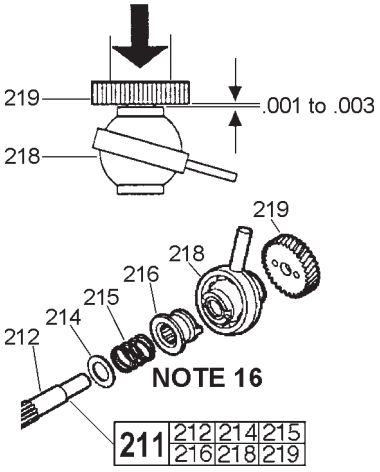
13. When reassembling the wobble shaft assembly (211), a clearance of .001 to .003 inch must be maintained between the reduction gear (219) and the inner race of the wobble plate (218). The ground side of the gear must face the wobble plate.

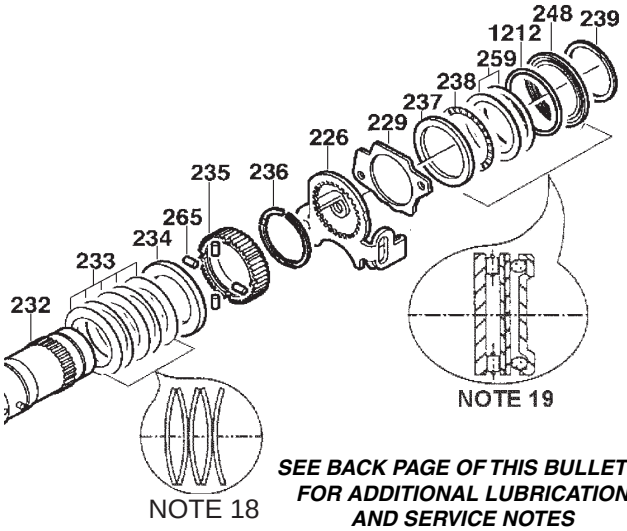
14. When reassembling the clutch be sure to stack the disk springs (233), as shown. (Refer to Note 18)

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.**

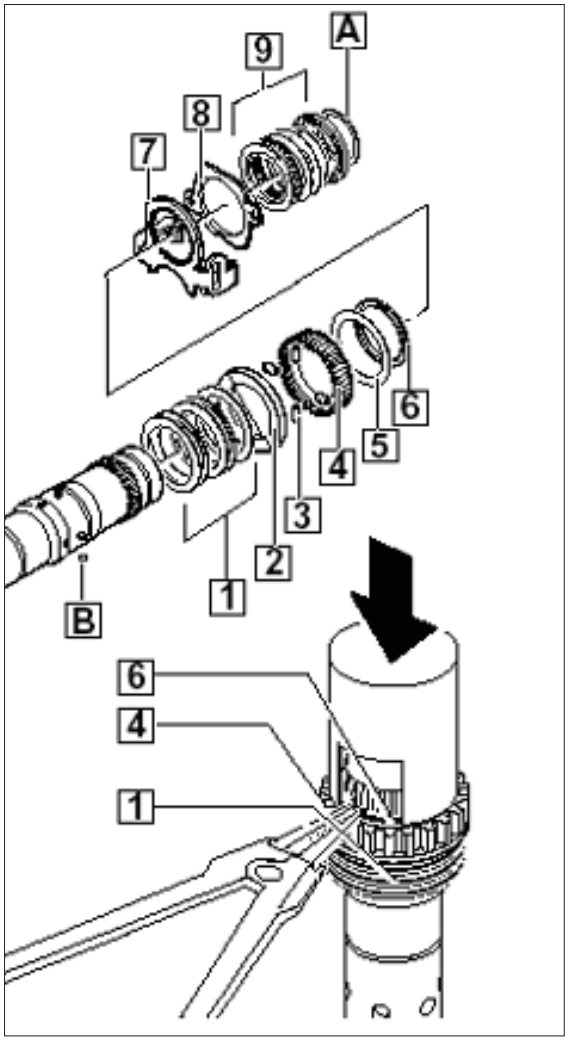
**Parts required to check the 'Static Torque' of Slip Clutch of the 5303-20 & 5360-21 Rotary Hammer are as follows.**

- **Chuck Adapter # 48-03-3047**
- **½" - 20 Hex Nut**

**Checking 'static' torque — 5360-21**

- remove SDS chuck adapter # 48-66-3044 from the hammer
- insert the 48-03-3047 chuck adapter with a ½"-20 hex nut threaded onto the adapter
- turn / place shifting lever into the "hammer with 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

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

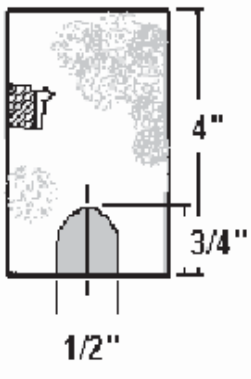


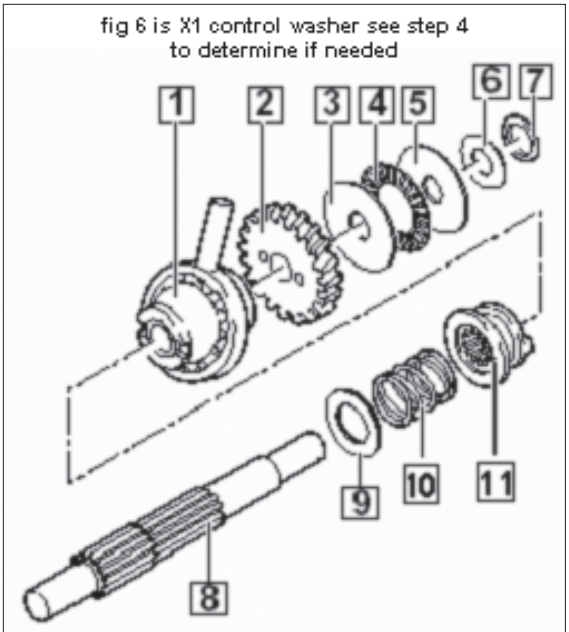

**Disassembling the spindle**

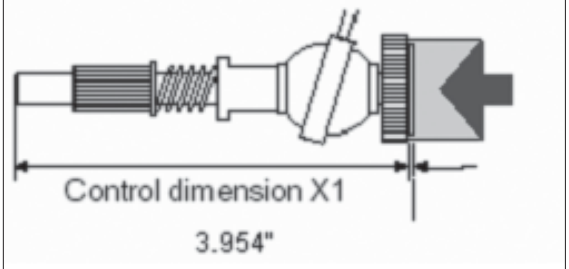
1) remove spiral retaining ring [A]
2) remove
   - washer, o-ring, two (2) thin washers, thrust bearing & thick washer assembly [9]
   - retaining plate [8]
   - shift ring [7]
3) remove spindle gear [4] with the aide of a 90º external snap ring pliers and 61 30 0290 press fixture (see illustration & 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

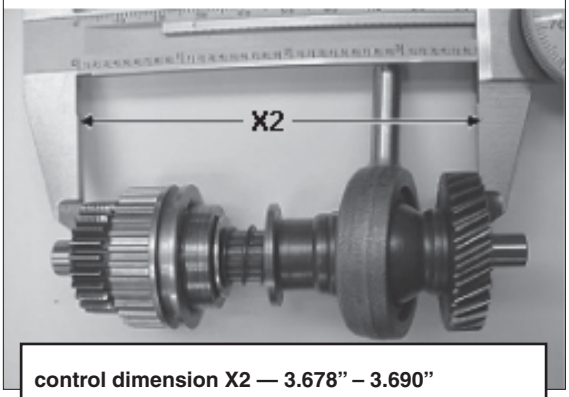

Press Fixture for removal of steel balls made from 1 3/8" Black or Galvanized Pipe cutting four [4] notches 90º from each other.

**NOTE:** Tools having spindle kit 38-50-0013 will not have flat washer #5.





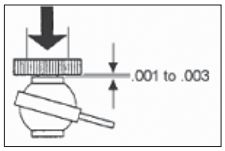




**control dimension X2 — 3.678" – 3.690"**
measured between face of 45-88-1183 washer [15] & face of flat washer [5], see illustration below
add washer(s) [16] to the assembly as needed to obtain X2 control dimension

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 | - | - | - |