



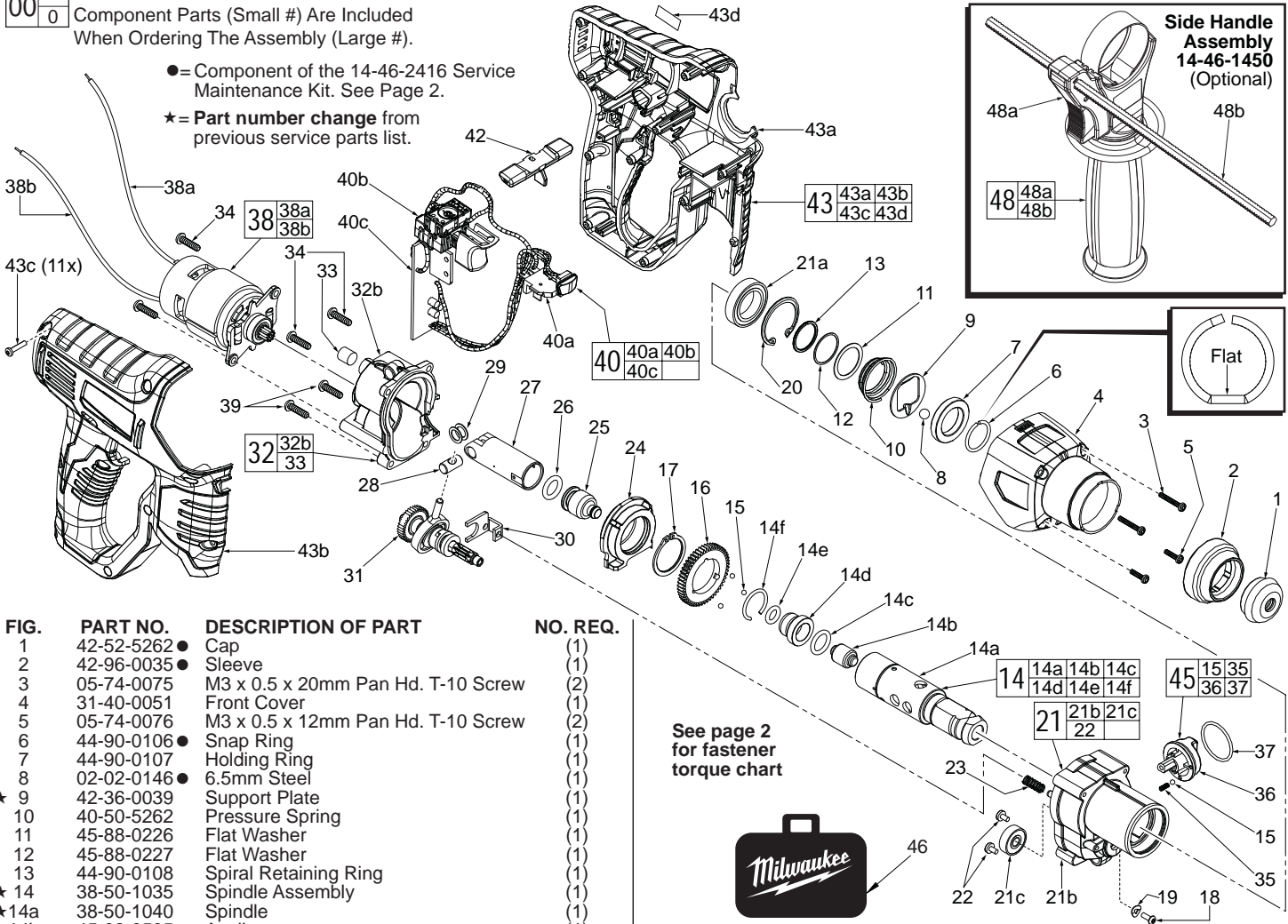
SERVICE PARTS LIST

BULLETIN NO.
54-24-2421

SPECIFY CATALOG NO. AND SERIAL NO. WHEN ORDERING PARTS		REVISED BULLETIN 54-24-2420	DATE July 2013
Cordless M12 SDS Rotary Hammer			
CATALOG NO. 2412-20	STARTING SERIAL NO. E31B	WIRING INSTRUCTION SEE PAGE 4	

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

- = Component of the 14-46-2416 Service Maintenance Kit. See Page 2.
- ★ = Part number change from previous service parts list.

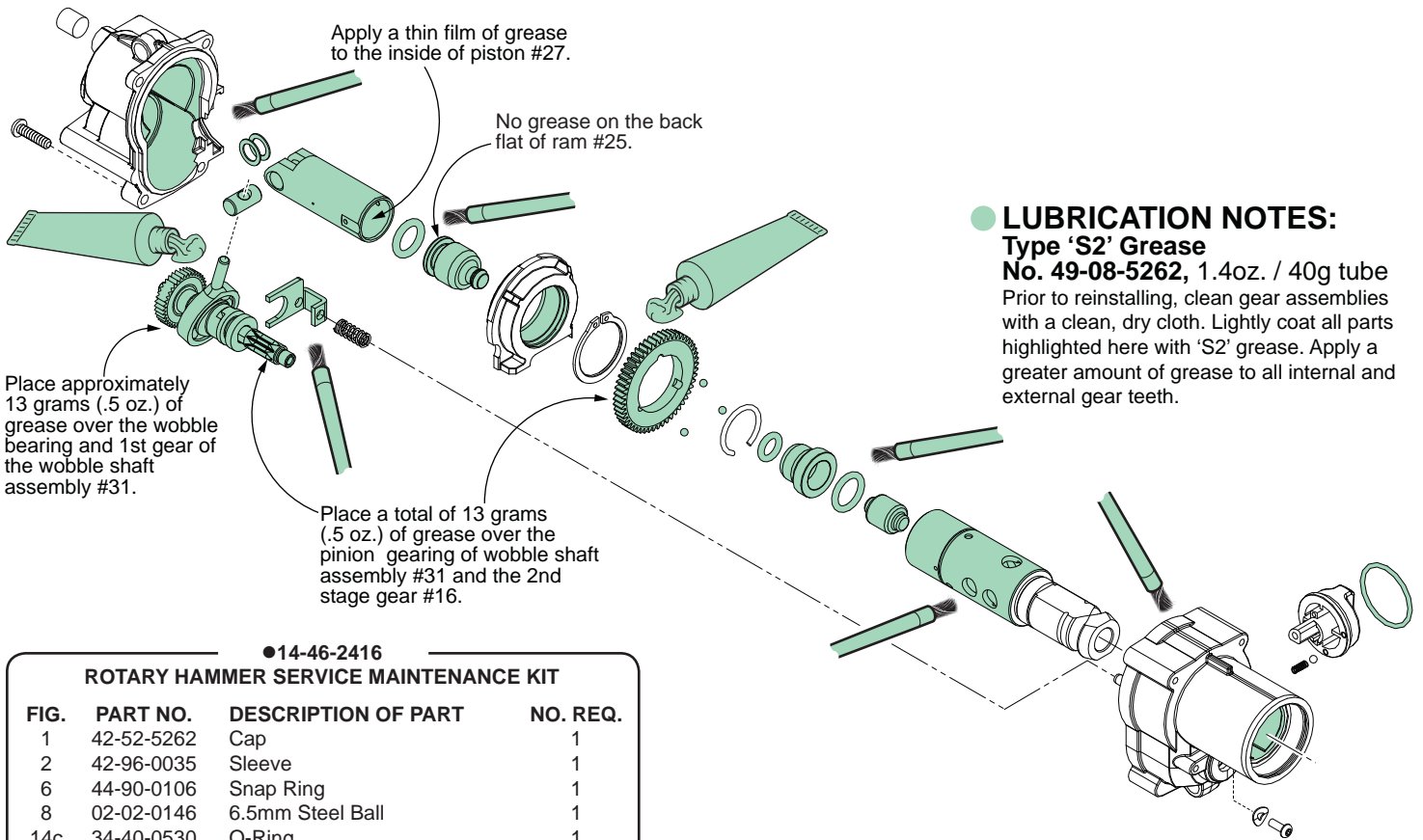


See page 2 for fastener torque chart

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
1	42-52-5262 ●	Cap	(1)
2	42-96-0035 ●	Sleeve	(1)
3	05-74-0075	M3 x 0.5 x 20mm Pan Hd. T-10 Screw	(2)
4	31-40-0051	Front Cover	(1)
5	05-74-0076	M3 x 0.5 x 12mm Pan Hd. T-10 Screw	(2)
6	44-90-0106 ●	Snap Ring	(1)
7	44-90-0107	Holding Ring	(1)
8	02-02-0146 ●	6.5mm Steel Support Plate	(1)
★ 9	42-36-0039	Pressure Spring	(1)
10	40-50-5262	Flat Washer	(1)
11	45-88-0226	Flat Washer	(1)
12	45-88-0227	Spiral Retaining Ring	(1)
13	44-90-0108	Spindle Assembly	(1)
★ 14	38-50-1035	Spindle	(1)
★ 14a	38-50-1040	Anvil	(1)
14b	45-08-0505	O-Ring	(1)
14c	34-40-0530 ●	Sleeve	(1)
14d	45-22-0008	O-Ring	(1)
14e	34-40-0531 ●	Snap Ring	(1)
14f	44-90-0109	3.0 Steel Ball	(4)
15	02-02-1230 ●	2nd Stage Gear	(1)
16	32-44-1130	Retaining Ring	(1)
17	34-60-0140	Retaining Ring	(1)
★ 18	05-84-0005 ●	M3 x 0.5 x 8.5mm Pan Hd. T-10 Screw	(1)
★ 19	45-88-0107 ●	Wave Washer	(1)
20	34-80-0210	Retaining Ring	(1)
21	14-30-0065	Front Gearcase Assy. with Needle Bearing	(1)
21a	02-04-0315	Ball Bearing	(1)
21b	-----	Gearcase with Shift Pin	(1)
★ 21c	02-04-0325	Ball Bearing	(1)
22	05-81-0020	M3.0 x 5 Pan Hd. ST Screw	(2)
23	40-50-1215	Shifter Spring	(1)
24	28-72-0035	Bearing Holder Assy. with Needle Bearing	(1)
25	45-56-0025	Striker (Ram)	(1)
26	34-40-0532 ●	O-Ring	(1)
27	44-62-0145	Piston	(1)
28	44-60-0555	Wrist Pin	(1)
29	45-88-0228 ●	Wrist Washer	(2)
30	44-66-0405	Shifting Clip	(1)
★ 31	36-92-0300	Wobble Shaft Assembly	(1)
32	14-30-0070	Rear Gearcase Assy. with Needle Bearing	(1)
32b	-----	Rear Gearcase	(1)
33	43-84-0300 ●	Felt Plug	(1)
34	05-74-0010	M4 x 16 Screw	(4)
35	40-50-1220 ●	Spring	(1)
36	44-10-0605	Shift Knob	(1)
37	34-40-0533	O-Ring	(1)
38	14-50-0210	Motor Assembly	(1)
38a	-----	Black Leadwire Assembly	(1)

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
38b	----- ●	Red Leadwire Assembly	(1)
39	05-74-0012	M4 x 20 Screw	(2)
40	23-66-0820	Switch Assembly	(1)
40a	-----	Contact Plate Holder	(1)
40b	-----	Switch	(1)
40c	-----	PCB Assembly	(1)
42	42-42-0057	Forward / Reverse Shuttle	(1)
43	14-34-1010	Handle Housing Assy. with Fuel Gauge	(1)
43a	-----	Support Housing	(1)
43b	-----	Cover Housing	(1)
43c	06-82-7225	M3 x 12.5 Pan Hd. Plastite T-10 Screw	(11)
43d	10-20-0304	Fuel Gauge Label	(1)
44	12-20-2412	Service Nameplate (Not Shown)	(1)
45	44-10-0610	Shift Knob Assembly	(1)
46	42-55-2412	Carrying Case	(1)
47	10-20-1341	Warning Label (Not Shown)	(1)
48	14-46-1450	Side Handle Assembly (Optional)	(1)
48a	14-34-0650	Auxiliary Side Handle (Optional)	(1)
48b	44-94-5381	Depth Rod (Optional)	(1)

- FIG. NOTE:**
18 Apply a drop of Blue Loctite® 242 or the equivalent to the threads of screw prior to installing in front gearcase.
- 6,14a There is a 'flat' that is opposite the opening on the snap ring. Align 'flat' on snap ring with 'flat' on spindle.
- 8,9 Position ball notch on support plate and ball towards 'flats'.



LUBRICATION NOTES:

Type 'S2' Grease

No. 49-08-5262, 1.4oz. / 40g tube
 Prior to reinstalling, clean gear assemblies with a clean, dry cloth. Lightly coat all parts highlighted here with 'S2' grease. Apply a greater amount of grease to all internal and external gear teeth.

●14-46-2416

ROTARY HAMMER SERVICE MAINTENANCE KIT

FIG.	PART NO.	DESCRIPTION OF PART	NO. REQ.
1	42-52-5262	Cap	1
2	42-96-0035	Sleeve	1
6	44-90-0106	Snap Ring	1
8	02-02-0146	6.5mm Steel Ball	1
14c	34-40-0530	O-Ring	1
14e	34-40-0531	O-Ring	1
14f	44-90-0109	Snap Ring	1
15	02-02-1230	3.0 Steel Ball	1
18	05-84-0005	M3 x 0.5 x 8.5 mm	1
19	45-88-0107	Wave Washer	1
26	34-40-0532	O-Ring	1
29	45-88-0228	Wrist Pin Washer	2
33	43-84-0300	Felt Plug	1
35	40-50-1220	Spring	1
37	34-40-0533	O-Ring	1
-	49-08-5262	1.4 oz. / 40gr. Tube 'S 2' Grease	1

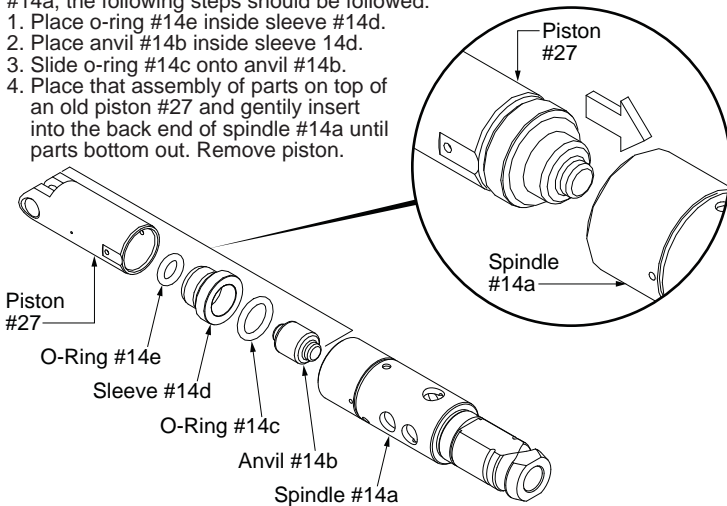
SCREW TORQUE SPECIFICATIONS

FIG.	PART NO.	WHERE USED	SEAT TORQUE	
			(KG/CM)	(IN/LBS)
3	05-74-0075	Front Cover (Top)	4-5	3-4
5	05-74-0076	Front Cover (Bottom)	4-5	3-4
18	05-84-0005	Gearcase (Bottom)	15-19	13-16
22	05-81-0020	Ball Bearing Retainers	8-12	7-10
34	05-74-0010	Rear Gearcase (Top)	12-17	10-14
34	05-74-0010	Motor Mounting Plate	12-17	10-14
39	05-74-0012	Rear Gearcase (Bottom)	12-17	10-14
43c	06-82-7225	Cover Housing	8-10	7-8

NOTE:

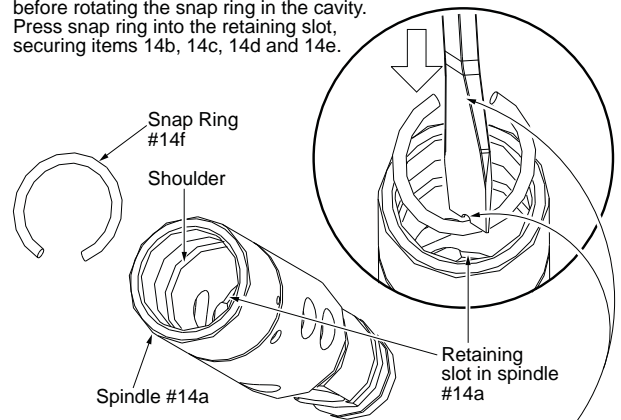
As an aid to installing items #14b, #14c, #14d and #14e squarely into spindle #14a, the following steps should be followed:

1. Place o-ring #14e inside sleeve #14d.
2. Place anvil #14b inside sleeve #14d.
3. Slide o-ring #14c onto anvil #14b.
4. Place that assembly of parts on top of an old piston #27 and gently insert into the back end of spindle #14a until parts bottom out. Remove piston.



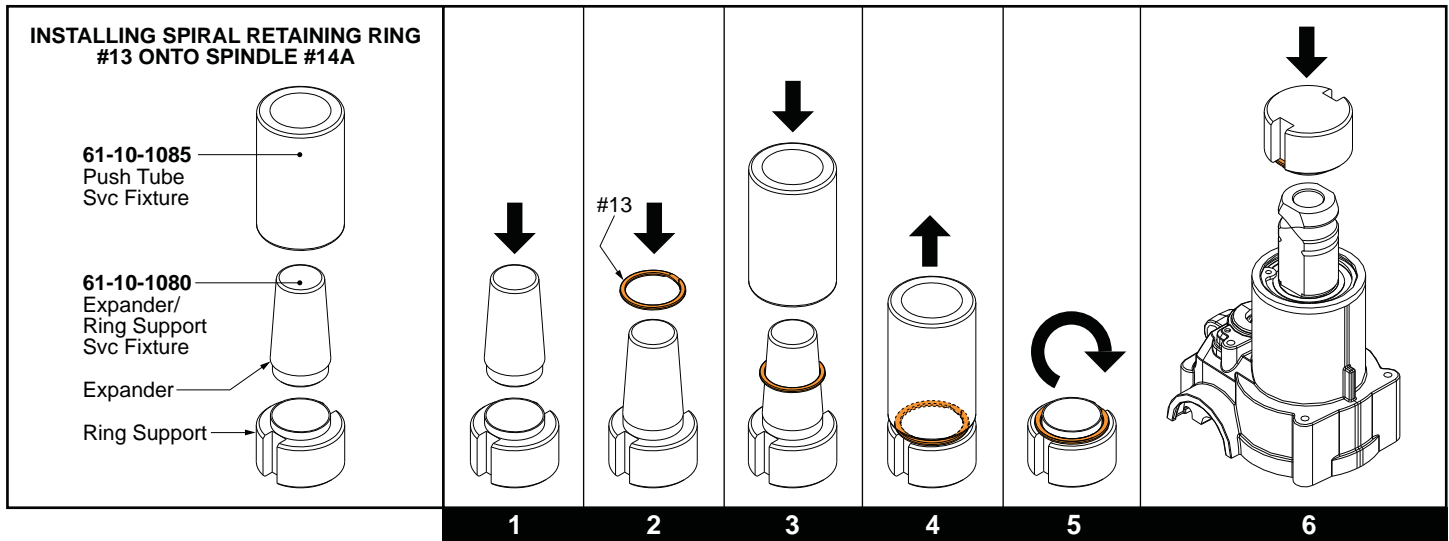
NOTE:

As an aid to installing snap ring #14f into spindle #14a, rest the snap ring on rear spindle, perpendicular to the opening. To condense the snap ring, use a flat blade screwdriver to push snap ring down into the spindle cavity. Push the snap ring past the shoulder in the spindle before rotating the snap ring in the cavity. Press snap ring into the retaining slot, securing items 14b, 14c, 14d and 14e.

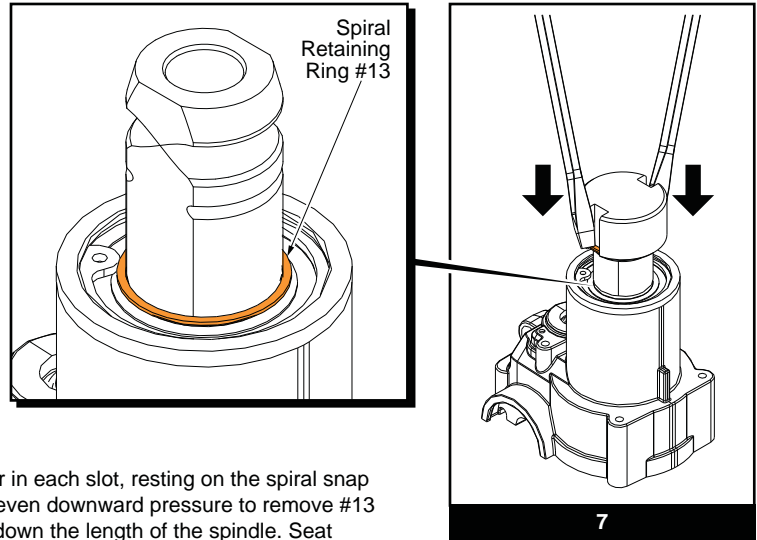


NOTE:

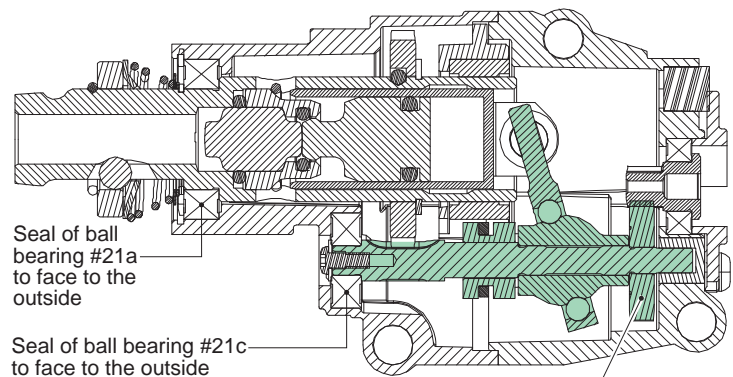
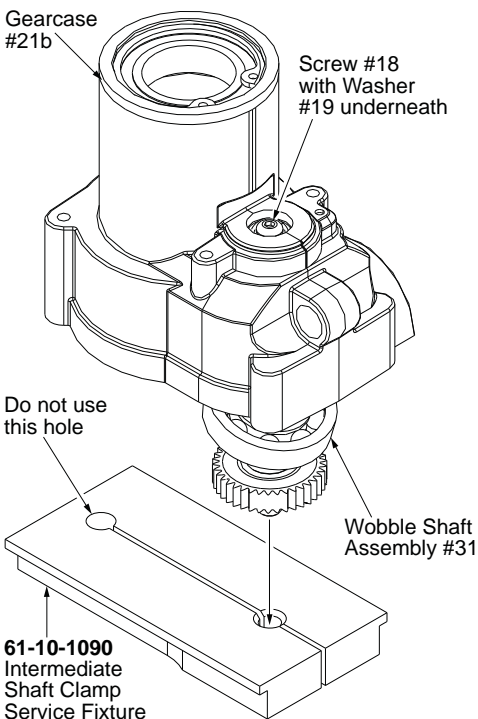
As an aid to installing snap ring, it may be helpful to file or grind a notch in the bottom flat of the screwdriver to accommodate the round of the snap ring. As force is applied to the snap ring, the open end of the ring will close in on the screwdriver. It may be necessary to do additional modifications to the screwdriver (grinding the sides of the blade or shaft) to allow for the insertion of the ring and the removal of the screwdriver.



1. Assemble Expander/Ring Support Service Fixture (61-10-1080) by inserting the expander into the ring support as shown.
2. Place the assembled fixture on a flat, level surface. Place the Spiral Retaining Ring #13 squarely onto tapered end of the expander.
3. Place the Push Tube Service Fixture (61-10-1085) over the expander until it rests against the spiral retaining ring. With the use of a mallet, drive the push tube and spiral retaining ring down onto the ring support.
4. Remove the push tube. The spiral retaining ring has been expanded around the collar of the ring support.
5. Turn the ring support/spiral snap ring upside down.
6. Place the ring support/spiral snap ring over the top of spindle #14a.



7. Locate the two slots on the ring support. Place a flat blade screwdriver in each slot, resting on the spiral snap ring. (It is preferred that the same size screwdrivers are used). Place even downward pressure to remove #13 off of the ring support and onto the spindle. Slide the spiral snap ring down the length of the spindle. Seat squarely into groove of spindle as shown.



DO NOT attempt to service or modify any individual component of wobble shaft assembly #31. **DO NOT** press apart or change the seating of the gear.

To properly assemble the wobble shaft assembly #31 to the gearcase #21b, the Intermediate Shaft Service Fixture (61-10-1090) will be needed.

Orient the service fixture as shown. Loosely place the service fixture in the jaws of a bench vise with the lip of the fixture riding on top of the vise.

Insert the narrow shaft end of the wobble shaft assembly through ball bearing #21c (not shown) inside the gearcase. Temporarily secure the wobble shaft assembly to the gearcase using washer #19 and screw #18). Hand tighten.

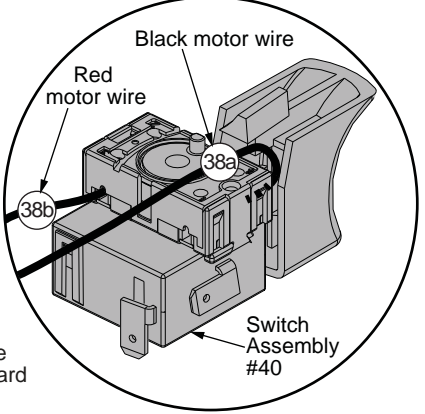
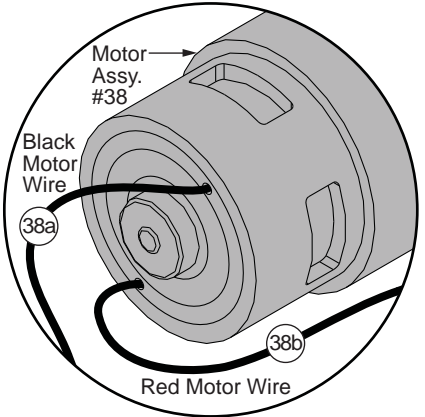
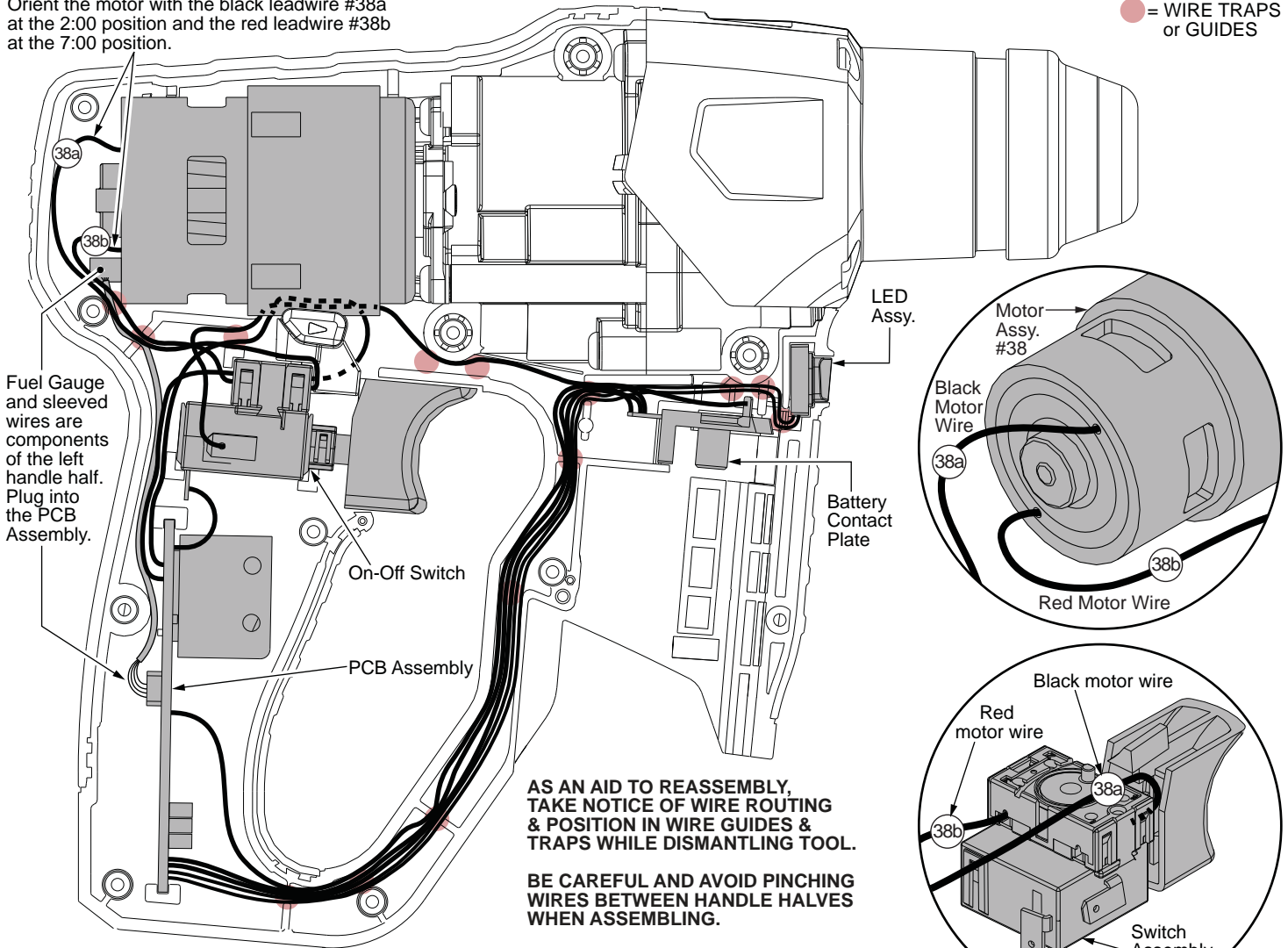
Place the wobble shaft into the hole of the service fixture as shown. Tighten the jaws of the bench vise to secure the service fixture around the intermediate shaft.

After the proper torque value is applied to screw #18 (**13-16 in/lbs or 15-19 kg/cm**), remove the gearcase/wobble shaft assembly from the service fixture.

WIRING DIAGRAM

Orient the motor with the black leadwire #38a at the 2:00 position and the red leadwire #38b at the 7:00 position.

● = WIRE TRAPS or GUIDES



AS AN AID TO REASSEMBLY, TAKE NOTICE OF WIRE ROUTING & POSITION IN WIRE GUIDES & TRAPS WHILE DISMANTLING TOOL.

BE CAREFUL AND AVOID PINCHING WIRES BETWEEN HANDLE HALVES WHEN ASSEMBLING.

Black leadwire #38a and red leadwire #38b are components of motor assembly #38 and are hard wired into the motor.

When replacing the motor assembly or the switch assembly, attach wires #38a and 38b from the motor to the switch as shown. **NOTE:** Soldered wires are not shown in the switch detail for clarity purposes.