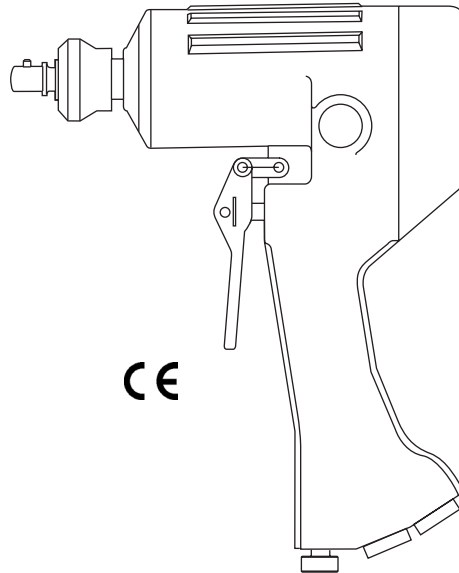


SERVICE MANUAL

Fairmont[®]



H8508

Impact Wrench

Model 48755 (Serial Code FWN)

Model 48760 (Serial Code FWP)



Read and understand all of the instructions and safety information in this manual before operating or servicing this tool.

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Purpose

This manual is intended to familiarize all personnel with the safe service procedures for the following Fairmont tools:

- 48755 (Serial Code FWN)
- 48760 (Serial Code FWP)

Keep this manual available to all personnel.
Replacement manuals are available upon request at no charge.

Safety

Safety is essential in the use and maintenance of Fairmont tools and equipment. This manual and any markings on the tool provide information for avoiding hazards and unsafe practices related to the use of this tool. Observe all of the safety information provided.

Other Publications

- Operation Manual: Publication 99930269
- Specifications and Parts Manual: Publication 99930293
- SAE Standard J1273 (Hose and Hose Assemblies):
Publication 99930323

All specifications are nominal and may change as design improvements occur. Greenlee Textron Inc. shall not be liable for damages resulting from misapplication or misuse of its products.

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KEEP THIS MANUAL

IMPORTANT SAFETY INFORMATION



**SAFETY
ALERT
SYMBOL**

This symbol is used to call your attention to hazards or unsafe practices which could result in an injury or property damage. The signal word, defined below, indicates the severity of the hazard. The message after the signal word provides information for preventing or avoiding the hazard.

⚠ DANGER

Immediate hazards which, if not avoided, **WILL** result in severe injury or death.

⚠ WARNING

Hazards which, if not avoided, **COULD** result in severe injury or death.

⚠ CAUTION

Hazards or unsafe practices which, if not avoided, **MAY** result in injury or property damage.

⚠ WARNING

Before operating this tool, see the safety information and operating instructions in the Operation Manual.

⚠ WARNING

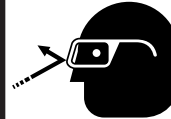


Skin injection hazard:

Oil under pressure easily punctures skin causing serious injury, gangrene or death. If you are injured by escaping oil, seek medical attention immediately.

- Do not use fingers or hands to check for leaks.
- Do not hold hose or couplers while operating the power source.
- Depressurize the hydraulic system before servicing.

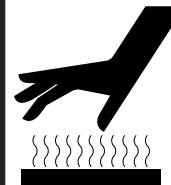
⚠ WARNING



Wear eye protection when operating or servicing this tool.

Failure to wear eye protection could result in serious eye injury from flying debris or hydraulic oil.

⚠ WARNING



Tool and accessory may be hot during and after operation.

Contact with hot surfaces could result in serious injury.

IMPORTANT SAFETY INFORMATION**⚠ WARNING**

Do not exceed the maximum hydraulic flow, pressure relief or back pressure listed in the Specifications and Parts manual.

Failure to observe this warning could result in severe injury or death.

⚠ WARNING

Do not disconnect tool, hoses, or fittings while the tool is running or if the hydraulic fluid is hot. Hot hydraulic fluid could cause serious burns.

⚠ WARNING

Do not reverse hydraulic flow. Operation with hydraulic flow reversed can cause tool malfunction. Connect the supply (pressure) hose and return (tank) hose to the proper tool ports.

Failure to observe this warning could result in severe injury or death.

IMPORTANT

Procedure for disconnecting hydraulic hoses, fittings or components:

1. Move the flow lever on the hydraulic power source to the OFF position.
2. Stop the power source.
3. Follow the sequence under Disconnecting Hoses to prevent pressure buildup. In case some pressure has built up, loosen hoses, fittings or components slowly.

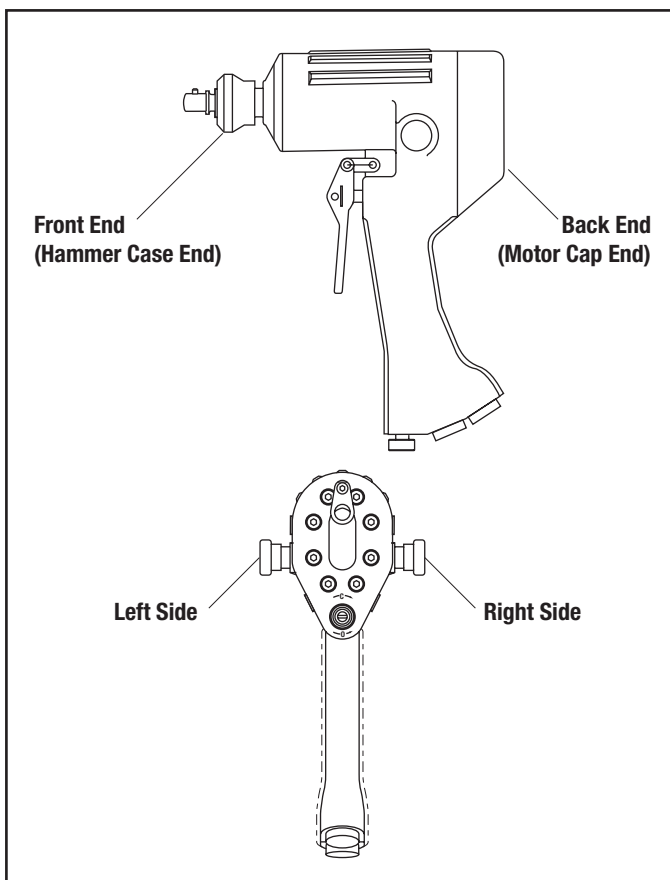
Disassembly

Complete disassembly of the tool is not recommended. If a complete overhaul is necessary, return the tool to your nearest Fairmont Authorized Service Center.

The disassembly procedure is divided into sections of the tool. Disassemble only the section(s) necessary to complete the repair.

Disassemble the tool on a flat, clean surface. Take care not to lose or damage any parts that may fall free during disassembly.

In order to simplify the disassembly and assembly instructions, see the Tool Orientation illustration to identify the sides and ends of the tool.



Quick-Change Chuck (48755 Only)

1. Remove adapter (61) from retaining sleeve (50).
Note: To prevent the loss of any steel balls, perform the next step over a clean, empty container.
2. Slide the thrust ring (52) back to expose thrust ring lock (51). Remove thrust ring lock, thrust ring, and spring (53). Slide the retaining sleeve off of the anvil (49) and remove two steel balls (54).

Hammer Case Components

1. Using a wrench on the flats of the hammer case cap (55), unscrew and remove the cap.
2. Remove the anvil (49), hammer frame (46), hammer (47) and hammer pin (48).
3. Remove spacer (45), thrust bearing (43) and thrust washers (44) from hammer case cavity.

Motor

1. Remove cap screws (16) and remove motor cap (6) from handle (1). Remove gasket (15). Remove dowel pins (14).
2. Pull idler shaft (13) with gear (10) from handle. Remove gear from idler shaft. Remove the drive pin (12) and retaining clip (11) from idler shaft.
3. Remove retaining ring (11), gear (10) and Woodruff key (9) from drive shaft (8). Push drive shaft toward hammer case end and remove it from the handle.

Trigger and Super Spool™

1. Remove roll pin (42) from trigger spool (29) by pressing or tapping it out with a hammer and punch.
Note: Support trigger (41) to prevent bending the trigger spool (29).
2. Remove washer (39), spring (38), retaining ring (37), and washer (36). Push the trigger spool (29) out of the handle (toward the front of the tool).
3. Remove the retaining ring (33).
Note: Perform Step 4 over an empty container to catch the steel ball (32) when it falls free.
4. Remove Super Spool™ (31) and O-ring (34).

Reversing Spool

1. Loosen and remove cap (24) on left side of tool and pull the reversing spool (19) out the right side of tool.
Note: Attempting to push the reversing spool the opposite way through the bore will damage the O-rings and could allow particles of O-ring to get into the motor.
2. Remove plug (22), spring (21) and poppet (20).
3. Repeat Step 2 for the right side of reversing spool (19).

Disassembly (cont'd)**Flow Control Cartridge**

1. Remove the retaining ring (66). Remove the flow control cartridge from the handle.
2. Remove the O-rings (64, 65) from the cartridge.

⚠ WARNING

Do not attempt to repair the flow control cartridge. It contains no replaceable parts.

Failure to observe this warning could result in severe injury or death.

Adjustable Torque Output Screw

1. Remove roll pin (70) from handle. Twist the adjustable torque screw (67) counterclockwise to remove it from the handle.
2. Remove the O-ring (68) and backup ring (69) from the screw.

Inspection

Clean all parts with solvent and dry them thoroughly. Inspect each component as described in this section. Replace any component that shows wear or damage.

1. Bearings: Insert shaft into bearing. Spin shaft. If shaft does not spin smoothly, replace the entire assembly with the bearings already pressed in.
2. Motor cap and handle: Inspect mating surfaces, gear cavities, oil passageways, etc. for grooves or nicks. If any component shows wear or damage, replace the entire assembly with the bearings already pressed in.
3. Thrust rings: Replace any thrust ring that is out-of-round or has been sprung.
4. Bearing (inside hammer case cap): Slide the anvil into the bearing. Spin the anvil. If the anvil does not turn smoothly, inspect the bearing surface. If the bearing surface shows uneven wear, replace hammer case cap as an assembly with the bearing already pressed in.
5. Thrust bearing and thrust washers: Spin the bearing against the washers. If bearing does not spin smoothly, replace the bearing and washers.
6. Flow control cartridge: Inspect for cracks, grooves or nicks. Replace the entire cartridge if it shows wear or damage.

⚠ WARNING

Do not attempt to repair the flow control cartridge. It contains no replaceable parts.

Failure to observe this warning could result in severe injury or death.

7. Adjustable torque output screw: Inspect all surfaces and all threads for cracks, grooves or nicks. Replace if it shows wear or damage.
8. Inspect all other disassembled components for cracks, grooves, or nicks.

Assembly

Refer to the Illustrations and Parts List for correct orientation and placement of parts.

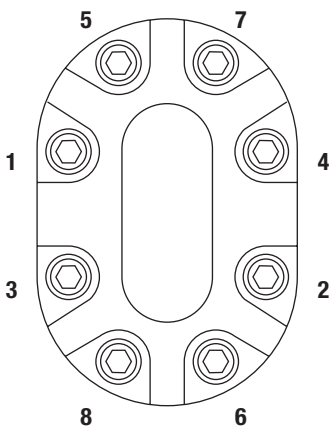
Apply hydraulic fluid or O-ring lubricant to all O-rings and all metal surfaces which they must slide over. When installing an O-ring which must slide over sharp surfaces, use a rolling motion and be careful not to damage the O-ring.

Wherever the assembly results in metal-to-metal contact, coat the surfaces with hydraulic fluid or O-ring lubricant.

Motor

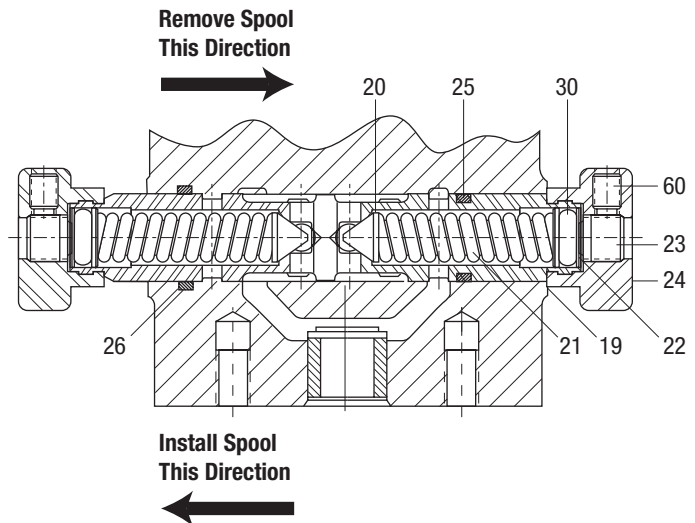
1. Use an O-ring tool to install a new O-ring (4) from the back end of the tool (1)
2. Lubricate drive shaft (8) and slide it into the tool from the back end.
3. Install Woodruff key (9) onto the drive shaft. Align the keyway in the gear (10) with the Woodruff key on the drive shaft and install the gear onto the drive shaft. Secure the gear with the retaining ring (11).
4. Install the drive pin (12) into the idler shaft (13). Align the keyway in the remaining gear (10) with the drive pin and install the gear onto the idler shaft. Install the idler shaft with gear into the handle, meshing the two gears together. Install the retaining ring (11).
5. Install dowel pins (14) into handle. Install new gasket (15).
6. Install motor cap (6) onto handle. Secure motor cap with cap screws (16). Torque cap screws to 10 to 11 Nm (95 to 100 in-lb). See the Torque Sequence illustration.

Torque Sequence



Reversing Spool

1. Install a new O-ring (25) onto reversing spool (19). Install a new O-ring (26) into the handle. Install a new O-rings (30) on both plugs (22).
2. Install one poppet (20), spring (21) and plug (22) on the left end (the end closest to the O-ring installed on the spool in Step 1) of the spool. Secure assembly with cap (24).
3. Slide the reversing spool assembly into the handle from the right side.
4. Install poppet (20), spring (21) and plug (22) into opposite end of spool. Secure with cap (24). Use one wrench on each cap and tighten to 31 Nm (23 ft-lb).
5. Use the Pressure Check Kit shown in the Parts List to check the relief pressure.



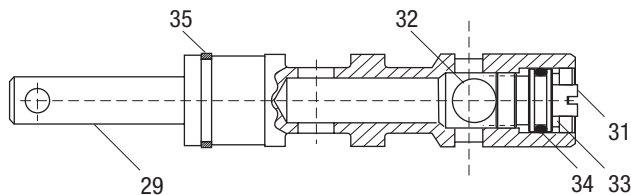
Assembly (cont'd)

Trigger, Trigger Spool and Super Spool™

1. Install O-ring (34) on the Super Spool™ (31). Install ball (32) in trigger spool cavity. Install Super Spool™ (31) into the trigger spool (29). Secure it with the retaining ring (33).
2. Install O-ring (35) onto trigger spool assembly. Install O-ring (27) and backup ring (28) in handle.
3. Slide trigger spool into handle from front end of the tool. Slide washer (36) onto trigger spool and secure with the retaining ring (37).
4. Slide spring (38) and washer (39) onto trigger spool (29). Secure trigger (41) to trigger spool (29) with spring pin (42).
5. Secure link (40) to handle and trigger with spring pins (42).

Note: Support trigger (41) so pressing or tapping on spring pins (42) does not bend trigger spool (29).

Trigger Spool™ (Shown in Open-Center Position)



Flow Control Cartridge

Install O-rings (64, 65) on flow control cartridge (63). Install flow control cartridge in cavity of handle. Secure with retaining ring (66).

Adjustable Torque Output Screw

Install O-ring (68) and backup ring (69) onto screw (67). Install screw into cavity of handle. Twist the screw clockwise until all threads are engaged in the handle. Secure the screw with the roll pin (70).

Hammer Case Components

1. Apply Mobilgrease® HP to thrust bearing (43) and work the grease into needle rollers. Apply a light film of grease to the thrust washers (44). Stack the thrust washers and thrust bearing properly and place the stack onto the drive shaft.
2. Place spacer (45) over the drive shaft with the flange upward.

Impact Mechanism

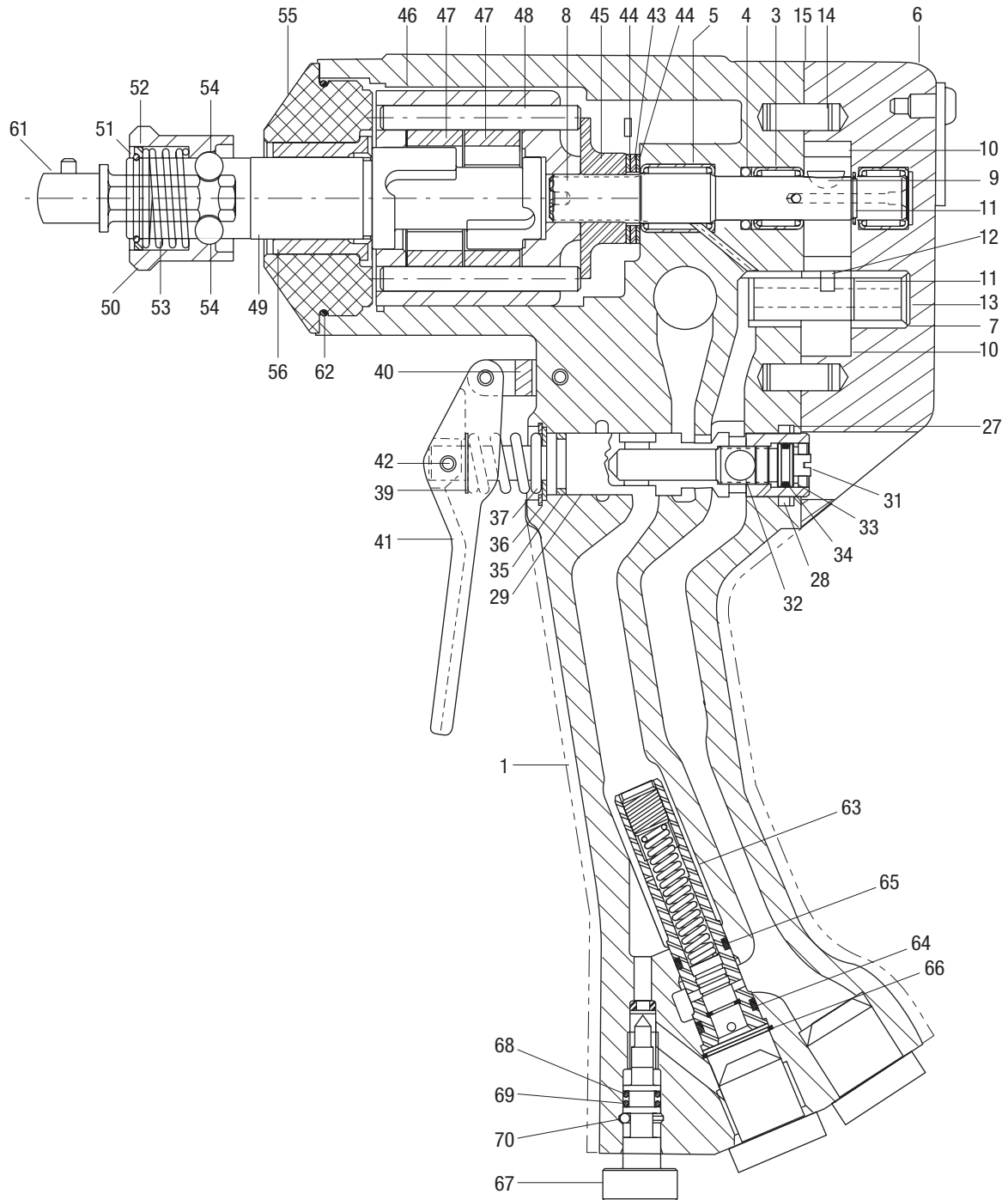
1. Apply Mobilgrease® HP to the surfaces of the hammer frame (46), hammers (47) hammer pin (48) and anvil (49).
2. Install the two hammers, 180° from each other, into hammer frame. Install pins into hammer frame and through the hammers, then slide the assembly onto the spline of drive shaft.
3. Pack hammer frame center space with Mobilgrease® Special #53030-3. Install anvil into hammer frame and through hammers.
4. Install O-ring (62) over threads on hammer case cap (55).
5. Apply Loctite primer to threads of cap. Apply Loctite primer to threads of handle at cap interface, ensuring threads are free of grease and other contaminants prior to application.
6. Slide the hammer case cap assembly (55, 56) over the anvil and, using a wrench on the flats of the cap, screw the assembly into the handle. Torque to 80-85 ft-lb.

Quick-Change Chuck (48755 Only)

1. Slide thrust ring lock (51) over anvil to the groove closest to hammer case cap.
2. Insert two balls (54) into the holes in the anvil. Slide the retaining sleeve (50) onto anvil with the flanged end upward. Insert spring (53) and thrust ring (52) into retaining sleeve. Slide the thrust ring back and install thrust ring lock (51) onto the anvil. Insert the drive shank (61) into the chuck.

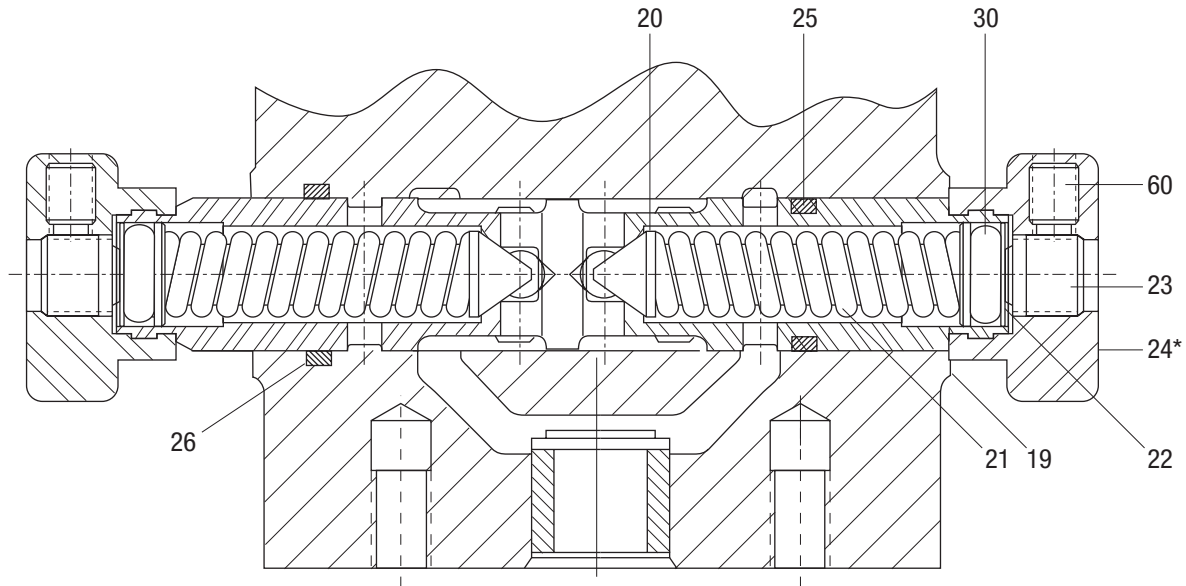
Illustrations

48755 and 48760 Impact Wrench, Side View



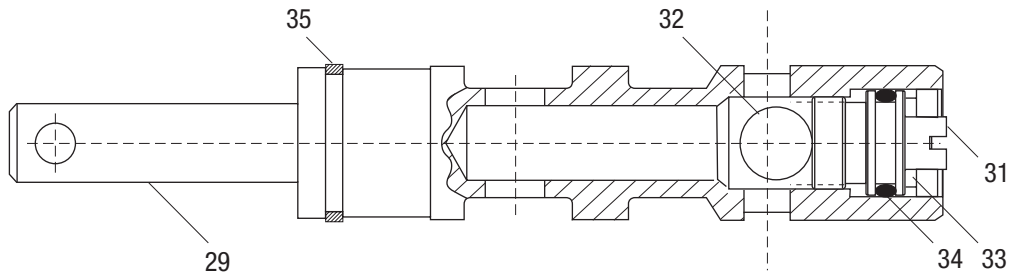
Illustrations (cont'd)

Reversing Spool



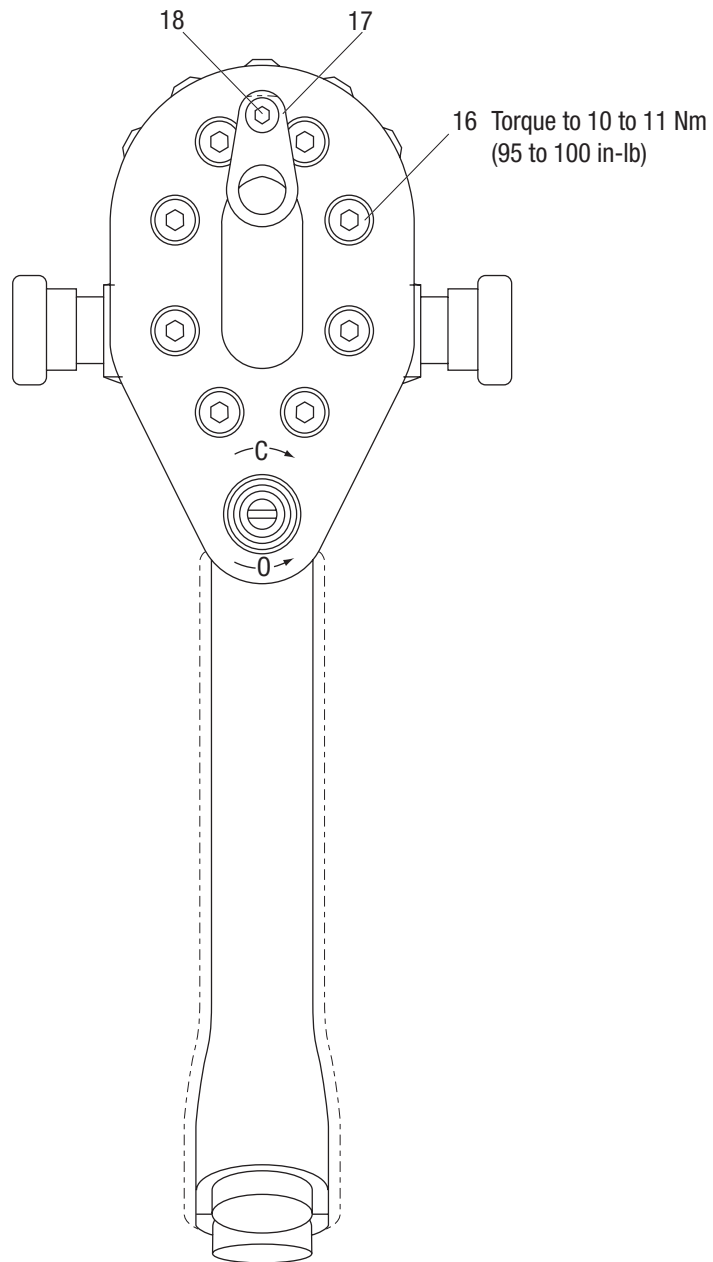
* Torque item (24) to 23 ft-lb.

Trigger Spool



Illustrations (cont'd)

Motor Cap View



Parts List

48755 and 48760 Impact Wrench

Key	UPC No. 78-3310-	Part No.	Description	Qty.
1	49269	50492691	Handle assembly (includes 3, 4, and 5).....	1
3	41591	F016728	Bearing, needle, .439 x .625 x .500"	2
4*	41503	F015305	O-ring, .500 x .687 x .093"-80	1
5	49243	50492438	Bearing	1
6	48307	50483072	Motor cap assembly (includes key 7).....	1
7	41591	F016728	Bearing, needle, .439 x .625 x .500"	2
8	49242	50492420	Shaft, drive	1
9	41592	F016729	Key, Woodruff, .125 x .375"	1
10	41630	F017105	Gear, 11-tooth	2
11	41621	F017010	Retaining ring, .437"	2
12	41593	F016730	Pin, drive, .123 x .209"	1
13	40168	104110K	Shaft, idler	1
14	41624	F017014	Pin, dowel, .250 x .625"	2
15*	48363	50483633	Gasket	1
16		F021296	Screw, cap, 1/4-20 x 1.250" socket head.....	8
17	48328	50483285	Eye.....	1
18	43701	F021676	Screw, cap, #10-32 x .375" button socket head	1
19	48361	50483617	Reversing spool.....	1
20	48515	50485156	Poppet.....	2
21	48543	50485431	Spring, comp., .177 x .329 x 1.09"	2
22	48621	50486217	Plug	2
23	50765	90507657	Screw, set, 5/16-24 x .250" socket.....	2
24	48380	50483803	Cap	2
25*	42050	F023449	O-ring, .500 x .625 x .062"-70	1
26*	48889	50488899	O-ring, .625 x .750 x .062"	1
27*	48539	F011743	O-ring, .612 x .818 x .103"	1
28*	43312	F021451	Backup ring, .640 x .812 x .048"	1
29	48696	50486969	Spool, trigger	1
30*	42047	F023379	O-ring, .250 x .375 x .062"-90	2
31	48697	50486977	Super Spool™	1
32	43829	F021411	Ball, .344", steel	1
33	48540	F021711	Retaining ring, .500"	1
34*	41331	F010777	O-ring, .375 x .500 x .062"-70	1
35*	41491	F015261	O-ring, .500 x .625 x .062"-70	1
36	48310	50483102	Washer, flat, .376 x .734 x .030"	1
37	41648	F017595	Retaining ring, .750"	1
38	48311	50483110	Spring	1
39	48312	50483129	Washer, flat, .359 x .562 x .030"	1
40	48313	50483137	Link	1
41	48360	50483609	Trigger.....	1
42	48542	F015810	Pin, roll, .156 x .875"	3
43	48318	50483188	Bearing, thrust, .500 x .937 x .078"	1
44	48319	50483196	Washer, thrust, .500 x .937 x .030"	2
45	48364	50483641	Spacer	1
55	49281	50492810	Cap, hammer case	1
56	49284	50492845	Bearing	1
60	48622	50486225	Screw, set, #8-32 x .250" socket.....	2
62*	41803	F020780	O-ring, 2.125 x 2.250 x .062"-70	1

Parts List (cont'd)

For Model 48755 Only

Key	UPC No. 78-3310-	Part No.	Description	Qty.
46	49274	50492748	Hammer frame.....	1
47	49275	50492756	Hammer.....	2
48	48346	50483463	Hammer pin.....	2
49	49272	50492721	Anvil, quick change.....	1
50	49277	50492772	Sleeve.....	1
51	49279	50492799	Thrust ring lock.....	1
52	49280	50492802	Thrust ring.....	1
53	49278	50492780	Sleeve spring.....	1
54	49276	50492764	Ball.....	3
61	41515	F015321	Adapter.....	1

For Model 48760 Only

Key	UPC No. 78-3310-	Part No.	Description	Qty.
46	49274	50492748	Hammer frame.....	1
47	49275	50492756	Hammer.....	2
48	48346	50483463	Hammer pin.....	2
49	49273	50492730	Anvil, 1/2" square drive.....	1
63	43302	138338	Flow control cartridge (includes 64 and 65).....	1
64*	41491	F015261	O-ring, .500 x .625 x .062"-70.....	1
65*	41627	F017078	O-ring, .437 x .562 x .062"-70.....	1
66	41600	F016737	Retaining ring, .687".....	1
67	41094	138311	Screw, adjustable torque.....	1
68*	42729	L080005	O-ring, .250 x .375 x .062".....	1
69*	41843	F021471	Backup ring, single turn, .265 x .371 x .048".....	1
70	42053	F023467	Pin, roll, .078 x .875".....	1

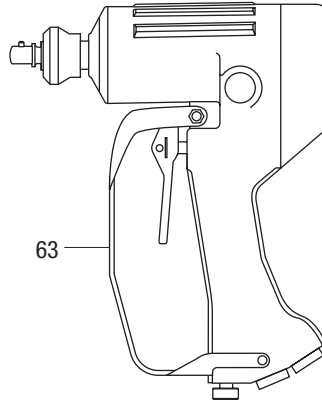
For 48755 and 48760

UPC No. 78-3310-	Part No.	Description	Qty.
48781	48781	Decal, Fairmont.....	2
46292	50462920	Decal, impact wrench.....	1

Repair Kits

UPC No. 78-3310-	Part No.	Description
48382	50483820	Reversing spool assembly (includes keys 19-26 and 30)
48756	50487566	Seal kit (includes all keys marked with an *)
49269	50492691	Handle assembly (includes keys 3, 4 and 5)
49283	50492837	Hammer case cap assembly (includes keys 55 and 56)
49270	50492705	Impact mechanism for 48755 (includes keys 46-54 and 61)
49271	50492713	Impact mechanism for 48760 (includes keys 46-49)

Accessories



Key	UPC No. 78-3310-	Part No.	Description	Qty.
63	49286	50492861	Trigger guard assembly	1
	49004	50490044	Kit, relief pressure check	1
	41769	F020028	1/2" Square drive impact socket set	1
	41535	F015424	Impact socket, 5/8"	1
	41536	F015426	Impact socket, 3/4"	1
	41537	F015427	Impact socket, 13/16"	1
	41538	F015428	Impact socket, 7/8"	1
	41539	F015430	Impact socket, 1"	1
	41540	F015431	Impact socket, 1-1/16"	1
	41515	F015321	Adapter, 7/16" quick change chuck to 1/2" square drive	1
	41784	F020538	Adapter, 1/2" female square socket to 5/8" quick change female hex socket	1
	49314	49314	Adapter, hex	1



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