Form P6865
Edition 2
November, 1987

SERIES 6F ANGLE WRENCHES

NONREVERSIBLE MODELS	REVERSIBLE MODELS
6WTR3F	6WRTR3F
6WTQ3F	6WRTQ3F

Always operate, inspect and maintain this tool in accordance with American National Standards Institute Safety Code for Portable Air Tools (ANSI B186.1) and any other applicable safety codes and regulations.

The delivered torque of this Angle Wrench can be effectively controlled by regulating the inlet air pressure between 50 psig (3.4 bar/340 kPa) and 85 psig (6.2 bar/620 kPa). Operating the Wrench at pressures outside this range will result in inefficient operation, and operating the Wrench on higher pressures will cause premature wear.

Operate this Wrench using 3/8" (10 mm) inside diameter air supply hose.

⚠WARNING

Always turn off the air supply and disconnect the air supply hose before installing, removing or adjusting any accessory on this tool, or before performing any maintenance on this tool. Failure to do so could result in injury.

LUBRICATION

Adequate lubrication is imperative for maximum performance and durability of the gearing in these Tools.

Oil: Ingersoll-Rand No. 10 Lubricant.
Grease: Ingersoll-Rand No. 67 Lubricant.

The use of an air line lubricator is recommended. Where the lubricator cannot be permanently mounted, we recommend using an Ingersoll-Rand No. 8LUB12 Lubricator. For permanent installations, we recommend using an Ingersoll-Rand No. NFLRU-4 Filter-Lubricator-Regulator Unit. Adjust the lubricator so there is a slight oil mist in the exhaust.

If an air line lubricator is not used, inject 2 cc of the recommended oil into the air inlet before attaching the air hose and after each **eight** hours of operation.

After each 50 000 cycles, or one month of operation, inject 3 to 4 cc of the recommended grease into the Grease Fitting (57) in the Gear Case (56),

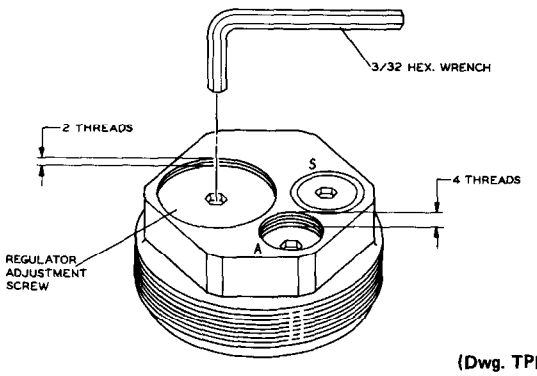
After each eight hours of operation, inject 1 to 2 cc of the recommended grease into the Grease Fitting (102) in the Angle Housing Assembly (101).

SHUTOFF VALVE ADJUSTMENT PROCEDURE

⚠WARNING

Adjustment to the Shutoff Valve system is preset at the factory. Do not adjust any part of the Valve unless, after prolonged use of the Tool, the Tool shuts off prematurely or the Tool fails to shut off. Only if either of these conditions exists are you to adjust the Valve. Adjust the Valve according to the procedures below.

1. Turn the Regulator Adjustment Screw until the top of the Screw is approximately two threads below the face of the Regulator Body. Set the Bleed Adjustment Screw approximately four threads below the face of the Regulator Body.



(Dwg. TPD1071)

Figure 1

Notice: The use of other than genuine Ingersoll-Rand replacement parts may result in decreased tool performance and increased maintenance, and may invalidate all warranties.

Refer All Communications to the Nearest Ingersoll-Rand Office or Distributor.

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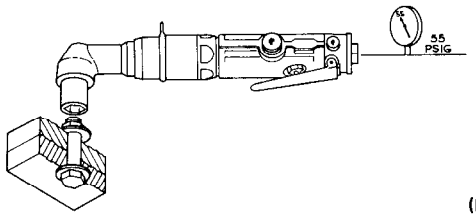
PROFESSIONAL TOOLS

PARTS BULLETIN

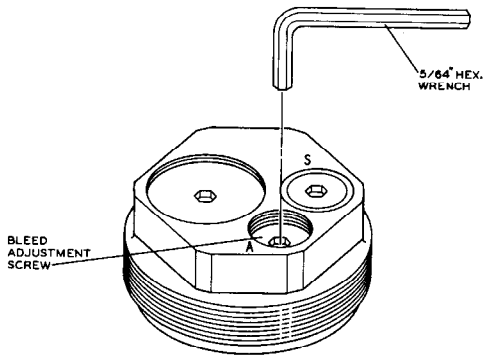
2. Cycle the tool on a test joint to test for shutoff.



(Dwg. TPD1074)

Figure 2

3.



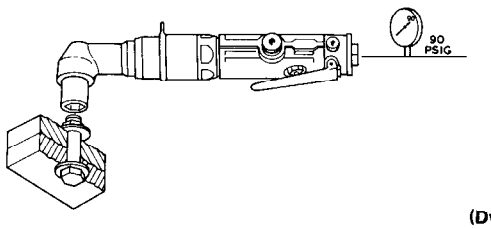
a. If the tool fails to shut off, turn the Bleed Adjustment Screw **clockwise** a little at a time, until consistent shutoff occurs. If no shutoff occurs, reset the Bleed Adjustment Screw four turns under flush. (See Figure 3). Set the Regulator Adjustment Screw 1/4 turn deeper and repeat steps 2 and 3. (See Figure 1).

b. If tool shutoff occurs, turn the Bleed Adjustment Screw **counterclockwise** until the tool stalls on a test joint. When the tool stalls, rotate the Bleed Adjustment Screw **clockwise**, a little at a time, until consistent shutoff occurs. (See Figure 3).

(Dwg. TPD1072)

Figure 3

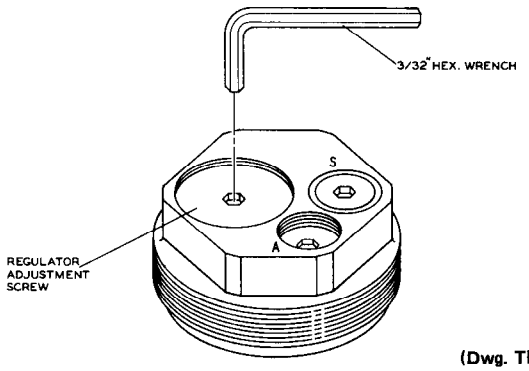
4. Cycle the tool on a test joint to test for shutoff.



(Dwg. TPD1075)

Figure 4

5.



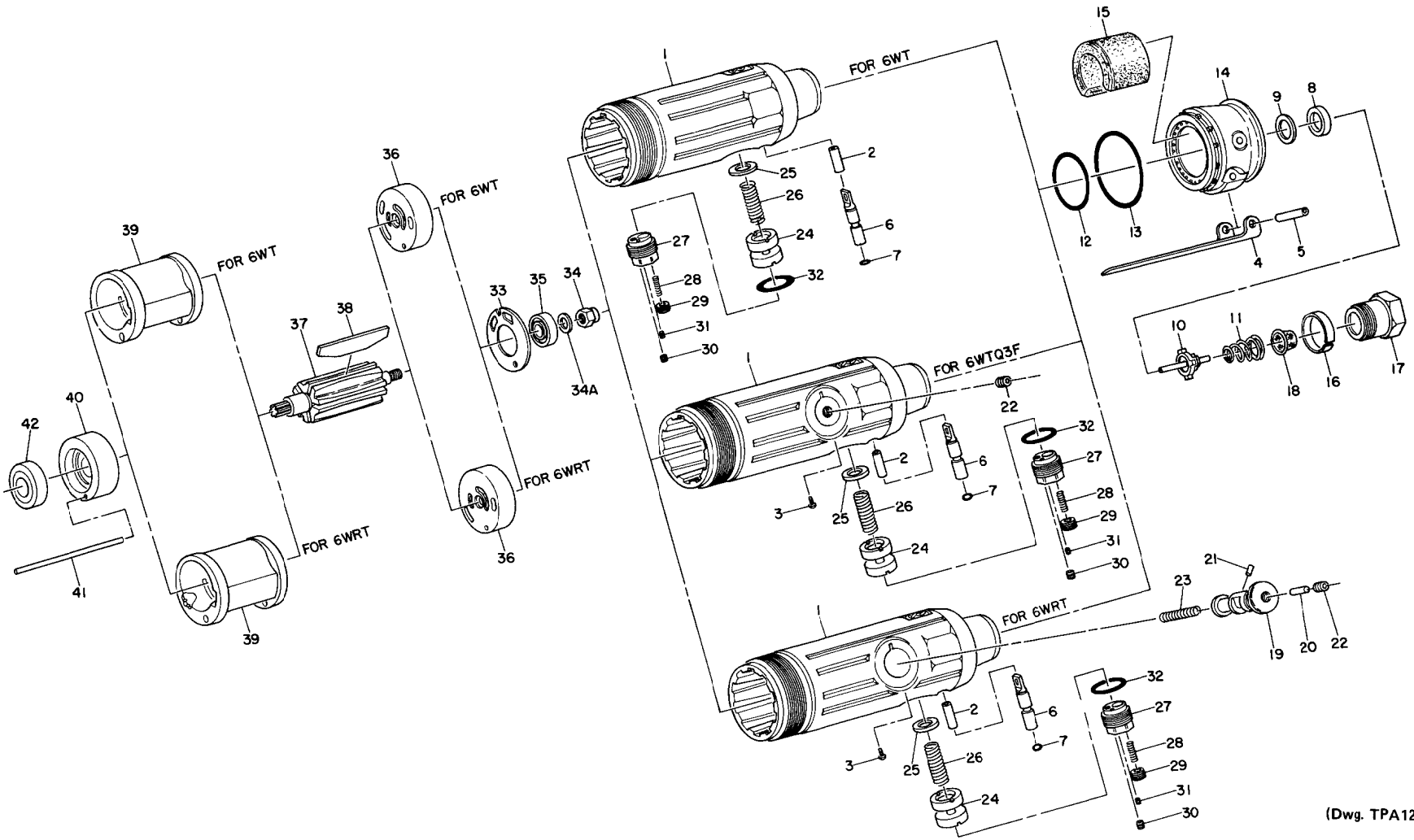
a. If the tool fails to shut off, turn the Regulator Adjustment Screw **clockwise**, a little at a time, until consistent shutoff occurs. (See Figure 5).

b. If tool shutoff occurs, turn the Regulator Adjustment Screw **counterclockwise** until the tool stalls on a test joint. When the tool stalls, rotate the Regulator Adjustment Screw **clockwise** 1/8 of turn at a time until consistent shutoff occurs. This adjustment provides maximum torque output at shutoff. (See Figure 5).

(Dwg. TPD1073)

Figure 5

6. It is possible that the tool might shut off when the throttle is depressed. This condition is a premature shutoff and can be corrected by turning the Bleed Adjustment Screw counterclockwise a little at a time until the premature shutoff condition is corrected. (See Figure 3).
If the Bleed Adjustment Screw was used to correct a premature shutoff condition, retest the tool for shutoff at 55 and 90 psig. If necessary, repeat steps 2 through 5. (See Figures 2, 3, 4 and 5).



Power Unit

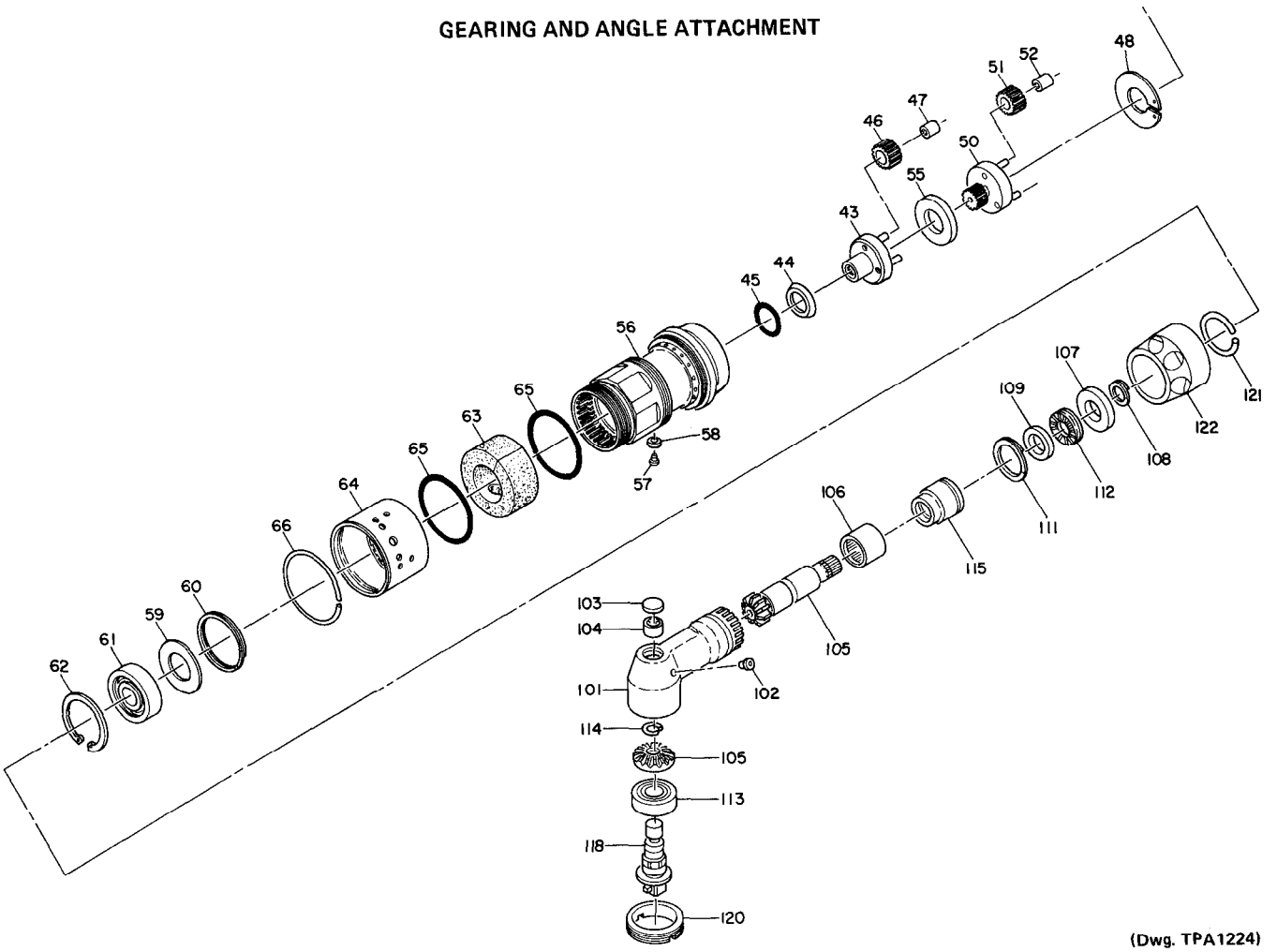
		PART NUMBER FOR ORDERING
	Motor Housing Assembly	
	for 6WRT	6WRT-A40
	for 6WT (except Model 6WTQ3F)	6WT-A40
	for 6WTQ3F	6WTF-A40
1	Motor Housing	
	for 6WRT	6WRT-B40
	for 6WT (except Model 6WTQ3F)	6WT-B40
	for 6WTQ3F	6WTF-B40
2	Throttle Plunger Bushing	5RLK2C-91
3	Reverse Valve Bushing Retainer (for 6WRT and 6WTQ3F)	6WRT-667
4	Throttle Lever	7L-273
5	Throttle Lever Pin	7L-120
	Throttle Plunger Assembly	6WT-A94
6	Throttle Plunger	6WT-94
• 7	Throttle Plunger Seal	8SL-259
8	Throttle Valve Seat	7RAK-303
9	Throttle Valve Seat Support	7RAK-304
10	Throttle Valve	7RAK-302
11	Throttle Valve Spring	7L-51
12	Silencer Seal Ring	WWV100A1-43
• 13	Exhaust Deflector Seal	R00A2-103
14	Rear Muffler	6WT-A23
• 15	Muffler Element	3RA-310
16	Inlet Bushing Spacer	7AH-65
17	Inlet Bushing	7L-565
• 18	Air Strainer Screen	R0A2-61
19	Reverse Valve (for 6WRT)	6WRT-329
20	Lock Pin Retainer (for 6WRT)	7RL-56
21	Reverse Valve Lock Pin (for 6WRT)	SPA102R-668
22	Retainer Setscrew	
	for 6WRT	7RL-669
	for 6WTQ3F	R2J-561
23	Reverse Valve Spring (for 6WRT)	55RP-515
24	Shutoff Valve	6WT-172
25	Shutoff Valve Stop	6WT-176
26	Shutoff Valve Spring	6WT-171
	Regulator Body Assembly	6WT-A173
27	Regulator Body	6WT-173
28	Regulator Spring	6WT-180
29	Regulator Adjustment Screw	6WT-174
30	Pressure Port Plug	5081T-266
31	Bleed Adjustment Screw	6WT-175
32	Regulator Body Seal	182A53-610
• 33	Rear End Plate Gasket	6WRT-739
• 34	Rear Rotor Bearing Retaining Nut	6WT-118
• 34A	Bearing Thrust Washer	6WTF-117
35	Rear Rotor Bearing	DG20-22

		PART NUMBER FOR ORDERING
36	Rear End Plate	
	for 6WRT	6WRT-12
	for 6WT	6WTF-12
37	Rotor	
	for Q ratio (12 teeth)	6WTQF-53
	for R ratio (9 teeth)	6WTRF-53
• 38	Vane Packet (set of 5 Vanes)	6WT-42-5
39	Cylinder	
	for 6WRT	6WRT-3
	for 6WT	6WT-3
40	Front End Plate	6WTF-11
41	Cylinder Dowel	6WT-98
• 42	Front Rotor Bearing	R00H-97
	Spindle Assembly	6LP-A8
43	Spindle	6LP-8
44	Seal Support	5RAK-5
• 45	Seal	182A53-610
46	Spindle Planet Gear Assembly (3) (18 teeth)	6WTP-A10
47	Spindle Planet Gear Bearing (1 for each Gear)	WFS182-654
48	Gear Retainer	6LL-81
50	Gear Head	
	for Q ratio (marked Q)	6LQ-216
	for R ratio (marked R)	6LR-216
51	Gear Head Planet Gear Assembly (3)	
	for Q ratio (18 teeth)	6WTP-A10
	p for R ratio (20 teeth)	6WTK-A10
52	Gear Head Planet Gear Bearing (1 for each Gear)	
	for Q ratio	WFS182-654
	for R ratio	7AJ-500
55	Gear Head Spacer	6LM-80
	Gear Case Assembly	6WTM-A37
56	Gear Case	6WTM-B37
57	Grease Fitting	D0F9-879
58	Grease Fitting Collar	6WT-880
59	Grease Shield	5R-701
60	Grease Shield Retainer	6LL-343
61	Spindle Bearing	R1L-24
62	Spindle Bearing Retainer	7L-28
• 63	Muffler Element	6WT-311
64	Exhaust Deflector	6WT-23
• 65	Exhaust Deflector Seal (2)	AG20-103
66	Deflector Retaining Ring	6WT-203
*	Horizontal Hanger	6WS-366
*	Vertical Hanger	7L-365
*	Grease Gun	R000A2-228
*	Tune-up Kit (includes illustrated items 7, 8, 9, 10, 11, 12, 13, 14, 18, 32, 33, 34, 34A, 35, 38, 42, 45, 63 and 65 [2])	6WT-TK1

* Not illustrated.

• To keep downtime to a minimum, it is desirable to have on hand certain repair parts. We recommend that you stock one (pair or set) of each part indicated by a bullet (•) for every four tools in service.

GEARING AND ANGLE ATTACHMENT



(Dwg. TPA1224)

PART NUMBER FOR ORDERING →

		7L3D6
	Angle Attachment	7L3D6
101	Angle Housing Assembly	7L3A-B550
102	Grease Fitting	D0F9-879
103	Angle Housing Cap	8SA32-110
• 104	Upper Spindle Bearing	8SA32-603
• 105	Matched Bevel Gear Set	7L3A-A552
• 106	Bevel Pinion Bearing	182A53-606
107	Rear Thrust Bearing Seat	7L2A-682
• 108	Bearing Seat Retainer	1415A12-6
109	Front Thrust Bearing Seat	141A12-683
• 111	Bearing Spacer Retainer	182A53-685
112	Bevel Pinion Thrust Bearing	161A32-105
• 113	Lower Spindle Bearing	8SA-593
• 114	Bevel Gear Retainer	8SA32-578
115	Bevel Pinion Bearing Spacer	182A53-165
118	Socket Adapter Spindle Assembly (3/8" Square Drive)	8SA32-P507-3/8
*	Socket Retaining Spring	401-718
*	Socket Retaining Pin	5020-716
120	Spindle Bearing Cap	8SA32-531
121	Coupling Nut Retainer	5C1-29
122	Coupling Nut	7L-27
*	Lower Bearing Cap Wrench	8SA32-26
*	Bearing Inserting Tool	7L3A-950

* Not illustrated.

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