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Edition 1  
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# Air Angle Wrench

7RL Series

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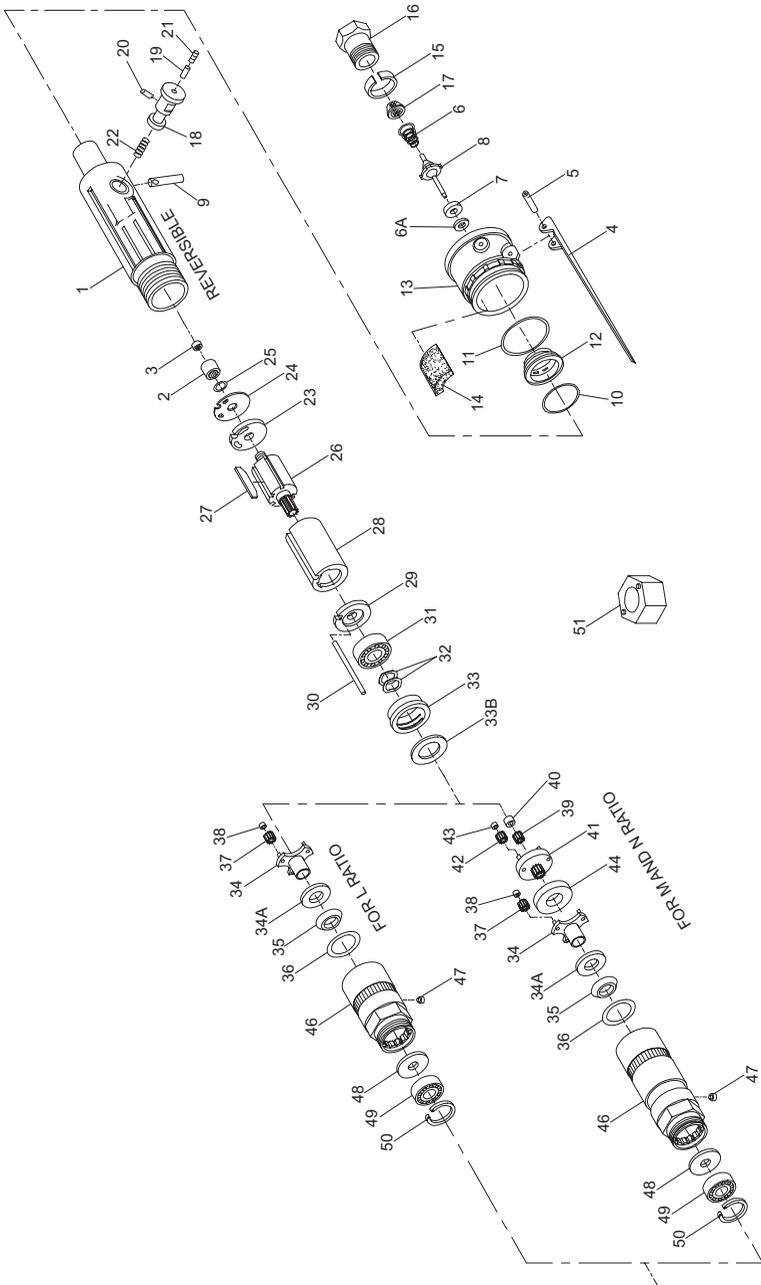
## Parts Information



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 **Ingersoll Rand**

# Motor Assembly, 7RL Series Angle Wrench Exploded Diagram



(Dwg. TPA893-4)

## Motor Assembly, 7RL Series Angle Wrench Parts List

Item	Part Description	Part Number	Item	Part Description	Part Number
	Motor Housing Assembly		26	Rotor (7 teeth)	7RL-53
	for 7RL models ending in -EU (with standard length lever)	7RL-EU-A40	‡ 27	Vane Packet (set of 4 Vanes) (.062" [1.57mm] thick)	7RL-42-4
	for 7RL model not ending in -EU (with standard length lever)	7RL-A40	28	Cylinder	7RL-3
	for 7RL models ending in -EU (with long length lever)	7RL-EU-AL40	29	Front End Plate	7AH-11
	for 7RL models not ending in -EU (with long length lever)	7RL-AL40	30	Cylinder Dowel	7AH-98
	Motor Housing		‡ • 31	Front Rotor Bearing	R1-22
1	for models ending in -EU	7RL-EU-B40	32	Rotor Bearing Spring Washer (2)	7AH-278
	for all other housings	7RL-B40	33	Rotor Bearing Housing	7AH-13
*	Warning Label		33B	Bearing Housing Spacer	7AH-81
	for models ending in -EU	EU-99		Spindle Assembly	
	for all other models	WARNING-7-99	34	Spindle	
‡ 2	Rear Rotor Bearing	7AH-24		for 7RLN	7LK-8
*	Throttle Valve Plunger Bushing	5RLK2C-91		for 7RLM	7LJ-8
3	Rotor Bearing Nut	7AH-105A	34A	Seal Retaining Washer	7L-303
4	Throttle Lever		35	Seal Support	5RAK-5
	standard length	7L-273	‡ • 36	Seal	182A53-610
	long length	7L-L273	37	Spindle Planet Gear Assembly (3)	
5	Throttle Lever Pin	7L-120		for 7RLN (21 teeth)	7AK-A10
‡ 6	Throttle Valve Spring	7L-51		for 7RLM (22 teeth)	7AL-A10
6A	Throttle Valve Seat Support	7RAK-304		for 7RLN (18 teeth)	7AJ-A10
‡ 7	Throttle Valve Seat	7RAK-303	38	Planet Gear Bearing (1 for each Gear)	
‡ 8	Throttle Valve	7RAK-302		for 7RLM and 7RLN	7AK-500
9	Throttle Valve Plunger	7RL-94		for 7RLM	7AJ-500
‡ 10	Silencer Seal Ring	WWV100A1-43	• 39	Rotor Pinion for 7RLM and 7RLN (22 teeth)	7AH-17
‡ • 11	Exhaust Deflector Seal	7A-379	• 40	Rotor Pinion Spacer for 7RLM and 7RLN	7AH-18
12	Exhaust Silencer	7L-310	41	Gear Head	
13	Exhaust Deflector	7L-23		for 7RLM (16 teeth)	7AM-216
‡ 14	Muffler Element	7L-311		for 7RLN (10 teeth)	7AN-216
15	Inlet Bushing Spacer	7AH-65	• 42	Gear Head Planet Gear Assembly (3)	
16	Inlet Bushing	7L-565		(for 7RLM and 7RLN) (15 teeth)	7AH-A10
‡ 17	Air Strainer Screen	ROA2-61	43	Gear Head Planet Gear Bearing (1 for each Gear)	7AH-500
18	Reverse Valve	7RL-329	44	Gear Head Spacer (for M and N ratios only)	7AN-80
19	Lock Pin Retainer	7RL-56		Gear Case Assembly	
20	Reverse Valve Lock Pin	7RL-347		for 7RLM and 7RLN	7LM-A37A
21	Retainer Setscrew	7RL-669			
22	Reverse Valve Spring	55RP-515			
23	Rear End Plate	7RL-12			
‡ • 24	Rear End Plate Gasket	7RL-739			
‡ 25	Rear End Plate Retainer	7AH-118			

\* Not Illustrated.

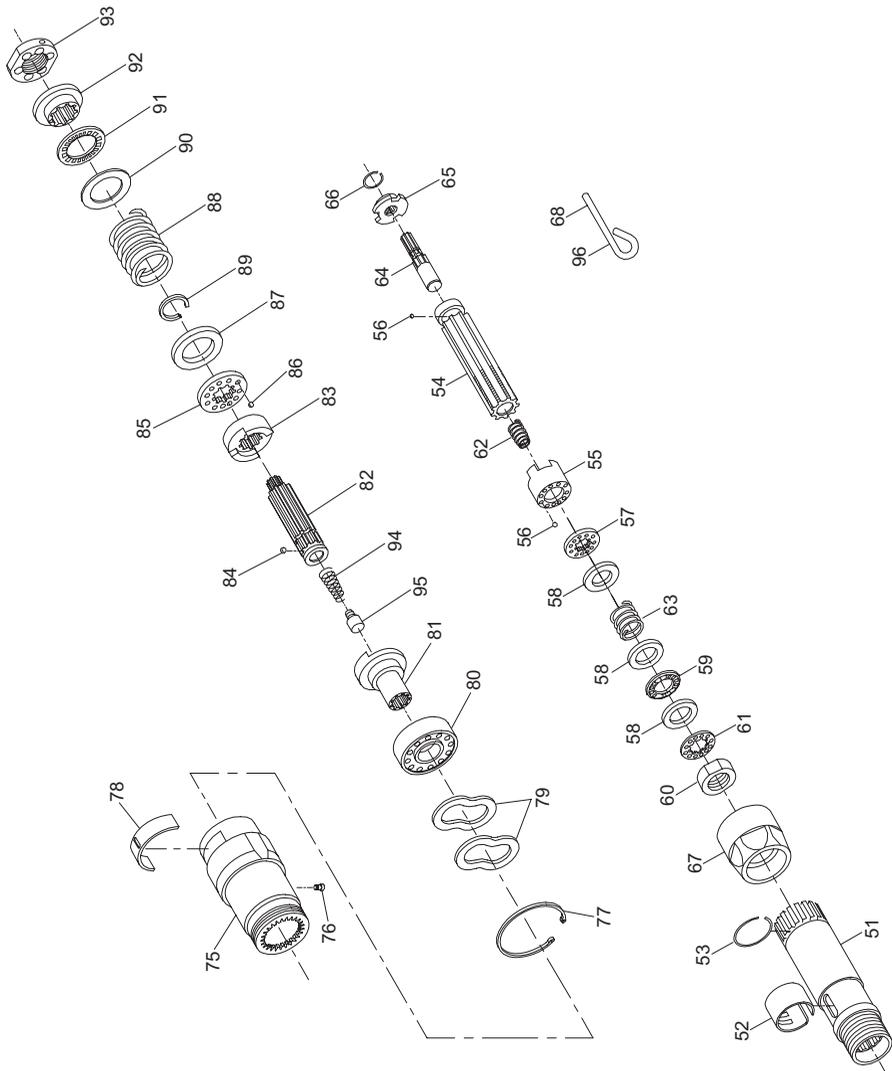
- To keep downtime to a minimum it is desirable to have on hand certain repair parts. We recommend that you stock one (pair or set) of each part indicated by a bullet (•) for every four tools in service.

‡ Indicates Tune-up Kit part.

<b>Item</b>	<b>Part Description</b>	<b>Part Number</b>	<b>Item</b>	<b>Part Description</b>	<b>Part Number</b>
46	Gear Case		*	Horizontal Hanger	6WS-366
	for 7RLL	7LH-B37A	*	Tune-up Kit (includes illustrated parts 2, 6, 7, 8, 10, 11, 14, 17, 24, 25, 27, 31 and 36)	
	for 7RLM and 7RLN	7LML-B37A			
47	Grease Fitting	D0F9-879			
48	Grease Shield	5R-710		for reversible models	7RL-S/D-A/ T-TK1
49	Spindle Bearing	R1L-24		for nonreversible models	7L-S/D-A/ T-TK1
50	Spindle Bearing Retainer	7L-28			
51	Housing Cap Wrench	141A12-26			
*	Grease Gun	R000A2-228	*	Piped-Away Exhaust Kit	7L-K284
*	Vertical Hanger	7L-365	*	Gear Case/Housing Sleeve	7L-747

\* Not illustrated.

# Clutch Attachment, 7RL Series Angle Wrench Exploded Diagram



(Dwg. TPB802-2)

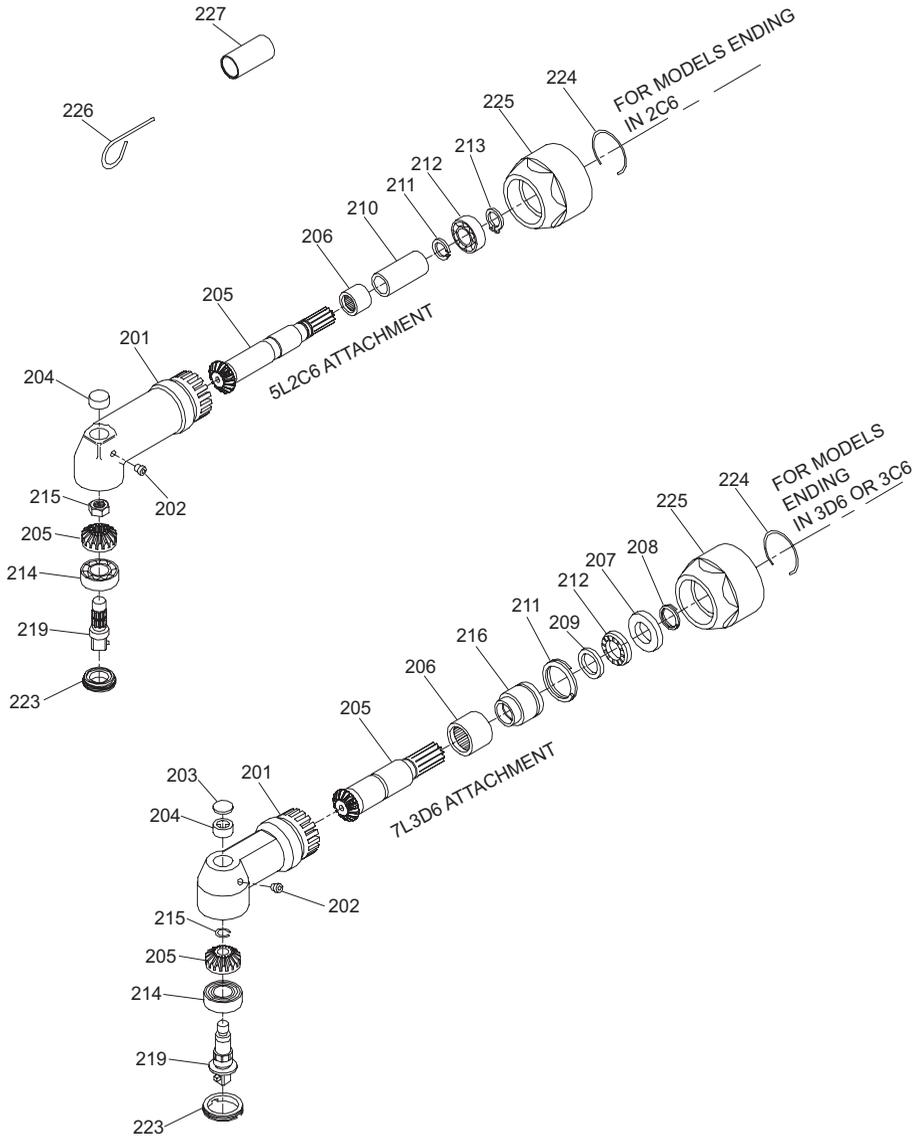
## Clutch Attachment, 7RL Series Angle Wrench Parts List

Item	Part Description	Part Number	Item	Part Description	Part Number
	Cushion Clutch Attachment (with Heavy Clutch Spring) (for models ending in 2C3)	5LN2C-AH580		Cushion Clutch Attachment (with Medium Clutch Spring) (for models ending in 3C6)	7L3C-A580
51	Clutch Housing Assembly	5LK2C-B580	75	Clutch Housing Assembly	7L3C-B580
52	Adjusting Hole Cover	5C1-415	76	Grease Fitting	DOF9-879
53	Coupling Nut Retainer	5C1-29	77	Retaining Ring	7L-28
	Clutch Shaft Assembly	5LN2C-AH586	78	Adjusting Hole Cover	7C-415A
54	Clutch Shaft	5LK2C-586	79	Driver Bearing Washer	R43F-278
• 55	Front Clutch Jaw	5C1-589A	80	Clutch Driver Bearing	R1L-24
• 56	Clutch Ball (24)	RX1-629	81	Driver Jaw	7L3C-585
• 57	Clutch Ball Spacer	5C1-401A		Clutch Driver Assembly	7C1-M581A
• 58	Clutch Spring Seat (3)	5C1-627	• 82	Clutch Driver	7C-581A
• 59	Spring Seat Bearing	5C1-105	• 83	Front Clutch Jaw	7C-589A
60	Clutch Adjusting Nut	5C1-582A	• 84	Jaw Bearing Ball (12)	2U-696
61	Adjusting Nut Lock	5C1-588	• 85	Clutch Ball Spacer	7C-401A
62	Clutch Engaging Spring	5LK2C-626	• 86	Clutch Release Ball (9)	4U-31
63	Clutch Spring (Heavy) (Green)	5C1-H583	• 87	Clutch Ball Seat	7C-627
	Clutch Driver Assembly	5LK2C-A581	88	Clutch Spring (Medium) (Yellow)	7C-583A
64	Clutch Shaft Support	5LK2C-584	89	Spring Seat Stop	7C-704B
65	Clutch Driver	5LK2C-581	90	Clutch Spring Seat	7C-623
66	Clutch Driver Retainer	7AH-118	91	Spring Seat Bearing	R02W-696
67	Coupling Nut	7L-27	92	Adjusting Nut Lock	7C-588A
68	Clutch Sprag Key	5C1-416	93	Clutch Adjusting Nut	7C-582A
*	Clutch Spring (Light) (Black)	5C1-L583	• 94	Disengaging Plunger Spring	4C-626
			• 95	Disengaging Plunger	7P1-584
			96	Clutch Adjusting Key	5C1-416
			*	Clutch Spring (Light) (Black)	7C-L583A
			*	Clutch Spring (Heavy) (Green)	7C-H583A

\* 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.

# Angle Attachment, 7RL Series Angle Wrench Exploded Diagram



(Dwg. TPA953-4)

## Angle Attachment, 7RL Series Angle Wrench Parts List

Item	Part Description	Part Number	Part Number
	Angle Attachment	5L2C6	7L3D6
201	Angle Housing Assembly	5L2C-A550	7L3A-B550
202	Grease Fitting	D0F9-879	D0F9-879
203	Angle Housing Cap	---	8SA32-110
• 204	Upper Spindle Bearing	120A4-603	8SA32-603
• 205	Matched Bevel Gear Set	141A12-552	7L3A-A552
• 206	Bevel Pinion Bearing	H54U-511B	182A53-606
207	Rear Thrust Bearing Seat	---	7L2A-682
• 208	Bearing Seat Retainer	---	1415A12-6
209	Front Thrust Bearing Seat	---	141A12-683
210	Pinion Bearing Spacer	AGS141-165	---
• 211	Bearing Spacer Retainer	RXA21-343	182A53-685
212	Bevel Pinion Thrust Bearing	120A4-97	161A32-105
• 213	Bearing Retainer	120A4-588	---
• 214	Lower Spindle Bearing	120A4-593	8SA32-593
• 215	Bevel Gear Retainer	120A4-578	8SA32-578
216	Bevel Pinion Bearing Spacer	---	182A53-165
219	Socket Adapter Spindle Assembly (3/8" square drive)	141A12-A607	8SA32-P507-3/8
*	Socket Retainer Spring	401-718	401-718
*	Socket Retainer Pin	5020-716	5020-716
223	Spindle Bearing Cap	120A4-531	8SA32-531
224	Coupling Nut Retainer	141A12-29	5C1-29
225	Coupling Nut	141A12-27	7L-27
226	Bevel Pinion Sprag Key	5C1-416	---
227	Bearing Inserting Tool	---	7L3A-950

Item	Part Description	Part Number
	Spindle Assembly	
	1/4" hex recess (for standard bits) (for 5L2C6 Angle Attachment)	5L2C3-B586
	1/4" hex recess (for insert bits) (for 5L2C6 Angle Attachment)	5L2C4-B386
	1/4" square drive Spindle Assembly (for 5L2C6 Angle Attachment)	141A9-A607-1/4
	3/8" square drive (for 5L2C6 Angle Attachment)	141A12-A607
	3/8" square drive (flush spindle) (for 7L3D6 Angle Attachment)	8SA32-P507-3/8
	3/8" square drive (recessed spindle) (for 7L3D6 Angle Attachment)	8SA32-P607-3/8
*	Bit Retainer (for No. 5L2C4-B386 Spindle Assembly)	5L2C4-425
*	Socket Retaining Spring (for No. 141A12-A607, No. 8SA32-P507-3/8 or No. 8SA32-P607-3/8 Spindle Assembly)	401-718
*	Socket Retaining Pin (for No. 141A12-A607 or No. 8SA32-P507-3/8 Spindle Assembly)	5020-716

\* 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.

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## **Parts and Maintenance**

When the life of the tool has expired, it is recommended that the tool be disassembled, degreased and parts be separated by material so that they can be recycled.

Tool repair and maintenance should only be carried out by an authorized Service Center.

Refer all communications to the nearest **Ingersoll Rand** Office or Distributor.

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## **Related Documentation**

For additional information refer to:

Product Safety Information Manual 04585006.

Product Information Manual 80167497.

Product Maintenance Information Manual 16584054.

Manuals can be downloaded from [www.irtools.com](http://www.irtools.com).





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