



16574089
Edition 2
February 2014

Air Angle Wrenches

9RS, 9S and 9T Series

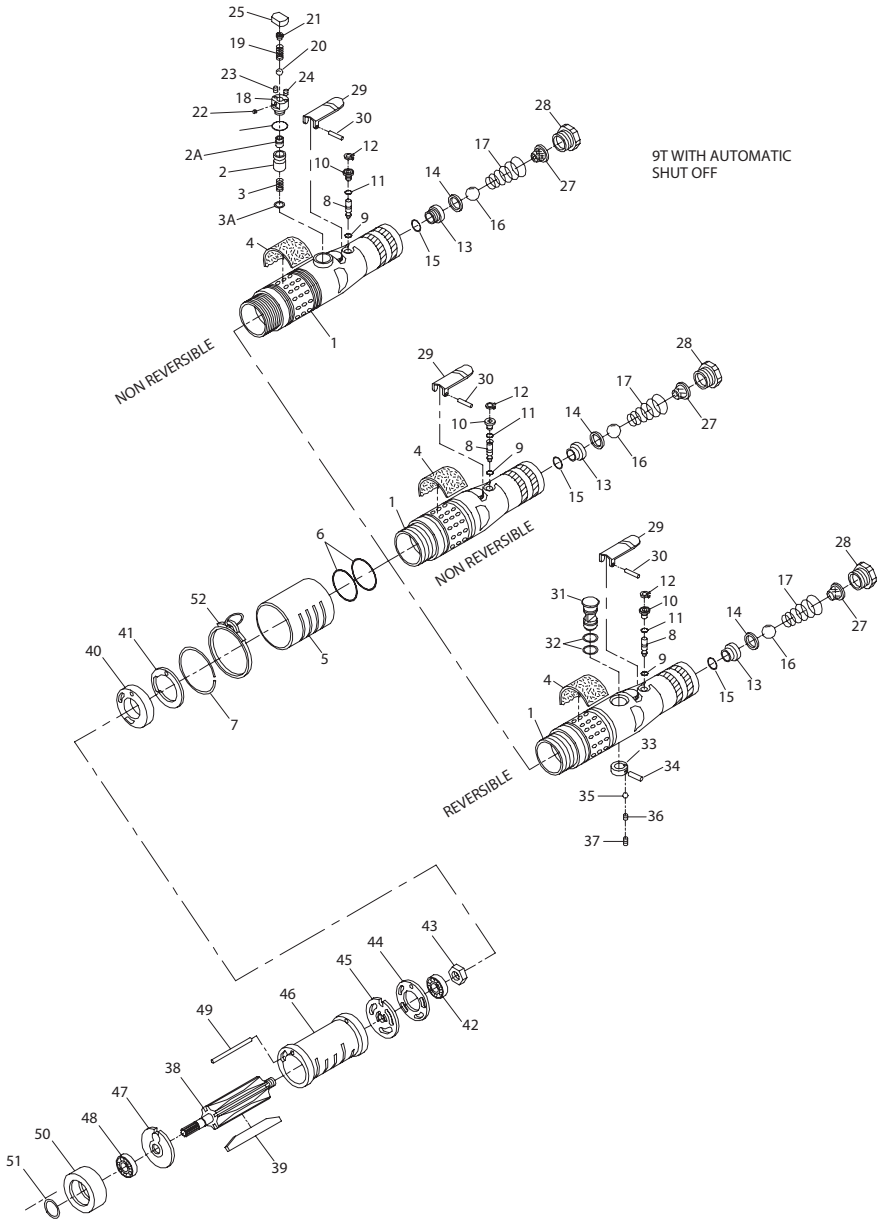
Parts Information



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 **Ingersoll Rand**[®]

9RS, 9S and 9T Angle Wrench - Exploded View



9RS, 9S and 9T Angle Wrench - Parts List

Item	Part Description	Part Number	
		9RS, 9S	9T
1	Motor Housing Assembly		
	Nonreversible		
	for 9S and 9T models ending in 53 or 83	9SL-A40	9TL-A40
	for 9T models ending in -EU	---	9TL-EU-A40
	Reversible		
	for 9R models ending in 53 or 83	9RSL-A40	---
	for 9R models ending in -EU	9RSL-EU-A40	---
*	Warning Label		
	for models ending in -EU	EU-99	EU-99
*	for all other models	WARNING-9-99	WARNING-9-99
2	Shutoff Valve	---	8TL-172
2A	Shutoff Valve Body	---	8TL-170
3	Shutoff Valve Spring	---	8TL-171
3A	Shutoff Valve Stop	---	8TL-176
• 4	Exhaust Silencer	9SL-311	9SL-311
• 5	Exhaust Deflector		
	for models ending in -EU	9SL-EU-23	9SL-EU-23
	for all other models	9SL-23	9SL-23
• 6	Exhaust Deflector Seal (2)	WBT180N-103	WBT180N-103
7	Deflector Retaining Ring	9SL-203	9SL-203
8	Throttle Valve Plunger Assembly	8SL-A302	8SL-A302
• 9	Throttle Valve Plunger Seal	8SL-259	8SL-259
10	Throttle Valve Plunger Bushing Assembly	8SL-A503	8SL-A503
• 11	Throttle Valve Plunger Bushing Seal	405-159	405-159
12	Throttle Valve Plunger Stop	8SL-305	8SL-305
13	Throttle Valve Seat Assembly	8SL-A303	8SL-A303
• 14	Valve Seat Face	8SL-159	8SL-159
• 15	Valve Seat Seal	AF120-290	AF120-290
16	Throttle Valve Ball	K6U-941	K6U-941
17	Throttle Valve Spring	8SL-262	8SL-262
18	Regulator Body Assembly	---	8TL-A173
19	Regulator Spring	---	8TL-180
20	Regulator Ball	---	2U-722
21	Regulator Adjusting Screw	---	8TL-174
22	Lock Screw	---	8TL-179
23	Bleed Adjusting Screw	---	8TL-175
24	Sensor Port Plug	---	5081T-266
25	Regulator Body Cap	---	8TL-181
26	Regulator Body Seal	---	C321-606

* Not illustrated.

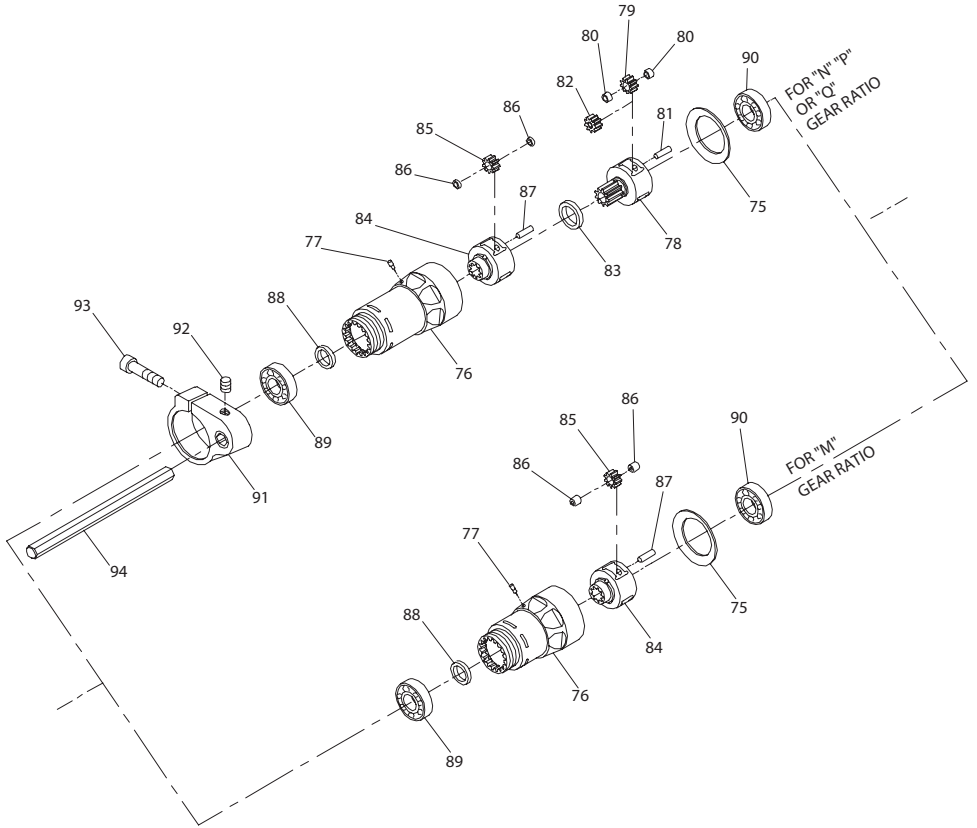
• To keep downtime to a minimum, it is desirable to have on hand certain repair parts. We recommend that you stock one (pair or set) of each part indicated by a bullet (•) for every four tools in service.

9RS, 9S and 9T Angle Wrench - Parts List

Item	Part Description	Part Number	
		9RS, 9S	9T
27	Air Strainer	834-61	834-61
28	Inlet Bushing	88V60-38	88V60-38
29	Throttle Lever	8SL-273	8SL-273
• 30	Throttle Lever Retaining Pin	MR-100	MR-100
31	Reverse Valve Assembly	8RSL-A329	---
• 32	Reverse Valve Seal (2)	85H-167	---
33	Reverse Valve Knob	8RSL-163	---
• 34	Reverse Valve Knob Pin	R100B-120	---
• 35	Detent Ball	8RSL-31	---
• 36	Detent Spring	5RA-664	---
37	Detent Adjusting Screw	8RSL-662	---
38	Rotor	9SM-53	9SM-53
• 39	Vane Packet (set of 5 Vanes)	9SL-42-5	9SL-42-5
40	Rear Rotor Bearing Support		
	for Nonreversible Sizes	9SL-25	9SL-25
	for Reversible Sizes	9RSL-25	---
• 41	Rear Bearing Support Gasket		
	for Nonreversible Sizes	9SL-283	9SL-283
	for Reversible Sizes	9RSL-283	---
• 42	Rear Rotor Bearing	AG210-24Z	AG210-24Z
• 43	Rotor Bearing Retaining Nut	8SL-118	8SL-118
44	Rear End Plate Gasket	9SL-739	9SL-739
• 45	Rear End Plate	9SL-12	9SL-12
46	Cylinder		
	for Nonreversible Sizes	9SL-3	9SL-3
	for Reversible Sizes	9RSL-3	---
• 47	Front End Plate	9SL-11	9SL-11
• 48	Front Rotor Bearing	WFS182-24	WFS182-24
49	Cylinder Dowel		
	for Nonreversible Sizes	9SL-98	9SL-98
	for Reversible Sizes	9RSL-98	---
50	Front Rotor Bearing Support Assembly	9SL-A26	9SL-A26
51	Front Rotor Bearing Retainer	AFH120A-362	AFH120A-362
52	Horizontal Hanger	9SL-366	9SL-366

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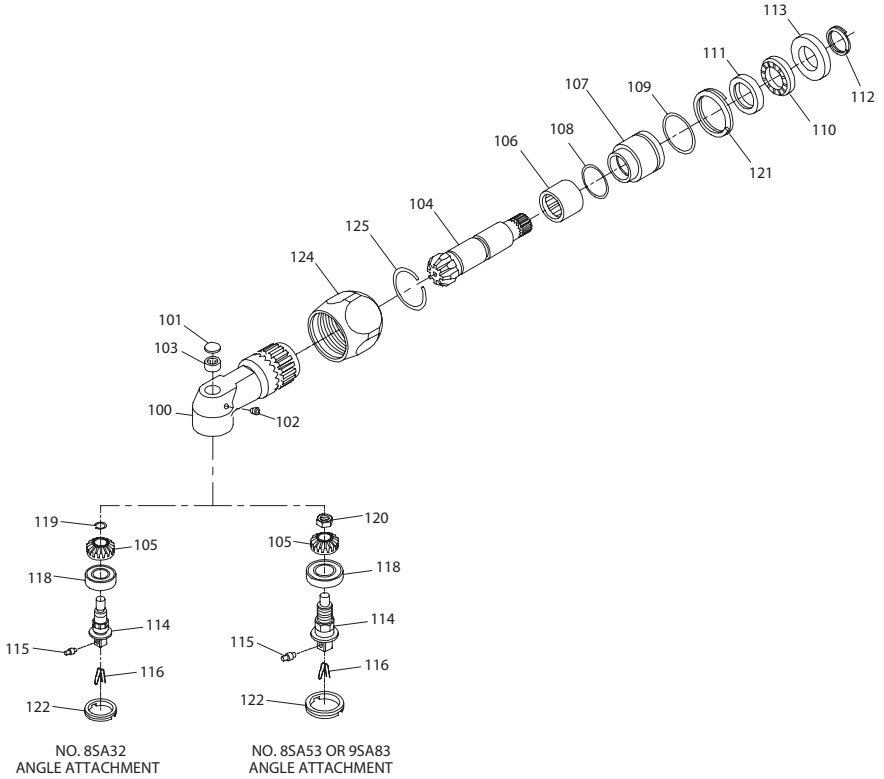
9RS, 9S and 9T Gear Case Assembly - Exploded View



9RS, 9S and 9T Gear Case Assembly - Parts List

Item	Part Description	Part Number			
		M Ratio	N Ratio	P Ratio	Q Ratio
75	Motor Clamp Washer	9SL-207	9SL-207	9SL-207	9SL-207
76	Gear Case Assembly	9SL-A37	9SN-A37	9SN-A37	9SN-A37
77	Grease Fitting	D0F9-879	D0F9-879	D0F9-879	D0F9-879
	Gear Head Assembly	---	9SN-A216	9SP-A216	9SQ-A216
78	Gear Head	---	9SN-216	9SP-216	9SQ-216
79	Planet Gear Assembly (3)				
	for N ratio gearing (15 teeth, color-coded green)	---	9SN-A9	---	---
	for P and Q ratio gearing (17 teeth, color-coded red)	---	---	9SP-A9	9SP-A9
80	Planet Gear Bearing (2 for N ratio 1, for P and Q ratios)	---	8SL-500	WFS182-654	WFS182-654
81	Planet Gear Shaft (3)	---	8SN-190	8SL-191	8SL-191
82	Rotor Pinion	---	9SN-17	---	---
	for N ratio (color-coded red)	---	---	9SP-17	9SP-17
	for P and Q ratio (color-coded yellow)	---	9SN-80	9SN-80	9SN-80
83	Gear Head Spacer	9SM-A108	9SN-A108	9SP-A108	9SQ-A108
	Spindle Assembly	9SM-108	9SN-108	9SP-108	9SQ-108
84	Spindle				
85	Spindle Planet Gear Assembly (3)				
	for M ratio gearing (22 teeth, color-coded yellow)	9SM-A10	---	---	---
	for N ratio gearing (15 teeth, color-coded steel)	---	9SN-A10	---	---
	for P ratio gearing (16 teeth, color-coded green)	---	---	9SP-A10	---
	for Q ratio gearing (19 teeth, color-coded red)	---	---	---	9SQ-A10
86	Planet Gear Bearing	W22-654	9SN-500	W22-654	W22-654
87	Planet Gear Shaft (3)	9SL-191	9SN-190	9SL-191	9SL-191
88	Spindle Spacer	WFS182-111	WFS182-111	WFS182-111	WFS182-111
89	Spindle Bearing (2 for M ratio; 1 for N, P and Q ratios)	R1602-510	R1602-510	R1602-510	R1602-510
90	Gear Head Bearing	---	R1602-510	R1602-510	R1602-510
91	Reaction Bar Adapter Assembly	9SL-A60	9SL-A60	9SL-A60	9SL-A60
92	Bar Lock Screw	9SL-50	9SL-50	9SL-50	9SL-50
93	Adapter Bolt	9SL-49	9SL-49	9SL-49	9SL-49
94	Torque Reaction Bar	9SL-48	9SL-48	9SL-48	9SL-48

9RS, 9S and 9T Angle Attachment - Exploded View



Item	Part Description	Part Number		
		For Models ending in 32	For Models ending in 53	For Models ending in 83
100	Angle Attachment	8SA32	8SA53	9SA83
100	Angle Housing Assembly	8SA32-A550	8SA53-A600	182A83-A600
101	Angle Housing Cap	8SA32-110	182A53-110	R00B-110
102	Grease Fitting	D0F9-879	D0F9-879	D0F9-879
• 103	Upper Spindle Bearing	8SA32-603	182A53-603	34U-367
•	Matched Gear Set	8SA32-A552	182A53-A602	182A83-A602
104	Bevel Pinion (not sold separately)	---	---	---
105	Bevel Gear (not sold separately)	---	---	---
• 106	Bevel Pinion Bearing	182A53-606	182A53-606	182A83-606
107	Bevel Pinion Bearing Spacer	182A53-A165	182A53-A165	182A83-A165
108	Front Seal	R18LF-21	R18LF-21	AFH120A-358
109	Rear Seal	C321-606	C321-606	C321-606
110	Bevel Pinion Thrust Bearing	R1610-105	R1610-105	R1610-105

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9RS, 9S and 9T Angle Attachment - Parts List

Item	Part Description	Part Number		
		For Models ending in 32	For Models ending in 53	For Models ending in 83
111	Bevel Pinion Thrust Washer	182A53-554	182A53-554	182A53-554
112	Bevel Pinion Snap Ring	182A53-689	182A53-689	182A53-689
113	Bevel Pinion Retainer	182A53-589	182A53-589	182A53-589
† 114	Socket Adapter Spindle Assembly			
	3/8" Square Drive (flush spindle)	---	---	---
+	1/2" Square Drive (flush spindle)	182A53-P507-1/2	182A83-P507-1/2	182A83-P507-1/2
+	3/8" Square Drive (recessed spindle)	---	---	---
+	1/2" Square Drive (recessed spindle)	182A53-A607-1/2	182A83-A607-1/2	182A83-A607-1/2
115	Socket Retainer	804-716	804-716	804-716
116	Socket Retainer Spring	5UHD-718	5UHD-718	5UHD-718
† *	Flush Socket Adapter Spindle			
	1/2" Hexagon	182A54-807	---	---
	13mm Hexagon	182A13MF-807	---	---
	9/16" Hexagon	182A55-807	---	---
	15 mm Hexagon	182A15MF-807	---	---
	5/8" Hexagon	182A56-807	---	---
	17 mm Hexagon	8SA56-807M	---	---
	11/16" Hexagon	---	182A87-807	182A87-807
	18 mm Hexagon	---	9SA87-807M	9SA87-807M
	3/4" Hexagon (19 mm)	---	182A88-807	182A88-807
• 118	Lower Spindle Bearing	182A53-593	182A83-593	182A83-593
† 119	Bevel Gear Retainer	---	---	---
† 120	Bevel Gear Lock Nut	182A53-578	182A83-578	182A83-578
121	Bevel Spacer Retainer	182A53-685	182A53-685	182A53-685
122	Spindle Bearing Cap	182A53-531	182A83-531	182A83-531
*	Spindle Bearing Cap Wrench	WFS182-26	WFS182-26	WFS182-26
124	Attachment Coupling Nut	8SA32-27	8SA32-27	8SA32-27
125	Coupling Nut Retainer	182A53-29	182A53-29	182A53-29

* 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.

† When ordering a Socket Adapter Spindle (114) or Flush Socket Spindle, also order a Bevel Gear Retainer (119) or Bevel Gear Lock Nut (120).

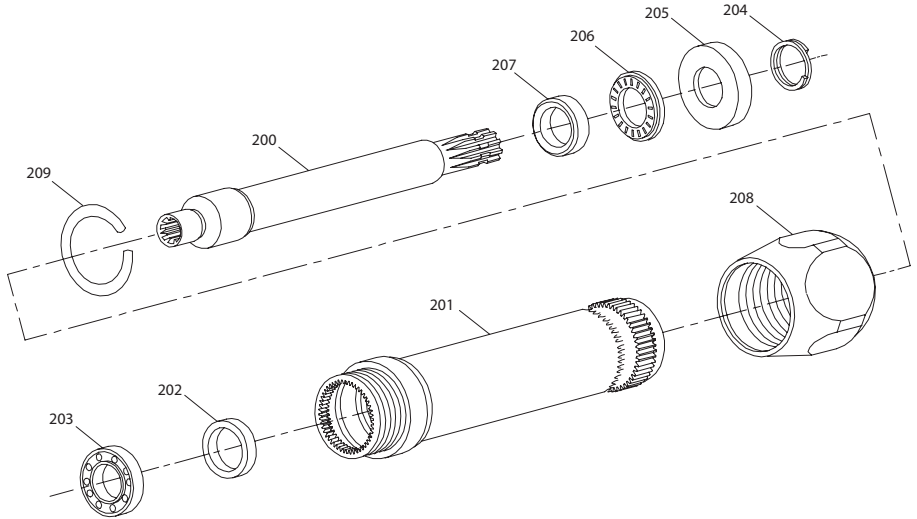
+ When using Spindle No. 8SA32-P507-3/8, 182A53-P507-1/2, or 182A83-P507-1/2, the rear face of the socket will be flush with the face of the Angle Housing.

When using Spindle No. 8SA32-P607-3/8, any socket not exceeding 15/16" diameter will fit up into the Angle Housing, thus reducing the overall height by 1/4".

When using Spindle No. 182A53-A607-1/2, any socket not exceeding 1-11/32" diameter will fit up into the Angle Housing, thus reducing the overall height by 1/4".

When using Spindle No. 182A83-A607-1/2, any socket not exceeding 1-7/16" diameter will fit up into the Angle Housing, thus reducing the overall height by 1/4".

9RS, 9S and 9T Angle Housing Extension Assembly - Exploded View



9RS, 9S and 9T Angle Housing Extension Assembly - Parts List

Item	Part Description	Part Number	Item	Part Description	Part Number
	6" Angle Housing Extension Assembly	8SL-A327-6	204	Extension Arbor Snap Ring	182A53-689
200	Extension Arbor	8SL-327-6	205	Extension Arbor Retainer	182A53-589
201	Arbor Housing	8SL-43-6	206	Extension Arbor Thrust Bearing	R1610-105
202	Arbor Spacer	WFS182-111	207	Extension Arbor Thrust Washer	182A53-554
203	Arbor Bearing	R1602-510	208	Coupling Nut	8SA32-27
			209	Coupling Nut Retainer	182A53-29

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.

Related Documentation

For additional information refer to:

Air Angle Wrench Product Safety Information Manual 04585006.

Air Angle Wrench Product Information Manuals 80167521, 80167539.

Air Angle Wrench Maintenance Information Manual 16575136.

Manuals can be downloaded from ingersollrandproducts.com.

Notes:

Notes:

ingersollrandproducts.com

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