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Air Screwdrivers

Series QS1L and QS1T Lever Inline

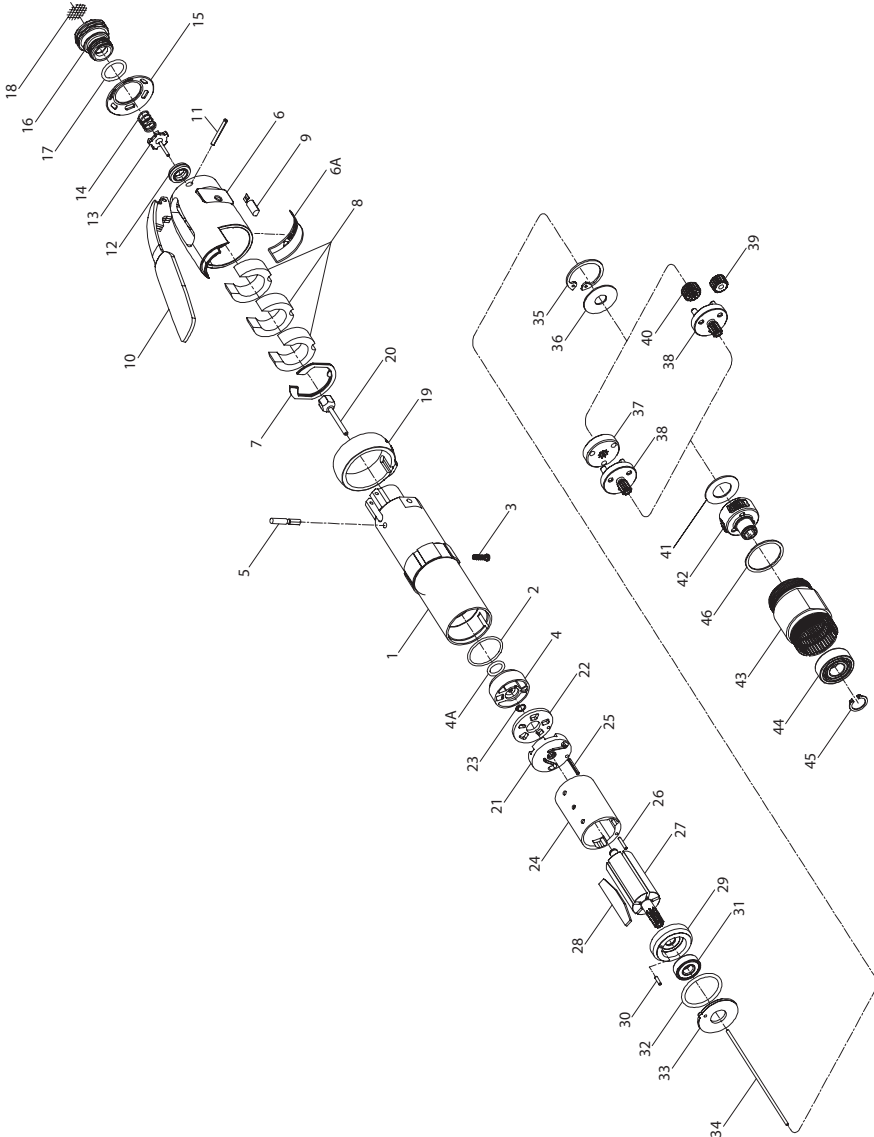
Parts Information



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QS1 and QS1T Lever Inline Motor and Gearing - Exploded View



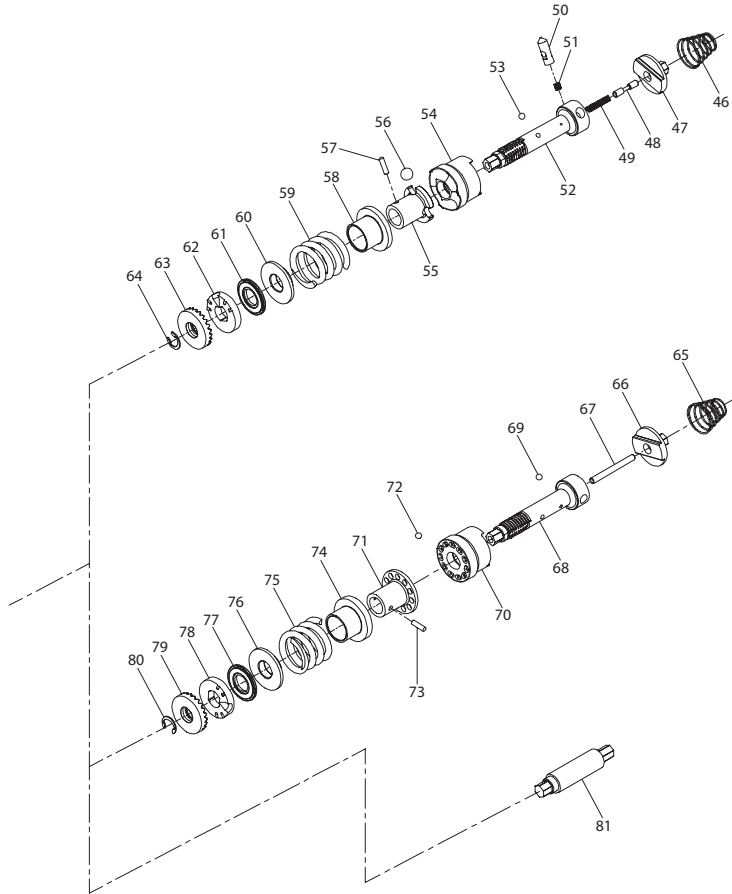
(Dwg. TPA1757-1)

QS1 and QS1T Lever Inline Motor and Gearing - Parts List

Item	Part Description	Part Number	Item	Part Description	Part Number	
1	Motor Housing	TRL-40	32	Motor Seal	TRH-211	
2	Housing O-Ring	TRH-104	33	Motor Clamp Washer	TRH-207	
3	Housing Screw	TRH-330	34	Push Rod (for Models with an Automatic Shutoff Valve)	TRH-425	
4	Reverse Valve Assembly		35	Gear Retainer	TRH-28	
	for Models with an Automatic Shutoff Valve	TRH-A329	36	Gear Head Spacer	TRH-81	
	for Models without Automatic Shutoff Valve	TRH-A3291	37	Planet Gear Head Drive Plate (for Series QS1L28 and QS1T28)	TRH-17	
4A	Reverse Valve Seal	R1A-159	38	Planet Gear Head Assembly (includes gear shafts)		
5	Throttle Plunger	TRL-302		for Series QS1L02, QS1T02, QS1L05, QS1T05, QS1L10, QS1T10, QS1L28 and QS1T28	TRH-A2169-16	
6	Back Cap	TRL-2311		for Series QS1L15, QS1T15, QS1L20C and QS1T20C	TRH-A2169-12	
6A	Warning Label (for direct drive models only)	TRL-99		for Series QS1L20S, QS1T20S and QS1L20D	TRH-A2169-10	
7	Back Cap Gasket	TRL-A283	39	Planet Gear (3 for each Gear Head)		
8	Muffler Element (3)	TRL-311			for Series QS1L02, QS1T02, QS1L05, QS1T05, QS1L10 and QS1T10	TRH-10-16
9	Memory Chip (for models with memory chip only)	TRH-800			for Series QS1L15, QS1T15, QS1L20C and QS1T20C	TRH-10-12
10	Throttle Lever	TRL-274			for Series QS1L20S, QS1T20S and QS1L20D	TRH-10-10
11	Throttle Lever Pin	TRL-98				
12	Throttle Valve Seat	TRH-303				
13	Throttle Valve	TRD-A302				
14	Throttle Valve Spring	TRL-51	40	Gear Head Pinion		
15	Exhaust Diffuser	TRH-123		for Series QS1L15, QS1T15, QS1L20C and QS1T20C	TRH-17-18	
16	Inlet Bushing Assembly			for Series QS1L20S, QS1T20S and QS1L20D	TRH-17-21	
	for 1/4-18 NPT thread	TRH-A465				
	for 1/4-19 BSPT thread	TRH-A465-B				
17	Inlet Bushing Seal	AF120-290	41	Planet Gear Head Spacer	TRH-82	
18	Inlet Screen	TRH-61	42	Spindle Assembly (includes all spindle gearing)		
19	Reverse Lever	TRH-273		for Series QS1L02, QS1T02, QS1L05, QS1T05, QS1L28 and QS1T28	TRH-A8-16	
20	Automatic Shutoff Valve (for all Models with a Shutoff Clutch and Lever Permit Models with a Cushion Clutch)	TRH-A435		for Series QS1L10, QS1T10, QS1L15, QS1T15, QS1L20S, QS1T20S and QS1L20D	TRH-A8-12	
21	Rear End Plate Assembly (includes rear rotor bearing)	TRH-A12-1		for Series QS1L20C, QS1T20C	TRH-A8-10	
22	Rear End Plate Face Plate	TRH-12-2	43	Gear Case	TAH-37	
23	Rear End Plate Assembly Retainer	8SL-305	44	Spindle Bearing	TRH-510	
24	Cylinder Assembly	TRH-A3	45	Spindle Bearing Retaining Ring	120A4-588	
25	Cylinder Rear Alignment Pin	TRH-98	46	Spindle Bearing Seat	TRH-208	
26	Cylinder Front Alignment Pin	TRH-98-1	*	Suspension Bail	7L-365	
27	Rotor		*	Piped-Away Exhaust Kit (optional)	LG1-K284	
	for Models with an Automatic Shutoff Valve	TRH-53	*	Tune-Up Kit (Includes the following items: 2, 4A, 7, 8, 12, 13, 14, 17, 18, 20, 23, 28, 30, 31 and 32)	Q2-TK1	
	for Models without an Automatic Shutoff Valve	TRD-53				
28	Vane Packet (set of 5 Vanes)	TRH-42-5				
29	Front End Plate Assembly	TRH-A11				
30	End Plate Alignment Pin	TRH-98-2				
31	Front Rotor Bearing	TRH-24				

* Not Illustrated.

QS1 and QS1T Lever Inline Clutches - Exploded View



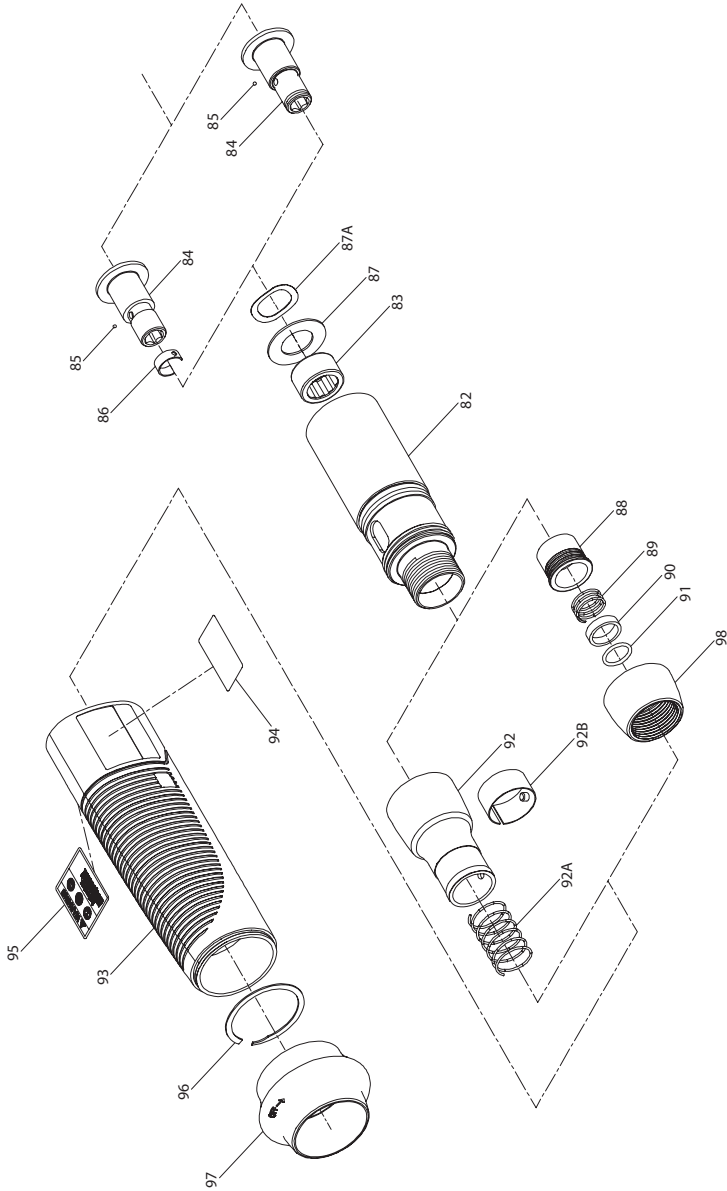
(Dwg. TPA1758)

QS1 and QS1T Lever Inline Clutches - Parts List

Item	Part Description	Part Number	Item	Part Description	Part Number
	Automatic Shutoff Clutch Assembly		65	Clutch Return Spring	TRH-405
	with heavy clutch spring (standard)	TRH-AH579	66	Clutch Input Driver	TRH-103
	with medium clutch spring	TRH-AM579	67	Clutch Pushrod	TRH-236-C
	with light clutch spring	TRH-AL579	68	Clutch Shaft	TRH-502
46	Clutch Return Spring	TRH-405	69	Clutch Ball (1/8" diameter) (12)	AV1-255
47	Clutch Input Driver	TRH-103	70	Cam Jaw	
48	Automatic Shutoff Plunger	TRH-408		for Series QS1T02, QS1L02, QS1T05, QS1L05, QS1T10 and QS1L10	TRH-721-C
49	Automatic Shutoff Plunger Return Spring	TRH-420		for Series QS1T15, QS1L15, QS1T20, QS1L20, QS1T28 and QS1L28	TRH-722-C
50	Automatic Shutoff Pin	TRH-704			
51	Automatic Shutoff Pin Spring	TRH-407	71	Clutch Cam Ball Driver	TRH-581-C
52	Clutch Shaft	TRH-502	72	Clutch Cam Ball (1/8" diameter) (11)	AV1-255
53	Clutch Ball (1/8" diameter) (12)	AV1-255	73	Clutch Cam Ball Driver Retaining Pin	TRH-188
54	Cam Jaw	TRH-721	74	Cam Ball Seat	TRH-627-C
55	Clutch Cam Ball Driver	TRH-581	75	Clutch Spring	
56	Clutch Cam Ball (1/4" diameter) (3)	4U-722		heavy (green)	TRH-H583
57	Clutch Driver Retaining Pin	TRH-188		medium (red)	TRH-M583
58	Cam Ball Seat	TRH-627		light (orange)	TRH-XL583
59	Clutch Spring		76	Spring Seat	TRH-623
	heavy (green)	TRH-H583	77	Thrust Bearing	161A32-105
	medium (red)	TRH-M583	78	Clutch Adjusting Nut Washer	TRH-582
	light (orange)	TRH-XL583	79	Clutch Adjusting Nut	TRH-588
60	Spring Seat	TRH-623	80	Clutch Adjusting Nut Stop	353-701
61	Thrust Bearing	161A32-105	81	Clutch Shaft (for Models with Direct Drive only)	TRH-786
62	Clutch Adjusting Nut Washer	TRH-582			
63	Clutch Adjusting Nut	TRH-588	*	Cushion Clutch Tune-Up Kit (Includes the following items: 65, 67, 69, 72, 73, 76, 77 and 80)	Q2-CC-TK1
64	Clutch Adjusting Nut Stop	353-701			
*	Automatic Shutoff Tune-Up Kit (Includes the following items: 34, 46, 49, 51, 53, 56, 57, 60, 61 and 64)	Q2-A50-TK1			
	Cushion Clutch Assembly				
	with heavy clutch spring (standard)	TRH-AH579-C			
	with medium clutch spring	TRH-AM579-C			
	with light clutch spring	TRH-AL579-C			

* Not Illustrated.

QS1 and QS1T Lever Inline Grip and Bit Drivers - Exploded View



(Dwg. TPA1759-2)

QS1 and QS1T Lever Inline Grip and Bit Drivers - Parts List

Item	Part Description	Part Number	Item	Part Description	Part Number
	Bit Holder Assembly		86	Bit Retaining Spring (for Bit Finder Bit Holders)	TRH-241
	with 1/4" Quick Release Bit Holder (for all Models with Lever Permit)	TRH-A580-PQ4	87	Shutoff Spacer (for all Models with Lever Start only)	TRH-591
	with 1/4" Quick Release Bit Holder (for all Models with Lever Start)	TRH-A580-NQ4	87A	Wave Washer (for all Models with Lever Start only)	TRH-592
	with 1/4" Bit Finder Bit Holder (for all Models with Lever Permit)	TRH-A580-PQ4F	88	Bit Retaining Sleeve (for Quick Release Bit Holders)	TRH-930
	with 1/4" Bit Finder Bit Holder (for all Models with Lever Start)	TRH-A580-NQ4F	89	Retaining Sleeve Spring (for Quick Release Bit Holders)	TRH-931
	with 5 mm Double End Quick Release Bit Holder (for all Models with Lever Permit)	TRH-A580-PQ5MD	90	Spring Seat (for Quick Release Bit Holders)	TRH-244
	with 5 mm Double End Quick Release Bit Holder (for all Models with Lever Start)	TRH-A580-NQ5MD	91	Retaining Ring (for Quick Release Bit Holders)	TRH-118
	with 1/4" Double End Quick Release Bit Holder (for all Models with Lever Permit)	TRH-A580-PQ4D	92	Non-Rotating Bit Finder (for Bit Finder Bit Holders)	TRH-873
	with 1/4" Double End Quick Release Bit Holder (for all Models with Lever Start)	TRH-A580-NQ4D	92A	Spring (for Bit Finder Bit Holders)	102A60-242
			92B	Finder Retaining Spring (for Bit Finder Bit Holders)	102A60-628
			93	Housing Grip	TRH-40-A145
			94	Nameplate	TRH-301
	82	Clutch Housing	TRH-580	95	Warning Label
83	Clutch Housing Bearing	TRH-105	96	Grip Retaining Ring	TRH-197
84	Bit Holder		97	Clutch Adjusting Hole Cover	
	for 1/4" Quick Release Bit Holder	TRH-586-H4		Cover with a flange (standard)	TRH-40-23
	for 1/4" Bit Finder Bit Holder	TRH-583-Q4		Cover without a flange (optional)	TRH-40-24
	for 5 mm Double End Quick Release Bit Holder	TRH-586-5MD	98	Clutch Housing Cap (for Quick Release Holders)	TRH-19
	for 1/4" Double End Quick Release Bit Holder	TRH-586-Q4D	*	Clutch Housing Spanner Wrench	TRH-478
85	Bit Retaining Ball				
	for metric Bit Holders	TRH-629-3M			
	for all other Bit Holders	R000B-263			

* Not Illustrated.

Clutch Spring Selection Chart

Tool	Free Speed (rpm)	Torque Range (Soft Draw)		
		Light Clutch Spring (Orange)	Medium Clutch Spring (Red)	Heavy Clutch Spring (Green)
All Series QS Inline Screwdrivers	2800	1.7 to 9.7 in-lbs. (0.19 to 1.1 Nm)	---	---
	2000	1.7 to 9.7 in-lbs. (0.19 to 1.1 Nm)	7.9 to 22.1 in-lbs. (0.89 to 2.50 Nm)	---
	1500	1.7 to 9.7 in-lbs. (0.19 to 1.1 Nm)	7.9 to 27.3 in-lbs. (0.89 to 3.08 Nm)	---
	1000	1.7 to 9.7 in-lbs. (0.19 to 1.1 Nm)	7.9 to 27.3 in-lbs. (0.89 to 3.08 Nm)	13.3 to 40.0 in-lbs. (1.50 to 4.52 Nm)
	500	1.7 to 9.7 in-lbs. (0.19 to 1.1 Nm)	7.9 to 28.3 in-lbs. (0.89 to 3.20 Nm)	13.3 to 47.8 in-lbs. (1.50 to 5.40 Nm)
	250	1.7 to 9.7 in-lbs. (0.19 to 1.1 Nm)	7.9 to 28.3 in-lbs. (0.89 to 3.20 Nm)	13.3 to 47.8 in-lbs. (1.50 to 5.40 Nm)

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 Screwdriver Product Safety Information Manual 04585006.

Air Screwdriver Product Information Manual 80165921.

Air Screwdriver Maintenance Information Manual 16575193.

Manuals can be downloaded from ingersollrandproducts.com.

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