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Air Screwdrivers

Series QS1L and QS1T Lever Inline

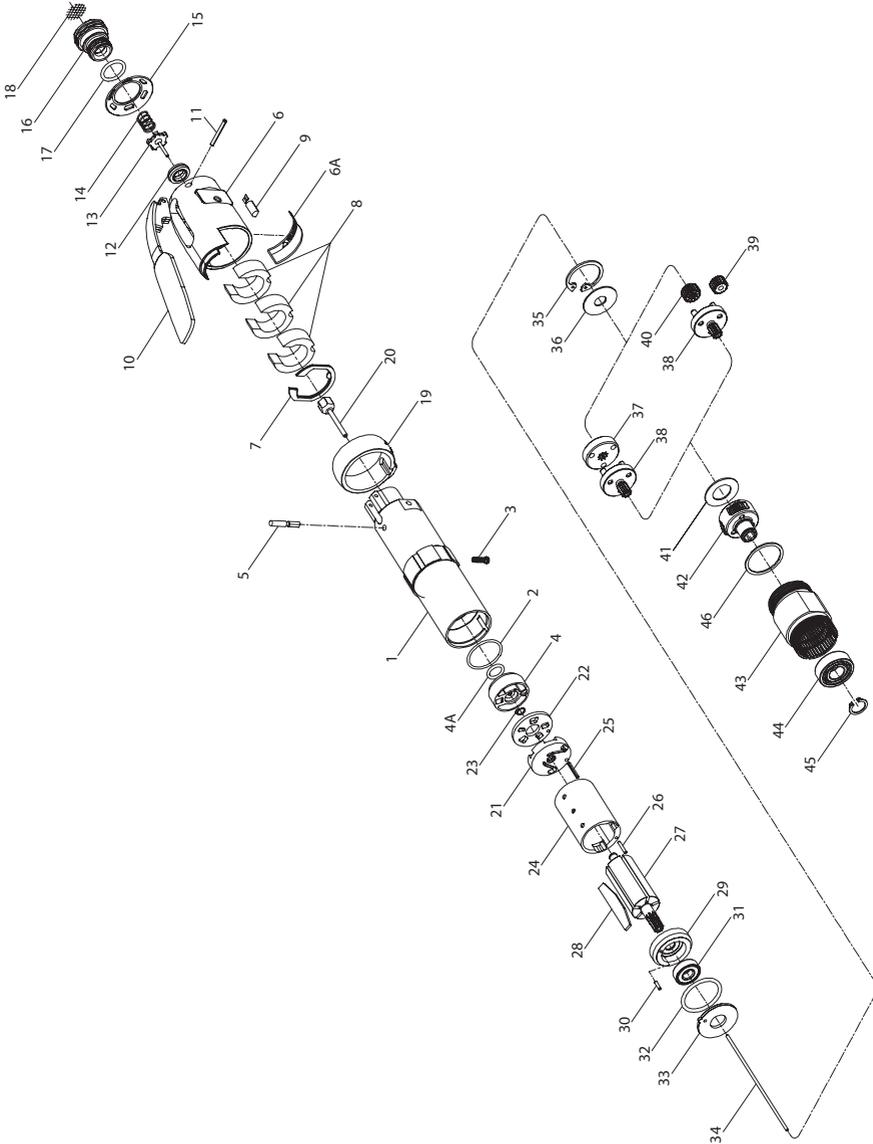
Parts Information



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QS1 and QS1T Lever Inline Motor and Gearing Exploded Diagram



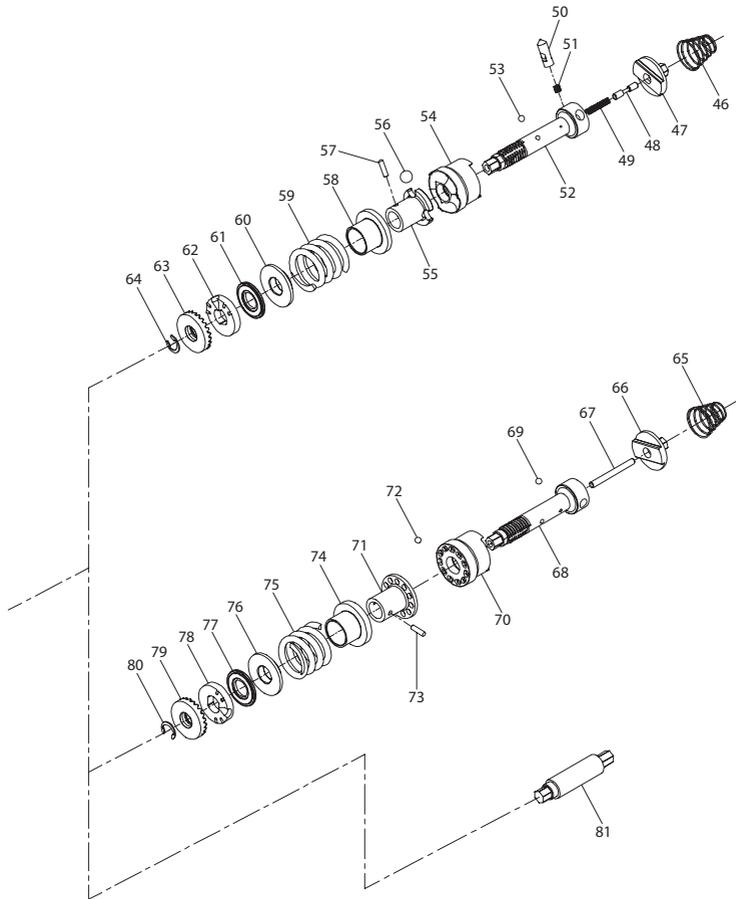
(Dwg. TPA1757-1)

Q51 and Q51T 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 Q51L28 and Q51T28)	TRH-17
4A	Reverse Valve Seal	R1A-159	38	Planet Gear Head Assembly (includes gear shafts)	
5	Throttle Plunger	TRL-302		for Series Q51L02, Q51T02, Q51L05, Q51T05, Q51L10, Q51T10, Q51L28 and Q51T28	TRH-A2169-16
6	Back Cap	TRL-2311		for Series Q51L15, Q51T15, Q51L20C and Q51T20C	TRH-A2169-12
6A	Warning Label (for direct drive models only)	TRL-99		for Series Q51L20S, Q51T20S and Q51L20D	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 Q51L02, Q51T02, Q51L05, Q51T05, Q51L10 and Q51T10	TRH-10-16
9	Memory Chip (for models with memory chip only)	TRH-800		for Series Q51L15, Q51T15, Q51L20C and Q51T20C	TRH-10-12
10	Throttle Lever	TRL-274		for Series Q51L20S, Q51T20S and Q51T20D	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			
15	Exhaust Diffuser	TRH-123	40	Gear Head Pinion	
16	Inlet Bushing Assembly			for Series Q51L15, Q51T15, Q51L20C and Q51T20C	TRH-17-18
	for 1/4-18 NPT thread	TRH-A465		for Series Q51L20S, Q51T20S and Q51L20D	TRH-17-21
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 Q51L02, Q51T02, Q51L05, Q51T05, Q51L28 and Q51T28	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 Q51L10, Q51T10, Q51L15, Q51T15, Q51L20S, Q51T20S and Q51L20D	TRH-A8-12
21	Rear End Plate Assembly (includes rear rotor bearing)	TRH-A12-1		for Series Q51L20C, Q51T20C	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 Diagram



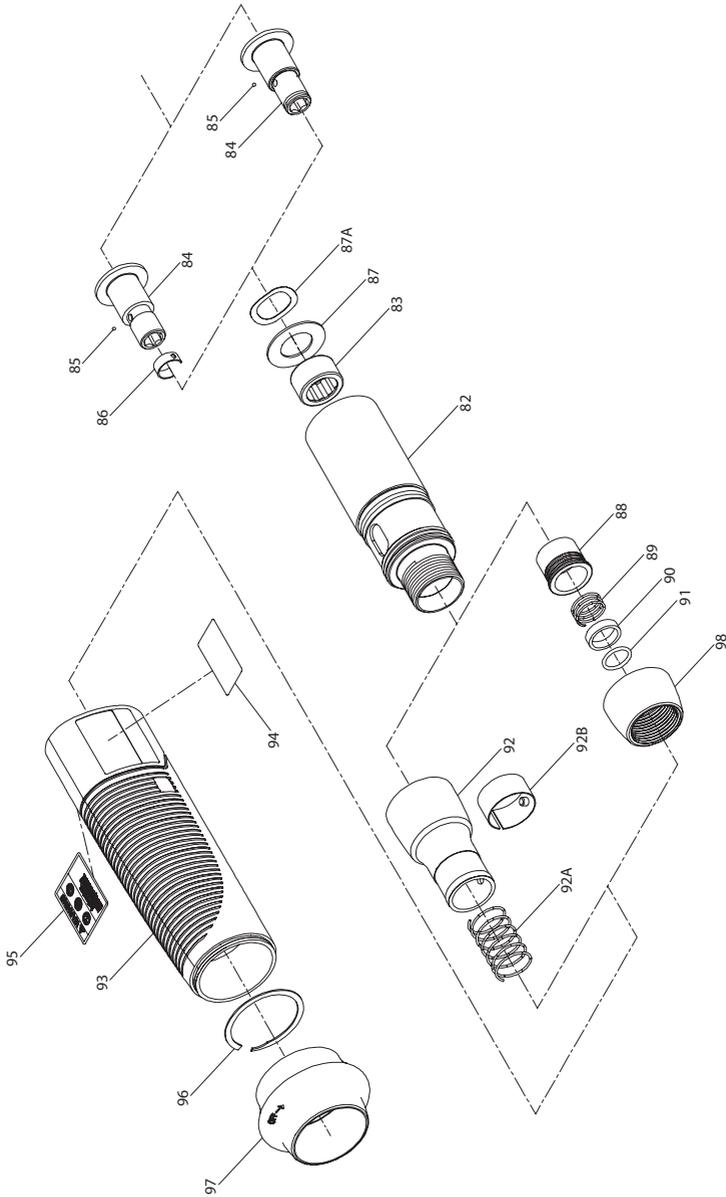
(Dwg. TPA1758)

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	71	Clutch Cam Ball Driver	TRH-581-C
51	Automatic Shutoff Pin Spring	TRH-407	72	Clutch Cam Ball (1/8" diameter) (11)	AV1-255
52	Clutch Shaft	TRH-502	73	Clutch Cam Ball Driver Retaining Pin	TRH-188
53	Clutch Ball (1/8" diameter) (12)	AV1-255	74	Cam Ball Seat	TRH-627-C
54	Cam Jaw	TRH-721	75	Clutch Spring	
55	Clutch Cam Ball Driver	TRH-581		heavy (green)	TRH-H583
56	Clutch Cam Ball (1/4" diameter) (3)	4U-722		medium (red)	TRH-M583
57	Clutch Driver Retaining Pin	TRH-188		light (orange)	TRH-XL583
58	Cam Ball Seat	TRH-627	76	Spring Seat	TRH-623
59	Clutch Spring		77	Thrust Bearing	161A32-105
	heavy (green)	TRH-H583	78	Clutch Adjusting Nut Washer	TRH-582
	medium (red)	TRH-M583	79	Clutch Adjusting Nut	TRH-588
	light (orange)	TRH-XL583	80	Clutch Adjusting Nut Stop	353-701
60	Spring Seat	TRH-623	81	Clutch Shaft (for Models with Direct Drive only)	TRH-786
61	Thrust Bearing	161A32-105	*	Cushion Clutch Tune-Up Kit (Includes the following items: 65, 67, 69, 72, 73, 76, 77 and 80)	Q2-CC-TK1
62	Clutch Adjusting Nut Washer	TRH-582			
63	Clutch Adjusting Nut	TRH-588			
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-AS0-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 Diagram



(Dwg. TPA1759-2)

QS1 and QS1T Lever Inline Grip and Bit Drivers Parts List

Item	Part Description	Part Number	Item	Part Description	Part Number
82	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
			95	Warning Label	TRH-99
	82	Clutch Housing	TRH-580	96	Grip Retaining Ring
83	Clutch Housing Bearing	TRH-105	97	Clutch Adjusting Hole Cover	
84	Bit Holder			Cover with a flange (standard)	TRH-40-23
	for 1/4" Quick Release Bit Holder	TRH-586-H4		Cover without a flange (optional)	TRH-40-24
	for 1/4" Bit Finder Bit Holder	TRH-583-Q4	98	Clutch Housing Cap (for Quick Release Holders)	TRH-19
	for 5 mm Double End Quick Release Bit Holder	TRH-586-5MD		* Clutch Housing Spanner Wrench	TRH-478
	for 1/4" Double End Quick Release Bit Holder	TRH-586-Q4D			
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 www.irttools.com.

www.irtools.com

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