



**16574493**  
Edition 4  
October 2013

## **Air Screwdrivers**

**Series QS Inline Push-to-Start Screwdriver**

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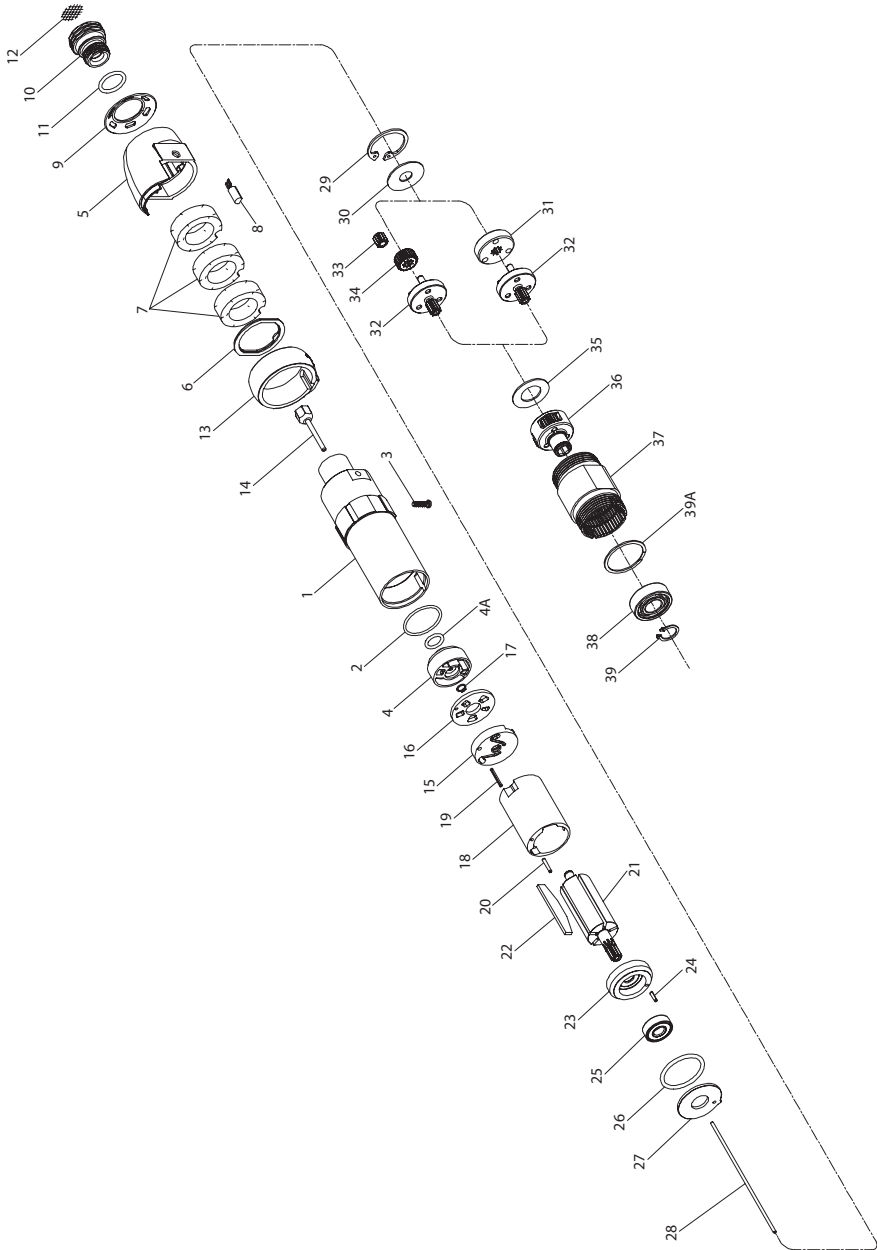
# **Parts Information**



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# QS Inline Push-To-Start Motor and Gearing - Exploded View



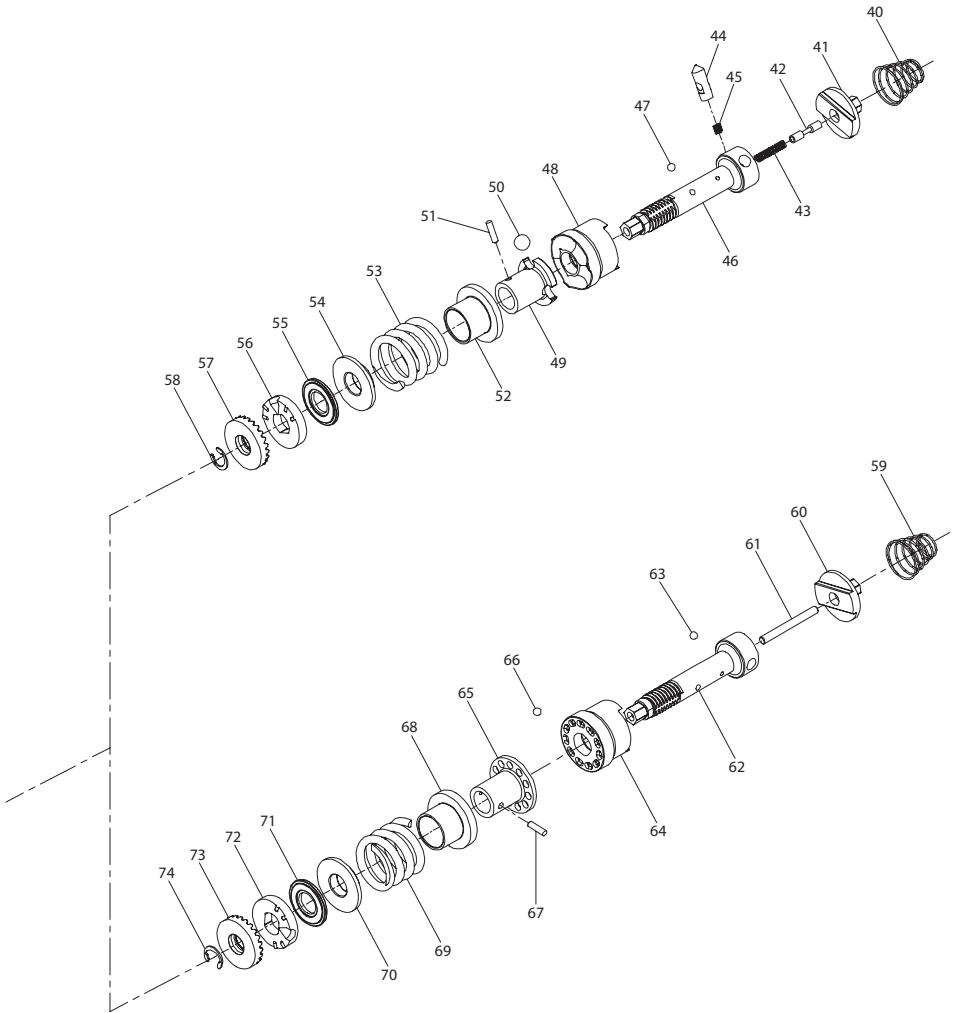
(Dwg. TPA1745-1)

## QS Inline Push-To-Start Motor and Gearing - Parts List

Item	Part Description	Part Number	Item	Part Description	Part Number
1	Motor Housing	TRH-40	26	Motor Seal	TRH-211
2	Housing O-Ring	TRH-104	27	Motor Clamp Washer	TRH-207
3	Housing Screw	TRH-330	28	Push Rod	TRH-425
4	Reverse Valve Assembly	TRH-A329	29	Gear Retainer	TRH-28
4A	Reverse Valve Seal	R1A-159	30	Gear Head Spacer	TRH-81
5	Back Cap	TRH-2311	31	Planet Gear Head Drive Plate (for Series QS1P28)	TRH-17
6	Back Cap Gasket	TRH-A283	32	Planet Gear Head Assembly (includes gear shafts)	
7	Muffler Element (3)	TRH-311		for Series QS1P02, QS1P05, QS1P10 and QS1P28	TRH-A2169-16
8	Memory Chip (for models with memory chip only)	TRH-800		for Series QS1P15 and QS1P20C	TRH-A2169-12
			for Series QS1P205	TRH-A2169-10	
9	Exhaust Diffuser	TRH-123	33	Planet Gear (3 for each Gear Head)	
10	Inlet Bushing Assembly			for Series QS1P02, QS1P05 and QS1P10	TRH-10-16
	for 1/4-18 NPT thread	TRH-A465		for Series QS1P15 and QS1P20C	TRH-10-12
	for 1/4-19 BSPT thread	TRH-A465-B		for Series QS1P205	TRH-10-10
11	Inlet Bushing Seal	AF120-290	34	Gear Head Pinion	
12	Inlet Screen	TRH-61		for Series QS1P15 and QS1P20C	TRH-17-18
13	Reverse Lever	TRH-273		for Series QS1P205	TRH-17-21
14	Shutoff Valve	TRH-A435	35	Planet Gear Head Spacer	TRH-82
15	Rear End Plate Assembly (includes rear rotor bearing)	TRH-A12-1	36	Spindle Assembly (includes all spindle gearing)	
				for Series QS1P02, QS1P05 and QS1P28	TRH-A8-16
16	Rear End Plate Face Plate	TRH-12-2		for Series QS1P10, QS1P15 and QS1P205	TRH-A8-12
17	Rear End Plate Assembly Retainer	8SL-305		for Series QS1P20C	TRH-A8-10
18	Cylinder Assembly	TRH-A3	37	Gear Case	TAH-37
19	Cylinder Rear Alignment Pin	TRH-98	38	Spindle Bearing	TRH-510
20	Cylinder Front Alignment Pin	TRH-98-1	39	Spindle Bearing Retaining Ring	120A4-588
21	Rotor	TRH-53	39A	Spindle Bearing Seat	TRH-208
22	Vane Packet (set of 5 Vanes)	TRH-42-5	*	Suspension Ball	7L-365
23	Front End Plate Assembly	TRH-A11	*	Piped-Away Exhaust Kit (optional)	LG1-K284
24	End Plate Alignment Pin	TRH-98-2	*	Tune-up Kit (Includes the following items: 2, 4A, 6, 7, 11, 12, 14, 17, 22, 24, 25 and 26)	Q2-TK1
25	Front Rotor Bearing	TRH-24			

\* Not Illustrated.

# QS Inline Push-to-Start Clutches - Exploded View



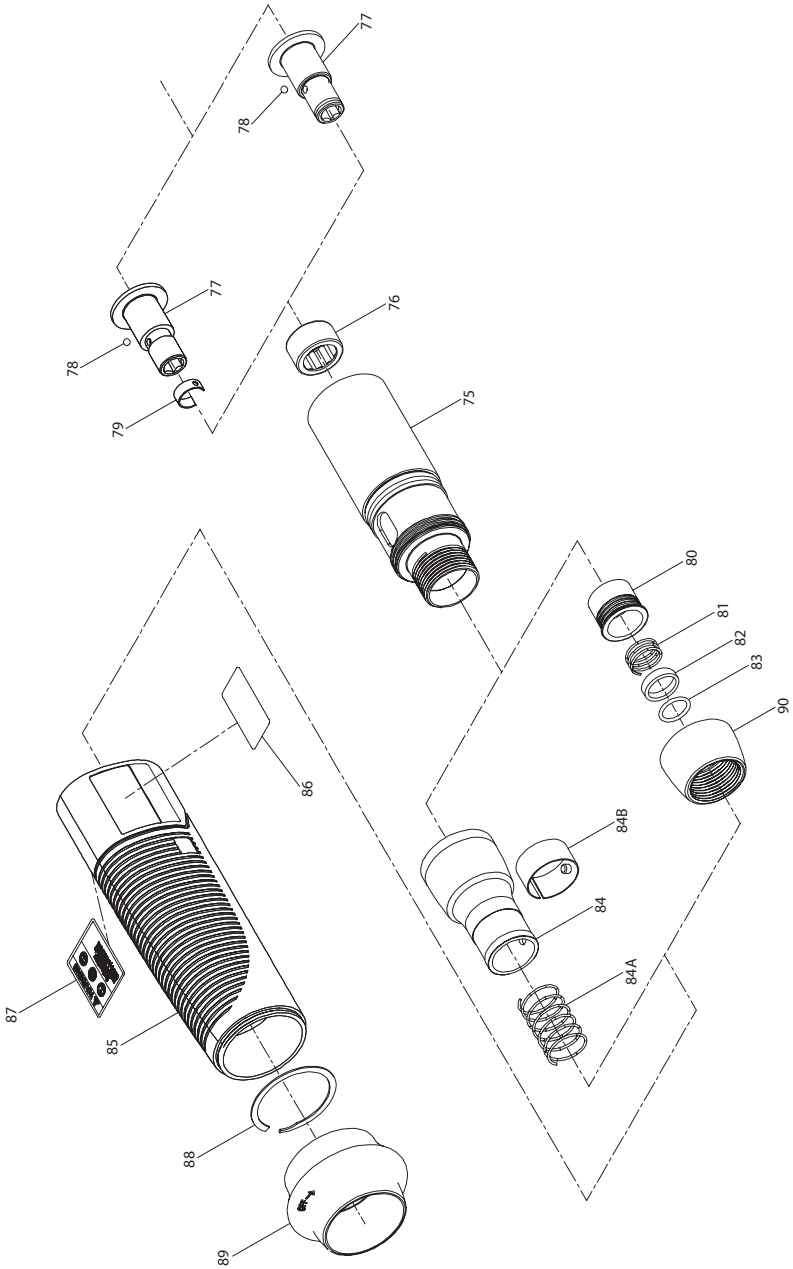
(Dwg. TPA1746)

## QS Inline Push-to-Start Clutches - Parts List

Item	Part Description	Part Number	Item	Part Description	Part Number
	Automatic Shutoff Clutch Assembly			Cushion Clutch Assembly	
	with heavy clutch spring (standard)	TRH-AH579		with heavy clutch spring (standard)	TRH-AH579-C
	with medium clutch spring	TRH-AM579		with medium clutch spring	TRH-AM579-C
	with light clutch spring	TRH-AL579		with light clutch spring	TRH-AL579-C
			59	Clutch Return Spring	TRH-405
40	Clutch Return Spring	TRH-405	60	Clutch Input Driver	TRH-103
41	Clutch Input Driver	TRH-103	61	Clutch Pushrod	TRH-236-C
42	Automatic Shutoff Plunger	TRH-408	62	Clutch Shaft	TRH-502
43	Automatic Shutoff Plunger Return Spring	TRH-420	63	Clutch Ball (1/8" diameter) (12)	AV1-255
44	Automatic Shutoff Pin	TRH-704	64	Cam Jaw	
45	Automatic Shutoff Pin Spring	TRH-407		for Series QS1P02, QS1P05 and QS1P10	TRH-721-C
46	Clutch Shaft	TRH-502		for Series QS1P15, QS1P20 and QS1P28	TRH-722-C
47	Clutch Ball (1/8" diameter) (12)	AV1-255	65	Clutch Cam Ball Driver	TRH-581-C
48	Cam Jaw	TRH-721	66	Clutch Cam Ball (1/8" diameter) (11)	AV1-255
49	Clutch Cam Ball Driver	TRH-581	67	Clutch Cam Ball Driver Retaining Pin	TRH-188
50	Clutch Cam Ball (1/4" diameter) (3)	4U-722	68	Cam Ball Seat	TRH-627-C
51	Clutch Driver Retaining Pin	TRH-188	69	Clutch Spring	
52	Cam Ball Seat	TRH-627		heavy (green)	TRH-H583
53	Clutch Spring			medium (red)	TRH-M583
	heavy (green)	TRH-H583		light (orange)	TRH-XL583
	medium (red)	TRH-M583	70	Spring Seat	TRH-623
	light (orange)	TRH-XL583	71	Thrust Bearing	161A32-105
54	Spring Seat	TRH-623	72	Clutch Adjusting Nut Washer	TRH-582
55	Thrust Bearing	161A32-105	73	Clutch Adjusting Nut	TRH-588
56	Clutch Adjusting Nut Washer	TRH-582	74	Clutch Adjusting Nut Stop	3S3-701
57	Clutch Adjusting Nut	TRH-588	*	Clutch Housing Spanner Wrench	TRH-478
58	Clutch Adjusting Nut Stop	3S3-701	*	Cushion Clutch Tune-Up Kit (Includes the following items: 59, 61, 63, 66, 67, 70, 71 and 74)	
*	Automatic Shutoff Tune-Up Kit (Includes the following items: 28, 40, 43, 45, 47, 50, 51, 54, 55 and 58)	Q2-A50-TK1			Q2-CC-TK1

\* Not Illustrated.

# QS Inline Grip and Bit Drivers - Exploded View



(Dwg. TPA1747-1)

## QS Inline Grip and Bit Drivers - Parts List

Item	Part Description	Part Number	Item	Part Description	Part Number
	Bit Holder Assembly		81	Retaining Sleeve Spring (for Quick Release Bit Holders)	TRH-931
	with 1/4" Quick Release Bit Holder	TRH-A580-PQ4			
	with 1/4" Bit Finder Bit Holder	TRH-A580-PQ4F	82	Spring Seat	TRH-244
	with 5 mm Double End Quick Release Bit Holder	TRH-A580-PQ5MD			
	with 1/4" mm Double End Quick Release Bit Holder	TRH-A580-PQ4D	83	Retaining Ring (for Quick Release Bit Holders)	TRH-118
75	Clutch Housing	TRH-580	84	Non-Rotating Bit Finder (for Bit Finder Bit Holder)	TRH-873
76	Clutch Housing Bearing	TRH-105	84A	Spring (for Bit Finder Bit Holders)	102A60-242
77	Bit Holder		84B	Finder Retainer Spring (for Bit Finder Bit Holders)	102A60-628
	for 1/4" Quick Release Bit Holder	TRH-586-H4			
	for 1/4" Bit Finder Bit Holder	TRH-583-Q4	85	Housing Grip	TRH-40-A145
	for 5 mm Double End Quick Release Bit Holder	TRH-586-5MD	86	Nameplate	TRH-301
	for 1/4" Double End Quick Release Bit Holder	TRH-586-Q4D	87	Warning Label	TRH-99
78	Bit Retaining Ball		88	Grip Retaining Ring	TRH-197
	for metric Bit Holders	TRH-629-3M	89	Clutch Adjusting Hole Cover	
	for all other Bit Holders	R000B-263		Cover with a flange (standard)	TRH-40-23
79	Bit Retaining Spring (for Bit Finder Bit Holders)	TRH-241		Cover without a flange (optional)	TRH-40-24
80	Bit Retaining Sleeve (for Quick Release Bit Holders)	TRH-930	90	Clutch Housing Cap (for Quick Release Holders)	TRH-19

## 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 27.3 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 27.3 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 16575185.

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

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