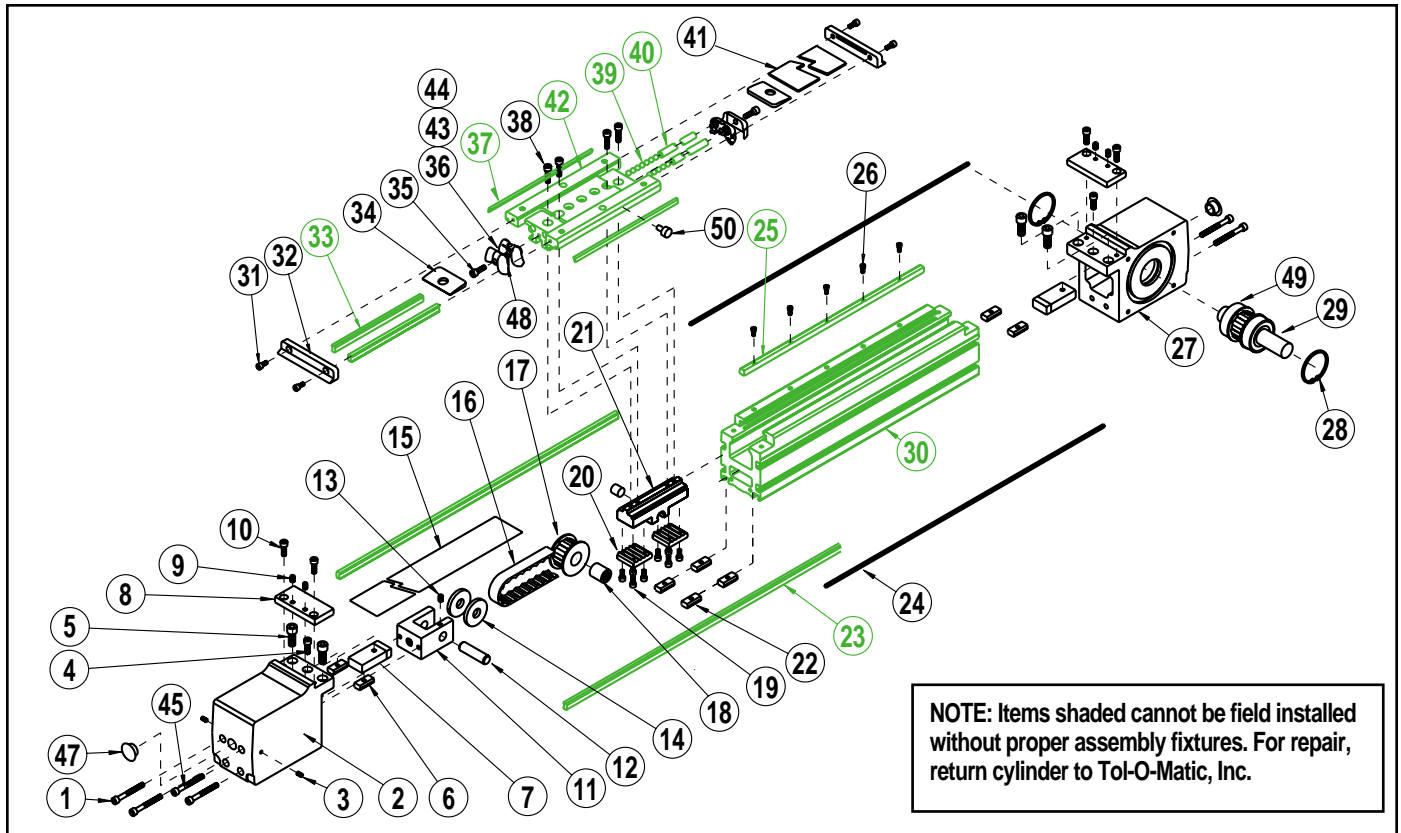




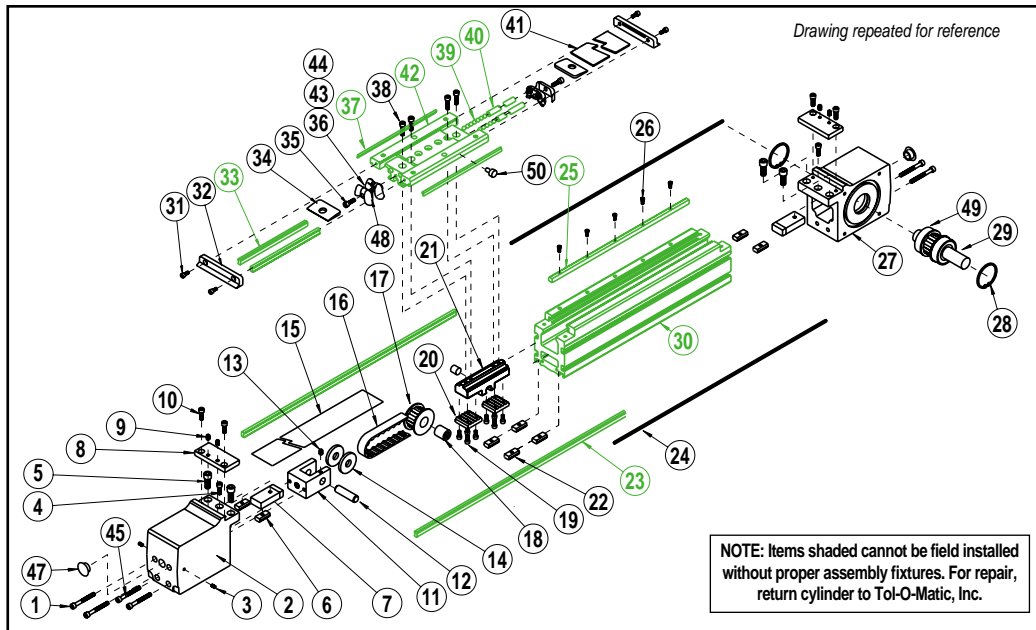
3410-0819 Axidyne® Belt-Drive Actuator, Kevlar Belt



List of Parts

Item	Part No.	Description	Qty.
1	3410-1413	SHCS #8-32 x 1.5 LG	2
2	3410-1401	Head, Idler	1
3	2309-1028	Set Screw #6-32 x .25 cup	2
4	0915-1016	SHCS, #10-24 x .50 LG	2
5	0915-1016	SHCS, #10-24 x .50 LG	4
6	3410-1013	Nut, T, BC3	4
7	3410-9209	Bumper Mount	2
8	3410-1404	Band Clamp	2
9	3600-1129	Set Screw, #6-32 x .19	4
10	0605-1046	SHCS, #8-32 x 0.38, BLK	4
11	3410-1527	Yoke	1
12	3410-1410	Shaft 3/8, x 1.313 long	1
13	0515-1049	Set Screw, #8-32 x 0.38, cup	2
14	0100-1306	Washer, Spacer, Idler Pulley	2
15	3410-1424	Upper Dust Band	A/R
16	3410-1542	Belt, 5mm pitch, 15mm wide, Kevlar	A/R
17	3410-1525	Pulley, Idler, 5mm pitch 15mm wide	1
18	1001-1055	Bearing, Needle, .38 ID, .56 OD, .62 W	1
19	0910-1357	SHCS, #4-40 x .31	8
20	3410-1409	Belt Clamp, 5MM pitch 1" wide	2
21	3410-1408	Belt Bracket	1
22	3410-1013	Nut	4
23	3410-1426	Rail Way	A/R
24	3410-1425	Magnet, Band	A/R
25	3410-1495	Machined Wedge	1

Item	Part No.	Description	Qty.
26	0605-1079	Socket Head Cap Screw	A/R
27	3410-1403	Head, Drive	1
28	3410-1418	Retaining Ring	2
29	3410-9088	Pulley, Shaft, Assy. SDLB or SDRB Keyed	A/R
30	3410-1470	Tube, Machined	1
31	0605-1079	SHCS, #4-40 x 0.25, BLK	4
32	3410-2024	Cap, End, BC310	2
33	3410-1024	Way, Carrier	2
34	3410-1047	Upper Band Ramp	2
35	0910-1357	SHCS, #4-40 x .5	2
36	3410-1014	Ball Return	2
37	3410-1510	Wiper	2
38	0910-1166	SHCS, #8-32 x 0.75,	4
39	3410-1009	Ball	116
40	3410-1114	Ball Return Tube	2
41	3410-2022	Cover, Carrier	1
42	3410-1113	Machined Carrier	1
43	3410-1015	Right Ball Race	2
44	3410-1032	Left Ball Race	2
45	3410-1413	SHCS, #8-31 x 1.5	4
46	3415-1218	Magnet	2
47	3415-1218	Cap, Plug, .500	2
48	3410-1079	PLT, Ball Return	2
49	3410-1417	Bearing	2
50	3415-1135	Zerk	2



GENERAL DISASSEMBLY INSTRUCTIONS

Begin with a clean work area. Be sure all replacement parts are present and have no visual damage or defects. The following tools are recommended for proper disassembly and assembly (exact wrench sizes will vary depending on actuator size)

Allen wrench set / Internal retaining ring pliers / Rubber hammer / Loctite #242

1. Remove any motor mounting hardware and/or adapter plates.
2. **Release carrier assembly:**
Remove screws (31) from end caps (32) and remove end caps. Remove carrier cover (41). Loosen and remove dust band clamp (8) on idler and drive head by removing SHCS (10). Remove the dust band (15).
Remove 4 SHCS's (38) that hold the carrier (42) to the belt bracket (21).
3. **Remove idler head**
Loosen the two set screws (3). Remove 2 SHCS (1) in the idler head that hold the tensioning yoke in. Remove 2 SHCS (45) that hold head to bottom of tube. Loosen SHCS (5) that hold head to top of tube. Remove head.
Loosen 2 sets screws (13) in yoke that hold shaft in. Remove shaft from yoke.
4. **Remove belt**
Remove SHCS (19) on both belt clamps (20) of belt bracket (21)
5. **Remove drive head**
Remove 2 SHCS (45) that hold the head to the bottom of the tube. Loosen SHCS (5) that hold the head to the top of the tube. Remove head. Pull belt through actuator and head.
6. Optional removal of drive pulley/shaft (29) from drive head.

NOTE: Do not remove carrier (42) from rail system. Balls contained in rail way will fall out.

GENERAL ASSEMBLY INSTRUCTIONS

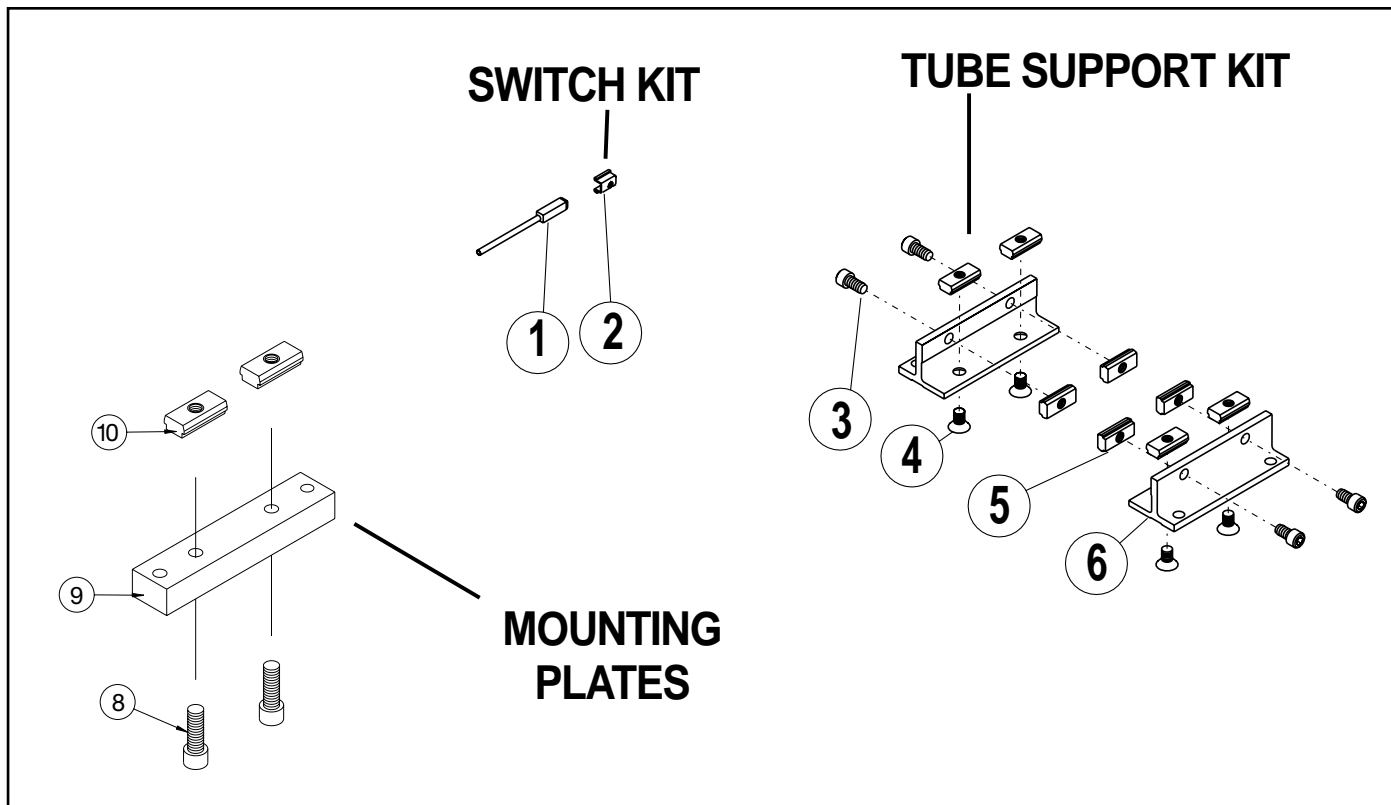
Any time SHCS are being installed, apply Loctite #242 to the threads.

1. If drive pulley/shaft (29) was removed. Fold belt in half (teeth facing each other) and slip loop end into drive head.

Wrap belt in a loop and insert it into drive head. Teeth on belt to be facing each other.

Slide pulley/shaft (29) into drive head. Note: press shaft in straight as possible. Make sure it is all the way against the retaining ring on the other side of the head. Install retaining ring into groove in head.

2. **Mount drive head to actuator:**
Slide belt through tube and slide drive head onto tube using T-nuts as a guide. Install 2 SHCS (45) to hold head on bottom of tube. Tighten both SHCS (5) on top head.
 - A. **Direct Drive Option:** (See drawing on page 5) Attach motor spacer (1) to actuator with fasteners (2). Attach coupler (3) to motor shaft. Slide motor/coupler into motor spacer (1). Through alignment hole in motor spacer, fasten coupler to shaft with allen wrench.
3. **Mount idler head to actuator:**
Attach the belt (16) to the belt bracket (21) with the belt clamp (20) and SHCS (19). Place the idler pulley (17) inside the the belt loop. Install the idler shaft through the yoke (11) and the two spacer washers (14). Slide idler head onto tube using T-nuts as a guide. Install 2 SHCS (45) to hold head on bottom of tube. Tighten both SHCS (5) on top head. Install 2 SHCS (1) into yoke. Tighten both equal to achieve the desired belt tension. Appropriate belt tensioning can be achieved by applying 110 lbs. of force to the idle end pulley yoke. A 5/16-24 tapped hole in the yoke can be accessed by removing the plug in the center of the idle head. Tighten both set screws (3).
4. **Lubricate ballways:**
Using grease zerk on carrier (15), lubricate the ballways with Mobil HP Grease, or equivalent.
5. **Attach Carrier to Belt Bracket:**
Mount carrier (42) to belt bracket (21) with 4 SHCS (38).
6. **Trim and Install Dust Band:**
Install dust band (15) over carrier (42) centering it along the length of the actuator. With a tin snips, cut band down 1/16" from the heads. Slide carrier cover (41) into slots on top of carrier. Install carrier endcaps (32) with SHCS. Loosely install band clamps (8) onto each head with SHCS (10). Slide carrier to one end of actuator, and tighten SHCS (10).
Slide carrier to other end of actuator and repeat.
7. Re-attach any motor adapter plates and/or hardware with actuator.



Optional Accessories Parts Listing

Item	SWITCH KIT		Switch Kit number (Hardware & switch)	
	Description	Part Number	(SWB3S10_)	Description
1.	Switch Only, Reed, Form C, 5m	3600-9084	BT	Form C, 5m lead
	Switch Only, Reed, Form C, Male Conn.	3600-9085	BM	Form C, 5m QD lead
	Switch Only, Reed, Form A, 5m	3600-9082	RT	Form A, 5m lead
	Switch Only, Reed, Form A, Male Conn.	3600-9083	RM	Form A, 5m QD lead
	Switch Only, Triac, 5m	3600-9086	CT	Triac switch, 5m lead
	Switch Only, Triac, Male Conn.	3600-9087	CM	Triac switch, 5m QD lead
	Switch Only, Hall-effect, Sinking, 5m	3600-9090	KT	Hall-effect, Sinking switch, 5m lead
	Switch Only, Hall-effect, Sinking, Male Conn.	3600-9091	KM	Hall-effect, Sinking switch, 5m QD lead
	Switch Only, Hall-effect, Sourcing, 5m	3600-9088	TT	Hall-effect, Sourcing switch, 5m lead
	Switch Only, Hall-effect, Sourcing, Male Conn.	3600-9089	TM	Hall-effect, Sourcing switch, 5m QD lead
Connector (Female) 5 meter lead	2503-1025			

Item	Part No.	Description	Qty.
2.	3410-9999	Switch Hardware Kit	A/R
TUBE SUPPORT KIT			
3.	3410-1012	SHCS, #10-24 x 0.44	4
	4410-1077	SHCS, M5 x 0.8mm x 10mm	4
4.	2006-1063	SFHCS, #10-24 x 0.38	4
	4410-1016	SFHCS, M5 x 0.8 x 10	4
5.	3410-1013	B3C310 Nut	8
	4410-1013	BC3M10 Metric Nut	8
6.	3410-1044	BC310 Tube Support	2
MOUNTING PLATES			
8.	0915-1016	SFHCS, #10-24 x 0.50	4
	4415-1016	SFHCS, M5 x 8 x 16mm	4
9.	3410-1332	Mounting Plate, B3S, 0.50	2
10.	3410-1013	Nut	4
	4410-1013	Nut, Metric	4

OPTIONAL ACCESSORY ASSEMBLY INSTRUCTIONS

1. **TUBE SUPPORTS.** Four T-Nuts (5) are required on each side of the Tube (30), two T-Nuts on bottom of Tube and two in lower slots on tube sides. Tube Supports should be secured at the required distances determined for the application to prevent Tube deflection. Apply Loctite #242 to Screws (4) and secure Tube Supports (6) to Tube aligning holes in T-Nuts with holes in Tube Supports.

2. **Switches.** Secure Switch (1) to magnet side of Tube with Switch Clamp (2) and Set Screw.

3. SWITCHES REED SWITCHES

NOTE: Form A Reed Switches should not be used in TTL logic circuits. A voltage drop caused by the L.E.D. indicator will result. For applications where TTL circuits are used, please contact the factory.

WARNING: An ohmmeter is recommended for testing Reed Switches. NEVER use an incandescent light bulb as a high current rush may damage the switch.

TO ORDER RETROFIT KITS:

SW then the model number and base size, and code for type of switch needed:

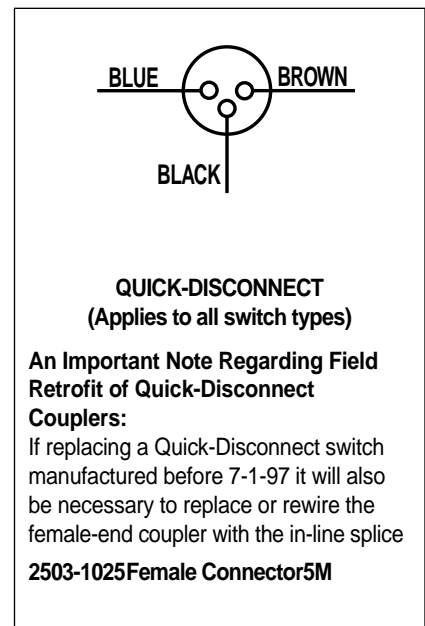
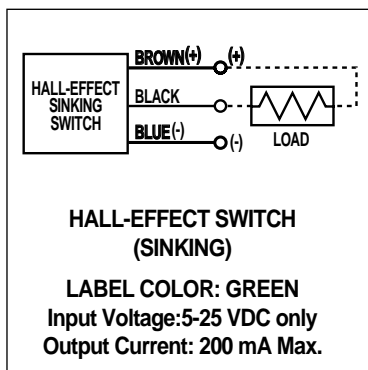
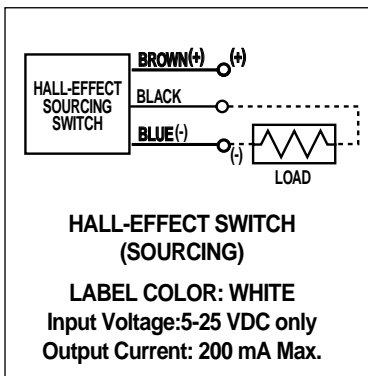
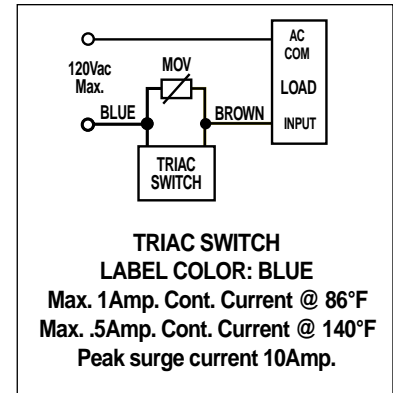
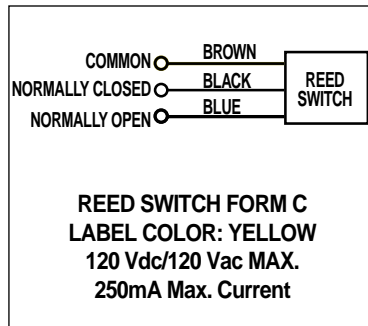
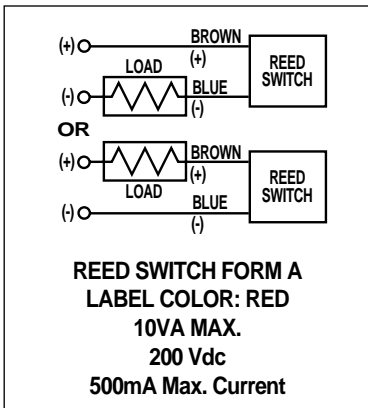
EXAMPLE: SWB3B10RU

Where SW is the switch, B3B10 is the 1 inch size, and RU is a Form A Reed Switch with quick disconnect and 2 meter lead

All switch kits include 1 switch and mounting hardware

Reed and TRIAC switches are only recommended for signalling position, not directly powering solenoids. For shifting a solenoid, a relay or resistor is recommended between it and the Reed Switch. Switch ratings must not be exceeded at any time.

Universal Switch Wiring Diagrams and Label Color Coding



SWITCH TYPE CODE

- | | |
|---|---|
| BT (Form C Reed Switch with 5-meter lead) | CM (TRIAC Switch with 5-meter lead and QD) |
| BM (Form C Reed Switch with 5-meter lead and QD) | KT (Hall-effect Switch (Sinking) 5-meter lead) |
| RT (Form A Reed Switch with 5-meter lead) | KM (Hall-effect Switch (Sinking) 5-meter lead and QD) |
| RM (Form A Reed Switch with 5-meter lead and QD) | TT (Hall-effect Switch (Sourcing) 5-meter lead) |
| CT (TRIAC Switch with 5-meter lead) | TM (Hall-effect Switch (Sourcing) 5-meter lead and QD) |



TOL-O-MATIC, INC.

3800 County Road 116, Hamel, MN 55340
 http://www.Tolomatic.com • Email: Help@Tolomatic.com
 Phone: (763) 478-8000 • Fax: (763) 478-8080 • Toll Free: 1-800-328-2174



Information furnished is believed to be accurate and reliable. However, Tol-O-Matic assumes no responsibility for its use or for any errors that may appear in this document. Tol-O-Matic reserves the right to change the design or operation of the equipment described herein and any associated motion products without notice. Information in this document is subject to change without notice.