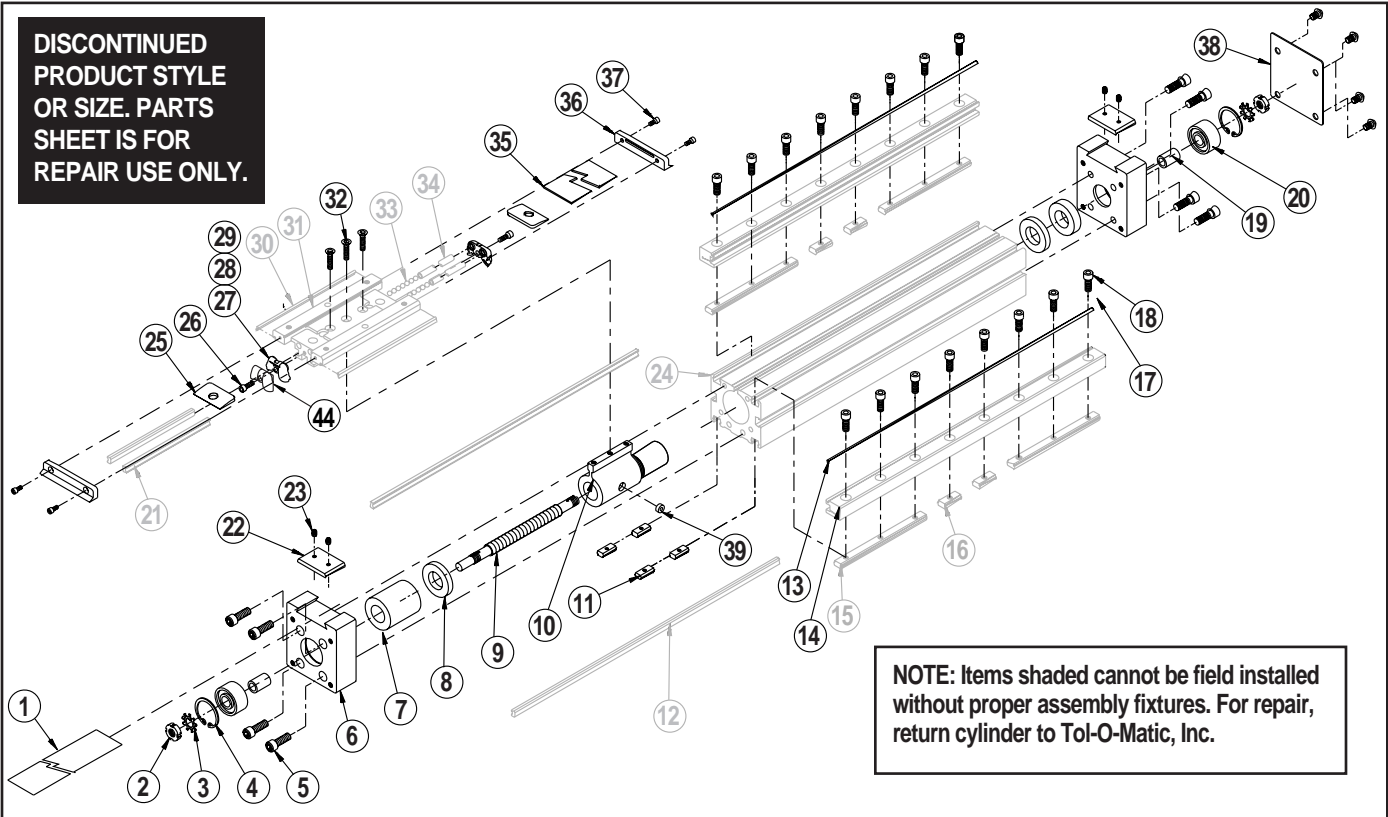




Axidyne® B3S20/M3S20 Screw-Drive Actuators

2"/50mm BORE

**DISCONTINUED
PRODUCT STYLE
OR SIZE. PARTS
SHEET IS FOR
REPAIR USE ONLY.**



NOTE: Items shaded cannot be field installed without proper assembly fixtures. For repair, return cylinder to Tol-O-Matic, Inc.

A/R = As Required

Parts Listing

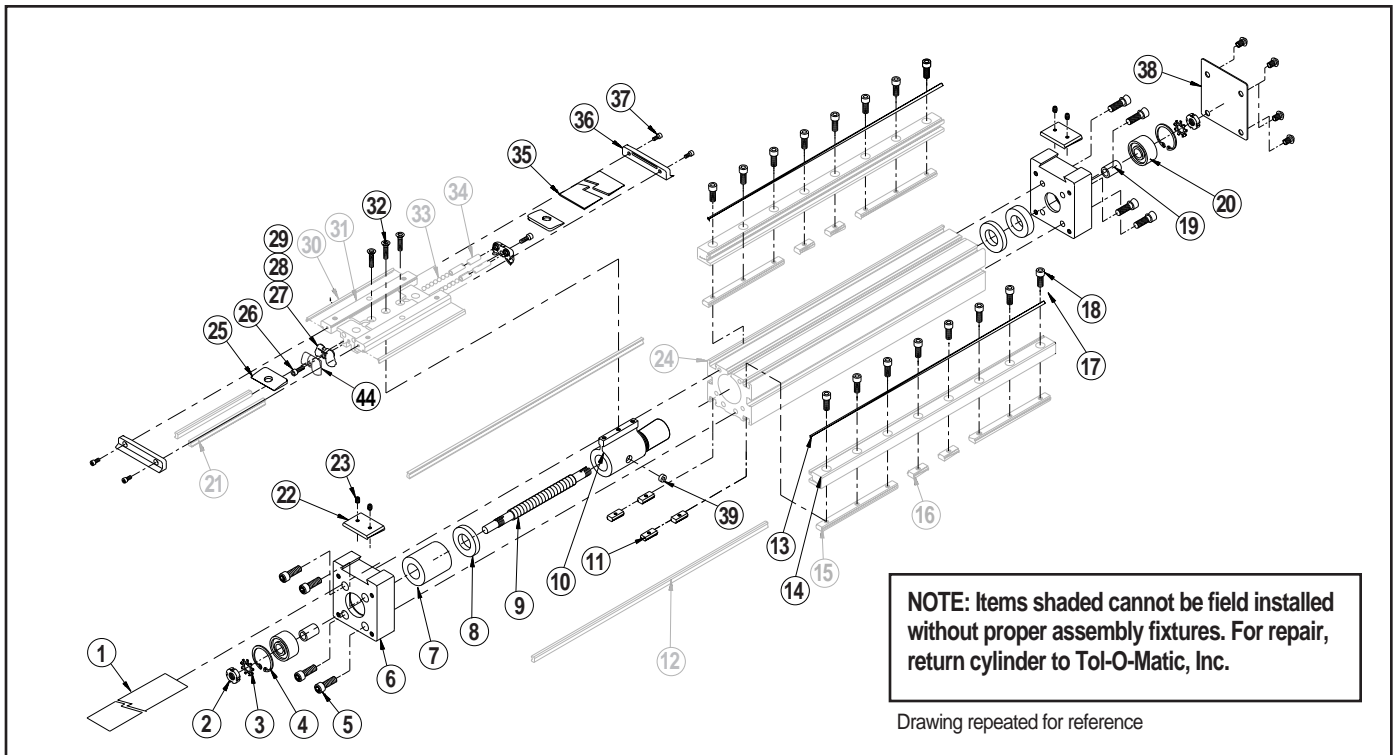
Item	Part No.	Description	B3S20					M3S20					
			B3S20SN01	B3S20SN02	B3S20SNA02	B3S20BN02	B3S20BN05	B3S20BNL05	M3S20SN25	M3S20SN12	M3S20BN05	M3S20BNL05	
1*	3420-1239	Dust Band	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R
2	3420-1206	Lock Nut	2	2	2	2	2	2	2	2	2	2	2
3	3420-1205	Lock Washer	2	2	2	2	2	2	2	2	2	2	2
4	2100-1010	Retaining Ring	2	2	2	2	2	2	2	2	2	2	2
5	1309-2020	SHCS	8	8	8	8	8	8	-	-	-	-	-
	4925-1033	SHCS	-	-	-	-	-	8	8	8	8	8	8
6	3420-1200	Actuator Head	2	2	2	2	2	2	-	-	-	-	-
	4420-1200	Actuator Head	-	-	-	-	-	2	2	2	2	2	2
7	3420-1208	Spacer	-	-	-	-	1	1	-	-	-	-	-
	3420-1209	Spacer	1	1	-	-	-	1	1	-	-	-	-
	3420-1210	Spacer	1	1	1	1	1	1	1	1	1	1	1
	4420-1210	Spacer	-	-	-	-	-	-	-	1	1	-	-
8	2332-1006	Bumper	2	2	2	2	2	2	2	2	2	2	2
9*	3420-1201	Lead Screw, 1TPI, ACME, Std	ST	-	-	-	-	-	-	-	-	-	-
	3420-1250	Lead Screw, 1TPI, ACME, Ext	OP	-	-	-	-	-	-	-	-	-	-
	3420-1202	Lead Screw, 2TPI, ACME, Std	-	ST	ST	-	-	-	-	-	-	-	-
	3420-1251	Lead Screw, 2TPI, ACME, Ext	-	OP	OP	-	-	-	-	-	-	-	-

* Specify stroke when ordering.

§ Available in Repair Kit No. 3420-9049.

ST = Standard Configuration (Used with LMI)
OP = Optional Configuration, Extended Shaft
(Used with Reverse Parallel)

Item	Part No.	Description	B3S20					M3S20					
			B3S20SN01	B3S20SN02	B3S20SNA02	B3S20BN02	B3S20BN05	B3S20BNL05	M3S20SN25	M3S20SN12	M3S20BN05	M3S20BNL05	
9*	3420-1203	Lead Screw, 2TPI, Ball, Std	-	-	-	ST	-	-	-	-	-	-	-
	3420-1252	Lead Screw, 2TPI, Ball, Ext	-	-	-	OP	-	-	-	-	-	-	-
	3420-1204	Lead Screw, 5TPI, Ball, Std	-	-	-	-	ST	ST	-	-	-	-	-
	3420-1253	Lead Screw, 5TPI, Ball, Ext	-	-	-	-	OP	OP	-	-	-	-	-
	4420-1201	Lead Scw, 12mm Lead, ACME, Std	-	-	-	-	-	-	-	-	ST	-	-
	4420-1250	Lead Scw, 12mm Lead, ACME, Ext	-	-	-	-	-	-	-	-	OP	-	-
	4420-1202	Lead Screw, 25mm Lead, V, Std	-	-	-	-	-	-	-	ST	-	-	-
	4420-1251	Lead Screw, 25mm Lead, V, Ext	-	-	-	-	-	-	-	OP	-	-	-
	4420-1203	Lead Screw, 5mm Lead, Ball	-	-	-	-	-	-	-	-	-	ST	ST
	4420-1252	Lead Screw, 5mm Lead, Ball	-	-	-	-	-	-	-	-	-	OP	OP
10	3420-9062	Nut Bracket Assy, 1 TPI	1	-	-	-	-	-	-	-	-	-	-
	3420-9063	Nut Bracket Assy, 2TPI	-	1	-	-	-	-	-	-	-	-	-
	3420-9064	Nut Bracket Assy, BN, 2TPI	-	-	1	-	-	-	-	-	-	-	-
	3420-9065	Nut Bracket Assy, BN, 5TPI	-	-	-	1	1	-	-	-	-	-	-
	3420-9066	Nut Bracket Assy, AB, 2TPI	-	-	1	-	-	-	-	-	-	-	-
	4420-9027	Nut Bracket (Metric), 12mm	-	-	-	-	-	-	-	1	-	-	-
	4420-9028	Nut Bracket (Metric), 25mm	-	-	-	-	-	-	1	-	-	-	-



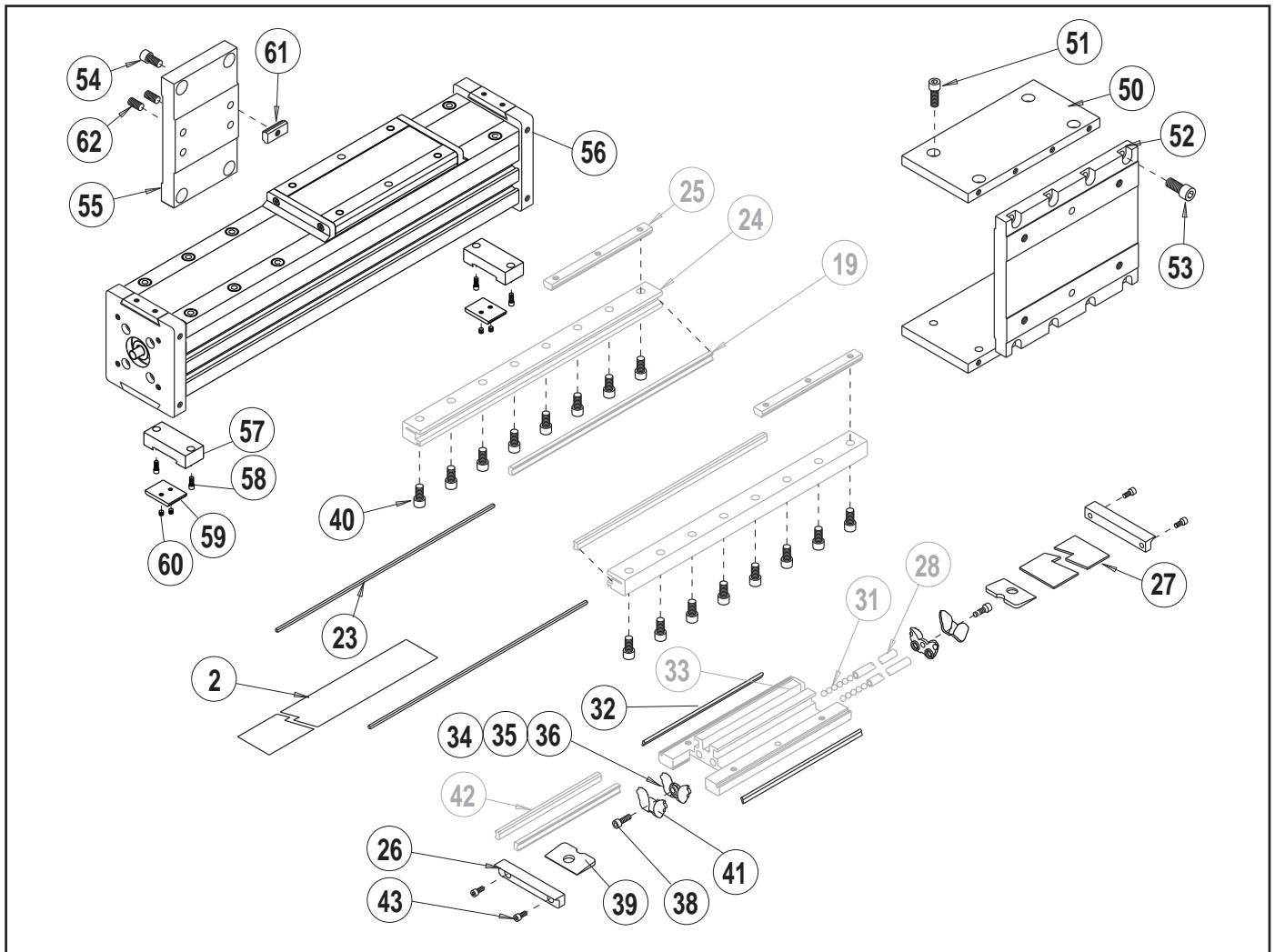
A/R = As Required

Item	Part No.	Description	B3S20					M3S20			
			B3S20SN01	B3S20SN02	B3S20SNA02	B3S20BN02	B3S20BN05	B3S20BNL05	M3S20SN25	M3S20SN12	M3S20BN05
10	4420-9029	Nut Bracket (Metric), 5mm	-	-	-	-	-	-	-	1	1
11	3420-1013	Nut	4	4	4	4	4	4	-	-	-
	4420-1013	Nut	-	-	-	-	-	-	4	4	4
12	3420-1241	Rail Way	2	2	2	2	2	2	2	2	2
13	3420-1240	Band Magnet	2	2	2	2	2	2	2	2	2
14	3420-1242	Machined Rail	2	2	2	2	2	2	2	2	2
15	3420-1008	Rail Nut	A/R	A/R	A/R	A/R	A/R	A/R	-	-	-
	4420-1008	Rail Nut	-	-	-	-	-	-	A/R	A/R	A/R
16	3420-1013	Nut	A/R	A/R	A/R	A/R	A/R	A/R	-	-	-
	4420-1013	Nut	-	-	-	-	-	-	A/R	A/R	A/R
18	0802-1252	Socket Head Cap Screw	A/R	A/R	A/R	A/R	A/R	A/R	-	-	-
	4415-1018	Socket Head Cap Screw	-	-	-	-	-	-	A/R	A/R	A/R
19	3415-1320	Sleeve BRG FLG	2	2	-	-	-	-	2	-	-
20	3420-1222	Contact Bearing	2	2	2	2	2	2	2	2	2
21	3420-1024	Carrier Way	2	2	2	2	2	2	2	2	2
22	3420-1219	Upper Clamp	2	2	2	2	2	2	-	-	-
	4420-1219	Upper Clamp	-	-	-	-	-	-	2	2	2
23	3415-1455	Set Screw	4	4	4	4	4	4	-	-	-
	4410-1017	Set Screw	-	-	-	-	-	-	4	4	4
24	3420-1221	Machined Tube	1	1	1	1	1	1	-	-	-
	4420-1221	Machined Tube	-	-	-	-	-	-	1	1	1

Item	Part No.	Description	B3S20					M3S20			
			B3S20SN01	B3S20SN02	B3S20SNA02	B3S20BN02	B3S20BN05	B3S20BNL05	M3S20SN25	M3S20SN12	M3S20BN05
25	3420-1047	Upper Band Ramp	2	2	2	2	2	2	2	2	2
26	1085-1075	Socket Head Cap Screw	2	2	2	2	2	2	-	-	-
	0610-1033	Socket Head Cap Screw	-	-	-	-	-	-	2	2	2
27	3420-1014	Ball Return	2	2	2	2	2	2	2	2	2
28	3420-1015	Right Ball Race	2	2	2	2	2	2	2	2	2
29	3420-1032	Left Ball Race	2	2	2	2	2	2	2	2	2
30§	3420-1025	Wiper	2	2	2	2	2	2	2	2	2
31	3420-2021	Machined Carrier	1	1	1	1	1	1	-	-	-
	4420-1235	Machined Carrier	-	-	-	-	-	-	1	1	1
32	3420-1223	Flathead Cap Screw	3	3	3	3	3	3	-	-	-
	4420-1011	Socket Head Cap Screw	-	-	-	-	-	-	3	3	3
33	3420-1009	Ball	92	92	92	92	92	92	92	92	92
34	3420-1019	Ball Return Tube	2	2	2	2	2	2	2	2	2
35§	3420-2022	Carrier Cover	1	1	1	1	1	1	1	1	1
36§	3420-2024	End Cap	2	2	2	2	2	2	2	2	2
37	0605-1046	Socket Head Cap Screw	4	4	4	4	4	4	-	-	-
	4415-1001	Socket Head Cap Screw	-	-	-	-	-	-	4	4	4
38	3420-9054	Head End Kit	1	1	1	1	1	1	-	-	-
	4420-9054	Head End Kit	-	-	-	-	-	-	1	1	1
39	2406-1008	Magnet	2	2	2	2	2	2	2	2	2
44	3420-1069	PLT Ball Return	2	2	2	2	2	2	2	2	2

* Specify stroke when ordering.

§ Available in Repair Kit No. 3420-9049.



Parts Listing

Item	B3S20D Part No.	M3S20D Part No.	Description	QTY.	Item	B3S20D Part No.	M3S20D Part No.	Description	QTY.
2.	3420-1028	3420-1028	Dust Band	1	41.	3420-1069	3420-1069	PLT Ball Return	2
19.	3420-1023	3420-1023	Rail Way	2	42.	3420-1024	3420-1024	Carrier Way	2
23.	3420-1022	3420-1022	Band Magnet	2	43.	0605-1046	4415-1001	Socket Head Cap Screw	4
24.	3420-1020	3420-1020	Machined Rail	2	50.	3420-1049	4420-1049	Plate, Conn., Dual Carrier	2
25.	3420-1008	4420-1008	Rail Nut	AR	51.	0920-1093	4415-1019	Socket Head Cap Screw	8
26.	3420-2024	3420-2024	End Cap	2	52.	3420-1054	4420-1054	Plate, Dual Carrier	1
27.	3420-2022	3420-2022	Carrier Cover	1	53.	0920-1093	4415-1019	Socket Head Cap Screw	8
28.	3420-1019	3420-1019	Ball Return Tube	2	54.	2317-1015	4920-1025	Socket Head Cap Screw	4
31.	3420-1009	3420-1009	Ball	92	55.	3420-1053	3420-1053	Tube Support	1
32.	3420-1025	3420-1025	Wiper	2	56.	3420-1267	4420-1218	Head, Dual 180°	2
33.	3420-2021	4420-1235	Machined Carrier	1	57.	3420-1050	3420-1050	PLT, Band, Dual 180° Carrier	2
34.	3420-1014	3420-1014	Ball Return	2	58.	1004-1066	4515-1019	Socket Head Cap Screw	4
35.	3420-1015	3420-1015	Right Ball Race	2	59.	3420-1029	4420-1029	Clamp, Upper	2
36.	3420-1032	3420-1032	Left Ball Race	2	61.	3415-1013	4415-1013	Nut	4
38.	1085-1075	0610-1033	Socket Head Cap Screw	2	62.	3415-1219	3415-1219	Set Screw	2
39.	3415-1047	3415-1047	Upper Band Ramp	2					
40.	3420-1077	4415-1018	Socket Head Cap Screw	AR					

GENERAL CYLINDER 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 upon cylinder size).

- Tin Snips
- Allen Wrench Set
- Open-end or Box Wrench Set and/or Sockets
- Retaining Ring Pliers

1. **Remove cylinder heads.** Remove Head End Kit (38) from “dead” end of cylinder. Loosen Set Screws (22) and remove Upper Clamp (22). Remove SHCS (5). Bend back tang on lockwasher (3) from slot in Lock Nut (2). Unscrew Lock Nut (2) from Screw (9). Remove Head (6). Remove Contact Bearing (20), Sleeve (19), and Snap Ring (4) from Head. Repeat procedure for “live” end Head.
2. **Release carrier assembly.** Remove Screws (37) from End Caps (36) and remove End Caps. Remove Carrier Cover (35), then remove Dust Band (1). Loosen screws (32) from Carrier (31) to release Carrier. Move Carrier assembly to the “dead” end of tube, stopping just as plastic Ball Return (27) is visible from end.

NOTE: Do NOT remove carrier (31) from Tube (24). Balls contained in rail way will fall out.

3. **Remove lead screw sub-assembly.** To release Nut Bracket Assy (10) from Carrier assembly, with a blunt object, push down slightly on lead screw to release Nut Bracket Assy (10) from plastic Ball Return (27). Remove lead screw sub-assembly from tube.

Ball Nut Style: Caution is required if removal of nut is necessary. Contact the factory for available parts and procedures.

Plastic Nut Style: Plastic nuts are factory pinned into the Nut Bracket and cannot be removed. If nuts are worn, a new Nut Bracket Assy must be ordered.

GENERAL CYLINDER ASSEMBLY INSTRUCTIONS

1. **Install Lead Screw assembly and heads.**

Ball Nut Style: Grease Lead Screw (9) with Mobil HP grease. **Plastic Nut Style:** Grease Lead Screw (9) with Christolube® 405.

Ball Nut or Plastic Nut Style: With Nut Bracket assembly (10) on Lead Screw, slide Bumper (8), Spacer (7), Head sub assembly (consisting of Head (6), Bearing (20), Bearing Sleeve (19), Retaining Ring (4)), Lockwasher (3) and Lock Nut (2) onto Lead Screw “live end”. Holding the Lead Screw tightly (care must be taken not to damage the lead screw threads) to prevent it from turning, tighten Lock Nut (2) to secure assembly. Bend tang on Lockwasher (3) into slot on Lock Nut to secure. Slide “dead end” of Lead Screw (9) into Tube (24) until “live end” head is against face of tube. Secure “live end” Head (6) with four Screws (5). Slide Carrier (31) to center of Tube and secure Carrier to Nut Bracket with Screws (32). Move Carrier to “dead end” side of tube. Slide Bumper (8), Spacer (7), Head (6) (with bearing, bearing sleeve (19) and retaining ring

installed), Lockwasher (3) and Lock Nut (2) onto Lead Screw shaft. Tighten Lock Nut (2) until Head (6) is snug to end of tube and head cannot be rotated back and forth about lead screw axis. Bend tang on Lockwasher (3) into slot in Lock Nut (2) to secure. Secure Head (6) with Screws (5). Loosen screws holding “live end” head, move carrier to “live end” and retighten Screws (5).

2. **Lubricate Ballways.** Before installing the top Dust Band (1), lubricate the ballways with a Mobil HP grease.
3. **Aligning the Carrier.** With the Head Bolts (5) snug, move the carrier until it reaches the internal bumper (8). Torque Head Bolts to 180-195 in-lbs (20.33-22.03 N-m). Repeat aligning procedure for the other end.
4. **Trim and install Dust Band.** Install Dust Band (1) over Carrier (31) centering it along the length of the cylinder. Slide Carrier Cover (35) into slots on top of Carrier. Apply Loctite #242 to Screws (37) and secure End Caps (36) to Carrier. With tin snips, cut ends of Dust Band (1) 1/16” in from outside edge of Head (6). Place a Upper Clamp (22) into Head slot over Dust Band. Apply Loctite #242 to Set Screws (23) and insert into Upper Clamp. Torque Set Screws to 20-30 in-lbs to secure Dust Band (1).
5. **Clean unit thoroughly before installing.**

BEARING LUBRICATION

The bearing system is prelubricated at the factory with a high quality Mobil HP grease. Relubrication is recommended every .5–1 million cycles using a lithium-soap base grease for optimal bearing performance. To relubricate, remove Set Screws (23) and Upper Clamp (22). Lift back Dust Band (1) and apply grease directly to the stationary ball ways.

B3S Series is a trademark of Tol-O-Matic, Inc. Loctite® is a registered trademark of Loctite Corporation, 999 North Mountain Road, Newington, Connecticut 0611. Magnalube-G is a registered trademark of Carleton-Stuart Corporation, 13-02 44th Avenue, Long Island City, New York 11101. Christolube® is a registered trademark of Lubrication Technology, Inc., 310 Morton Street, Jackson, Ohio 45640.

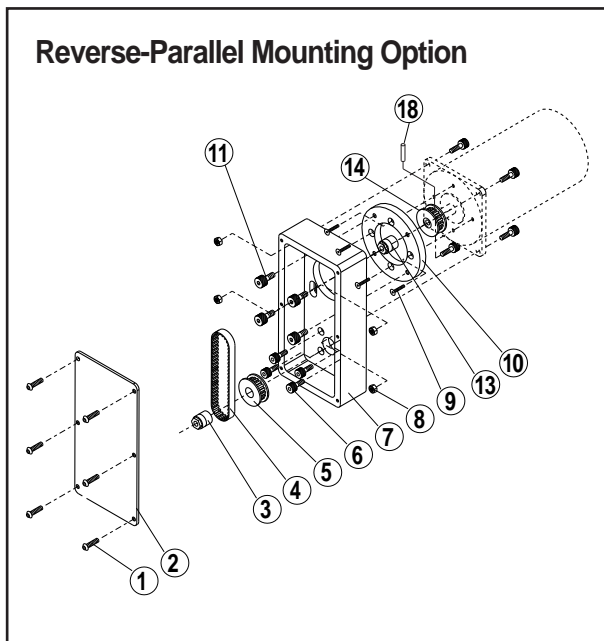
REVERSE PARALLEL DISASSEMBLY INSTRUCTIONS

1. Remove the Drive Case Cover (2) from the Drive Case (7) by removing the six Button Head Cap Screws (1).
2. Release the tension on the belt by loosening Socket Head Cap Screws (11) and remove the belt from the two pulleys.
3. Remove Collar Clamp (3) from Pulley (5) and remove Pulley (5) from lead screw.
4. Remove Socket Head Cap Screw (11) to detach motor form Drive Case (7).
5. If applicable, remove Adapter Plate (10) from the motor by removing the four Flat Head Cap Screws (9).
7. Unfasten the Drive Case (7) from the drive head of the B3S by removing the four Socket Head Cap Screws (6). NOTE: Drive Case can be mounted in four different positions. Observe the position of the Drive Case before disassembling.

2. Make sure the bore and shaft are clean and completely free of oil by wiping the surfaces with a clean cloth and solvent.
3. Place Pulley (5) onto the shaft approximately .060 in (1.5 mm) from the inner wall of the Drive Case (7). Secure the Pulley (5) to lead screw with Collar Clamp (3).
4. Torque the Collar Clamp (3) with a calibrated torque wrench to 50 in-lbs (5.6 N-m).
5. If applicable, mount Adapter Plate (10) to motor. Apply Loctite #242 on threads of the Socket Flat Head Screws (9).
6. Position motor into Drive Case (7). Apply Loctitie #242 on the threads of the screws. Secure the motor to the Drive Case (7) with Screws (11) and Nuts (8) provided.
7. Place Belt (4) over the two pulleys. Position the motor within the slots provided to produce tension on the belt. Tighten Screws (11) to lock motor into place.
8. Mount the Drive Case Cover (2) to the Drive Case (7) with six BHCS (1). Use Loctite #242 on the threads of the screws.

REVERSE PARALLEL ASSEMBLY INSTRUCTIONS

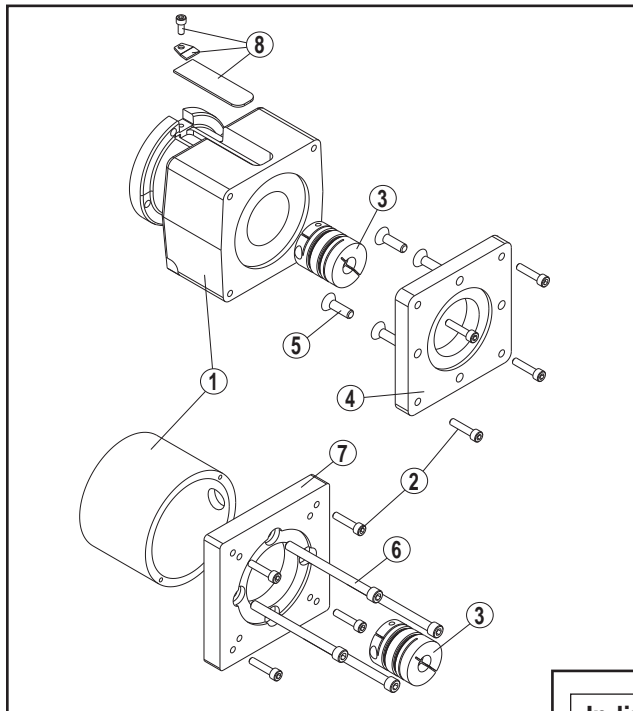
1. Secure Drive Case (7) to the drive head of the B3S with four Socket Head Cap Screws (6). Use Loctite #242 on the screws. NOTE: Drive Case can be mounted in four different positions. Position the Drive Case in the same position as it was prior to disassembly.



Parts Listing

Item	Part No.	Description	QUANTITY											
			1:1						2:1					
			RP_1(MRB34X)	RP_1(MRB40X)	RP_1(MRS34X)	RP_1(MRV34X)	RP_1(MRV23_)	RP_1(MRB21, MRS23_)	RP_2(MRB34X)	RP_2(MRB40X)	RP_2(MRS34X)	RP_2(MRV34X)	RP_2(MRB21, MRS23_)	
1	0510-1249	Button Head Screw	6	6	6	6	6	6	6	6	6	6	6	6
2	3420-1257	Case Cover	1	1	1	1	1	1	1	1	1	1	1	1
3	0520-1067	Collar Clamp	1	1	1	1	1	1	1	1	1	1	1	1
4	0515-1064	Belt, 1/5P, 3/8 W, 14" L, 70 teeth	1	-	1	1	1	1	-	-	-	-	-	-
	0520-1070	Belt, 1/5P, 3/8 W, 16" L, 80 teeth	-	-	-	-	-	-	1	-	1	1	1	-
	3420-1247	Belt, 5mm x 20mm, 70 teeth	-	1	-	-	-	-	-	-	-	-	-	-
	3420-1248	Belt, 5mm x 20mm, 80 teeth	-	-	-	-	-	-	1	-	-	-	-	-
5	3420-1255	Pulley, 1/5P, 18 teeth	1	-	1	1	1	1	-	-	-	-	-	-
	3420-1256	Pulley, 1/5P, 36 teeth	-	-	-	-	-	-	1	1	1	1	-	-
	3420-1245	Pulley, 5mm, 18 teeth	-	1	-	-	-	-	-	-	-	-	-	-
	3420-1246	Pulley, 5mm, 36 teeth	-	-	-	-	-	-	1	-	-	-	-	-
6	1310-1015	Socket Head Cap Screw	4	4	4	4	4	4	4	4	4	4	4	4
7	0520-1055	Case 34 Frame Stepper	1	-	1	1	-	1	-	1	1	-	-	-
	0520-1056	Case 40 Frame Dc	-	1	-	-	-	-	-	1	-	-	-	-
	34201356	Case MRB23_	-	-	-	-	-	-	-	1	1	1	1	1
8	2506-1007	Jam Nut	4	-	4	4	4	4	-	4	4	4	4	4
9	6000-1731	Flat Head Cap Screw	-	4	-	-	-	-	-	4	-	-	-	-
10	0515-1488	Adapter Plate 40 Frame Dc	-	1	-	-	-	-	-	1	-	-	-	-
11	0910-1314	Socket Head Cap Screw	4	-	4	4	4	4	-	4	4	4	4	4
	3420-1095	R/P Slot Nut	-	4	-	-	-	-	-	4	-	-	-	-
	2212-1010	Socket Flathead Screw	-	4	-	-	-	-	-	4	-	-	-	-
13	0515-1181	Trantorq	-	-	1	-	-	-	-	1	-	-	-	-
	0510-1111	Trantorq	-	-	-	1	1	-	-	-	-	1	1	-
14	0515-1190	Pulley, TMG, 18T, .500	1	-	-	1	-	-	1	-	-	-	-	-
	3420-1244	Pulley FLNGD, .625 ID, 5mm P, 18 T HTD	-	1	-	-	-	-	-	1	-	-	-	-
	3420-1255	Pulley,	-	-	-	-	1	-	-	-	-	-	-	1
	0515-1191	Pulley,	-	-	-	-	1	-	-	-	-	-	-	1
	0515-1192	Pulley, TMG, 18T, .750	-	-	1	-	-	-	-	-	1	-	-	-
18	1930-1032	Pin, Roll, DIA 5/32 x .875 LG	1	1	-	1	-	-	1	1	-	1	-	-

B3S Series is a trademark of Tol-O-Matic, Inc. Loctite® is a registered trademark of Loctite Corporation, 999 North Mountain Road, Newington, Connecticut 0611. Magnalube-G is a registered trademark of Carleton-Stuart Corporation, 13-02 44th Avenue, Long Island City, New York 11101. Christolube® is a registered trademark of Lubrication Technology, Inc., 310 Morton Street, Jackson, Ohio 45640.



In-Line Gear Head Mounting Option

In-line mounting with gear head

Parts Listing

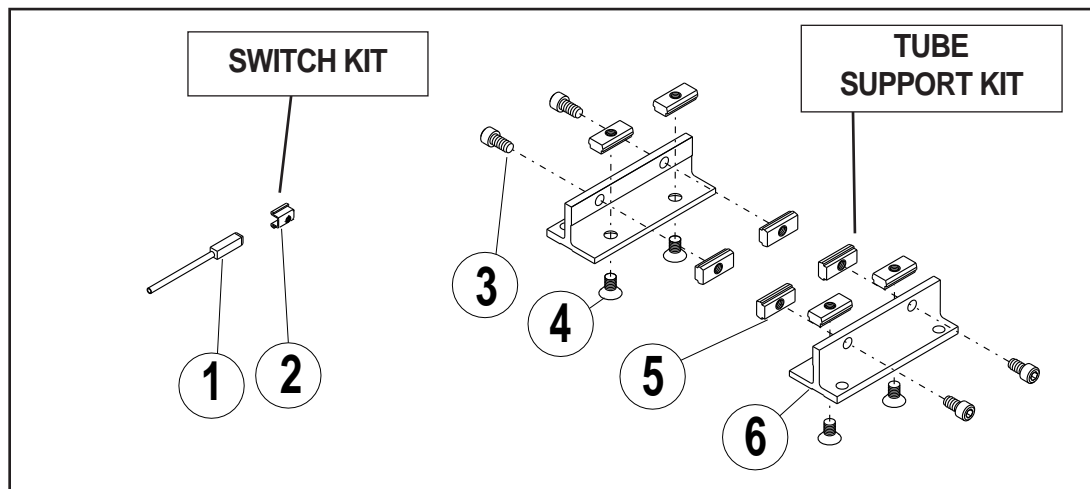
Item	Part No.	Description	In-line mounting with gear head					
			MRB34 w/ GHJ30, 31	MRS34X w/ GHK30	MRV34X w/ GHJ30, 31	MRV23X w/ GHJ20, 21	MRV234X w/ GHJ20, 21	MRB23 GHK20
1	3420-1349	MTR/ADAP — Spacer	1	1	1	-	-	-
	3420-1352	MTR/ADAP — Spacer	-	-	-	1	1	1
2	0910-1314	SHCS 10-24 x .75	4	4	4	4	4	4
3	3600-6173	CPLR—MRV23	-	-	-	1	-	-
	3600-6174	CPLR—MRV234	-	-	1	-	1	-
	3420-9041	CPLR—GEARHEAD	-	1	-	-	-	1
6	0910-1314	SHCS, 1/4-24 x .75	4	4	4	4	4	4
8	3420-9305	Cover Kit	4	4	4	4	4	4

In-Line Motor Mounting Option

In-line mounting with motor

Parts Listing

Item	Part No.	Description	MRB34	MRS34X	MRV34X	MRB40X	MRV23X	MRS234X	MRS23	MRB23
			1	3420-1235	Spacer	1	1	-	-	-
	3420-1349	MTR/ADAP — Spacer	-	-	1	-	-	-	-	-
	3420-1353	MTR/ADAP — Spacer	-	-	-	1	-	-	-	-
	3420-1350	MTR/ADAP — Spacer	-	-	-	-	1	1	-	-
	3420-1234	Spacer	-	-	-	-	-	-	1	1
2	1024-7711	SHCS 10-24 x .88	4	4	-	-	-	-	-	-
	0910-1314	SHCS 10-24 x .75	-	-	4	4	4	4	-	-
	0915-1016	SHCS 10-24 x .50	-	-	-	-	-	-	4	4
3	3600-9219	CPLR — MRB34	1	-	-	-	-	-	-	-
	3600-9209	CPLR — MRS34	-	1	-	-	-	-	-	-
	3600-6174	CPLR — MRV34	-	-	1	-	-	-	-	-
	3600-9213	CPLR — MRB23	-	-	-	-	-	-	-	1
	3600-9208	CPLR — MRS23	-	-	-	-	-	-	1	-
	3600-9042	CPLR—MRB40	-	-	-	1	-	-	-	-
	3600-6173	CPLR—MRV23	-	-	-	-	1	-	-	-
	3600-6174	CPLR—MRV234	-	-	-	-	-	1	-	-
4	3410-1445	PLT — MRB40	-	-	-	1	-	-	-	-
5	6000-1731	SFHCS 1/4-20 x 7/8 LG	-	-	-	4	-	-	-	-
6	0515-1121	SHCS, 1/4-20 x 3.25	4	4	-	-	-	-	-	-
	0910-1314	SHCS, 1/4-24 x .75	-	-	4	4	4	4	-	-
	0910-1486	SHCS, 1/4-20 x 3.0	-	-	-	-	-	-	4	4
7	3420-1226	MTR MNT PLT	1	1	-	-	-	-	1	1
8	3420-9305	Cover Kit			1					
	3420-9300	Cover Kit				1				
	3420-9302	Cover Kit					1			



OPTIONAL ACCESSORY ASSEMBLY INSTRUCTIONS

- TUBE SUPPORTS.** Four T-Nuts (45) are required on each side of the Tube (23), 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 (44) and secure Tube Supports (46) to Tube aligning holes in T-Nuts with holes in Tube Supports.
- Switches.** Secure Switch (40) to magnet side of Tube with Switch Clamp (41) and Set Screw (42).
- 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.

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.

NOTE: For Hall Effect Switch Magnet, be sure the S pole of the magnet (indicated with black dot) is facing toward the switch (down).

NOTE: The side of the switch with the groove indicates the sensing surface. This must face toward the magnet.

For complete Switch Performance Data, refer to the Tol-O-Matic Axidyne Products catalog # 3600-4609.

TO ORDER RETROFIT KITS:

SW (then the model number and base size, and code for type of switch needed).

Optional Accessories Parts Listing

1.	SWITCH KIT	Part Number	Switch Kit number (Hardware & switch) (SWB3S20_...)	Description
	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	BC3S20 Part No.	MC3S20 Part No.	Description	QTY.
SWITCH KIT				
2	3420-9999	3420-9999	Switch Hardware Kit	1
TUBE SUPPORT KIT				
3	2317-1015	4415-1011	SHCS, 5/16-18 x .63/ M8 x 1.25 x 12	4
4	3415-1046	4415-1014	SFHCS, 1/4-20 x .44/ M6 x 1 x 10	4
5	3420-1013	4420-1013	B3S20 Nut	4
6	3420-1044	3420-1044	Tube Support	2

EXAMPLE: SWB3S20BT

Where **SW** is the switch kit, **B3S** is the model, **20** is the 2" size, and **BT** is a Form C Reed Switch with 5-meter lead.

All Switch Kits come with 1 switch and mounting hardware.

HARDWARE ONLY KIT:
3420-9999

QUICK-DISCONNECTS:
2503-1025 Female Connector 5M

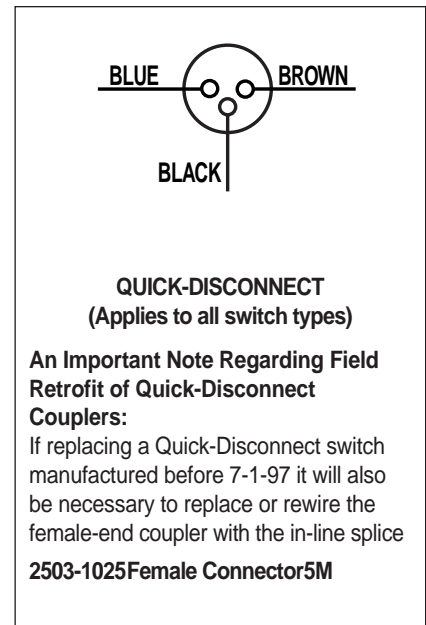
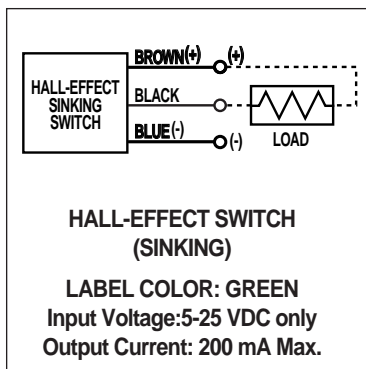
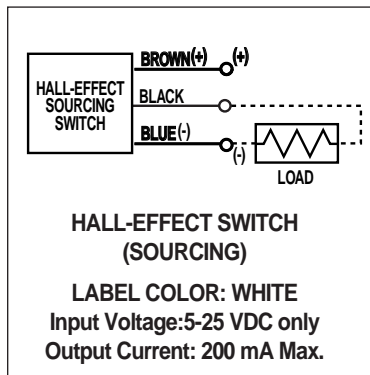
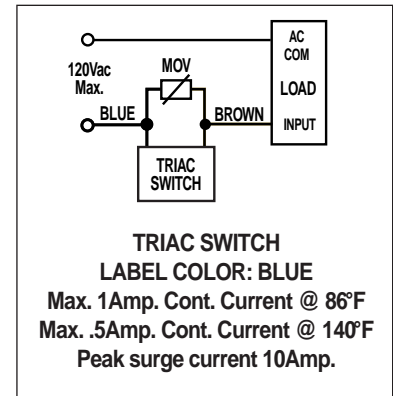
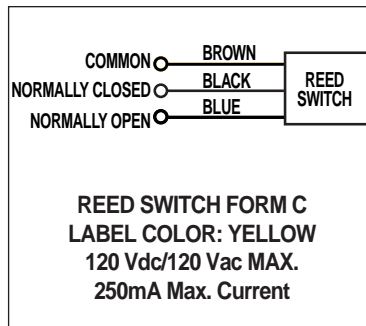
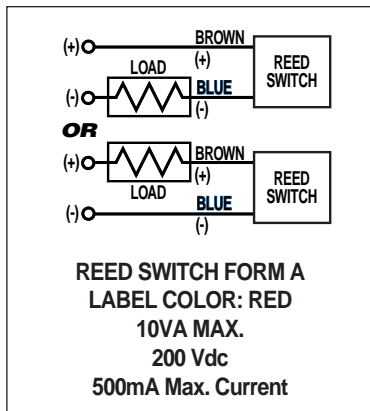
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Magnalube®-G is a registered trademark of the Carleton-Stuart Corporation, www.magnalube-g.com

Universal Switch Wiring Diagrams and Label Color Coding



An Important Note Regarding Field Retrofit of Quick-Disconnect Couplers:
 If replacing a Quick-Disconnect switch manufactured before 7-1-97 it will also be necessary to replace or rewire the female-end coupler with the in-line splice.



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