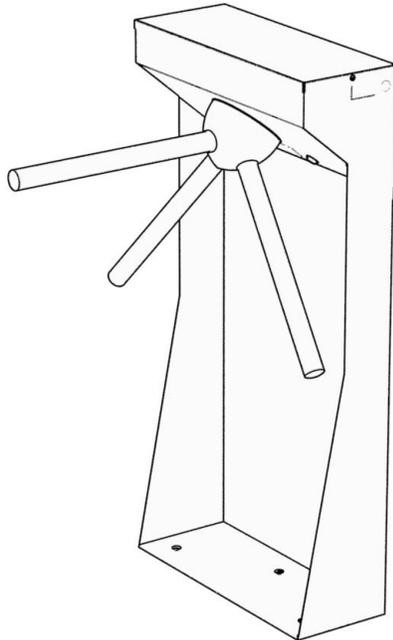


SLT

Waist High Slimline Security Turnstile Revision 1.6 – December 2017



Instructions and Maintenance Guide

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Important Safety Precautions

WARNING

Always follow the installation and operating precautions, including the following:

- Read this manual in its entirety before installing or operating the turnstile. If there are questions, you may contact Alvarado at (909) 591-8431, Monday through Friday, 6:00 AM to 4:30 PM PST.
- Only skilled individuals should install and service the turnstile.
- The turnstile is not a toy. Do not allow children to play on or near the turnstile. Do not allow horseplay near the turnstile.
- Follow a proper maintenance schedule.
- Do not operate the turnstile if it has been damaged in any manner. Have the turnstile repaired or adjusted by a skilled service person before use.
- Do not modify or alter the turnstile.
- Do not operate the turnstile unless the hydraulic dampening unit is operating and adjusted correctly. For information on maintenance and adjustment of the hydraulic dampening unit, please refer to the Maintenance section of this document.
- Use **ONLY** Alvarado parts.

SAVE THESE PRECAUTIONS

Support

For support, contact Alvarado's Tech Support department M–F, 7:00 AM to 4:00 PM Pacific time.

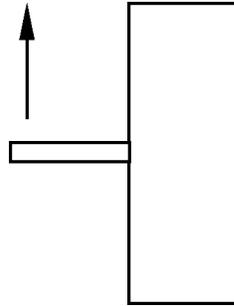
Email: support@alvaradomfg.com

Phone: 909-591-8431

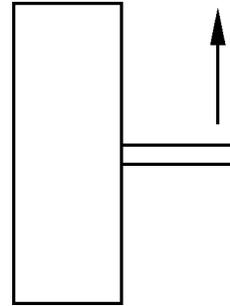


Turnstile Configuration Descriptions

Entry



Right Handed
Turnstile



Left Handed
Turnstile

Turnstile Configuration

SLT-3

Three-position key lock control allows turnstile to remain locked in both directions, unlocked in either direction or open in both directions.

Unlock Override

The unlock override feature allows one or both directions of passage to be unlocked with a key (included for both directions on all SLT models). One key lock for each passage direction is located near the arms on the cabinet fascia. Both locks are keyed alike.



Overview of Installation / Slab Requirements

SLAB REQUIREMENTS
MINIMUM THICKNESS: 4" LEVEL SOLID CONCRETE
DO NOT INSTALL ON ASPHALT

Overview of Installation Steps:

- A. Determine turnstile locations taking into account power and activation wiring (if applicable)
- B. Anchor turnstile
- C. Connect Power (if applicable)
- D. Connect Activation Wiring (if applicable)

Parts required (Supplied by Alvarado)

- 3 each mounting bolts
- 3 each washers
- 3 each Anchors

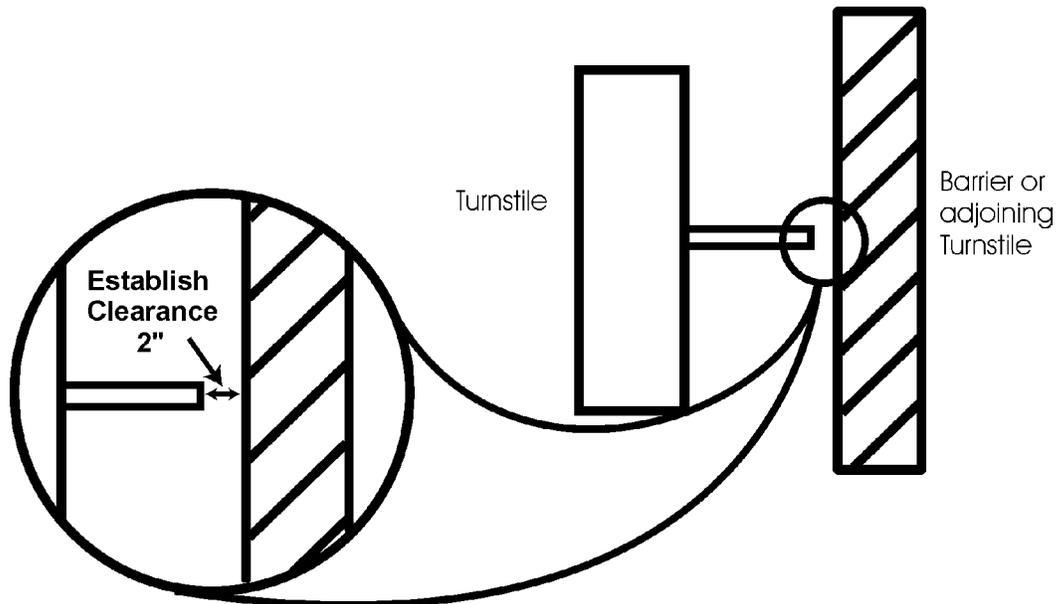
Tools required

- Heavy Duty Drill
- 5/8" Concrete Drill Bit
- 3/8" Torque Wrench
- Hammer
- Shop Vac
- Tape Measure
- Chalk
- Shim Material
- Safety Glasses

Turnstile Location and Barrier Spacing

Verify layout location.

NOTE The turnstile arm should be approximately 2" from the next unit or outside barrier.





Installing the Turnstile

1. Place the turnstile in the desired location.
2. Mark the center location of the three anchor holes.
3. Using the impact drill and a 5/8" drill bit, drill a minimum 3" deep hole at the center of each of the three marked outer anchor locations. For Terrazzo, ceramic tile, or brick veneer installations add the thickness of the finished floor material to the anchor hole depth (Note: The anchoring package provided by Alvarado should ONLY be used to anchor the unit directly into the concrete slab).
4. Vacuum out holes thoroughly. If the holes are not clean, the anchors will not tighten.
5. Insert an anchor into each drilled hole. Ensure that the anchors are flush with the concrete floor.

NOTE Insert anchors with threads down.

6. Return the turnstile to the install location.
7. Insert a 3/8" bolt and washer through the turnstile base into each of the SB anchors. Tighten the 3/8" bolts to 20 ft-lbs. torque.
8. If the turnstile is uneven or rocks, loosen the bolts, shim the turnstile cabinet as necessary, and re-tighten the bolts.



Maintenance

Inspect the installed turnstiles approximately 30 days after the initial installation. Thereafter, the frequency of maintenance will depend on usage and the environment. We suggest inspecting and lubricating the turnstile interior twice a year. Interior maintenance should be performed more frequently in high use applications and/or in dusty or humid environments. Periodically check the anchor bolts for tightness. Exterior cleaning should be performed as necessary.

Interior Care

1. **General** – Check the tension of the three anchors. Tighten to approximately 20 ft-lbs. Check tension of all nuts, bolts and screws. Clean away accumulated dust and dirt.
2. **Microswitches** – (Counting units only) Manually rotate the turnstile and inspect the microswitch contact(s). Switch activation should occur without any distortion or bending of the switch arm. Necessary adjustments can be made by repositioning the adjustable micro plate (#87 on exploded drawing-page 24).
3. **Movement** – Verify that the compression arm and shoe (#81 and #82 on exploded drawing) move freely. If the movement is not smooth, remove both parts and apply 3-in-1 oil. Replace parts and check movement.
4. **Hydraulic Cylinder** – Verify that the hydraulic cylinder is properly adjusted by observing the rotation of the turnstile arms. Use the override key to disengage the lockarms and unlock the turnstile arm.

Spin the arm once rapidly in the testing direction. The turnstile arm should rotate once and stop in the standard position. If the turnstile over rotates, increase the hydraulic tension. Do this by removing the cotter type pin at the top of the hydraulic closure (#62 on the exploded drawing). Tighten the adjusting screw (clock-wise) with a slotted screwdriver. Put the pin back in and retest. Test in increments of 1/8 of a turn.

If the turnstile under-rotates (returns to standard position very slowly), decrease the hydraulic tension. Follow directions as above, but loosen the adjusting screw (turn the adjustment screw counter-clockwise). Replace the pin and retest.

The hydraulic cylinder is adjusted at the factory to a level suitable for most standard applications; however, the viscosity of the hydraulic fluid is affected by extreme variations in temperature. Adjustments may be necessary depending on the application or environmental factors. When making adjustments, ensure that the hydraulic is not adjusted so loosely that the turnstile arm hits the user in the back/rear as they pass through the turnstile.

5. **Lubrication** – Apply a light grade lubricant (i.e. Tri-Flow or 3-in-1 oil with a tube extension applicator) to all contact points. Contact points include spring and micro-switch (if applicable) contact points. Review the photo on page 26 for identification of lubrication areas.
6. **Springs** – Inspect the springs for unusual wear and replace if worn or damaged. When replacing springs use only Alvarado supplied parts.



Exterior Care

1. **Stainless Steel** - Stainless steel surfaces include the turnstile arms and lid and, depending on the finish ordered, the cabinet. Stainless steel surfaces may be cleaned using any commercially available polish or cleaner. If a heavier scratch or mark is apparent, a metal blend and finish pad (3M or equivalent) may be used. A quality automotive wax may be used to buff the cabinet after cleaning.
2. **Aluminum Head** - The conical shaped aluminum head can be cleaned using a soft damp cloth.
3. **Powdercoat Finishes** – Powdercoat finishes should be cleaned using a soft damp cloth. Any deep scratches or chips in this type of finish should be touched up to prevent a rust spot from forming. If left untreated, rust will spread.

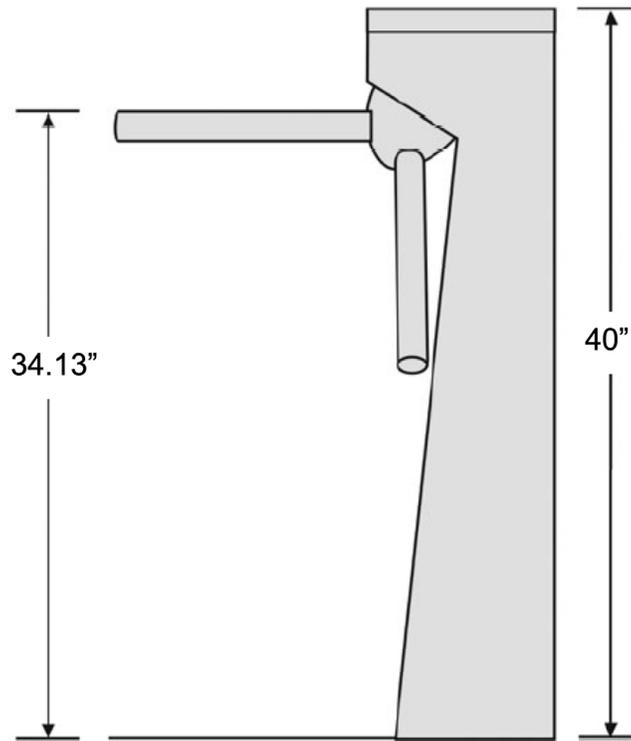
Troubleshooting

Symptom	Possible Cause	Solution
The turnstile head does not turn smoothly	The turnstile is not properly lubricated.	<ul style="list-style-type: none">• Clean and lubricate the pivot points as described in the Maintenance section of this document.• If necessary, adjust the hydraulic dampening unit as described in the Maintenance section of this document.

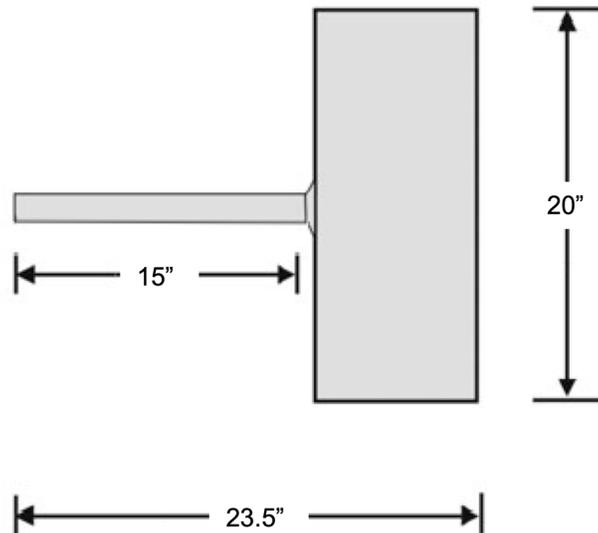


SLT Plan & Elevation View Drawings

Elevation (Front) View



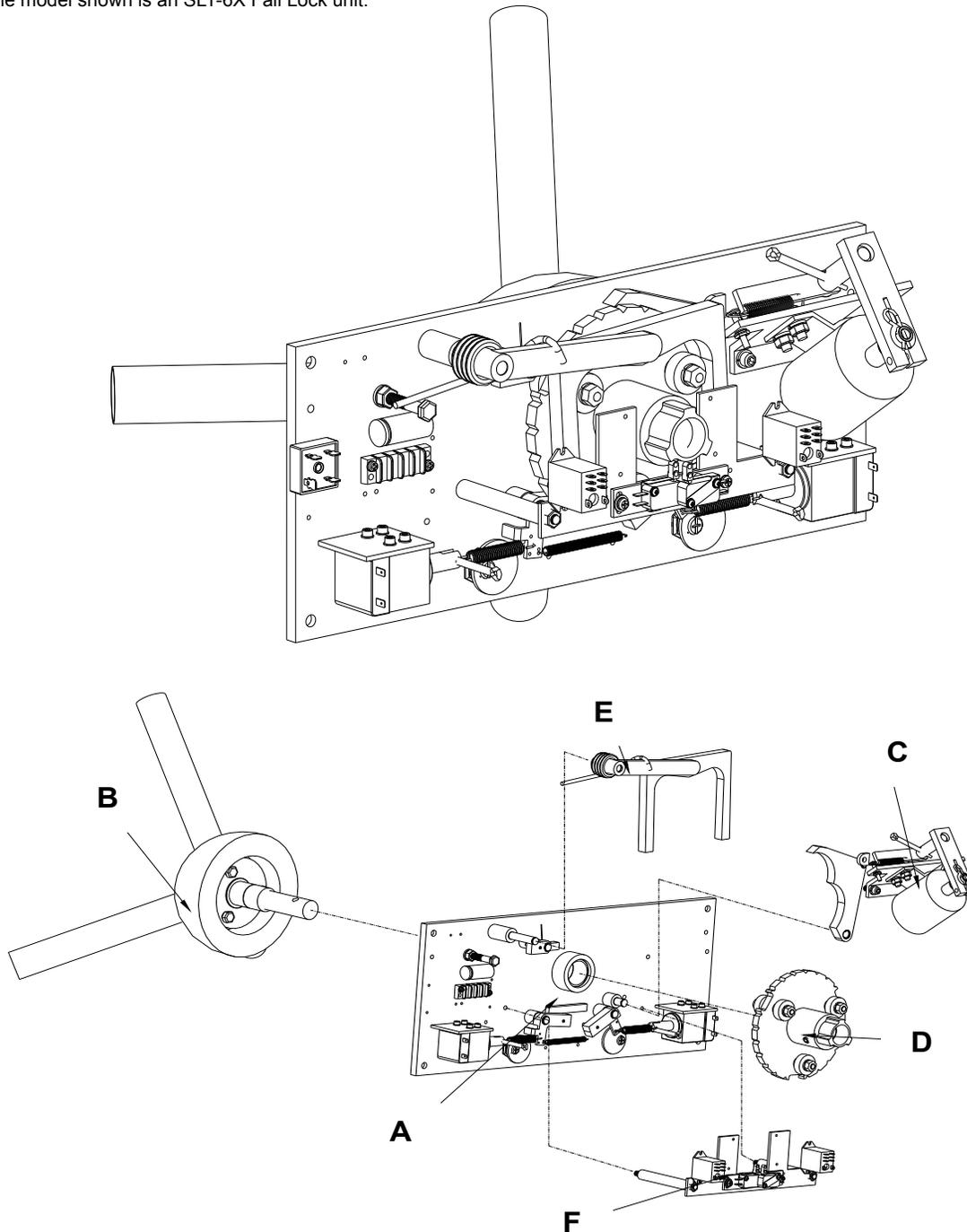
Plan (Top) View





SLT Exploded Parts Detail*

* The turnstile model shown is an SLT-6X Fail Lock unit.



SLT Sub Assemblies

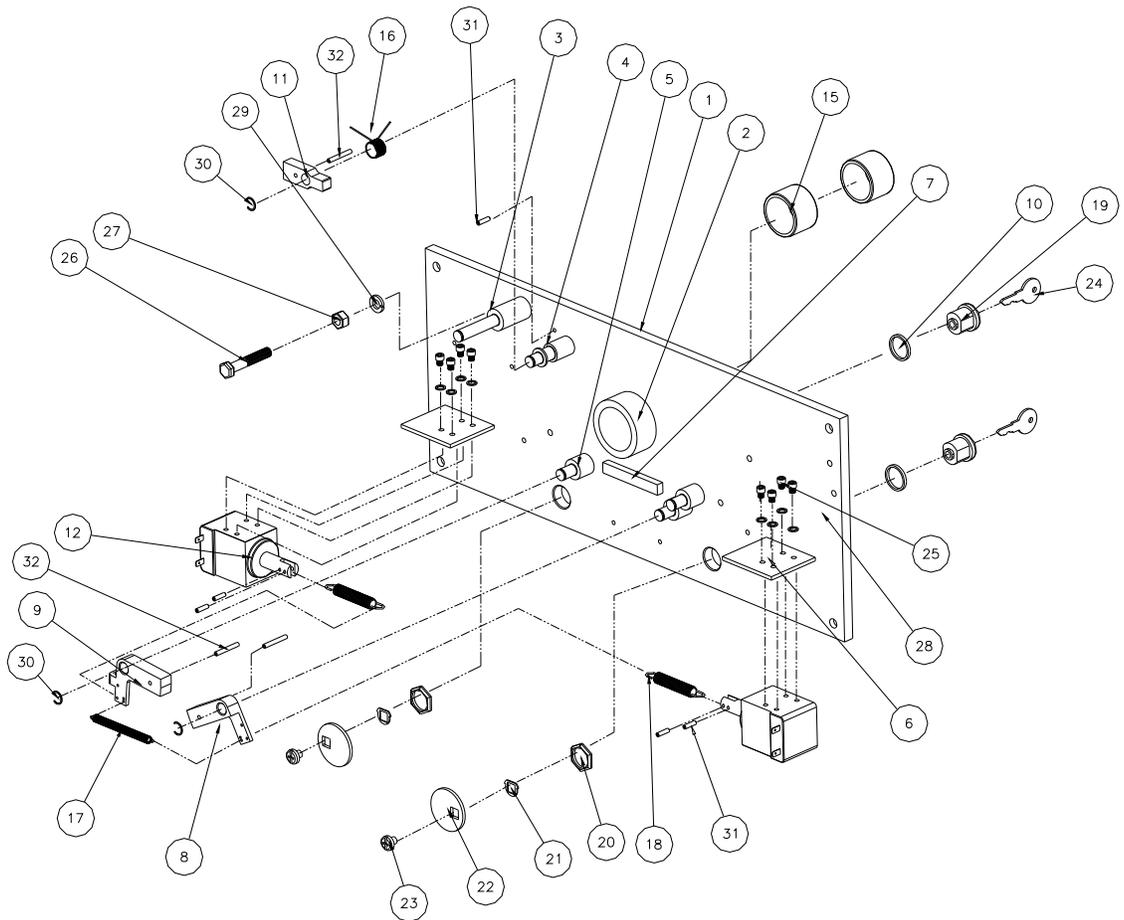
- A. SLT Frame Plate Sub Assembly
- B. SLT Head and Arms Sub Assembly
- C. SLT Hydraulic Closure Sub Assembly
- D. SLT Ratchet Sub Assembly
- E. SLT Compression Shoe Sub Assembly
- F. SLT Microswitch Mounting Plate Sub Assembly



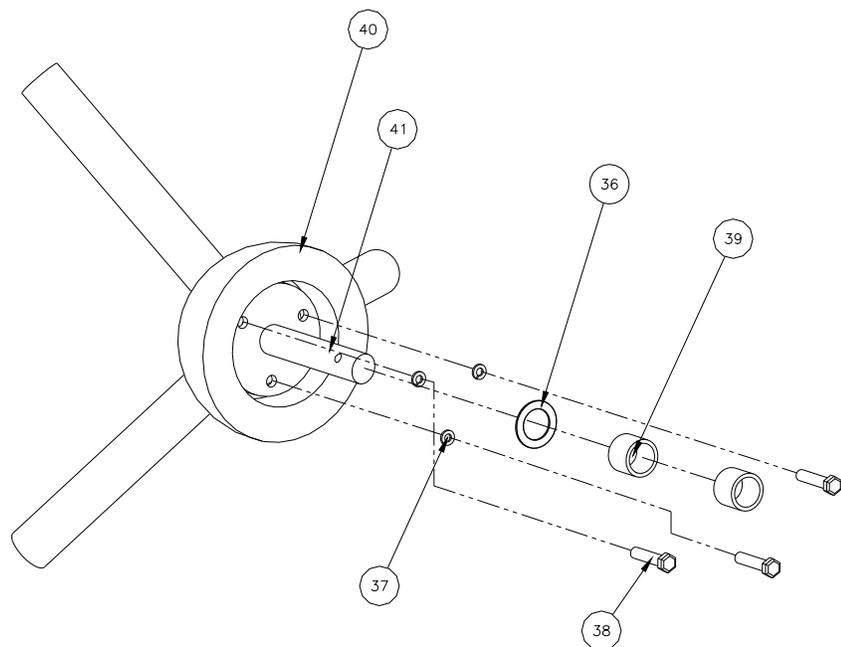
SLT Exploded Parts Detail (continued)

See Page 25 for the corresponding numbered parts listing.

SLT Frame Plate Sub Assembly Exploded View



SLT Head and Arms Sub Assembly Exploded View

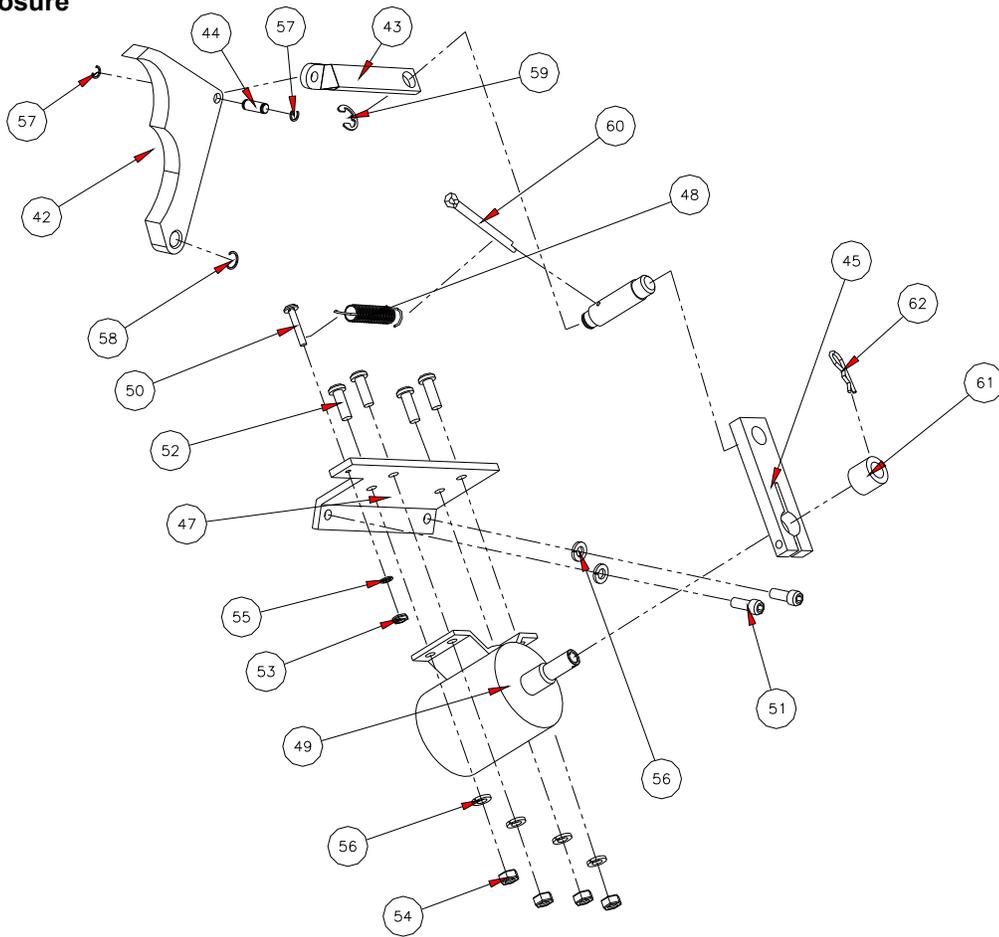




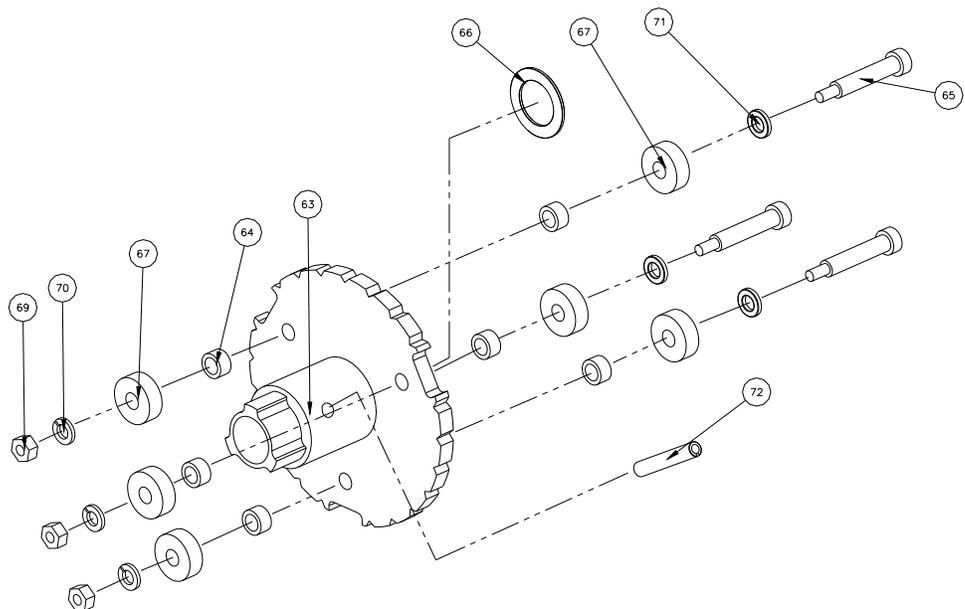
SLT Exploded Parts Detail (continued)

See Page 25 for the corresponding numbered parts listing.

SLT Hydraulic Closure Sub Assembly Exploded View



SLT Ratchet Sub Assembly Exploded View

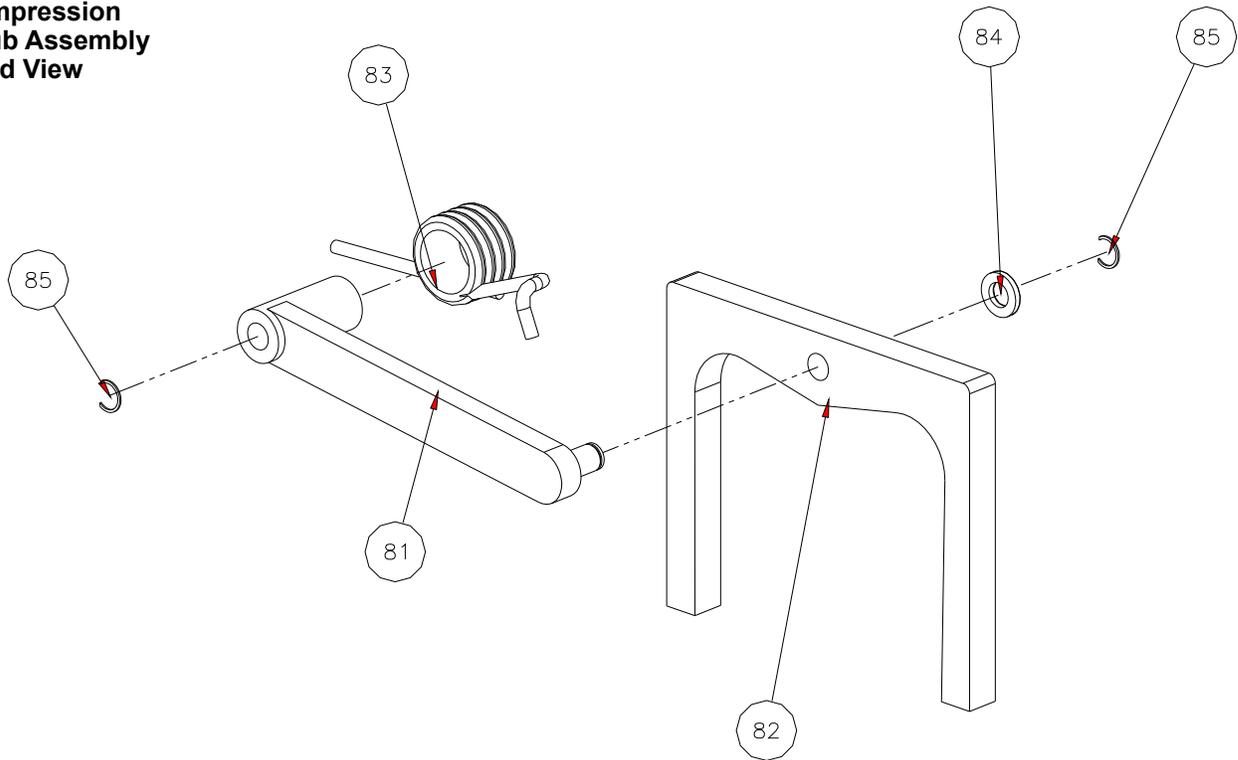




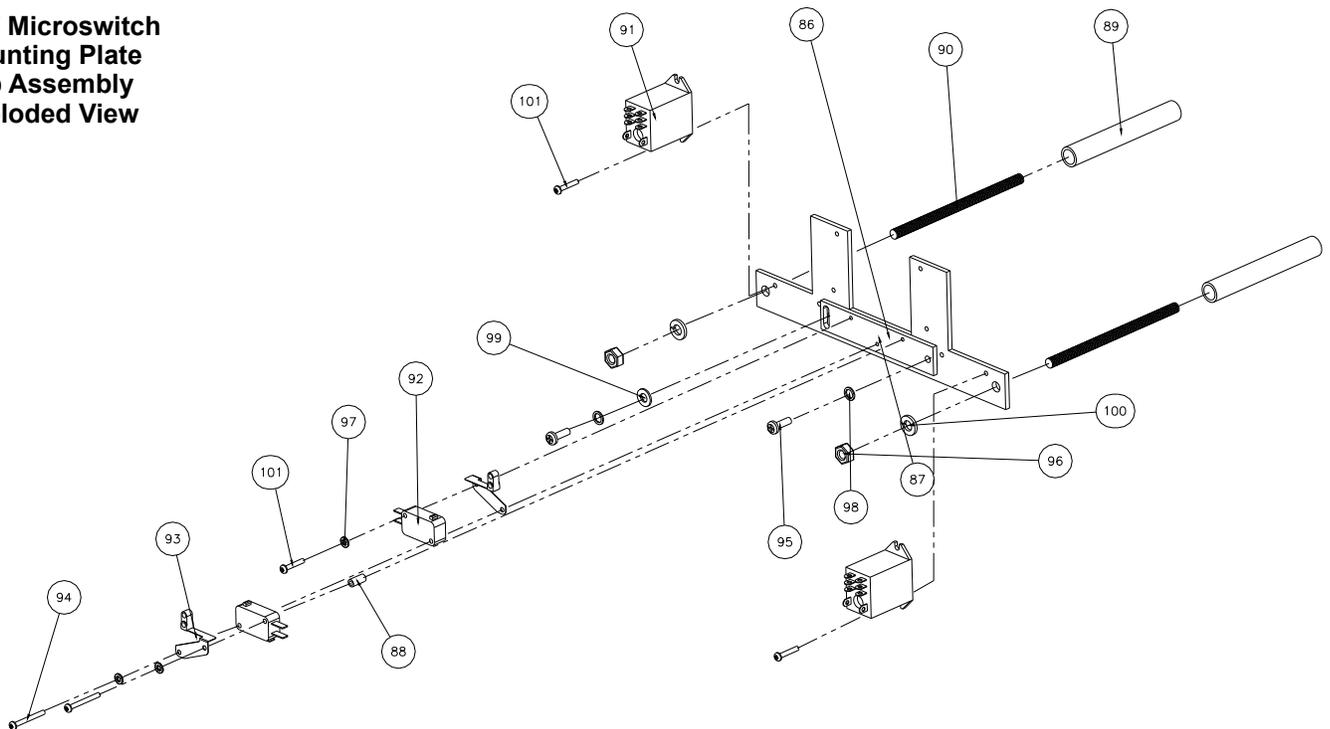
SLT Exploded Parts Detail (continued)

See Page 25 for the corresponding numbered parts listing.

SLT Compression Shoe Sub Assembly Exploded View



SLT Microswitch Mounting Plate Sub Assembly Exploded View



**SLT Exploded View Parts Listing***

I.D.	Qty.	Part #	Description
1	1	04-7100	EDC Frame
2	1	See Note A	EDC Bearing Housing
3	1	See Note A	EDC Compression Arm Post
4	1	See Note A	EDC Reversing Pawl Post
5	3	See Note A	EDC Lock Arm Post
6	2	See Note A	EDC Solenoid Bracket
7	1	See Note A	EDC Lock Arm Stop Plate
8	1	04-7201	EDC Lock Arm - Left(See Note B)
9	1	04-7201	EDC Lock Arm - Right (See Note B)
10	2	04-7210	EDC Key Override Spacer
11	1	04-7221	Reversing Pawl
12	2	10-1000	24 VDC Solenoid
15	2	11-4410	Roller Bearing - EDC
16	1	11-5310	EDC Back Pawl Spring
17	1	11-5330	EDC Lock Arm Spring
18	2	11-5380	EDC Faillock Solenoid Spring
19	2	11-9401C	Key Override Assembly Component
20	2	See Note C	Key Override Assembly Component
21	2	See Note C	Key Override Assembly Component
22	2	11-9403	Key Override Assembly Cam
23	2	See Note C	Key Override Assembly Component
24	2	See Note C	Key Override Key
25	10	91-1054	8-32 3/8 SHCS - Blk Oxide
26	1	91-1229	5/16 - 18 x 1 -3/4 HHCS - Zinc
27	1	91-2253	5/16 -18 Hex Nut -Zinc
28	8	91-3100	#8 Internal Tooth Lock Washer
29	1	91-3252	5/16 Med. Lock Washer - Zinc
30	3	91-6240	3/8 Crescent Retaining Ring
31	1	91-8101	1/8 x 1/2 Spiral Pin - Black Oxide
32	3	91-8102	1/8 x 1 Roll Pin Black Oxide
36	1	11-4400	Bearing
37	3	91-3302	3/8" Split Lock Washer
38	3	91-1266	3/8" - 16 x 3/4" HHCS
39	2	11-4420	Bearing Race
40	1	04-7186-155	Turnstile Head & Arms
41	1	04-7192	Main Shaft**
42	1	04-7251	EDC Shock Absorber Cam
43	1	04-7261	EDC Deceleration Link Arm
44	1	04-7270	EDC Deceleration Link Arm Pin
45	1	04-7280	EDC Deceleration Arm & Pin
47	1	04-7341	EDC Door Closure Bracket
48	1	11-5340	EDC Hydraulic Closure Return Spring
49	1	11-9060	EDC Hydraulic Closure Unit

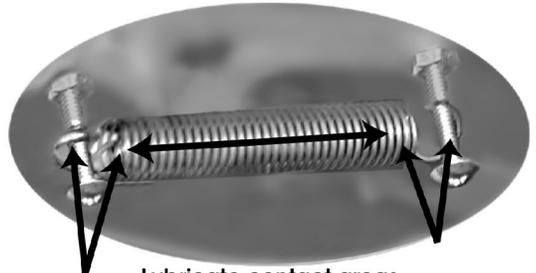
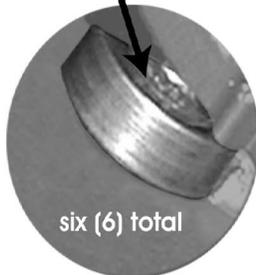
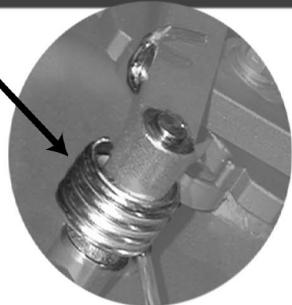
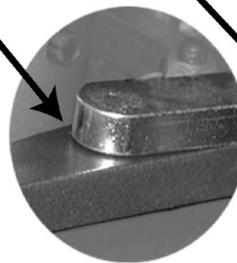
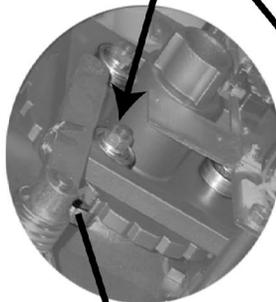
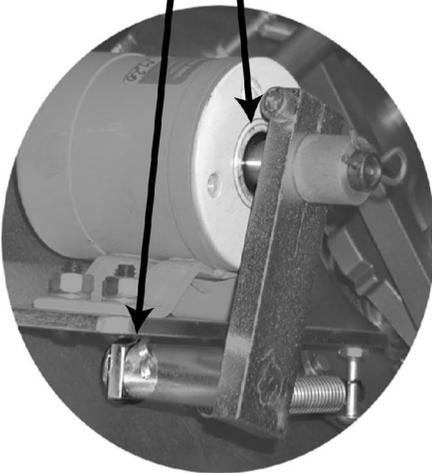
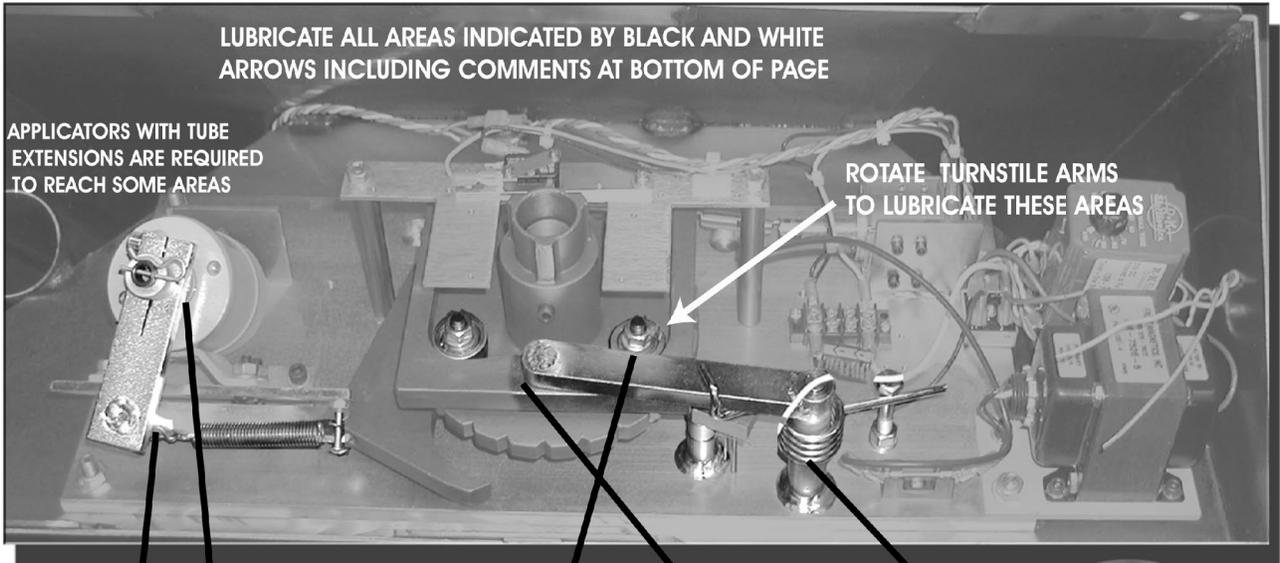
I.D.	Qty.	Part #	Description
50	1	91-1051	#8 -32 Hex 1 THSMS - Zinc
51	2	91-1160	1/4 - 20x 5/8 SHCS - Blk Oxide
52	4	91-1162	1/4 - 20 x 3/4 BHSCS - Blk Oxide
53	1	91-2101	#8 -32 Hex Nut -Zinc
54	4	91-2202	1/4 -20 Hex Nut - Zinc
55	1	91-3100	#8 Internal Tooth Lock Washer-Zinc
56	6	91-3202	1/4 Split Lock Washer - Zinc
57	2	91-6230	1/4 Crescent Retaining Ring
58	1	91-6240	3/8 Crescent Retaining Ring
59	1	91-6250	7/16 Retaining Ring
60	1	91-8200	1/8 x 2 Cotter Pin
61	1	See Note D	Bushing Hydraulic
62	1	See Note D	Cotter Pin
63	1	04-7141	EDC Ratchet Assembly **
64	6	04-7161	EDC Roller Spacer
65	3	11-1601	3/8 x 1 3/4 Shoulder Bolt
66	1	11-4400	EDC Flat Bearing
67	6	11-4440	1" Roller Bearing
69	3	91-2252	5/16 - 18 Lock Nut - Zinc
70	3	91-3252	5/16 Med. Lock Washer - Zinc
71	3	91-3301	3/8 RM x 5/8 OD 1/16 Washer
72	1	91-8170	5/16 2 Roll Pin - Black Oxide
81	1	04-7231	Compression Arm
82	1	04-7241	Compression Shoe
83	1	11-5300	Compression Arm Spring
84	1	91-3301	3/8 Washer
85	2	91-6240	3/8 Crescent Ring
86	1	04-7301	EDC Micro Support Plate
87	1	04-7311	EDC Adjustable Micro Plate
88	1	04-7312-1	EDC/MSTX Stacking Micro Spacer
89	2	04-7320-1	EDC Micro Plate Support Tube
90	2	1980072	EDC Micro Plate Support Studs
91	2	10-1210	24 VDC Relay
92	2	10-1400-1	Micro Switch
93	2	10-1450-1	Micro Switch Arm
94	2	91-1000	#4-40 X RHSMS-Zinc
95	2	91-1052	#8-32 x 1/2 RHPSMS-Zinc
96	2	91-2202	1/4-20 Hex Nut-Zinc
97	3	91-3000	#4 Internal Tooth Lock Washer
98	2	91-3100	#8 Internal Tooth Lock Washer
99	1	91-3102	#8 Flat Washer - Zinc
100	2	91-3202	1/4 Split Lock Washer - Zinc
101	3	91-1021	6-32 x 1/2 RHSMS - Zinc

NOTES

- A. These components are provided assembled to the Frame (#1) and are not available for individual purchase.
- B. Include 1 each Key Override Tab (Part # 04-7205) with each 04-7201 and specify the Key Override direction(s) when reordering lock arms.
- C. These components are provided with the Key Override Assembly (#20) and are not available for individual purchase.
- D. These components are provided with the Hydraulic Closure Unit (#49) and are not available for individual purchase.
- * The turnstile model shown is an SLT-6X Fail Lock Unit with Key Overrides for both directions.
- ** These components are not available for individual purchase. Use Part # 04-7141 to reorder an SLT Ratchet & Main Shaft Assembly.



Lubrication Guide



Lubricate contact areas and rubbing areas on all springs

IMPORTANT

Some of the parts shown are no longer applicable. For more information, please contact Alvarado Manufacturing.



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