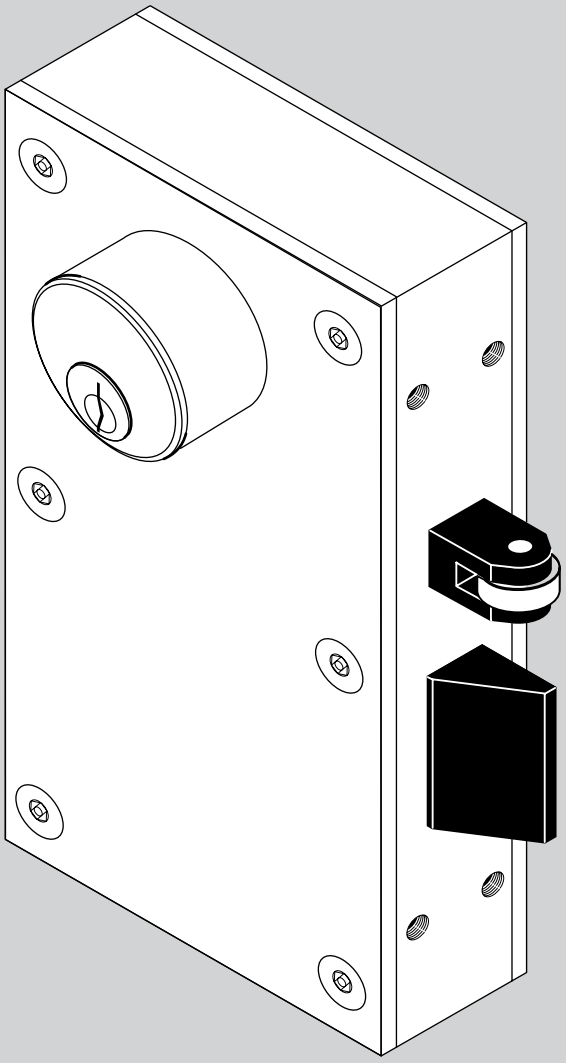
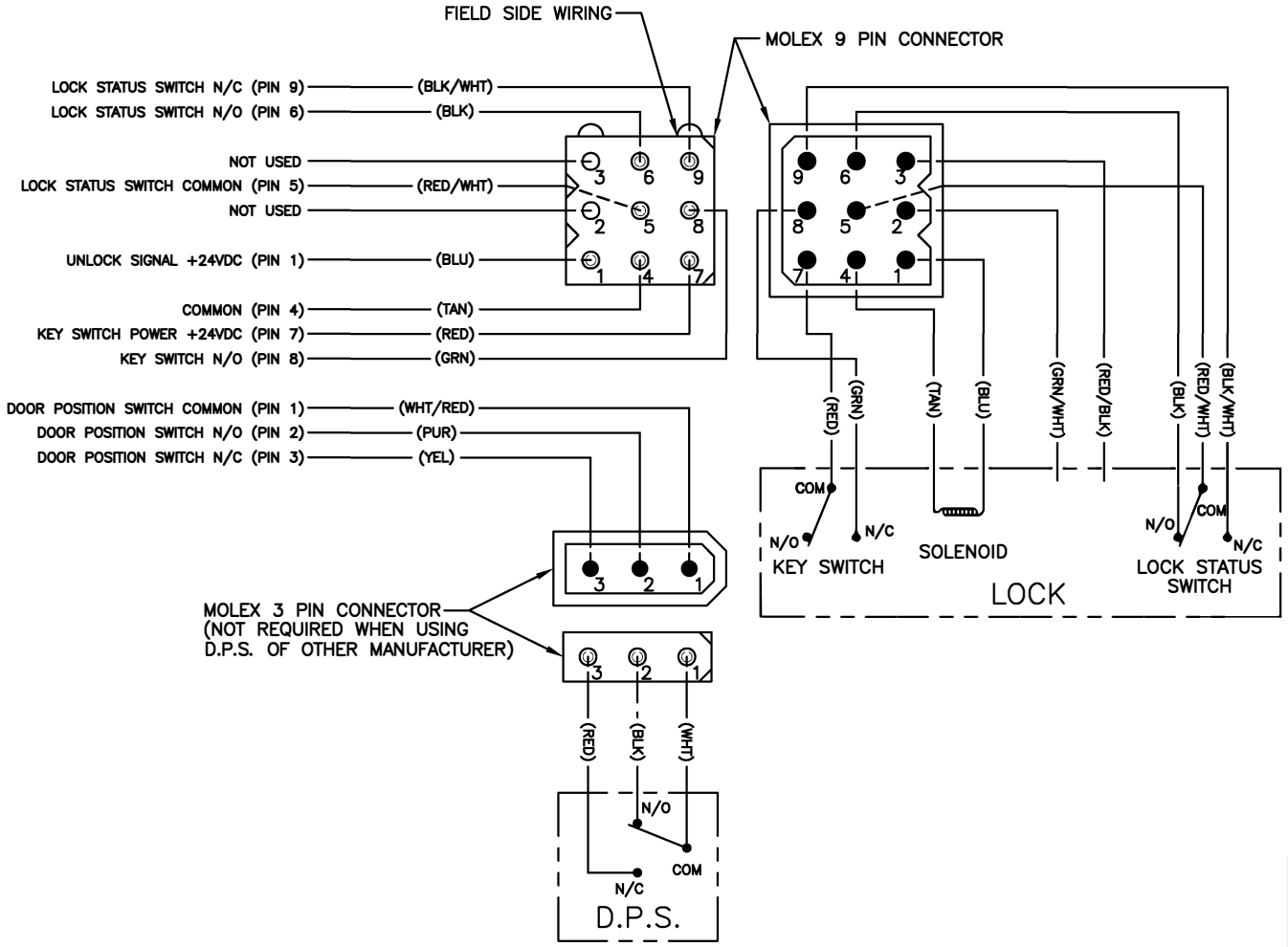
9700 SERIES LOCK





REVISIONS				
REV	ECN	DESCRIPTION	DRAWN	CHK
01	2572	SEE ECN	DEE 2/7/03	
02	2738	ADD "CHECK CONTINUITY BETWEEN WHT/RED AND RED/WHT" TO NOTE 5	MEL 6/28/05	

NOTES:
1. SOLENOID LOAD: 24VDC ±2V, 1.5W MAX
2. SWITCH CONTACTS: 5A.
3. SCHEMATIC SHOWN WITH DOOR IN THE CLOSED AND LOCKED (SECURE) POSITION.
4. PLUGS AND RECEPTACLES INSIDE LOCK NOT SHOWN.
5. FOR SERIES LOCK STATUS AND DOOR POSITION SWITCH OPERATION, CONNECT BLACK AND PURPLE WIRES IN FIELD SIDE WIRING. CHECK CONTINUITY BETWEEN WHT/RED AND RED/WHT.
6. ALWAYS INSTALL IN ACCORDANCE WITH LOCAL REGULATIONS AND THE NATIONAL ELECTRIC CODE (NEC). POWER DEVICE FROM A CLASS 2 POWER SOURCE WHEN PNEUMATIC TUBING OCCUPIES THE SAME SPACE AS CONTROL WIRING.

AIRTEQ

TITLE	WIRING DIAGRAM 9700 AIR LOCK
DRAWN BY	DEE
APPROVED	
DATE	6/18/01
SCALE	NONE

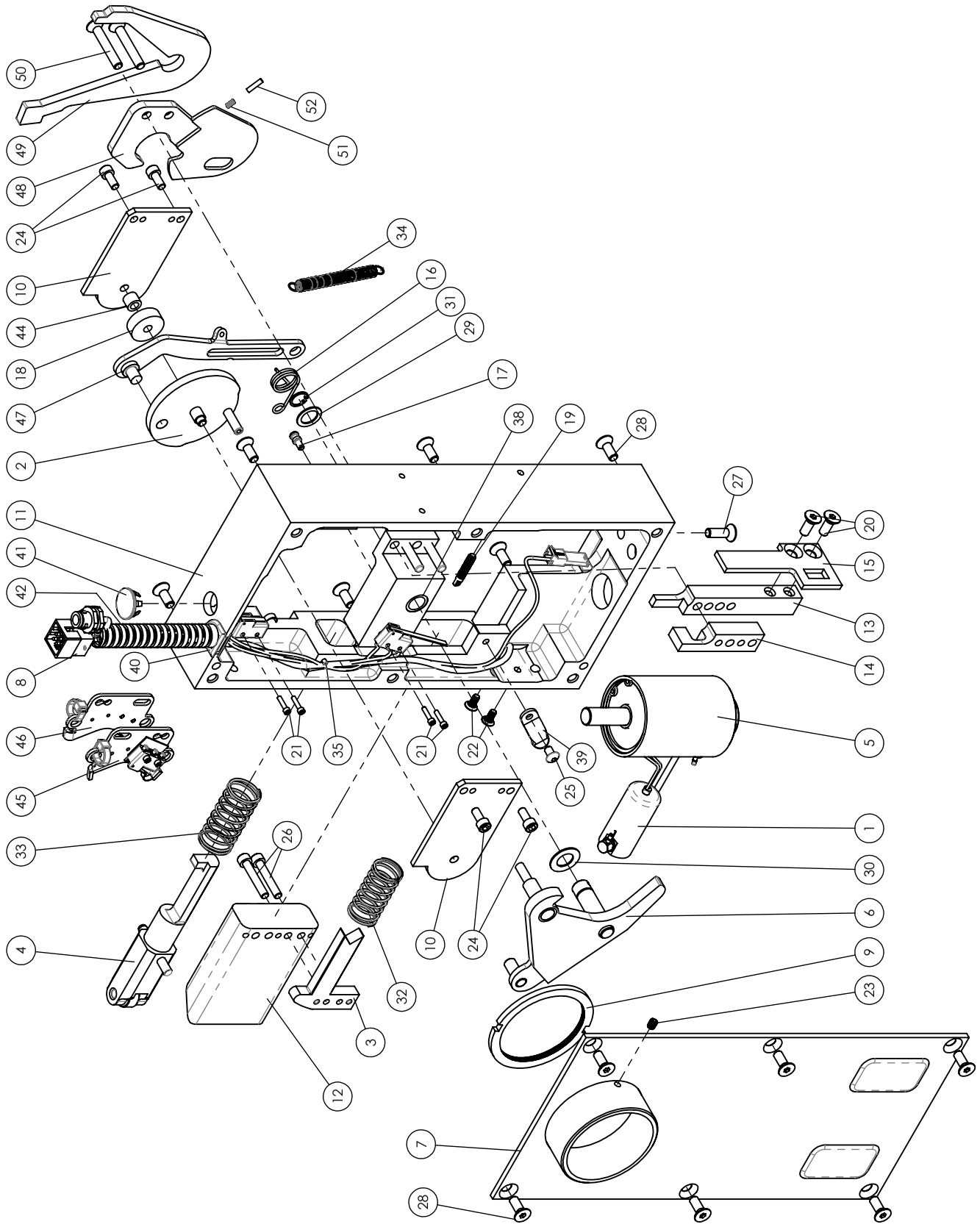
SIZE	DWG. NO.	REV
B	EL-0083	02

AIRTEQ

www.airteq.com

9700 SERIES LOCK

9700 9/8/05



AIRTEQ

www.Airteq.com

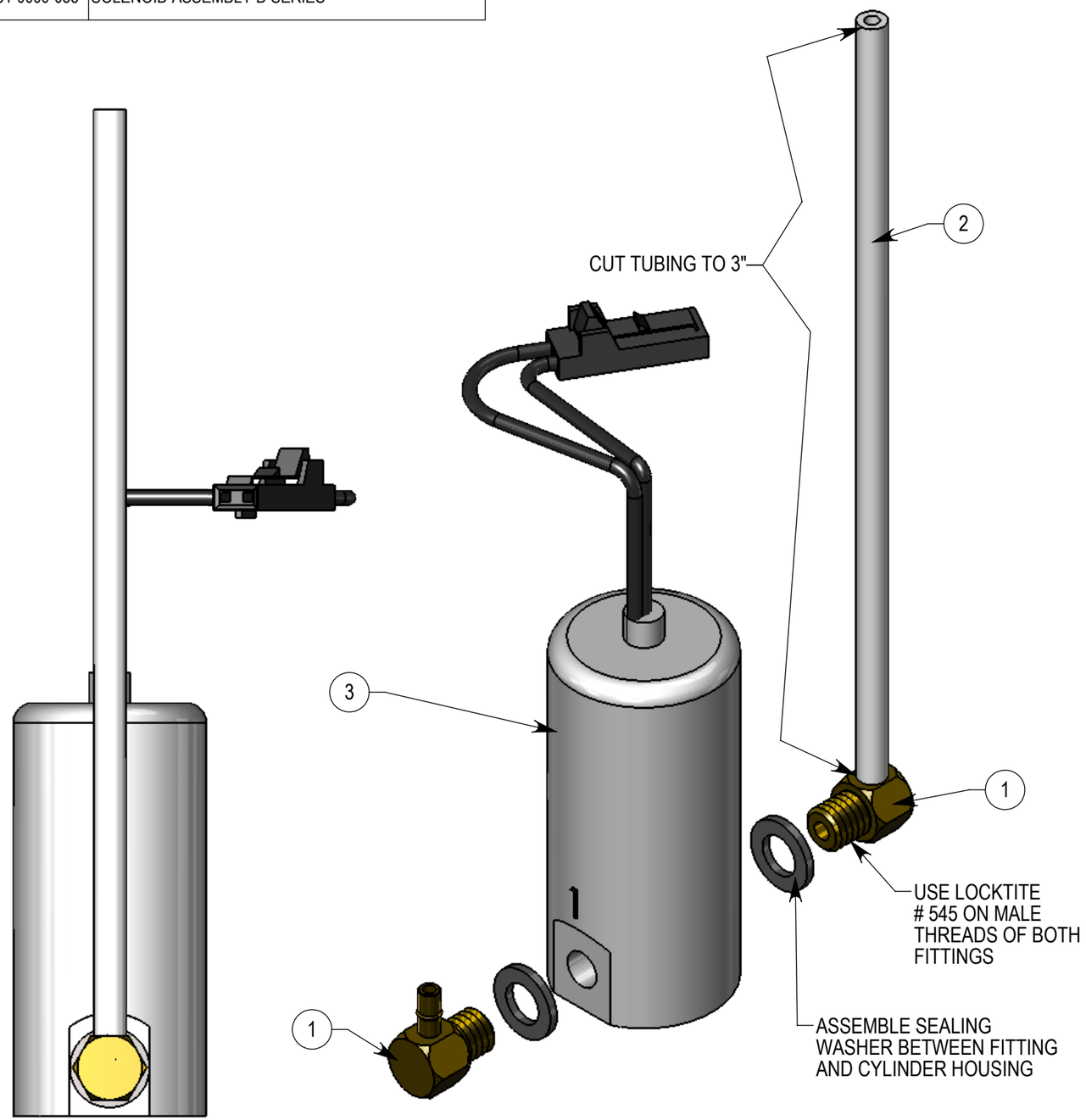
9700

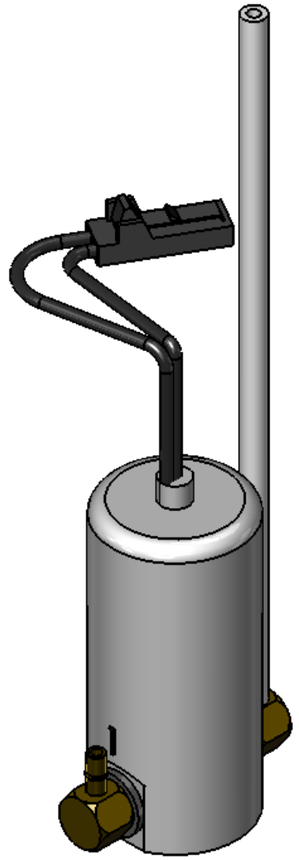
ITEM NO.	QTY	PART NUMBER	REQ FOR FEATURE	DESCRIPTION 9700 9/8/05
1	1	146-9600-052		ASSY SOLENOID, 9600 9700
2	1	146-9700-034		ASSY, MANUAL OVERRIDE DISC
3	1	146-9700-045		ASSY, GUIDE BAR
4	1	146-9700-040		ASSY, ROLLER BOLT
5	1	146-9700-066		ASSY, AIR CYLINDER
6	1	146-9700-107		ASSY, ACTUATOR CAM
7	2	146-9724-021 146-9724-029 146-9724-031		Cover Plate Weldment, Airteq Mogul Cover Plate Weldment, ASSA Mogul Cover Plate Weldment, For Cylinder Extension
8	1	160-9700-017 160-9700-018		WIRE HARNESS W/ KEY SWITCH WIRE HARNESS W/ NO KEY SWITCH
9	2	216-1000-028		Mogul Cylinder, SPANNER Lock NUT
10	2	216-9700-058		PIVOT PLATE
11	1	216-9700-115		LOCK BODY
12	1	216-9700-122		LATCHBOLT
13	1	216-9700-141		DEADBOLT SUPPORT BAR, REAR
14	1	216-9700-142		Deadbolt Support Bar, Front
15	1	216-9700-211		EXTENDED BOLT GUIDE
16	1	216-9700-271		TORSION SPRING, ACTUATOR CAM
17	1	216-9700-276		ANCHOR PIN, TORSION SPRING
18	1	216-9700-306		Spacer, Override Disc, Link Side
19	1	217-0000-035		Spring Anchor, 7/8in, 8-32x5/8 Thread, Black Oxide
20	2	310-0000-009		SCREW, 10-32 X .500 FLAT HEAD SOCKET
21	4	310-0000-014		SCREW SHCS 2-56x3/8 Black W/LOCKING PATCH
22	2	310-0632-007		SCREW, FH SOC., 6-32 X 5/16
23	1	310-0832-000		8-32 x 3/16 Socket Set Screw Cup PT, Black Oxide
24	4	310-0832-004		SCREW, SHCS 8-32 X 3/8
25	1	310-0832-016		SCREW, BH SOC, 8-32 X 1/4
26	2	310-0832-018		SCREW, SHCS, 8-32 X 1.00
27	1	310-1032-019		SCREW, FH, SOCKET, 10-32 X 5/8
28	12	310-0000-009		SCREW, FH, SOC., 10-32 X 1/2
29	1	313-0000-070		WASHER, .384IDx.564ODx.030 Steel, SEASTROM #5702-133-30
30	1	313-0000-077		WASHER, Nylon,. .38 ID X .68 OD X .031
31	1	315-0000-013		RETAINING RING, ROTO CLIP SH-37STPA
32	1	315-0000-015		SPRING, (LATCHBOLT) CENTURY #S-64
33	1	315-0000-016		SPRING (DEADLATCH) CENTURY #10602
34	1	315-0000-059		SPRING (SLIDE RETURN)CENTURY #S-539, .25ODx2.0Len,.84rate, Mx defl.2.5
35	1	316-0000-028		ROLL PIN 3/32 X 1/2
36	4	316-0000-031		DOWEL PIN, 1/8 X 3/8 LG, H&G
37	2	316-0000-033		PIN, DOWEL, 3/16 X 1 LG, H&G
38	1	317-0000-016		3/8"ID, 1/2"OD, 3/4" Length, BUSHING, BRONZE
39	1	319-0000-058		CLIP, TENSION, RICHCO #TC-30-1
40	1	319-0000-077		GROMMET, MINOR RUBBER #Z-1128
41	1	319-0000-083		HOLE PLUG, .5 DIA
42	0.25	340-0000-205		3" SPLIT CONVOLUTED TUBING, .343, BLK
44	1	319-0000-066	KLHB	SPACER, 5/16"ODx.192"IDx.25"Length Brass (Replaces 216-9700-306)
45	1	160-9700-012	Inmate Keying	Assy, Inmate Keying Switch, Right Hand
46	1	160-9700-013	Inmate Keying	Assy, Inmate Keying Switch, Left Hand
47	1	146-9700-115 146-9700-116	ELHB	Link Weldment, 9700 Mogul, ELHB Capable ELHB Link Weldment - (ELHB requires all RLB related components (216-9700-303 replaces 216-9700-301)
48	1	150-9700-000	RLB	RLB PIVOT WELDMENT
49	1	216-9700-301 216-9700-303	RLB ELHB	RLB Pawl ELHB Pawl
50	2	310-1032-018	RLB	SCREW, FH, SOCKET, 10-32 X 1 1/4
51	1	315-0000-061	RLB	SPRING CENTURY # O-56 OR EQUIV.
52	1	316-0000-087	RLB	DOWEL PIN, 3/32 X 3/8 LG, H&G

ITEM NO.	QTY	PART NUMBER	DESCRIPTION
1	2	330-0000-133	Elbow Fitting: 10-32x1/16 Tube Barb, MEM-CO# 10LB1
2	1	330-1206-000	TUBING, 1/8 OD X 1/16 ID, POLYURETHANE
3	1	331-0000-053	SOLENOID ASSEMBLY D SERIES

REVISIONS

ECN #	ZONE	REV.	DESCRIPTION	DATE	APPROVED
2802	01		ADDED NOTE: USE LOCKTITE # 545 . REDRAWN IN SOLID WORKS	6/6/06	





NOTE:
USE LOCKTITE #545 ON MALE THREADS OF BOTH FITTINGS
2. ASSEMBLE SEALING WASHER BETWEEN FITTING AND SOLENOID HOUSING.

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
TOLERANCES:
ANGULAR: ±1
TWO PLACE DECIMAL ±.015
THREE PLACE DECIMAL ±.010

INTERPRET GEOMETRIC TOLERANCING PER:

	DATE	NAME
DRAWN		
CHECKED		

MATERIAL:

FINISH:

AIRTEQ

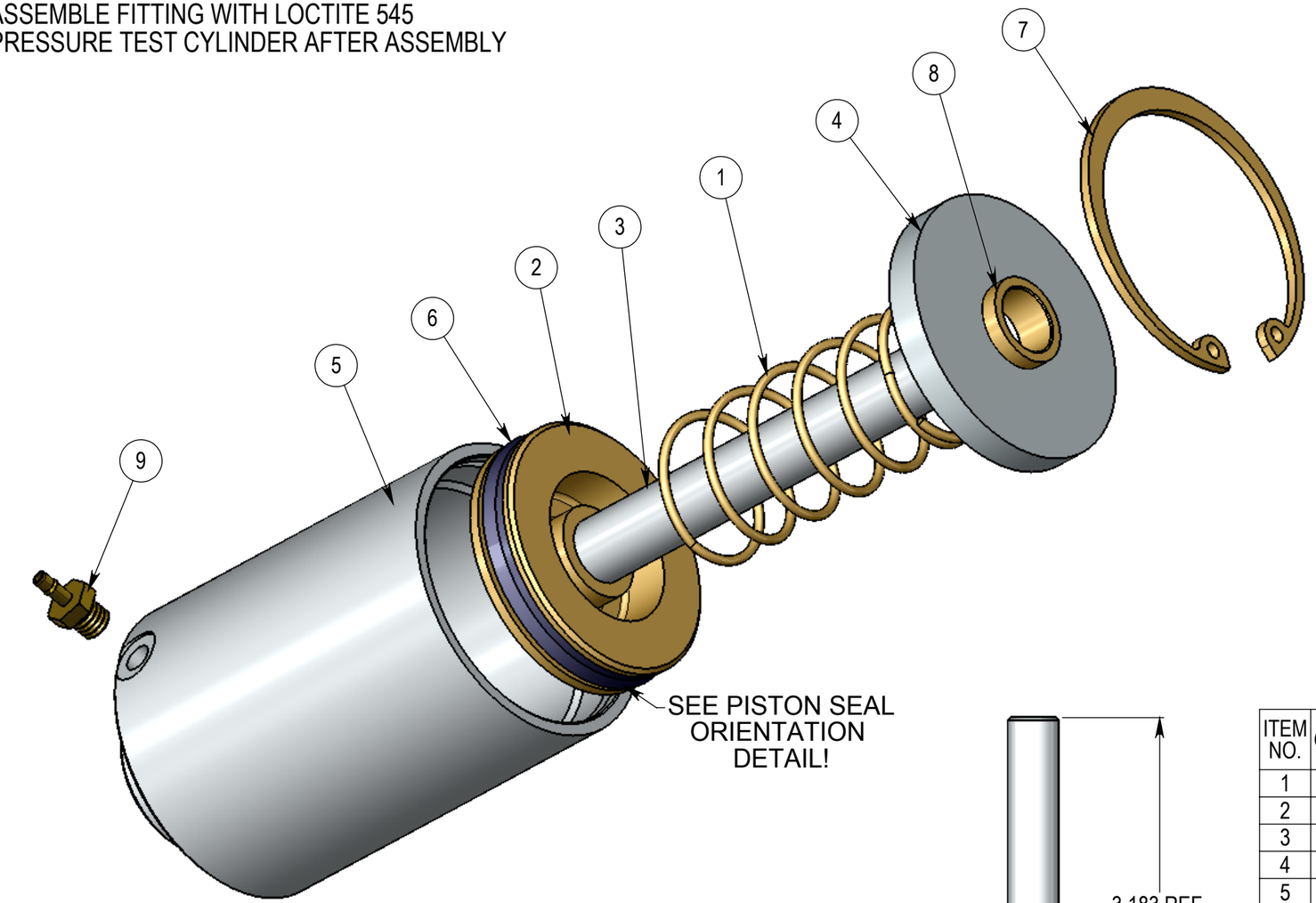
TITLE:
Assy, Solenoid for 9600 & 9700 Series Locks

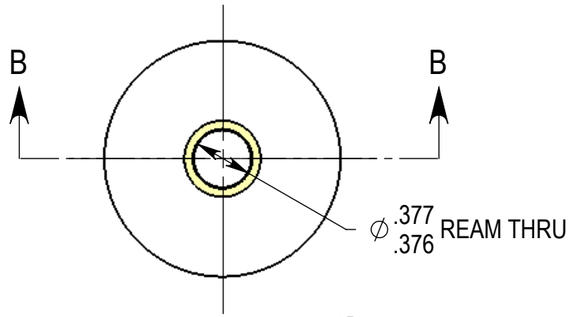
SIZE	DWG. NO.	REV
B	146-9600-052	01

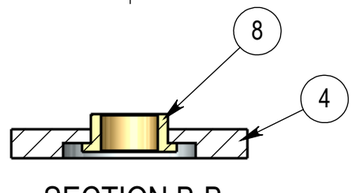
SCALE: 1:1 | WEIGHT: | SHEET 1 OF 1

NOTE:
1. LIGHTLY LUBRICATE CYLINDER WITH SYNCO "SUPER LUBE"
2. ASSEMBLE FITTING WITH LOCTITE 545
3. PRESSURE TEST CYLINDER AFTER ASSEMBLY

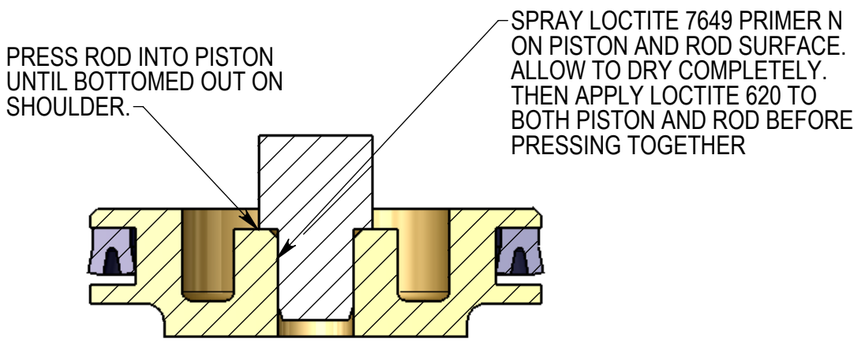
REVISIONS					
ECN #	ZONE	REV.	DESCRIPTION	DATE	APPROVED
2699		01	ADD PISTON SEAL ORIENTATION DETAIL	12/8/04	MEL
2866		02	Added note: Ø .377/.376 Ream thru. Added drawing view of assembly head, and cylinder assembly drawing view. Revised B.O.M to show individual parts.	1/31/07	CW
2918		03	ADD NOTES: LOCKTITE 620 AND PRESSURE TEST ASSEMBLIES;	10/10/07	MEL



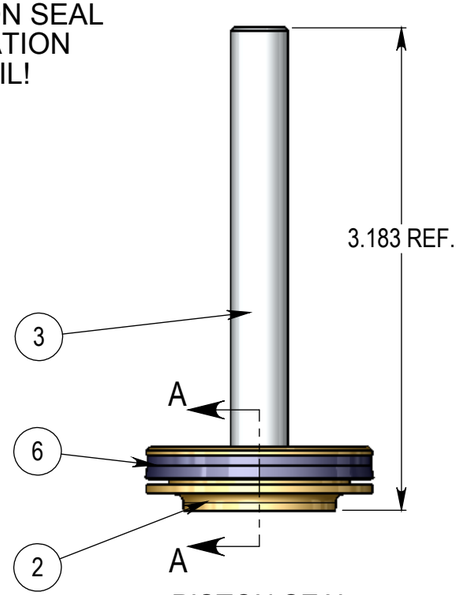




SECTION B-B



SECTION A-A
SCALE 2 : 1



PISTON SEAL ORIENTATION DETAIL

ITEM NO.	QTY	PART NUMBER	DESCRIPTION
1	1	216-9700-103	ACTUATOR RETURN SPRING
2	1	216-9700-139	PISTON
3	1	216-9700-140	ROD
4	1	216-9700-146	HEAD, CYLINDER
5	1	216-9700-204	CYLINDER
6	1	313-0000-087	Seal, U-Cup, Parker #4180-8405-01187
7	1	315-0000-038	Retaining Ring, TRUARC # 5000-156
8	1	317-0000-021	Flanged Bushing: 3/8"ID x 1/2"OD x 3/16"len w/5/8"dia x 1/16"flange, , BERG #B7-43 OR EQ
9	1	330-0000-086	Brass Fitting, 10-32x1/16 Barb MEM-CO# B1

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
TOLERANCES:
ANGULAR: ±1/2
TWO PLACE DECIMAL ±.015
THREE PLACE DECIMAL ±.010

INTERPRET GEOMETRIC TOLERANCING PER:

	DATE	NAME
DRAWN	12-7-04	MEL
CHECKED		

MATERIAL:

FINISH:

AIRTEQ

TITLE:

AIR CYLINDER ASSEMBLY

SIZE	DWG. NO.	REV
B	146-9700-066	03

SCALE: 1:1 | WEIGHT: | SHEET 1 OF 1

9700 SERIES LOCK

RECOMMENDED SPARE PARTS LIST

PART NUMBER	DESCRIPTION
331-0000-053	SOLENOID
OR 146-9600-052	SOLENOID ASSY
315-0000-015	SPRING, LATCHBOLT
315-0000-016	SPRING, DEADLATCH
315-0000-018	SPRING, LINK RETURN
315-0000-036	SPRING, CAM RETURN
160-9400-012*	ASSY, KEY SWITCH
160-9700-006	ASSY, LOCK STATUS SWITCH, 2-Wire
OR 160-9700-007	Lock Status Switch, 3-Wire
330-0000-414	COUPLING HALF
330-0000-415	COUPLING HALF (FIELD SIDE)
315-0000-024*	SPRING, HOLD BACK
316-0000-087*	DOWEL PIN, 3/32 X 3/8 (RLB / ELHB)
315-0000-061*	SPRING, RLB / ELHB
400-9700-000	REPAIR KIT, 9700 AIR CYLINDER
340-0000-209	TERMINAL, MALE

*** NOT USED ON ALL MODELS**

LOCK MAINTENANCE INFORMATION

PNEUMATIC LOCKING DEVICES

A. Lubrication and cleaning

1. Each Airlock is well lubricated at the time of assembly. However, all lubricants deteriorate eventually and need replacing on a regularly scheduled basis in order to prevent equipment failure. Airteq Systems recommends cleaning and lubricating each type of lock according to the following instructions approximately every (2) years. (Yearly for locks in high use areas).

9400 SERIES LOCK:

Remove the side cover plate and lubricate the angled ramp surface on the sideplate that the deadlatch bolt dowel pin rides against. Lubricate the stop side of the deadlatch bolt (back side). When replacing the side cover, be sure the lever of the lock status switch is not trapped under the retainer plate or actuator. The lower lock mechanism should be checked and cleaned once a year (or more often if special conditions exist) for accumulated dirt and other debris that would interfere with proper operation. Lubrication of upper lock mechanism is not necessary nor recommended.

9600 SERIES LOCK:

Remove the slide cover. Remove the housing cover. Remove the slide assembly . Clean and re-lubricate the slide with a thin coating of recommended lubricant on the following surfaces:

a.) The 45º angled surface that contacts the deadbolt.
b.) The flat "shelf" that lifts the back of the latchbolt.
c.) The two small areas where the slide contacts the back wall of the slide cavity.
d.) The edges of the two "rails" which contact the side of the right side cover.
e.) The front and rear faces of the slide which contact the slide cavity walls.

When replacing the slide assembly, hold the latchbolt retracted into the lock housing while inserting the slide assembly near the top of the cavity so that it drops in above the lock status switch lever arm and not on top of it. Replace the housing cover and slide cover and fasten securely.

Lubrication of the upper lock mechanism is not necessary nor recommended.

PNEUMATIC LOCKING DEVICES

9700 SERIES LOCK:

Remove one side cover plate and lubricate the deadbolt shaft and cam surface. Lubricate the latchbolt shaft and the stop sides of both bolts.

9700P SERIES LOCK: (PARACENTRIC KEYING)

Remove one side cover plate and lubricate the deadbolt shaft and cam surface. Lubricate the latchbolt shaft and the stop sides of both bolts.

KEYS AND LEVER TUMBLERS:

1) Key wear can cause improper operation of the lock and may damage the lock's lever tumblers. Keys in constant use should be periodically compared to a similar new key. When grooves due to wear are noted in the steps on the key bit, the old key should be replaced.

2) When rekeying is performed, new tumbler stacks should be purchased as a set including a new key. This enables Airteq to maintain complete keying records.

WARNING:

1) Never use WD40 or similar silicone based lubricants.

2) Never use graphite powder as a lubricant.

3) Never lubricate the lever tumblers.

ALL LOCKS:

2. RECOMMENDED LUBRICANTS:

Multipurpose teflon based grease: Lubricate internal moving parts with SYNCO SUPER LUBE WITH TEFLON or equivalent.

Stick lubricant: Lubricate the beveled surfaces of all latch bolts and strikes with stick lubricant as required. Use PANEF WHITE STICK LUBRICANT WITH SILICONE or equivalent.

B. Electrical:

1. The electrical system of this lock is operated on regulated 24VDC current. Any other voltage or current condition is not acceptable and will result in failure of the solenoid.

TROUBLESHOOTING
9400, 9500 AND 9700 LOCKS

If the lock is not working properly, the following chart may be used as a guide to locate and correct the problem.

Because the lock receives its signal from the electronic control system, a thorough check of the control system should be conducted. Using a volt/ohm meter known to be accurate, verify the correct power signal input at the appropriate connector pin. If the proper electronic signal is not evident, begin checking " upstream " from the connector. If the electronic signal input is correct, the problem is within the locking device, use the following chart to locate and correct the problem.

The recommended air pressure at the lock is 80 P.S.I.. If the correct air pressure is not evident, begin checking "upstream" from the lock. If the air pressure is correct, the problem is within the locking device, use the following chart to locate and correct the problem.

PROBLEM	CHECK
LATCHBOLT WILL NOT RETRACT	*AIR SUPPLY TO LOCK *MECHANICAL INTERFERENCE *POWER INPUT TO UNLOCK SOLENOID (POWER SHOULD BE PRESENT DURING LOCK OPEN CYCLE) *BROKEN OR LOOSE WIRING *FAULTY OR CONTAMINATED SOLENOID VALVE
LATCHBOLT WILL NOT EXTEND	*MECHANICAL INTERFERENCE *BROKEN OR LOOSE WIRING (SHORT TO GROUND) *POWER INPUT TO UNLOCK SOLENOID (POWER SHOULD NOT BE PRESENT DURING LOCK SECURE CYCLE) *FAULTY KEYSWITCH
LOCK RETRACTS/EXTENDS SLOWLY	*AIR PRESSURE TO LOCK *MECHANICAL INTERFERENCE *FAULTY OR CONTAMINATED SOLE-NOID VALVE
MANUAL OVERRIDE NOT WORKING PROPERLY	*MECHANICAL INTERFERENCE *PROPER ENGAGEMENT OF KEY CYLINDER CAM IN LOCK
DOOR POSITION SIGNAL NOT GIVEN	*BROKEN OR LOOSE WIRING (SEE WIRING DIAGRAM)
LATCHBOLT POSITION SIGNAL NOT GIVEN	*BROKEN OR LOOSE WIRING (SEE WIRING DIAGRAM)