



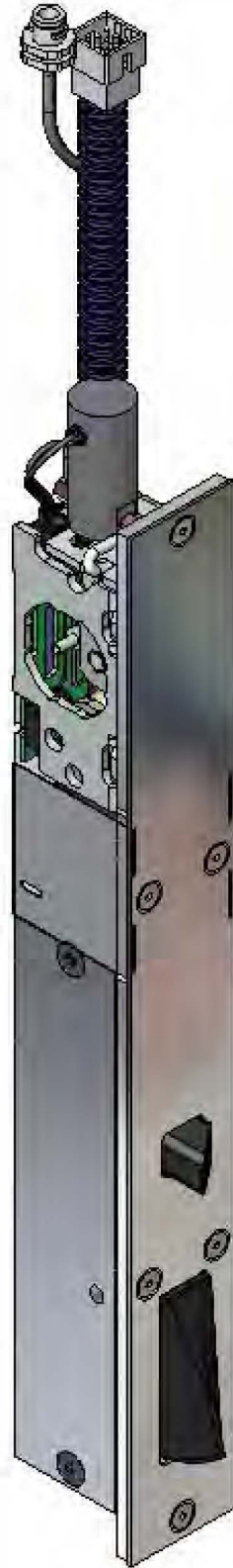
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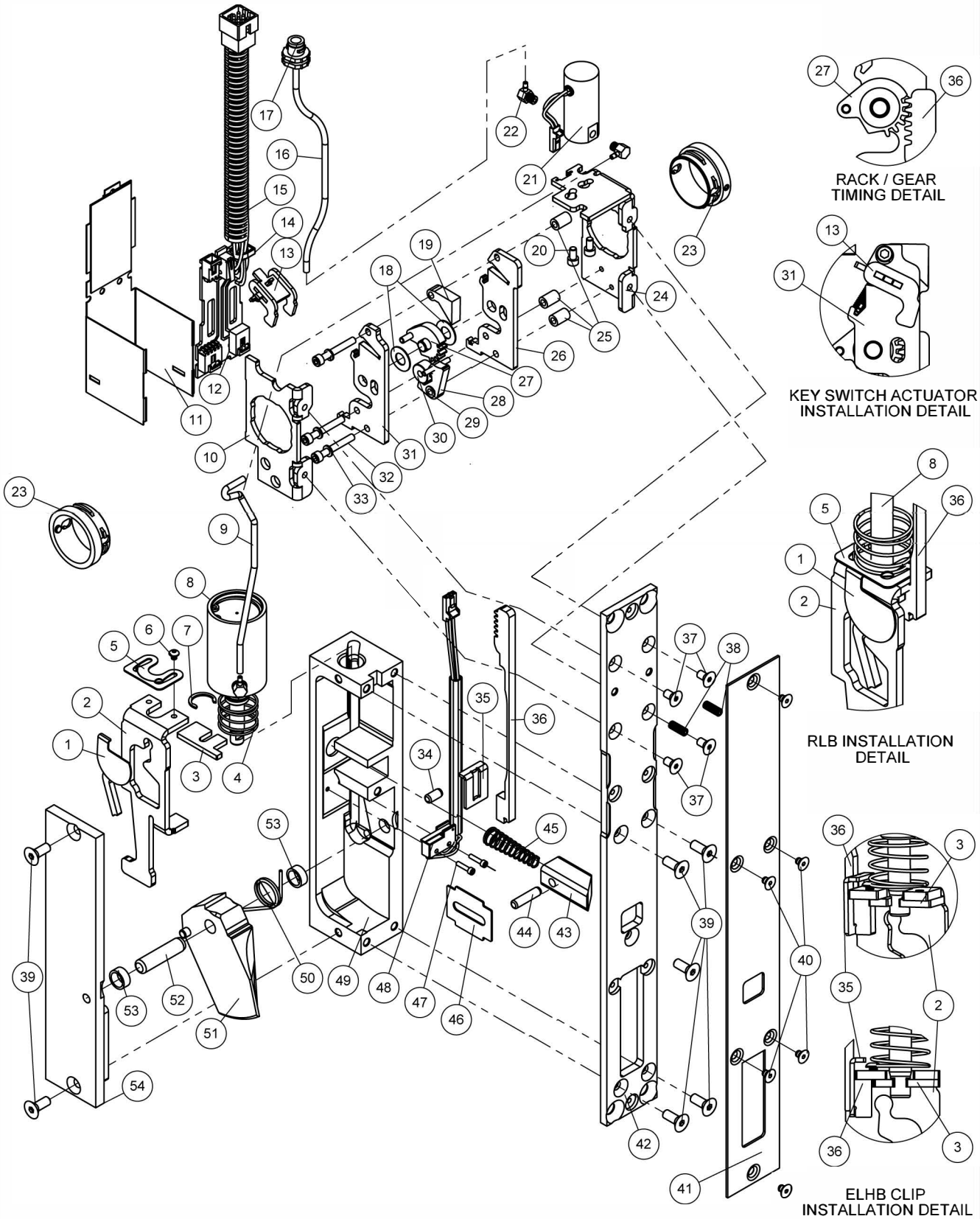
9400D SERIES LOCK

9424 7-24-06



9400D SERIES LOCK

9400 3-28-07

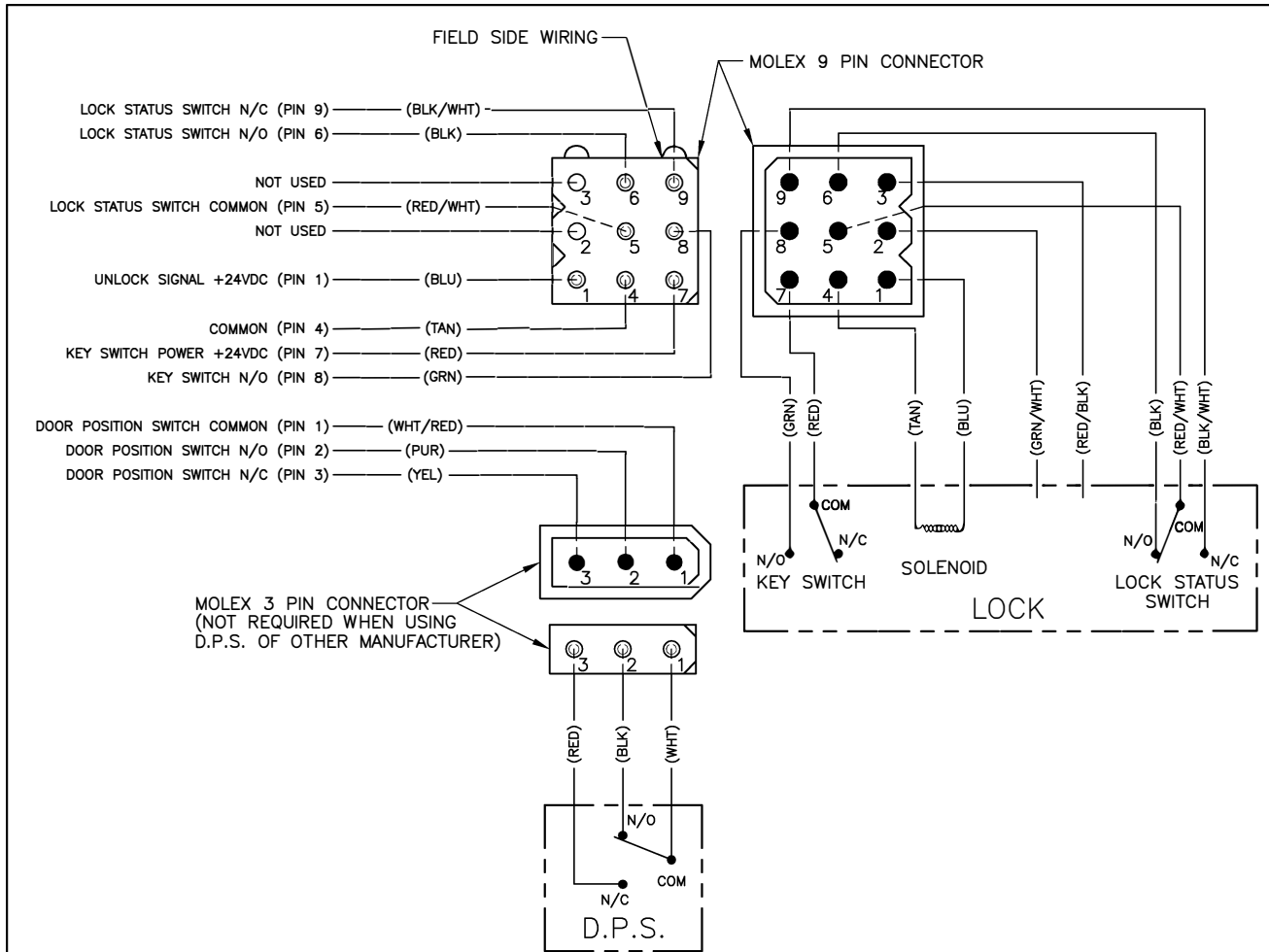




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9400D SERIES LOCK

ITEM NO.	9400D QTY.	PART NUMBER	REQ. FOR FEATURE:	DESCRIPTION	9400 7-24-06
1	1	146-9424-016	RLB	RLB PAWL WELDMENT	
2	1	216-9424-029 216-9424-024	RLB STANDARD	ACTUATOR, RLB (OR) ACTUATOR	
3	1	216-9424-021		MOTOR KEY	
4	1	315-0000-022		ACTUATOR RETURN SPRING	
5	1	216-9424-028	RLB	RLB SPRING	
6	1	310-0440-032	RLB	SCREW, BHCS, 4-40 X 1/8, SS	
7	1	315-0000-020		RETAINING RING, (CRESENT TYPE) IRR #2000-50	
8	1	146-9400-111		AIR CYLINDER ASSEMBLY	
9	1	330-1206-000		TUBING, 1/8 OD X 1/6 ID POLYURETHANE, 5 1/2"	
10	1	216-9400-247		MORTISE CYLINDER PLATE	
11	1	146-9400-112		TOP COVER ASSEMBLY	
12	1	146-9400-101 146-9400-102	STANDARD KEY SWITCH	CIRCUIT BOARD ASSY (OR) CIRCUIT BOARD ASSY W/KEY SWITCH (SHOWN)	
13	1	146-9400-098	KEY SWITCH	KEY SWITCH ASSY D SERIES	
14	1	340-0000-204		CABLE TIE, 4"	
15	1	340-0000-205		5" SPLIT CONVOLUTED TUBING, .343, BLK	
16	1	330-1206-000		TUBING, 1/8 OD X 1/16 ID, POLYURETHANE, 8"	
17	1	330-0000-414		COUPLING HALF (LOCK SIDE)	
18	2	313-0000-072		WASHER, PLASTIC	
19	1	216-9400-284		Air Line Spacer	
20	2	310-0632-006		SCREW, SHCS 6-32 X .250 BLACK	
21	1	331-0000-053		SOLENOID, BARE (Also see <i>Suggested Spares</i>)	
22	2	330-0000-133		FITTING, 10-32 X .078 90 BARB PNEUTRONICS #190-8035	
23	2	146-9400-113		BAYONET LUG ASSY	
24	1	216-9400-248		MORTISE CYLINDER PLATE R.H.	
25	3	319-0000-044		SPACER, 1/4 X 3/8	
26	1	216-9400-241		GEAR SUPPORT PLATE	
27	1	146-9400-097		GEAR ASSY, D SERIES	
28	1	146-9400-099	KLHB	ASSEMBLY, KLHB	
29	1	319-0000-045		SPACER 1/4 X 1/4	
30	1	216-9400-256		SPACER .250 X .438 DIA	
31	1	216-9400-285		GEAR SUPPORT PLATE	
32	3	310-0632-010		SCREW, SHCS 6-32 X 1	
33	3	313-0000-088		LOCKWASHER #6	
34	1	316-0000-050		DOWEL PIN, 3/16 X .375	
35	1	216-9400-253	ELHB	ELHB CLIP	
36	1	216-9400-251		RACK	
37	4	310-0832-023		SCREW, FH SOC. 8-32 X 5/16	
38	2	310-0832-015		SET SCREW, 8-32 X .438	
39	7	310-0000-009		SCREW, 10-32 X .500 FLAT HEAD SOCKET	
40	6	311-0632-018	QTY. 8 GR. 1	SCREW, TORX,6-32X3/16, UNDCUT HD SST	
41	1	216-9400-149 216-9400-203	STANDARD GRADE 1	FACEPLATE (SHOWN) (OR) FACE PLATE GRADE 1	
42	1	216-9400-252 146-9400-103	STANDARD GRADE 1	MOUNTING PLATE (SHOWN) (OR) MOUNTING PLATE GRADE 1	
43	1	216-9400-008		DEADLATCH	
44	1	316-0000-038		DOWEL PIN, 3/16 X .750	
45	1	315-0000-023		DEADLATCH SPRING	
46	1	216-9400-047		RETAINER	
47	2	310-0000-014		SCREW, SHCS 2-56 X .375 BLACK	
48	1	160-9400-023		LOCK STATUS SWITCH ASSY	
49	1	216-9400-238		LOCK BODY	
50	1	216-9400-022		TORSION SPRING	
51	1	146-9400-104 146-9400-105	LH RH	LATCHBOLT ASSEMBLY, LH (OR) LATCHBOLT ASSEMBLY, RH (SHOWN)	
52	1	316-0000-063		DOWEL PIN, 5/16 X 1.250	
53	2	216-9400-026		SPACER LATCHBOLT	
54	1	146-9400-065		SIDE PLATE WELDMENT	
55	1	330-0000-415		FEM QTR-TURN DISC .125-.188 KENT (FIELD SIDE, NOT SHOWN)	



REVISIONS				
REV	ECN	DESCRIPTION	DRAWN	CHK
01	2460	ADDED NOTE READING, "NOT REQUIRED WHEN USING D.P.S. OF OTHER MANUFACTURER)	DEE 8/1/00	
02	2468	MOVED YELLOW WIRE ON DPS FROM PIN 1 TO PIN 3; MOVED WHITE/RED WIRE ON DPS FROM PIN 3 TO PIN 1	DEE 2/14/01	
03	2572	SEE ECN	DEE 2/7/03	

- NOTES:
- SOLENOID LOAD: 24VDC \pm 2V, 1.5W MAX.
 - SWITCH CONTACTS: 5A.
 - SCHEMATIC SHOWN WITH DOOR IN THE CLOSED AND LOCKED (SECURE) POSITION.
 - PLUGS AND RECEPTACLES INSIDE LOCK NOT SHOWN.
 - FOR SERIES LOCK STATUS AND DOOR POSITION SWITCH OPERATION, CONNECT BLACK AND PURPLE WIRES IN FIELD SIDE WIRING.
 - 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.

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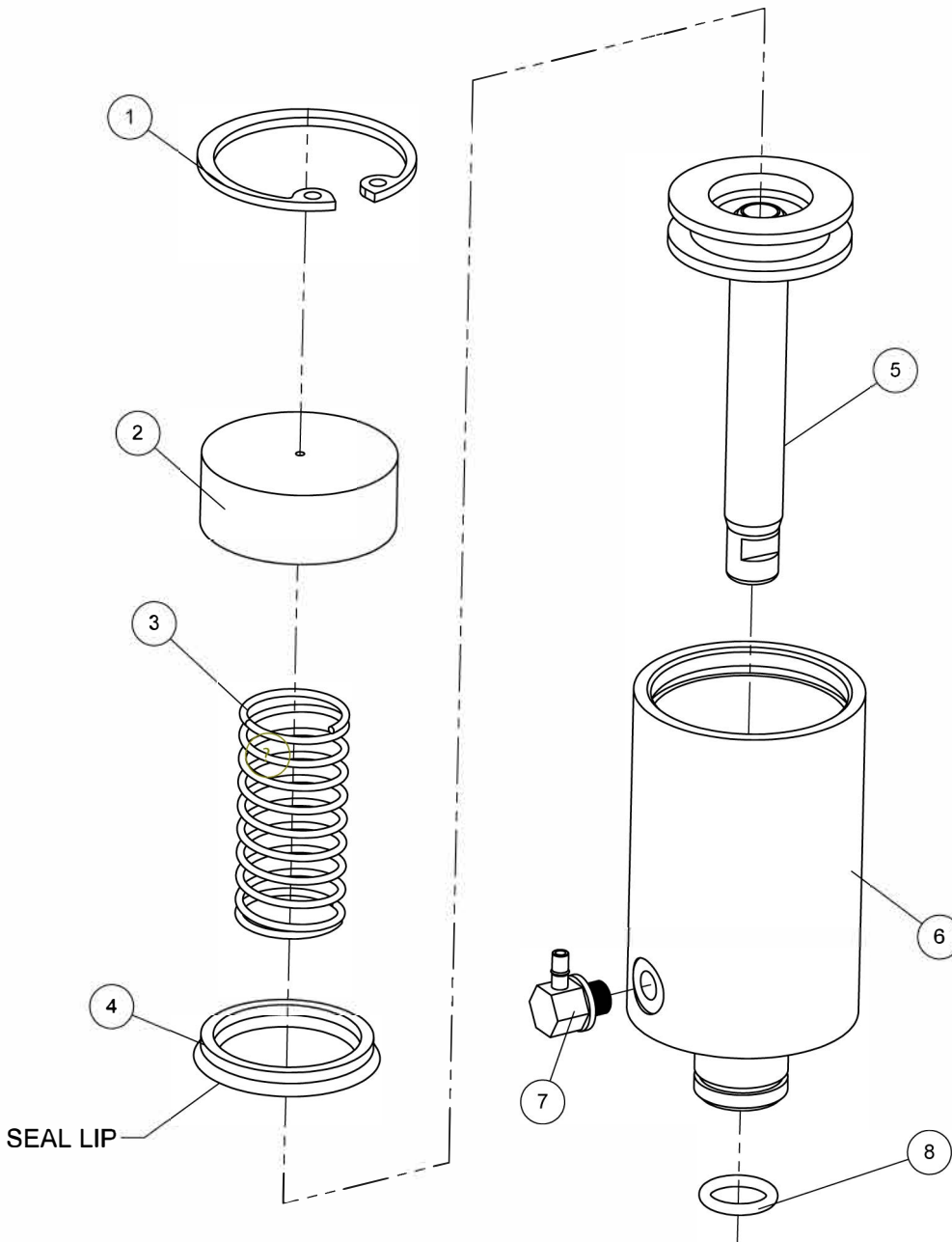
TITLE WIRING DIAGRAM		DRAWN BY SAB	
9400D, 9500D, & 9600		APPROVED	
AIR LOCK		DATE 8-27-99	
		SCALE NONE	
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9400 AIR CYLINDER PARTS

ITEM NO.	QTY	PART NUMBER	DESCRIPTION	9400 3-26-05
1	1	315-0000-035	RETAINING RING, TRUARC #N5000-106	
2	1	216-9400-167	CAP, AIR CYLINDER	
3	1	216-9400-138	ACTUATOR RETURN SPRING	
4	1	313-0000-082	PISTON SEAL, PARKER #8404-0075	
5	1	146-9400-095	ASSY, PISTON AND ROD	
6	1	216-9400-168	CYLINDER	
7	1	330-0000-133	FITTING, 10-32 X .078 90 BARB	
8	1	313-0000-081	O-RING, PARKER # 2-011	

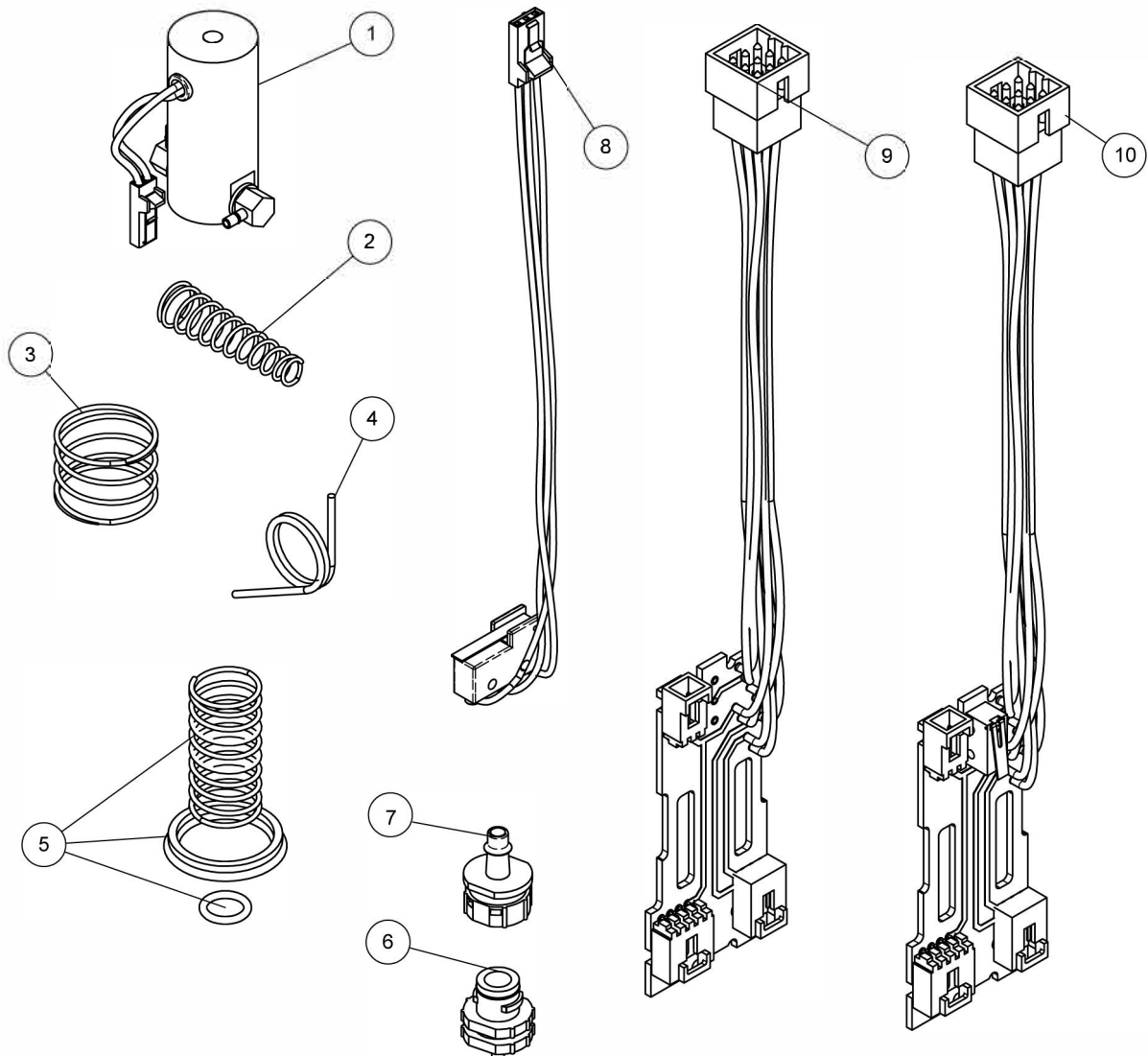




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9400D RECOMMENDED SPARE PARTS

ITEM NO.	PART NUMBER	DESCRIPTION	9400 8-24-05
1	146-9400-110	SOLENOID ASSEMBLY D SERIES	
2	315-0000-023	DEADLATCH SPRING	
3	315-0000-022	ACTUATOR RETURN SPRING	
4	216-9400-022	TORSION SPRING	
5	400-9400-000	REPAIR KIT, 9400 AIR CYLINDER (INCLUDES SPING, O-RING, PISTON SEAL, AND LUBE)	
6	330-0000-414	COUPLING HALF (LOCK SIDE)	
7	330-0000-415	COUPLING HALF (FIELD SIDE)	
8	160-9400-023	LOCK STATUS SWITCH ASSY	
9	146-9400-101	CIRCUIT BOARD ASSY	
10	146-9400-102	(OR) CIRCUIT BOARD ASSY W/KEY SWITCH	





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 45° 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	<ul style="list-style-type: none"> *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	<ul style="list-style-type: none"> *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	<ul style="list-style-type: none"> *AIR PRESSURE TO LOCK *MECHANICAL INTERFERENCE *FAULTY OR CONTAMINATED SOLENOID VALVE
MANUAL OVERRIDE NOT WORKING PROPERLY	<ul style="list-style-type: none"> *MECHANICAL INTERFERENCE *PROPER ENGAGEMENT OF KEY CYLINDER CAM IN LOCK
DOOR POSITION SIGNAL NOT GIVEN	<ul style="list-style-type: none"> *BROKEN OR LOOSE WIRING (SEE WIRING DIAGRAM)
LATCHBOLT POSITION SIGNAL NOT GIVEN	<ul style="list-style-type: none"> *BROKEN OR LOOSE WIRING (SEE WIRING DIAGRAM)