A Division of Norment Security Group

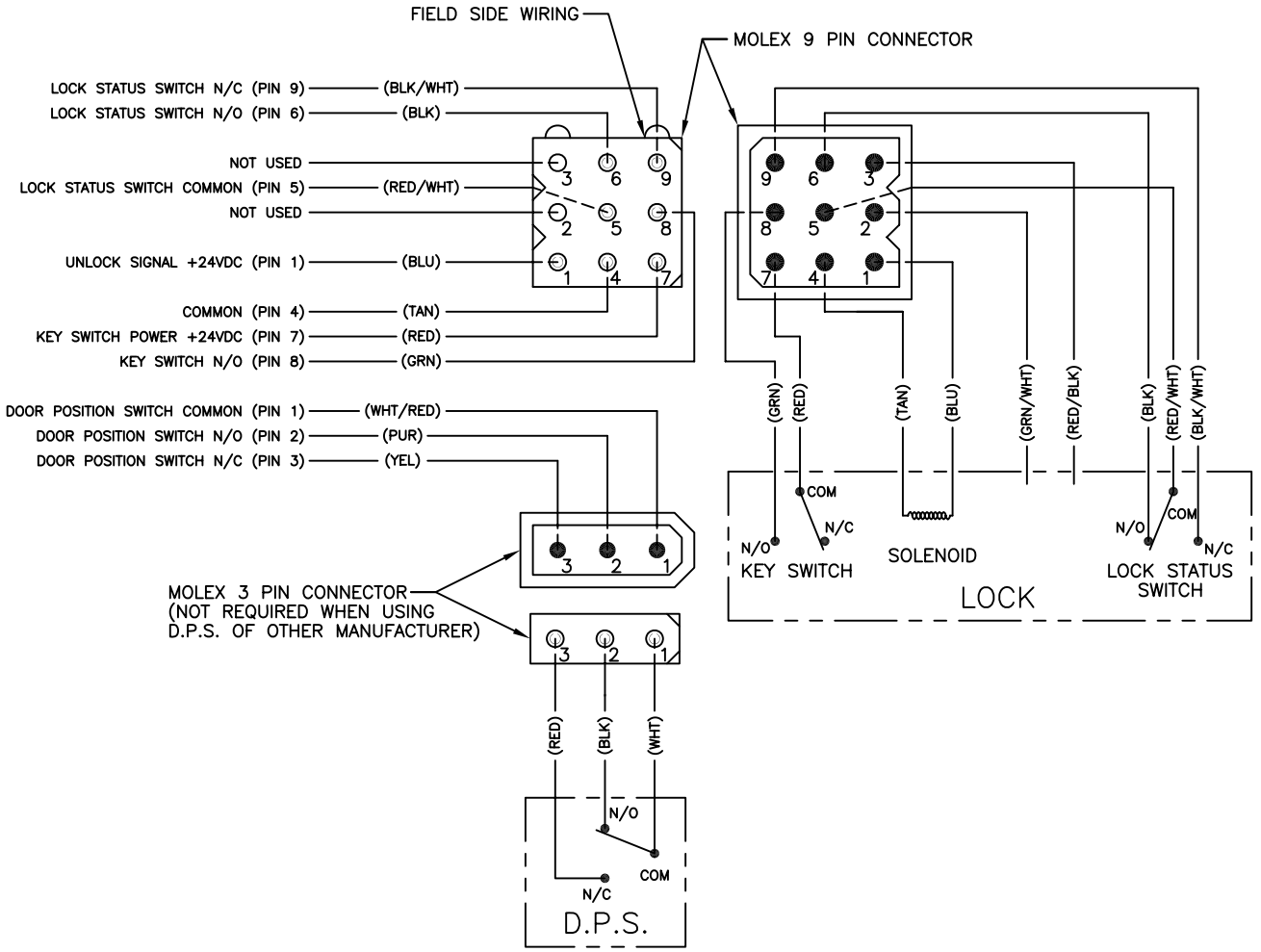
AIRTEQ SYSTEMS

A Division of Norment Security Group

9500D SERIES LOCK

9500D 4-28-06

Remote controlled 2" jamb internal latchbolt lock.
Mortise key release
For swing door or sliding doors



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	
04	2738	ADD "CHECK CONTINUITY BETWEEN WHT/RED AND RED/WHT" TO NOTE 6	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 9400D, 9500D, & 9600 AIR LOCK	DRAWN BY SAB
	APPROVED
	DATE 8-27-99
	SCALE NONE

SIZE	DWG. NO.	REV
B	EL-0078	04

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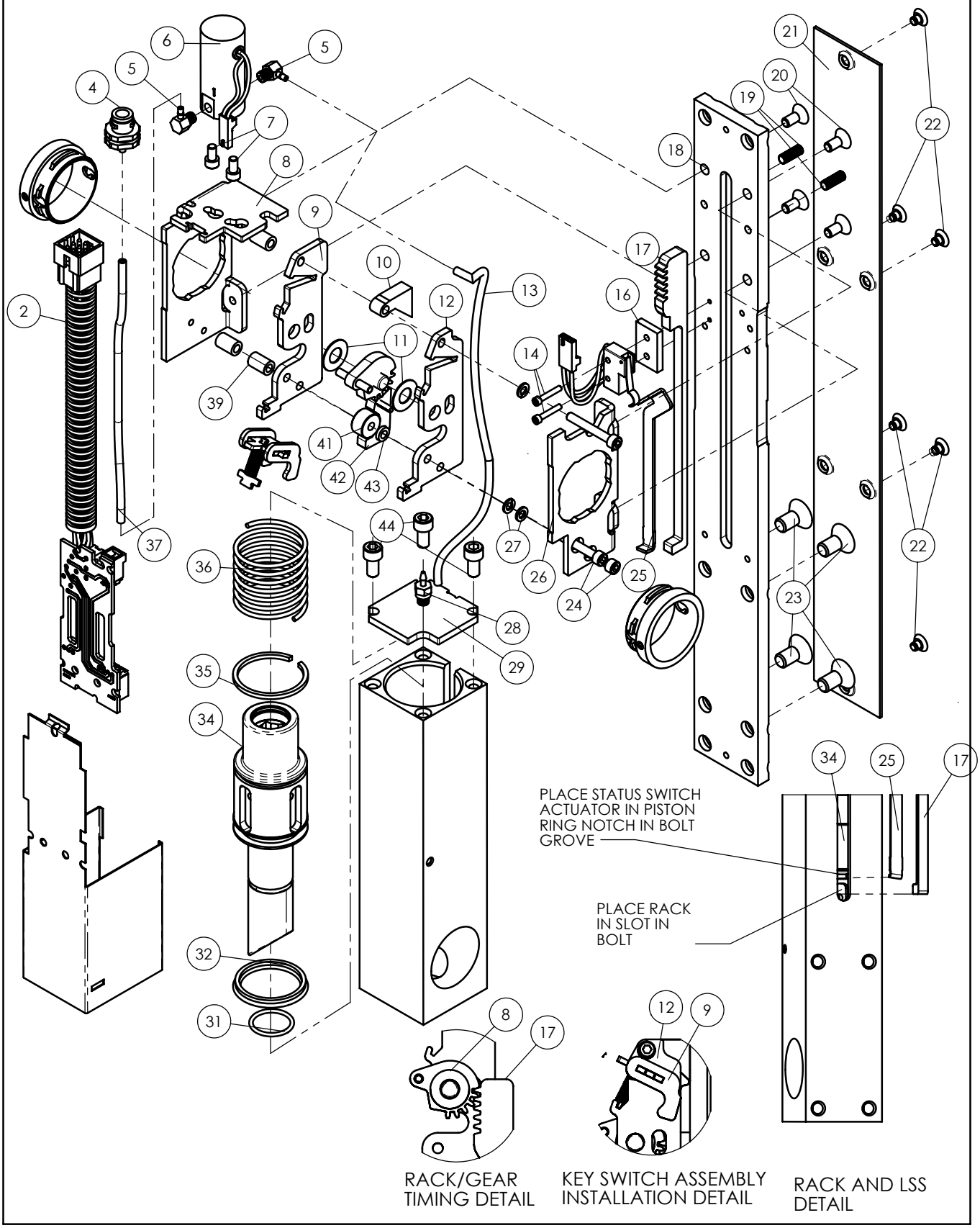
9500D SERIES LOCK

9500D2-13-07



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9500D SERIES LOCK

9500D 5/1/06

ITEM NO.	QTY	PART NUMBER	REQ. FOR FEATURE:	DESCRIPTION
1	1	146-9400-102 146-9400-101	KEY SWITCH STANDARD	CIRCUIT BOARD ASSY W/KEY SWITCH (SHOWN) (OR) CIRCUIT BOARD ASSY
2	1	340-0000-205		5" SPLIT CONVOLUTED TUBING, .343, BLK
3	2	146-9400-113		BAYONET LUG ASSY
4	1	330-0000-414		COUPLING HALF (LOCK SIDE)
5	2	330-0000-133		FITTING, 10-32 X .078 90 BARB PNEUTRONICS #190-8035
6	1	331-0000-053		SOLENOID D SERIES
7	2	310-0632-006		SCREW, SHCS 6-32 X .250 BLACK
8	1	216-9400-248		MORTISE CYLINDER PLATE R.H.
9	1	216-9400-241		GEAR SUPPORT PLATE
10	1	216-9400-284		Air Line Spacer
11	2	313-0000-072		WASHER, PLASTIC
12	1	216-9400-285		GEAR SUPPORT PLATE
13	1	330-1206-000		TUBING, 1/8 ODX 1/6 ID POLYURETHANE
14	2	310-0256-000		SCREW, SHCS 2-56 X .500 BLACK
15	1	160-9500-005		ASSY, LOCK STATUS SWITCH, D SERIES
16	1	216-9500-122		SPACER, LOCK STATUS SWITCH
17	1	216-9500-130		RACK, 95D
18	1	216-9524-006 146-9500-135 216-9500-091	STANDARD GRADE 1 SLIDING DOOR	MOUNTING PLATE "D" SERIES (SHOWN) (OR) MOUNTING PLATE, GRADE 1 (OR) MOUNTING PLATE, SLIDING DOOR
19	2	310-0832-015		SET SCREW, 8-32 X .438
20	4	310-0832-026		SCREW, 8-32 X .375 FH BLACK
21	1	216-9500-023 216-9500-101 216-9500-067	STANDARD GRADE 1 SLIDING DOOR	FACEPLATE (SHOWN) (OR) FACEPLATE, GRADE 1 (OR) FACEPLATE, SLIDING DOOR
22	6	311-0632-018	QTY. 8 GRADE	1 SCREW, TORX,6-32X3/16, UNDCUT HD SST
23	4	310-2520-019		SCREW, FH SOCKET 1/4-20 X .500
24	3	310-0632-010		SCREW, SHCS 6-32 X 1
25	1	216-9500-142		STATUS SWITCH ACTUATOR
26	1	216-9400-247		MORTISE CYLINDER PLATE
27	3	313-0000-088		LOCKWASHER #6
28	1	330-0000-086		FITTING, 10-32 X 1/16 BARB
29	1	216-9500-119		TOP COVER
30	1	146-9500-086 146-9500-087	STANDARD SLIDING DOOR	LOCK BODY ASSEMBLY (SHOWN) (OR) LOCK BODY, SLIDING DOOR
31	1	313-0000-050		O-RING, 2-016 VITON, 70D
32	1	313-0000-116		SEAL, U-CUP, PARKER #8504-0100-4180 BONAN
33	1	146-9500-132		TOP COVER ASSEMBLY
34	1	216-9500-120 146-9500-134	STANDARD ELHB	LATCHBOLT (SHOWN) (OR) ASSY, LATCHBOLT ELHB
35	1	313-0000-052		PISTON RING, 1.25 X .070 DYNAMIC SEALS TFE-S-4
36	1	216-9524-011		COMPRESSION SPRING
37	1	330-1206-000		TUBING, 1/8 ODX 1/16 ID, POLYURETHANE, 8"
38	1	146-9400-098	KEY SWITCH	KEY SWITCH ASSY D SERIES
39	3	319-0000-044		SPACER, 1/4 X 3/8
40	1	146-9400-097		GEAR ASSY, D SERIES
41	1	216-9400-256		SPACER .250 X .438 DIA
42	1	146-9400-099	KLHB & ELHB	ASSEMBLY, KLBH
43	1	319-0000-045		SPACER 1/4 X 1/4
44	3	310-1032-003		SCREW, SHCS 10-32 X .375 BLACK
45	1	330-0000-415		COUPLING HALF (FIELD SIDE)

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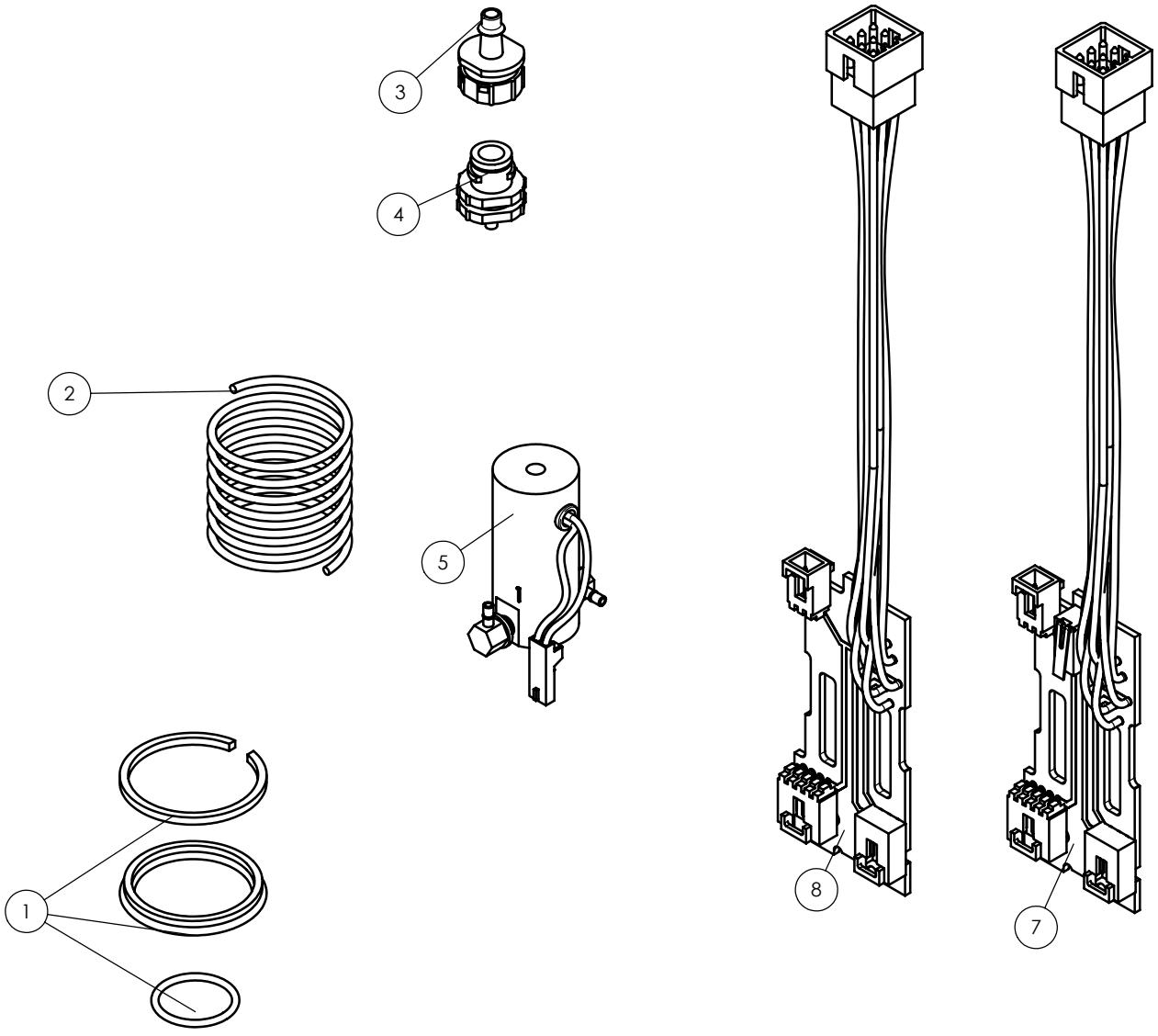
9500D RECOMMENDED SPARE PARTS

9500D 5-1-06

ITEM NO.	PART NUMBER	DESCRIPTION
1	400-9500-001	SEAL KIT 9500 LOCK (INCLUDES SEALS AND O RING SHOWN AND LUBE)
2	216-9524-011	COMPRESSION SPRING
3	330-0000-415	COUPLING HALF (FIELD SIDE)
4	330-0000-414	COUPLING HALF (LOCK SIDE)
5	146-9400-110	SOLENOID ASSEMBLY D SERIES
6	160-9500-005	ASSY, LOCK STATUS SWITCH, D SERIES
7	146-9400-102	CIRCUIT BOARD ASSY W/KEY SWITCH
8	146-9400-101	(OR) CIRCUIT BOARD ASSY



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AIRTEQ SYSTEMS

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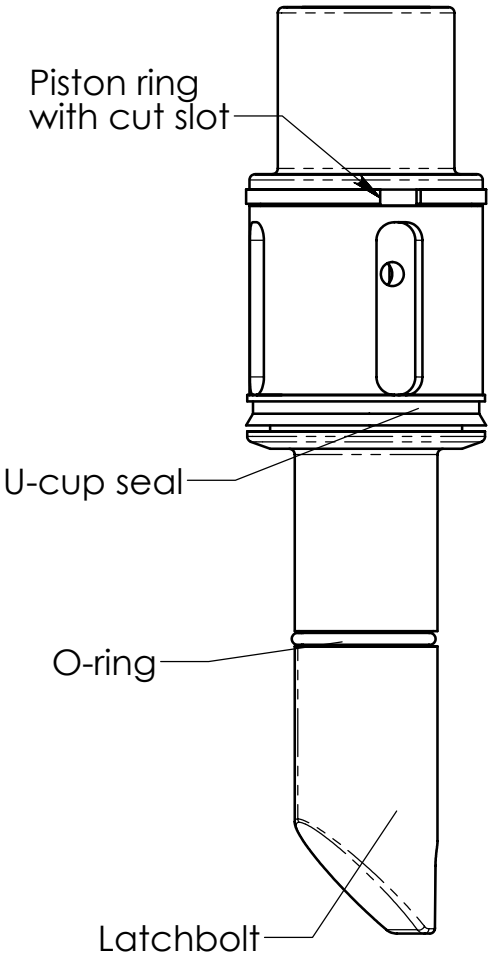
9500 LOCK LUBRICATION/SEAL REPLACEMENT

9500D 5-2-06

LOCK LUBRICATION

The 9500D Series Lock is lubricated at the factory and will require periodic lubrication depending on environmental conditions and frequency of operation. In general, cleaning and lubrication will be required at least once a year if lock is used fifty times or more per day. If the locks is used less than fifty times per day, clean and lubricate at least once every two years.

Lubrication is also required when replacing the lock seals. Lock seals should last approximately 5 years under normal operating conditions. If seals need replacing a seal replacement kit is available (AIRTEQ PART NUMBER 400-9500-001).



LOCK SEAL REPLACEMENT

1. Remove latchbolt from lock body and remove old piston ring, O-ring and u-cup seal.
2. Carefully clean latchbolt and lock body bores with solvent. DO NOT scratch piston or lock body bores.
3. After parts are clean, lightly lubricate new O-ring and seal with lubricant provided and install on latchbolt. Cut a 1/4" slot in new piston ring and install on latchbolt with slot facing mounting plate.
4. Lightly lubricate the lock body bores with lubricant provided. Carefully insert latchbolt assembly into lock body. DO NOT tear the O-ring as it enters the bores or passes by the notch in lock body. DO NOT scratch lock body bores.
5. Reassemble lock and check for proper operation.

NOTE:
Lubricant provided is SYNCO SUPER LUBE WITH TEFLON. Use only approved lubricant.

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 SOLENOID 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)