ADDENDUM NO. 1

Date: June 4, 2018

Project: Eldora State Training School for Boys
Upgrade Door Control System
DAS RFP 0218335038
DAS Project 9038.00

GENERAL CLARIFICATIONS:

1. Within the RFP, edit the first paragraph of Section 1.3 by striking “twenty-four (24)” and replacing it with “twenty-five (25)”.

2. Throughout the design process, a concern that the Facility asks the Design Professional to keep in mind is that the proposed control screen is in an open area, not in a secured control room.

3. The Facility desires the proposed system to have the ability to control individual doors, groups of doors simultaneously, and all door simultaneously depending on the circumstances at any given time.

4. The Facility desires the proposed system control screen to indicate the status of each lock.

5. The proposed system does not need to have the ability to be expandable.

QUESTIONS AND ANSWERS FROM THE PRE-BID MEETING:

Q1. What is the current lock make and model?
A1. Please see the attached information on the locks.

Q2. Are drawings available of the building?
A2. PDF files of the original building construction are available, but ACAD files are not.

Q3. Will the new system be required to tie into the building automation system or the fire alarm system?
A3. No. The system is intended to be standalone.

ATTACHMENTS:

1. Pre-Proposal Meeting Sign-In Sheet
2. Folger Adam NS400E Lock Information
3. R.R. Brink 5020M Lock Information

END OF ADDENDUM

State Training School for Boys
Upgrade Door Control System @ Corbett-Miller Building
Eldora, Iowa

Pre-Proposal Meeting
May 30, 2018

STORY CONSTRUCTION

Sign-in Sheet

Name	Company	Email Address	Telephone
Troy Turner	Story Construction Co.	TURNER@STORYCON.COM	515. 291. 9889
Vinnie Mendez	Bluestone Eng.	MENDEZV@BLUESTONEMER.COM	515-727-0700
Mike Boege	STS	mboege@dhs.state.ia.us	641-751-5030
Jon Kies	STS	jkies@dhs.state.ia.us	641-858-5202
Jennifer Kleene	DAS	Jennifer.Kleene@iowa.gov	515-725-0454
Bret Lawrence	STS	blawren@dhs.state.ia.us	641 858-5402

Key: Builders Hardware
Door: Swinging
Security Level: Minimum/Medium

Lock Used for 24 Rooms

NS400E

SOLENOID-OPERATED DEADLATCHES

Description

NS400E Series Deadlatches are pin tumbler, solenoid-operated locks for swinging doors. Specify builders hardware cylinders and keying as follows:

NS402E & NS402EFS
Keyed one side

NS406E & NS406EFS
Keyed both sides

Note: See optional features for factory or customer-supplied key cylinders. For models NS400E and NS400EFS, no cylinders are supplied.

Applications

Specify for minimum/medium security swinging cell, corridor or administration areas of institutions with 2" wide hollow metal jamb construction.

Operations

A remote switch is used to control the lock electrically, or it may be operated mechanically by builders hardware cylinder. These locks offer the convenience of remote, electric unlocking or locking and automatic deadlocking when the door is closed.

Fail-Safe Models

Unlock when solenoid is de-energized (1): by switch or power failure, and the latch remains retracted while the door is open. Upon closure, with power restored, the latchbolt extends and deadlocks.

Non-Fail-Safe Models

Unlock when solenoid is energized (1): by a momentary-contact switch. Latchbolt remains retracted mechanically until the door is opened. Upon closure, the latchbolt extends automatically (mechanical latchback).

Unlock when solenoid is energized (2): by a momentary-contact switch. Latchbolt is electrically held retracted only as long as control switch is tripped (no mechanical latchback). The door must be opened while control switch is in the unlocked position. Upon closure, the latchbolt deadlocks automatically. Continuous-duty feature is standard to hold bolt retracted for extended periods (no latchback, continuous-duty power modulator).

Unlock when solenoid is energized (3): by a momentary-contact switch. Latchbolt is held electrically retracted until door is opened, then it extends automatically (electric holdback).

Standards Compliance

- **All deadlatch models UL1034 –** Burglary-resistant electric deadbolts.
- **Non-fail-safe models, UL10B –** Electrically controlled single point locks or latches, three-hour rating, A label.
- ASTM F-1577 Grade 1 Impact

Standard Features

- **Instant solenoid actuation –** Heavy duty solenoid provides fast, audible latchbolt operation.
- **Fail-safe model operation –** Solenoid holds latchbolt extended and deadlocked.
- **Compact size –** Designed for hollow metal frames with standard 2" face.

UL LISTED

- **Power modulator –** Allows solenoid models to operate on either 24VAC or 24VDC - reduces power consumption. UL listed and patented (Pat. No. 4,797,779).
- **Two-piece, twelve-pin plug connector –** Simplifies wiring, allows pre-wiring of the lock opening.
- **Heavy duty lock mechanism –** Designed with heavy duty, corrosion-resistant working parts tested over 1,000,000 cycles.
- **Stainless steel strike –** Angled lip-type, furnished with tamper-resistant screws. Requires less force to close and lock the door.
- **Mechanical latchback (Model NS400E-01) –** Holds latchbolt retracted until door opens. Not available in fail-safe models.
- **Mechanical unlocking by key –** Offers manual control at the door in event of power failure or at any other time.
- **Stainless steel latchbolt –** 3/4" throw, hardened to resist sawing.

For more information, please call 210.533.1231.

Key: Builders Hardware
Door: Swinging
Security Level: Minimum/Medium

NS400E

SOLENOID-OPERATED DEADLATCHES

- **Holdback switch (Models NS400EFS, NS400E with electrical holdback) –** Maintains electrical holdback. Requires a relay in the central control console.
- **Finish –** US32D satin stainless steel.
- **Indication switch –** An internal switch to monitor the positions of the deadlock actuator. Signals deadlocked condition.

Optional Features

- **Builders hardware cylinders –** High security six-pin tumbler cylinder may be specified. Special keying requests will be accommodated, if possible.

NOTE: Customer-supplied key cylinders may be used to adapt NS400 Series locks to a specific keying system. These cylinders must have:
a) 1-5/32" diameter, full bar stock bodies.
b) 1-1/8" length, including cam.
c) Standard, removable Yale-type cam.
Cylinders and all keys should be sent to Southern Folger Detention Equipment Company and are required with cylinder extenders.

- **Local electric key (LEK) –** Inmate key operates lock electrically. Staff keys always operate the lock manually and can operate it electrically. Feature is enabled or canceled from a remote control console.

NOTE: When key cylinders for LEK are supplied by customer, contact factory before ordering or sending cylinders.

- **Inmate push button –** Allows operation of the lock from inside the room or cell. May be canceled from central control console. A double-pole, double-throw switch is available for additional functions.
- **Key cylinder extension –** Required when lock is keyed on the stop side of the door frame. Five standard lengths are offered:

Jamb Size	Cylinder Extension
4-1/2" – 5"	4-3/4"
5" – 6"	5-3/4"
6" – 7"	6-3/4"
7" – 8"	7-3/4"
8" – 9"	8-3/4"

NOTE: Please specify appropriate cylinder extension length when ordering. Special lengths may be provided for other jamb thicknesses. Contact factory for pricing and availability.

- **Finish –** Key Cylinder: US26D

Specifications

- **Lock case –** Investment-cast stainless steel.
- **Latchbolt –** Investment-cast stainless steel hardened.
- **Latchbolt throw –** 3/4"
- **Operating lever –** Stainless steel.
- **Deadbolt lever/trigger bolt –** Investment-cast stainless steel.
- **Strike –** Stainless steel stamping, angled lip.

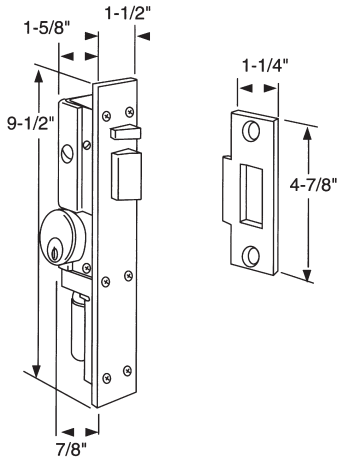
Electrical Characteristics

- **Solenoid –** Tubular, continuous-duty power modulator.
- **Voltage –** 24 VAC or DC, 3.3 amps, 82 watts inrush; .25 amps 6 watts seated.
- **Indication switch –** SPDT, UL listed.
- **Switch rating –** 5 amp @ 125 or 250 VAC.

Dimensional Data

Note: Dimensions are for information and planning purposes only, and should not be used as templates.

For complete details, see How to Specify in this section.



Feature/Option Chart

MODEL	OPERATION	INDICATION SWITCH	LATCHBACK			OPERATIONAL SWITCH HOLDBACK	LEK OPTION	CONTINUOUS DUTY MODULATOR
			WITH	WITHOUT	ELECTRIC			
NS400E-01	1	•	•				Available	Standard
NS400E-04	2	•		•			Available	Standard
NS400E-07	3	•			•	•	Available	Standard
NS400EFS-04	1	•		•		•	Available	Standard

P.O. Box 2021, San Antonio, TX 78297 ■ Ph: 210.533.1231 ■ Fx: 210.533.2211
Web: www.SouthernFolger.com ■ Email: info@southernfolger.com

Key: Builders Hardware
Door: Swinging
Security Level: Minimum/Medium

NS400M and 400MC
MOTOR-OPERATED DEADLATCHES

Description

NS400M and NS400MC Series Deadlatches are pin tumbler, motor-operated locks for swinging doors. Specify builders hardware cylinders and keying as follows:

NS402M/MC	Keyed one side
NS406M/MC	Keyed both sides

Note: See optional features for factory or customer-supplied key cylinders. For Models NS400M and NS400MC, no cylinders are supplied.

Applications

Specify for minimum/medium security swinging cell, corridor or administration areas of institutions, with 2" wide hollow metal jamb construction.

Operations

A remote switch is used to control the lock electrically, or may be operated mechanically by a builders hardware key cylinder. These locks offer the convenience of remote, electric unlocking or locking and automatic deadlocking when the door is closed.

Motor-Actuated Models

Unlock when the motor is energized (1): by a momentary-contact switch. Latchbolt is held mechanically retracted until the door is opened. It then extends automatically (mechanical latchback).

Two-Position Motor Actuated Models

Lock or unlock when the motor is energized (1): by either a two or three-position maintained-contact switch, or by a three-position, momentary-contact switch. When unlocked by control switch, latchbolt remains retracted by motor position until control switch is set to lock. Latchbolt is held mechanically retracted until the door is opened. It will then extend automatically, if the control switch is set to the lock position (mechanical latchback).

Lock or unlock when the motor is energized (2): by either a two or three-position maintained-contact switch, or a three-position momentary-contact switch. Latchbolt then remains retracted until selected to lock. Opening and closing the door has no effect on the lock (no latchback).

Unlock when the motor is energized (3): by a momentary contact switch. A relock switch energizes the motor to relock once the door is open. On closure, the latchbolt deadlocks automatically (no latchback with relock).

Standards Compliance

- **All deadlatch models, UL1034 –** Burglary-Resistant Mechanisms.
- **All models (except two-position motor actuated), UL10B –** Electrically controlled single point locks or latches, three-hour rating, A label.
- ASTM F-1577 Grade 1 Impact

Standard Features

- **300 lb. rated side load motor operation (Models NS400M, NS400MC) –** Preclude jamming by applying side pressure on the door.
- **Compact size –** Designed for hollow metal frames with standard 2" face.
- **Two-piece, twelve-pin plug connector –** Simplifies wiring, allows pre-wiring of the lock opening.

UL LISTED

- **Heavy-duty lock mechanism –** Designed to complement the high torque motor. Corrosion resistant working parts tested over 1,000,000 cycles.
- **Stainless steel strike –** Angled lip type, furnished with tamper resistant screws. Requires less force to close and lock the door.
- **Mechanical latchback (Models NS400M, NS400MC) –** Holds latchbolt retracted until door opens.
- **Mechanical unlocking by key –** Offers manual control at the door in event of power failure, or at any other time.
- **Stainless steel latchbolt –** 3/4" throw, hardened to resist sawing.
- **Relock switch (Model NS400MC) –** Repositions motor to relock when door is opened.
- **Finish –** Key Cylinder: US32D.

For more information, please call 210.533.1231.

Key: Builders Hardware
Door: Swinging
Security Level: Minimum/Medium

NS400M and 400MC

MOTOR-OPERATED DEADLATCHES

- **Indication switch –** An internal switch to monitor the positions of the deadlock actuator. Signals deadlocked condition.

Optional Features

- **Builders hardware cylinders –** High security six-pin tumbler cylinder may be specified. Special keying requests will be accommodated, if possible.

  Note: Customer supplied key cylinders may be used to adapt NS400 Series locks to a specific keying system. These cylinders must have:
  a. 1-5/32" diameter, full bar stock bodies.
  b. 1-1/8" length, including cam.
  c. Standard, removable Yale-type cam.

  Cylinders and all keys should be sent to Southern Folger Detention Equipment Company and are required with cylinder extenders.

- **Local electric key (LEK) –** Inmate key operates lock electrically. Staff keys always operate the lock manually and can operate it electrically. Feature is enabled or canceled from a remote control console.
- **Inmate push button –** Allows operation of the lock from inside the room or cell. May be canceled from central control console. A double pole, double throw switch is available for additional functions.
- **Key cylinder extension –** Required when lock is keyed on the stop side of the door frame. Five standard lengths are offered:

Jamb Size	Cylinder Extension
4-1/2" – 5"	4-3/4"
5" – 6"	5-3/4"
6" – 7"	6-3/4"
7" – 8"	7-3/4"
8" – 9"	8-3/4"

NOTE: Please specify appropriate cylinder extension length when ordering. Special lengths may be provided for other jamb thicknesses. Contact factory for pricing and availability.

- **Finish –** Key Cylinder: US26D.

Specifications

- **Lock case –** Investment-cast stainless steel.
- **Latchbolt –** Investment-cast stainless steel hardened.
- **Latchbolt throw –** 3/4"
- **Operating lever –** Stainless steel.
- **Deadbolt lever/trigger bolt –** Investment-cast stainless steel.
- **Strike –** Stainless steel stamping, angled lip.

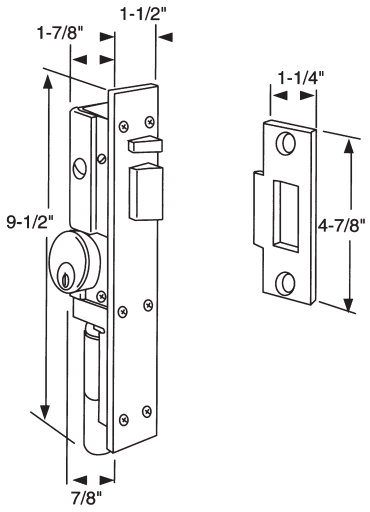
Electrical Characteristics

- **Motor –** High-torque, permanently lubricated, permanent magnet, planetary gearmotor, UL Listed.
- **Voltage –** 24 VDC, operates on 24 VAC via rectifier 0.12 Amps running, 1.29 amps stalled.
- **Indication switch –** SPDT, UL listed.
- **Switch rating –** 5 amp @ 125 or 250 VAC.

Dimensional Data

Note: Dimensions are for information and planning purposes only, and should not be used as templates.

For complete details, see How to Specify in this section.



Feature/Option Chart

MODEL	OPERATION	INDICATION SWITCH	LATCHBACK		OPERATIONAL SWITCH HOLDBACK	LEK OPTION	CONTINUOUS DUTY MODULATOR
			WITH	WITHOUT			
NS400M-01	1	•	•			Available	No
NS400MC-01	1	•	•			No	No
NS400MC-04	2	•		•		No	No
NS400MC-09	3	•		•	•	Available	No

P.O. Box 2021, San Antonio, TX 78297 ■ Ph: 210.533.1231 ■ Fx: 210.533.2211
Web: www.SouthernFolger.com ■ Email: info@southernfolger.com

Key: Builders Hardware
Door: Swinging
Security Level: Minimum/Medium

NS400MCD

MOTOR-OPERATED DEADBOLTS

Description

NS400MCD is a pin tumbler, two-position motor-operated deadbolt for swinging doors. Specify builders hardware cylinders and keying as follows:

NS402MCD	Keyed one side
NS406MCD	Keyed both sides

Note: See optional features for either factory or customer-supplied key cylinders. Model NS400MCD, no cylinder supplied.

Applications

Specify for minimum/medium security swinging cell or office areas of institutions requiring deadbolt locks for use in 2" wide hollow metal jamb construction.

Operations

Locks or unlocks when motor is energized by either a two or three-position maintained contact switch. Once unlocked, the deadbolt remains retracted until selected to lock. Opening and closing the door have no effect on the lock. Non-fail-safe only. Holdback switch prevents the deadbolt from extending while the door is open. Deadbolt is deadlocked upon closure of the door.

Standards Compliance

- **UL1034 –** Burglary-Resistant Mechanisms.
- ASTM F-1577 Grade 1 Impact

Standard Features

- **300 lb. rated side load motor operation –** Precludes jamming by applying side pressure on the door.
- **Heavy-duty lock mechanism –** Designed to complement the high torque motor. Corrosion-resistant working parts tested over 1,000,000 cycles.
- **Compact size –** Specifically for hollow metal frames with standard 2" face.
- **Two-piece, twelve-pin plug connector –** Simplifies wiring, allows pre-wiring of the lock opening.
- **Stainless steel strike –** Furnished with tamper-resistant screws.
- **Holdback switch –** Does not allow deadbolt to extend while door is open.
- **Mechanical unlocking by key –** Offers manual control at the door in event of power failure, or at any other time.
- **Stainless steel deadbolt –** 3/4" throw, hardened to resist sawing.
- **Faceplate finish –** US32D satin stainless steel.
- **Indication switch –** An internal switch to monitor the positions of the deadlock actuator. Signals deadlocked condition.

Optional Features

- **Builders hardware key cylinders –** High security six-pin tumbler cylinder may be specified. Special keying requests will be accommodated, if possible.

  Note: Customer supplied key cylinders may be used to adapt NS400 Series locks to a specific keying system. These cylinders must have:
  1. 1-5/32" diameter, full bar stock bodies.
  2. 1-1/8" length, including cam.

  3. Standard, removable Yale-type cam. Cylinders and all keys should be sent to Southern Folger Detention Equipment Company and are required with cylinder extenders.

UL LISTED

- **Key cylinder extension –** Required when lock is keyed on the stop side of the door frame. Five standard lengths are offered:

Jamb Size	Cylinder Extension
4-1/2" – 5"	4-3/4"
5" – 6"	5-3/4"
6" – 7"	6-3/4"
7" – 8"	7-3/4"
8" – 9"	8-3/4"

Note: Please specify appropriate cylinder extension length when ordering. Special lengths may be provided for other jamb thickness. Contact factory for pricing and availability.

- **Finish –** Key cylinder: US26D.

For more information, please call 210.533.1231.

Key: Builders Hardware
Door: Swinging
Security Level: Minimum/Medium

NS400MCD

MOTOR-OPERATED DEADBOLTS

Specifications

- **Lock case –** Investment-cast stainless steel.
- **Deadbolt –** Investment-cast stainless steel hardened.
- **Deadbolt throw –** 3/4"
- **Deadlock lever/operating lever –** Stainless steel.
- **Strike –** Stainless steel stamping.

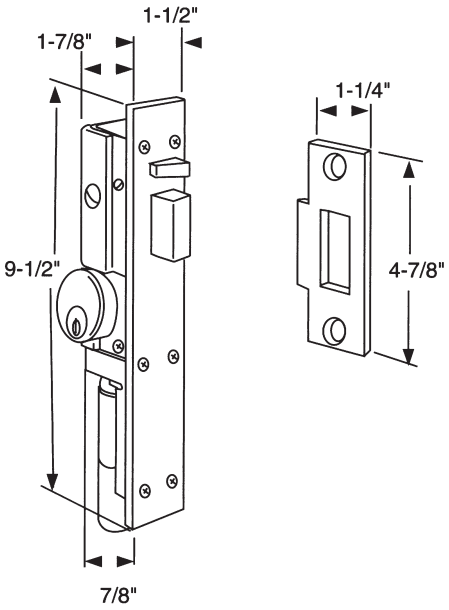
Electrical Characteristics

- **Motor –** High-torque, permanently lubricated, permanent magnet, planetary gearmotor, UL Listed.
- **Voltage –** 24VDC or 24VAC 0.12 running, 1.29 amps stalled.
- **Indication switch –** SPDT, UL listed.
- **Switch rating –** 5 amp @ 125 or 250 VAC.

Dimensional Data

Note: Dimensions are for information and planning purposes only, and should not be used as templates.

For complete details, see How to Specify in this section.



Feature/Option Chart

MODEL	OPERATION	INDICATION SWITCH	LATCHBACK WITHOUT	LEK OPTION	CONTINUOUS DUTY MODULATOR
NS400MCD-04-01	Standard	•	•	No	No

P.O. Box 2021, San Antonio, TX 78297 ■ Ph: 210.533.1231 ■ Fx: 210.533.2211
Web: www.SouthernFolger.com ■ Email: info@southernfolger.com

HOW TO SPECIFY NS400 SERIES LOCKS

1	2	3	4	5	6	7	8	9	10	11
NS400	E	FS	01	B2	RHRB	24 VAC	LEK	PB-1	US32D	Cyl. Ext. 5-3/4"

1 Keying Location

NS400
No Cylinder

NS402
Keyed 1 Side

NS406
Keyed 2 Sides

2 Basic Models Deadlatches

E
Solenoid

M
Motor

MC
2-Position Motor

Deadbolt MCD
2-Position Motor

3 Mode of Operation
(E Solenoid Only For Fail-Safe)

NFS
Non-Fail-Safe

FS
Fail-Safe

4 Switch Functions

01
Deadlock Indication Switch With Latchback

04
Deadlock Indication Switch No Latchback

07
Deadlock Indication Switch No Latchback Auxiliary Switch For Electric Holdback

09
Deadlock Indication Switch No Latchback Auxiliary Switch For Electric Relock

5 Cylinder Options

BC
Prep For Builders Hardware Cylinder, Customer Supplied

B2
High Security Builders Hardware Cylinder

6 Latchbolt Handing*

RHRB LHRB
RHSB LHSB

Deadbolt Handing
LH
RH

7 Voltage

Solenoid
24 VAC
24 VDC

8 Optional
Local Electric Key

9 Optional
Inmate Push Button

10 Faceplate Finish

Standard
US32D

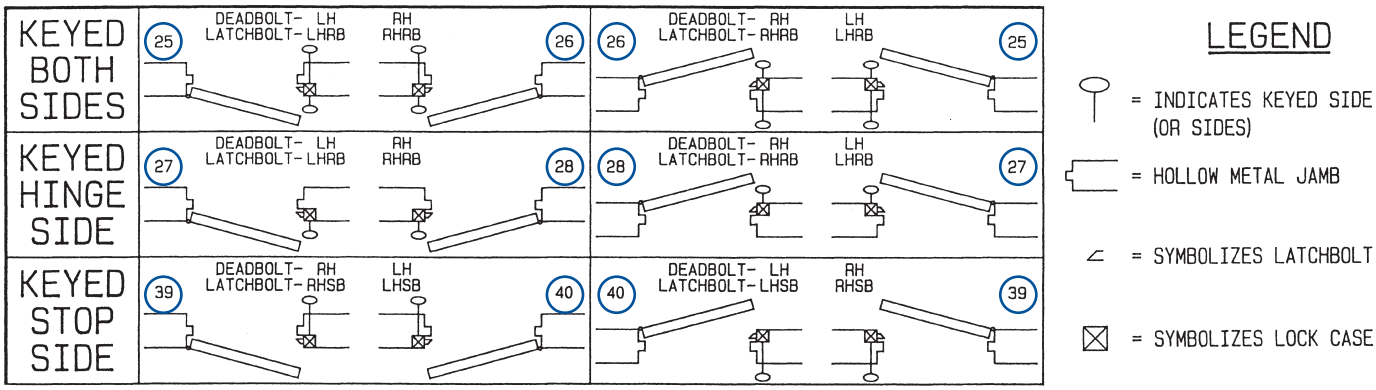
11 Optional
Cylinder Extension Select Standard Offered Length

* For application handing, see the handing chart on the following page.

For more information, please call 210.533.1231.

HOW TO SPECIFY NS400 SERIES LOCKS

Specify circled swing number when ordering.



LEGEND

= INDICATES KEYED SIDE (OR SIDES)

= HOLLOW METAL JAMB

= SYMBOLIZES LATCHBOLT

= SYMBOLIZES LOCK CASE

P.O. Box 2021, San Antonio, TX 78297 ■ Ph: 210.533.1231 ■ Fx: 210.533.2211
Web: www.SouthernFolger.com ■ Email: info@southernfolger.com

NOTE: A LOCK TESTER (Part Number 900-0400-001) IS AVAILABLE TO TEST LOCK OPERATIONS AND FUNCTIONS PRIOR TO INSTALLATION. TUBING WITH THE APPROPRIATE FITTING IS REQUIRED FOR TESTING PNEUMATIC LOCKS.

SECTION 1 INSTALLATION

These instructions give you a step-by-step procedure for installing, operating and wiring Folger Adam, NS400 Series locks. We suggest that you take the time to study these instructions and illustrations carefully, before attempting to install a NS400 lock.

1. Make sure you have the correct lock for the door at which you are working. See the box label for door number and model of lock.

   NOTE: Key cylinder collars and blocking rings must be supplied per the appropriate template dimensions. If cylinder is supplied by Folger Adam, collars and blocking rings are included.

2. Check the door and frame preparation. Referring to the template drawing (enclosed with the lock), check the dimensions of the frame preparation for the lock, key cylinder(s) and Inside Push Button Switch, if used. Also check the dimensions of the door preparation for the strike plates.

3. Prior to installation, the wiring to the door must be completed per the appropriate wiring diagram. Proper operating voltage must be supplied to the lock if it is to function correctly. Voltage at the lock must be within ± 10% of the voltage listed on the lock label.

Prior to installation of pneumatic locks, the tubing must be run to each lock opening per the appropriate Riser diagram. All pneumatic locks run are controlled by 24VDC. For 24VAC, a Rectifier will need to be installed prior to installation.

The pneumatic tubing uses the following fittings:

Installed end: 5/32" OD tubing
Colder Brand Fitting SMF-M3, FASI P/N 018-0021-001
1/4" OD tubing
Colder Brand Fitting SMF-02, FASI P/N 018-0024-001
Lock end: 5/32" OD tubing
Colder Brand Fitting SMM-M3, FASI P/N 018-0022-001

Referring to the wiring diagram (enclosed with the lock). Complete the wiring connections. Field harness hook-ups are available.

If an Inside Push Button Switch is used, make sure to complete the wiring at this time.

REMEMBER: Protect all wires (and tubing - for pneumatic locks) from any sharp metal objects to prevent an electrical short or air leaks.

4. Unpack and verify the receipt of all hardware: NS400 series lock and four (4) 12-24 x 3/8 FHMS for mounting, strike plate and two (2) 12-24 x 1/2 FHTS for mounting and (if required) key cylinder, key cylinder extension and two (2) 12-24 x 1/2 FHTS for mounting, two (2) keys per cylinder, inside push button switch and two (2) 1/4-20 x 1/2 RHSE for mounting.

   NOTE: A torx driver is required for installation. Drivers are available from Folger Adam, P/N 007-0700-011.

5. Before installing the lock:

   A) Remove the face plate and set it aside with the six (6) screws, they will be needed later to complete the installation. See Figure 1.

   B) If the lock has a key cylinder, it must also be removed. Back out, but do not remove the cylinder retaining set screw at the front of the lock. Unscrew the cylinder and set it aside, it will be reinstalled later.

   C) If the lock requires a key cylinder extension, the lock has a slotted adapter to accept the extension. Do not remove its set screw or the adapter.

   D) If the lock requires only one key cylinder, it has a plastic plug in the other hole. Do not remove this plug, it keeps dust and dirt from entering the lock.

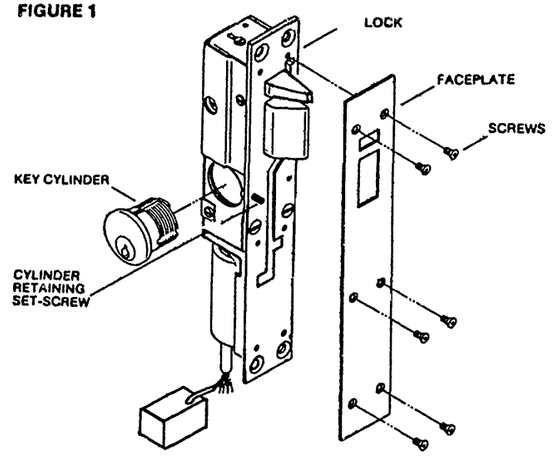
6. Installation of the lock:

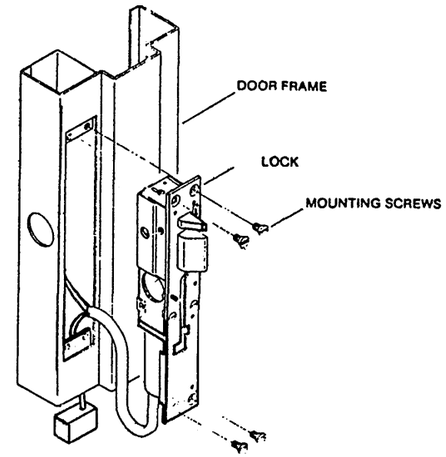
   A) Guide the Rectifier or Modulator (if required) in to the bottom of the back box (it should rest on the bottom of the box). Guide the wires (and tubing for pneumatic locks) to below or to side of the opening, out of the way of the lock. Position the solenoid or motor end of the lock into the opening. Swing the top end of the lock into the opening and set it against the mounting tabs. Make sure that the lock seats firmly into its opening, see Figure 2.

   B) Secure the lock to the door frame with the four (4) 12-24 x 3/8 FHMS that are supplied.

   NOTE: Do not force the lock into the opening by tightening the screws, this will only warp the lock case and bind up the internal parts.

FIGURE 1





SOLENOID MODEL SHOWN

REVISION	REVISION DESCRIPTION	ECO	BY	APPV	DATE
D	REVISED AND REASSEMBLED ON PRO/E.	900-0356	BJP		10-8-98

MATERIAL PART NUMBER	MATERIAL DESCRIPTION	FINISH

DRAWN BY: BJ PUTNAM	DATE: 09-14-98
CHECKED BY:	SCALE: NONE
WORK ORDER NUMBER:	OLD PART NUMBER: 089-0900-033

SOUTHERN FOLGER
DETENTION EQUIPMENT CO.
4634 S. Presa Street
San Antonio, Texas 78223
Phone: 210-533-1231
Fax: 210-533-2211

DRAWING TITLE
NS400 SERIES
LOCK INSTALLATION
INSTRUCTIONS

DRAWING NUMBER	REVISION
089-0900-033	D

7. Installation of Key Cylinder (Hinge Side of Door Frame):

NOTE: Before Installing Key Cylinder:
Check the key operation. Turning the key toward the back of the lock will mechanically retract the lockbolt. Turning the key toward the face of the lock will operate the internal LEK electrical retraction, if installed. If the key cylinder is modified for LEK feature (see product label on lock), it should have two (2) different keys to operate the lock. One of these keys turns in one direction only, toward the front of the lock. The other key (master key) turns in both directions.

A) Slip collar, spring and blocking ring over the threaded portion of the key cylinder body. Insert the cylinder through its hole on the hinge side of the door frame. Carefully thread the cylinder by hand, with out the key, into the lock until it stops. Then, back it out to align the cylinder in an upright position. See Figure 3.

B) Tighten the cylinder retaining set screw until it is flush with the front surface of the lock case. Make sure that the set screw is tightened before using a key.

C) Re-check the operation of the key cylinder)

8. Installation of Key Cylinder Extension (Stop Side of Door Frame):

A) Making sure that the key cylinder is in an upright position, insert the tailpiece of th extension throught its hole on the stop side of the door frame. Make sure the cam that is attached to the adapter is in an upright position like the key cylinder. The tailpiece must go into the slotted adapter in the lock. (Tailpiece is spring-loaded to allow for variations in the depth of door frames, ± 1/2".) See Figure 4.

B) Secure the extension to the door frame with the two (2) 12-24 x 1/2 FHTS that are supplied.

C) Re-check the operation of the key cylinder.

9. Installation of Inside Push Button Switch:

A) Guide the wires into the door frame below the switch opening and out of the way of the switch. Position the switch and secure it to the frame with the two (2) 1/4-20 x 1/2 RHSE that are supplied. See Figure 5.

NOTE: The hex head of these screws is designed to "break off". Care should be taken to thread the screws properly, to avoid breaking off the hex head prematurely.

B) After the screws are tightened and the switch is secure, break off the hex head of both screws. Apply additional torque to the hex head with a wrench and it will break off. Grind any remaining portion of the neck smooth with the surface of the screw head.

10. Installation of Strike Plate:

A) Position the strike plate into its opening in the edge of the door and seat it against the mounting tabs. Make sure that the strike plate seats firmly into its opening and that it is flush with the surface of the door. Figure 6.

If a dust box is used, place it between the strike plate and the door so that its cavity will receive the lockbolt.

B) Secure the strike plate to the door with the two (2) 12-24 x 1/2 FHTS that are supplied.

11. Installation of Face Plate:

A) Secure the face plate to the lock with the six (6) 6-32 1/4 FHTS that were previously removed and set aside along with the face plate See Figure 7.

B) Check to see that the face plate is flush with the surface of the door frame.

12. Before Installation is Completed:

Check door gap. With the door closed and locked, check the clearance between the door and the door frame. The clearance should be 1/8", which is standard, but not more than 3/16" (1/4" at the centerline of the lockbolt), to properly deadlock the extended lockbolt, when the door is closed.

NOTE: Door gaps over 3/16" wide must be corrected for proper operation of the lock.

At the same time the door gap is checked, the alignment of the lockbolt and its opening in the strike should also be checked. Make sure that the lockbolt extends fully into the strike plate, and there is no binding between the lockbolt and the strike plate. The lockbolt must extend and retract smoothly for proper operation.

FIGURE 3

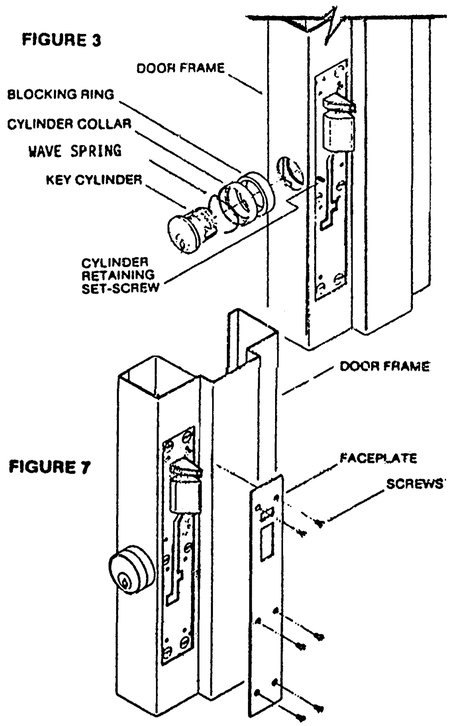


FIGURE 4

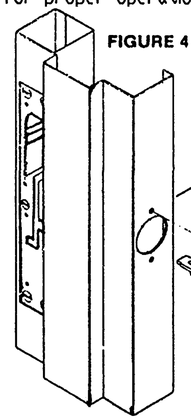


FIGURE 5

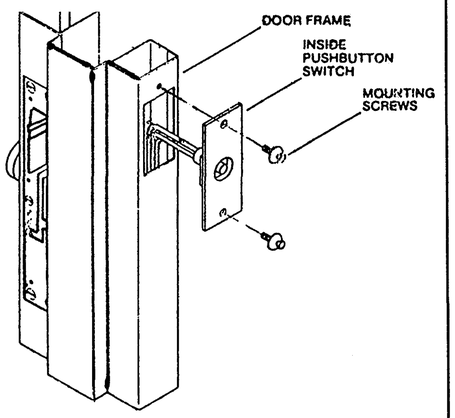


FIGURE 6

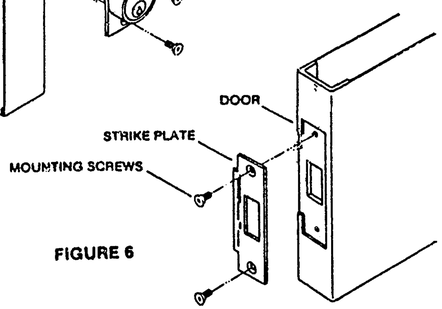


FIGURE 7

DRAWN BY	DATE
BJ PUTNAM	09-14-98
CHECKED BY	SCALE
	NONE
WORK ORDER NUMBER	OLD PART NUMBER
	089-0900-033

REVISION	REVISION DESCRIPTION	ECO	BY	APPV	DATE
D	REVISED AND REASSEMBLED ON PRO/E.	900-0356	BJP		10-8-98

MATERIAL PART NUMBER	MATERIAL DESCRIPTION	FINISH

SOUTHERN FOLGER
DETENTION EQUIPMENT CO.
4634 S. Presa Street
San Antonio, Texas 78223
Phone: 210-533-1231
Fax: 210-533-2211

DRAWING TITLE
NS400 SERIES
LOCK INSTALLATION
INSTRUCTIONS

DRAWING NUMBER	REVISION
089-0900-033	D

SECTION 2 OPERATION OF STANDARD AND OPTIONAL FEATURES

1. ELECTRIC OPERATION OF LOCK:

These NS400 series locks are solenoid, solenoid valve and motor actuated for electric unlocking and locking. They are controlled by a remote switching device. 24VDC is standard, 24VAC is optional.

Models: NS400E, NS400EFS, NS400P, NS400PD, NS400M, NS400MC, NS400MCD, No cylinders are supplied.
Models: NS402E, NS402EFS, NS402P, NS400PD, NS402M, NS402MC, NS402MCD are keyed one side.
Models: NS406E, NS406EFS, NS406P, NS400PD, NS406M, NS406MC, NS406MCD are keyed both sides.

A) NON-FAIL-SAFE MODELS

NS400E-00, NS400P-00, NS400E-01 and NS400P-01 - DEADLATCHES - Unlocks when solenoid or solenoid valve (Pneumatic) is energized by a momentary contact switch. Latchbolt remains retracted until the door is opened. Upon closure, the latchbolt extends automatically. (Mechanical Latchback)

NS400E-03, NS400P-03, NS400E-04 and NS400P-04 - DEADLATCHES - Unlocks when solenoid or solenoid valve (Pneumatic) is energized by a momentary contact switch. Latchbolt is electrically held retracted only as long as control switch is tripped. The door must be opened while control switch is in the unlocked position. Upon closure, the latchbolt deadlocks automatically. Continuous duty feature is available on some models to hold bolt retracted for extended periods. (No Latchback, continuous duty)

NS400E-06 and NS400E-07 - DEADLATCHES - Unlocks when solenoid is energized by a momentary contact switch. Latchbolt is held electrically retracted until the door is opened, then it extends automatically. (Electric holdback)

B) FAIL-SAFE MODELS:

NS400EFS-03 and NS400EFS-04 - DEADLATCHES - Unlocks when solenoid is de-energized by a switch or power failure, and the latch remains retracted until the door is opened. Upon closure, with power restored, the latchbolt extends and deadlocks.

C) MOTOR-ACTUATED MODELS:

NS400M-00 and NS400M-01 - DEADLATCHES - Unlocks when solenoid the motor is energized by a momentary contact switch. Latchbolt is held mechanically retracted until the door is opened. It then extends automatically. (Mechanical latchback)

D) TWO-POSITION MOTOR ACTUATED DEADLATCH MODELS:

NS400MC-00 and NS400MC-01 - DEADLATCHES - Locks or unlocks when the motor is energized by a two or three-position maintained-contact switch, or a three-position momentary contact switch. Latchbolt is held mechanically retracted until the door is opened. It then extends automatically, if control switch is set to lock position. (Mechanical latchback)

NS400MC-03 and NS400MC-04 - DEADLATCHES - Locks or unlocks when the motor is energized by either a two or three-position, maintained-contact switch, or a three-position momentary contact switch. Latchbolt then remains retracted until selected to lock. Opening and closing the door has no effect on the lock. (No latchback)

D) TWO-POSITION MOTOR ACTUATED DEADLATCH MODELS (Continued):

NS400MC-09 - DEADLATCH - Unlocks when the motor is energized by a momentary contact switch. A re-lock switch energizes the motor once the door is open. Upon closure, the latchbolt deadlocks automatically. (No latchback with re-lock)

E) TWO-POSITION MOTOR ACTUATED DEADLOCK MODELS:

NS400MCD-03 and NS400MCD-04 - DEADLOCKS - Unlocks or unlocks when motor is energized by either a two or three-position maintained-contact switch, or a three-position, momentary contact switch. Once unlocked, the deadbolt remains retracted until selected to lock. Opening and closing the door have no effect on the lock. Non-Fail-Safe only. Holdback switch prevents the deadbolt from extending while the door is open. Deadbolt is deadlocked upon closure of the door.

2. MECHANICAL OPERATION OF LOCK WITH KEY CYLINDER:

A mortise type key cylinder, 1-5/32 diameter x 1-1/8" long (from under the head, including the cam) with a standard Yale type cam must be used. Cylinder can be furnished by Folger Adam or the customer.

An optional cylinder extension is required when the lock is keyed stop side. Cylinders must be sent to Folger Adam for fitting of the extension parts. Request drawing 089-0900-001 for complete information.

3. LEK (LOCAL ELECTRIC KEY) OPERATION:)

The key cylinder is modified to operate the lock electrically with the change key (turning the key 90° toward the front of the lock) - unless electric operation is cancelled from the control console. The master key operates the lockbolt electrically (when activated) and mechanically.

Cylinders and keys must be sent to Folger Adam for modification.

4. ELECTRIC OPERATION OF INSIDE PUSH BUTTON SWITCH:

A push button switch, mounted on the inside jamb, used to electrically unlock the lock.

The push button is activated or deactiviated by a switch in thecontrol console.

5. ELECTRIC OPERATION OF INDICATION SWITCH:

An indication switch, mounted in the lock, to indicate the deadlocked or unlocked condition of the lock. A door position switch should be used in conjunction with the indication switch to provide 'secure' indication that the door is closed and the lock is deadlocked.

6. PLUG CONNECTOR:

A two piece plug connector added to the lock wiring. When required, the field connector can be sent to the job site for pre-wiring the opening, and the connector plug, attached to the lock wiring, would plug later.

In the case of pneumatic jobs, the tubing connector can be sent to the job for pre-plumbing the tubing lines prior to receiving the locks. The installed end connector required for 1/4" tubing is Colder Brand Fitting SMF-02, FASI P/N 018-0024-001. The installed end connector required for 5/32" tubing is Colder Fitting SMF-M3, FASI P/N 018-0021-001.

REVISION	REVISION DESCRIPTION	ECO	BY	APPV	DATE
D	REVISED AND REASSEMBLED ON PRO/E.	900-0356	BJP		10-8-98

MATERIAL PART NUMBER	MATERIAL DESCRIPTION	FINISH

DRAWN BY: BJ PUTNAM	DATE: 09-14-98
CHECKED BY:	SCALE: NONE
WORK ORDER NUMBER:	OLD PART NUMBER: 089-0900-033

SOUTHERN FOLGER DETENTION EQUIPMENT CO.
4634 S. Presa Street
San Antonio, Texas 78223
Phone: 210-533-1231
Fax: 210-533-2211

DRAWING TITLE

NS400 SERIES LOCK INSTALLATION INSTRUCTIONS

DRAWING NUMBER	REVISION
089-0900-033	D

SECTION 3 MAINTENANCE AND LUBRICATION

Under normal usage the lock should be lubricated at least once a year to maintain its reliability. To lubricate, remove the six (6) face plate screws and the face plate.

Squeeze a small amount of Lubit 8 (available from Folger Adam) into the two (2) lubrication holes in the armor back plate and into the bolt openings. See Illustrations. Operate the lock a few times to spread the lubricant.

In high usage applications, more frequent lubrication may be required.

NOTE: Locks used in dusty or dirty locations should be removed periodically to be cleaned before being lubricated. Follow the instructions for removal and cleaning listed on this page.

REMOVAL AND CLEANING

Removal and Disassembly:

1) Follow a reverse procedure of the instructions for installation. Do not force the lock out of the opening. Pull the top of the lock out first then lift the lock up and out of the opening, being careful not to damage the wires.

2) Disconnect the wiring. Disconnect the tubing using a lock end fitting, a small length of tubing, and a plug.

3) To disassemble, remove the four (4) rear cover attaching screws and the rear cover.

Cleaning and Lubrication:

1) Clean out the lock by wiping out as much dirt and grime as possible.

2) Lubricate all parts identified in the drawings (except the solenoid plunger) with "TUFOIL LIGHTENING GREASE", available from Folger Adam or Fluoramics, Inc. Lubricate the solenoid plunger with Lubit 8 (also available from Folger Adam or Fluoramics, Inc.). The pneumatic cylinder and solenoid valve, DO NOT require lubrication.

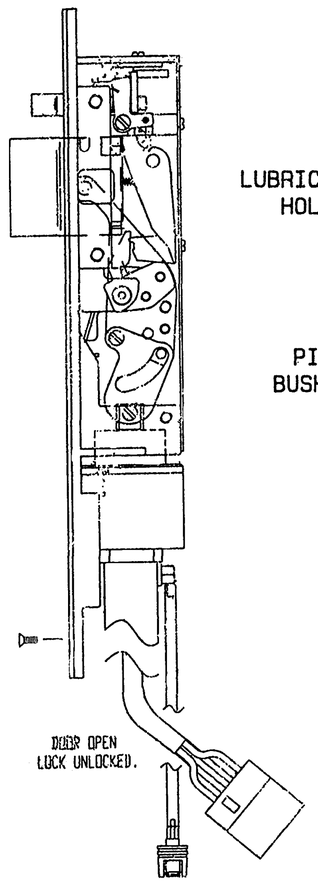
3) Test the lock operation.

4) Re-assemble rear cover.

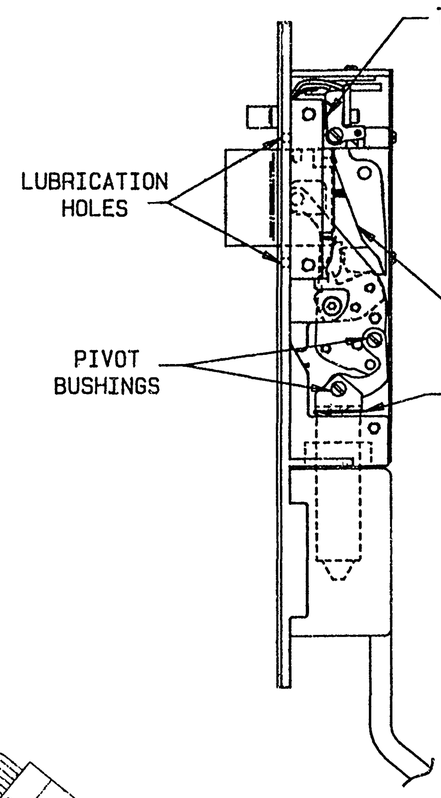
5) Follow the installation instructions to reinstall.

OPERATIONAL NOTE

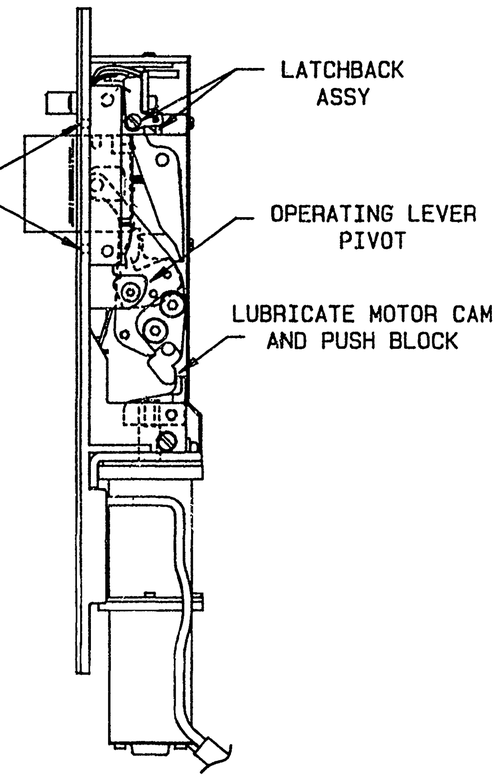
This product may be provided fail safe or fail secure. Fail safe versions allow exit in the event of power failure. Fail secure versions require manual operation by key. Consult with local authority having jurisdiction concerning the installation of this type of product to determine whether listed panic hardware is required to allow emergency exit from the secured area.



NS400P LOCK



NS400E LOCK



NS400M LOCK

REVISION	REVISION DESCRIPTION	ECO	BY	APPV	DATE
D	REVISED AND REASSEMBLED ON PRO/E.	900-0356	BJP		10-8-98

MATERIAL PART NUMBER	MATERIAL DESCRIPTION	FINISH

SOUTHERN FOLGER DETENTION EQUIPMENT CO.
4634 S. Presa Street
San Antonio, Texas 78223
Phone: 210-533-1231
Fax: 210-533-2211

DRAWN BY	DATE
BJ PUTNAM	09-14-98
CHECKED BY	SCALE
	NONE
WORK ORDER NUMBER	OLD PART NUMBER
	089-0900-033

DRAWING TITLE

NS400 SERIES LOCK INSTALLATION INSTRUCTIONS

DRAWING NUMBER	REVISION
089-0900-033	D

SECTION 4 TROUBLE SHOOTING

With door open, lockbolt does not extend or retract freely.	Check face plate for binding, file if necessary. Check if key cylinder is threaded too deep and binding the internal parts. Adjust cylinder depth (refer to installation instructions). On Pneumatic locks, check muffler or choke for oil or dirt drainage out the bottom. The muffler or choke may need to be replaced. See Pneumatic Solenoid Valve replacement.
With door closed, lockbolt does not work freely. Door will not latch or will not release.	Check for strike misalignment, file clearance in strike. Check that the bolt projects fully into the strike opening.
With door closed, automatic deadlocking does not lock the lockbolt	Check the door gap, 1/8" gap is standard, 3/16" is maximum (1/4" at the centerline of the bolt). If door gap is over 3/16", it must be corrected. Check for strike misalignment. Drag on the lockbolt will prevent full projection into the strike.
With door closed, lockbolt will not extend (fail-safe latchbolt and motor deadbolt only).	Check that control console switch is in the locked position. Trigger bolt is not depressed far enough to trip the holdback/relock switch in the lock, door gap over 3/16". Check wiring connections. If switch needs to be adjusted, see HOLDBACK or RELOCK SWITCH ADJUSTMENT.
With door open, key cylinder not working properly. Will not operate LEK switch, or works excessively hard.	Check for proper key position, (key cuts up and SSSC seated in "V" groove of cylinder). Remove the face plate and loosen the one (1) 6/32 x 5/16" SSSC holding the key cylinder. Turn key cylinder in until it stops, then back it out until keyway is upright. Remove the key cylinder and test the cylinder operation out of the lock, the cylinder may be defective.
Lock does not switch to green indication. Deadlocking of the bolt has been verified.	Check the operation of any door position switch installed. Check door gap (if over 3/16", gap must be corrected). Check the operation of the green lamp or indicator. See ADJUSTMENT OF INDICATION SWITCH.
Lock solenoid/solenoid valve overheats.	Check voltage with lock energized. Maximum is 26.4
LEK Switch will not operate.	Check wiring. Check control console switch position. Check ADJUSTMENT OF SWITCH
Motor lock latchbolt will not latchback.	Check position of motor cam. Cam is stopping short of pulling latchbolt back far enough to engage katchback assembly. Motor switch needs adjustment, see MOTOR SWITCH ADJUSTMENT.
When motor is energized, lockbolt does not retract, or motor binds halfway through cycle.	Check motor cam for proper positioning on motor shaft. See MOTOR SWITCH ADJUSTMENT.
When trigger is depressed to proper depth, deadlock lever is not fully deadlocked.	Check position of deadlock release. See ADJUSTMENT OF DEADLOCKING.

SECTION 5 ADJUSTMENTS

SOLENOID ADJUSTMENTS

1) NON-FAIL-SAFE ADJUSTMENT:

   A) Loosen two (2) 10-32 SSSC holding solenoid, enough to move the solenoid. See ILL. 1

   B) Energize the solenoid or retract the lockbolt.

   C) Using a flat blade screwdriver, per ILL. 1 slowly pry solenoid away from mounting pad until lockbolt is flush to a maximum 1/16" above face plate. See ILL. 1 NOTE: If solenoid is moved too far, plunger will unseat.

   D) Tighten the two (2) 10-32 SSSC (be sure solenoid is straight before tightening).

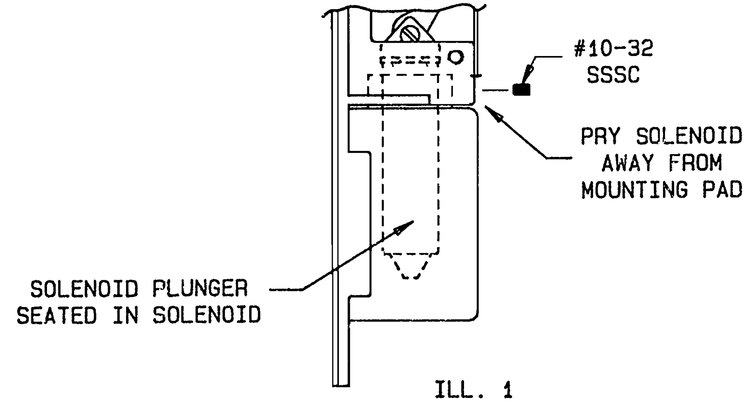
2) FAIL-SAFE SOLENOID ADJUSTMENT: (Extending the bolt when energized.)

   A) Loosen two (2) 10-32 SSSC holding the solenoid, enough to move solenoid. See ILL. 1

   B) Energize the solenoid to extend the lockbolt. (Holdback switch must be tripped to operate lock.)

   C) Using a flat blade screwdriver, per ILL. 1, slowly pry away from the mounting pad until the lockbolt is fully extended. NOTE: If solenoid is moved too far, plunger will unseat.

   D) Tighten the two (2) 10-32 SSSC (be sure solenoid is straight before tightening).



ILL. 1

REVISION	REVISION DESCRIPTION	ECO	BY	APPV	DATE
D	REVISED AND REASSEMBLED ON PRO/E.	900-0356	BJP		10-8-98

MATERIAL PART NUMBER	MATERIAL DESCRIPTION	FINISH

DRAWN BY	BJ PUTNAM
DATE	09-14-98
CHECKED BY	
SCALE	NONE
WORK ORDER NUMBER	
OLD PART NUMBER	089-0900-033

SOUTHERN FOLGER
DETENTION EQUIPMENT CO.
4634 S. Presa Street Phone: 210-533-1231
San Antonio, Texas 78223 Fax: 210-533-2211

DRAWING TITLE

NS400 SERIES
LOCK INSTALLATION
INSTRUCTIONS

DRAWING NUMBER	REVISION
089-0900-033	D

ADJUSTMENT OF DEADLOCKING

NOTE: Before adjusting the deadlock, please read the section below on operation.

Operation

When the trigger bolt is depressed, the deadlock lever is lifted out of the way of the retracting lockbolt by the deadlock release as the lock operates. The deadlock release is attached to the operating lever. When the trigger bolt is depressed to within 1/4" of the face plate, the lock should be in full deadlock. Full deadlock means the deadlock lever should be resting against the armor backplate.

Adjustments

All adjustments can be made through the cylinder hole.

Conditions to be checked when trigger bolt is depressed.

Adjustment is needed, if, as the lockbolt retracts it hits the deadlock lever.

1) To lift deadlock lever out of the way of the lockbolt, loosen the 6-32 x 1/4" PHMS that hold the deadlock release to the operating lever.

2) Rotate deadlock release away from bolt openings to lift deadlock lever quicker.

3) Tighten the 6-32 x 1/4" PHMS.

4) Re-check the lock operation.

Adjustment is also needed, if, when the trigger bolt is depressed the 1/4" dimension, the deadlock lever is not in full deadlock.

1) To allow deadlock lever to fully deadlock, simply loosen the 6-32 x 1/4" PHMS.

2) Rotate deadlock release toward bolt openings to allow deadlock lever to drop further.

3) Tighten the 6-32 x 1/4" PHMS.

4) Re-check the lock operation.

HOLDBACK OR RELOCK SWITCH

Definitions

HOLDBACK SWITCH: NS400E Locks - Latchbolt is held electrically retracted until the door is opened then is extends automatically.

NS400EFS Locks - Upon closure of the door, with power restored, the latchbolt extends and deadlocks.

NS400MCD Locks - Switch does not allow the deadbolt to extend while the door is open.

RELOCK SWITCH: NS400MC Locks - Switch repositions motor to relock when door is opened.

Adjustment

NOTE: Switch must be tripped and lock must be energized to make adjustment.

1) Loosen 4-40 BDMS enough to allow switch assembly to be moved in slot. (See ILL. 2

2) Slide screw (and switch assembly) toward cylinder to trip sooner or away to trip later.

3) Tighten 4-40 BDMS.

NOTE: If switch can not be adjusted to trip: Remove three (3) FHMS and side cover (switch assembly is attached to side cover). Rebend switch actuator toward the back of the lock (to make contact with trigger bolt tail). Replace side cover, routing switch wires per ILL. 2 and replace (3) mounting screws. Return to instruction 2 above.

Replacement

All work on the holdback or relock switch should be performed with the lock removed and disconnected. Work on a workbench using an ohmmeter or test lamp circuit to verify switch operation. Use only repair switches with factory connected wire leads. Do not solder onto the switches. Do not remove the plug connector pin contact. Splice replacement switch wires to the existing plug connector leads.

1) Remove the rear cover by removing the four (4) 4-40 BDMS.

2) Remove the (3) FHMS holding the side cover then remove the side cover.

3) Remove the switch bracket screw (4-40 x 3/16 BDMS) and the switch and bracket assembly.

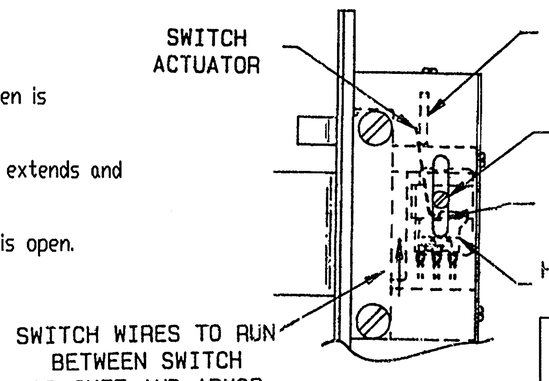
4) Install a new switch and bracket assembly, tightening the adjusting screw.

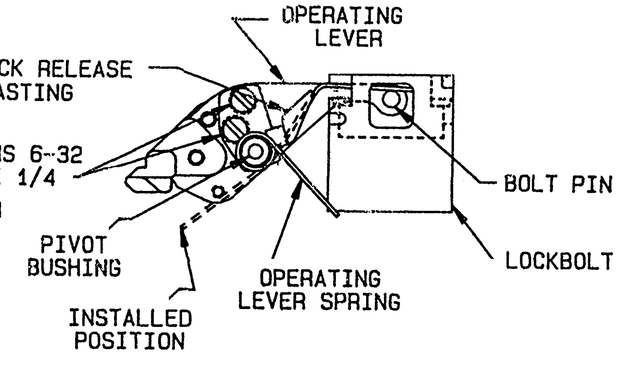
5) Replace the side cover while carefully routing all wires away from moving parts. CAUTION: Do not let wires from side cover switch be pinched under the side cover.

6) Tighten side cover screws and test trigger bolt for free motion.

7) See instructions for HOLDBACK OR RELOCK SWITCH ADJUSTMENT.

8) Replace the rear cover.





SOUTHERN FOLGER
DETENTION EQUIPMENT CO.
4634 S. Presa Street
San Antonio, Texas 78223
Phone: 210-533-1231
Fax: 210-533-2211

DRAWN BY	DATE
BJ PUTNAM	09-14-98
CHECKED BY	SCALE
	NONE
WORK ORDER NUMBER	OLD PART NUMBER
	089-0900-033

DRAWING TITLE

NS400 SERIES LOCK INSTALLATION INSTRUCTIONS

REVISION	REVISION DESCRIPTION	ECO	BY	APPV	DATE
D	REVISED AND REASSEMBLED ON PRO/E.	900-0356	BJP		10-8-98

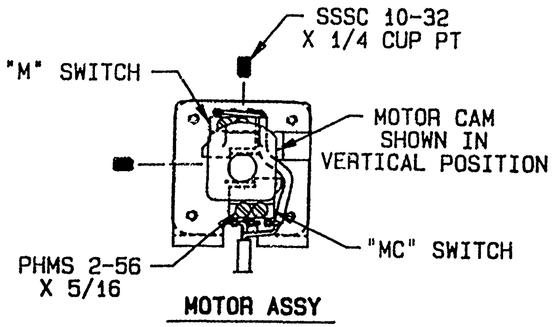
MATERIAL PART NUMBER	MATERIAL DESCRIPTION	FINISH

DRAWING NUMBER: 089-0900-033 REVISION: D

MOTOR SWITCH(ES)

The switches determine what position the motor cam stops at through the linkage assembly, this in turn controls the amount of bolt retraction and projection your lock has.

All work on the motor switches should be performed with lock removed and disconnected. Work on a workbench using an ohmmeter or test lamp circuit to verify switch operation. Use only repair switches with factory connected wire leads. Do not solder onto the switches. Do not remove the plug connector pin contacts. Splice replacement switch wires to the existing plug connector leads.



MOTOR ASSY

Adjustment

1) Remove the rear cover by removing the four (4) 4-40 BDMS. Remove the face plate.

2) Remove the two flat head screws that hold the motor mounting bracket to armor backplate.

3) Remove the 6-32 x 3/8 PHMS and external tooth washer.

4) Lift motor assembly out of notch in armor backplate, be careful not to strain the wires.

   NOTE: Motor cam should stop in position shown on diagram for "M" lock. For "MC" lock, it should also stop after rotating 180°.

5) Loosen two (2) SSSC that hold motor cam to motor shaft. Slide motor cam off of shaft.

6) "M" Switch:

   To adjust "M" motor switch, loosen two (2) 2-56 x 5/16 PHMS and rotate switch clockwise to trip later, counter-clockwise to trip sooner. Tighten screws. After proper adjustment, motor cam should stop in vertical position.

7) "MC" Switch:

   The "MC" motor switch can be adjusted in the same manner as the "M" switch. When properly adjusted, the "MC" switch should stop when the motor cam is rotated 180° to give the lockbolt it's maximum retraction.

8) Replace motor cam on motor shaft and tighten SSSC. Make sure SSSC are on flats of motor shaft. See motor cam section for adjustment.

9) Replace motor assembly into armor backplate.

10) Tighten two (2) FHMS into motor mounting bracket through the armor backplate Replace PHMS and external tooth washer and tighten.

11) Replace rear cover and face plate.

Replacement

1) Remove motor assembly as in adjustment of the motor switches.

2) Disconnect motor switch. Cut the wires above the plug connector, leaving enough wire to splice on new switch wires.

3) Remove old switch and assemble new switch to motor mounting bracket.

4) Feed switch wires the same way as the old wires, through motor bracket.

5) Adjust switch (see adjustment).

6) Re-assemble (see adjustment).

LEK SWITCH

The LEK switch is not operating correctly if when the key is used to activiate the LEK switch and the solenoid or motor will not energize.

Adjustment

1) Remove key cylinder from lock.

2) Look inside lock and check to see if LEK switch tripper moves freely.

3) Check LEK siwtch assembly to see if switch actuator will trip switch.

4) Re-bend switch actuator to allow switch to trip from cam pushing against LEK tripper, if necessary.

5) Assemble the cylinder into the lock and retest.

Replacement

1) Remove rear cover, deadlock lever and linkage assembly.

2) Remove the two (2) 2-56 x 5/16 FHMS screws holding the LEK switch to armor backplate.

3) Disconnect the LEK switch wires. Cut the wires above the plug connector leaving enough wire to splice on the new switch wires.

4) Remove the old LEK switch.

5) Feed the new switch wires into the hole in the armor backplate. Place the new LEK switch into the backplate as shown. Replace and tighten the two (2) 2-56 x 5/16 FHMS.

6) Splice the LEK switch wires. Replace linkage assembly, deadlock lever and rear cover.

MOTOR CAM ADJUSTMENT

The motor cam will need adjustment if when the motor is energized, the motor completes it's cycle but does not retract the lockbolt.

1) To adjust motor cam to retract lockbolt, remove rear cover by removing the four (4) 4-40 BDMS.

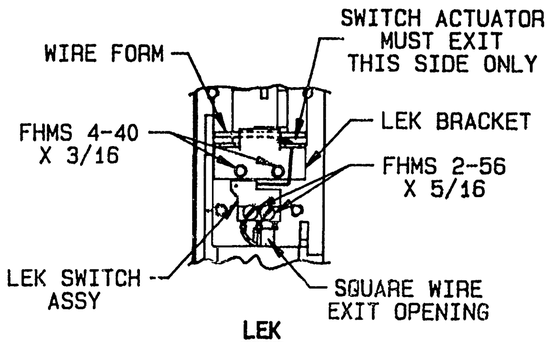
2) Loosen the two (2) 10-32 SSSC holding motor cam to motor shaft.

3) Slide cam so that about 1/16" of motor cam hangs over motor pushblock.

4) Retighten SSSC. Operate lock to re-check. If ok, replace rear cover.

Cam also need adjustment, if cam stops halfway through cycle and binds against pushblock.

To adjust motor cam to keep it from binding on pushblock, follow same procedure as above except slide cam away from pushblock and tighten SSSC.



LEK

REVISION	REVISION DESCRIPTION	ECO	BY	APPV	DATE
D	REVISED AND REASSEMBLED ON PRO/E.	900-0356	BJP		10-8-98

MATERIAL PART NUMBER	MATERIAL DESCRIPTION	FINISH

DRAWN BY	BJ PUTNAM
DATE	09-14-98
CHECKED BY	
SCALE	NONE
WORK ORDER NUMBER	
OLD PART NUMBER	089-0900-033

SOUTHERN FOLGER
DETENTION EQUIPMENT CO.
4634 S. Presa Street
San Antonio, Texas 78223
Phone: 210-533-1231
Fax: 210-533-2211

DRAWING TITLE

NS400 SERIES LOCK INSTALLATION INSTRUCTIONS

DRAWING NUMBER	REVISION
089-0900-033	D

INDICATION SWITCH

Adjustment

The indication switch monitors the position of the deadlock lever. The deadlock lever moves into deadlocking position when the trigger bolt is depressed into the lock by the strike on the door.

To check the setting of the indication switch, depress trigger bolt until 1/4" of trigger bolt is projecting above face plate (1/4" maximum gap allowed between face of lock and strike at center line of lockbolt), switch should trip (indication light turns green) and lockbolt should deadlock. If lockbolt is deadlocked but switch does not trip, switch should be readjusted. If switch trips before lock is deadlocked, switch should be readjusted.

Carefully follow instructions below to adjust indication switch.

1) Loosen the 4-40 BDMS (binder head machine screw) at the top of the case, only enough so the screw moves in the slot.

2) Slide the screw (moving switch assembly) to the front of the lock to make the switch trip sooner, toward the back of the lock to trip it later.

3) Tighten the 4-40 BDMS screw.

Replacement

All work on the indication switch should be performed with lock removed and disconnected. Work on a workbench using an ohmmeter or test lamp circuit to verify switch operation. Use only repair switches with factory connected wire leads. Do not solder onto the switches. Do not remove the plug connector pin contacts. Splice replacement switch wires to the existing plug connector leads.

1) Remove the rear cover by removing the four (4) 4-40 BDMS.

2) Remove the switch adjusting screw (BDMS 4-40 x 3/16").

3) Remove the deadlock shoulder screw and the deadlock lever.

4) Remove one (1) 8-32 x 1/4 FHMS and two (2) 10-32 x 1/4 FHMS holding the case frame then remove case frame.

5) Remove the switch and bracket assembly.

6) Install a new switch and bracket assembly.

7) Replace case frame while carefully routing all wires away from moving parts.

8) Replace and tighten the switch adjusting screw.

9) Tighten case frame screws and test trigger bolt for free motion.

10) See instructions for ADJUSTMENT OF INDICATION SWITCH.

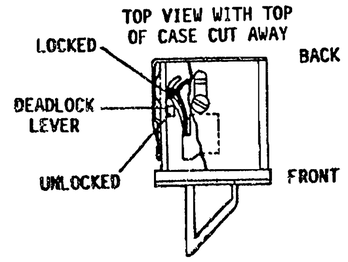
11) Replace the rear cover.

LATCHBACK

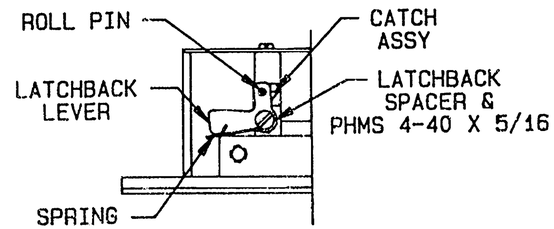
To Remove Latchback Parts:

1) Remove side cover.

2) Remove 4-40 x 5/16 PHMS and disassemble catch assembly, latchback lever, lever spring and latchback spacer.



INDICATION SWITCH



LATCHBACK ASSY

REVISION	REVISION DESCRIPTION	ECO	BY	APPV	DATE
D	REVISED AND REASSEMBLED ON PRO/E.	900-0356	BJP		10-8-98

MATERIAL PART NUMBER	MATERIAL DESCRIPTION	FINISH

DRAWN BY: BJ PUTNAM
DATE: 09-14-98
CHECKED BY:
SCALE: NONE
WORK ORDER NUMBER:
OLD PART NUMBER: 089-0900-033

SOUTHERN FOLGER DETENTION EQUIPMENT CO.
4634 S. Presa Street
San Antonio, Texas 78223
Phone: 210-533-1231
Fax: 210-533-2211

DRAWING TITLE
NS400 SERIES LOCK INSTALLATION INSTRUCTIONS

DRAWING NUMBER: 089-0900-033
REVISION: D

PNEUMATIC SOLENOID VALVE AND CYLINDER

Adjustment

See the instructions under SOLENOID ADJUSTMENTS for adjusting the solenoid valve/cylinder assembly.

Replacement of Solenoid Valve or Cylinder

All work on the Pneumatic solenoid valve or cylinder should be performed with lock removed and disconnected. Use a Lock end fitting, small length of tubing and a plug to disconnect the pneumatic tubing. The electric connection should be disconnected prior to beginning work. Work on a workbench using an ohmmeter or test lamp circuit to verify solenoid valve operation. Use only repair valves with factory connected wire leads. Do not solder onto the solenoid valves. Do not remove the plug connector pin contacts. Splice replacement solenoid valve wires to the existing plug connector leads.

Replacement of Solenoid Valve

1) Unscrew the small brass fitting with tubing connection from the side of the valve.

2) Unscrew the solenoid valve from the pneumatic cylinder body and reinstall the new valve. The exhaust muffler or choke should be replaced at the same time. This is done by replacing the muffler or choke from the valve top end. The muffler or choke can become plugged over time and can cause sluggish valve actuation.

3) Reinstall the small brass fitting. The fitting should be positioned down but must not leak. Reattach air supply and check for leaks. Add additional gasket, if required.

4) Make sure solenoid valve with the same characteristics is used as a replacement. (FASI P/N 006-3108-001).

Replacement of Cylinder

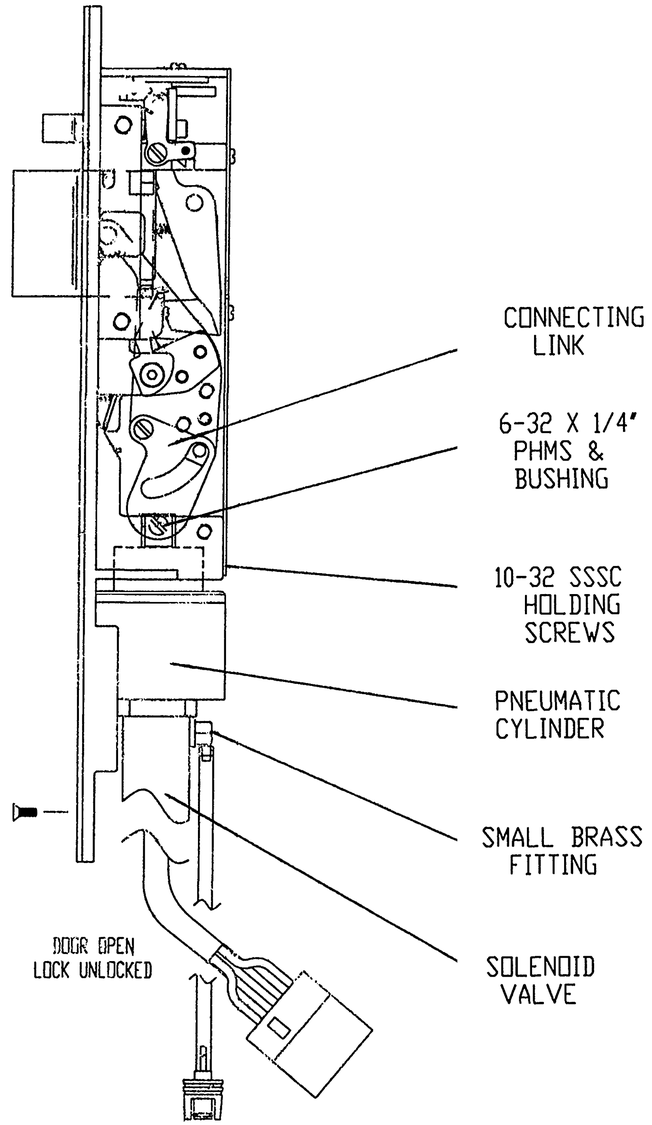
1) The procedure for replacement is the same as for a solenoid on a NS400E lock, except care must be taken with the pneumatic tubing fitting. The fitting should be positioned down and close to the frame so that the tubing does not hit or catch on the frame during installation.

2) The side and rear covers may need to be removed to get access to the connecting link and operating lever stamping.

3) Loosen the two (2) 10-32 SSSC holding the cylinder and valve assembly in place. By rotating the valve/cylinder assembly sideways, the connecting link can be lifted over the manual release pin and pulled out of the bottom of the lock.

4) The connecting link must be removed from the old cylinder and replaced on the new cylinder. Take care to reposition the bushings and screws just as they had been on the old assembly. The 6-32 x 1/4 PHMS screw should be 'Loc-tited' in place.

5) Assembly is just the opposite as removal. See SOLENOID ADJUSTMENT section for adjusting the solenoid valve/ cylinder assembly.



NS400P LOCK

REVISION	REVISION DESCRIPTION	ECO	BY	APPV	DATE
D	REVISED AND REASSEMBLED ON PRO/E.	900-0356	BJP		10-8-98

MATERIAL PART NUMBER	MATERIAL DESCRIPTION	FINISH

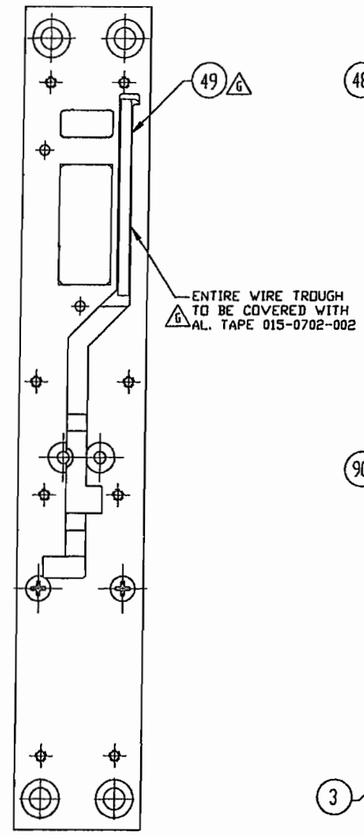
DRAWN BY	DATE
BJ PUTNAM	09-14-98
CHECKED BY	SCALE
	NONE
WORK ORDER NUMBER	OLD PART NUMBER
	089-0900-033

SOUTHERN FOLGER
DETENTION EQUIPMENT CO.
4634 S. Presa Street
San Antonio, Texas 78223
Phone: 210-533-1231
Fax: 210-533-2211

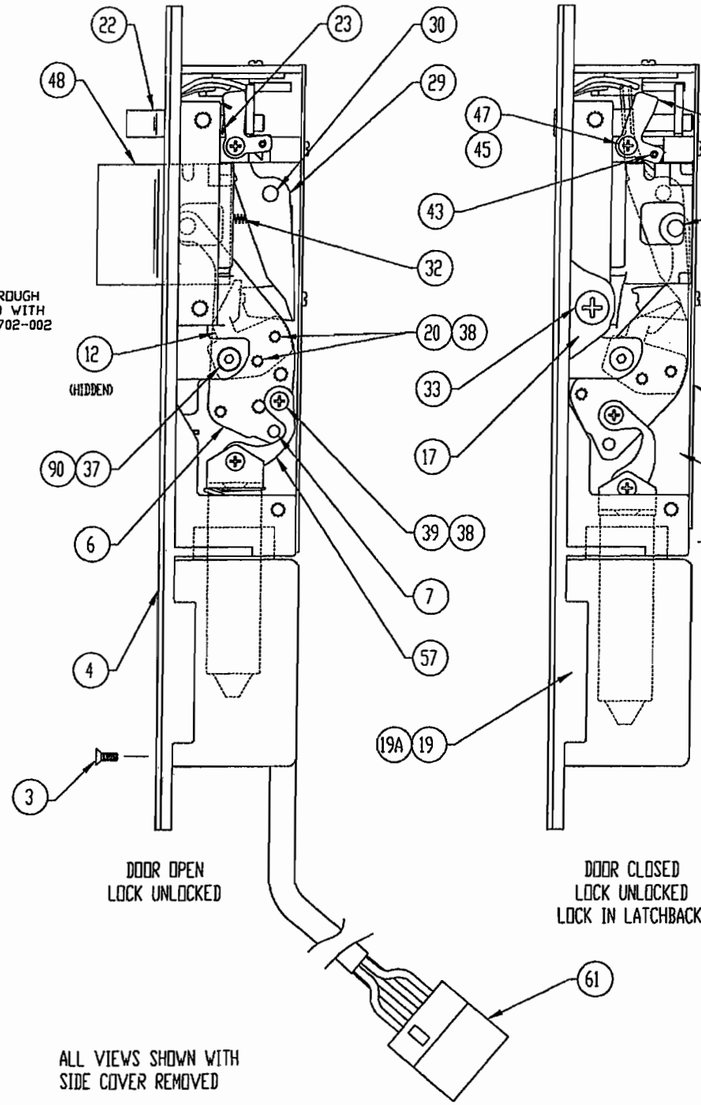
DRAWING TITLE

NS400 SERIES LOCK INSTALLATION INSTRUCTIONS

DRAWING NUMBER	REVISION
089-0900-033	D



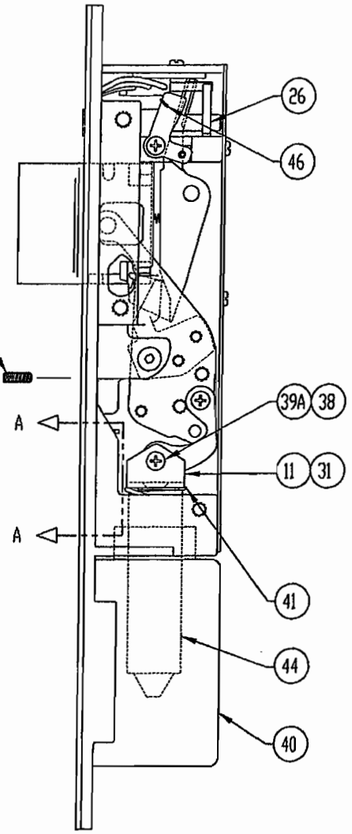
VIEW SHOWN
WITHOUT FACE PLATE



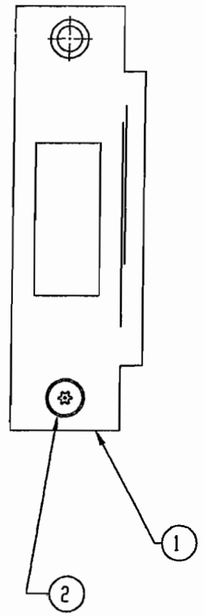
DOOR OPEN
LOCK UNLOCKED

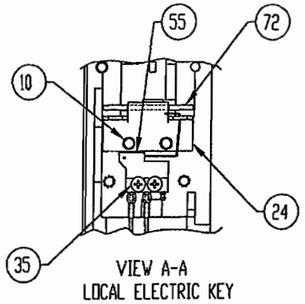
ALL VIEWS SHOWN WITH
SIDE COVER REMOVED

DOOR CLOSED
LOCK UNLOCKED
LOCK IN LATCHBACK

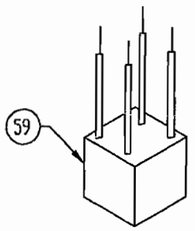


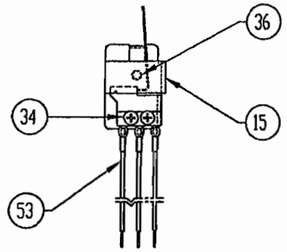
DOOR CLOSED
LOCK DEADLOCKED



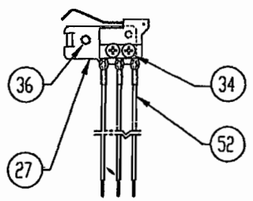


VIEW A-A
LOCAL ELECTRIC KEY





DPS/HOLDBACK/RELOCK
SWITCH ASSY



DEADLOCK INDICATION
SWITCH ASSY

LTR.	REVISION	E. C. O.	BY	APP.	DATE
G	ADDED ITEM 49 & AL TAPE NOTE	04-137-900	SJ		08/10/04
F	REVISED PAGE 2 - SCREW PART #'S	MINOR	DH		11-16-95

SOUTHERN FOLGER DETENTION EQUIPMENT CO.
16300 West 103rd Street-Lemont, Illinois 60439
Tel:(630)739-3900 Fax:(630)739-3958

DRAWN BY	CHECKED BY	DATE	OLD PART NUMBER
P. DUBINA	R. STEFANEK	5-3-91	NS400E

PART NUMBERS SUBJECT TO CHANGE W/O NOTICE

CAD FILE

NS400E REPAIR PARTS
LOCK ASSY
DRAWING TITLE

900-2000-003
DRAWING NUMBER

NS400E STANDARD PARTS --NS400E SWITCH OPTION 00 & 03
(NON-FAIL-SAFE LATCHBOLT)

ITEM NO.	OLD PART NO.	DESCRIPTION	QTY	NEW PART NO.
*9		FHPMS 4-40 X 3/16 UC SST (TRIG)	2	002-2301-387
14		BDPMS 4-40 X 3/16 ZINC (COVER)	4	002-2404-102
*16		FHPMS 8-32 X 1/4 UC ZINC (COVER)	2	002-2301-064
17	NS400-2	SIDE COVER GALVANIZED	1	012-3503-002
18	NS400-4	CASE FRAME MACH. GALVANIZED	1	012-3558-002
19	NS400-1M	ARMOR BACKPLATE MACH	1	012-3559-002
19A	NS400-1M	ARMOR BACKPLATE MACH NLB	1	012-3559-003
21		SSSC 6-32 X 5/16 CUP BO (CYLS)	2	002-1200-065
28	NS400-3	REAR COVER GALVANIZED	1	008-3507-004
29	NS400-20	DEADLOCK LEVER MACH	1	012-3502-002
30		DEADLOCK SHOULDER SCREW W/NYL BO	1	011-3502-002
32	NS400-21	SPRING-DEADLOCK LEVER	1	003-0104-001
33		FHPMS 10-32 X 1/4 UC ZINC (COVER)	4	002-2301-567
37	NS400-19	PIVOT BUSHING-OPER. LEVER	1	011-3511-001
41	NS400E-18	SPRING-SOLENOID PLUNGER	1	003-0023-001
49		SPACER, WIRE TROUGH	1	008-0400-001 G
78		SSSC 10-32 X 1/4 CUP PT W/ NYL BO	2	002-1200-212
90		SHCS 8-32 X 7/16 BO W/NYL	1	002-2801-418
	NS400E-8	LINKAGE ASSY. NS400E	1	075-3517-003
6	NS400-11	OPERATING LEVER STAMPING	1	008-3512-003
7	NS400-15	MANUAL RELEASE PIN W/ NYL	1	011-3510-002
8		BOLT PIN	1	002-5102-001
11	NS400E-16	SOLENOID PLUNGER MTG ANGLE	1	008-3534-001
12	NS400-12	DEADLOCK RELEASE STMP	1	008-3535-001
20		WASHER 6 EXT TOOTH ZINC	2	010-1707-600
31		FHPMS 8-32 X 3/8 UC ZINC W/NYL	1	002-2301-067
38		PHPMS 6-32 X 1/4 ZINC W/ NYL ZINC	4	002-2303-064
39		PIVOT BUSHING .100	1	011-3503-001
39A	NS400-13	PIVOT BUSHING .070	1	011-3503-002
44	NS400-17	SOLENOID PLUNGER	1	005-4126-003
48	NS400-9	LATCHBOLT CASTING NS400	1	013-3503-002
57	NS400E-14	CONNECTING LINK NFS	1	008-3513-006
	NS400-7	TRIGGER BOLT ASSY. W/GUIDE	1	075-3604-001
*13	NS400-7E	TRIGGER BOLT GUIDE STMP	1	008-3538-001
22	NS400-7A	TRIGGER BOLT ASSY.	1	075-3595-002
23		SPRING-TRIGGER BOLT	1	003-0003-002
26	NS400-7F	TRIGGER BOLT TAIL	1	008-3540-002

CONTINUOUS DUTY SOLENOID

ITEM NO.	OLD PART NO.	DESCRIPTION	QTY	NEW PART NO.
*91A		POWER MODULATOR ASSY.	1	005-7505-002
40		SOLENOID 24VDC DUAL COIL PULL	1	005-4010-002

INTERMITTENT DUTY SOLENOID

40		SOLENOID 24VDC DUAL COIL PULL	1	005-4010-002

ADDITIONAL PART FOR AC INTERMITTENT DUTY

59		RECTIFIER ASSY	1	076-0710-004

ADDITIONAL PARTS FOR LATCH HOLDBACK -- SWITCH OPTIONS 06 & 07

15	NS400-30	SWITCH MTG BRKT-BOLT GALV	1	008-3510-003
34		BDPMS 2-56 X 1/4 ZINC	2	002-2404-052
36		BDPMS 4-40 X 3/16 ZINC	1	002-2404-102
53	NS400-29	SWITCH ASSY DPS/HOLDBACK/RELOCK	1	075-3611-002

ADDITIONAL PARTS FOR LATCHBACK

42	NS400-37	LATCHBACK LEVER	1	008-3539-001
43	NS400-36	LATCHBACK CATCH W/ROLL PIN	1	075-3609-001
45	NS400-38	SPACER-LATCHBACK	1	011-3513-001
46	NS400-41	SPRING-LATCHBACK LEVER	1	003-0232-001
47		PHPMS 4-40 X 5/16 ZINC W/NYL	1	002-2302-204
48	NS400-09	LATCHBOLT CASTING NS400	1	013-3503-002

LOCK MOUNTING SCREWS

*5		FHPMS 12-24 X 3/8 UC ZINC	4	002-2301-118

STRIKE

1	NS400-06	STRIKE US32D	1	008-3542-002
2		FHTS 12-24 X 1/2 UC SST	2	002-0605-327

* NOT SHOWN

ADDITIONAL PARTS INDICATION SWITCH OPTIONS 01, 04, & 07

ITEM NO.	OLD PART NO.	DESCRIPTION	QTY	NEW PART NO.
27		SWITCH MOUNTING BRKT. - CASE	1	008-3515-001
34		BDPMS 2-56 X 1/4 ZINC	2	002-2404-052
36		BDPMS 4-40 X 3/16 ZINC	1	002-2404-102
52	NS400-24	INDICATION SWITCH ASSY.	1	075-3612-002

ADDITIONAL PARTS - WIRING PLUG

*60		FIELD RECEPTICAL ASSY. - 12 PIN	1	075-0517-001
61		CONNECTOR PLUG - 12 PIN	1	005-1705-005
*62		CONNECTOR CONTACT PIN	12	005-1707-001

ADDITIONAL PARTS - CYLINDER(S)

*63		CYLINDER BLOCKING RING	-	PER ORDER
*64		CYLINDER 1-5/32 X 1 1/8 LG	-	PER ORDER
*65		EXTENSION ASSY.	-	PER ORDER
*66		LEK MODIFIED CYL.	-	PER ORDER
*67		SWITCH TRIPPER - LEK	-	005-1202-005

ADDITIONAL PARTS FOR LOCAL ELECTRIC KEY

10		FHPMS 4-40 X 3/16 UC SST	2	002-2301-387
24	NS400-27	SWITCH MTG. BRKT. GALV. - LEK	1	008-3546-002
*25		SWITCH INSULATOR	1	005-0703-001
35		FHPMS 2-56 X 5/16 ZINC	2	002-2301-349
55	NS400-26	SWITCH ASSY. LEK NFS	1	075-3613-001
72	NS400-28	SWITCH TRIPPER - LEK	1	003-0805-001

FACE PLATES

		FHTS 6-32 X 1/4 UC W/NYL US4	6	002-0605-002
3		FHTS 6-32 X 1/4 UC W/NYL US10	6	002-0605-003
		FHTS 6-32 X 1/4 UC W/NYL US10B	6	002-0605-004
		FHTS 6-32 X 1/4 UC W/NYL US26D	6	002-0605-006
		FACE PLATE US4	1	012-3568-001
		FACE PLATE US10	1	012-3568-002
4		FACE PLATE US10B	1	012-3568-003
		FACE PLATE US32D	1	012-3568-006

LTR.	REVISION	E.C.O.	BY	APP.	DATE
G	ADDED ITEM 49 & AL TAPE NOTE	04-137-900	SJ		08/10/04
F	REVISED PAGE 2 - SCREW PART #'S	MINOR	DH		11-16-95

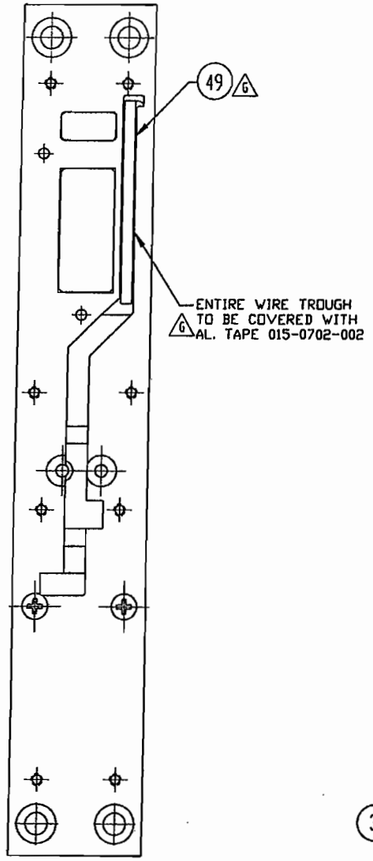
SOUTHERN FOLGER DETENTION EQUIPMENT CO.
16300 West 103rd Street-Lemont, Illinois 60439
Tel:(630)739-3900 Fax:(630)739-3958

DRAWN BY	CHECKED BY	DATE	OLD PART NUMBER
C. MALONE	C. DURKOVIC	10-17-91	NS400E

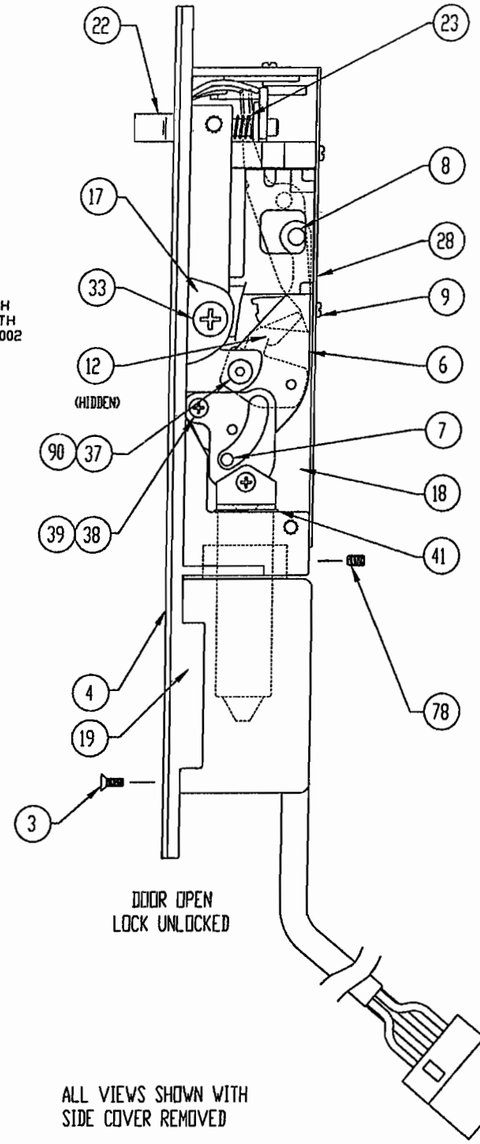
PART NUMBERS SUBJECT TO CHANGE W/O NOTICE | CAD FILE | PAGE 2 OF 2

NS400E REPAIR PARTS
PARTS LIST
DRAWING TITLE

900-2000-003
DRAWING NUMBER

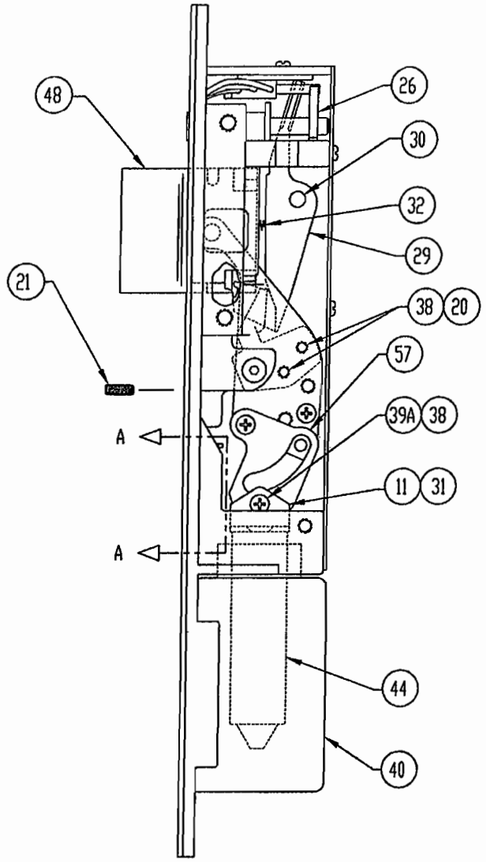


VIEW SHOWN
WITHOUT FACE PLATE

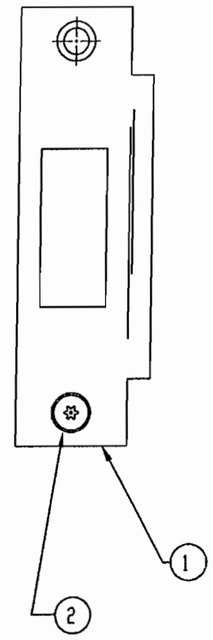


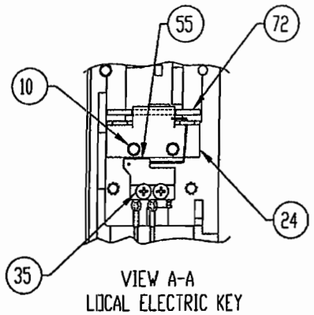
DOOR OPEN
LOCK UNLOCKED

ALL VIEWS SHOWN WITH
SIDE COVER REMOVED

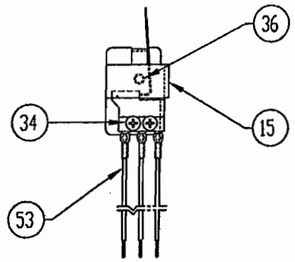


DOOR CLOSED
LOCK DEADLOCKED

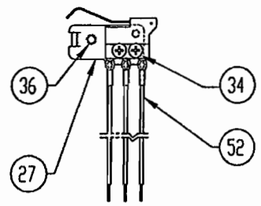




VIEW A-A
LOCAL ELECTRIC KEY



DPS/HOLDBACK/RELOCK
SWITCH ASSY



DEADLOCK INDICATION
SWITCH ASSY

LTR.	REVISION	E. C. D.	BY	APP.	DATE
G	ADDED ITEM 49 & AL TAPE NOTE	04-137-900	SJ		08/10/04
F	REVISED PAGE 2 - SCREW PART #'S	MINOR	DH		11-16-95

SOUTHERN FOLGER DETENTION EQUIPMENT CO.
16300 West 103rd Street-Lemont, Illinois 60439
Tel:(630)739-3900 Fax:(630)739-3958

DRAWN BY	CHECKED BY	DATE	OLD PART NUMBER
P. DUBINA	R. STEFANEK	5-3-91	NS400EFS
PART NUMBERS SUBJECT TO CHANGE W/O NOTICE		CAD FILE	PAGE 1 OF 2

NS400EFS REPAIR PARTS
LOCK ASSEMBLY
DRAWING TITLE

900-2000-004
DRAWING NUMBER

NS400EFS STANDARD PARTS --NS400EFS SWITCH OPTION 00 & 03 FAIL-SAFE LATCHBOLT)

ITEM NO.	OLD PART NO.	DESCRIPTION	QTY	NEW PART NO.
*9		FHPMS 4-40 X 3/16 UC SST (TRIG)	2	002-2301-387
14		BDPMS 4-40 X 3/16 ZINC (COVER)	4	002-2404-102
15	NS400-30	SWICH MTG BRACKET-BOLT GALV	1	008-3510-003
*16		FHPMS 8-32 X 1/4 UC ZINC (COVER)	2	002-2301-064
17	NS400-2	SIDE COVER GALVANIZED	1	012-3503-002
18	NS400-4	CASE FRAME MACH. GALVANIZED	1	012-3558-002
19	NS400-1M	ARMOR BACKPLATE MACH NLB	1	012-3559-003
21		SSSC 6-32 X 5/16 CUP BO (CYLS)	2	002-1200-065
28	NS400-3	REAR COVER GALVANIZED	1	008-3507-004
29	NS400-20	DEADLOCK LEVER MACH	1	012-3502-002
30		DEADLOCK SHOULDER SCREW W/NYL BO	1	011-3502-002
32	NS400-21	SPRING-DEADLOCK LEVER	1	003-0104-001
33		FHPMS 10-32 X 1/4 UC ZINC (COVER)	4	002-2301-567
34		BDPMS 2-56 X 1/4 ZINC	2	002-2404-052
36		BDPMS 4-40 X 3/16 ZINC	1	002-2404-102
37	NS400-19	PIVOT BUSHING-OPER. LEVER	1	011-3511-001
40F		SOLENOID 24VDC DUAL COIL PULL	1	005-4010-002
41	NS400E-18	SPRING-SOLENOID PLUNGER	1	003-0023-002
49		SPACER, WIRE TROUGH	1	008-0400-001 (G)
53	NS400-24	SWITCH ASSY DPS/HOLDBACK/RELOCK	1	075-3611-002
78		SSSC 10-32 X 1/4 CUP PT W/ NYL BO	2	002-1200-212
90		SHCS 8-32 X 7/16 BO W/NYL	1	002-2801-418
*90A		POWER MODULATOR ASSEMBLY	1	005-7505-002
	NS400E-8	LINKAGE ASSY. NS400EFS	1	075-3518-003
6	NS400-11	OPERATING LEVER STAMPING	1	008-3512-003
7	NS400-15	MANUAL RELEASE PIN W/ NYL	1	011-3510-002
8		BOLT PIN	1	002-5102-001
11	NS400E-16	SOLENOID PLUNGER MTG ANGLE	1	008-3534-001
12	NS400-12	DEADLOCK RELEASE STMP	1	008-3535-001
20		WASHER 6 EXT TOOTH ZINC	2	010-1707-600
31		FHPMS 8-32 X 3/8 UC ZINC W/NYL	1	002-2301-067
38		PHPMS 6-32 X 1/4 ZINC W/ NYL ZINC	4	002-2303-164
39		PIVOT BUSHING .100	1	011-3503-001
39A	NS400-13	PIVOT BUSHING .070	1	011-3503-002
44	NS400E-17	SOLENOID PLUNGER	1	005-4126-003
48	NS400-9	LATCHBOLT CASTING NS400	1	013-3503-002
57	NS400E-14	CONNECTING LINK FS	1	008-3514-004
	NS400-7	TRIGGER BOLT ASSY. W/GUIDE	1	075-3604-001
*13	NS400-7E	TRIGGER BOLT GUIDE STMP	1	008-3538-001
22	NS400-7A	TRIGGER BOLT ASSY.	1	075-3595-002
23		SPRING-TRIGGER BOLT	1	003-0003-002
26	NS400-7F	TRIGGER BOLT TAIL	1	008-3540-002

ADDITIONAL PARTS - WIRING PLUG

ITEM NO.	OLD PART NO.	DESCRIPTION	QTY	NEW PART NO.
*60		FIELD RECEPTICAL ASSY. - 12 PIN	1	075-0517-001
61		CONNECTOR PLUG - 12 PIN	1	005-1705-005
*62		CONNECTOR CONTACT PIN	12	005-1707-001
LOCK MOUNTING SCREWS				
*5		FHPMS 12-24 X 3/8 UC ZINC	4	002-2301-118
STRIKE				
1	NS400-06	STRIKE US32D	1	008-3542-002
2		FHTS 12-24 X 1/2 UC SST	2	002-0605-327
FACE PLATES				
		FHTS 6-32 X 1/4 UC W/NYL US4	6	002-0605-002
3		FHTS 6-32 X 1/4 UC W/NYL US10	6	002-0605-003
		FHTS 6-32 X 1/4 UC W/NYL US10B	6	002-0605-004
		FHTS 6-32 X 1/4 UC W/NYL US26D	6	002-0605-006
		FACE PLATE US4	1	012-3568-001
		FACE PLATE US10	1	012-3568-002
4		FACE PLATE US10B	1	012-3568-003
		FACE PLATE US32D	1	012-3568-006

ADDITIONAL PARTS - INDICATION SWITCH - SWITCH OPTION 04

ITEM NO.	OLD PART NO.	DESCRIPTION	QTY	NEW PART NO.
27		SWITCH MOUNTING BRKT. - CASE	1	008-3515-001
34		BDPMS 2-56 X 1/4 ZINC	2	002-2404-052
36		BDPMS 4-40 X 3/16 ZINC	1	002-2404-102
52	NS400-24	INDICATION SWITCH ASSY.	1	075-3612-002

ADDITIONAL PARTS - CYLINDER(S)

*63		CYLINDER BLOCKING RING	-	PER ORDER
*64		CYLINDER 1-5/32 X 1 1/8 LG	-	PER ORDER
*65		EXTENSION ASSY.	-	PER ORDER
*66		LEK MODIFIED CYL.	-	PER ORDER
*67		SWITCH TRIPPER - LEK	-	005-1202-005

ADDITIONAL PARTS FOR LOCAL ELECTRIC KEY

10		FHPMS 4-40 X 3/16 UC SST	2	002-2301-387
24	NS400-27	SWITCH MTG. BRKT. GALV. - LEK	1	008-3546-002
*25		SWITCH INSULATOR	1	005-0703-001
35		FHPMS 2-56 X 5/16 ZINC	2	002-2301-349
55	NS400-26	SWITCH ASSY. LEK NFS	1	075-3613-001
72	NS400-28	SWITCH TRIPPER - LEK	1	003-0805-001

* NOT SHOWN

LTR.	REVISION	E. C. D.	BY	APP.	DATE
G	ADDED ITEM 49 & AL TAPE NOTE	04-137-900	SJ		08/23/04
F	REVISED PAGE 2 - SCREW PART #'S	MINOR	DH		11-16-95

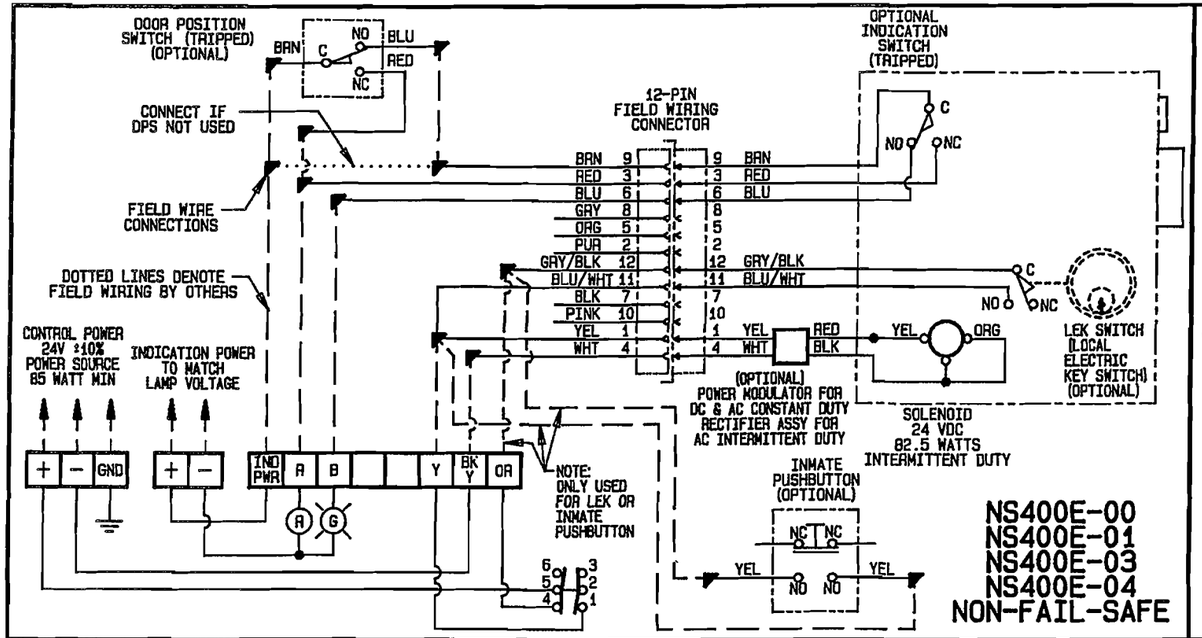
SOUTHERN FOLGER DETENTION EQUIPMENT CO.
16300 West 103rd Street-Lemont, Illinois 60439
Tel:(630)739-3900 Fax:(630)739-3958

DRAWN BY	CHECKED BY	DATE	OLD PART NUMBER
C. MALONE	C. DURKOVIC	10-17-91	NS400EFS

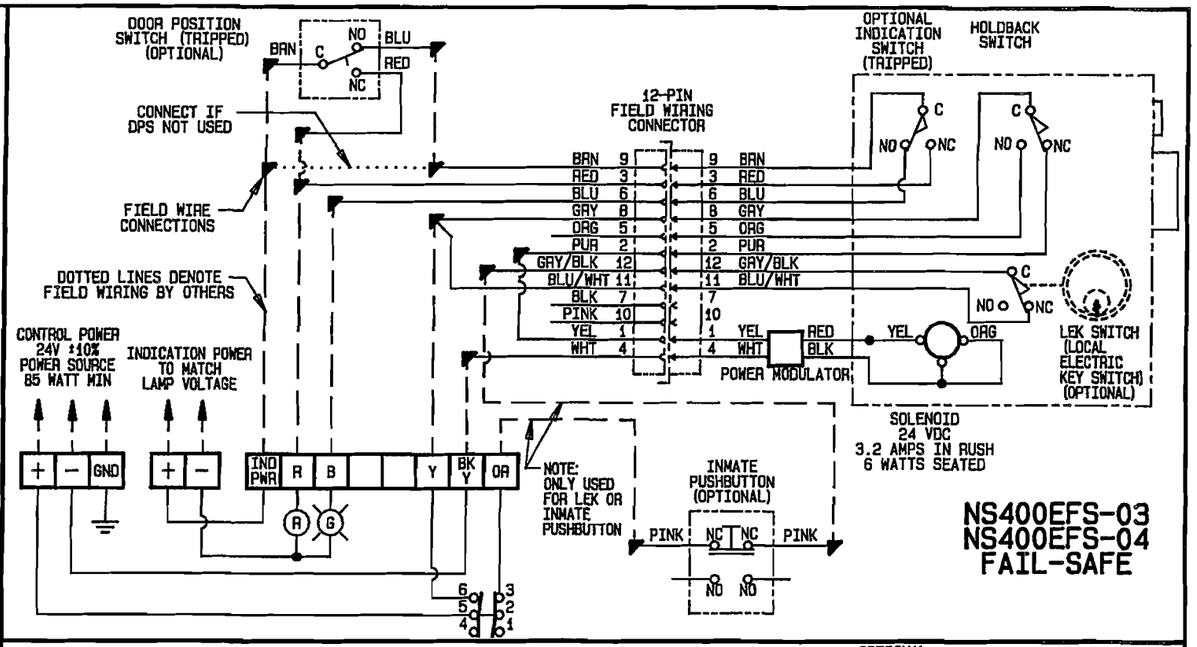
PART NUMBERS SUBJECT TO CHANGE W/O NOTICE — CAD FILE —

NS400EFS REPAIR PARTS
PARTS LIST
DRAWING TITLE

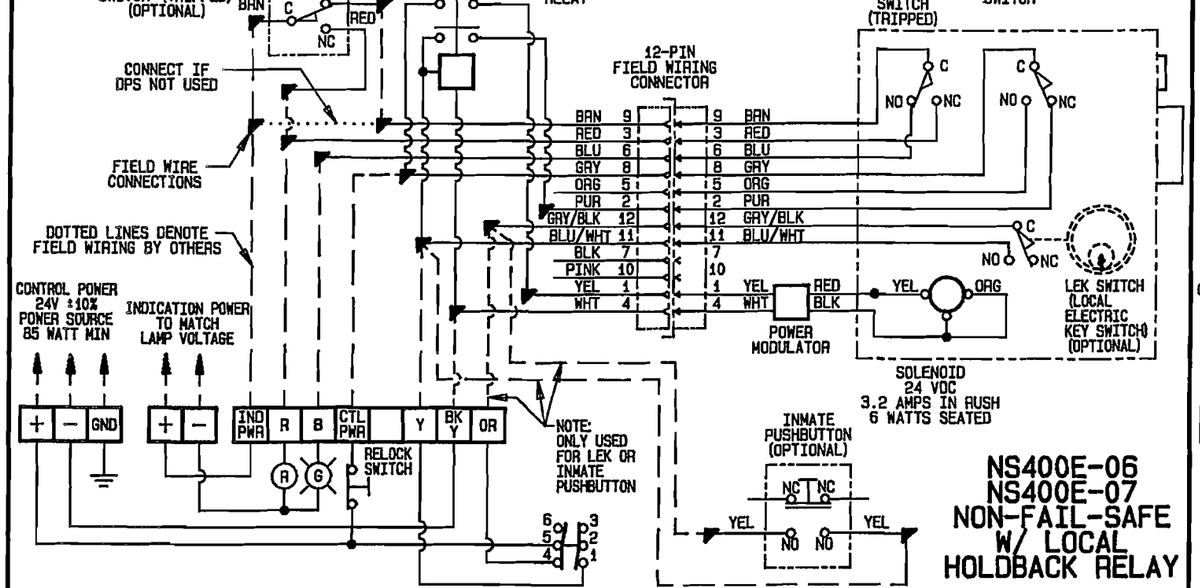
900-2000-004
DRAWING NUMBER



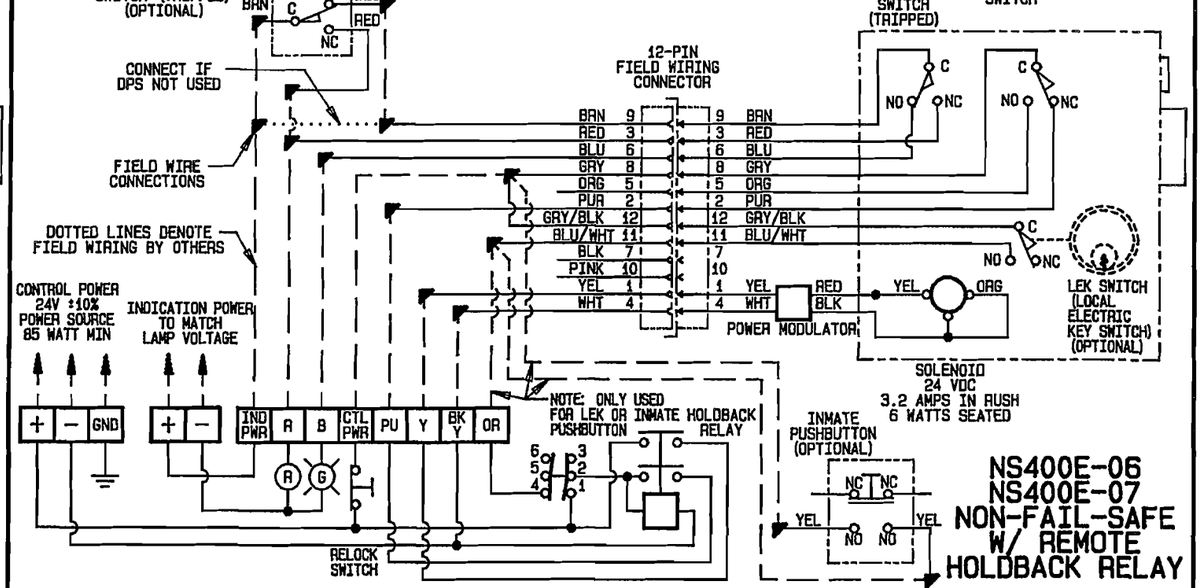
NS400E-00
NS400E-01
NS400E-03
NS400E-04
NON-FAIL-SAFE



NS400EFS-03
NS400EFS-04
FAIL-SAFE



NS400E-06
NS400E-07
NON-FAIL-SAFE
W/ LOCAL
HOLDBACK RELAY



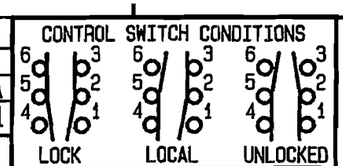
NS400E-06
NS400E-07
NON-FAIL-SAFE
W/ REMOTE
HOLDBACK RELAY

RECORD SET

INSTALLATION MUST BE PROPERLY GROUNDED PER NATIONAL ELECTRICAL CODE ARTICLE 250.

LTR	REVISION	ECO	BY	APPV	DATE
C	CHANGED YELLOW LEK WIRE TO BLUE/WHITE	ECN 11-154	TCC	A	8-3-11
B	ADDED NEC NOTE	091-0019	CD	RS	10-1-91
A	NEW PN & DWG RELEASE	900-0254	JR	RS	2-6-91

CONTROL SWITCH CONDITIONS



SOUTHERN FOLGER DETENTION EQUIPMENT CO.
4634 S. PRESA ST, SAN ANTONIO, TX 78223
Tel. (210) 533-1231 Fax: (210) 533-2211

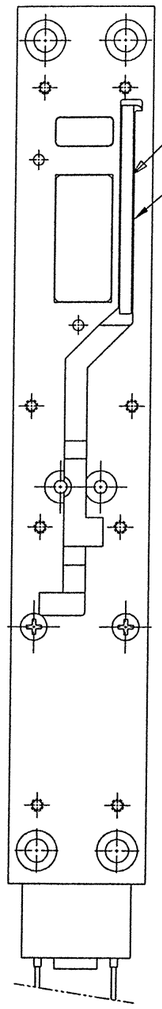
DRAWN BY: J. RUSSELL	DATE: 2-6-91
CHECKED BY: P.D. CAPLINGER	DATE: 2-28-91
APPROVED BY: R. STEFANEK	CAD: C23-D10

CONTROLS SHOWN FOR REFERENCE ONLY
(R) RED LIGHT-OPEN (UNLOCKED)
(G) GREEN LIGHT-CLOSED (LOCKED)
DOOR SHOWN CLOSED & LOCKED.

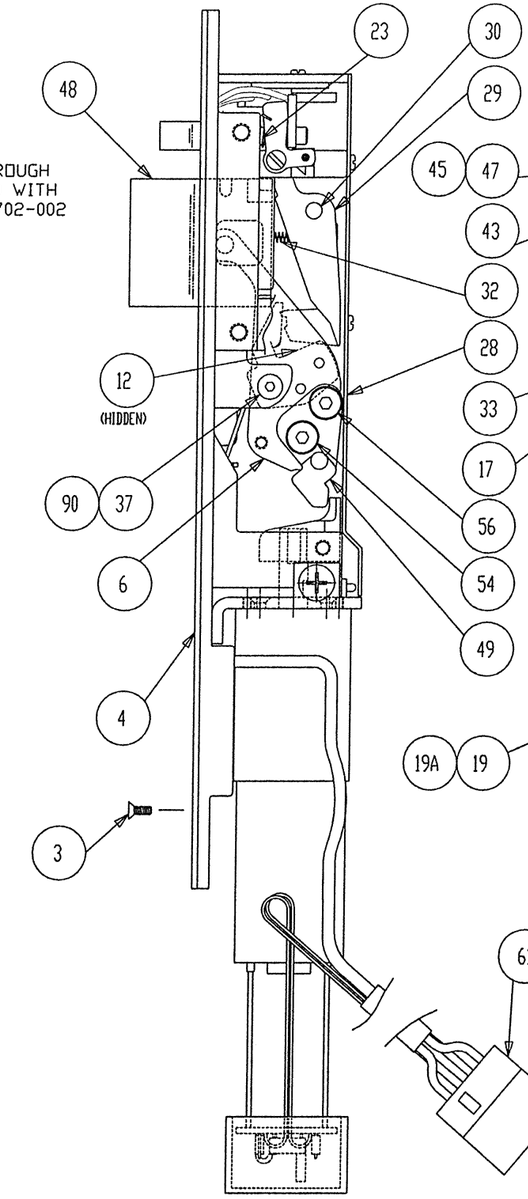
NOTICE:
WIRING SUBJECT TO CHANGE WITHOUT NOTICE. NOT RESPONSIBLE WHEN CONTROLS FURNISHED BY OTHERS.

WIRING DIAGRAM
NS400 SERIES DC & AC SOLENOID VOLTAGE

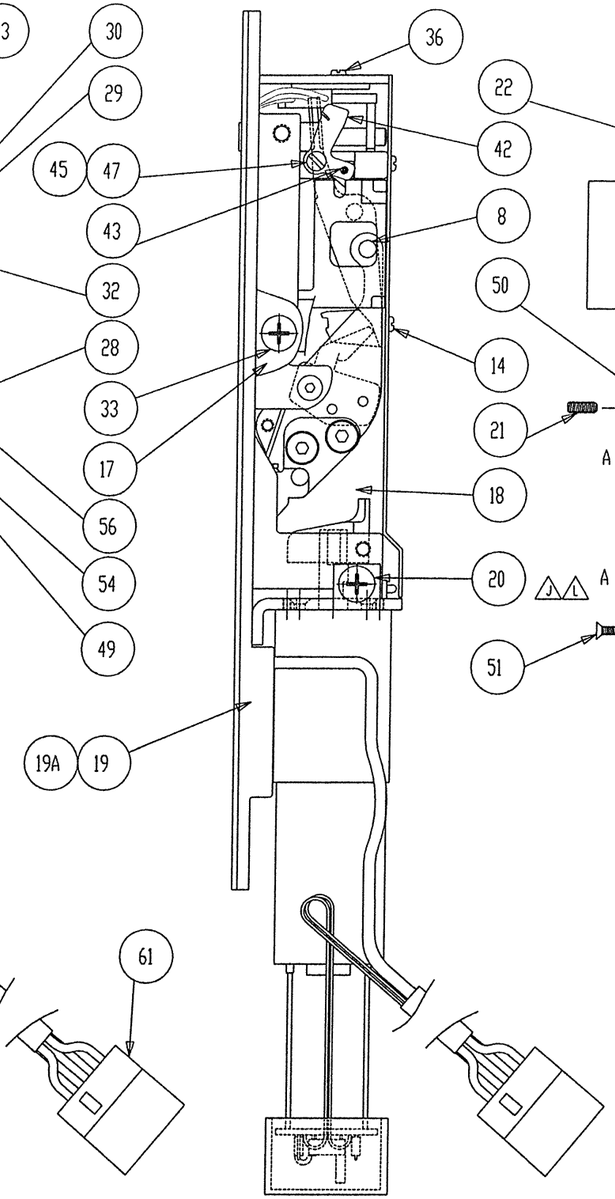
WIRING DIAGRAM NO.
091-0900-024



VIEW SHOWN
WITHOUT FACE PLATE

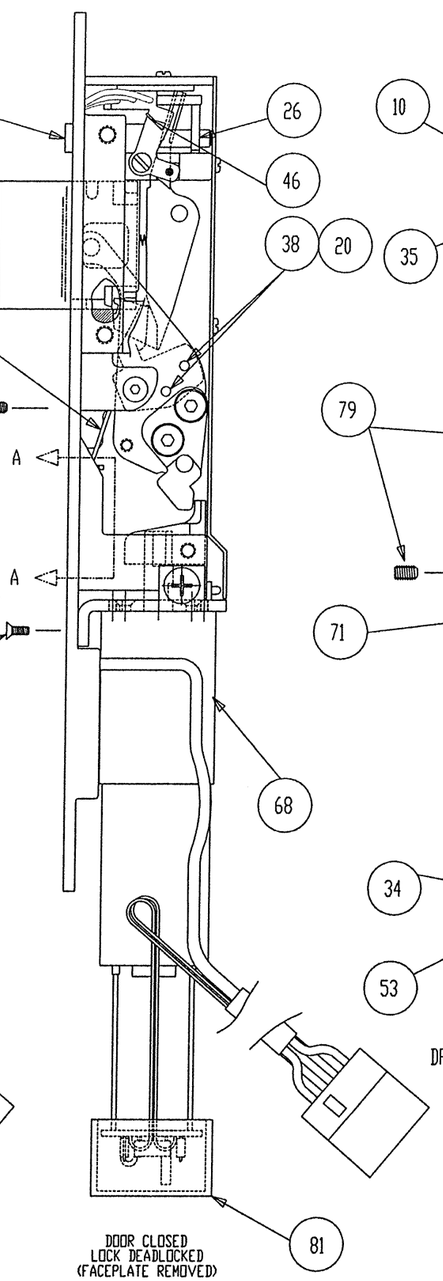


DOOR OPEN
LOCK UNLOCKED

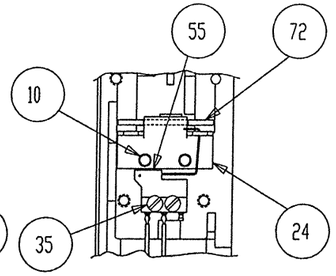


ALL VIEWS SHOWN WITH
SIDE COVER REMOVED

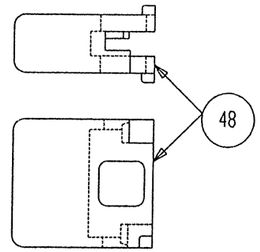
DOOR CLOSED
LOCK UNLOCKED
LOCK IN LATCHBACK



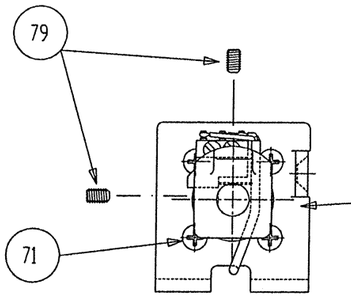
DOOR CLOSED
LOCK DEADLOCKED
(FACEPLATE REMOVED)



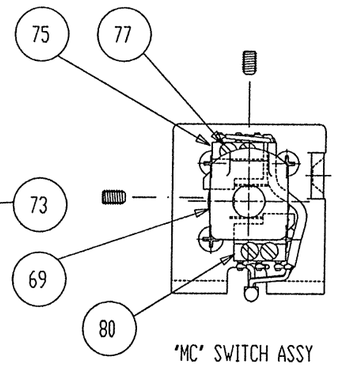
VIEW A-A
LOCAL ELECTRIC KEY



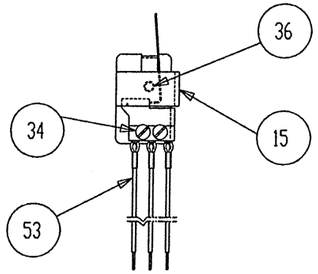
3/4" DEADBOLT



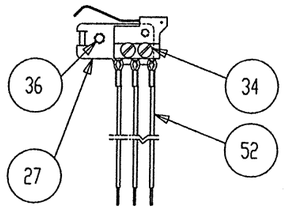
"M" SWITCH ASSY



"MC" SWITCH ASSY



DPS/HOLDBACK/RELOCK
SWITCH ASSY



DEADLOCK INDICATION
SWITCH ASSY

LTR.	REVISION	E. C. O.	BY	APP.	DATE
M	ADDED ITEM 57 AND BOTTOM VIEW	04-137-900	SJ		8/9/04
L	ITEM 20 WAS ITEM 16, REV TO NEW CON. ON BRAKE	03-233-900	SJ		12-31-03
K	ADDED ITEM 81 POTTED BRAKE, MOTOR WAS -002	02-205-900	SJ		12/23/02
J	ITEM 16 WAS ITEM 33	02-100-900	SJ		6/28/02
H	REV. TO USE NEW MOTORS, REDRAWN ON ACAD	02-041-900	SJ		3/19/02
G	REVISED PAGE 2 - SCREW PART #'S	MINOR	DH		11-16-95

SOUTHERN FOLGER DETENTION EQUIPMENT CO.
4634 S. Presa Street
San Antonio, Texas 78223
Phone: 210-533-1231 Fax: 210-533-2211

Security Hardware & Detention Equipment

DRAWN BY	CHECKED BY	DATE	OLD PART NUMBER
P.DUBINA	R.STEFANEK	5-3-91	NS400M

PART NUMBERS SUBJECT TO CHANGE W/O NOTICE | CAD FILE | PAGE 1 OF 2

NS400M,MC AND MCD LOCK ASSEMBLY

DRAWING TITLE

900-3000-002

DRAWING NUMBER

NS400M-MC-MCD STANDARD PARTS -- SWITCH OPTIONS 00 & 03

(NON-FAIL-SAFE MOTOR LATCHBOLT & DEADBOLT)

ITEM NO.	OLD PART NO.	DESCRIPTION	QTY	PART NUMBER	
*9		FHPMS 4-40 X 3/16 UC SST (TRIG)	2	002-2301-387	
14		BDPMS 4-40 X 3/16 ZINC (COVER)	3	002-2404-102	
14		BDPMS 4-40 X 1/8 ZINC (COVER)	1	002-2401-101	
16		FHPMS 8-32 X 1/4 UC ZINC (COVER)	2	002-2301-064	J L
17	NS400-2	SIDE COVER GALV	1	012-3503-002	
18	NS400-4	CASE FRAME MACH GALV	1	012-3558-002	
19	NS400M-1M	ARMOR BACK PLATE-MOTOR	1	012-3566-001	
19A		ARMOR BACK PLATE-MOTOR NLB	1	012-3566-002	
20		FHPH SELF-TAPPING 10-32 X 3/8 UC ZINC	1	002-0608-200	L
21		SSSC 6-32 X 5/16 CUP BO (CYLS)	2	002-1200-065	
28	NS400M-3	REAR COVER GALV-MOTOR	1	008-3545-002	
29	NS400-20	DEADLOCK LEVER MACH	1	012-3502-002	
30		DEADLOCK SHOULDER SCREW W/NYL	1	011-3502-002	
32	NS400-21	SPRING-DEADLOCK LEVER	1	003-0104-001	
33		FHPMS 10-32 X 1/4 UC ZINC (COVER)	4	002-2301-567	J
37	NS400-19	PIVOT BUSHING-OPER LEVER	1	011-3511-001	
50	NS400M-35	SPRING-OPERATING LEVER	1	003-0230-001	K
57		SPACER, WIRE TROUGH	1	008-0400-001	M K
51		FHPMS 6-32 X 1/4 ZINC (MOT BRKT)	2	002-2301-450	
90		SHCS 8-32 X 7/16 BO W/NYL	1	002-2801-418	

	NS400M-8	LINKAGE ASSY NS400M-MC	1	075-3606-001	
6	NS400-11	OPERATING LEVER STMP	1	008-3512-003	
8		BOLT PIN	1	002-5102-001	
12	NS400M-12	DEADLOCK RELEASE GLASS BEAD	1	013-3512-002	
20		#6 LOCKWASHER	2	010-0196-800	
38		PHPMS 6-32 X 1/4 ZINC W/NYL	2	002-2303-164	
48	NS400-9	DEADBOLT FINISHED ASSY-LB	1	075-3616-001	
49	NS400M-39	MOTOR PUSH BLOCK GLASS BEAD	1	013-3509-002	
54		FHSCS 8-32 X 3/8 BO W/NYL	1	002-2802-005	
56		FHSCS 8-32 X 1/2 BO W/NYL	1	002-2802-083	

	NS400MD-8	LINKAGE ASSY NS400MCD	1	075-3623-001	
6	NS400-11	OPERATING LEVER STMP	1	008-3512-003	
8		BOLT PIN	1	002-5102-001	
12	NS400M-12	DEADLOCK RELEASE GLASS BEAD	1	013-3512-002	
20		#6 LOCKWASHER	2	010-0196-800	
38		PHPMS 6-32 X 1/4 ZINC W/NYL	2	002-2303-164	
48	NS400-9	DEADBOLT FINISHED ASSY	1	075-3524-002	
49	NS400M-39	MOTOR PUSH BLOCK GLASS BEAD	1	013-3509-002	
54		FHSCS 8-32 X 3/8 BO W/NYL	1	002-2802-005	
56		FHSCS 8-32 X 1/2 BO W/NYL	1	002-2802-083	

	NS400-7	TRIGGER BOLT ASSY W/GUIDE	1	075-3604-001	
*13	NS400-7E	TRIGGER BOLT GUIDE STMP	1	008-3538-001	
22	NS400-7A	TRIGGER BOLT ASSY	1	075-3595-002	
23		SPRING-TRIGGER BOLT	1	003-0003-002	
26	NS400-7F	TRIGGER BOLT TAIL	1	008-3540-002	

ADDITIONAL PARTS FOR LATCHBACK -- SWITCH OPTIONS 00 & 01

(STANDARD ON M LOCKS, NOT AVAILABLE ON MCD LOCKS)

ITEM NO.	OLD PART NO.	DESCRIPTION	QTY	PART NUMBER
42	NS400-37	LATCHBACK LEVER	1	008-3539-001
43	NS400-36	LACKBACK CATCH W/ROLL PIN	1	075-3609-001
45	NS400-38	SPACER-LATCHBACK	1	011-3513-001
46	NS400-41	SPRING-LATCHBACK LEVER	1	003-0232-001
47		PHPMS 4-40 X 5/16 ZINC W/NYL	1	002-2303-204

ADDITIONAL STANDARD PARTS FOR NS400MCD -- SWITCH OPTION 03					
15	NS400M-30	SWITCH MOUNTING BRKT-BOLT GALV	1	008-3510-003	
34		BDPMS 2-56 X 1/4 ZINC	2	002-2404-052	
36		BDPMS 4-40 X 3/16 ZINC	1	002-2404-102	
53	NS400-29	SWITCH ASSY DPS/HOLDBACK/RELOCK	1	075-3611-002	

MOTOR ASSEMBLIES

		MOTOR ASSY 24VDC NS400M	1	075-3618-001	
*25		SWITCH INSULATOR	1	005-0703-001	
68		MOTOR 24VDC 400:1 GEAR	1	005-2630-001	
81		DC MOTOR BRAKE, POTTED	1	005-0916-002	
69		MOTOR CAM MACH	1	012-3565-001	
71		PHPMS M3 X0.5 X 6mm	4	002-2900-001	
73		MOTOR MOUNTING BRACKET GALV	1	008-3900-002	
75		MOTOR SWITCH ASSY	1	075-3629-001	
77		PHPMS 2-56 X 5/16 ZINC	2	002-2303-001	
79		SSSC 10-32 X 1/4 CUP W/NYL BO	2	002-1200-212	

		MC MOTOR ASSY 24VDC NS400MC	1	075-3618-002	
*25		SWITCH INSULATOR	2	005-0703-001	
68		MOTOR 24VDC 400:1 GEAR	1	005-2630-001	K
81		DC MOTOR BRAKE, POTTED	1	005-0916-002	K
69		MOTOR CAM MACH	1	012-3565-001	
71		PHPMS M3 X0.5 X 6mm	4	002-2900-001	
73		MOTOR MOUNTING BRACKET GALV	1	008-3900-002	
77		PHPMS 2-56 X 5/16 ZINC	4	002-2303-001	
79		SSSC 10-32 X 1/4 CUP W/NYL BO	2	002-1200-212	
80		MC MOTOR SWITCH ASSY	1	075-3628-001	

ADDITIONAL PART FOR AC					
•59	NS400M-40	RECTIFIER ASSY	1	076-0710-006	

LOCK MOUNTING SCREWS					
*5		FHPMS 12-24 X 1/2 UC SST	4	002-2301-118	

STRIKE					
•1	NS400-6	STRIKE US32D	1	008-3542-002	
•2		FHTS 12-24 X 1/2 UC SST	2	002-0605-327	

ADDITIONAL PARTS -- DEADLOCK INDICATION -- SWITCH OPTIONS 01 & 04

ITEM NO.	OLD PART NO.	DESCRIPTION	QTY	PART NUMBER
27		SWITCH MOUNTIG BRACKET-CASE	1	008-3515-001
34		BDPMS 2-56 X 1/4 ZINC	2	002-2404-052
36		BDPMS 4-40 X 3/16 ZINC	1	002-2404-101
52	NS400-24	INDICATION SWITCH ASSY	1	075-3612-002

ADDITIONAL PARTS FOR SWITCH OPTION 09: DEADLOCK & AUXILIARY ELECTRICAL RELOCK (MC LATCHBOLT ONLY)				
15	NS400M-30	SWITCH MOUNTING BRKT-BOLT GALV	1	008-3510-003
27		SWITCH MOUNTIG BRACKET-CASE	1	008-3515-001
34		BDPMS 2-56 X 1/4 ZINC	4	002-2404-052
36		BDPMS 4-40 X 3/16 ZINC	2	002-2404-102
52	NS400-24	INDICATION SWITCH ASSY	1	075-3612-001
53	NS400-29	SWITCH ASSY DPS/HOLDBACK/RELOCK	1	075-3611-002

ADDITIONAL PARTS -- WIRING PLUG				
*60		FIELD RECEPTACLE	1	075-0517-001
61		CONNECTOR PLUG - 12 PIN	1	005-1705-005
*62		CONNECTOR CONTACT PIN	12	005-1707-001

ADITIONAL PARTS -- CYLINDERS				
*63		CYLINDER BLOCKING RING	-	PER ORDER
*64		CYLINDER 1 5/32 X 1 1/8 LONG	-	PER ORDER
*65		EXTENSION ASSY	-	PER ORDER
*66		LEK MODIFIED CLY	-	PER ORDER
*67		HOLE PLUG 1 3/32 PLASTIC	-	005-1202-005

ADDITIONAL PARTS FOR LOCAL ELECTRIC KEY				
10		FHPMS 4-40 X 3/16 UC SST	2	002-2301-387
24	NS400-27	SWITCH MTG BRACKET GALV-LEK	1	008-3546-002
*25		SWITCH INSULATOR	1	005-0703-001
35		FHPMS 2-56 X 5/16 ZINC	2	002-2301-349
55	NS400-26	SWITCH ASSY LEK NFS	1	075-3613-001
72	NS400-28	SWITCH TRIPPER LEK	1	003-0805-001

FACE PLATES				
		FHTS 6-32 X 1/4 UC W/NYL US4	6	002-0605-002
3		FHTS 6-32 X 1/4 UC W/NYL US10	6	002-0605-003
		FHTS 6-32 X 1/4 UC W/NYL US10B	6	002-0605-004
		FHTS 6-32 X 1/4 UC W/NYL US26D	6	002-0605-006
		FACE PLATE US4	1	012-3505-001
		FACE PLATE US10	1	012-3505-002
4	NS400-28	FACE PLATE US10B	1	012-3505-003
		FACE PLATE US32D	1	012-3505-006

* NOT SHOWN

• NOT SHOWN, SEE DRAWING 900-2000-003

LTR.	REVISION	E. C. O.	BY	APP.	DATE
M	ADDED ITEM 57	04-137-900	SJ		8/9/04
L	ITEM 16 WAS QTY 3, ADDED ITEM 20	04-058-900	SJ		3/25/04
K	MOTOR WAS -002, ADDED BRAKE #81	02-205-900	SJ		12/27/02
J	ITEM 33 WAS QTY 5, ITEM 16 WAS QTY 2	02-100-900	SJ		6/28/02
H	REVISED TO USE NEW MOTOR ASSEMBLIES, REDRAWN ON CAD	02-041-900	SJ		3/19/02
G	REVISED PAGE 2 - SCREW PART #'S	MINOR	DH		11-16-95

SOUTHERN FOLGER DETENTION EQUIPMENT CO.
4634 S. Presa Street
San Antonio, Texas 78223
Phone: 210-533-1231 Fax: 210-533-2211

Security Hardware & Detention Equipment

DRAWN BY	CHECKED BY	DATE	OLD PART NUMBER
C. MALONE	C. DURKOVEC	10-17-91	NS400M

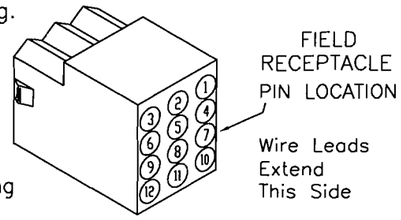
PART NUMBERS SUBJECT TO CHANGE W/O NOTICE — PAGE 2 OF 2

NS400M,MC AND MCD LOCKS PARTS LIST
DRAWING TITLE

900-3000-002
DRAWING NUMBER

NOTES :

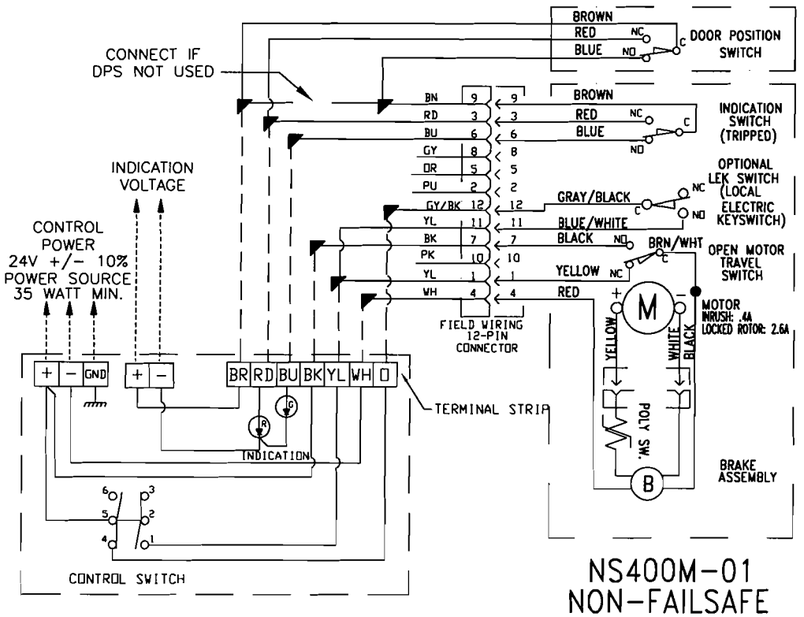
- – – – – – Indicates Field Wiring (By Others)
- ——— Indicates Factory Supplied Hardware Hardware Wiring and/or Internal Control Unit Wiring.
- Indicates Field Wire Connection Points.
- Indicates Designated Field Receptacle Pin Number
- Encloses Typical Control Wiring Shown for Reference Only
- Hardware Installation Must Be Properly Grounded Per National Electrical Code – Article 250 – Supplied By Others –



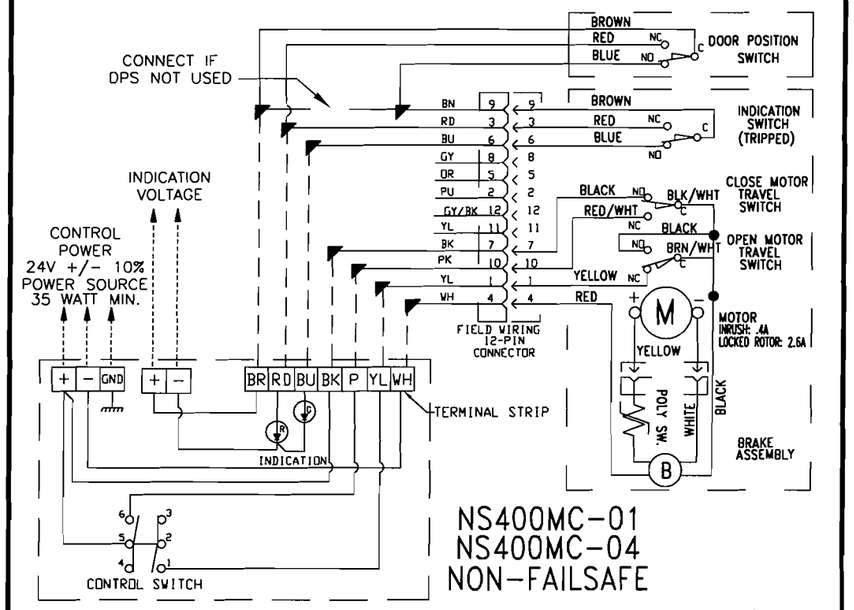
FIELD RECEPTACLE PIN LOCATION

Wire Leads Extend This Side

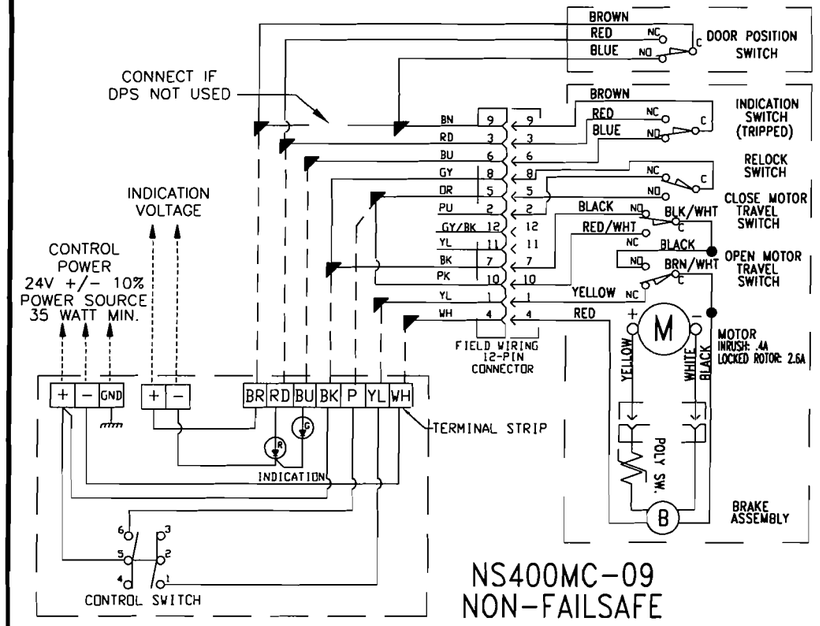
RECORD SET



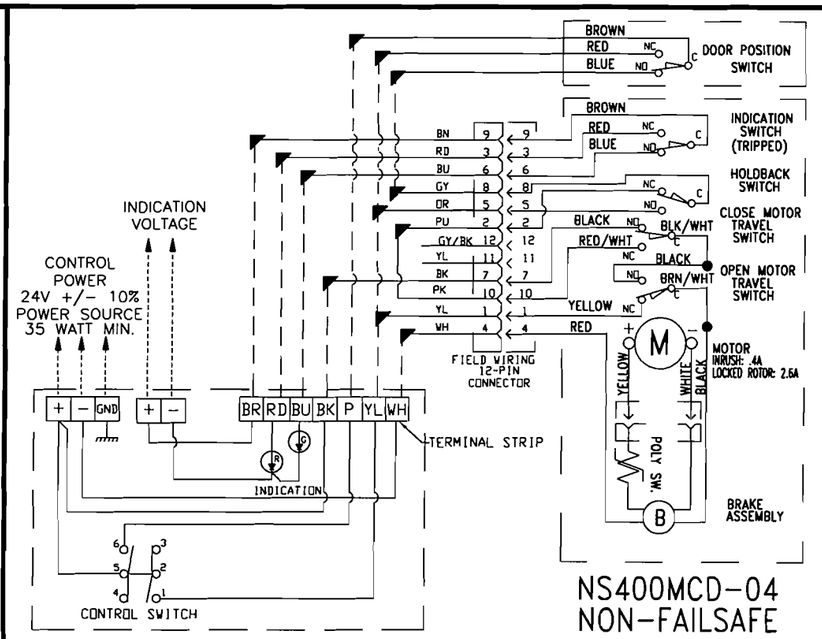
NS400M–01
NON–FAILSAFE



NS400MC–01
NS400MC–04
NON–FAILSAFE



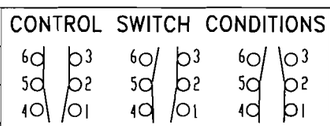
NS400MC–09
NON–FAILSAFE



NS400MCD–04
NON–FAILSAFE

LTR	REVISION	ECO	BY	APPV	DATE
G	VIOLET LEK WIRE TO BLUE/WHITE, UPDATED DESCRIPTION, UPDATED MOTOR AMPS	12-085	RA		4-11-12
F	ADDED POLYSWITCH	11-099-091	EFD		6/1/11
E	YELLOW LKE WIRE TO VIOLET		BCP		8-6-04

CONTROL SWITCH CONDITIONS



ELECTRICAL SPECIFICATION
BREAKDOWN CURRENT
24 VDC INRUSH: .4 AMP
LOCKED ROTOR: 2.6 AMP

SOUTHERN FOLGER DETENTION EQUIP. CO.
4634 S. PRESA ST. SAN ANTONIO, TEXAS 78223
Tel. (210) 533-1231 Fax: (210) 533-2211

DRAWN BY	DATE
B.PAVEY	1/28/04
CHECKED BY	DATE
APPROVED BY	DATE
CAD FILE NO.	OLD PART NUMBER

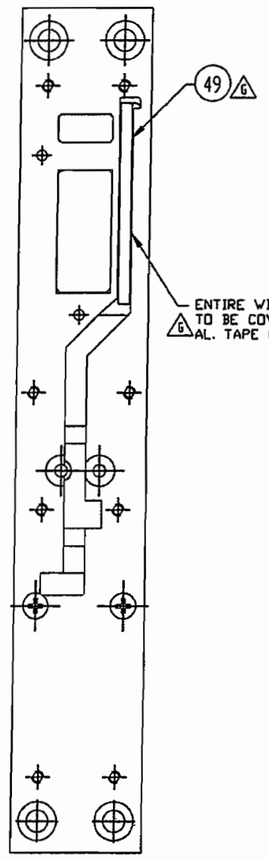
CONTROLS SHOWN FOR REFERENCE ONLY
- R RED LIGHT-OPEN (UNLOCKED)
- G GREEN LIGHT-CLOSED (LOCKED)

WIRING SHOWN - W/ DOOR CLOSED & LOCKED.

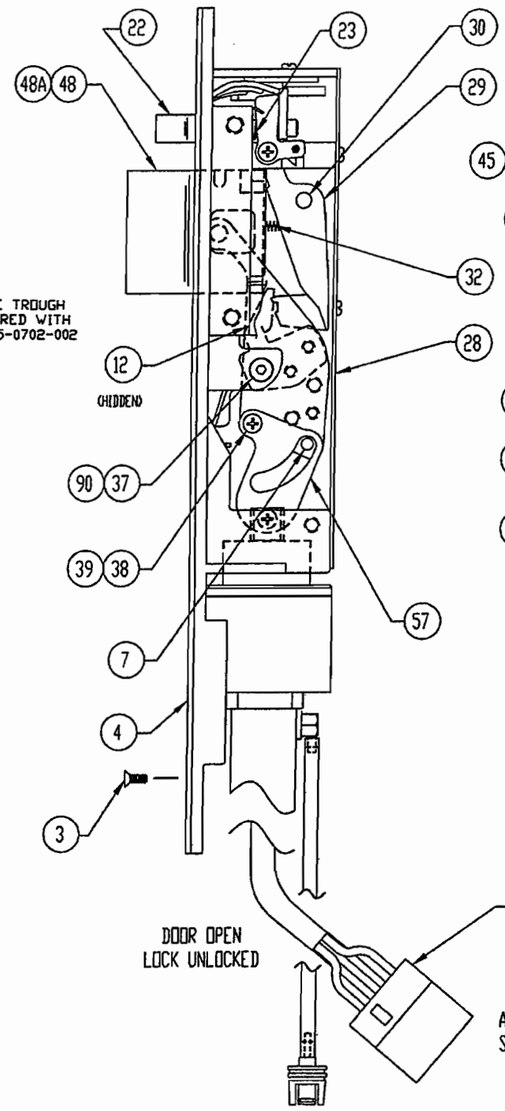
NOTICE:
WIRING SUBJECT TO CHANGE WITHOUT NOTICE. NOT RESPONSIBLE WHEN CONTROLS ARE FURNISHED BY OTHERS

WIRING DIAGRAM
NS400 SERIES
AC & DC MOTOR VOLTAGE
POWER ELECTRIC MOTOR

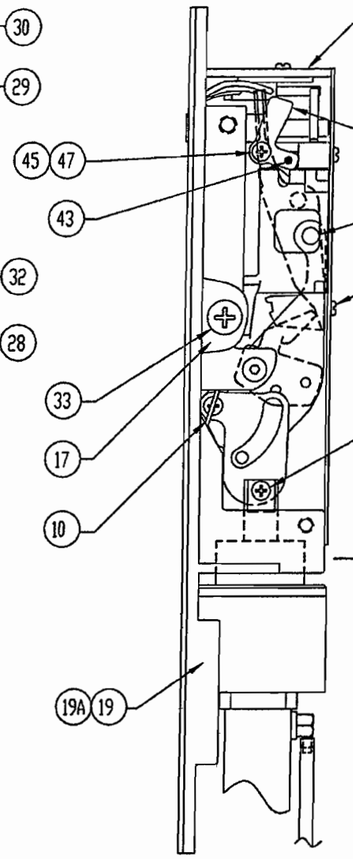
WIRING DIAGRAM NO.	REV
091-0900-025	G



VIEW SHOWN WITHOUT FACE PLATE

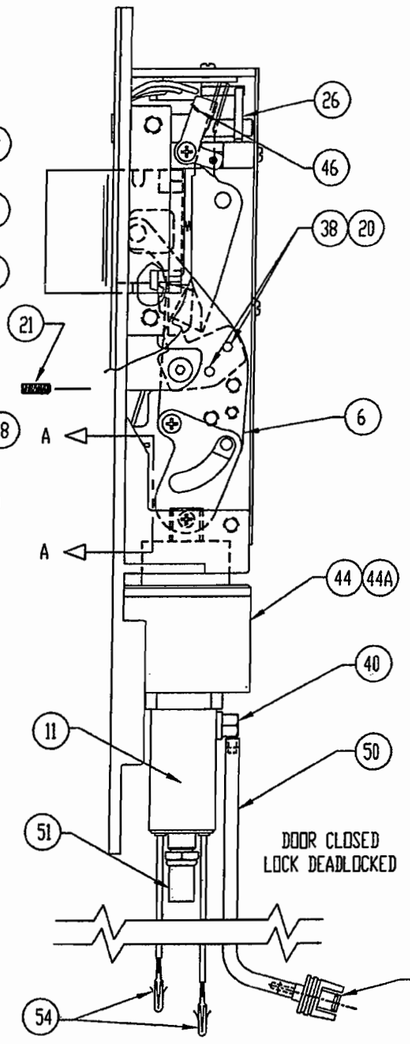


DOOR OPEN
LOCK UNLOCKED

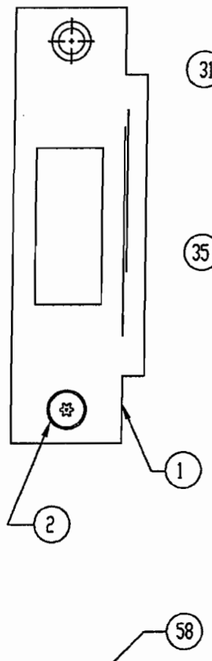


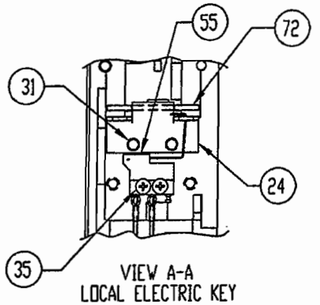
DOOR CLOSED
LOCK UNLOCKED
LOCK IN LATCHBACK

ALL VIEWS SHOWN WITH
SIDE COVER REMOVED

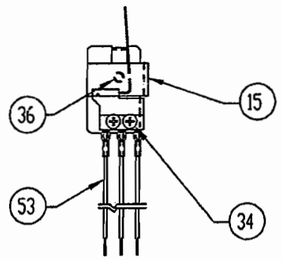


DOOR CLOSED
LOCK DEADLOCKED

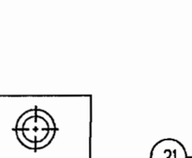




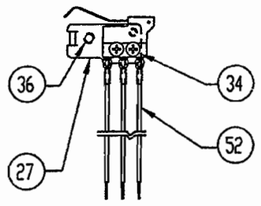
VIEW A-A
LOCAL ELECTRIC KEY



DPS/HOLDBACK/RELOCK
SWITCH ASSY



OPTIONAL QUICK CONNECT



DEADLOCK INDICATION
SWITCH ASSY

LTR.	REVISION	E. C. D.	BY	APP.	DATE
J	REVISIONS ON PAGE 2.	04-184-900	BJP		10-12-04
H	REVISIONS ON PAGE 2.	04-182-900	BJP		10-11-04
G	ADDED ITEM 49 & AL TAPE NOTE	04-137-900	SJ		08/10/04
F	REVISE PNEUM. VALVE & ADDED QUICK CONN. OPT'N		DS		08/14/98
E	REVISE SCREW PART NUMBERS PAGE 2	MINOR	DH		12-05-95

SOUTHERN FOLGER DETENTION EQUIPMENT CO.
16300 West 103rd Street-Lemont, Illinois 60439
Tel:(630)739-3900 Fax:(630)739-3958

DRAWN BY	CHECKED BY	DATE	OLD PART NUMBER
R.JACKSON	P.DUBINA	7-29-91	NS400-P
PART NUMBERS SUBJECT TO CHANGE W/O NOTICE		CAD FILE C-23 D-18	PAGE 1 OF 2

NS400P & PD LOCK
(PNEUMATIC) ASSY
DRAWING TITLE

900-P003-001
DRAWING NUMBER

NS400P & NS400PD STANDARD PARTS
NS400P SWITCH OPTIONS 00 &03 -- NS400PD SWITCH OPTION 03
(NON-FAIL-SAFE LATCHBOLT & DEADBOLT

ITEM NO.	OLD PART NO.	DESCRIPTION	QTY	NEW PART NO.
*9		FHPMS 4-40 X 3/16 UC SST (TRIG)	2	002-2301-387
10	NS400M-35	SPRING-OPERATING LEVER	1	003-0230-001
11		PNEU. 3-WAY VALVE	1	006-3108-001
14		BDPMS 4-40 X 3/16 ZINC (COVER)	4	002-2404-102
*16		FHPMS 8-32 X 1/4 UC ZINC (COVER)	2	002-2301-064
17	NS400-2	SIDE COVER GALVANIZED	1	012-3503-002
18	NS400-4	CASE FRAME MACH. GALVANIZED	1	012-3558-002
19	NS400-1M	ARMOR BACKPLATE MACH	1	012-3559-002
19A	NS400-1M	ARMOR BACKPLATE MACH NLB	1	012-3559-003
21		SSSC 6-32 X 5/16 CUP BO (CYLS)	2	002-1200-065
28	NS400-3	REAR COVER GALVANIZED	1	008-3507-004
29	NS400-20	DEADLOCK LEVER MACH	1	012-3502-002
30		DEADLOCK SHOULDER SCREW W/NYL BO	1	011-3502-002
32	NS400-21	SPRING-DEADLOCK LEVER	1	003-0104-001
33		FHPMS 10-32 X 1/4 UC ZINC (COVER)	4	002-2301-567
37	NS400-19	PIVOT BUSHING-OPER. LEVER	1	011-3511-001
38		PHPMS 6-32 X 1/4 ZINC W/ NYL ZINC	1	002-2303-164
39		PIVOT BUSHING .100	1	011-3503-001
40		PNEU. BARB FTG 10-32 NPT X 5/32	1	018-0182-001 J
41		PNEU. FTG MALE X 5/32 O.D.	1	018-0022-001
44		PNEU. CYL 1 1/4 BORE 1/2 STROKE	1	006-3003-001
o 44A	NS400E-18	SPRING-SOLENOID PLUNGER	1	003-0023-002
49		SPACER, WIRE TROUGH	1	008-0400-001 G
50		PNEU. TUBING 5/32 OD	9"	001-1806-001
51		PNEU. EXHAUST MUFFLER, 10-32	1	001-1601-001
H				
54		PIN TERMINAL	2	005-1707-001
78		SSSC 10-32 X 1/4 CUP PT W/ NYL BO	2	002-1200-212
90		SHCS 8-32 X 7/16 BO W/NYL	1	002-2801-418
91		PNEU. FITTING FEMALE X 1/4"O.D.	1	018-0024-001
	NS400P-8	LINKAGE ASSY. NS400P	1	075-3620-001
	NS400PO-8	LINKAGE ASSY. NS400PD	1	075-3621-001
6	NS400-11	OPERATING LEVER STAMPING	1	008-3512-003
7	NS400-15	MANUAL RELEASE PIN W/ NYL	1	011-3510-002
8		BOLT PIN	1	002-5102-001
12	NS400-12	DEADLOCK RELEASE STMP	1	008-3535-001
20		WASHER 6 EXT TOOTH ZINC	2	010-1707-600
38		PHPMS 6-32 X 1/4 ZINC W/ NYL ZINC	3	002-2200-064
39		PIVOT BUSHING .100	1	011-3503-001
48		LATCHBOLT CASTING NS400	1	013-3503-002
48A	NS400-9	DEADBOLT FINISHED ASSY.	1	075-3524-002
57	NS400P-14	CONNECTING LINK	1	008-3600-001
H				
*13	NS400-7E	TRIGGER BOLT GUIDE STMP	1	008-3538-001
22	NS400-7A	TRIGGER BOLT ASSY.	1	075-3595-002
23		SPRING-TRIGGER BOLT	1	003-0003-002
26	NS400-7F	TRIGGER BOLT TAIL	1	008-3540-002 H

ADDITIONAL STANDARD PARTS FOR NS400PD LOCKS
(NON-FAIL-SAFE DEADBOLT) -- SWITCH OPTIONS 03

ADDITIONAL PARTS FOR LATCH HOLDBACK -- NS400PD
(NON-FAIL-SAFE LATCHBOLT) LOCKS ONLY -- SWITCH OPTIONS 06 &07

ITEM NO.	OLD PART NO.	DESCRIPTION	QTY	NEW PART NO.
15	NS400-30	SWITCH MOUNTING BRKT. - BOLT GALV	1	008-3510-003
34		BDPMS 2-56 X 1/4 ZINC	2	002-2404-052
36		BDPMS 4-40 X 3/16 ZINC	1	002-2404-102
53	NS400-29	SWITCH AY DPS/HOLDBACK/RELOCK	1	075-3611-002

ADDITIONAL PARTS FOR LATCHBOLT NS400P LOCKS ONLY
(NON-FAIL-SAFE LATCHBOLT)

42	NS400-37	LATCHBACK LEVER	1	008-3539-001
43	NS400-36	LATCHBACK CATCH W/ROLL PIN	1	075-3609-001
45	NS400-38	SPACER-LATCHBACK	1	011-3513-001
46	NS400-41	SPRING-LATCHBACK LEVER	1	003-0232-001
47		PHPMS 4-40 X 5/16 ZINC W/NYL	1	002-2302-204
48	NS400-09	LATCHBOLT CASTING NS400	1	013-3503-002

LOCK MOUNTING SCREWS

*5		FHPMS 12-24 X 3/8 UC ZINC	4	002-2301-118

STRIKE

1	NS400-06	STRIKE US32D	1	008-3542-002
2		FHTS 12-24 X 1/2 UC SST	2	002-0605-327

OPTIONAL QUICK CONNECT

58		QUICK CONNECT FITTING 5/32 OD TO 1/4 OD	1	018-0093-001

ADDITIONAL PARTS INDICATION SWITCH
NS400 SWITCH OPTIONS 01, 04, & 07; NS400PD SWITCH OPTION 04

ITEM NO.	OLD PART NO.	DESCRIPTION	QTY	NEW PART NO.
27		SWITCH MOUNTING BRKT. - CASE	1	008-3515-001
34		BDPMS 2-56 X 1/4 ZINC	2	002-2404-052
36		BDPMS 4-40 X 3/16 ZINC	1	002-2404-102
H				

ADDITIONAL PARTS - WIRING PLUG

*60	FIELD RECEPTICAL ASSY. - 12 PIN	1	075-0517-001
61	CONNECTOR PLUG - 12 PIN	1	005-1705-005
*62	CONNECTOR CONTACT PIN	12	005-1707-001

ADDITIONAL PARTS - CYLINDER(S)

*63	CYLINOER BLOCKING RING	-	PER ORDER
*64	CYLINDER 1-5/32 X 1 1/8 LG	-	PER ORDER
*65	EXTENSION ASSY.	-	PER ORDER
*66	LEK MODIFIED CYL.	-	PER ORDER
*67	SWITCH TRIPPER - LEK	-	005-1202-005

ADDITIONAL PARTS FOR LOCAL ELECTRIC KEY

31		FHPMS 4-40 X 3/16 UC SST	2	002-2301-387
24	NS400-27	SWITCH MTG. BRKT. GALV. - LEK	1	008-3546-002
*25		SWITCH INSULATOR	1	005-0703-001
35		FHPMS 2-56 X 5/16 ZINC	2	002-2301-349
55	NS400-26	SWITCH ASSY. LEK NFS	1	075-3613-001
72	NS400-28	SWITCH TRIPPER - LEK	1	003-0805-001

(NON-FAIL-SAFE LATCHBOLT)

	FHTS 6-32 X 1/4 UC W/NYL US4	6	002-0605-002
3	FHTS 6-32 X 1/4 UC W/NYL US10	6	002-0605-003
	FHTS 6-32 X 1/4 UC W/NYL US10B	6	002-0605-004
	FHTS 6-32 X 1/4 UC W/NYL US26D	6	002-0605-006
	FACE PLATE US4	1	012-3568-001
	FACE PLATE US10	1	012-3568-002
4	FACE PLATE US10B	1	012-3568-003
	FACE PLATE US32D	1	012-3568-006

* NOT SHOWN
o NOT SHOWN, INCLUDED IN ITEM #44
◦ USE THREAD SEALANT

LTR.	REVISION DESCRIPTION	E.C.O.	BY	APPV	DATE
J	REPL'D FITTING, WAS # 018-0013-001	04-184-900	BJP		10-12-04
H	REM'D ITEMS 51 & 52, & NS400-7 TAG	04-182-900	BJP		10-11-04
G	ADDED ITEM 49 & AL TAPE NOTE	04-137-900	SJ		8/23/04
F	REDRAWN ON CAD		DS		9/14/98
E	REVISED SCREW PART NUMBERS	MINOR	DH		12/4/95

SOUTHERN FOLGER DETENTION EQUIPMENT CO.
16300 West 103rd Street-Lemont, Illinois 60439
Tel:(630)739-3900 Fax:(630)739-3958

DRAWN BY	CHECKED BY	DATE	OLD PART NUMBER
C. MALONE	C. DURKOVIC	7-29-91	NS400P

PART NO.'S SUBJECT TO CHANGE W/O NOTICE

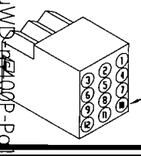
DRAWING TITLE: NS400P & PD LOCKS (PNEUMATIC) PARTS LIST

DRAWING NUMBER: 900-P003-001

H:\Stock Parts\ECN 11-154\091-0900-029-rB-PneuWD-NS400P-Pgl.dgn 8/4/2011 4:18:32 PM, TravisC

NOTES :

- – – – – – Indicates Field Wiring (By Others)
- ——— Indicates Factory Supplied Hardware Hardware Wiring and/or Internal Control Unit Wiring.
- Indicates Field Wire Connection Points.
- X Indicates Designated Field Receptacle Pin Number
- Encloses Typical Control Wiring Shown for Reference Only
- Hardware Installation Must Be Properly Grounded Per National Electrical Code – Article 250 – Supplied By Others –



FIELD RECEPTACLE PIN LOCATION

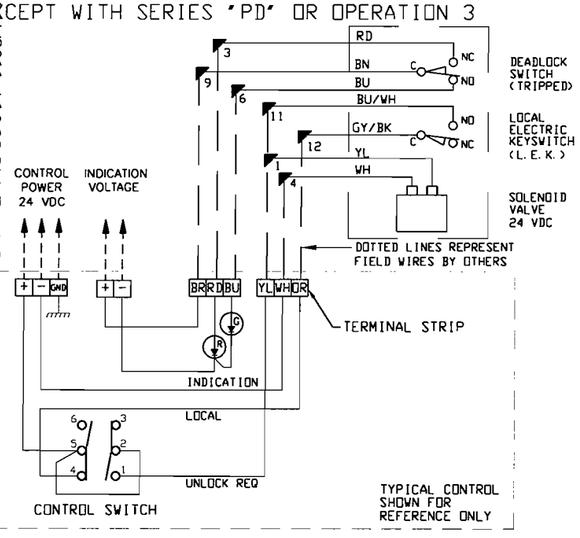
Wire Leads Extend This Side

COLOR CODE FOR x & xx WIRES & TERMINALS			
VOLTS	WIRE COLOR x	x TERM.MARK xx	
120 VAC	WHITE	N	BK
24 VDC	BLACK/YELLOW	BKY	RY

RECORD SET

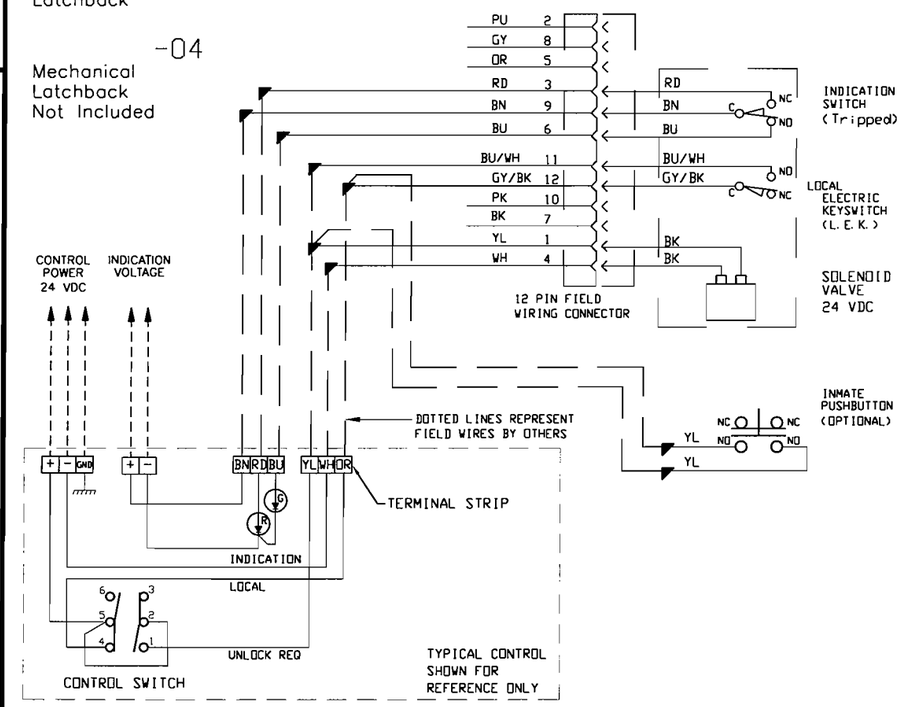
DETAIL FOR LEK OPTION

WIRING FOR THE LEK OPTION - AS SHOWN MAY BE USED WITH ALL LOCK WIRING DETAILS EXCEPT WITH SERIES 'PD' OR OPERATION 3



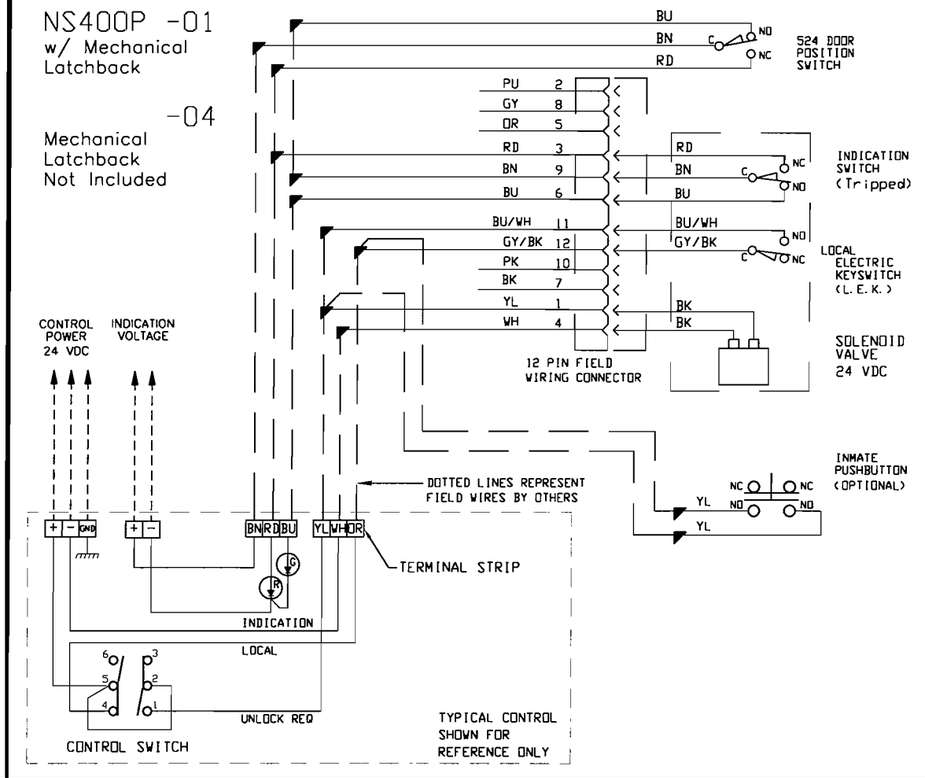
NS400P -01
w/ Mechanical Latchback

-04
Mechanical Latchback Not Included



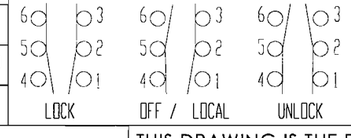
NS400P -01
w/ Mechanical Latchback

-04
Mechanical Latchback Not Included



LTR	REVISION	ECO	BY	APPV	DATE
C	YELLOW LEK WIRE TO BLUE/WHITE	ECN 11-154	TCC		8-4-11
B	NEW REL./REV. PIN #S 3 AND 9		PRF		2-10-99

CONTROL SWITCH CONDITIONS



VALVE CURRENT SPECS.
1.5 WATTS (.06 AMP)
AT 24 VOLTS DC

CONTROLS SHOWN FOR REFERENCE ONLY

R RED LIGHT-OPEN (UNLOCKED)
G GREEN LIGHT-CLOSED (LOCKED)
DOOR SHOWN CLOSED & LOCKED.

NOTICE:

WIRING SUBJECT TO CHANGE WITHOUT NOTICE. NOT RESPONSIBLE WHEN CONTROLS FURNISHED BY OTHERS

SOUTHERN FOLGER DETENTION EQUIPMENT CO.
4634 S. PRESA ST, SAN ANTONIO, TX 78223
Tel. (210) 533-1231 Fax: (210) 533-2211

DRAWN BY	DATE
PRF	8-31-98
CHECKED BY	DATE
APPROVED BY	DATE
CAD FILE NO.	OLD PART NUMBER

WIRING DIAGRAM
NS 400 PNEUMATIC SERIES
24 VDC

WIRING DIAGRAM NO
091-0900-029

5020M

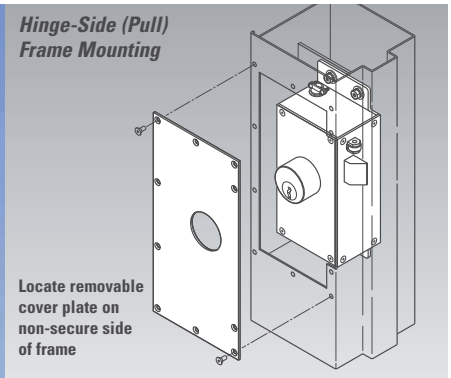
Lock Used for 1 Room

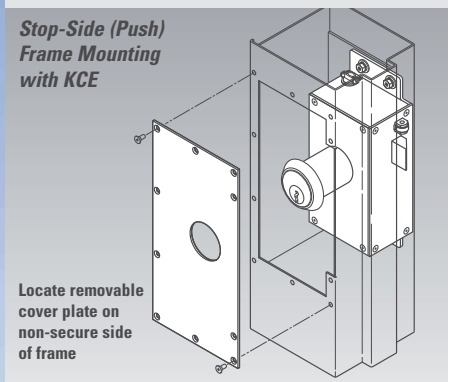
will accept Yale 1-1/8" commercial cylinder with straight cam

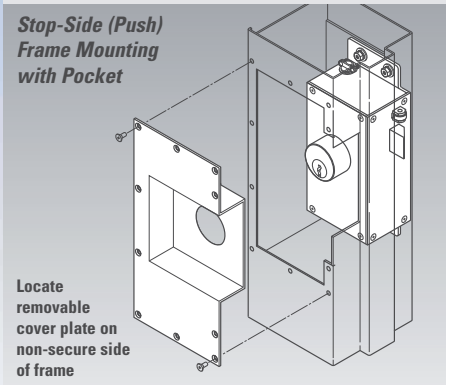
Electromechanical Automatic Deadlocking Latch
High Security and Impact Resistant – 1" Throw

24 VDC or 120 VAC Motor Power and Manual Key Unlocking – Jamb Mounted

Cast stainless steel strike plate







R.R. BRINK LOCKING SYSTEMS, INC.
500 Earl Road • Shorewood, IL 60404
Tel: 815-744-7000 • Fax: 815-744-7020
www.rrbrink.com

Application

- The 5020M is widely used in medium and maximum security detention facilities for remotely controlled electric unlocking of inmate room and passage doors.
- This lock is ideal as a component in attack resistant security perimeters in sensitive areas of commercial, governmental, and industrial buildings.
- Electric unlocking is by either 24VDC or 120VAC motor. Latch retraction is quiet and capable of overcoming abnormally high side loads (e.g. someone leaning or pulling on the door to prevent unlocking).
- Mechanical latch retraction by pin tumbler key cylinder–commercial or "Prison Mogul" types.
- The Model 5020M normally is jamb mounted in a steel door frame (14 gauge minimum) in a specially fabricated and reinforced lock pocket (or mortar box).
- The lock mechanism can be accessed without removal from the frame via an access plate on the non-secure side of the frame.
- Impact tested to Security Grade 1 per ASTM F1450 and F1577.
- When used in exterior locations, moisture proofing of the lock enclosure is essential and an internal resistance heating strip is recommended when the lock may be subjected to extreme freezing conditions.

5020M

Electromechanical Automatic Deadlocking Latch – 1" Throw High Security / Impact Resistant

24 VDC or 120 VAC motor power and manual key unlocking via standard or Mogul key cylinder – jamb mounted

Standard Features

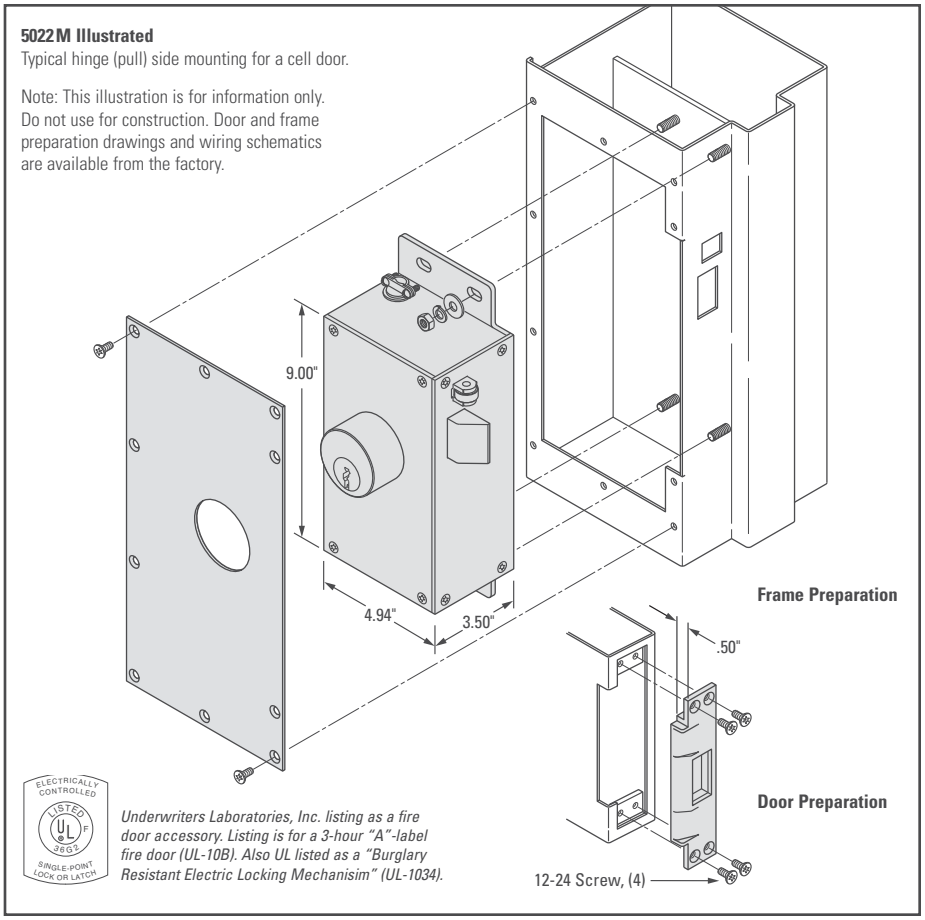
- Lock case and cover made of 10 gauge steel, electroplated for corrosion resistance
- Beveled latch made of saw-resistant hardened steel with a full 1" throw and 3/4" x 1-1/2" cross section.
- Cast stainless steel strike plate.
- All internal parts are cast, fabricated or turned stainless steel.
- Maintained Switch Latch Holdback **(MSLH)** function *(see "Lock Function Reference Guide")*
- Lock status switch **(LSS)** trips when the latch is in a deadlocked condition. Used in a signal circuit to indicate lock status – unlocked or deadlocked – via control panel lights and/or alarm devices. The LSS is also used to control an electrical interlock, which permits only one of a group of doors to be unlocked electrically at any time. *Note: For positive, tamper resistant signaling of a closed and deadlocked door, a sensitive door position **(DPS)** switch must be wired in combination with the LSS. Our DPS Nos. 201023 or 201030 are recommended.*
- Fitted for mechanical operation via either RRBLS proprietary "Mogul" or user's commercial key cylinder. (Factory supplied commercial key cylinder optional.) For stop side only or both side frame keying, the frame manufacturer must provide stop (push) side cylinder access or optional "key cylinder extension" **(KCE).** Key cylinder(s) must be factory assembled in lock.
- Available cylinder finishes – Satin Brass (ANSI 606, US4) or Chrome (ANSI 626, US26D)
- Plug connectors are provided for ease in wiring and removal.
- Exposed fasteners – pinned "Torx" head

Electrical Data

- Motor – 24VDC, 1.0 amp or 120VAC, 3 amp
- Lock Status Switch – 125/250VAC, 5 amp, SPDT (Form C)

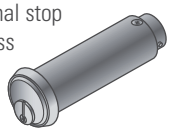
CERTIFICATIONS

- The Model 5020M complies with all test standards (Grade 1 where applicable) set forth in ASTM F1577 – "Standard Test Methods for Detention Locks for Swinging Doors." Copies of the independent third party testing laboratory certification reports are available on request.
- Fire Rated to 3 Hour per UL10B.



Optional Features

- **FKC** – Factory supplied high security commercial key cylinder with collar – two change keys/ cylinder
- **MOG** – Supplied with RRBLS Mogul proprietary 2" diameter 6-pin cylinder. UL listed locking cylinder (UL-437). Keys are ordered separately.
- **KCE** – In lieu of a conventional stop (push) side key cylinder access opening in the frame, a key cylinder extension extends the working length of a commercial or Mogul key cylinder to adapt to outside jamb depths. This option applies to one side stop or both side keying only. Customer supplied cylinders must be factory fitted to each KCE. (Jamb depth dimension required with order.)



- **CKS** – An internal limit switch enables electrical unlocking by one-way only rotation of a change level key (factory cylinder modification required). The change key unlock circuit can be disabled at the lock control panel. Mechanical unlocking is by a master level key. This feature is used to select periods when change key unlocking is permitted, e.g. by prison inmates who carry a key to their cell.
- **MKUS** (Manual Key Unlock Switch) – An internal limit switch is provided to signal the occurrence of manual key unlocking. Available with one or two side keying. A special RRBLS cam is provided to replace the original with customer supplied key cylinders. Can be used in combination with the **CKS** feature.

Ordering Information 5020M – Motor Power Series

Model	Description
5021M	5020M keyed stop side only
5022M	5020M keyed hinge side only
5026M	5020M keyed both sides

Consult with our technical service personnel regarding custom applications such as retrofits to existing lock installations and special mounting situations.

Example: 5022 M – 24VDC – MSLH – MOG – RHR – Hinge-Side (PULL) – US26D

Model & Keying	Voltage	Function	Optional Features	Hand of Lock	Removable Cover Plate Frame Side	Key Cylinder Finish
5021M Keyed stop side **5022M** Keyed hinge side **5026M** Keyed both sides	**24VDC** **120VAC**	See our ***"Lock Function Reference Guide"*** for a full description of available lock functions.	See the ***"Optional Features"*** section above for description and symbol.	See our ***"Hand of Locks Reference Guide"*** for description and symbol.	**Hinge-Side (PULL)** **Stop-Side (PUSH)**	**US4** or **US26D** (standard)

R.R. BRINK LOCKING SYSTEMS, INC.
500 Earl Road • Shorewood, IL 60404
Tel: 815-744-7000 • Fax: 815-744-7020
www.rrbrink.com