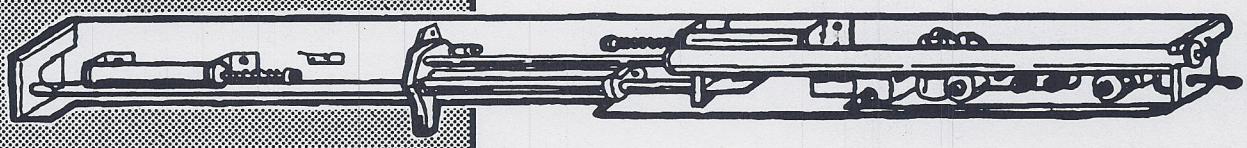
STANLEY

0-24 OPERATOR MANUAL FOR AUTO-SLIDE 5000 & 6000



maintenance and repair

STANLEY MAGIC-DOOR

DIVISION OF THE STANLEY WORKS STANLEY FARMINGTON, CONNECTICUT 06032

MDS-311 (7/70)

INDEX

WHAT IS THE AUTO-SLIDE 5000 PACKAGE?

A. GENERAL

AN AUTOMATIC SINGLE OR BI-PARTING SLIDING ENTRANCE

The Equipment Consists Of:

Bolted sliding aluminum door(s) unglazed; header & track assembly; door jambs; threshold and door guide, bolted fixed or swing-out panel(s); 0-24 AUTO-SLIDE 5000 pneumatic operator; Stanley Magic-Door controls and accessories.

B. OPERATING FEATURES

1. a. 0-24 AUTO-SLIDE Pneumatic Operator is pneumatically powered from central air supply or separate compressor.

   b. The operator contains an electrical circuit with plug-in relay.

   c. The operator will re-cycle instantaneously to full open position from any point in closing cycle.

   d. Opening speed is controlled by a pressure regulator and a flow control needle valve located in the body of the opening valve.

   e. Closing speed is controlled by a pressure regulator and an adjustable exhaust control.

   f. Power checking is provided for the opening cycle and along with an opening checking cylinder cushions the door as it nears the end of its travel for positive control.

   g. A closing cylinder is provided to cushion the door on its return.

2. **Swing-out Panel:** Is available and permits emergency exit when automatic door is not operating. It includes a magnetic switch for de-activating the automatic control circuit when panel is swung open and automatic re-set when door is closed.

3. **Finish:** All exposed aluminum is 6063-T5 alloy, finished in accordance with Alcoa Spec. 204-A1-R1.

WHAT IS THE AUTO-SLIDE 6000 PACKAGE?

A. GENERAL

AN AUTOMATIC SINGLE OR BI-PARTING SLIDING ENTRANCE

The Equipment Consists Of:

Sliding Aluminum Door(s) Unglazed, Header and Track Assembly, Door Jambs, Threshold-Door Guide, Swing-Out Panels(s), 0-24 AUTO-SLIDE Pneumatic Operator, Stanley MAGIC-DOOR Controls and Accessories.

B. OPERATING FEATURES

1. a. 0-24 AUTO-SLIDE Pneumatic Operator is pneumatically powered from central air supply or separate compressor.

   b. The operator contains an electrical circuit with plug-in relay.

   c. The operator will re-cycle instantaneously to full open position from any point in closing cycle.

   d. Opening speed is controlled by a pressure regulator and a flow control needle valve located in the body of the opening valve.

   e. Closing speed is controlled by a pressure regulator and an adjustable exhaust control.

   f. Power checking is provided for the opening cycle and along with an opening checking cylinder cushions the door as it nears the end of its travel for positive control.

   g. A closing cylinder is provided to cushion the door on its return.

2. SLIDING DOORS

   a. Heavy duty breakout with adjustable tension roller catch. Friction pivot for resistance to door while swinging. Cantilever support to prevent sag.

   b. Door slides on inside of entrance.

   c. Doors can break out at any point in opening cycle.

   d. Specially designed steel rollers with quality bearing for smooth, quiet, long life performance. All in continuous extrusion.

   e. Door height screw adjustment for lowering door after door is hung, provides up to 1/4" adjustment.

   f. Door edge alignment adjustment provided.

   g. Anti-riser stop adjustment provided to prevent door from lifting or jumping during cycle.

   h. Recessed intermediate rail is standard.

   i. New door guide design provides most positive guiding of door. Double knife edge bracket operating within grooves of special threshold provides excellent appearance in addition to smooth and positive guiding.

WHAT IS THE AUTO-SLIDE 6000 PACKAGE?

3. **SWING-OUT PANEL**

   a. Center pivoted at jamb and hung on outside of entrance to permit doors to swing out at any point in the sliding door cycle.

   b. Concealed door closer in top rail for automatic door closing.

   c. Two point lock for threshold and header locking. Button type switch in header interrupts operator power circuit until S. O. panel is unlocked. Also, magnetic switch in header maintains operator power circuit until S. O. panel is pushed open.

   d. Recessed intermediate rail is standard.

   e. Bottom pivot is adjustable for horizontal alignment of door.

   f. Permits emergency exit when automatic door is not operating.

4. **STANDARD FINISH**

   All exposed aluminum is 6063-T5 alloy, finished in accordance with Alcoa Spec. 204-A1-R1.

HOW AUTO-SLIDE 0-24 OPERATOR WORKS

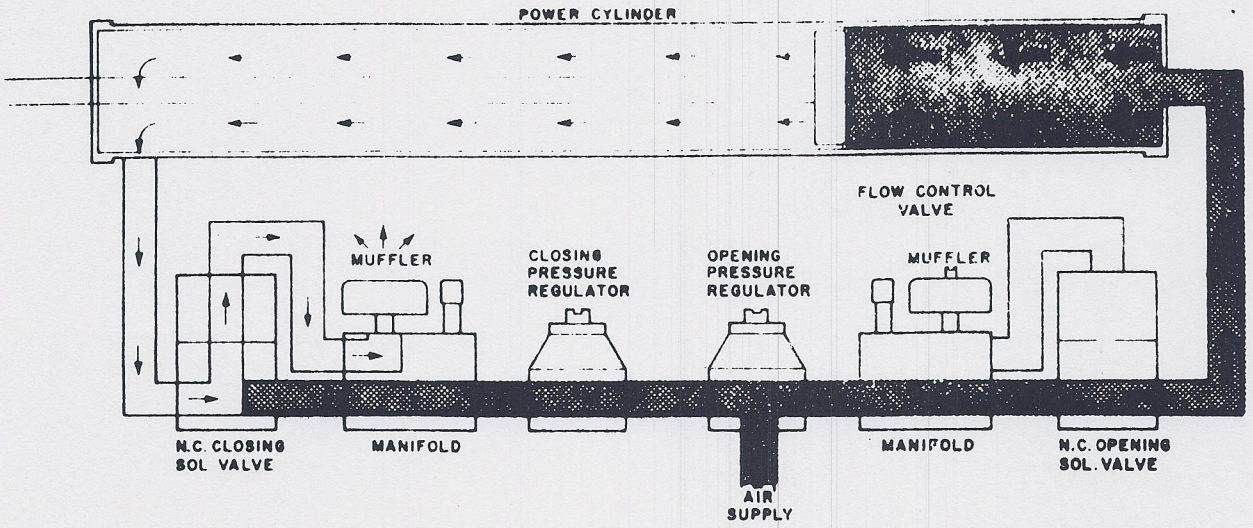


FIGURE 1

OPENING CYCLE: When signal is actuated (Carpet, Photo Electric, etc.) through a relay the normally closed opening valve is energized, and is magnetically opened. This allows air from the compressor to flow through opening pressure regulator, through the opening valve, into the rear end of the power cylinder forcing power piston rod forward. The closing valve exhausts air from the front end of the cylinder. The piston rod is connected to the door so door slides open. Just before the door is in its full open position, a trip rod momentarily closes a micro-switch which energizes the closing solenoid valve thus providing power checking. The power checking along with a single stage checking cylinder cushions the door as it nears the end of travel.

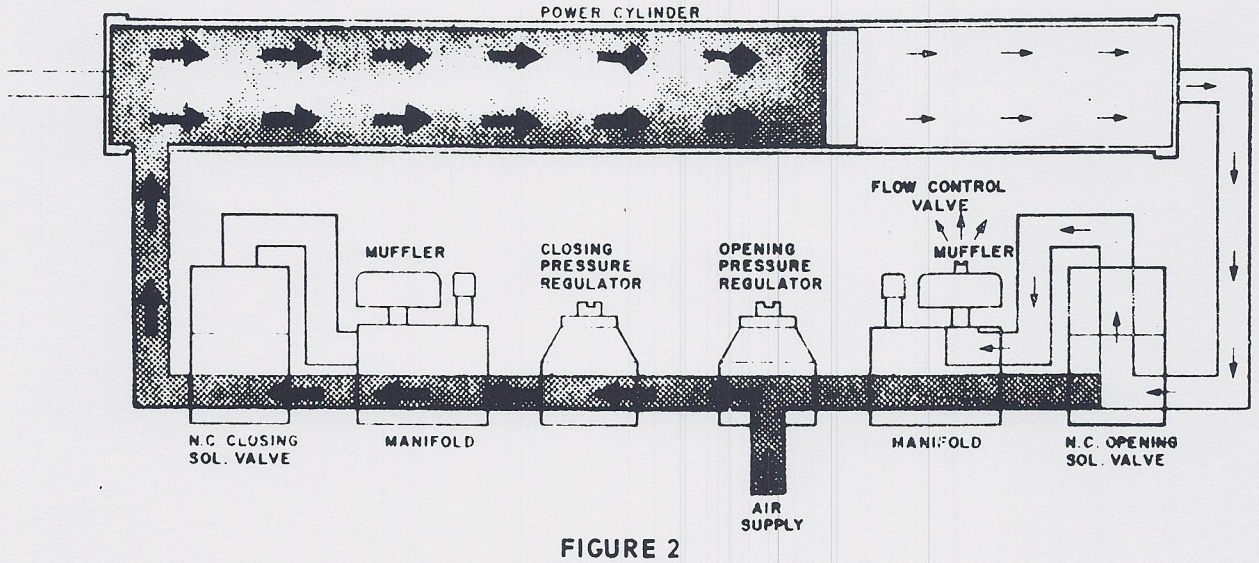


FIGURE 2

CLOSING CYCLE: When signal is deactivated, the opening valve is de-energized and closes and the closing valve is energized and opens. This allows air from the compressor to flow through the opening pressure regulator, and the closing pressure regulator and body of the closing valve into front end of power cylinder, forcing power piston rod toward rear end of power cylinder. The opening valve exhausts air from front end of cylinder. The piston rod connected to door draws door closed. A single-stage checking cylinder cushions door as it nears end of travel. At the end of the operator stroke an adjustable rod activates a micro-switch de-energizing the closing valve.

TUNE-IN AND ADJUSTMENT

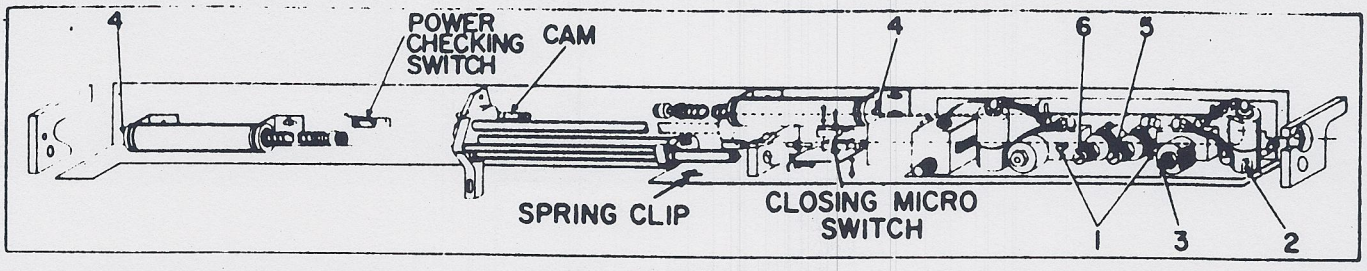


FIGURE 3

IMPORTANT:

The #307474 Pressure Gauge Service Kit must be used when tuning-in the 0-24 operator.

NOTE:

The extension kit must be assembled to the pressure gauge before using. See Fig. 4.

1. Be sure the bolt that connects the operator slide to the hanger assembly is **secure but not tight.**
2. Turn off main air supply to the operator. Bleed line between shut-off valve and operator. This can be done by means of a dump valve accessory, #306158, or by stepping on and off carpet until door ceases to move. Turn off electric power (24 volts and 115 volts) if heater is used.
3. Manually cycle door to be sure there is no binding. Leave door in closed position.
4. Open header cover. **Note:** On the larger bi-parting units, it may be necessary to **shore-up** the header to prevent sag **before opening the cover.**
5. Remove blanking plugs from operator. See Fig. 3 Ref. 1.
6. Insert pressure gauges finger tight.
7. Back-out flow metering screw on opening solenoid 3/4 of a turn. See Fig. 3. Ref. 2.
8. Back-out exhaust needle valve one turn. See Fig. 3 Ref. 3
9. Close down the needle valve on both the opening and closing checking cylinder. Back-out the needle valve 1/4 of a turn for the opening check and one (1) turn for the closing check. See Fig. 3. Ref. 4.
10. Turn on electric power.
11. Manually open door and check that the power checking micro-switch leaf closes, a clicking sound will be heard, and also that the cam engages the switch along its entire length. If cam does not engage switch, adjust switch until it does. See Fig. 5.
12. Turn off electric power.
13. Turn on air supply and adjust opening pressure regulator, Fig. 3, Ref. 5, until gauge reads 30PSI and closing pressure regulator, Fig. 3, Ref. 6, until gauge reads 20PSI.
14. Turn on electric power and activate door. If faster or slower speeds are desired for the **full cycle,** adjust pressures and flow metering screw until desired speeds are obtained.

    IMPORTANT: (1) Checking cylinder needle valves may also need readjustment. (2) To reduce closing delay, open exhaust needle valve.
15. Once you have adjusted the speeds for the full cycle, check the speed of the 3/4 recycle. This speed should be only .2 to .3 seconds slower than the full opening speed. If not, **opening pressure** should be readjusted. Afterwards, a slight readjustment of the flow metering screw (Fig. 3, Ref. 2) may also be needed to compensate for the change in pressure.
16. Trip Rod Adjustment. See Fig. 7.
    a) Trip rod is factory adjusted so closing micro-switch is tripped when door is in closed position.
    b) If adjustment is required, loosen set screw and move sleeve **in** to **lengthen** door travel and **out** to **shorten** door travel. Make sure collar does not bottom out.
17. For the largest single slide and bi-parting packages, the full length of the power checking cam will be used. **However,** for the smaller size packages, you **may** want to reduce the **amount** of power checking. To accomplish this, proceed as follows:
    a) Remove large collar from leading end of cam rod, and replace **beveled** collar. See Fig. 6
    b) Re-activate door and see if power checking is reduced sufficiently.
    c) If not, remove the collars from the trailing end of the cam rod **as needed,** but **make sure** that the **beveled collar is reassembled** to the cam rod before activating door. See Fig. 6
18. Check spring clip and adjust if necessary.
19. Shut off air supply and bleed line.
20. Remove pressure gauges and replace blanking plugs.
21. Close header cover.
22. Lock the **SO** panel and then activate door. **Auto-Slide 6000 Only.**
    a) If door slides, check that throw bolt is engaging button switch in header. See Fig. 7A.
    b) If bolt is not engaging switch, swing out **SO** panel and loosen lock-nut and turnout screw in the top of the throw bolt until contact is made. Retighten lock-nut. See Fig. 7A. Care should be taken not to damage the buttom switch by adjusting the bolt screw too high.
    c) If door still slides, recheck wiring.
    d) If wiring appears intact, remove two screws holding switch plate assembly in header and connect a voltmeter across the button switch terminals. The meter should read zero. By pressing the switch the meter should read 24 volts A.C. Press and release switch several times to insure that it is working OK. If switch does not operate the meter as described, replace the switch. See Fig. 7A.
23. Swing-out **SO** panel and hold. Activate door.
    a) If door slides, recheck wiring.
    b) If wiring appears intact, remove two screws holding switch plate assembly in header and check voltage across the terminals of the magnetic switch with a voltmeter. A reading of 24 volts A.C. should be obtained. If not, the switch is defective and should be replaced. See Fig. 7A.

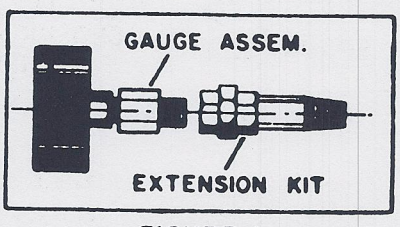


FIGURE 4

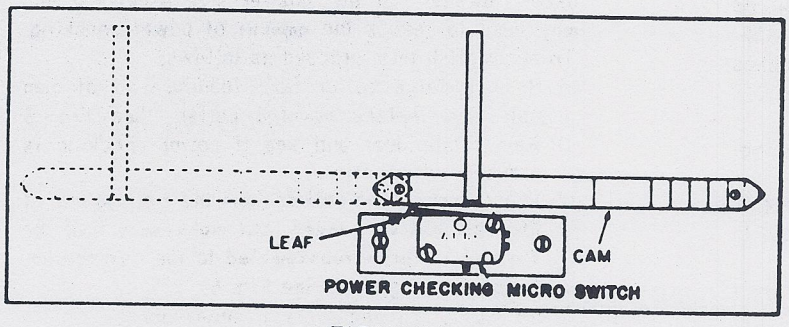


FIGURE 5

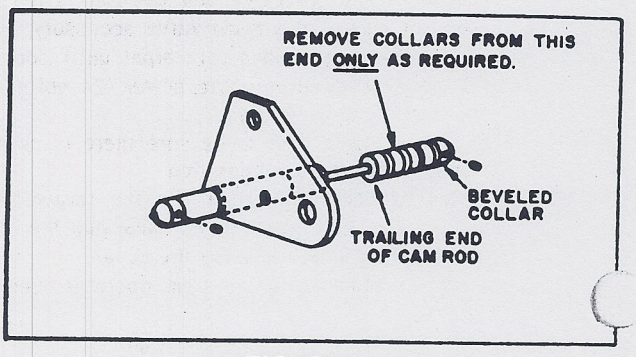


FIGURE 6

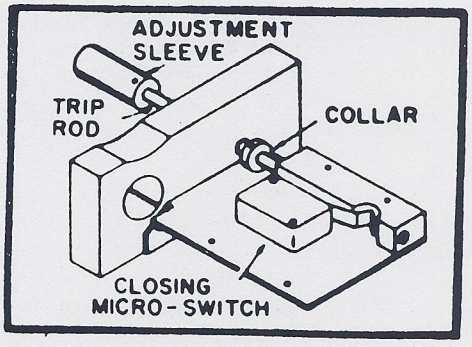


FIGURE 7

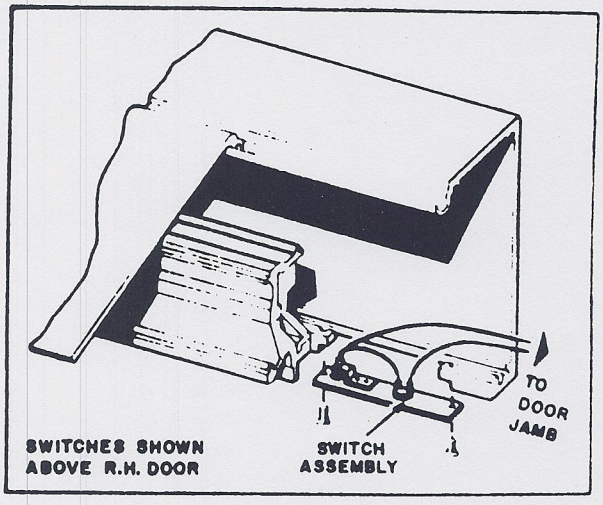
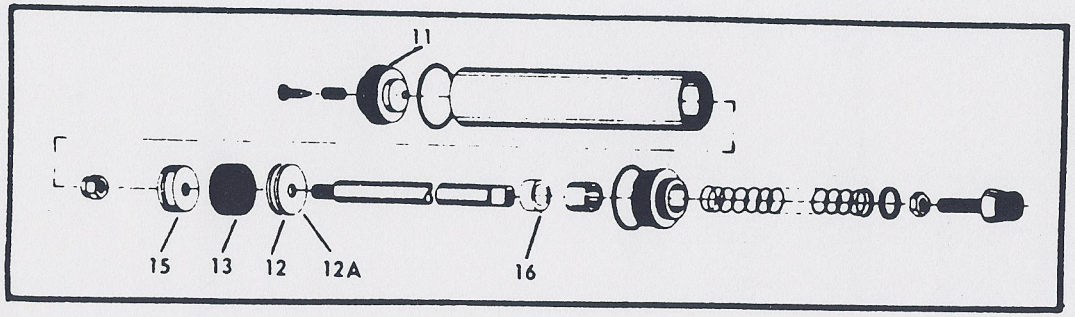
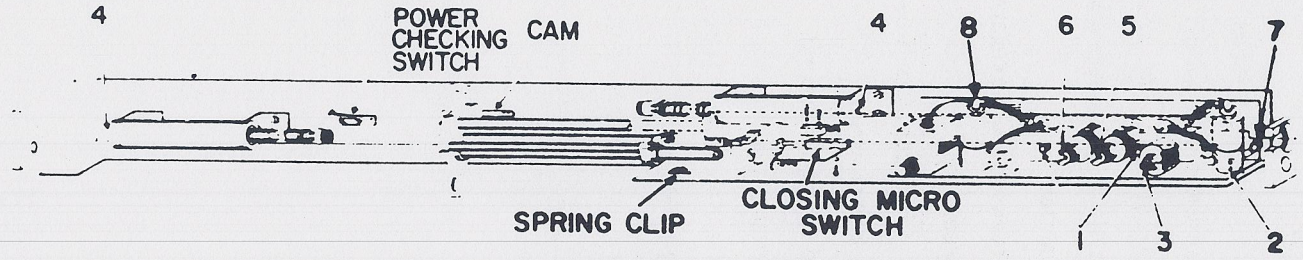


FIGURE 7A

EXPLODED VIEW OF AUTO-SLIDE 0-24 OPERATOR

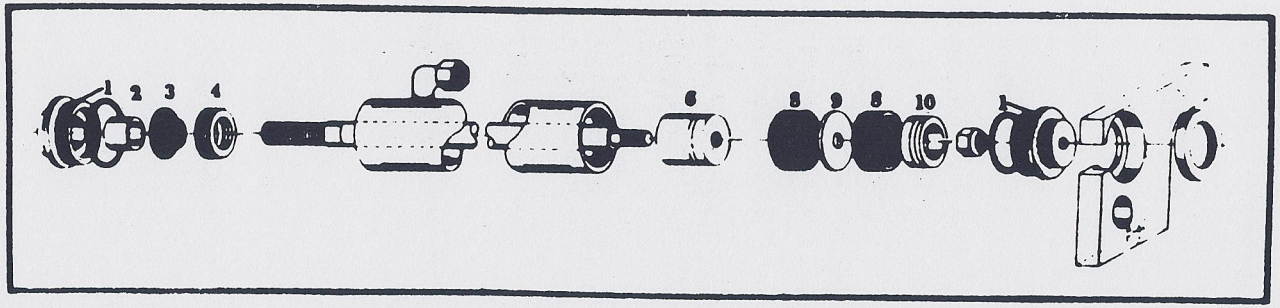


CHECKING CYLINDER



0-24 OPERATOR
Showing Exploded View's of Power & Checking Cylinder

POWER CYLINDER



PREVENTIVE MAINTENANCE FOR YOUR AUTO-SLIDE 5000 OR 6000 DOOR PACKAGE

A. OPERATOR (CAUTION: If Heater Kit Installed - Disconnect.)

1. Clean and lubricate tie rods.
2. Manually rotate checking cylinder pistons.
3. Test action of ball check in each checking cylinder.
4. Inspect condition of return spring and rubber bumper in each checking cylinder. Replace if necessary.
5. Replace cup packing in checking cylinders when necessary (approximately every two years.)
6. Replace cup packing in power cylinder when necessary (approximately every two years.)
7. Manually rotate power cylinder piston.
8. Replace slide bushings when necessary (approximately every four years.)
9. Inspect all screws, tighten if necessary.
10. Inspect relay for proper action. Clean contacts if necessary.
11. Inspect closing limit switch for proper action.
12. Inspect closing limit switch rod for proper setting.
13. Inspect pressure regulator diaphrams and seat washers. Replace if necessary.
14. Test solenoid valves for proper action. Clean if necessary.
15. Inspect power checking trip rod for tightness.
16. Inspect power checking micro-switch for proper action.
17. Inspect power checking cams to make sure they are secured against trip rod.

B. CONTROLS - CARPET

1. Test carpets for proper opening and hold open action.
2. Inspect carpet cord set for good connection. **MC Carpets Only.**
3. Replace carpet cord set if required. **MC Carpets Only.**
4. Inspect molding for proper anchorage. Secure if necessary.
5. Check **SC** and **MCS** carpet splices.

C. COMPRESSOR

1. Drain water from tank.
2. Lubricate motor cups.
3. Test motor for operation. Replace if necessary.
4. Check crank case oil level. Refill if necessary.

COMPRESSOR - con't

5. Drain and refill compressor crank case with new oil (every six months.)
6. Test Belt Tension. Tighten if necessary.
7. Test safety relief valve. Pull to unseat.
8. Check tank pressure.
9. Test pressure switch for proper cut-in, cut-out action. **See Figure 8.**
10. Remove dust from tubes for proper cooling action.
11. Test compressor for proper build up of air pressure. Replace if necessary.
12. Inspect all fittings for tightness.

D. DOOR(S) AND CONNECTING HARDWARE

1. Tighten rollers in hanger assembly if necessary.
2. Clean track in header.
3. Clean threshold-door guide.
4. If Bi-Parting, check cable tension and brackets. **Tighten if necessary.**
5. Check pivot adjustment on SO Panel.
6. Check sliding door to jamb alignment. **For 6000 Only.**
7. Check sliding door break-out tension. **For 6000 Only.**
8. Lubricate break-out rollers. **For 6000 Only.**
9. Clean and lubricate slide rod.
10. Check door "sag" on break-out. **For 6000 Only.**
11. Check anti-riser stops for proper adjustment. **For 6000 Only.**

CUT-IN TO CUT-OUT TIME CHART
100 Lb. Cut-Out Pressure -- Single-Stage

PRESSURE RANGE CUT-IN TO CUT-OUT	1/2 H.P.	3/4 H.P.	1 H.P.	1-1/2 H.P.	2 H.P.	3 H.P.
	30 GAL. TANK	30 GAL. TANK	30 GAL. TANK	60 GAL. TANK	60 GAL. TANK	60 GAL. TANK
10 Lbs.	95	49	41	58	35	25
15 Lbs.	143	73	62	87	52	38
20 Lbs.	191	98	83	116	69	51
25 Lbs.	238	122	104	145	86	64
30 Lbs.	286	147	124	174	104	76

CHART SHOW TIME IN SECONDS BETWEEN CUT-IN AND CUT-OUT FOR COMPRESSORS WITH DIFFERENT MAXIMUM (CUT-OUT) PRESSURE LIMIT.

EFFICIENCY TEST PROCEDURE:

1. Drain all water from tank.
2. With tank up to maximum pressure, close main air valve to air supply.
3. Bleed air from tank through safety valve until compressor starts to run. Close valve and note the time and pressure at which the compressor cuts in.

FIGURE 8

0-24 OPERATOR REPAIR

Preventive maintenance as outlined on Pages 8 and 9, insures maximum efficiency of your AUTO-SLIDE 5000 and 6000 equipment. A major overhaul of the operator is recommended once a year using the Exploded Views on Page 7 as a reference.

STEPS IN DISMANTLING OPERATOR - SINGLE SLIDE - 5000 ONLY

A. Turn off electric power.
B. Turn off air supply.
C. Open header cover.
D. Disconnect air supply line from operator with ½" open end wrench.
E. Disconnect Wiring Plug.
F. Remove two 1/4 x 20 hex. head screws from sliding door hanger assembly. Lift door from hanger assembly. Fig. 9.
G. Remove nut from bolt connecting operator slide and hanger assembly with a ½" open end wrench. Remove hanger assembly. Fig. 9
H. Remove #10 - 24 x ½" flat head slotted screws located at each end of operator which secure it to the cover clips attached to header.
I. Remove complete operator from header.

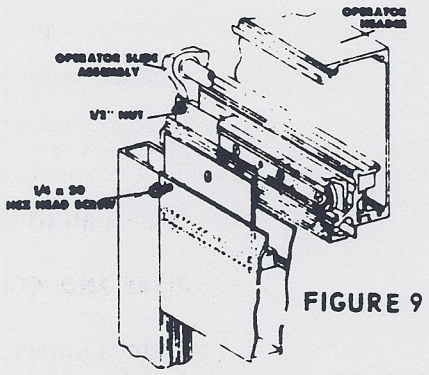


FIGURE 9

STEPS IN DISMANTLING OPERATOR - BI-PARTING - 5000 ONLY

A. Repeat (A, B, C, D, E) of Single Slide Procedure.
B. Remove two 1/4 - 20 hex. head screws from Active Door hanger assembly. Fig. 11.
C. Remove nut from bolt connecting operator slide and hanger assembly with a ½" open end wrench. Remove hanger assembly. Fig. 10.
D. Remove cable from hex. coupling on operator slide castings.
E. Remove cable bracket from operator slide casting.
F. Remove 10 - 24 flat head slotted screws located at each end the middle of the operator which secure it to the cover clips attached to header.
G. Remove complete operator from header.

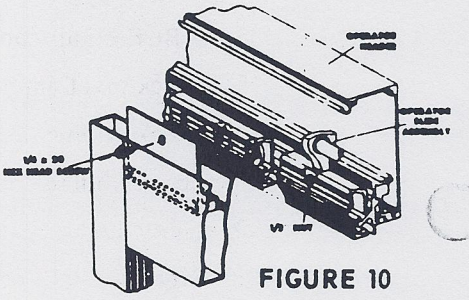


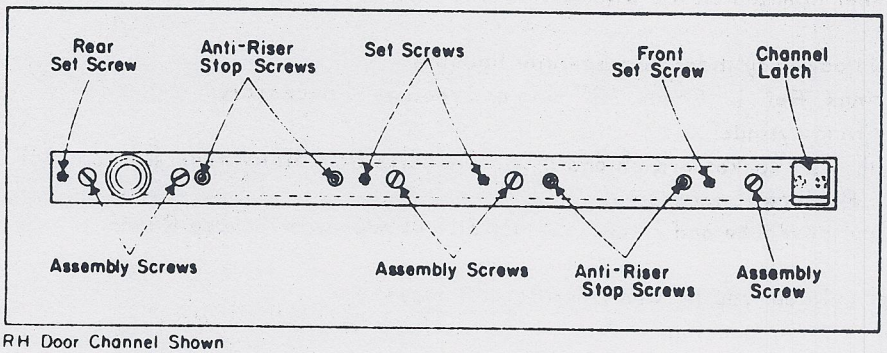
FIGURE 10

STEPS IN DISMANTLING OPERATOR - SINGLE SLIDE - 6000 ONLY

A. Turn off electric power.
B. Turn off air supply.
C. Open header cover.
D. Disconnect air supply line from operator with ½" open end wrench.
E. Disconnect Wiring plug.
F. Break-Out door and remove channel latch and channel screws. See Fig. 12.
G. Slide channel cover forward. See Fig. 12.
H. Turn the anti-riser screws **counterclockwise** as far as they will go. See Fig. 11.
I. Remove nut from bolt connecting operator slide and hanger assembly. Fig. 13.
J. Slide channel cover back in place.
K. With the SX door assembly in the fully closed position, lift the door up and off of the header track.
L. Remove #10 - 24 x ½" flat head slotted screws located at each end of operator which secure it to the cover clips attached to header.
M. Remove complete operator from header.

STEPS IN DISMANTLING OPERATOR - BI-PARTING - 6000 ONLY

A. Repeat (A, B, C, D, E) of Single-Slide Procedure.
B. Break-Out active door and remove channel latch and channel cover screws. See Fig. 12
C. Slide channel cover forward and out of hanger assembly. See Fig. 12
D. Turn The anti-riser stop screws **counterclockwise** as far as they will go. See Fig. 11.
E. Remove nut from bolt connecting operator slide and hanger assembly with a ½" open end wrench. See Fig. 13.
F. With the SX Door assembly in the fully closed position, lift the door up and off of the header track.
G. Remove cable from hex coupling on operator slide castings.
H. Remove cable bracket from operator slide casting.
I. Remove 10 - 24 flat head slotted screws located at each end and the middle of the operator which secure it to the cover clips attached to header.
J. Remove complete operator from header.



RH Door Channel Shown

FIGURE 11

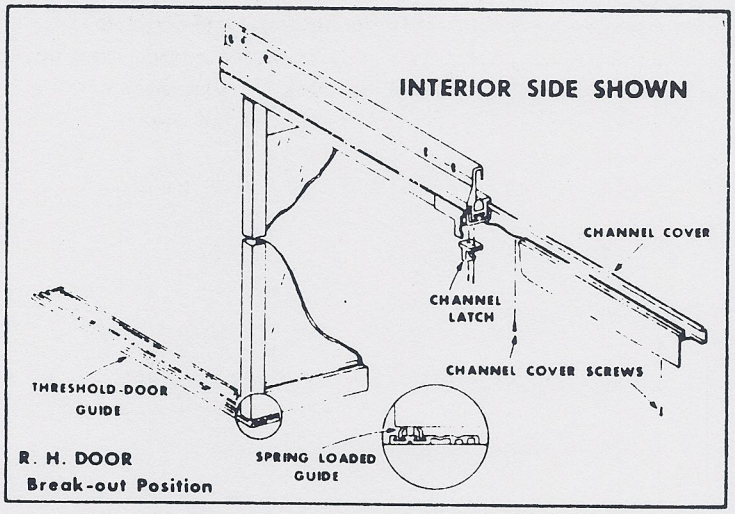


FIGURE 12

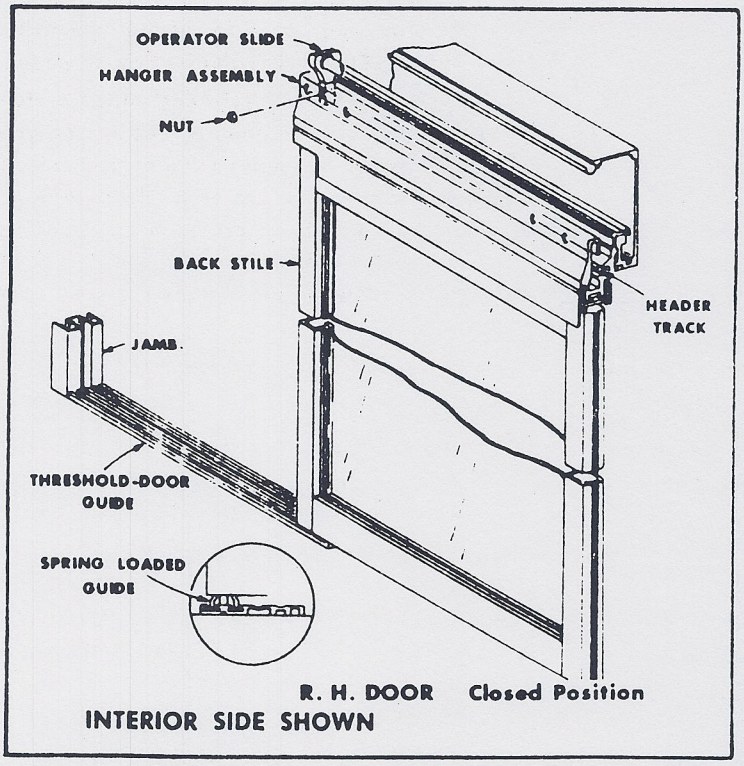


FIGURE 13

OVERHAUL & PARTS REPLACEMENT

NOTE: 1. To replace the slide bushings, castings, power cylinder, or valves remove the operator from the header. **See Pages 10 and 11.**

2. You may substitute Stanley Hydraulic Oil No. 303581 or a quality non-detergent SAE 20 W motor oil for Texaco Rando Type "A" Mineral Oil.

OPERATOR FRAME ASSEMBLY: Examine all castings. Make certain that there are no cracks in these units. Replace all cracked or bent castings.

A. THE DOUBLE ACTING POWER CYLINDER

1. Disconnect synflex tubing to power cylinder from both opening and closing valve with 1/2" open end wrench, **Ref. 7.**
2. Disconnect piston rod from slide assembly.
   c. Place 3/8" open end wrench on flat end of piston.
   b. Remove stop nut and washer from piston rod with 5/8" socket wrench.
3. Move slide carriage forward.
4. Remove end cap nut and slide power cylinder from operator housing.
5. Remove end caps and "O" rings, **Ref. 1.** Check "O" ring and replace if necessary.
6. Remove piston rod assembly from cylinder.
7. Remove elastic stop nut, with 1/2" socket wrench and dismantle parts from piston rod. **Ref. 6 - 10.**
8. Clean and inspect all parts. Replace if necessary.
9. Inspect inner wall of power cylinder tube and clean. Lightly oil cylinder with Texaco Rando Type "A" Mineral Oil.
10. Inspect piston rod and power cylinder cap for wear. Replace if necessary.
11. Reassemble. IMPORTANT: Dip cup packings in Texaco Rando Type "A" Mineral Oil before using. Do Not flex packings.
    a. Insert small threaded end of piston rod through front end of end cap. **Ref. 1 - 5.**
    b. Slide end cap down to the wrench flat of piston rod. Assemble in power cylinder.
    CAUTION: DO NOT allow threaded end or wrench flat to slide into end cap.
    c. With piston in cylinder, place piston filler, **Ref. 6,** onto piston rod. Place cup packing, **Ref. 8,** into cylinder (opened end facing you) past threaded portion of cylinder; being careful not to damage the outer edge of the packing. Turn the packing 180° with fingers to the proper position, and press onto piston filler. Add piston follower, **Ref. 9,** cup packing, **Ref. 8,** (use the same precautions as previous cup packing), but do not rotate 180°, piston filler, **Ref. 10,** and secure with locknut.
    CAUTION: Over tightening the locknut will deform the piston follower and cause the piston to bind in cylinder.
12. Replace end cap.

B. AIR VALVES

1. The opening and closing air valves, **Ref. 2** and **8** are normally closed 3-way solenoid valves, which are electrically energized.
2. Valves may require service due to:
   a. Dirt in unit.
   b. Defective plunger.
   c. Defective spring loaded seat on plunger.
   d. Defective seat in body of valve.
   e. Ruptured valve sleeve.
3. Dismantle and clean valve, check plunger seat. Replace complete plunger if defective. If seat in body of valve is popped up, peen over. Check solenoid coil and replace if necessary.

C. PRESSURE REGULATORS

1. The AUTO-SLIDE O-24 Operator contains two regulators. **Ref. 5 and 6.**
   a. One to regulate opening pressure, and one for closing pressure.
   b. Both regulators are self-relieving.

2. Function.
   a. Turning the adjusting screw compresses the adjusting spring.
   b. This compresses the diaphragm which compresses the needle valve.
   c. Compressing the needle valve exposes an oriface.
   d. The greater the oriface exposed the greater volume of air allowed to pass through the regulator and the higher the pressure.

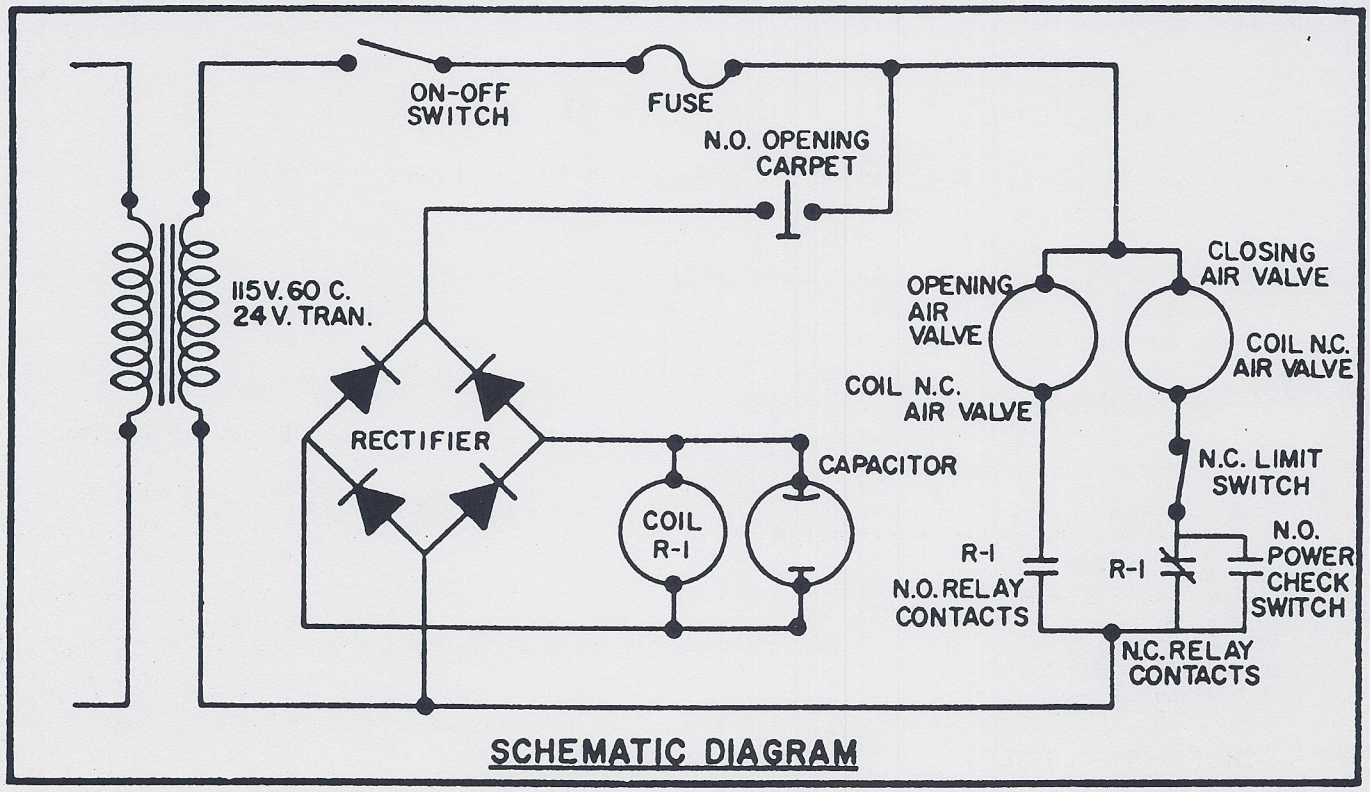
3. Regulators may require service due to:
   a. Worn diaphragm.
   b. Distorted spring.
   c. Dirt in unit.
   d. Worn seat washer.
   e. Dirt on needle valve.

D. CHECKING CYLINDERS

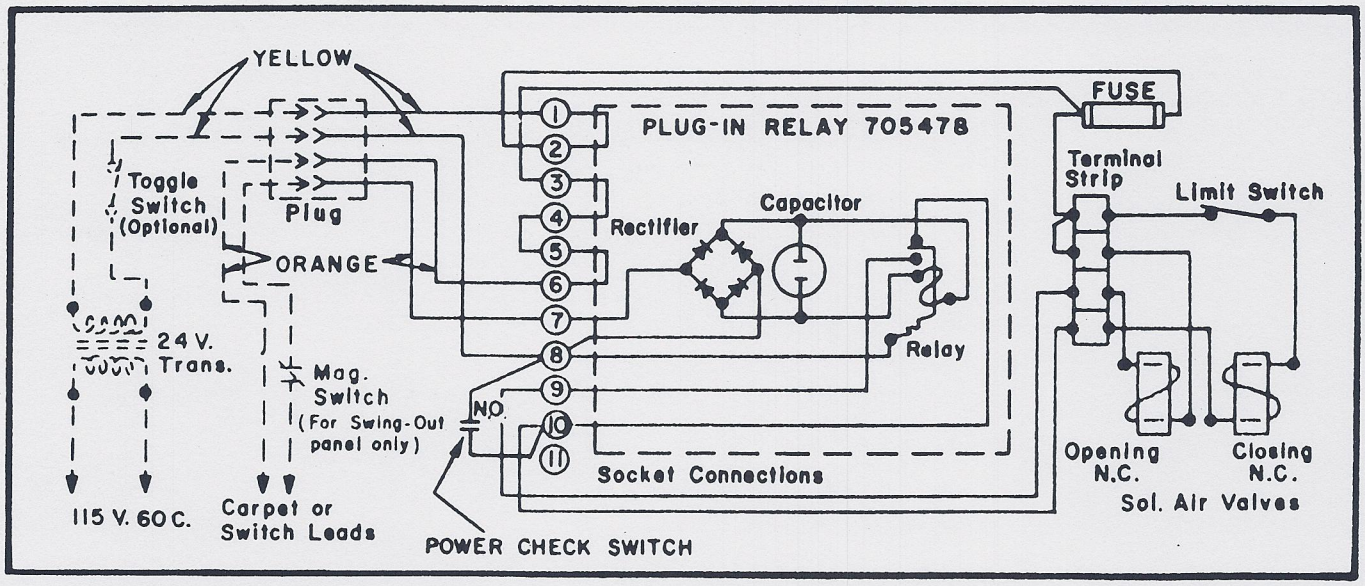
1. FUNCTION.
   a. Are used to smooth out final opening and closing door motion.
   b. Both checking cylinders are single stage Pneumatic type.
   c. The checking action is regulated by the needle valve adjustment at the end of the cylinder.
   d. When the slide moves away from the cylinder the spring returns piston rod to its normal position.
   e. A muffler in the end cap silences exhaust.

2. SERVICE.
   a. Remove end cap with adjustment, **Ref. 11.**
   b. Remove bushed cylinder end cap and piston rod assembly from cylinder. Disassemble packing and remove end cap and spring. Remove bumper assembly and washer.
   c. Clean all parts. Be sure to clean exhaust port in cylinder tube.
   d. Inspect inner wall of cylinder tub. If scored, replace. Lightly oil cylinder with Texaco Rando Type "A" Mineral Oil.
   e. Replace cup packing. IMPORTANT: Dip cup packing in Texaco Rando Type "A" Mineral Oil before using. DO NOT flex packings.
   f. Reassemble on piston rod.
      1. Steel washer **Ref. No. 12A**, piston follower, **Ref. 12**, cup packing, **Ref. 13**, piston filler, **Ref. 15**, and tighten locknut. Replace felt washer, **Ref. 16.**
         CAUTION: After tightening locknut, check to see that piston follower can be turned by hand. Over tightening the locknut will deform the piston follower and cause the piston to bind.
      2. Insert piston rod end opposite cup packing end into cylinder (opposite end of exhaust hole) and pull cup packing to the center of checking cylinder.
      3. Replace both end caps, piston rod spring, washer and bumper assembly. Replace checking cylinder and adjust.

WIRING DIAGRAM FOR AUTO-SLIDE 5000

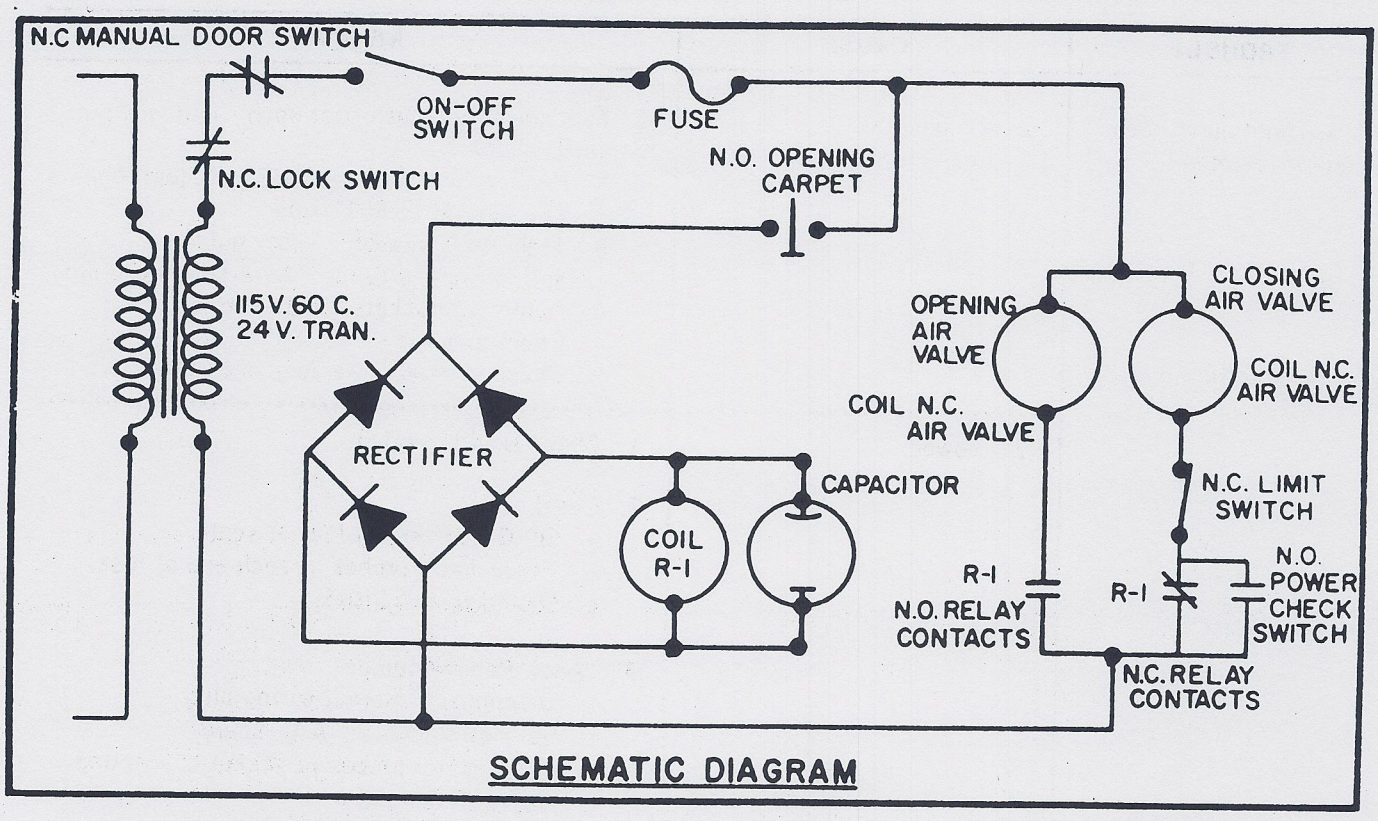


SCHEMATIC DIAGRAM FOR AUTO-SLIDE 5000

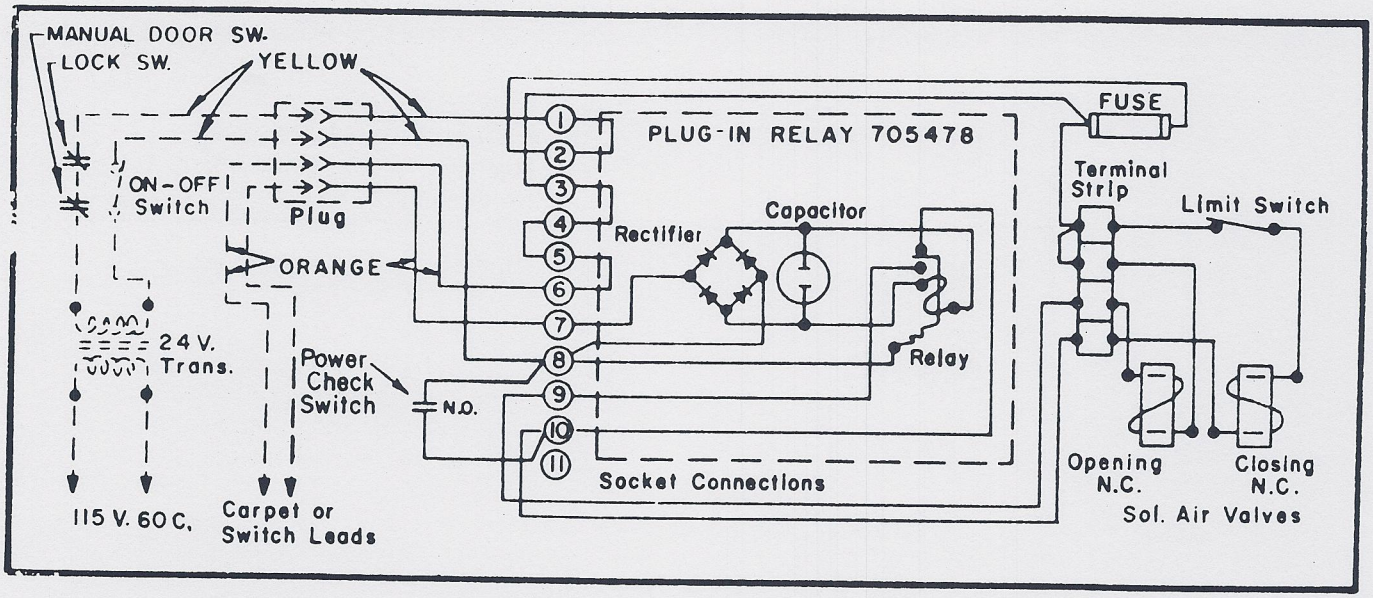


WIRING DIAGRAM FOR AUTO-SLIDE 5000

WIRING DIAGRAM FOR AUTO-SLIDE 6000



SCHEMATIC DIAGRAM FOR AUTO-SLIDE 6000



WIRING DIAGRAM FOR AUTO-SLIDE 6000

TROUBLE SHOOTING

TROUBLE	CAUSE	REMEDY
Door will not open when carpet is actuated.	1. Mechanical interference	1. With power off, push door open. If it will not open, check: a. Hanger assembly - Anti-Riser Stops Wheels. **For Auto-Slide 6000 only.** b. Track in Threshold - door guide. c. Spring Loaded Guide. **Auto-Slide 6000 only.** d. Cable & brackets (if Bi-Parting). e. Operator Slide f. Check to make sure door is on track.
	2. Power Disconnected	1. Check On-Off switch. 2. Check fuse: a. Set OHM meter at lowest scale. b. Place meter probes at each end of fuse. c. Should read 0 OHMS. 3. Check Power source: a. Disconnect internal wiring plug. b. Set meter on 24V., A.C. scale. c. Place meter probes in socket connecting from yellow leads. d. Should read 24V., A.C. 4. Check transformer: a. Set volt meter at 24V., A.C. scale. b. Place meter probes on transformer terminals. (secondary side) c. Should read 24V., A.C. 5. Check transformer coil: a. Set OHM meter on lowest scale. b. Place meter probes on coil leads. c. Should read 0 OHMS.
	3. Magnetic Switch, Button Switch, or both. **Auto-Slide 6000 only.**	1. Make sure SO Panel is not locked or ajar. 2. Turn-Off electric power. 3. Remove two screws holding switch plate assembly to header and lower assembly. Do not remove wires from switches. 4. Check continuity across switches at terminals. Resistance reading should be infinite. 5. If not, check each switch individually. Button switch should read 0 and magnetic switch infinity. 6. Before replacing defective switch, re-check that switch leads are still properly connected to power leads.

TROUBLE SHOOTING

TROUBLE	CAUSE	REMEDY
Door will not open when carpet is actuated.	4. Carpet Open	1. Set OHM meter on lowest OHM scale. a. Place meter probes on carpet leads. b. Step on carpet. c. If open will read infinite OHMS. d. Replace carpet.
	5. Carpet Cord Set	1. Disconnect leads from carpets. a. Place jumper across carpet cord leads. If door opens, carpet cord okay. If not, replace. b. Where carpet leads are spliced, check splice for leaks and good wire to wire connections. c. Where carpet leads are plug connected, check prongs to make sure that they are clean.
	6. Internal Wiring Problem	1. Check opening solenoid valve a. Turn off electric power b. Set meter on lowest ohm scale and then properly zero in meter. c. Place meter leads across terminals 2 and 3 on the terminal block where the solenoid leads are connected. d. The resistance should read 5 ohms ± 10%. If so, coil is OK and go to steps 2, 3, and 4 of this section. e. If the resistance reads infinity or zero ohms, coil is defective and must be replaced. 2. Check plug a. Disconnect internal wiring plug. b. Set meter on 24V., A.C. scale. c. Place meter probes in socket connections from yellow leads. d. Should read 24V., A.C. e. Set meter on lowest OHM'S scale. 1. Place meter probes in socket connections from orange leads. 2. Resistance reading should be infinite. f. If it has swing-out panel check break-out switch wired in series with carpet leads. 1. Set meter at lowest OHM'S scale. 2. Place meter probes on switch leads. 3. Meter should read 0 OHM'S. 3. If all above checks out and solenoid does not energize, check for loose or broken wires. 4. If solenoid energizes check valve. a. Top and bottom seats. b. Plunger and spring loaded seat. c. Dirt or binding. d. Clean and reassemble. e. If still malfunctioning, replace. 5. If all the above check out OK, replace relay.
	7. No Air At Operator	1. Check compressor. If not working, check line switch; make sure it is on. 2. Check cut-off valve on air line at compressor, make sure it is open. 3. Check tank gage pressure; must be 60-80 P.S.I. If low, consult compressor manufacturer's manual for remedial action. 4. Loosen external air line fitting; listen for air.

TROUBLE SHOOTING

TROUBLE	CAUSE	REMEDY
Door will not open when carpet is actuated.	8. Insufficient air at operator. Restriction, clogged air filters, compressor inefficient.	1. Check external air lines and fittings for leaks. 2. If air dryer installed. Drain and check desiccant.
	9. Insufficient Air At Power Cylinder	1. Check opening pressure regulator. If air supply does not pass through with regulator control turned on, replace regulator.
Door slows down or is erractic in operation.	1. Water Condensation In Air Lines.	1. Check location of compressor; if it is located in hot moist area, change if possible to drier location or move pipe intake to drier, cooler area. 2. Where moisture content in air line is too much to be handled by water ejector, install an air drier on the line. 3. If a pressure regulator is not installed between the compressor and the operator, install one. a. Slope line from regulator to the compressor. b. Set pressure regulator at 60 P.S.I. c. Run compressor at highest maximum P.S.I. setting.
	2. Freezing Temperatures	1. Install heater kit. See Detail Sheet P-40.
	3. Cup Packings In Power Cylinder Not Performing Correctly	1. Wedge door half way open. a. Energize valves. b. If air exhausts out of exhaust port of valves, it demonstrates that air is blowing past packing. c. Change packings.
	4. Packing Flange Worn	1. Air blowing past end of power cylinder. Replace packing flange.
	5. Closing Valve Remains Energized When Door Is In Closed Position	1. Check adjustment of trip rod. See Fig. 7 2. Check closing micro-switch. a. Set meter at lowest OHM'S scale. b. Place meter probes on micro-switch leads. c. Press micro-switch leaf in to closed position. d. Should read 0 OHM'S.

TROUBLE SHOOTING

TROUBLE	CAUSE	REMEDY
Door opens and stays open.	1. Carpet or Leads Shorted	1. Disconnect carpet leads, if door closes, check carpet with OHM meter. a. Set meter at lowest OHM scale. b. Place meter probes on carpet leads. c. Meter should read infinite OHM'S.
	2. Opening Relay Not Releasing	1. Disconnect relay. If door closes, disassemble and clean. Check coil for short or risidual magnetism. Replace relay and try door; if action continues replace relay.
	3. Mechanical Interference	1. With power off push door closed. If it will not close check: a. Cable and brackets (if Bi-Parting). b. Hanger assembly. c. Threshold-door guide. d. Header track.
	4. Closing Valve Not Energizing	1. Check closing solenoid valve a. Turn off electric power and open door. b. Set meter on lowest ohm scale and then properly zero in meter. c. Place meter leads across terminals 1 & 4 on the terminal block where the solenoid leads are connected. d. The resistance should read 5 ohms ± 10%. If so, coil is OK and go to steps 2 and 3 of this section. e. If the resistance reads infinity or zero ohms, coil is defective and must be replaced. 2. If solenoids do not energize check for loose or broken wires. 3. If solenoid energizes, check valve. a. Top and bottom seat. b. Plunger and spring loaded seat. c. Dirt or binding. d. Clean and reassemble. e. If still malfunctioning, replace.
Poor checking action.	1. Air Leaking Past Checking Cylinder Packing	1. Lubricate packing or replace.
	2. Ball Check Sticking	1. Clean ball check port thoroughly. 2. Adjust checking cylinder exhaust screw. 3. If no change in action, replace checking cylinder.

TROUBLE SHOOTING

TROUBLE	CAUSE	REMEDY
Poor Checking Action	3. Defective Power Checking Micro-Switch	1. Place voltmeter across switch. a. Place scale on 24 VAC. b. Meter should read 24 VAC. Depress switch and meter should read 0. c. If not, switch is defective and must be replaced.
Door Creeps Open from closed position.	1. Spring tension of checking cylinder plunger pushes door open	1. Adjust and tighten spring clip. a. Replace if necessary.
Scraping Noise.	1. Steel Wheels	1. Tighten wheels and lubricate.
	2. Improper Adjustment	1. Readjust door height.
	3. Bind in door guide.	1. Inspect threshold door guide and clean. 2. Check spring loaded guide. **Auto-Slide 6000 Only.**

DOOR ADJUSTMENTS — FOR AUTO-SLIDE 6000 ONLY

SINGLE SLIDE

Check sliding door vertical alignment to lock-jamb. See Fig. 14.

If either condition exists, correct as follows:

EXAMPLE A

1. Break out door and remove channel latch and channel cover screws. See Fig. 15.
2. Slide channel cover forward.
3. Remove channel cap. See Fig. 16.
4. Loosen both the assembly screws and set screws in the bottom of the channel approximately one (1) turn each. See Fig. 17.
5. Tighten **rear** set screw **only**. **NOTE:** If still necessary, further loosen the assembly screws. See Fig. 17.
6. Retighten the other set screws and all the assembly screws.
7. Close door and recheck door alignment. Repeat above if necessary.

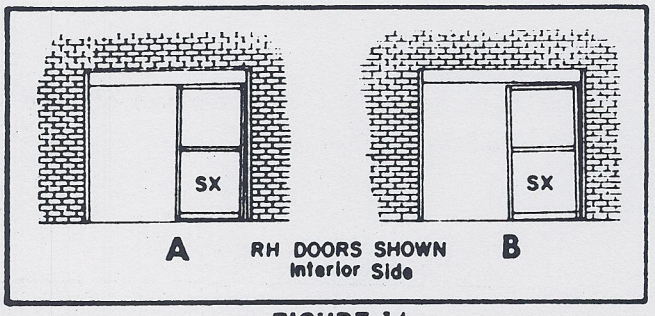


FIGURE 14

EXAMPLE B

8. Repeat 1, 2, 3 and 4 above.
9. Tighten **front** set screw **only**. **NOTE:** If still necessary, further loosen the assembly screws. See Fig. 17.
10. Repeat 6 and 7 above.
11. Break-out door and check door sag. See Fig. 18.
    a. If door sags, adjust as follows:
        1. Loosen rear assembly screw. See Fig. 17.
        2. Tighten rear set screw until door is parallel. See Fig. 17.
        3. Retighten assembly screw.

    NOTE: Check door height. If downward adjustment is necessary, loosen all assembly screws by same amount of turn and then tighten the set screws by the **exact** same amount. Recheck height and repeat if necessary.

12. Slide Channel cover back in place.
13. Replace channel cover mounting screws.
14. Replace channel latch.
15. Replace channel cap.

The break-out tension has been factory adjusted. However for special conditions such as excessive stack pressures, tension may be varied.

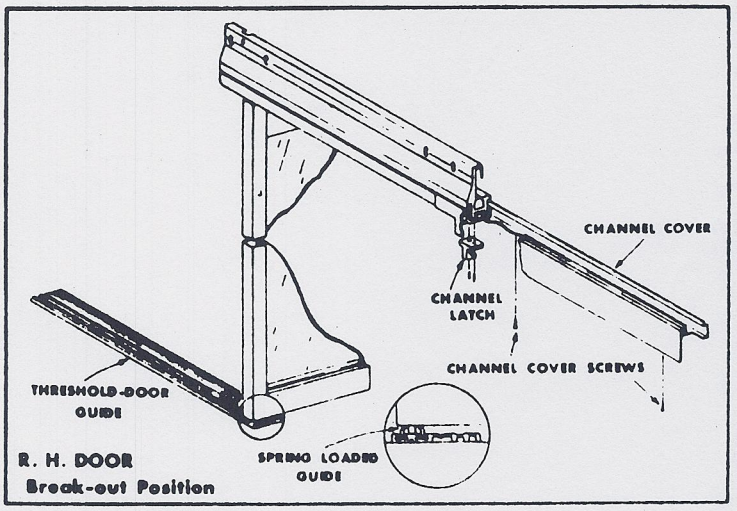


FIGURE 15

PROCEDURE. See Fig. 19.

1. Remove face plate of lock on sliding door.
2. Slide weather stripping down until two (2) screws are exposed in stile.
3. Remove screws and lift out the roller latch.
   CAUTION: Be sure not to drop roller-latch while removing screws.
4. Tighten spring nut in roller latch to increase tension.
5. Replace roller latch and lock face plate.

DOOR ADJUSTMENTS—FOR AUTO-SLIDE 6000 ONLY

ANTI-RISER STOP SCREW ADJUSTMENT

1. Check sliding doors for upward movement.

2. If doors move, adjust as follows:

   a. Break-Out door and remove channel latch and channel cover screws. See Figure 15.
   b. Slide door to open position and slide channel cover forward.
   c. Turn anti-riser stop screws clockwise until resistance is met and then back off 1/4 turn. See Figure 17.

IMPORTANT

Check door for friction and back-off more if necessary.

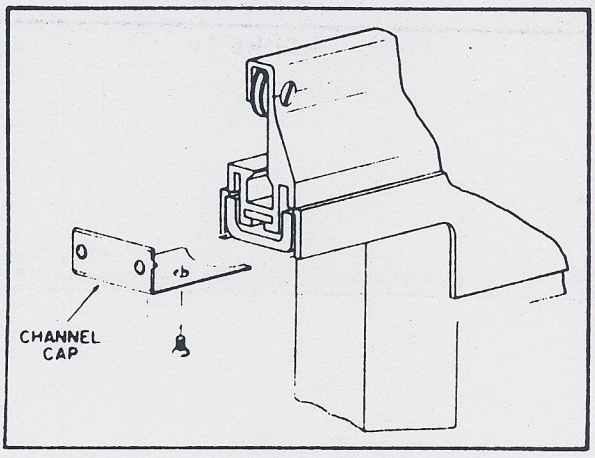
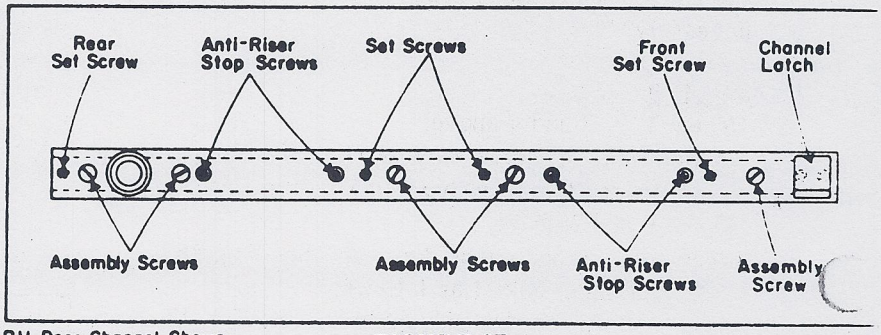


FIGURE 16



RH Door Channel Shown

FIGURE 17

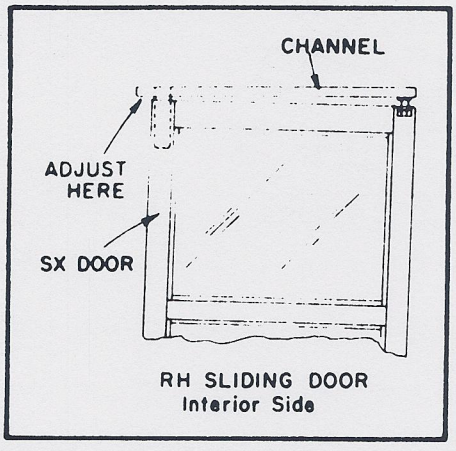


FIGURE 18

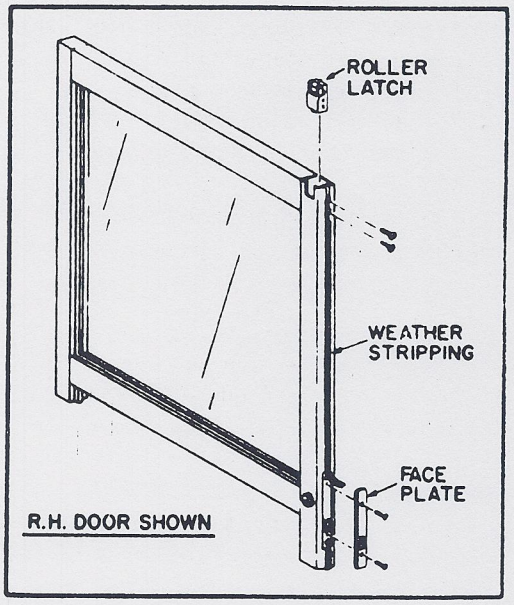


FIGURE 19

DOOR ADJUSTMENTS FOR AUTO-SLIDE 6000 ONLY

BI-PARTING

Check sliding door vertical alignment with cover closed. See Fig. 20.

IMPORTANT: For RH door adjustments, See Fig. 21.
For LH door adjustments, See Fig. 22.

1. To lower rear stile of door:
   a. Break-out door and remove channel latch and channel cover screws. See Fig. 23.
   b. Slide channel cover forward and out of hanger assembly. See Fig. 23.
   c. Remove channel cap. See Fig. 24. Replace channel latch.
   d. Loosen both the assembly screws and set screws in the bottom of the channel approximately one (1) turn each. See Fig. 21 or 22.
   e. Tighten **rear** set screw **only. NOTE:** If still necessary, further loosen the assembly screws. See Fig. 21 or 22.
   f. Retighten the other set screws and all the assembly screws.
   g. Close door and recheck door alignment. Repeat above if necessary.

2. To lower front stile of door:
   a. Repeat a, b, c, and d above.
   b. Tighten **front** set screw **only. NOTE:** If still necessary, further loosen the assembly screws. See Fig. 21 or 22.
   c. Repeat f and g above.

3. **Break-out door and check door sag. See Fig. 25.**

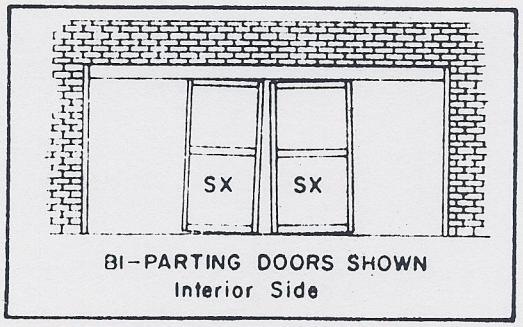


FIGURE 20

IMPORTANT: For RH door adjustments, See Fig. 21.
For LH door adjustments, See Fig. 22.

   a. If door sags, adjust as follows:
      1. Loosen **rear** assembly screw. See Fig. 21 or 22.
      2. Tighten **rear** set screw until door is parallel. See Fig. 21 or 22.
      3. Retighten assembly screw.
      NOTE: Check door height. If downward adjustment is necessary, loosen all assembly screws by same amount of turn and then tighten the set screws by the **exact** same amount. Recheck height and repeat if necessary.

4. Remove channel latch.

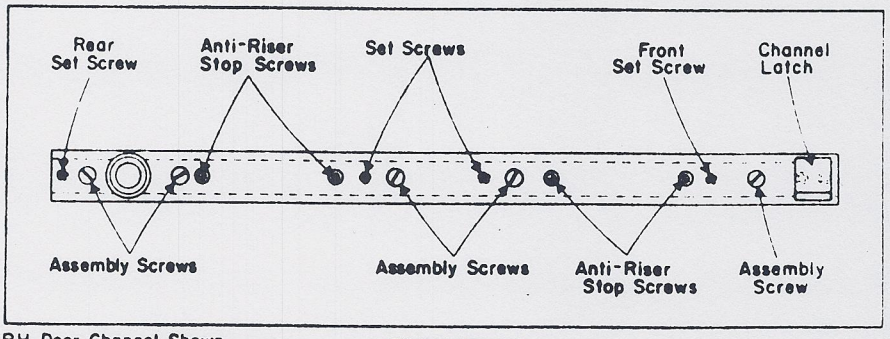
5. Slide channel cover back onto hanger assembly.

6. Replace channel cover mounting screws.

7. Replace channel latch.

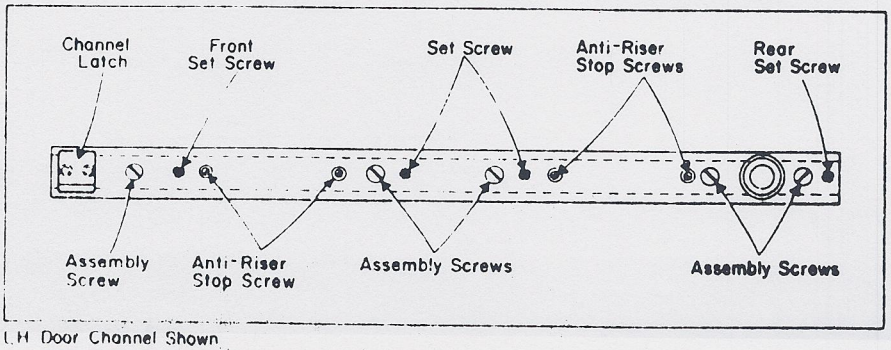
8. Replace channel cap.

9. **The break-out tension has been factory adjusted. However, for special conditions such as excessive stack pressures, tension may be varied.**
   a. Procedure. See Fig. 26.
      1. Remove face plate of lock on sliding door.
      2. Slide weather stripping down until two (2) screws are exposed in stile.
      3. Remove screws and lift out the roller latch.
      CAUTION: Be sure not to drop roller-latch while removing screws.
      4. Tighten spring nut in roller latch to increase tension.
      5. Replace roller latch and lock face plate.



RH Door Channel Shown

FIGURE 21



LH Door Channel Shown

DOOR ADJUSTMENTS FOR AUTO-SLIDE 6000 ONLY

ANTI-RISER STOP SCREW ADJUSTMENT

1. Check sliding doors for upward movement.

2. If doors move, adjust as follows:

   a. Break-Out door and remove channel latch and channel cover screws. See Figure 23.
   b. Slide door to open position and slide channel cover forward.
   c. Turn anti-riser stop screws clockwise until resistance is met and then back off 1/4 turn. See Figure 21 or 22.

IMPORTANT

Check door for friction and back-off more if necessary.

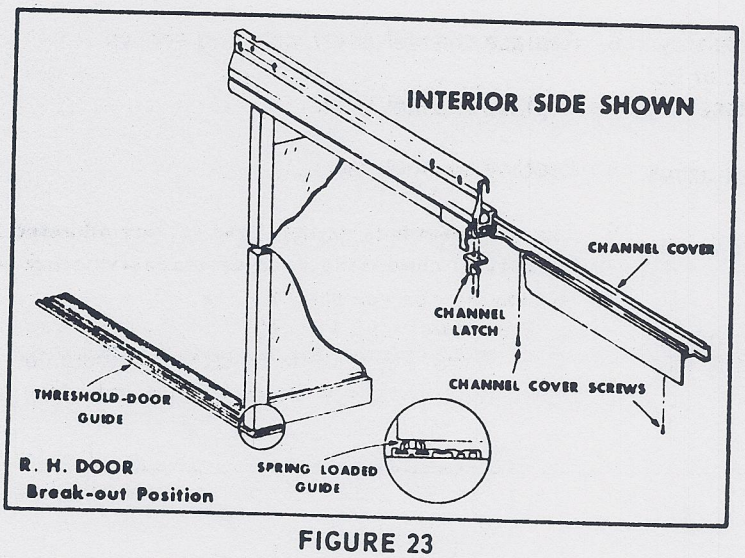


FIGURE 23

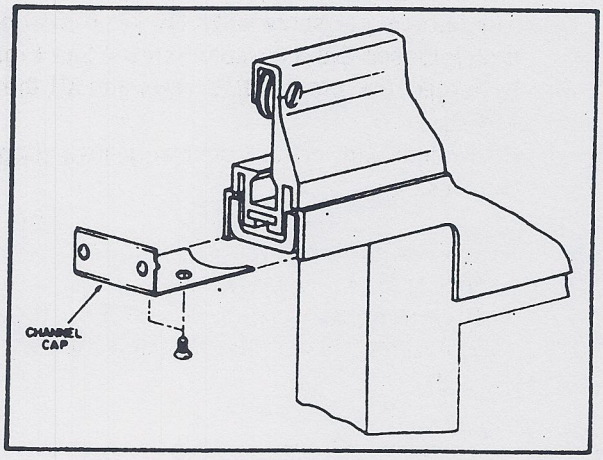


FIGURE 24