HUSSMANN CORPORATION

(Gloversville)

Parts and Service Manual

Models 100R , 101 & 2100

Date: July 1999

HUSSMANN CORPORATION
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Wiring Diagrams and Heater Values

(Total Amperage Draw Without Lights)

Model: 101LT: (Drawing #43)

Door Size: 29 7/8" x 60 11/16"

2 --	3.4 Amps	120 Volts
3 --	5.0 Amps	120 Volts
4 --	6.6 Amps	120 Volts
5 --	8.2 Amps	120 Volts

Model: 2100LT: (Drawing #43)

Door Size: 29 7/8" x 60 11/16"

2 --	3.1 Amps	120 Volts
3 --	4.5 Amps	120 Volts
4 --	6.0 Amps	120 Volts
5 --	7.4 Amps	120 Volts

Model: 101NT: (Drawing #39)

Door Size: 29 7/8" x 60 11/16"

2 --	1.2 Amps	120 Volts
3 --	1.8 Amps	120 Volts
4 --	2.3 Amps	120 Volts
5 --	2.9 Amps	120 Volts

Model: 2100NT: (Drawing #39)

Door Size: 29 7/8" x 60 11/16"

2 --	.87 Amps	120 Volts
3 --	1.23 Amps	120 Volts
4 --	1.61 Amps	120 Volts
5 --	2.01 Amps	120 Volts

Model: 101LT: (Drawing #43)

Door Size: 22 11/16" X 60 3/16"

1 --	.72 Amps	120 Volts
2 --	1.63 Amps	120 Volts
3 --	2.46 Amps	120 Volts

Model: 2100LT: (Drawing #43)

Door Size: 22 11/16" X 60 3/16"

1 --	.68 Amps	120 Volts
2 --	1.55 Amps	120 Volts
3 --	2.34 Amps	120 Volts

Model: 101NT: (Drawing #39)

Door Size: 22 11/16" X 60 3/16"

1 --	.61 Amps	120 Volts
2 --	1.17 Amps	120 Volts
3 --	1.72 Amps	120 Volts

Model: 2100NT: (Drawing #39)

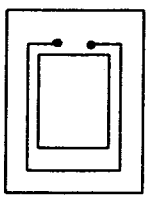
Door Size: 22 11/16" X 60 3/16"

1 --	.44 Amps	120 Volts
2 --	.83 Amps	120 Volts
3 --	1.21 Amps	120 Volts

Heater Wire Schematics

Drawing #33

Heater Layout: Perimeter

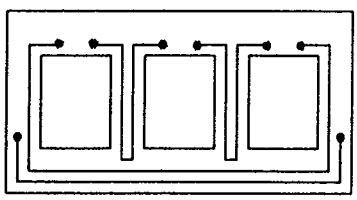


1 - Door Shown

(Typical for 1 Door)

Drawing #43

Heater Layout: Bottom and End Perimeter, Center, Bottom Supplement

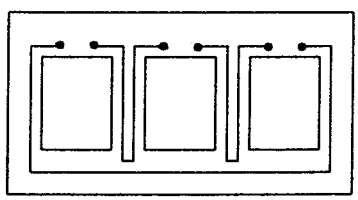


3 - Door Shown

(Typical for 2 thru 5 Doors)

Drawing #39

Heater Layout: Bottom and End Perimeter, Center, Bottom Supplement



3 - Door Shown

(Typical for 2 thru 5 Doors)

Electronic Lighting System ("ELS")

120 Volt Amperage Draw Number of Doors Number of Lights	1 2	2 3	3 4	4 5	5 6
Lamp Length			— Amperage Draw —		
48"	0.92	1.45	1.84	2.37	2.76
60"	1.30	2.02	2.60	3.32	3.90
72"	1.31	2.07	2.62	3.38	3.93

Electronic Lighting System ("ELS")

120 Volt Wattage Number of Doors Number of Lights	1 2	2 3	3 4	4 5	5 6
Lamp Length			— Total Wattage —		
48"	77.4	117.5	154.8	194.9	232.2
60"	109.5	169.4	219.0	278.9	328.5
72"	110.0	173.6	220.0	283.6	330.0

Electronic Lighting System ("ELS")

Bulb Type	Bulb Length	Watts
T8	24"	17 Watts
T8	36"	25 Watts
T8	48"	32 Watts
T8	60"	40 Watts
T8	72"	70 Watts

Anthony's "ELS"

Electronic Lighting System

T-8 Lamp Replacement Instructions

CENTER MULLION FIXTURES:

1. **Turn light power off** before start of lamp replacement.

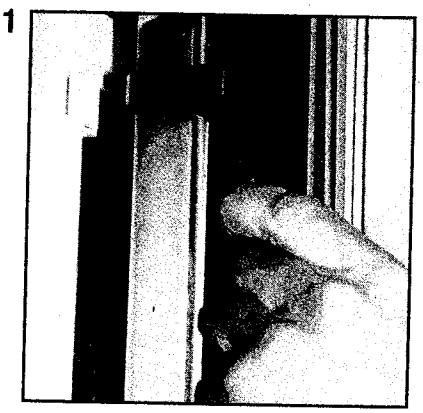
2. **Remove top and bottom spring steel clips**(1). Insert small flat-head screwdriver under clip to release clip from side of fixture. On one side at a time, pull clip out of pre-punched holes in side of mullion.
(See Drawing #1)

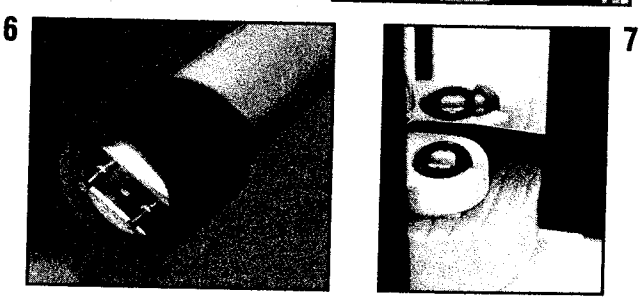
3. **Remove ELS lens.** Starting at top, pull lens away from front of light fixture, attached to frame mullion(2). (If necessary, a small flat-head screwdriver can be inserted between the lens and black mullion plastic(3), to ease the lens out of the groove.) **There is no need to remove lens from the bridge.** (The "bridge" is the black or clear plastic piece connecting the two lenses at the back of the fixture.)

   If pulled away from *one side* carefully, the lens will swing back into the case to give access to the bulb. Otherwise, the left and right lenses *and* the bridge will pull away from the fixture – in *one complete section*(4).

4. With lens removed, hold lamp with fingers and twist bulb to line up with socket access holes(5). **Remove old bulb.** *Remove **insulator tubes** from both ends of old bulb, and **replace on ends of new bulb***(6).

   To **install new bulb**, place into socket, and **turn TWO CLICKS.** On the top and bottom of lamp sockets, there are foam end caps(7). ***End caps must be attached before lens is replaced.***





CENTER MULLION FIXTURES
(continued)

5. Be sure that both ELS lenses are snapped securely into the plastic bridge before re-installing on the light fixture(8). *(See Drawing #1 for end view.)*

6. Install clip on plastic bridge if required before reinstalling on light fixture.

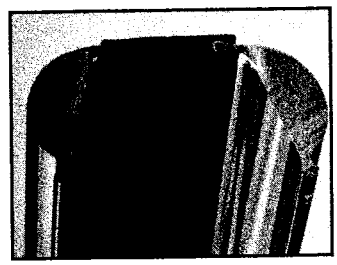
7. Starting at the top on one side of the light fixture, line up the edge of the lens with the groove in the fixture plastic(9). **Snap lens into groove.** Repeat with lens on the other side, if removed.

8. Holding lens snugly against top of light fixture, **install spring steel clip** over lenses(10). Snap clip into pre-punched holes on each side of mullion. Move to bottom of fixture and install bottom clip.

IMPORTANT: Bulb insulators(5) must be on each end of bulb before lenses are re-installed. **Foam end caps**(7) should be securely attached to top and bottom of lamp sockets. *(Foam end caps are cut to fit snugly, but if they have become dislodged, or pulled out during changes, they **must be replaced!**)*

9. Turn light power on.

8



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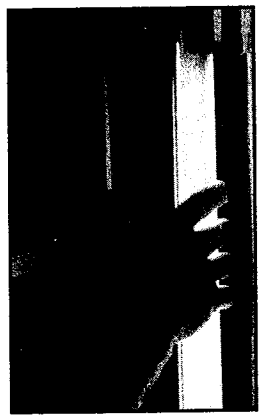

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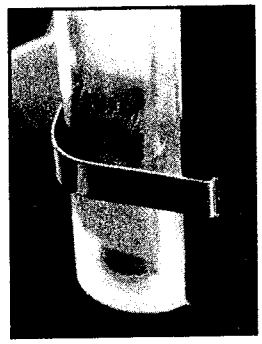

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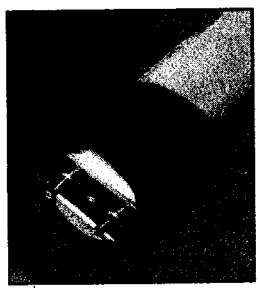

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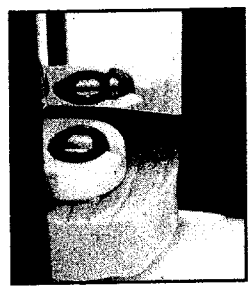
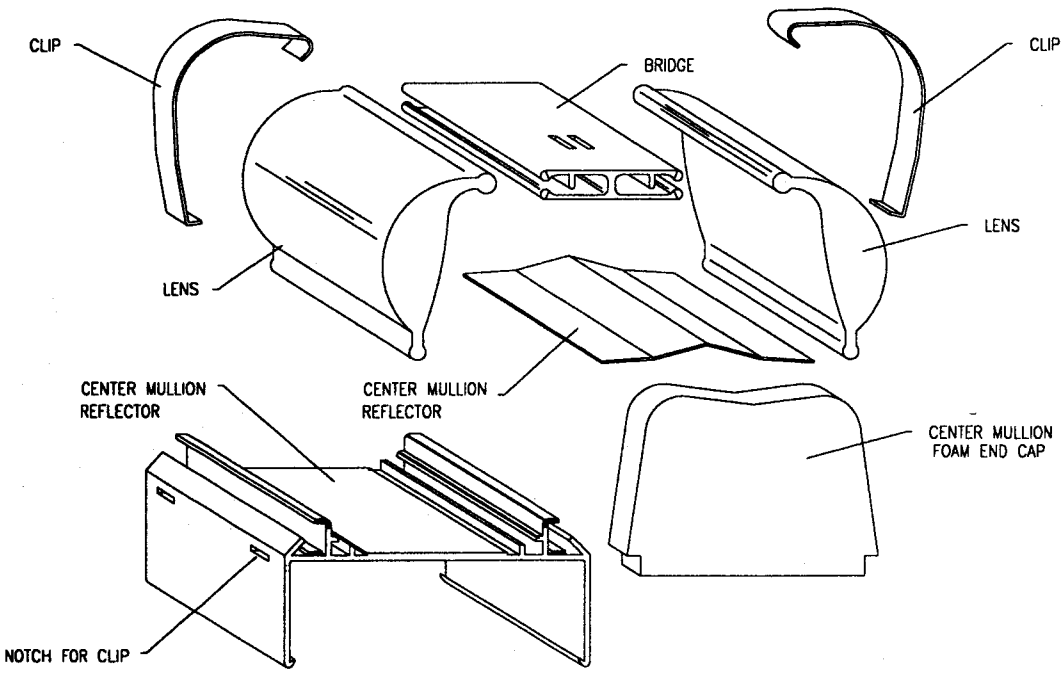
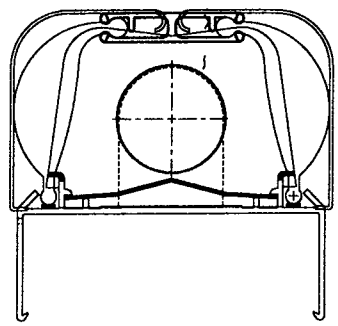


Drawing #1





Electronic Lighting System

T-8 Lamp Replacement Instructions

FRAME END FIXTURES:

1. **Turn light power off** before start of lamp replacement.

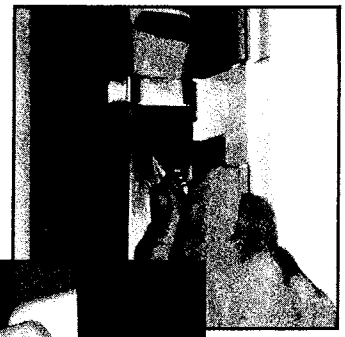
2. **Remove top and bottom spring steel clips**(11). Insert small flat-head screwdriver under flat portion of spring steel clip to remove from side of light fixture. *(See Drawing #2)* **Swing clips to the side till re-installation.**

3. **Remove ELS lens.** Starting at top, pull lens away from *inside front* edge of fixture(12). (If necessary, a small flat-head screwdriver can be inserted between the lens and black fixture plastic(13), to ease the lens out of the groove.) If rear edge of lens is left in fixture plastic, lens will swing back on flexible "hinge" to expose bulb(14).

4. Reaching into fixture, hold bulb with fingers and twist to line up with socket access holes. **Remove old bulb.** *Remove* ***insulator tubes*** *from both ends of old bulb, and* ***replace on ends of new bulb***(5).

   To **install new bulb**, place into socket, and **turn *TWO CLICKS.*** On the top and bottom of lamp sockets, there are foam end caps(7). ***End caps must be attached before lens is replaced!***

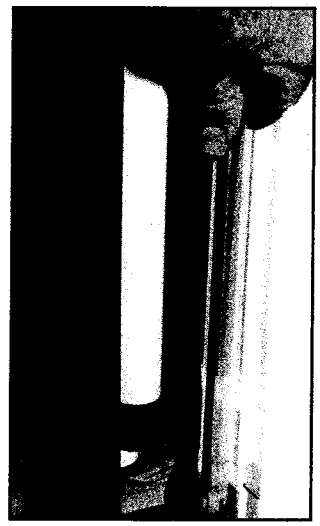
11

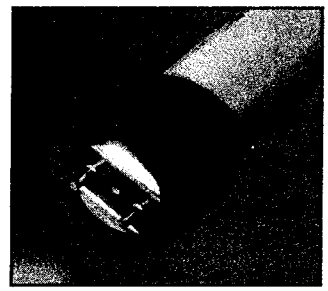


12

13

14





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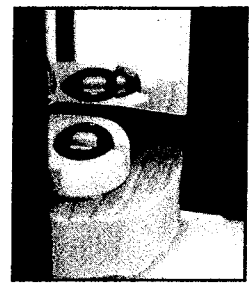

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Drawing #2

FRAME END FIXTURES
(continued)

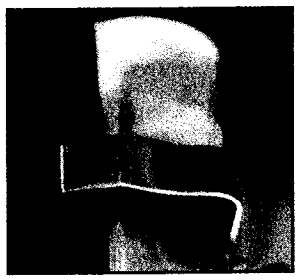
5. **Re-install ELS lens.** If lens has been *completely* removed from fixture, pull grooved plastic rear section of fixture froward, and snap *rear edge* of **ELS** lens *(See Drawing #2)* back into the groove. (This part of the light fixture has a "hinge", or flexible portion(14), that swings away for easy bulb access.): install clip on hinging side if required before reinstalling the other end of the lens. Starting at the top, snap the other side of the lens into the front groove of the lamp fixture(15).

6. End clips conform to the shape of the end fixture, and can be snapped into place only one way *(See Drawing #2).* The curved sides of the spring steel clip should be touching the lens. **Snap the top and bottom clips into place**(16).

IMPORTANT: Bulb insulators(5) must be on each end of bulb before lens is re-installed. **Foam end caps**(7) should be securely attached to top and bottom of lamp sockets. *(Foam end caps are cut to fit snugly, but if they have become dislodged, or pulled loose during lamp changes, they* ***must be replaced.)***

7. **Turn light power on.**


15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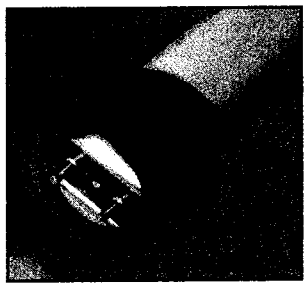
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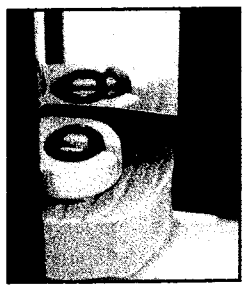
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Anthony's
"ELS" Electronic Ballast Replacement
& Wiring Instructions

Warning: *Before servicing Anthony doors make sure all power to case is turned off. Always use a qualified electrician.*

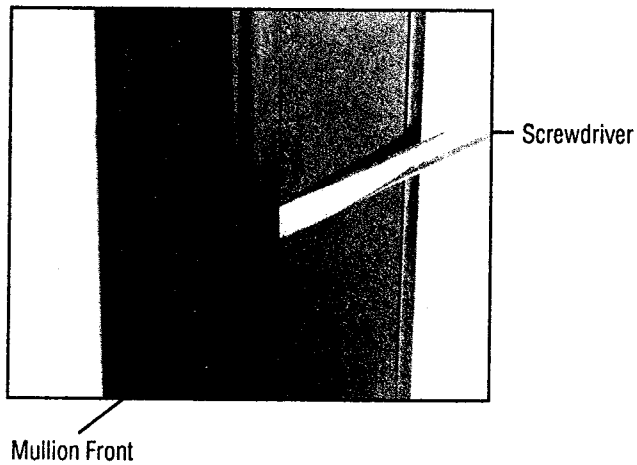
1. Refer to drawings on following pages for ballast location and wiring.

2. To remove contact plate & retainer at front of frame mullion, insert flat-head screwdriver under back edge of black contact plate retainer. Gently pull up to unsnap retainer from mullion. Repeat for other side of mullion, and remove contact plate.

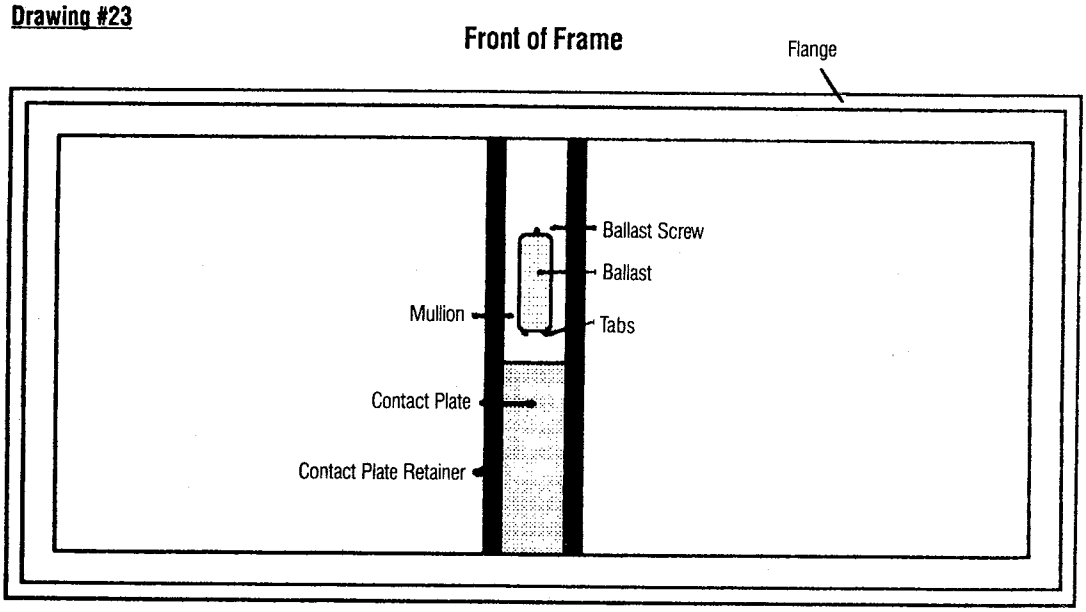
3. With ballast now exposed, remove screw on top end of ballast. Slide ballast up & out of punched tabs, shown in Drawing #23.

4. Disconnect or cut all lead wires. If cut, leave enough lead wire to reconnect new ballast with wire nut.

Figure #22



Drawing #23



"ELS" Electronic Ballast Replacement & Wiring Instructions
(Continued)

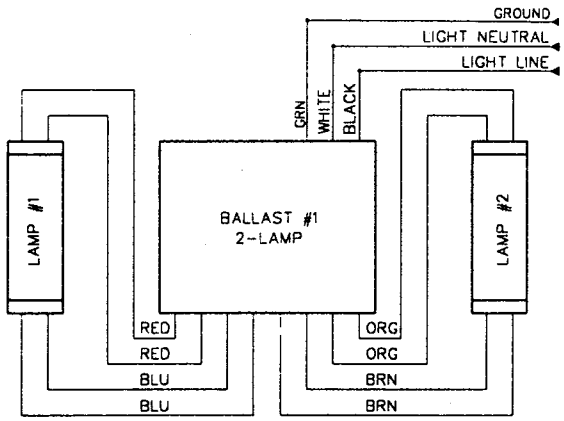
5. Insert bottom of new ballast in punched tabs on mullion. Re-install top screw in top end of ballast.

6. Reconnect new ballast lead wires following Wiring Diagrams #24, #24a, #24b, #24c or #24d:

#24	2-Light (1-Door)
#24a	3-Light (2-Door)
#24b	4-Light (3-Door)
#24c	5-Light (4-Door)
#24d	6-Light (5-Door)

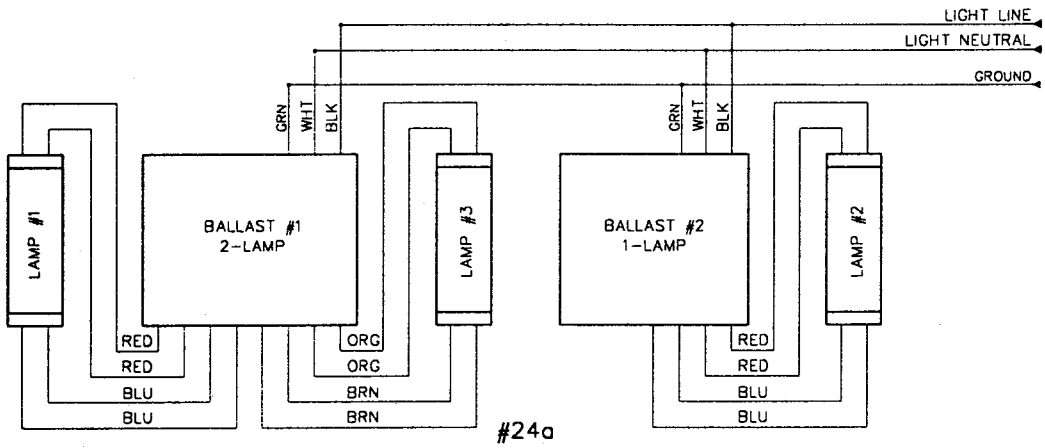
7. Lay contact plate flat on mullion. Starting at the top, insert contact plate retainer into front edge of mullion. Snap retainer on back edge of mullion. Repeat instruction for opposite side.

120V/220V Electronic Ballast Wiring Diagrams #24, #24a & #24b
From 5/97 to Present
(LT2X Series)



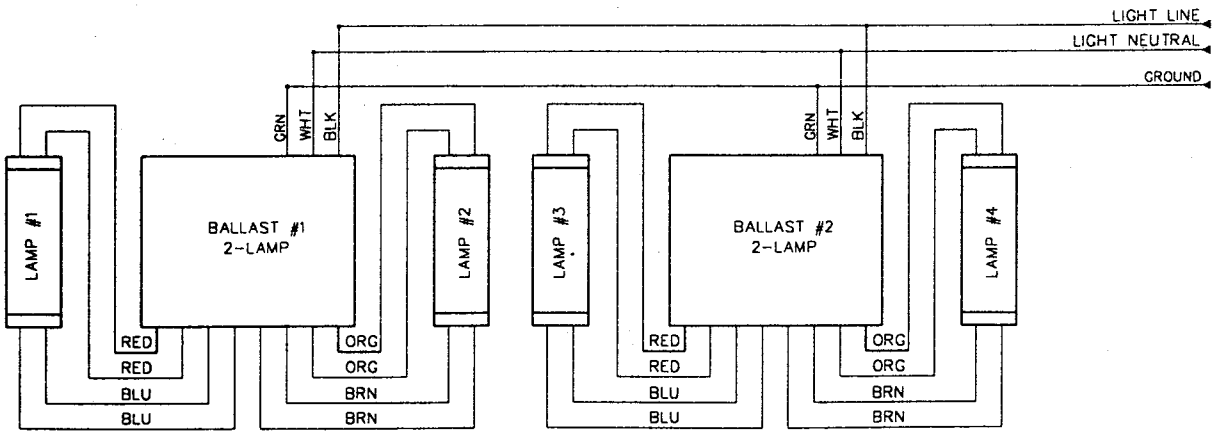
#24

1 – DOOR SECTION



#24a

2 – DOOR SECTION



#24b

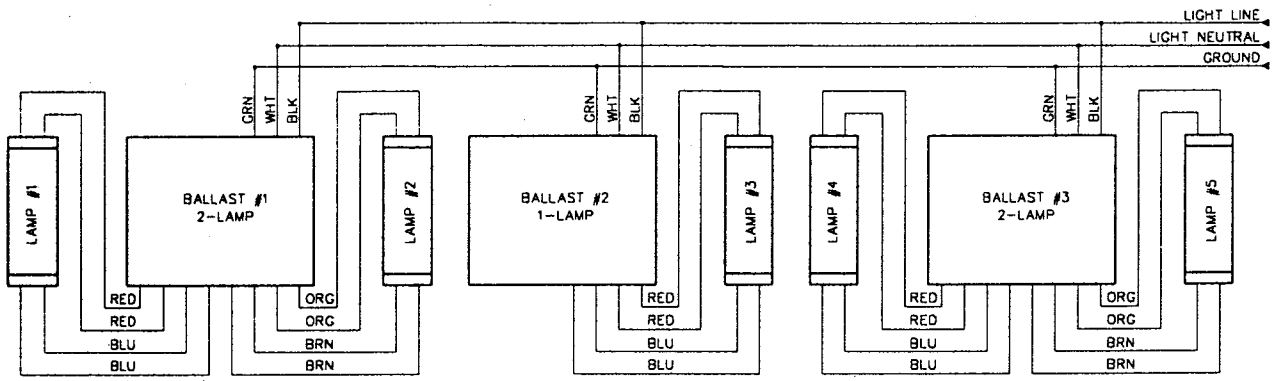
3 – DOOR SECTION

NOTES:

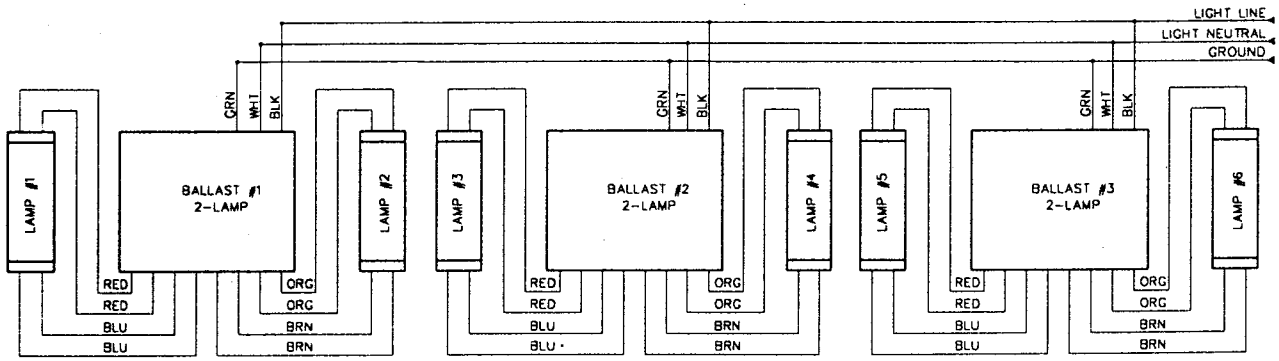
1. WIRING DIAGRAMS SHOWN FOR 60" LAMP SIZES, BUT BALLAST MODEL NUMBERS WILL VARY. WHEN ORDERING REPLCEMENTS, PLEASE REFER TO PARTS BOOK FOR CORRECT PART NUMBERS.
2. ANTHONY FRAME PRODUCTION AFTER 3/20/97 BALLAST ARE SUPPLIED WITH CONNECTORS.

SOLID STATE BALLAST
WIRING DIAGRAMS, 120VAC
1,2 AND 3 DOOR SECTIONS

120V/220V Electronic Ballast Wiring Diagrams #24c, #24d
From 5/97 to Present
(LT2X Series)



#24c
4 – DOOR SECTION



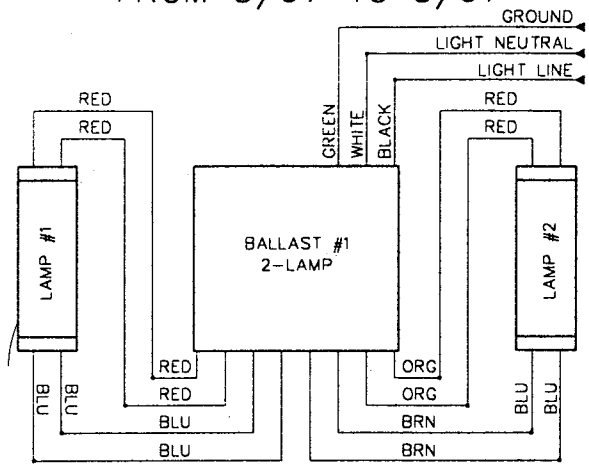
#24d
5 – DOOR SECTION

NOTES:

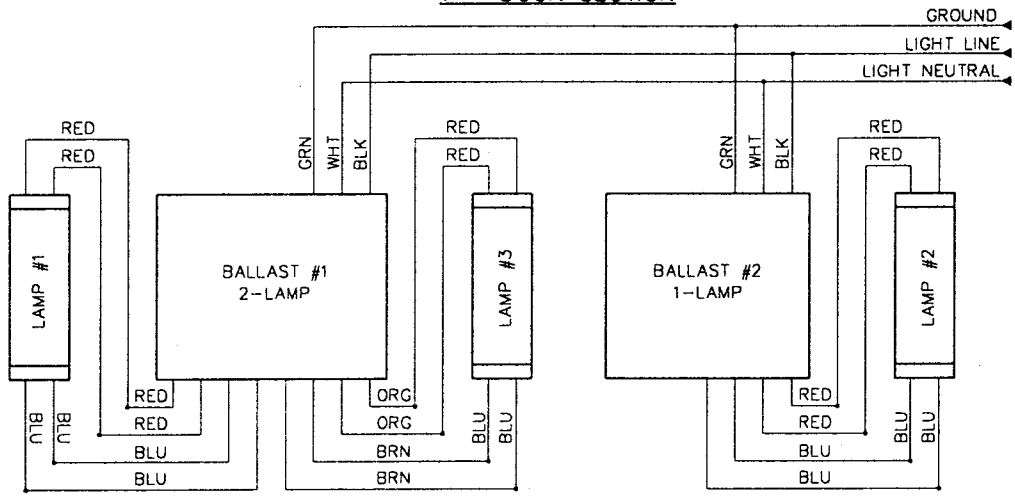
1. WIRING DIAGRAMS SHOWN FOR 60" LAMP SIZES, BUT BALLAST MODEL NUMBERS WILL VARY. WHEN ORDERING REPLCEMENTS, PLEASE REFER TO PARTS BOOK FOR CORRECT PART NUMBERS.
2. ANTHONY FRAME PRODUCTION AFTER 3/20/97 BALLAST ARE SUPPLIED WITH CONNECTORS.

SOLID STATE BALLAST
WIRING DIAGRAMS, 120VAC
4 AND 5 DOOR SECTIONS

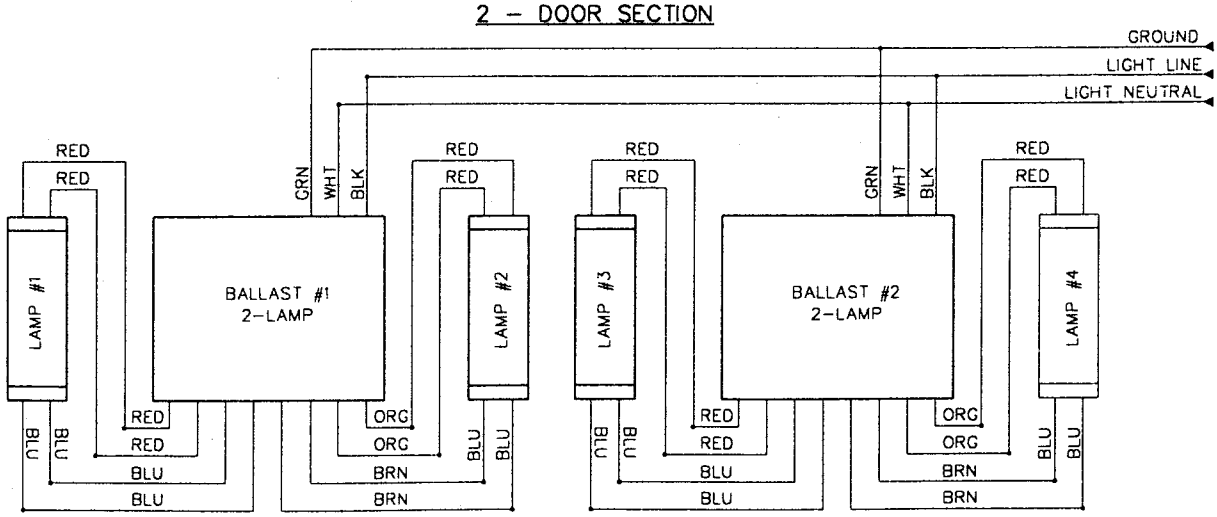
120V Electronic Ballast Wiring Diagrams #24, #24a & #24b
FROM 3/97 TO 5/97



#24
1 – DOOR SECTION



#24a
2 – DOOR SECTION

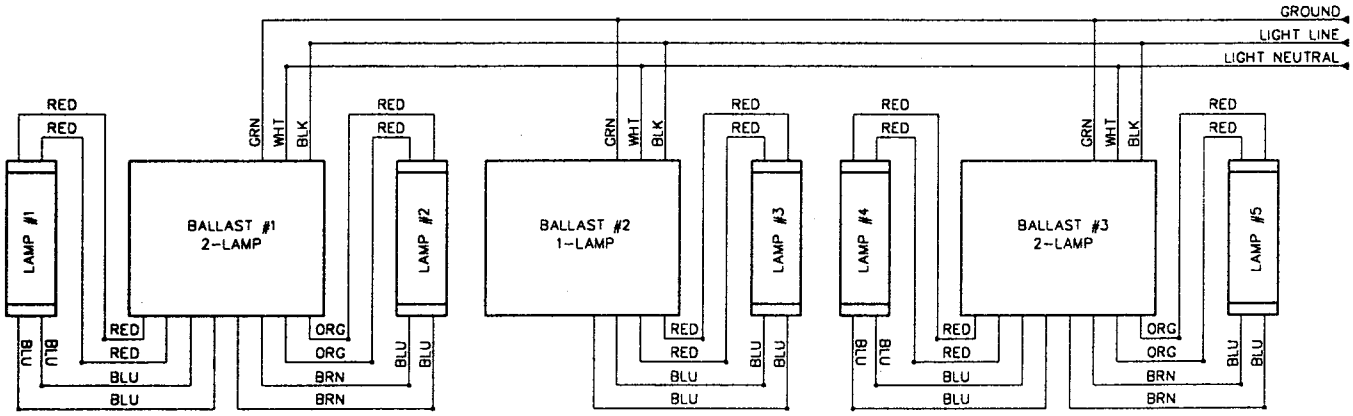


#24b
3 – DOOR SECTION

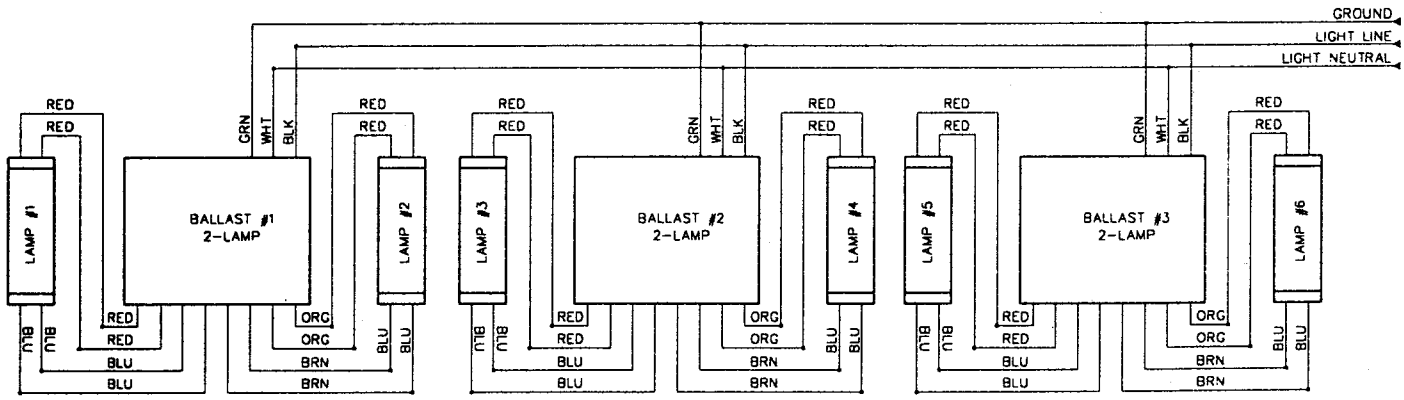
WIRING DIAGRAMS SHOWN FOR 60" LAMP SIZES,
BUT BALLAST MODEL NUMBERS WILL VARY. WHEN ORDERING REPLCEMENTS,
PLEASE REFER TO PARTS BOOK FOR CORRECT PART NUMBERS.

SOLID STATE BALLAST
WIRING DIAGRAMS, 120VAC
1,2 AND 3 DOOR SECTIONS

120V Electronic Ballast Wiring Diagrams #24c, #24d
FROM 3/97 TO 5/97



#24c
4 – DOOR SECTION

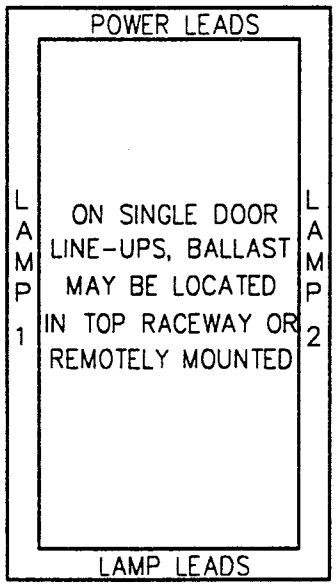


#24d
5 – DOOR SECTION

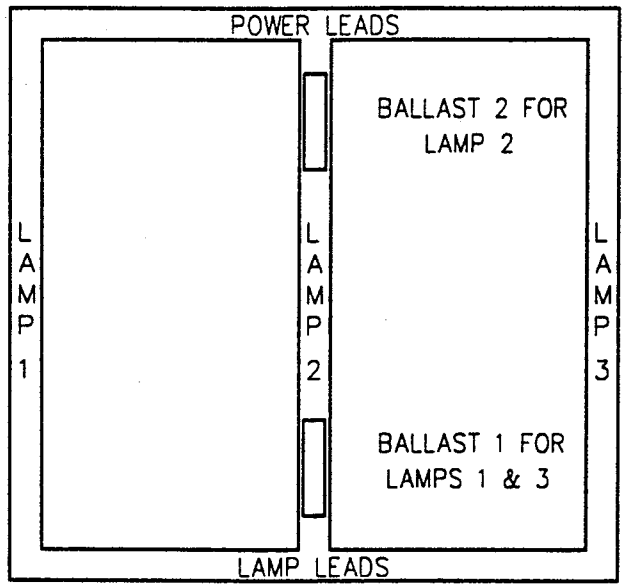
WIRING DIAGRAMS SHOWN FOR 60" LAMP SIZES,
BUT BALLAST MODEL NUMBERS WILL VARY. WHEN ORDERING REPLCEMENTS,
PLEASE REFER TO PARTS BOOK FOR CORRECT PART NUMBERS.

SOLID STATE BALLAST
WIRING DIAGRAMS, 120VAC
4 AND 5 DOOR SECTIONS

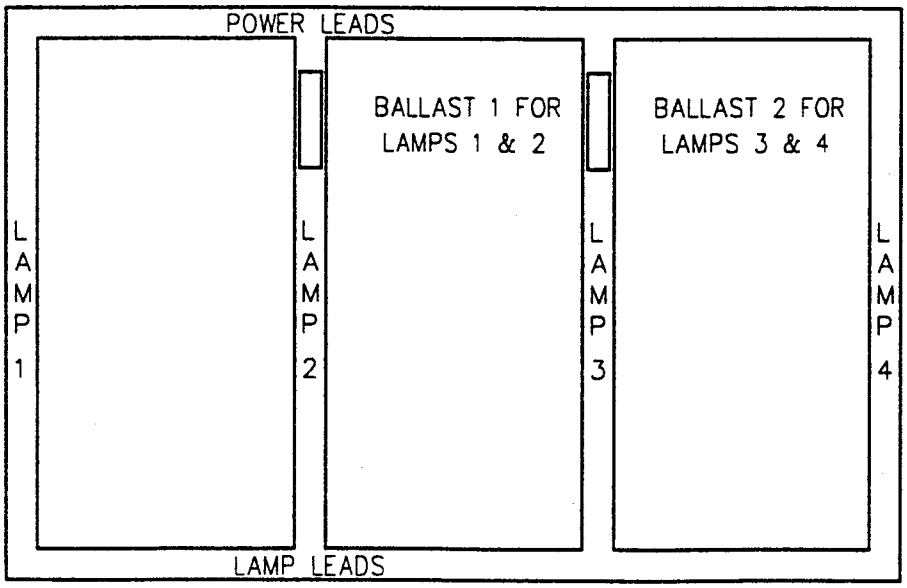
ELS Lighting System, 120V Component Layout
as viewed from the front (customer's side) of the cases.



1 – DOOR SECTION

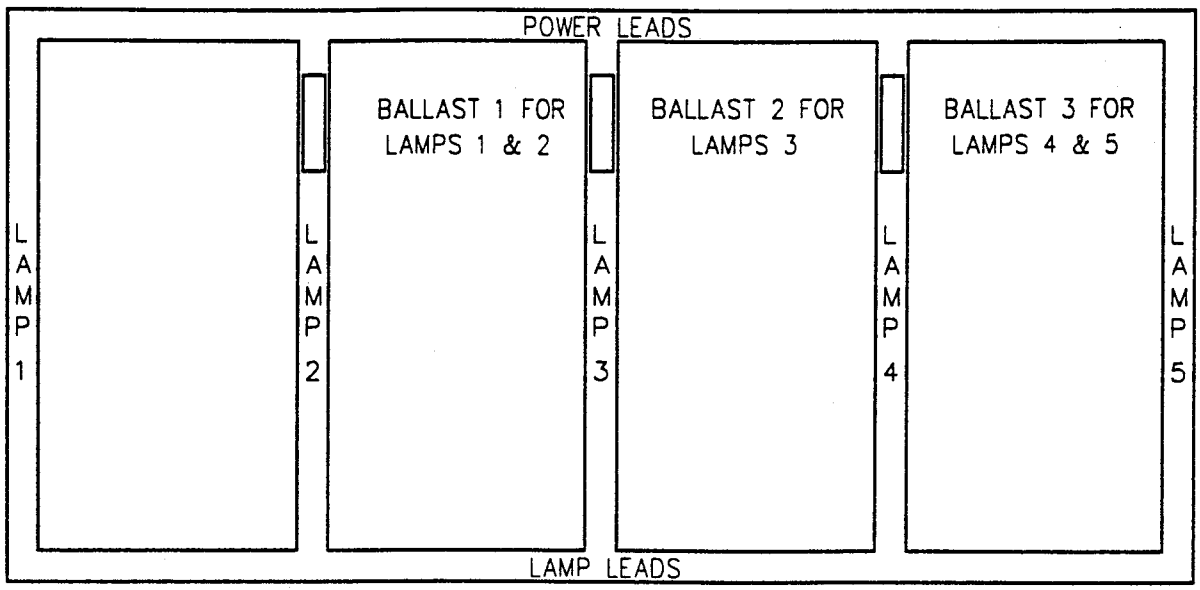


2 – DOOR SECTION

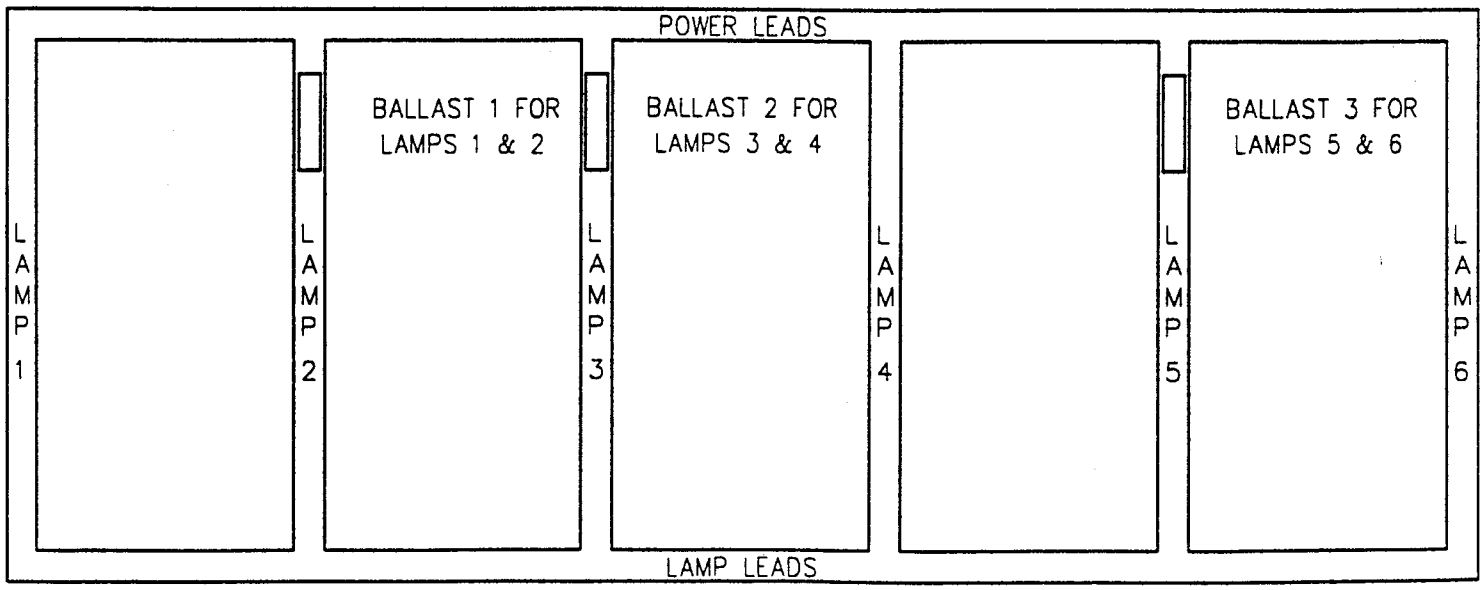


3 – DOOR SECTION

ELS Lighting System, 120V Component Layout
as viewed from the front (customer's side) of the cases.



4 – DOOR -SECTION



5– DOOR SECTION

ALL SWING DOOR AND FRAME INSTALLATION INSTRUCTIONS:

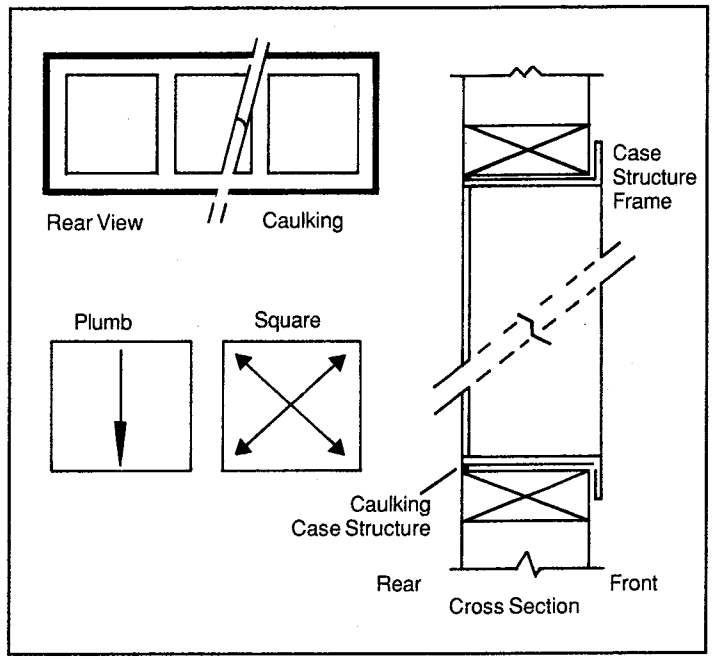
Frame Installation Instructions

1. Read Instructions completely before installing frames.
2. Net openings must conform to net openings listed in Price Book or other.
3. Check size of finished frame to rough opening.
4. Do not fit frame into tight net opening.
5. Check rough opening for plumb and square as shown. Sill must be level left to right and front to back.
   - **a.** Jambs, header and sill should be wood for a secure installation.
   - **b.** Anthony door frame needs a sill of at least 1 1/2".
6. Set frame in net opening (for safety, partially install wood screws into top of frame. Do not tighten.) Torquemaster (silver rectangular box) goes at bottom of frame. Hinge pin goes to top of frame.
7. Check frame for square as shown. Shim as necessary. Ensure that shims are placed as close to installation holes as possible. When shimming is necessary, shim top and bottom and/or left end of frame and right end of frame to maintain square of frame in net opening.
8. From the inside of case, caulk all four sides of frame between frame and rough opening as shown in drawing.
9. Starting with frame sill, install mounting screws and tighten. Now do sides, then top. (DO NOT OVER TIGHTEN SCREWS AS THIS WILL BOW FRAME.)
10. From inside the case, re-check caulking and re-caulk as necessary.

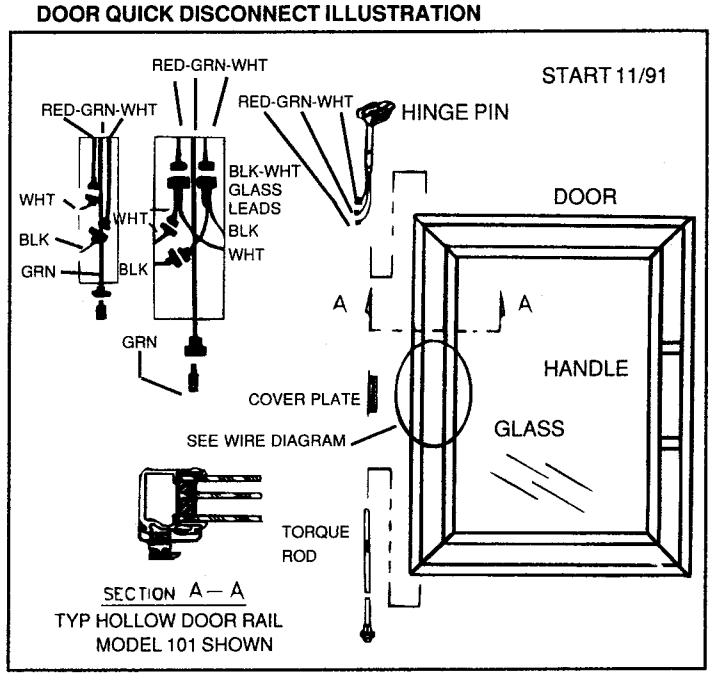
Additional Model 101-100 INSTRUCTIONS:

1. Remove cover plate.
2. Unplug hinge pin connectors from glass and/or heater connections. Remove hinge pin from top of door. Remove torque rod from bottom of door and insert in opposite end. Then insert hinge pin in opposite end of door and plug in quick disconnect wires, following color codes. (Heaters & glass to hinge pin.)
3. **Wiring Instructions:**
   - **a:** Hinge pin—red or black-white-green wire.
   - **b.** Door heater—red or black-white wire.
   - **c.** Glass—black-white wire.
   - **d.** Connect black or red wire to black glass lead and red or black door heater lead.
   - **e.** Connect white to white door heater and white glass wire.
   - **f.** Green to ground.

DRAWING #1 FRAME INSTALLATION



DOOR QUICK DISCONNECT ILLUSTRATION



HOW TO INSTALL YOUR NEW REVERSIBLE DOOR

1. Align door with Torque rod and insert into the Torquemaster™ socket at base of door.
2. Engage door with hinge pin plug installed into hinge pin plug receptical at top of door.
3. Push door into frame with your thumb until hinge pin plug snaps into place.

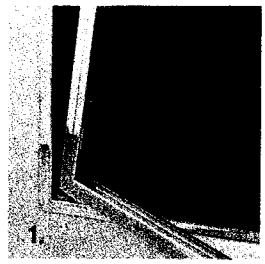
*4. Hook door stop and hold-open device into camel back loop on back side of door.

*5. Slide on fastener to slide attachment inside of frame until it clicks into position.

6. Adjust closing force by turning the screw on the front of the Torquemaster™ with a regular screwdriver. Turn counter-clockwise to tighten, clockwise to loosen. Don't over-adjust to cause door slamming. The door is installed.

NOTE:
Do not use power tools to adjust Torquemaster™

* See Front of Back Page for New Hold-Open.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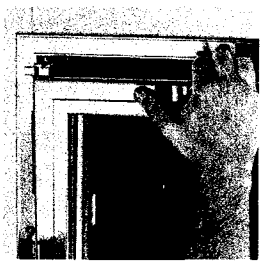

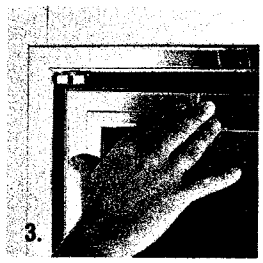
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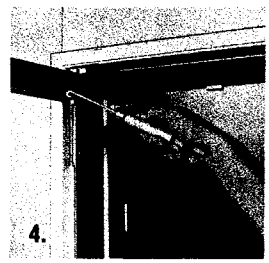
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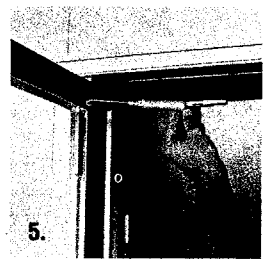
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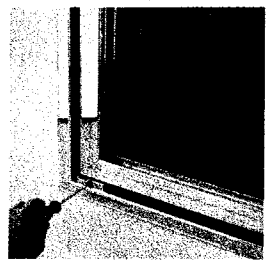
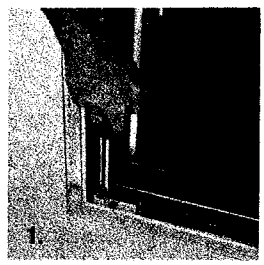


REVERSING THE FRAME HARDWARE

1. Remove Torquemaster by turning center screw counter clockwise as shown.
2. Remove black cover plate with a regular screwdriver and insert into old Torquemaster hole. Replace and reinstall Torquemaster in new position.
3. Insert black safety cover plate into old hinge pin hole.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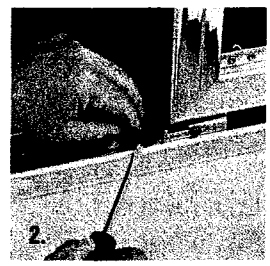
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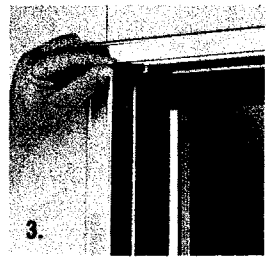
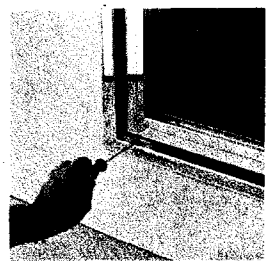
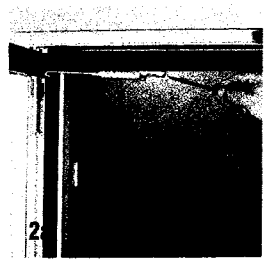
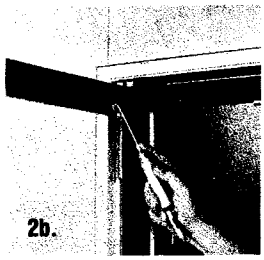
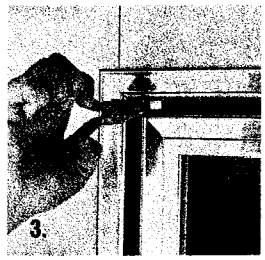

3.

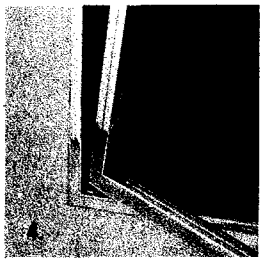
HOW TO REVERSE A DOOR

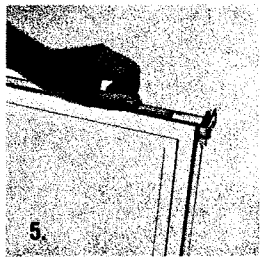


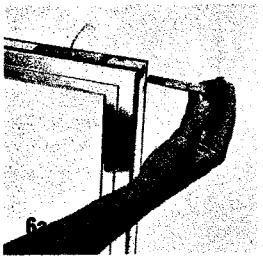


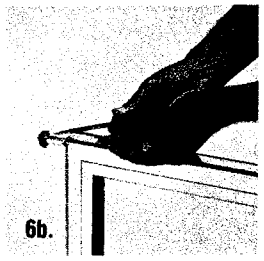


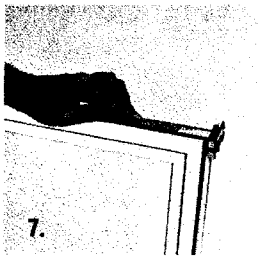












1. Release tension on Torquemaster by turning "front" screw clockwise.

2a. Open the door and lock into the hold-open position. Using a regular screwdriver, release the door stop and hold-open frame attachment from slide channel as shown.

***2b.** Remove door stop and hold-open device from door as shown.

3. Remove hinge pin plug from frame by inserting needle nose pliers into hinge pin plug 1/8" hole (as shown). Compress and pull hinge pin plug away from frame.

4. Lift door out of Torquemaster; lean it on its side against a stable surface.

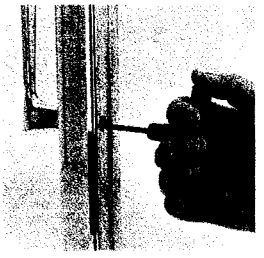
5. Remove hinge pin plug access cover from hinged side of door.

6a. Unplug door and/or glass heater connectors found in hinge side of door under access plate and remove hinge pin plug (start date 1991) out through top of door. Re-insert lead wires from new hinge pin into opposite end of door, and plug lead wires into door and/or glass heater wires.

6b. Remove Torque rod by sliding it out of bottom of door and insert back in opposite end of door.

7. Carefully replace hinge pin plug access covers.

* **See Back Page for New Hold-Open Instructions.**

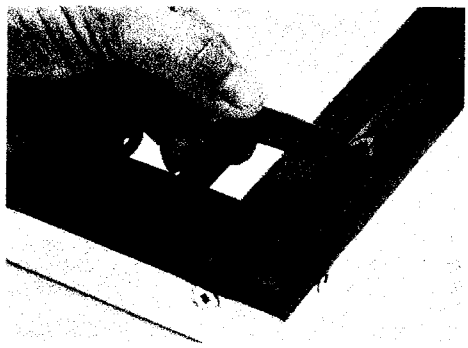


DOOR HANDLE REPLACEMENT

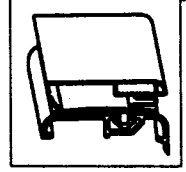
To remove handle, insert 5/32" Allen wrench through back side of door frame. Hanlde screws are contained in door frame.

DOOR HEATER REPLACEMENT

CAUTION: Before removing door, decrease torque tension clockwise.

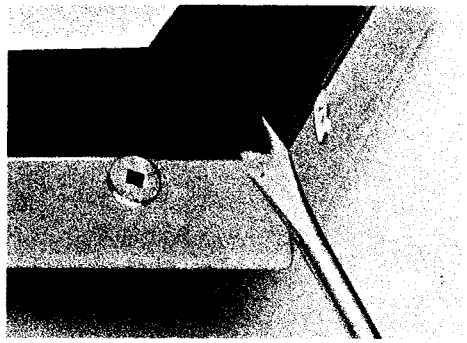


D-126A
Door Gasket
D-125A
Vinyl Door Cover
Before 10/95



D-10797
Door Gasket
D-10796
Vinyl Door Cover
After 10/95

1. Carefully pull gasket from gasket retainer strip.

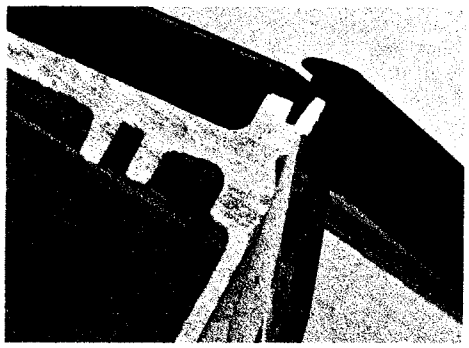


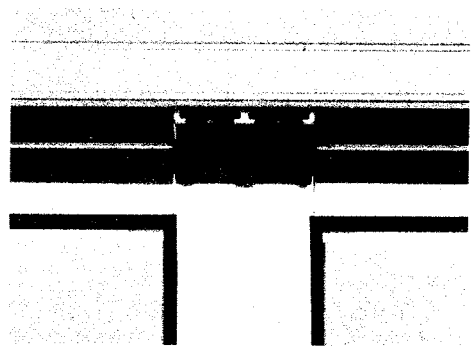
2. To remove plastic retainer strip at the corner of the door, carefully lift as shown.

3. Snip solid heater lead wire and re-connect with new heater lead.

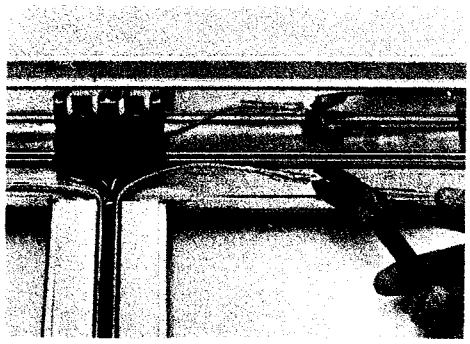
FRAME HEATER REPLACEMENT

CAUTION: Before removing door, decrease torque tension clockwise.

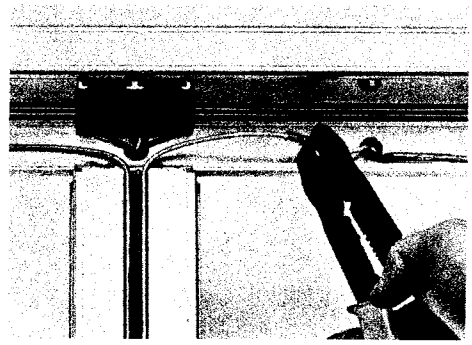




1. To remove heater wire cover, pry up gently on zipper strip with screwdriver as shown. Zipper strip must be removed from bottom.



2. Disconnect defective heater element as shown.



3. Replace defective heater element as shown using crimp connector. Check wires for continuity and reassemble.

Model 100R, 101 & 2100

Doors and Frame

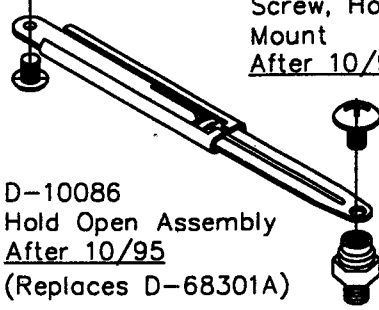
Parts List

R-42544
Access Hole
Cover-Gold

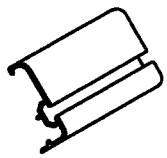
R-42552
Access Hole
Cover-Silver

D-10085
Standoff, Hold Open
Mount
After 10/95

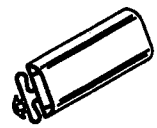
D-10084
Screw, Hold Open
Mount
After 10/95



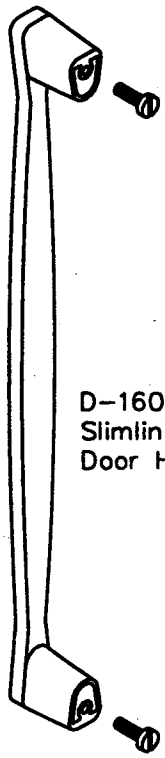
D-10086
Hold Open Assembly
After 10/95
(Replaces D-68301A)



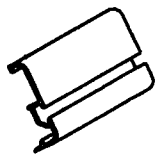
D-125A
Vinyl Door Cover
Strip (per ft)
Before 10/95



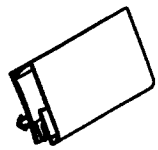
D-126A
Door Gasket
Before 10/95



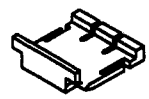
D-1601
Slimline Chrome
Door Handle



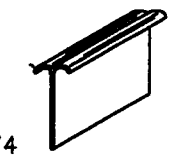
D-10796
Vinyl Door Cover
Strip (per ft)
After 10/95



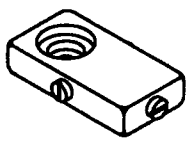
D-10797
Door Gasket
After 10/95



R-42595
Frame Electrical
Dummy Plug

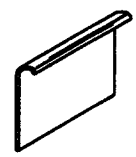


F-174
Adjoining Strip (Full)
(per ft) (Gold-Silver)

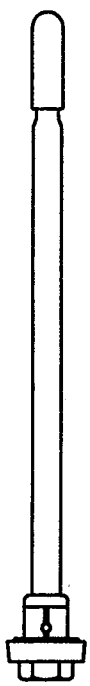


F-122R
Reversible Door
Torquemaster

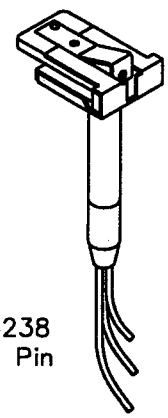
R-42587
Torquemaster Hole Cover
(Specify Gold or Silver)



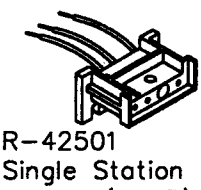
F-173
Adjoining Strip (Full)
(per ft) (Gold-Silver)



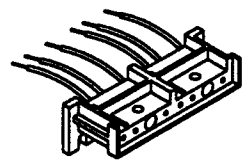
RD-157
Torque Rod ('89)
(Hex Base)



D-64238
Hinge Pin

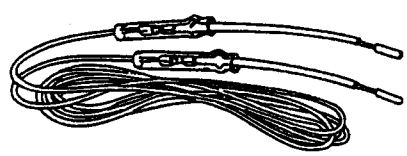


R-42501
Single Station
Socket (1-87)

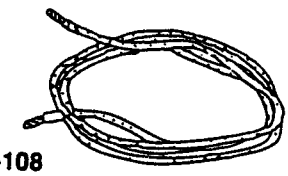


R-42528
Double Station Socket

D-150
Plastic Handle
Hole Plug



RD-152
Door Heater Wire
(per ft.) (Specify Door O.D.-Specify Lt/Nt)



F-108
Frame Heater
(per ft.) (LT/NT)

HOLD OPEN INSTRUCTIONS

(SEE DRAWING #3 AND #4)

1. Insert rectangular nut provided, into box housing on frame as Shown.

2. Mount New Hold Open as shown with shoulder screw provided.

3. Thin metal slide (Insert) to frame box housing.

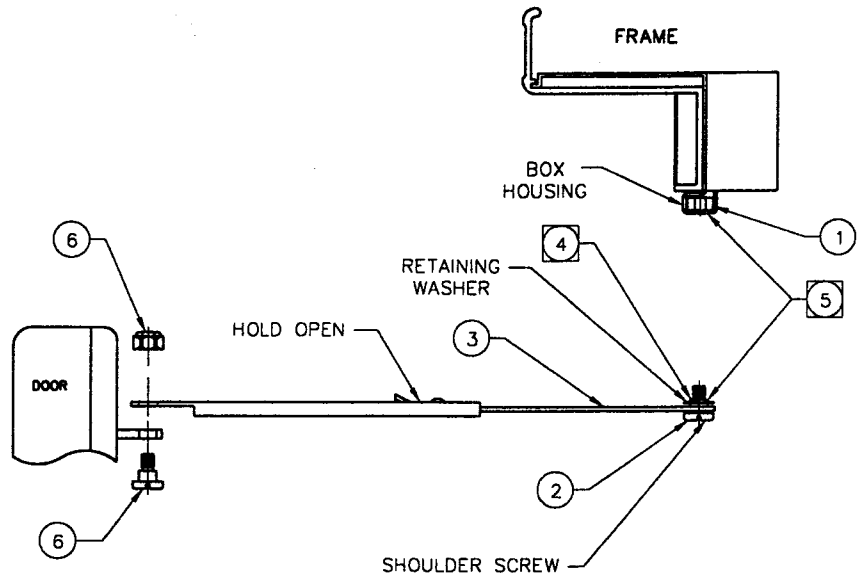
4. Remove retaining washer prior to installation of shoulder screw.

5 Screw shoulder must go thru box housing clearance hole for proper seating on nut and full thread engagement.

6 Screw shoulder must go thru clearance hole on door bracket and hold open, tighten nut and shoulder screw

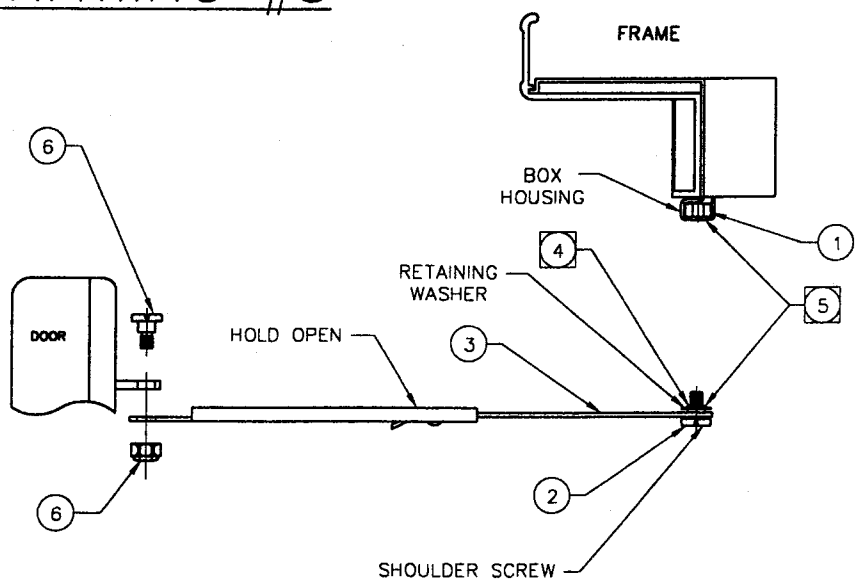
DO NOT OVER TIGHTEN SCREW (HAND TIGHTEN WITH HAND DRIVER ONLY).

NEW SPRING LOCK HOLD OPEN, RETROFITABLE WITH O-RING TYPE HOLD OPEN



NEW HOLD OPEN (SPRING LOCK)
USED ON MODELS: 100R,2100

DRAWING #3



NEW HOLD OPEN (SPRING LOCK)
USED ON MODELS: 101

DRAWING #4

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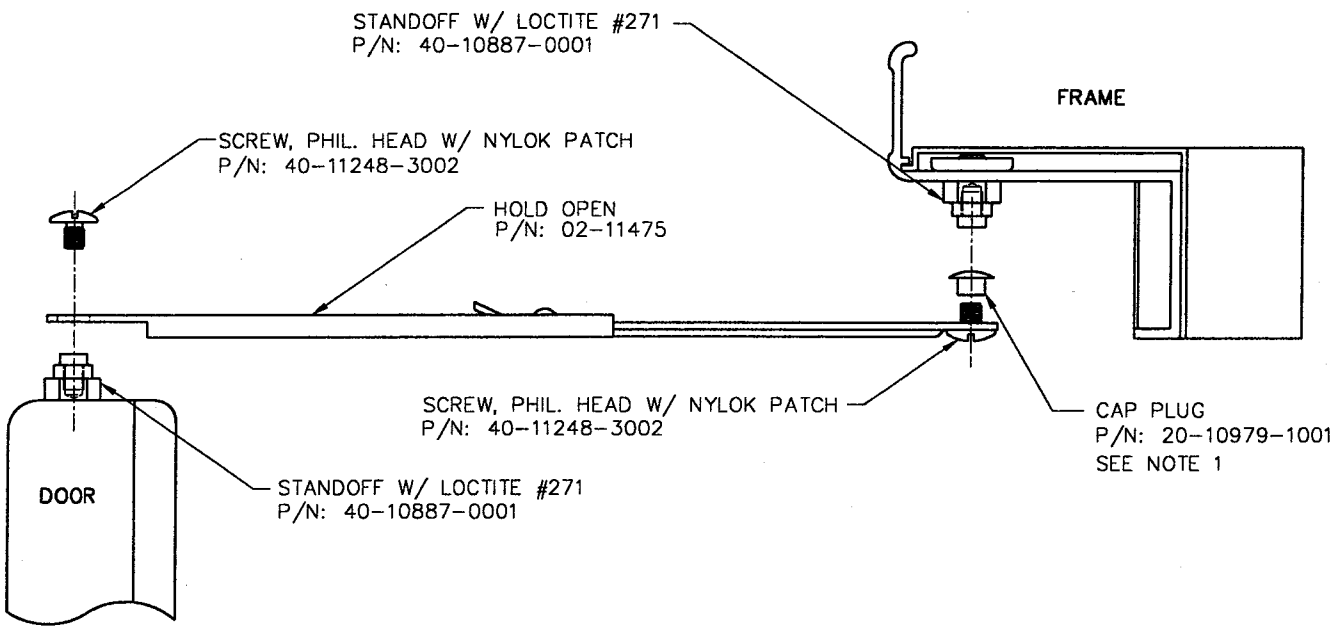
NEW SPRING LOCK HOLD OPEN WITH SURFACE MOUNT APPLICATION

USED ON MODELS: 101, 103 & 2100



NEW HOLD OPEN (SPRING LOCK)

NOTES: UNLESS OTHERWISE SPECIFIED

1. REMOVE CAP PLUG (DISCARD) PRIOR TO INSTALLATION OF SCREW.
2. STANDOFF INSTALLATION TORQUE: 115±5 IN/LBS.

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