



## **SECTION 9 - DOOR OPERATOR**

For installing the G.A.L. door operator to be driven by the M.C.E. Controller, refer to M.C.E.'s Controller job prints, page 3x, which shows the controller terminal labels to which you should make these connections.

Since the MOM and MOH door operators require more field adjustments than the MOD operator, see the last two pages of the M.C.E. Controller Job prints for door adjustments and diode installation. For convenience of reference, the M.C.E. Controller connections to these operators are again shown.

### **FOR ADDITIONAL INSTALLATION AND ADJUSTMENT DETAILS, ALSO SEE:**

- G.A.L. DRAWING L5836-H FOR THE MOD OPERATOR.
- G.A.L. DRAWING S7587-1 FOR THE MOM AND MOH OPERATORS.
- SEE FOLLOWING DOOR LINKAGE ADJUSTMENTS.

### **DOOR OPERATOR LINKAGE ADJUSTMENTS**

1. A steel tape, plumb bob, and 12" tri-square are required when adjusting the mechanical linkage.
2. Turn on the power and the main power disconnect. Position the car where it is easy to work on the operator.
3. Determine that the center of the door operator wheel is the proper distance from the edge of the daylight opening. If it is much over 1/8" off its dimension, modifications may be necessary to the door operator arm measurement. Measurements D, E and F of the G.A.L. print are fixed measurements and are given just to insure that you have the right operator for that door opening. Dimension X and Z are the ones that are more usually missed by the field constructors. For proper operation of the retractable clutch and safety edge, all measurement should be within 1/16".
4. Check the tension of the door operator chain at this, time. It should be quite snug, but not tight enough to cause undue friction. The chain will loosen very slightly with operation. Adjust the doorstop roller so that the rubber astragal does not hit the strike jamb, but clears by about 1/8". Adjust the cam on the retractable clutch is fully retracted. Premature retracting drops the hall doors too soon and may not close them against resistance.
5. Adjust the safety edge next. Loosen the clamp screw on the retracting rod to allow the edge to fall freely. With the door in about the midway position. Loosen the two cap screws that hold the safety edge switch bracket. The upper cap screw is in a slotted hole. Adjust the bracket position so that with the switch fully against its backstop, the safety edge is retracted fully into its rubber. If desire able to be able to operate the safety edge with the door fully open, allow about 1/8" between the bumper and the safety edge arm. When this adjustment is satisfactory, tighten the cap screws on the safety edge switch bracket.

6.



7. The little adjustable roller on the door operator's arm controls the lifting of the safety edge. The closer this roller is to the leading edge of the door, the later the safety edge retracts. Make a preliminary setting of this roller and with the door fully closed, pull the safety edge rod through its clamp and lock it. Check the edge operation to be sure that the edge retracts without striking the strike jamb, or the other edge in the case of center parting doors. The easiest way to adjust the edge retraction on door open is to loosen the cap screws on the cam that lifts the edge with door open. Only loosen them enough to allow the cam to move with considerable pressure. Set the cam in the position that will lift the edge earliest and open the door fully. The edge will retract fully and then force the cam to the proper position by means of the loosened cap screw. Close the door slightly and lock the cap screws.
8. The door gate contact should be adjusted so that it makes contact when the door has less than 2" of daylight opening. The roller on the door hanger handle should force the contact open as the door is opened.
9. Adjust the light ray safety putting the SIDABLE switch in its "ON" position away from the door. The small interrupted beam indicator red light may illuminate, unless the beam is already made up (check by blocking beam with the hand). If the beam is already made up, be sure to check alignment for full door travel, moving the doors by hand. The indicator light should remain completely out for the entire door travel. If alignment is not good, the intensity of the indicator will change with the amount of miss-alignment. The unit will operate even though the light is not completely out, but it may be marginal. If necessary, adjust the position of (or bend) the brackets to achieve a condition where the indicator light remains out. In most cases it will not be necessary to align the units, if care is taken during counting and measuring.
10. Please see Figure 6-1 for door operator CAM adjustment and Figure 6-2 for door operator control circuit.

**G.A.L. Manufacturing Corp.**

50 East 153rd Street  
Bronx, N.Y. 10451  
Phone (718) 292-9000  
Fax (718) 292-2034

Date  
Order Number  
P.O. Number  
Job Number  
Job Name

01/30/01

**CONTRACTOR**

AMLIPT INTERNATIONAL, INC.  
C/O ROMERO & McNALLY CO.  
9475 NICOLA TESLA COURT

SAN DIEGO, CA 92154  
USA

Kindly be advised that our equipment is being supplied to suit the following:

**Car Number 1 - Front Opening**

|                       |                    |                      |                      |
|-----------------------|--------------------|----------------------|----------------------|
| Door Opening 36 x 84  | Hand Right         | Car S/S              | Hatch S/S            |
| Overall Cab Height 96 | Cab Door Height 84 | Hatch Door Height 84 | Number of Landings 2 |

**Car Number 1 - Rear/Side Opening**

|                       |                    |                      |                      |
|-----------------------|--------------------|----------------------|----------------------|
| Door Opening 36 x 84  | Hand Left          | Car S/S              | Hatch S/S            |
| Overall Cab Height 96 | Cab Door Height 84 | Hatch Door Height 84 | Number of Landings 1 |

**CAR DOOR MFR. - none**

Car Door Drilling Per Drawing(s) below.

Car No. - 1 F, 1 R/S

Drawing No. - 8231

Notes

DOOR PROTECTION BY OTHERS

**HATCH DOOR MFR. - none**

Hatch Door Drilling Per Drawing(s) below.

Car No. - 1 F, 1 R/S

Drawing No. - 8241

Drawing(s) below for Interlock(s).

None

**CONTROLLER MFR. - none**

Wiring Diagram(s) below indicates the necessary relay contacts and resistors required for Power Door Operator/Motorized Retiring Cam.

Car No. - 1 F, 1 R/S

Drawing No. - L-5836 MODL

Enclosed ( 2 ) sets of drawings

Very truly yours,  
G.A.L. MANUFACTURING CORP.  
Engineering Department

**G.A.L. Manufacturing Corp.**

50 East 153rd Street  
Bronx, N.Y. 10451  
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Date  
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01/30/01

**CONTRACTOR**

AMLIFT INTERNATIONAL, INC.  
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9475 NICOLA TESLA COURT

SAN DIEGO, CA 92154  
USA

Please forward the following to the CAR DOOR MFR.

Kindly be advised that our equipment is being supplied to suit the following:

**Car Number 1 - Front Opening**

|                       |                    |                      |                      |
|-----------------------|--------------------|----------------------|----------------------|
| Door Opening 36 x 84  | Hand Right         | Car S/S              | Hatch S/S            |
| Overall Cab Height 96 | Cab Door Height 84 | Hatch Door Height 84 | Number of Landings 2 |

**Car Number 1 - Rear/Side Opening**

|                       |                    |                      |                      |
|-----------------------|--------------------|----------------------|----------------------|
| Door Opening 36 x 84  | Hand Left          | Car S/S              | Hatch S/S            |
| Overall Cab Height 96 | Cab Door Height 84 | Hatch Door Height 84 | Number of Landings 1 |

**CAR DOOR MFR. - none**

Car Door Drilling Per Drawing(s) below.

Car No. - 1 F, 1 R/S

Drawing No. - 8231

Notes

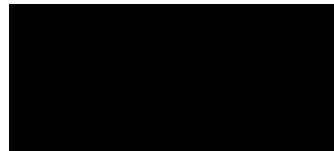
DOOR PROTECTION BY OTHERS

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Engineering Department

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Fax (718) 292-2034

Date  
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P.O. Number  
Job Number  
Job Name

**CONTRACTOR**

AMLIFT INTERNATIONAL, INC.  
C/O ROMERO & McNALLY CO.  
9475 NICOLA TESLA COURT

SAN DIEGO, CA 92154  
USA

Please forward the following to the HATCH DOOR MFR.

Kindly be advised that our equipment is being supplied to suit the following:

**Car Number 1 - Front Opening**

|                       |                    |                      |                      |
|-----------------------|--------------------|----------------------|----------------------|
| Door Opening 36 x 84  | Hand Right         | Car S/S              | Hatch S/S            |
| Overall Cab Height 96 | Cab Door Height 84 | Hatch Door Height 84 | Number of Landings 2 |

**Car Number 1 - Rear/Side Opening**

|                       |                    |                      |                      |
|-----------------------|--------------------|----------------------|----------------------|
| Door Opening 36 x 84  | Hand Left          | Car S/S              | Hatch S/S            |
| Overall Cab Height 96 | Cab Door Height 84 | Hatch Door Height 84 | Number of Landings 1 |

**HATCH DOOR MFR. - none**

Hatch Door Drilling Per Drawing(s) below.

Car No. - 1 F, 1 R/S

Drawing No. - 8241

Drawing(s) below for Interlock(s).

None

Very truly yours,  
G.A.L. MANUFACTURING CORP.

Engineering Department

**G.A.L. Manufacturing Corp.**

50 East 153rd Street  
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Date  
Order Number  
P.O. Number  
Job Number  
Job Name

**CONTRACTOR**

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C/O ROMERO & McNALLY CO.  
9475 NICOLA TESLA COURT

SAN DIEGO, CA 92154  
USA

Please forward the following to the CONTROLLER MFR.

Kindly be advised that our equipment is being supplied to suit the following:

**Car Number 1 - Front Opening**

|                       |                    |                      |                      |
|-----------------------|--------------------|----------------------|----------------------|
| Door Opening 36 x 84  | Hand Right         | Car S/S              | Hatch S/S            |
| Overall Cab Height 96 | Cab Door Height 84 | Hatch Door Height 84 | Number of Landings 2 |

**Car Number 1 - Rear/Side Opening**

|                       |                    |                      |                      |
|-----------------------|--------------------|----------------------|----------------------|
| Door Opening 36 x 84  | Hand Left          | Car S/S              | Hatch S/S            |
| Overall Cab Height 96 | Cab Door Height 84 | Hatch Door Height 84 | Number of Landings 1 |

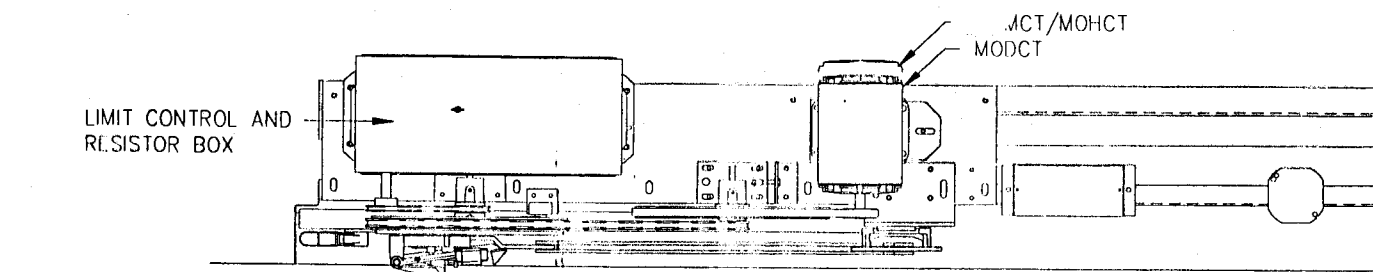
**CONTROLLER MFR. - none**

Wiring Diagram(s) below indicates the necessary relay contacts and resistors required for Power Door Operator/Motorized Retiring Cam.

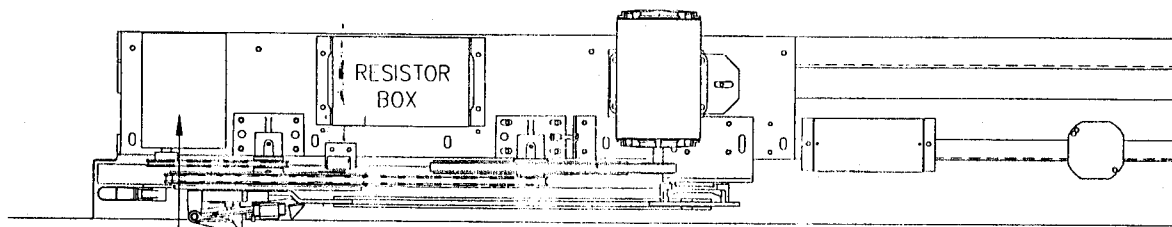
Car No. - 1 F, 1 R/S

Drawing No. - L-5836 MODL

Very truly yours,  
G.A.L. MANUFACTURING CORP.  
[Redacted]  
Engineering Department

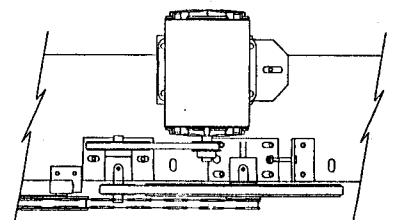


MODCT/MOMCT/MOHCT  
MOVFR (SIMILAR)

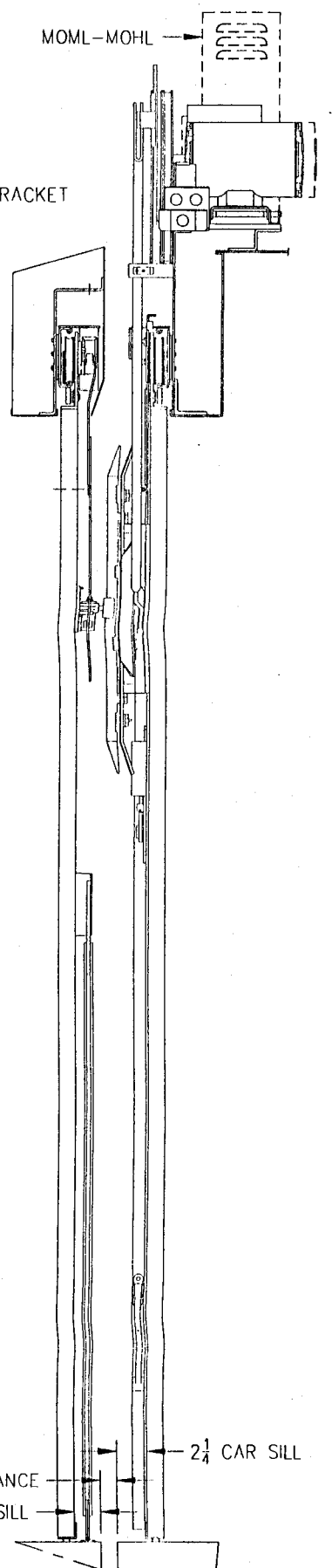
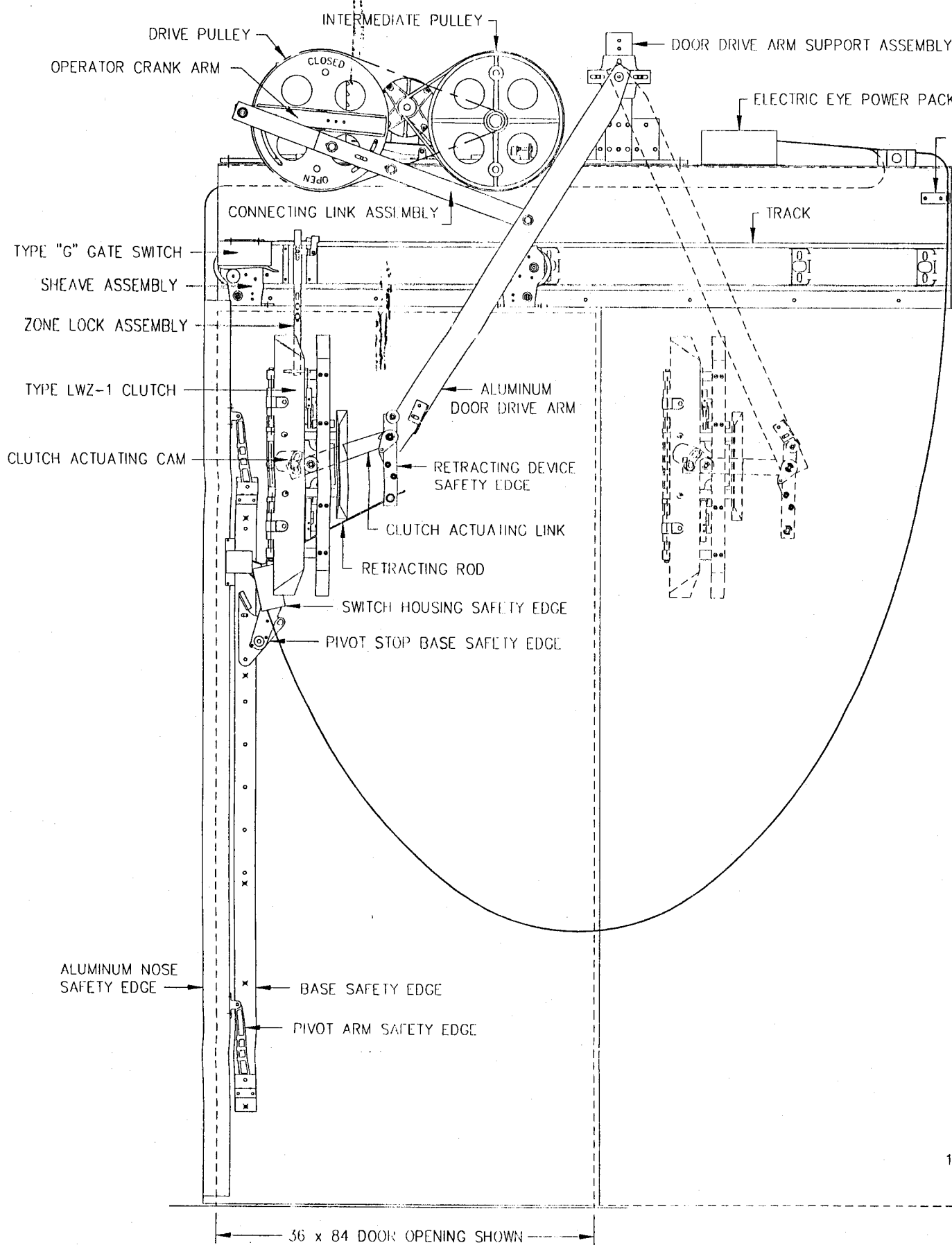
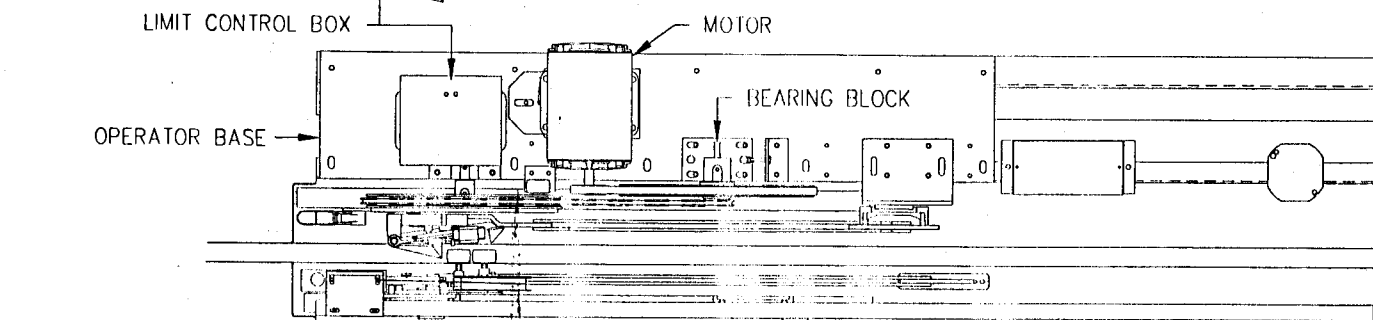


MOML/MOHL

43-48 D.O. REDUCTION UNIT IS  
SUPPLIED ON MOMCT, MOHCT,  
MOML, AND MOHL OPERATORS



MODL  
(SHOWN)



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CERTAIN EQUIPMENT COVERED UNDER:

| U.S. PAT. | U.K. PAT. | CAN. PAT. |
|-----------|-----------|-----------|
| 4364454   | 2085840   | 1168464   |
| 4423799   | 2112352   | 1179702   |

- NOTE -  
SIGHT GUARD WITH DOUBLE BEAM ELECTRIC EYES  
NOT SHOWN FOR SIMPLICITY.  
WHEN ORDERING REFER TO CATALOG PART NUMBER.  
FOR CAR DOOR DRILLINGS REFER TO DWG. 8231.  
FOR OPERATOR LAYOUT REFER TO DWG. DATA21.

LEFT HAND SHOWN  
RIGHT HAND OPPOSITE

| REV | DESCRIPTION             | DATE     | ECN |
|-----|-------------------------|----------|-----|
| B   | MODCT/MOMCT/MOHCT ADDED | 12-12-95 |     |
| A   | MOCT OPERATOR ADDED     | 9-12-95  |     |



G.A.L. MANUFACTURING CORP.  
50 E. 153rd STREET  
BRONX, N.Y. 10451

SINGLE SPEED CAR ASSEMBLY  
TYPE "A" HANGER WITH RAL SAFETY EDGE 22-48 D.O.

|                     |             |
|---------------------|-------------|
| DRAWN BY GAVIRIA A. | DATE 9-7-95 |
| ENGINEER VARON J.   | SHEET OF    |
| SCALE 5/64          | SIZE        |
| PART No.            | RE          |
| DOCUMENT No. 8221   | B           |

|     |  |          |              |
|-----|--|----------|--------------|
| REV |  | PART No. | DOCUMENT No. |
| B   |  | SCALE    | 5/64         |
|     |  | ENGINEER | VARON J.     |
|     |  | SHEET    | OF           |
|     |  | DATE     | 9-7-95       |
|     |  | DRAWN BY | GAVIRIA A.   |

G.A.L. MANUFACTURING CORP.  
50 E. 15th STREET  
BRONX, N.Y. 10451

G.A.L. "A" HANGER WITH RAL SAFETY EDGE 22-48 D.O.

| REV | DESCRIPTION            | DATE     | ECN |
|-----|------------------------|----------|-----|
| A   | MOCT OPERATOR ADDED    | 9-12-95  |     |
| B   | MODCT/MOMCT/MOHT ADDED | 12-12-96 |     |

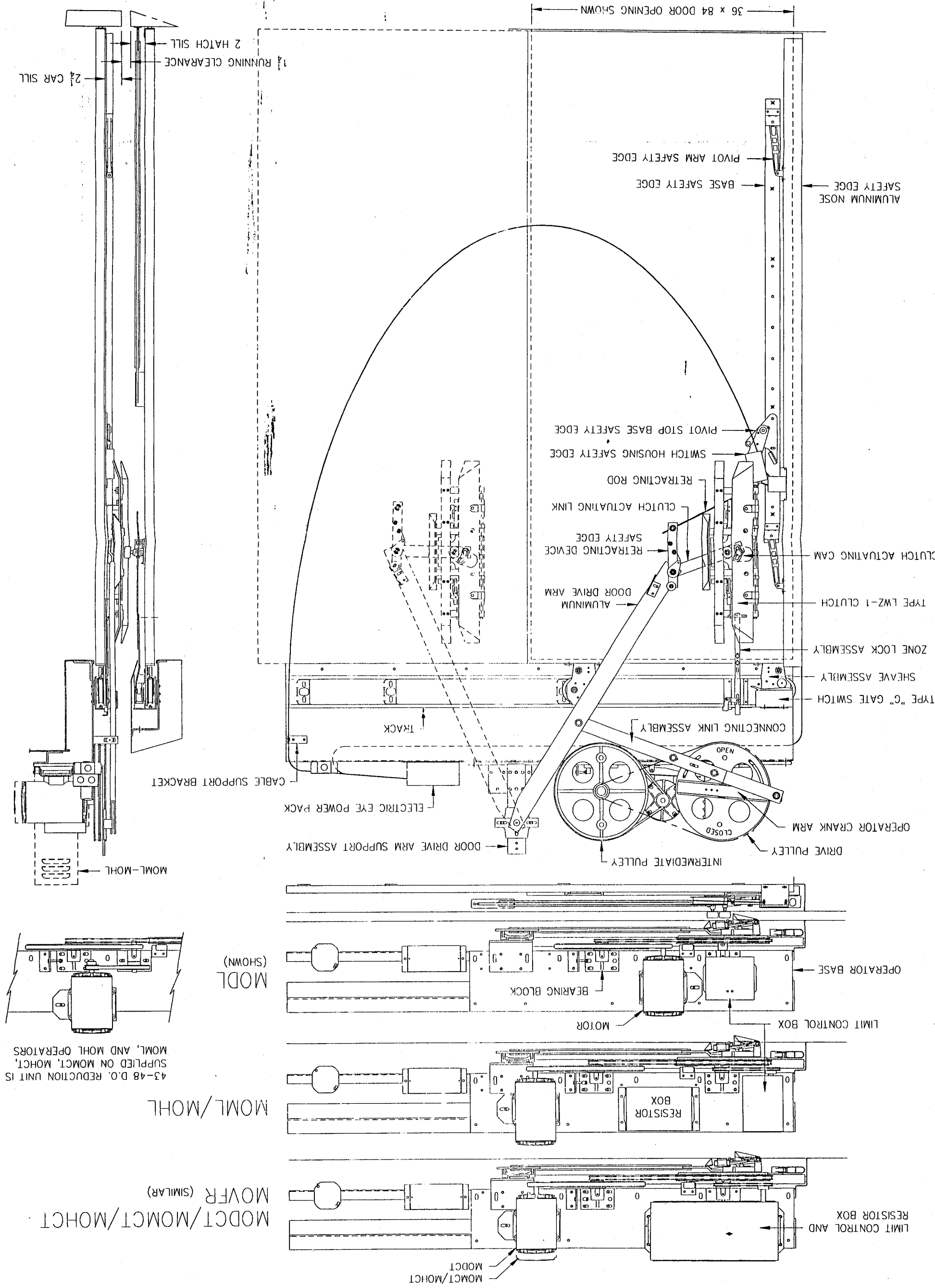
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RIGHT HAND OPPOSITE

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CERTAIN EQUIPMENT COVERED UNDER:  
U.S. PAT. 4,364,454  
U.K. PAT. 2,085,840  
CAN. PAT. 1,168,464  
11,797,022

NOTE -  
SIGHT GUARD WITH DOUBLE BEAM ELECTRIC EYES  
NOT SHOWN FOR SIMPLICITY.  
WHEN ORDERING REFER TO CATALOG PART NUMBER.  
FOR CAR DOOR DRILLINGS REFER TO DWG. 8231.  
FOR OPERATOR LAYOUT REFER TO DWG. DATA21.

0-9hscm2 + 1111111111



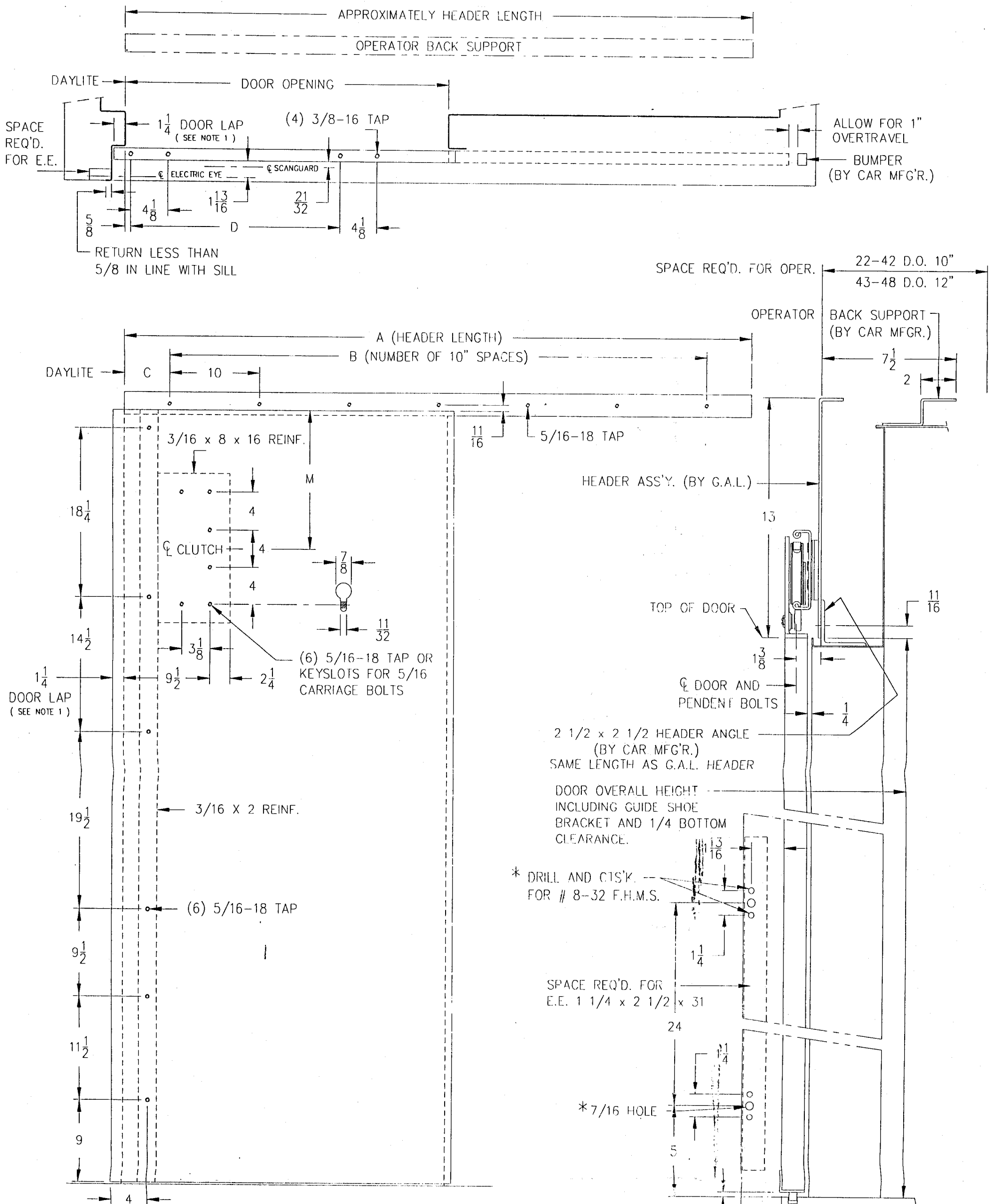
43-48 D.O. REDUCTION UNIT IS  
SUPPLIED ON MOMCT, MOHT,  
MOML, AND MOHL OPERATORS

MOML/MOHL

MODCT/MOMCT/MOHT  
MOVR (SIMILAR)

b.98





# NOTES :

- CLUTCH, PENDANT BOLT AND HEADER HANGER SUPPORT DRILLINGS LOCATED FROM DAYLITE, REGARDLESS OF DOOR LAP SIZE. G.A.L. PREFERS 1 1/4 LAP AT THE LEADING EDGE ONLY.
- DRAWINGS ARE BASED ON EQUAL CAR AND HOISTWAY DOOR HEIGHTS  $\pm 1$  INCH. IF DOOR HEIGHTS DIFFER NOTIFY G.A.L. AND HOISTWAY DOOR MFG'R.

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|            |    |   |   |    |                       |
|------------|----|---|---|----|-----------------------|
| 46-47-48   | 94 | 9 | 2 | 38 | 23                    |
| 43-44-45   | 88 | 8 | 4 | 35 | (45) 23<br>(43-44) 19 |
| 40-41-42   | 82 | 7 | 6 | 32 | 19                    |
| 37-38-39   | 76 | 7 | 3 | 29 | 15                    |
| 34-35-36   | 70 | 6 | 5 | 26 | 15                    |
| 31-32-33   | 64 | 6 | 2 | 23 | 15                    |
| 28-29-30   | 58 | 5 | 4 | 20 | (30) 15<br>(28-29) 11 |
| 25-26-27   | 52 | 4 | 6 | 17 | 11                    |
| 22-23-24   | 46 | 4 | 3 | 14 | 11                    |
| DOOR OPNG. | A  | B | C | D  | M                     |

DIMENSION TABLE

AS SHOWN L.H. \_\_\_\_\_  
SYMMETRICALLY \_\_\_\_\_  
OPPOSITE R.H. \_\_\_\_\_  
DOOR HEIGHT \_\_\_\_\_  
JAMB HEIGHT \_\_\_\_\_



G.A.L. MANUFACTURING CORP.  
50 E. 153rd STREET BRONX, N.Y. 10451

CAR REINFORCEMENT AND DRILLINGS SINGLE SPEED  
TYPE "A" HANGER W/RAL SAFETY EDGE AND ELECTRIC EYES OR SCANGUARD 22-48 D.O.

SCALE 3/32 DATE 10-31-94  
DWG. BY \_\_\_\_\_  
REV. No. \_\_\_\_\_

8231

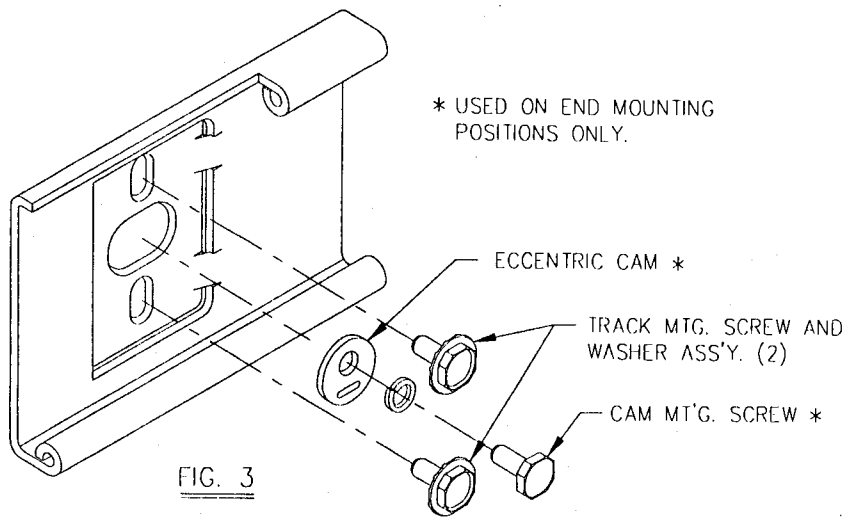


FIG. 3

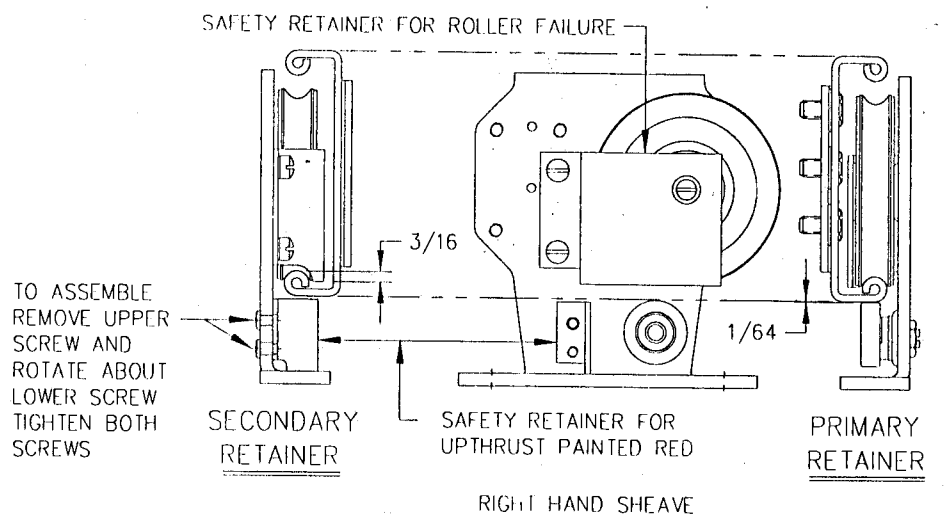
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- DETAIL "A" -



1/4-20 x 1 1/8 LONG  
TO MOUNT MO INTERLOCK  
AND REEL CLOSER ANCHOR

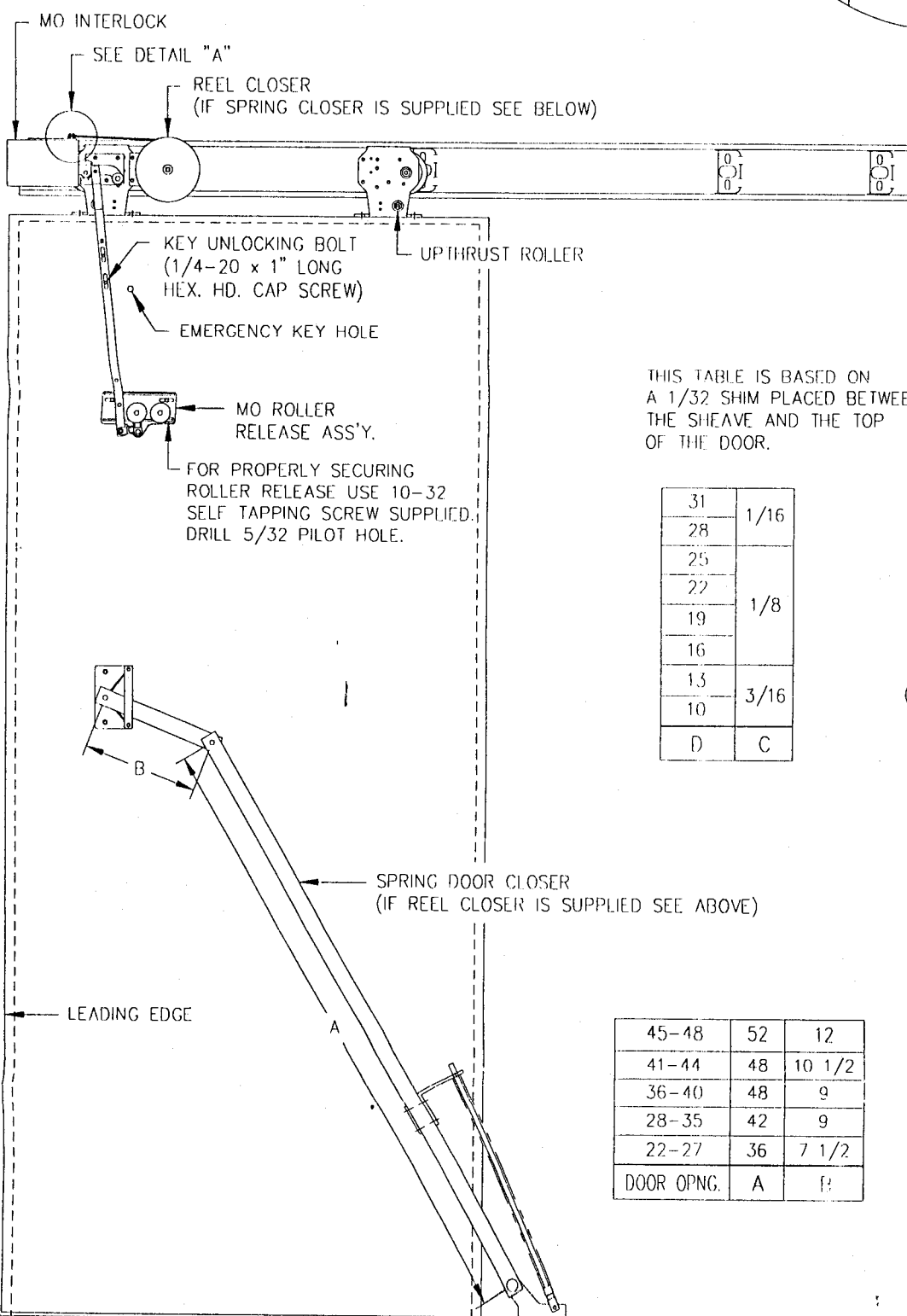
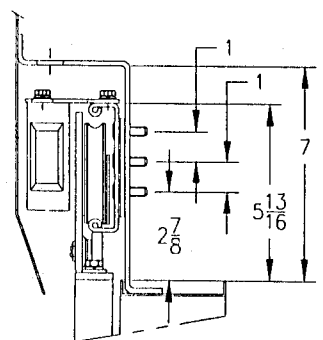
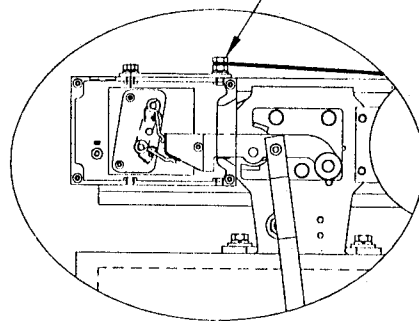


FIG. 1

THIS TABLE IS BASED ON  
A 1/32 SHIM PLACED BETWEEN  
THE SHEAVE AND THE TOP  
OF THE DOOR.

|    |      |
|----|------|
| 31 | 1/16 |
| 28 |      |
| 25 |      |
| 22 |      |
| 19 | 1/8  |
| 16 |      |
| 13 |      |
| 10 | 3/16 |
| D  | C    |

|            |    |        |
|------------|----|--------|
| 45-48      | 52 | 12     |
| 41-44      | 48 | 10 1/2 |
| 36-40      | 48 | 9      |
| 28-35      | 42 | 9      |
| 22-27      | 36 | 7 1/2  |
| DOOR OPNG. | A  | B      |

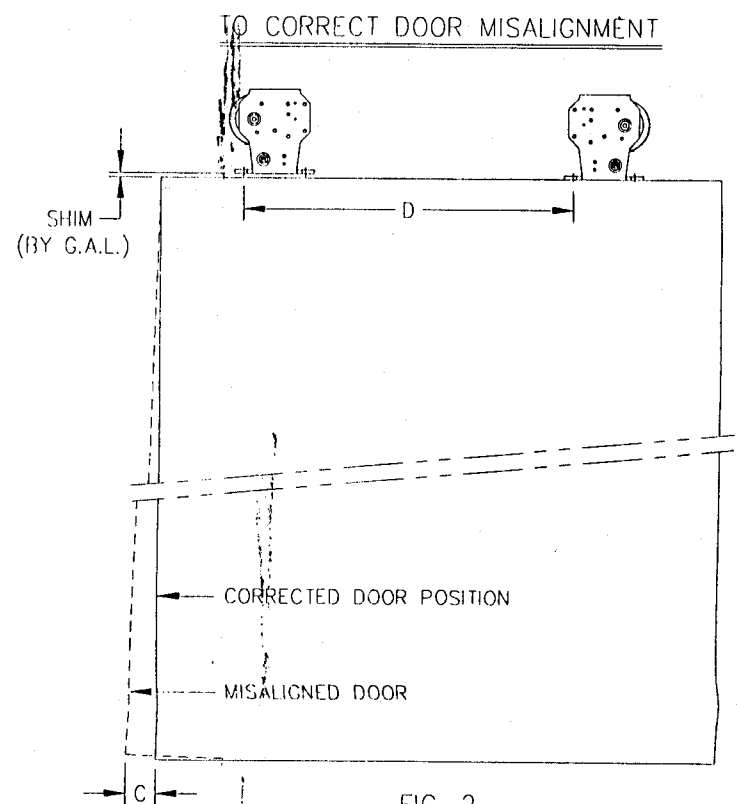


FIG. 2

INSTALLATION INSTRUCTIONS

- 1.- REMOVE PAINT FROM TRACK SURFACE WHERE THE HANGER ROLLER WILL RUN.
- 2.- MOUNT HANGERS TO DOOR WITH UPTHURST ROLLERS IN LOWEST POSITION.
- 3.- MOUNT TRACK TO HEADER AND SET ECCENTRIC CAM SO THAT THE TRACK IS IN THE LOWEST POSITION. HAND TIGHTEN ALL SCREWS. FIG. 3
- 4.- HANG DOOR ON TRACK AND ROTATE ECCENTRIC CAM TO GIVE DOOR REQUIRED SILL CLEARANCE. ADJUST UPTHURST ROLLERS TO CLEAR TRACK BY APPROXIMATELY 1/64 INCH.
- 5.- CHECK DOOR MISALIGNMENT IN OPENED AND CLOSED POSITION AND CORRECT IF REQUIRED. FIG. 2
- 6.- IF REQUIRED, READJUST THE ECCENTRIC CAM TO GIVE DOOR REQUIRED SILL CLEARANCE.
- 7.- TIGHTEN ALL SCREWS.

(36 x 84 DOOR OPNG. SHOWN)



G.A.L. MANUFACTURING CORP.  
50 E. 153rd STREET BRONX, N.Y. 10451

SINGLE SPEED HATCH DOOR ASSEMBLY  
TYPE "A" HANGER WITH REEL OR SPRING DOOR CLOSER 22-48 D.O.

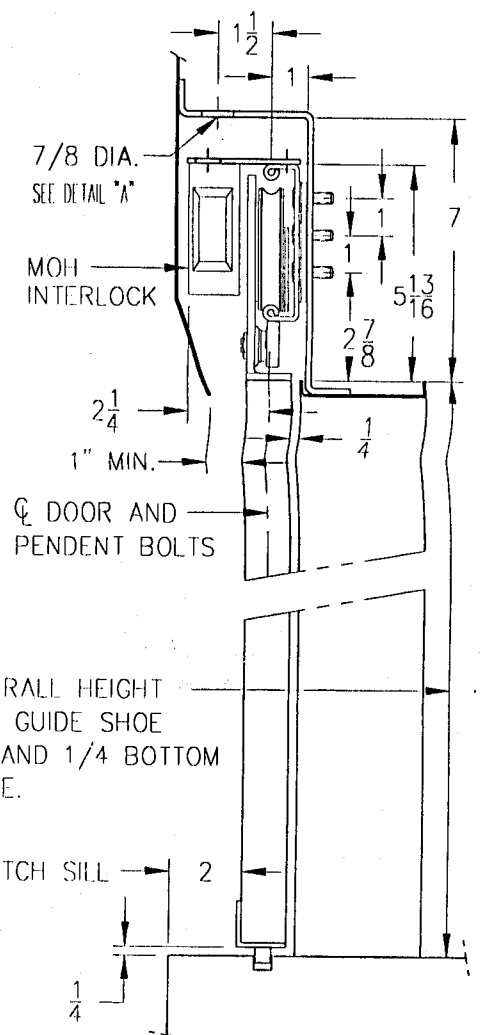
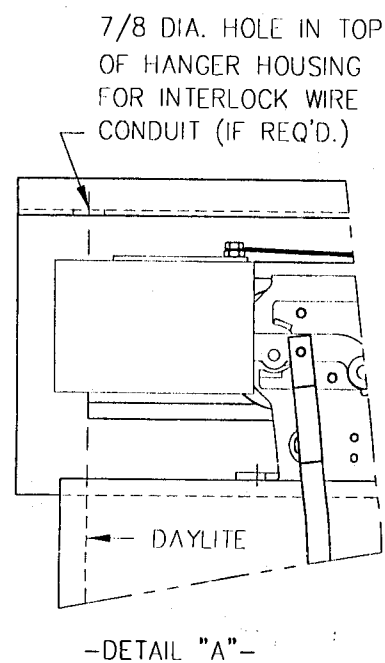
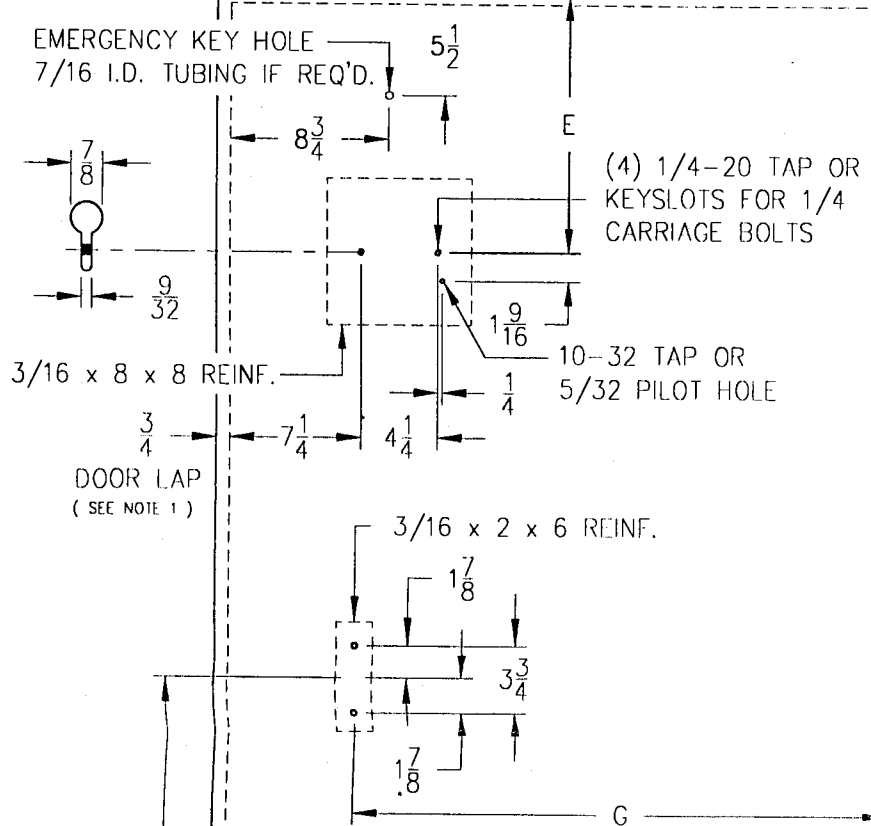
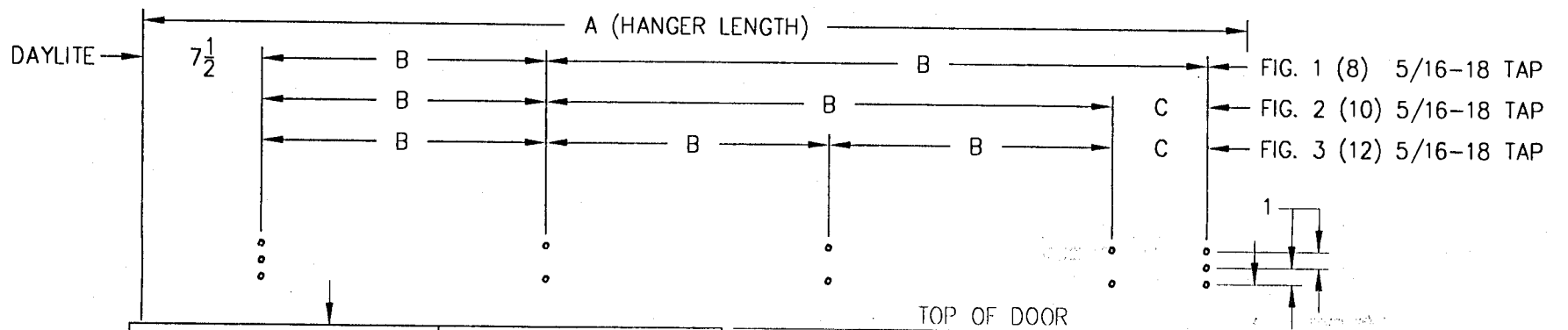
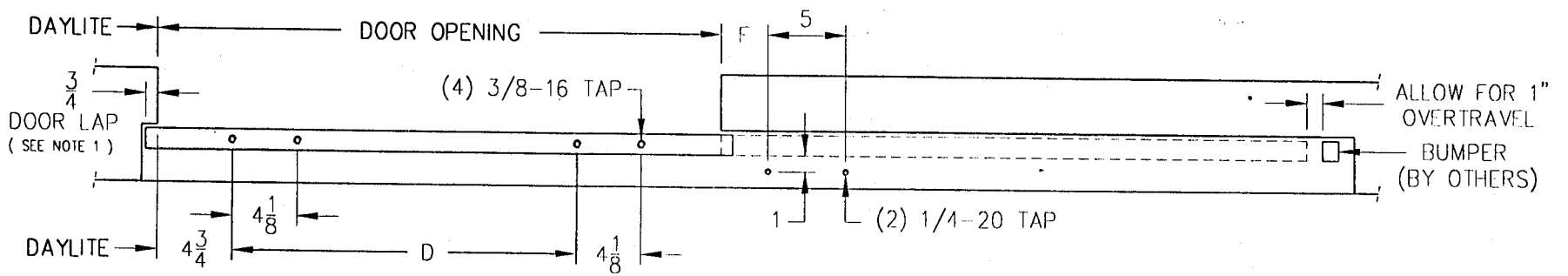
SCALE 5/64 DATE 11-3-94

DWG. BY

CHK. BY

| No. | REVISION | DATE | CHK. |
|-----|----------|------|------|
|     |          |      |      |
|     |          |      |      |
|     |          |      |      |
|     |          |      |      |

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NOTES :

- 1.- INTERLOCK ROLLER RELEASE, PENDANT BOLT, EMERGENCY KEY HOLE AND HANGER DRILLINGS LOCATED FROM DAYLITE, REGARDLESS OF DOOR LAP SIZE. G.A.L. PREFERRED 3/4 LAP.
- 2.- DRAWINGS ARE BASED ON EQUAL CAR AND HOISTWAY DOOR HEIGHTS ± 1 INCH. IF DOOR HEIGHTS DIFFER NOTIFY G.A.L. AND HOISTWAY DOOR MFG'R.

|                 |    |             |    |    |                       |            |   |        |        |
|-----------------|----|-------------|----|----|-----------------------|------------|---|--------|--------|
| 46-47-48        | 94 | 24 (FIG. 3) | 12 | 34 | 22                    | 45-48      | 3 | 36 1/2 | 50 1/2 |
| 43-44-45        | 88 | 24 (FIG. 2) | 24 | 31 | (45) 22<br>(43-44) 18 | 41-44      | 3 | 33 1/2 | 46 1/2 |
| 40-41-42        | 82 | 24 (FIG. 2) | 24 | 28 | 18                    | 36-40      | 3 | 29 1/2 | 47 1/2 |
| 37-38-39        | 76 | 24 (FIG. 2) | 12 | 25 | 14                    | 28-35      | 3 | 27 1/2 | 42     |
| 34-35-36        | 70 | 24 (FIG. 2) | 12 | 22 | 14                    | 27         | 2 | 24 1/2 | 36     |
| 31-32-33        | 64 | 24 (FIG. 4) | X  | 19 | 14                    | 26         | 3 | 23 1/2 | 36     |
| 28-29-30        | 58 | 24 (FIG. 1) |    | 16 | (30) 14<br>(28-29) 10 | 25         | 4 | 22 1/2 | 36     |
| 25-26-27        | 52 | 18 (FIG. 1) |    | 13 | 10                    | 24         | 5 | 21 1/2 | 36     |
| 22-23-24        | 46 | 18 (FIG. 1) |    | 10 | 10                    | 23         | 6 | 20 1/2 | 36     |
| DOOR OPNG.      | A  | B           | C  | D  | E                     | 22         | 7 | 19 1/2 | 36     |
| DIMENSION TABLE |    |             |    |    |                       | DOOR OPNG. | F | G      | H      |

(36 x 84 D.O. SHOWN)



G.A.L. MANUFACTURING CORP.  
50 E. 153rd STREET BRONX, N.Y. 10451

HATCH REINFORCEMENT AND DRILLINGS SINGLE SPEED  
TYPE "A" HANGER WITH REEL OR SPRING DOOR CLOSER 22-48 D.O.

|          |      |      |          |
|----------|------|------|----------|
| SCALE    | 3/32 | DATE | 11-11-94 |
| DWG. BY  | 8241 |      |          |
| REV. No. |      |      |          |

AS SHOWN R.H. \_\_\_\_\_  
SYMETRICALLY \_\_\_\_\_  
OPPOSITE L.H. \_\_\_\_\_  
DOOR HEIGHT \_\_\_\_\_  
JAMB HEIGHT \_\_\_\_\_

ALL CAMS AND RESISTORS ARE FACTORY ADJUSTED. DO NOT CHANGE THE CAM SETTINGS UNTIL THE RESISTORS HAVE BEEN ADJUSTED FOR INDIVIDUAL JOB CONDITIONS. ALL G.A.L. EQUIPMENT MUST BE INSTALLED, ADJUSTED, TESTED AND MAINTAINED IN COMPLIANCE WITH ALL FEDERAL, STATE AND LOCAL CODES.

**LEGEND -**

CL DOOR CLOSE LIMIT  
OL DOOR OPEN LIMIT  
HSC HIGH SPEED CLOSE LIMIT  
HSD HIGH SPEED OPEN LIMIT  
SDC SLOWDOWN CLOSE LIMIT  
SDO SLOWDOWN OPEN LIMIT

NR NUCCING RELAY  
C CLOSE RELAY  
O OPEN RELAY  
AT ATTENDANT RELAY

ON CONTR BY OTHERS  
ON OPERATOR BY G.A.L.

### RESISTOR TUBES

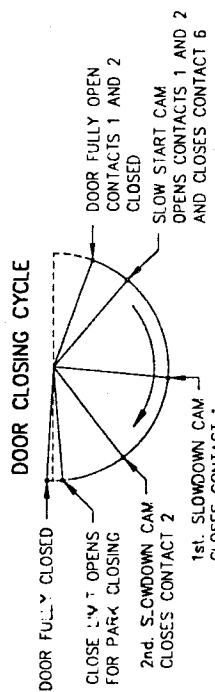
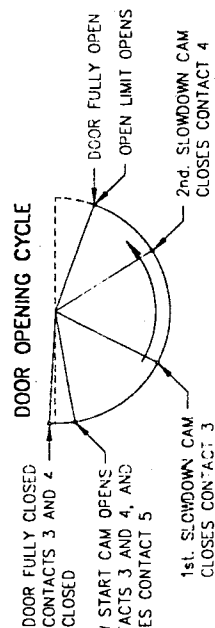
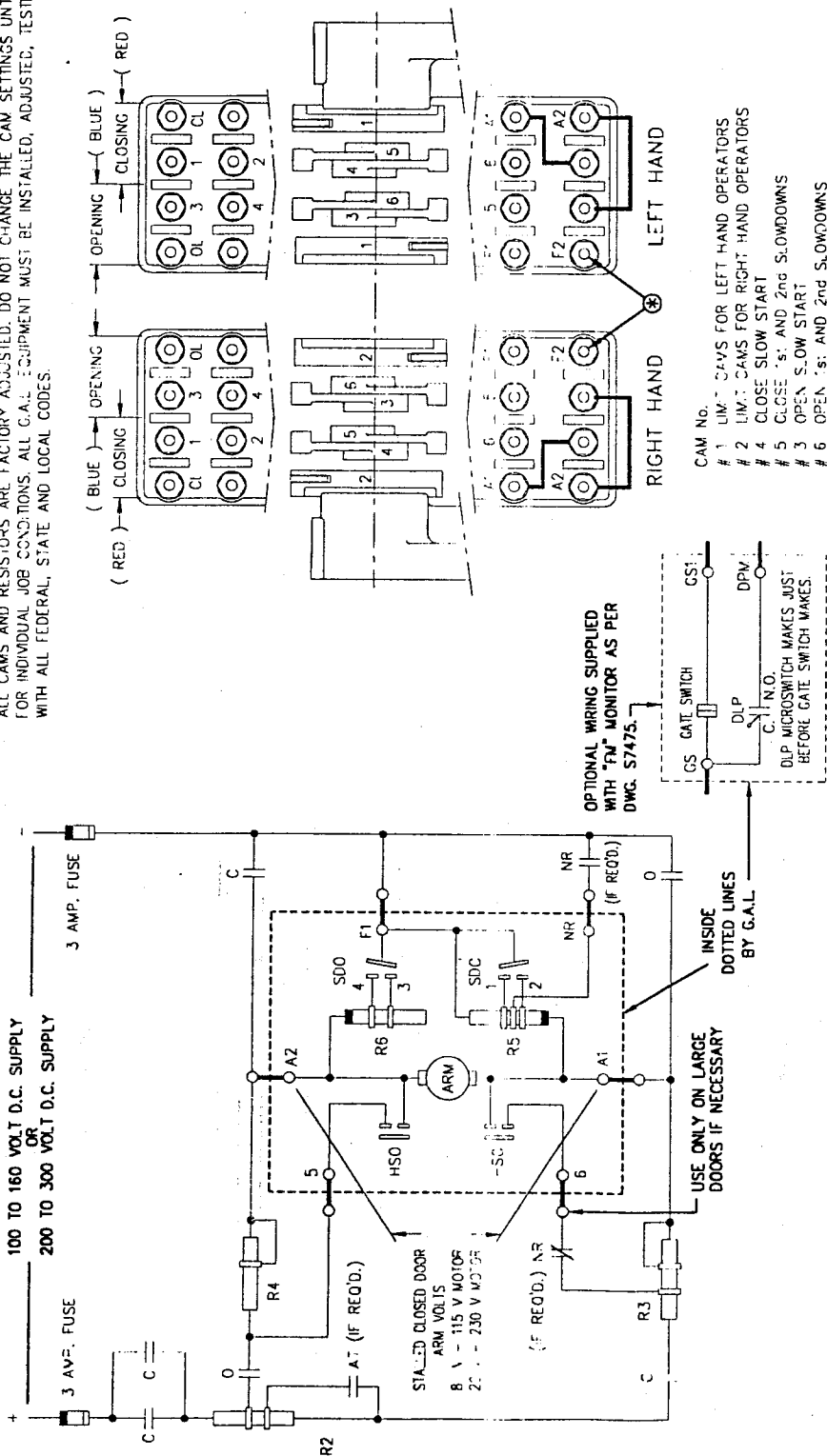
SHADE AREA INDICATES TOP. MOVE BAND TOWARDS TOP TO REDUCE SPEED.

| 115 VOLTS | 230 VOLTS | RESISTOR | WATTS         |
|-----------|-----------|----------|---------------|
| R2        | 50 OHM    | 250 OHM  | 200 BY OTHERS |
| R3        | 50 OHM    | 250 OHM  | 200 BY OTHERS |
| R4        | 50 OHM    | 250 OHM  | 200 BY OTHERS |
| R5        | 100 OHM   | 300 OHM  | 100 BY G.A.L. |
| R6        | 100 OHM   | 300 OHM  | 100 BY G.A.L. |

NOTE:

CLOSE LIMIT, USED FOR PARK CLOSED DOORS, MUST BE BY-PASSED TO KEEP MOTOR ENERGIZED WHILE THE ELEVATOR IS RUNNING.  
THE EMERGENCY STOP SWITCH MUST NOT REMOVE DOOR CLOSING POWER WHILE THE ELEVATOR IS OUTSIDE THE LANDING ZONE.

⊗ - CONNECTION TO F2 NOT REQUIRED.



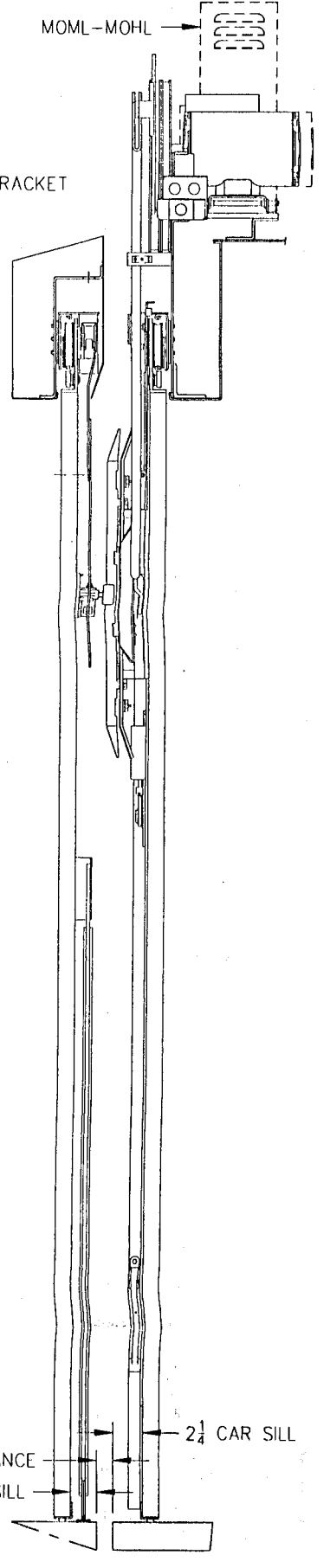
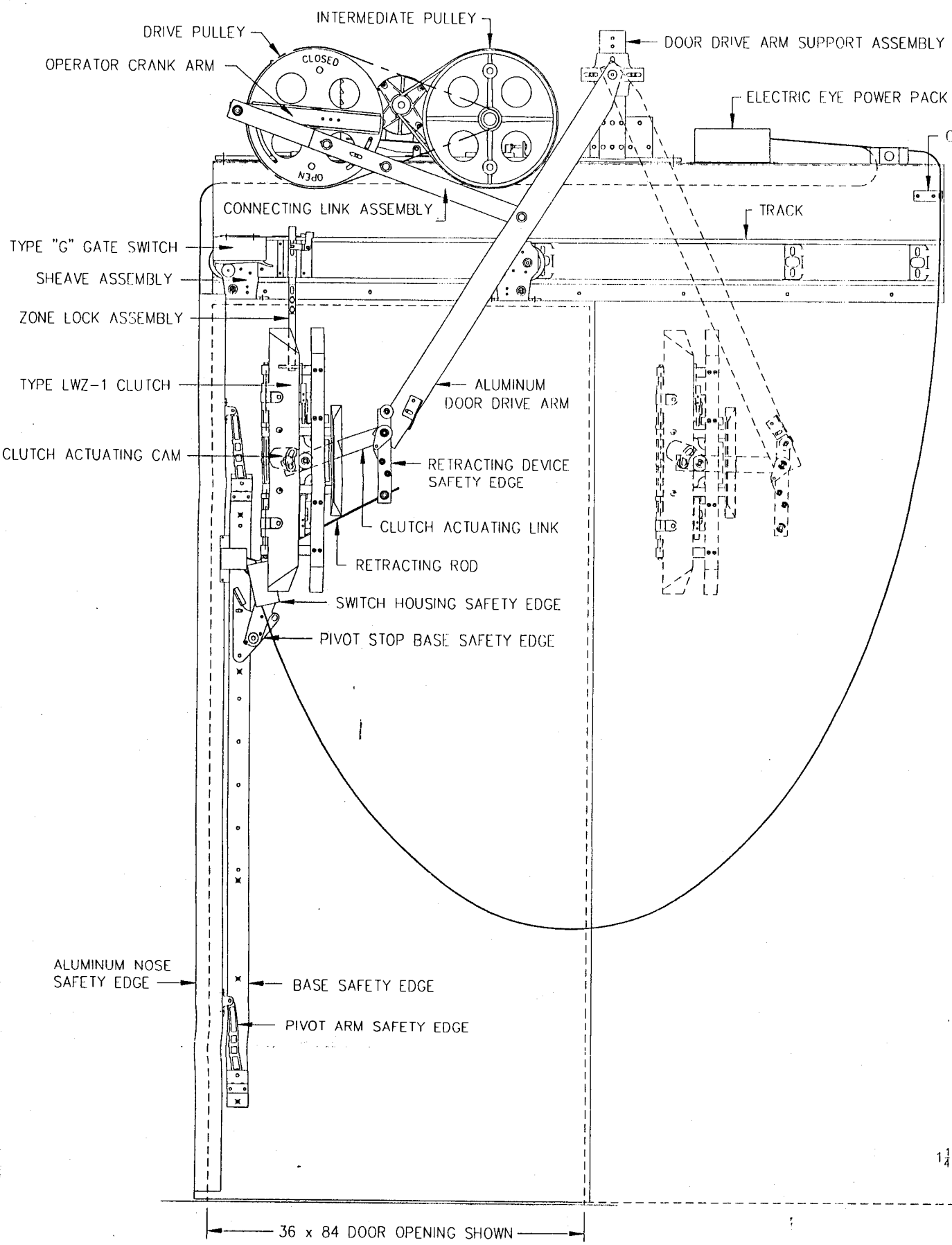
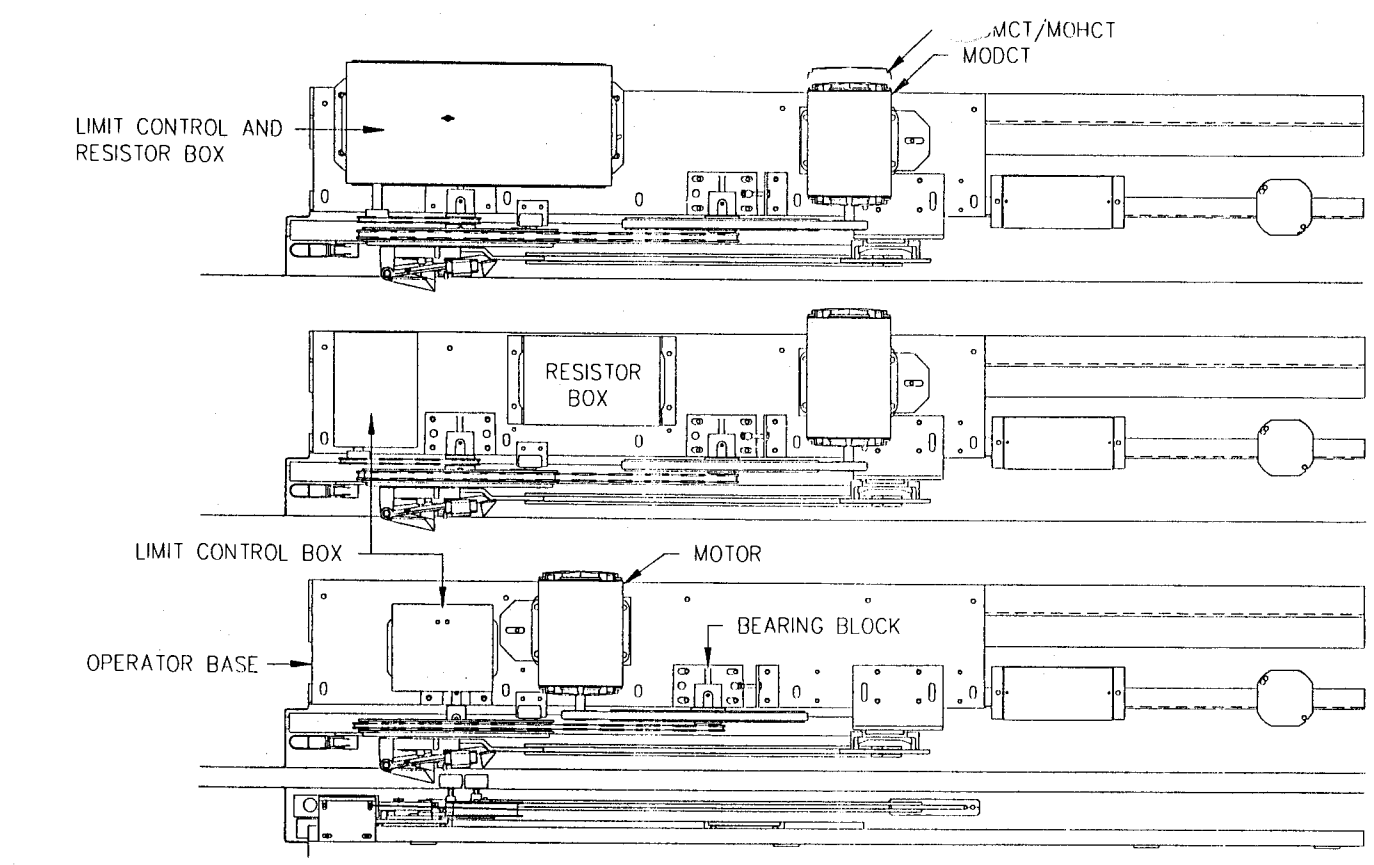
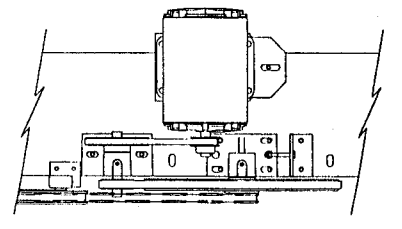
| G.A.L. MANUFACTURING CORP.           |       | DATE 1/27/98                 |   |
|--------------------------------------|-------|------------------------------|---|
| 50 E. 153rd STREET BRONX, N.Y. 10451 |       | ENGINEER [REDACTED] SHEET OF |   |
| G.A.L. MOD PM MOTOR DOOR OPERATOR    |       | SCALE 5/8 SIZE               |   |
| WIRING DIAGRAM AND CAM ADJUSTMENTS   |       | PART No. [REDACTED]          |   |
| REVISION                             |       | DOCUMENT No. L5836           |   |
| No.                                  | DATE  | REV                          | J |
| 4-95                                 | 11-94 |                              |   |
| 6-94                                 | 4-94  |                              |   |
| 5-86                                 | 11-80 |                              |   |
| 5-74                                 | 7-61  |                              |   |
| 7-61                                 |       |                              |   |

MODCT/MOMCT/MOHCT  
MOVFR (SIMILAR)

MOML/MOHL

43-48 D.O. REDUCTION UNIT IS  
SUPPLIED ON MOMCT, MOHCT,  
MOML, AND MOHL OPERATORS

MODL  
(SHOWN)



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CERTAIN EQUIPMENT COVERED UNDER:  
U.S. PAT. U.K. PAT. CAN. PAT.  
4364454 2085840 1168464  
4423799 2112352 1179702

NOTE -  
SIGHT GUARD WITH DOUBLE BEAM ELECTRIC EYES  
NOT SHOWN FOR SIMPLICITY.  
WHEN ORDERING REFER TO CATALOG PART NUMBER.  
FOR CAR DOOR DRILLINGS REFER TO DWG. 8231.  
FOR OPERATOR LAYOUT REFER TO DWG. DATA21.

LEFT HAND SHOWN  
RIGHT HAND OPPOSITE

| REV | DESCRIPTION             | DATE     | ECN |
|-----|-------------------------|----------|-----|
| B   | MODCT/MOMCT/MOHCT ADDED | 12-12-96 |     |
| A   | MOCT OPERATOR ADDED     | 9-12-95  |     |

**G.A.L. MANUFACTURING CORP.**  
50 E. 153rd STREET BRONX, N.Y. 10451

SINGLE SPEED CAR ASSEMBLY  
TYPE "A" HANGER WITH RAL SAFETY EDGE 22-48 D.O.

|              |       |        |
|--------------|-------|--------|
| DRAWN BY     | DATE  | 9-7-95 |
| ENGINEER     | SHEET | OF     |
| SCALE        | 5/64  | SIZE   |
| PART No.     | REV   |        |
| DOCUMENT No. | 8221  | B      |

Amist 040546-0

h.102

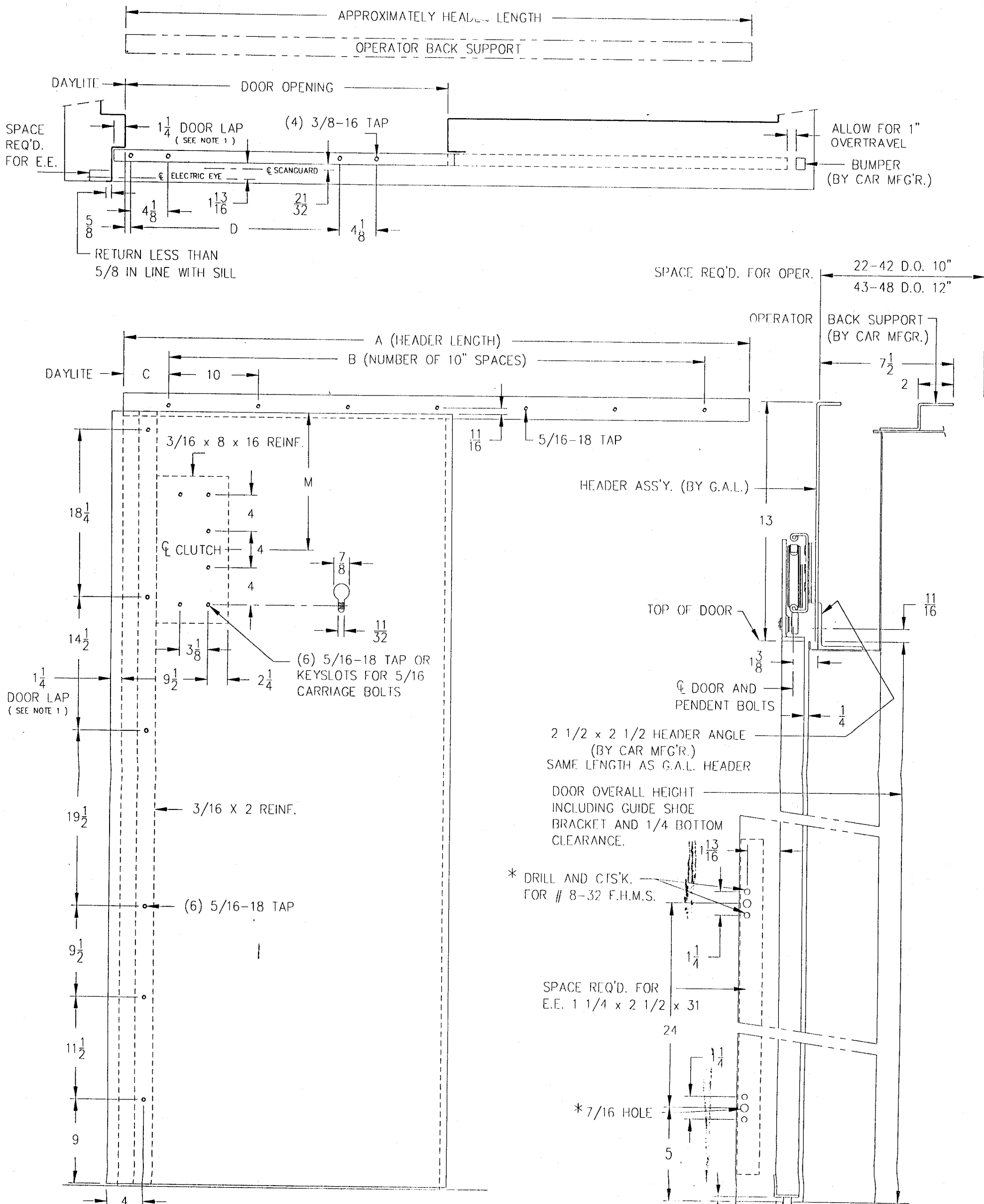
Diagram illustrating a mechanical linkage system, likely a pump or engine component, showing various dimensions and labels:

- Dimensions:**
  - $8\frac{3}{4}$  (Horizontal distance from left edge to point D)
  - $13$  (Vertical distance from bottom edge to point C)
  - $16\frac{1}{2}$  (Vertical distance from top edge to point F)
  - $\frac{1}{2}$  (Vertical distance from point F to point Z)
  - $8\frac{7}{8}$  (Horizontal distance from left edge to point X)
  - $8\frac{3}{4}$  (Horizontal distance from left edge to point A)
  - $0$  (Horizontal distance from point A to point O)
  - $X$  (Horizontal distance from point D to point X)
  - $Z$  (Vertical distance from point F to point Z)
  - $M$  (Vertical distance from bottom edge to point D)
  - $T$  (Horizontal distance from left edge to point T)
- Labels and Components:**
  - A, C, D, E, F, Z**: Points on the linkage mechanism.
  - O**: A pivot point or center of rotation.
  - DAYLITE**: A label pointing to the left side of the mechanism.
  - R**: A label pointing to a vertical dimension line.
  - D.O.**: A label pointing to a horizontal dimension line.
  - SPACE REQUIRED FOR OPER.**: A label indicating the required clearance for operation.

DR OPENING

NOV. 11, 1994

DATA21



NOTES :

- 1.- CLUTCH, PENDANT BOLT AND HEADER HANGER SUPPORT DRILLINGS LOCATED FROM DAYLITE, REGARDLESS OF DOOR LAP SIZE. G.A.L. PREFERRED 1 1/4 LAP AT THE LEADING EDGE ONLY.
- 2.- DRAWINGS ARE BASED ON EQUAL CAR AND HOISTWAY DOOR HEIGHTS  $\pm 1$  INCH. IF DOOR HEIGHTS DIFFER NOTIFY G.A.L. AND HOISTWAY DOOR MFG'R.

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|            |    |   |   |    |                       |
|------------|----|---|---|----|-----------------------|
| 46-47-48   | 94 | 9 | 2 | 38 | 23                    |
| 43-44-45   | 88 | 8 | 4 | 35 | (45) 23<br>(43-44) 19 |
| 40-41-42   | 82 | 7 | 6 | 32 | 19                    |
| 37-38-39   | 76 | 7 | 3 | 29 | 15                    |
| 34-35-36   | 70 | 6 | 5 | 26 | 15                    |
| 31-32-33   | 64 | 6 | 2 | 23 | 15                    |
| 28-29-30   | 58 | 5 | 4 | 20 | (10) 15<br>(28-29) 11 |
| 25-26-27   | 52 | 4 | 6 | 17 | 11                    |
| 22-23-24   | 46 | 4 | 3 | 14 | 11                    |
| DOOR OPNG. | A  | B | C | D  | M                     |

DIMENSION TABLE

AS SHOWN L.H. \_\_\_\_\_  
SYMETRICALLY \_\_\_\_\_  
OPPOSITE R.H. \_\_\_\_\_  
DOOR HEIGHT \_\_\_\_\_  
JAMB HEIGHT \_\_\_\_\_

\* REQUIRED ONLY IF ELECTRIC EYES BY G.A.L.  
(36 x 84 D.O. SHOWN)



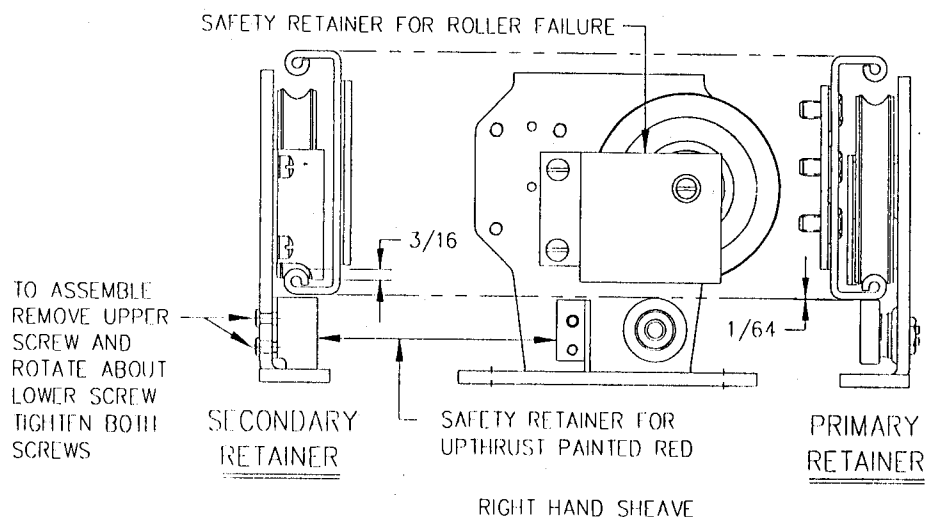
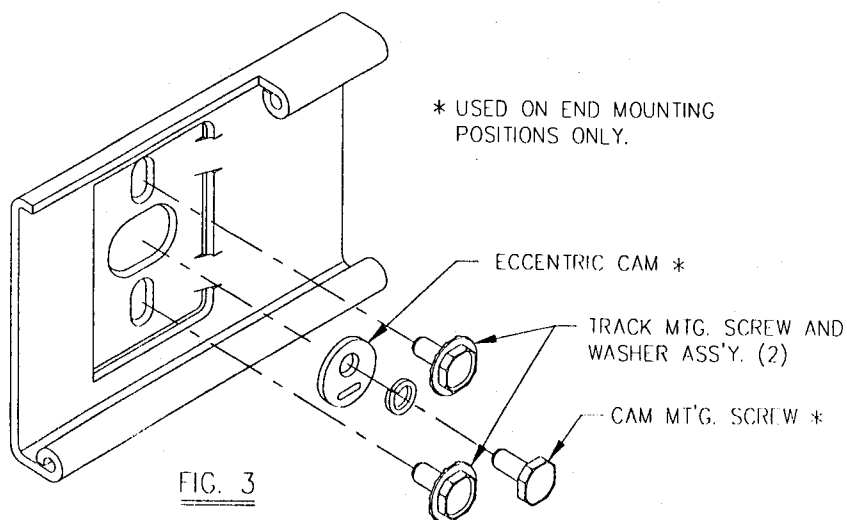
G.A.L. MANUFACTURING CORP.  
50 E. 153rd STREET BRONX, N.Y. 10451

CAR REINFORCEMENT AND DRILLINGS SINGLE SPEED  
TYPE "A" HANGER W/RAL SAFETY EDGE AND ELECTRIC EYES OR SCANGUARD 22-48 D.O.

|          |      |      |          |
|----------|------|------|----------|
| SCALE    | 3/32 | DATE | 10-31-94 |
| DWG. BY  |      |      |          |
| REV. No. |      |      |          |

8231

501-9



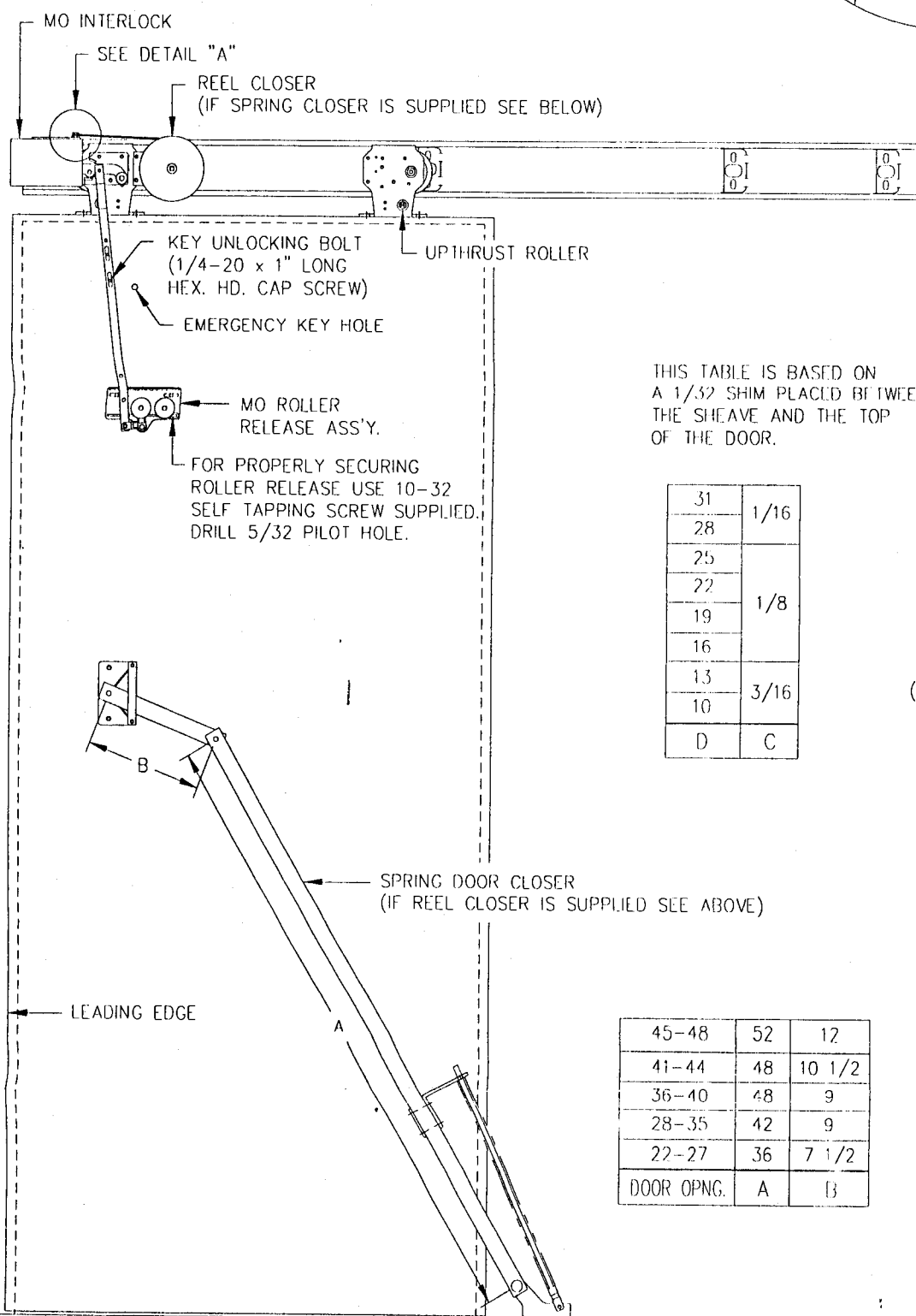
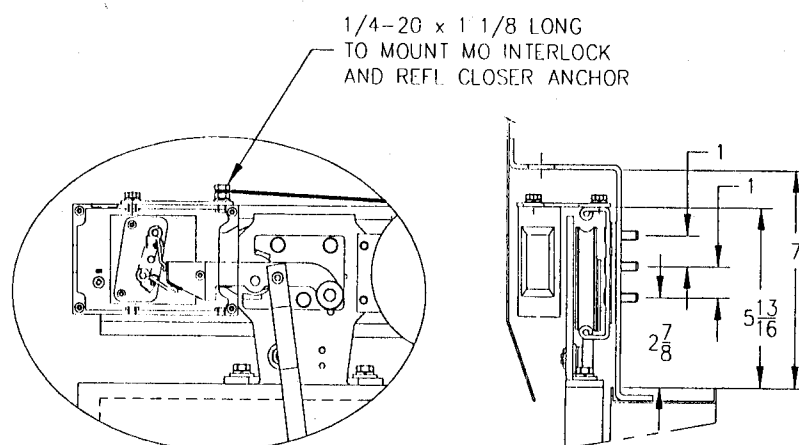
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- DETAIL "A" -



THIS TABLE IS BASED ON A 1/32 SHIM PLACED BETWEEN THE SHEAVE AND THE TOP OF THE DOOR.

|    |      |
|----|------|
| 31 |      |
| 28 | 1/16 |
| 25 |      |
| 22 |      |
| 19 | 1/8  |
| 16 |      |
| 13 | 3/16 |
| 10 |      |
| D  | C    |

|            |    |        |
|------------|----|--------|
| 45-48      | 52 | 12     |
| 41-44      | 48 | 10 1/2 |
| 36-40      | 48 | 9      |
| 28-35      | 42 | 9      |
| 22-27      | 36 | 7 1/2  |
| DOOR OPNG. | A  | B      |

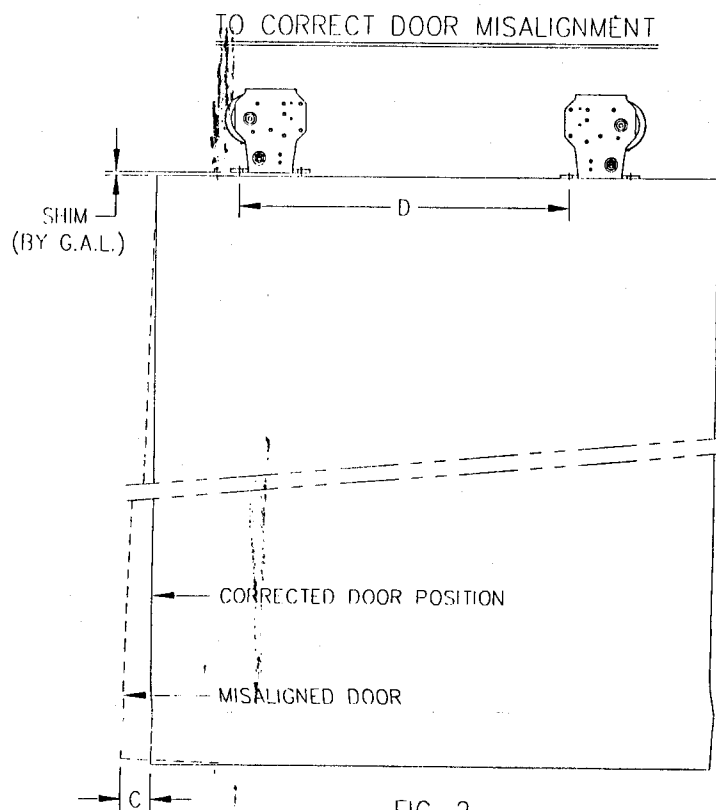


FIG. 2

FIG. 1

# INSTALLATION INSTRUCTIONS

- 1.- REMOVE PAINT FROM TRACK SURFACE WHERE THE HANGER ROLLER WILL RUN.
- 2.- MOUNT HANGERS TO DOOR WITH UPTHURST ROLLERS IN LOWEST POSITION.
- 3.- MOUNT TRACK TO HEADER AND SET ECCENTRIC CAM SO THAT THE TRACK IS IN THE LOWEST POSITION. HAND TIGHTEN ALL SCREWS. FIG. 3
- 4.- HANG DOOR ON TRACK AND ROTATE ECCENTRIC CAM TO GIVE DOOR REQUIRED SILL CLEARANCE. ADJUST UPTHURST ROLLERS TO CLEAR TRACK BY APPROXIMATELY 1/64 INCH.
- 5.- CHECK DOOR MISALIGNMENT IN OPENED AND CLOSED POSITION AND CORRECT IF REQUIRED. FIG. 2
- 6.- IF REQUIRED, READJUST THE ECCENTRIC CAM TO GIVE DOOR REQUIRED SILL CLEARANCE.
- 7.- TIGHTEN ALL SCREWS.

(36 x 84 DOOR OPNG. SHOWN)

G.A.L. MANUFACTURING CORP.  
50 E. 153rd STREET BRONX, N.Y. 10451

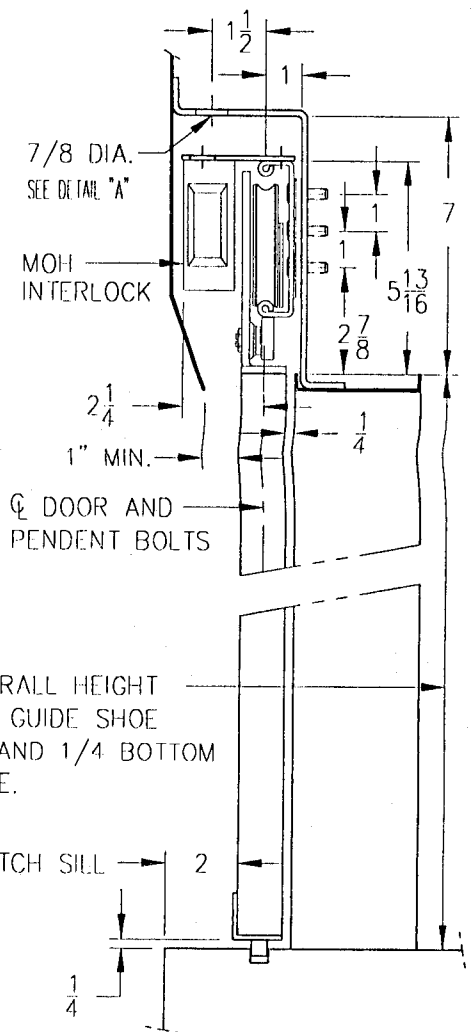
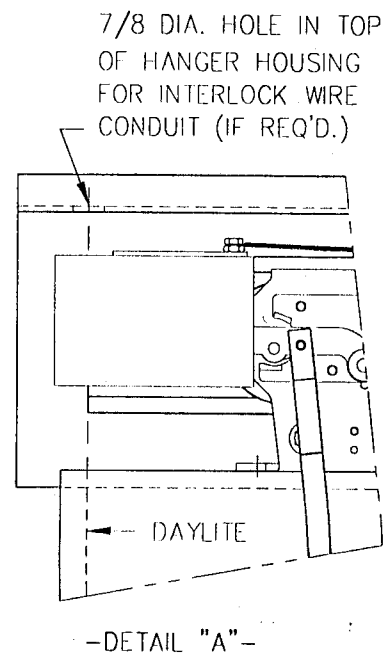
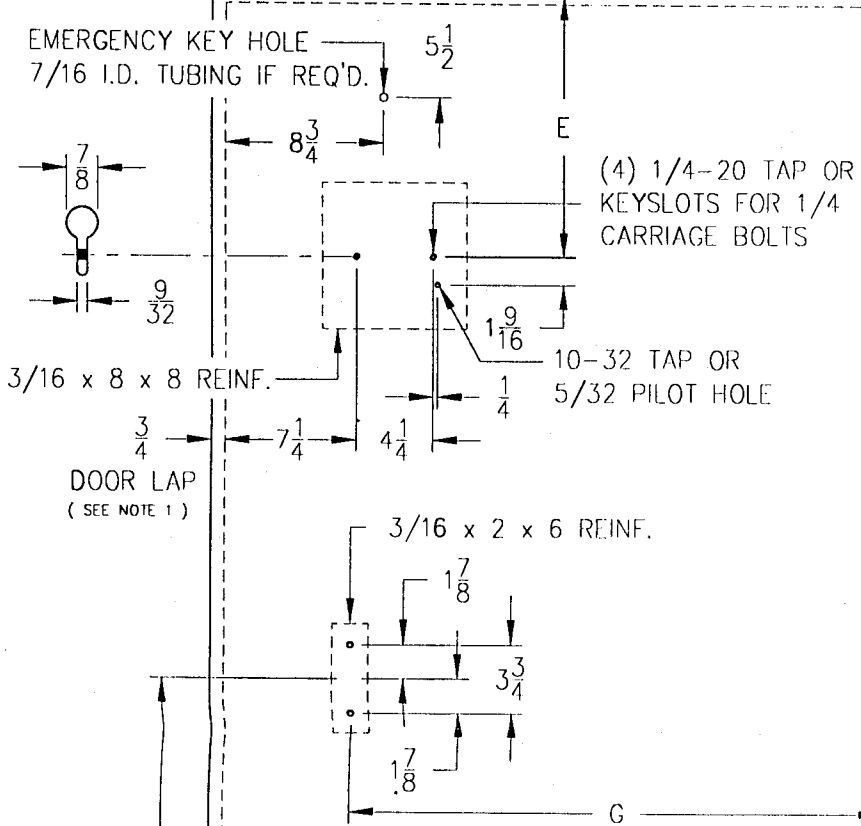
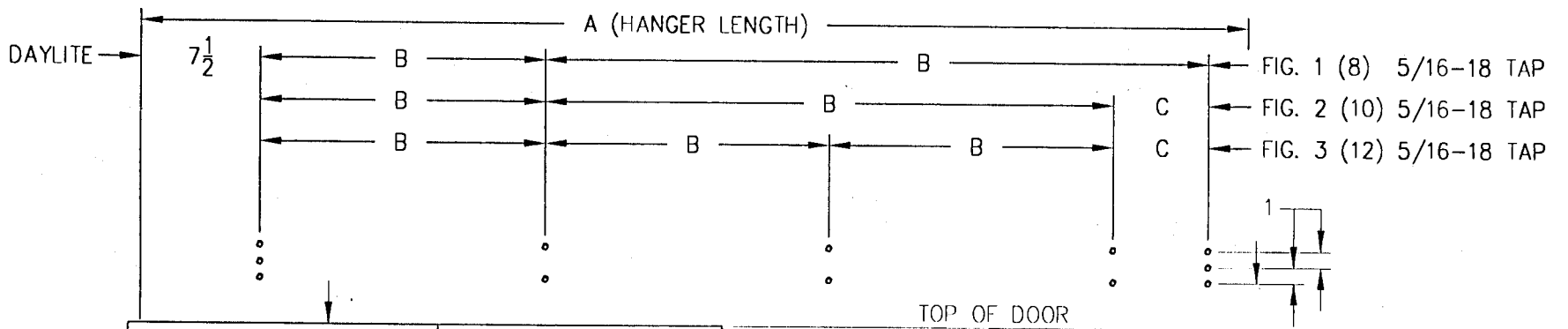
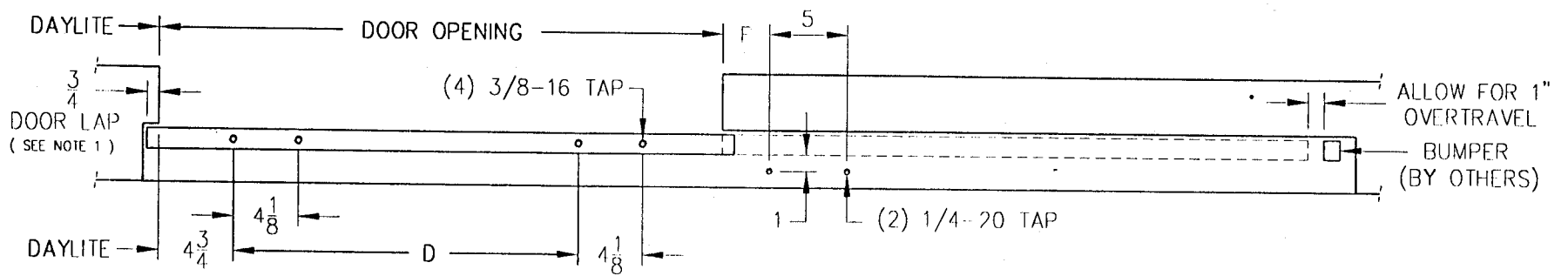
SINGLE SPEED HATCH DOOR ASSEMBLY  
TYPE "A" HANGER WITH REEL OR SPRING DOOR CLOSER 22-48 D.O.

SCALE 5/64 DATE 11-3-94

DWG. BY 8251

| No. | REVISION | DATE | CHK. | CHK. BY |
|-----|----------|------|------|---------|
|     |          |      |      |         |
|     |          |      |      |         |
|     |          |      |      |         |
|     |          |      |      |         |





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NOTES :

- 1.- INTERLOCK-ROLLER RELEASE, PENDANT BOLT, EMERGENCY KEY HOLE AND HANGER DRILLINGS LOCATED FROM DAYLITE, REGARDLESS OF DOOR LAP SIZE. G.A.L. PREFERRED 3/4 LAP.
- 2.- DRAWINGS ARE BASED ON EQUAL CAR AND HOISTWAY DOOR HEIGHTS  $\pm 1$  INCH. IF DOOR HEIGHTS DIFFER NOTIFY G.A.L. AND HOISTWAY DOOR MFG'R.

|                 |    |             |    |    |                       |            |   |        |        |
|-----------------|----|-------------|----|----|-----------------------|------------|---|--------|--------|
|                 |    |             |    |    |                       | 45-48      | 3 | 36 1/2 | 50 1/2 |
| 46-47-48        | 94 | 24 (FIG. 3) | 12 | 34 | 22                    | 41-44      | 3 | 33 1/4 | 46 1/2 |
| 43-44-45        | 88 | 24 (FIG. 2) | 24 | 31 | (45) 22<br>(43-44) 18 | 36-40      | 3 | 29 3/4 | 47 1/2 |
| 40-41-42        | 82 | 24 (FIG. 2) | 24 | 28 | 18                    | 28-35      | 3 | 27 1/4 | 42     |
| 37-38-39        | 76 | 24 (FIG. 2) | 12 | 25 | 14                    | 27         | 2 | 24 1/2 | 36     |
| 34-35-36        | 70 | 24 (FIG. 2) | 12 | 22 | 14                    | 26         | 3 | 23 1/2 | 36     |
| 31-32-33        | 64 | 24 (FIG. 1) | X  | 19 | 14                    | 25         | 4 | 22 1/2 | 36     |
| 28-29-30        | 58 | 24 (FIG. 1) |    | 16 | (30) 14<br>(28-29) 10 | 24         | 5 | 21 1/2 | 36     |
| 25-26-27        | 52 | 18 (FIG. 1) |    | 13 | 10                    | 23         | 6 | 20 1/2 | 36     |
| 22-23-24        | 46 | 18 (FIG. 1) |    | 10 | 10                    | 22         | 7 | 19 1/2 | 36     |
| DOOR OPNG.      | A  | B           | C  | D  | E                     | DOOR OPNG. | F | G      | H      |
| DIMENSION TABLE |    |             |    |    |                       |            |   |        |        |

(36 x 84 D.O. SHOWN)



G.A.L. MANUFACTURING CORP.  
 50 E. 153rd STREET BRONX, N.Y. 10451

HATCH REINFORCEMENT AND DRILLINGS SINGLE SPEED  
 TYPE "A" HANGER WITH REEL OR SPRING DOOR CLOSER 22-48 D.O.

|          |      |      |          |
|----------|------|------|----------|
| SCALE    | 3/32 | DATE | 11-11-94 |
| DWG. BY  |      |      |          |
| REV. No. |      |      |          |

8241

AS SHOWN R.H. \_\_\_\_\_  
 SYMETRICALLY \_\_\_\_\_  
 OPPOSITE L.H. \_\_\_\_\_  
 DOOR HEIGHT \_\_\_\_\_  
 JAMB HEIGHT \_\_\_\_\_