
# SERVICE DOOR

## INSTALLATION INSTRUCTIONS

## AND MAINTENANCE MANUAL

3-3950-01(10) ECN 1187 BY RG 8/1/13

THIS REVISION SUPERSEDES
ALL PREVIOUS REVISIONS

# TABLE OF CONTENTS

# *IMPORTANT* FREIGHT DAMAGE INSTRUCTIONS *IMPORTANT*

IMMEDIATELY UPON DELIVERY CHECK CONDITION OF MATERIALS FOR VISIBLE CONCEALED FREIGHT DAMAGE INCURRED IN TRANSIT.

UNDER NO CONDITION SHOULD INSTALLATION BE MADE WITHOUT AUTHORIZATION, AS NEITHER THE CARRIER NOR THE MANUFACTURER WILL ASSUME RESPONSIBILITY FOR LABOR COSTS INVOLVED IN REPLACING DAMAGED MATERIAL THAT HAS BEEN INSTALLED.

## CONCEALED LOSS OR DAMAGE:

THE TERM "CONCEALED LOSS OR DAMAGE" INDICATES THE LOSS OR DAMAGE WAS DISCOVERED AFTER, AND THE CARRIER RECEIVED A CLEAR DELIVERY RECEIPT WITH NO EXCEPTIONS NOTED.

- REPORTING CONCEALED LOSS OR DAMAGE - IF LOSS OR DAMAGE IS DISCOVERED AFTER YOU HAVE GIVEN THE CARRIER A CLEAR DELIVERY RECEIPT, IMMEDIATELY NOTIFY THE CARRIER IN WRITING, OR IF BY PHONE CONFIRM IN WRITING LATER. HOLD THE PIECES IN THE CONDITION THEY WERE IN WHEN THE DAMAGE WAS DISCOVERED.
- INSPECTION BY THE CARRIER - THE CARRIER WILL INSPECT THE FREIGHT WITHIN FIVE WORKING DAYS, AND WILL GIVE YOU A COPY OF THE INSPECTION REPORT FOR CLAIM SUPPORT. INCLUDE THIS INSPECTION REPORT WHEN FILING YOUR CLAIM.
- FAILURE TO INSPECT - IF THE CARRIER FAILS TO INSPECT THE FREIGHT, YOU MUST MAKE THE INSPECTION AND RECORD ALL RELEVANT FACTS ABOUT THE DAMAGE. THIS INFORMATION MUST BE INCLUDED WHEN YOU FILE A CLAIM.

## VISIBLE DAMAGE:

CAREFULLY CHECK ALL PIECES FOR ANY VISIBLE SIGNS OF DAMAGE. IF A PACKAGE IS DAMAGED IT SHOULD BE OPENED IMMEDIATELY WITH THE DRIVER PRESENT. A JOINT INSPECTION OF THE PIECE(S) SHOULD BE MADE BY YOU AND THE DRIVER, AND A FULL/EXACT DESCRIPTION OF THE INSPECTION SHOULD BE WRITTEN ON BOTH THE CARRIER'S AND YOUR COPY OF THE DELIVERY RECEIPT. BE SURE THE DRIVER SIGNS AND DATES YOUR COPY.

WHEN NOTING DAMAGE ON A DELIVERY RECEIPT, IT IS NOT RECOMMENDED THAT YOU ONLY USE THE WORD "DAMAGE". THIS IS A GENERAL TERM THAT DOES NOT PROPERLY SUPPORT YOUR CLAIM. WRITE THE EXACT NATURE (SCRATCHED, BROKEN, BENT OR DENTED) AND THE EXTENT OF DAMAGE ON BOTH COPIES.

## INCOMPLETE DELIVERY/SHORTAGES:

CHECK FOR A SHORTAGE AS GOODS ARE BEING OFFLOADED. COUNT THE PIECES, AND MAKE A WRITTEN TALLY WHEN A LARGE NUMBER OF ITEMS ARE BEING RECEIVED. KEEP THE SHIPMENT TOGETHER UNTIL UNLOADING IS COMPLETE IN CASE A RECOUNT IS NECESSARY. IF THERE IS A DISCREPANCY, DESCRIBE IT EXACTLY ON THE CARRIER'S DELIVERY RECEIPT AND YOUR COPY OF THE DELIVERY RECEIPT BEFORE SIGNING FOR THE GOODS. CHECK THE LABELS ON ALL PIECES TO BE CERTAIN THAT THEY ARE YOURS.

## MITIGATION OF LOSS:

THE FACT THAT GOODS ARE DAMAGED OR SHORT DOES NOT JUSTIFY YOUR REFUSAL TO ACCEPT THE SHIPMENT, NOR DOES ACCEPTANCE OF DAMAGED OR SHORT DELIVERY RELEASE THE CARRIER FROM COVERING REPLACEMENT MATERIAL COST. WHENEVER PRACTICAL, PRODUCT SHOULD BE ACCEPTED AND ALL NECESSARY STEPS SHOULD BE TAKEN TO MINIMIZE THE LOSS. A CLAIM SHOULD THEN BE FILED FOR THE COST OF REPAIRS AND/OR REPLACEMENT OF MATERIAL SHORT OR DAMAGED BEYOND REPAIR.

## TIME LIMIT / WHO MAY FILE CLAIM:

CARRIERS SPECIFY THAT CLAIMS MUST BE FILED AFTER THE DELIVERY HAS BEEN MADE, HOWEVER THE QUICKER THIS IS DONE THE BETTER YOUR CHANCES OF BEING REIMBURSED. EVERY CARRIER HAS THEIR OWN POLICY FOR DURATION AFTER DELIVERY FOR ACCEPTING CLAIMS. CONSULT THE CARRIER FOR THEIR POLICY. A CLAIM MAY BE FILED BY THE SHIPPER, THE CONSIGNEE OR A THIRD PARTY WHO MAY HAVE PAID THE FREIGHT CHARGES.

## RETURNING DAMAGED MATERIAL:

IF DAMAGED TO THE EXTENT THAT IT IS NECESSARY TO RETURN TO THE MANUFACTURER TO BE REPAIRED, PLEASE DO AS FOLLOWS:

(A) OBTAIN PERMISSION TO DO SO FROM THE DELIVERING CARRIER.

(B) ROUTE THE RETURN SHIPMENT VIA THE IDENTICAL CARRIER(S) INVOLVED IN THE ORIGINAL SHIPMENT.

(C) NOTIFY THE MANUFACTURER WHEN SHIPPED.

FD

# PRE-INSTALLATION INSTRUCTIONS

## WARNING

**ONLY TRAINED DOOR SYSTEMS TECHNICIANS SHOULD DROP TEST, RESET OR PERFORM MAINTENANCE ON DOORS**

## WARNING

**READ AND FOLLOW THESE INSTRUCTIONS THOROUGHLY - THE MANUFACTURER WILL NOT BE HELD RESPONSIBLE FOR ANY CHARGES INCURRED THROUGH MISSING PARTS, OPERATION, OR DAMAGE - DUE TO IMPROPERLY INSTALLED DOOR ASSEMBLIES**

1) IF YOU HAVE RECEIVED MORE THAN ONE DOOR, YOU WILL FIND THAT ALL MAJOR PARTS AND PIECES FOR ANY ONE DOOR ARE MARKED WITH CORRESPONDING NUMBERS; THEREFORE, A COMPLETE DOOR SHOULD BE COMPOSED OF PARTS BEARING THE SAME NUMBERS AND LETTERS.

DO NOT INTERCHANGE PARTS FROM ONE DOOR TO ANOTHER!!!

2) BEFORE INSTALLING THE DOOR SEE THAT ALL COMPONENT MARKINGS AGREE.
3) BEFORE ATTEMPTING INSTALLATION OF THE DOOR AND, SPECIFICALLY, BEFORE LEAVING THE JOBSITE MAKE CERTAIN YOU HAVE READ AND ADHERED TO THE ATTACHED "SAFETY CHECK LIST".
4) SHOULD THERE BE ANY DISCREPANCIES IN THE JOB CONDITIONS OR MANUFACTURED MATERIALS, CONTACT THE COOKSON COMPANY, INC. IN WRITING OR BY CALLING 1-800-294-4358 FOR WESTERN U.S. AND CANADA OR 1-800-390-8590 FOR EASTERN U.S. AND CANADA. IF DOOR WAS PURCHASED BY A COOKSON DISTRIBUTOR AND SOLD TO ANOTHER PARTY THEY SHOULD CONTACT THE DISTRIBUTOR FOR WARRANTY OR REPAIR RIGHTS.

# SAFETY CHECK LIST

## WARNING

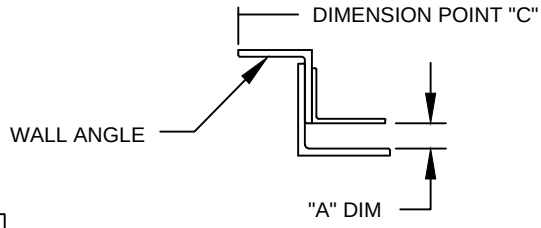
**IN ORDER FOR YOU TO ASSURE YOUR CUSTOMER THAT THIS DOOR HAS BEEN INSTALLED PROPERLY AND IN A SAFE MANNER, WE ASK THAT YOU CHECK THE FOLLOWING BEFORE LEAVING THE JOBSITE**

1) MAKE CERTAIN THAT THE PROPER AMOUNT OF TENSION HAS BEEN APPLIED TO THE TORSION SPRINGS, IN ORDER TO PROPERLY COUNTERBALANCE THE WEIGHT OF THE CURTAIN.
2) ASSURE YOURSELF THAT THE TENSION WHEEL IS SECURELY FASTENED IN PLACE.
3) ASSURE YOURSELF THAT SPROCKETS OR GEARS REQUIRING KEYS HAVE THE CORRECT KEYS INSTALLED AND DRIVE SHAFT SPROCKETS OR GEARS ARE RETAINED BY COTTER PINS.
4) RECHECK THE SETSCREWS (ONE OVER KEY - THE OTHER LOCATED AT 90° FROM KEY) IN EACH SPROCKET OR GEAR FOR TIGHTNESS.
5) CHECK ALL FASTENERS HOLDING GUIDES TO BUILDING STRUCTURES.
6) CHECK ALL FASTENERS USED IN ASSEMBLING DOOR COMPONENTS.
7) INSTRUCT OWNERS OR HIS/HER REPRESENTATIVE IN THE PROPER METHOD OF OPERATING THIS DOOR.

# GUIDE INSTALLATION

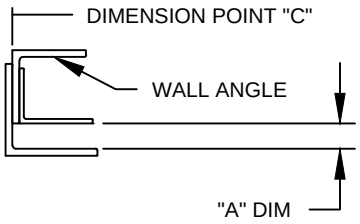
**Depending on your specific job conditions, you have received guides that appear as shown below.**

**TYPE I ASSY**



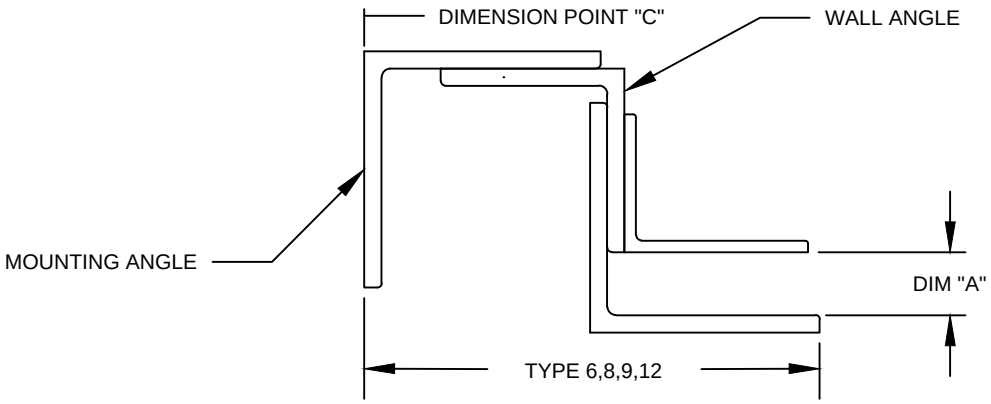

**TYPE II ASSY**

**STANDARD FACE OF WALL MOUNTED GUIDE**



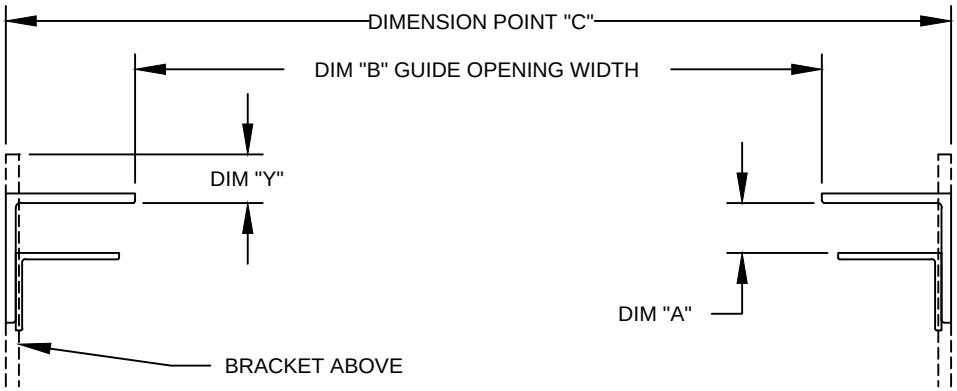

A1

**TYPE 6, 8, 9 & 12**




A2

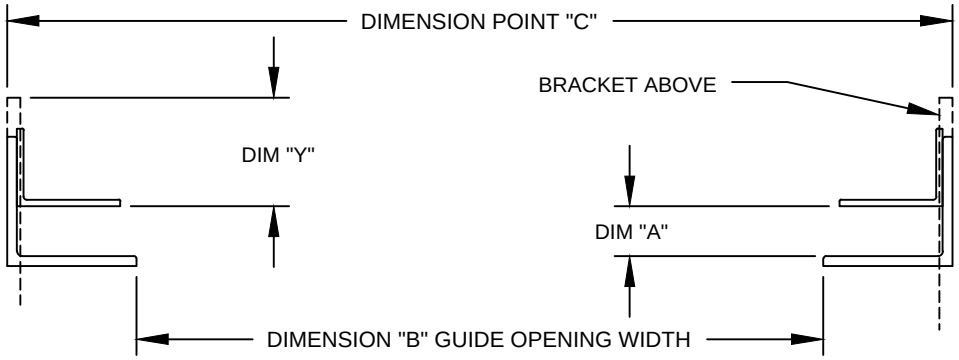
**TYPE 3**




A3

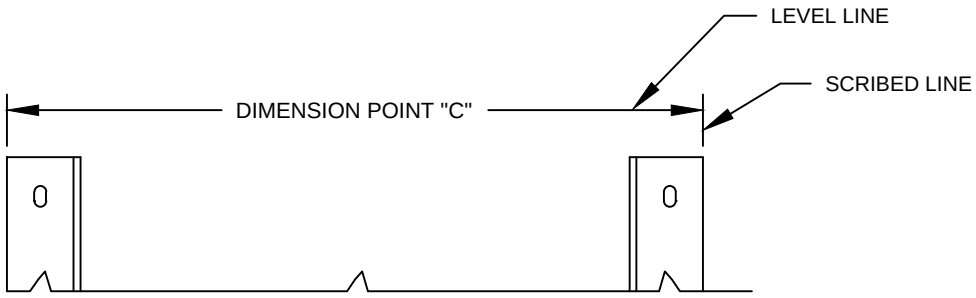
# GUIDE INSTALLATION (CONT)

**TYPE 4**

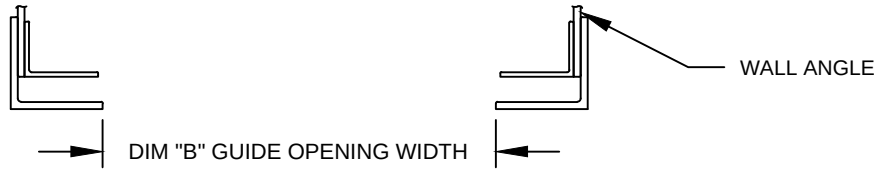



A4

1) Locate guide dimension point for both left and right jamb. Measurement between dimension points must equal dimension "C".
2) For typical installation for Type I and II (See FIG A1) guide assemblies, Dimension point "C" is centered around jamb opening - (if side room permits) - if there are questions check job construction drawings (if available).
3) Check the Guide opening measurement. Locate a mark on the floor at the tip of each guide and measure. Guide measurement must equal Dim "B". (See FIG A6) THIS IS CRITICAL If guide opening does not equal Dim "B", STOP and redo steps 1 and 2.
4) Scribe a plumb line on the wall at dimension points.
5) Place the guides against the scribed line and with the tops of guides level, mark the location of the mounting holes. NOTE: Guide types 2, 6, 8, 9 & 12 may have to be disassembled.
6) Drill mounting holes for wall fasteners and mount the guides. (See Page 4 for fastener type) Reassemble guides if necessary.
7) Make sure that the width of the guide groove is equal to Dim "A". (See Page 4) Adjust if necessary.



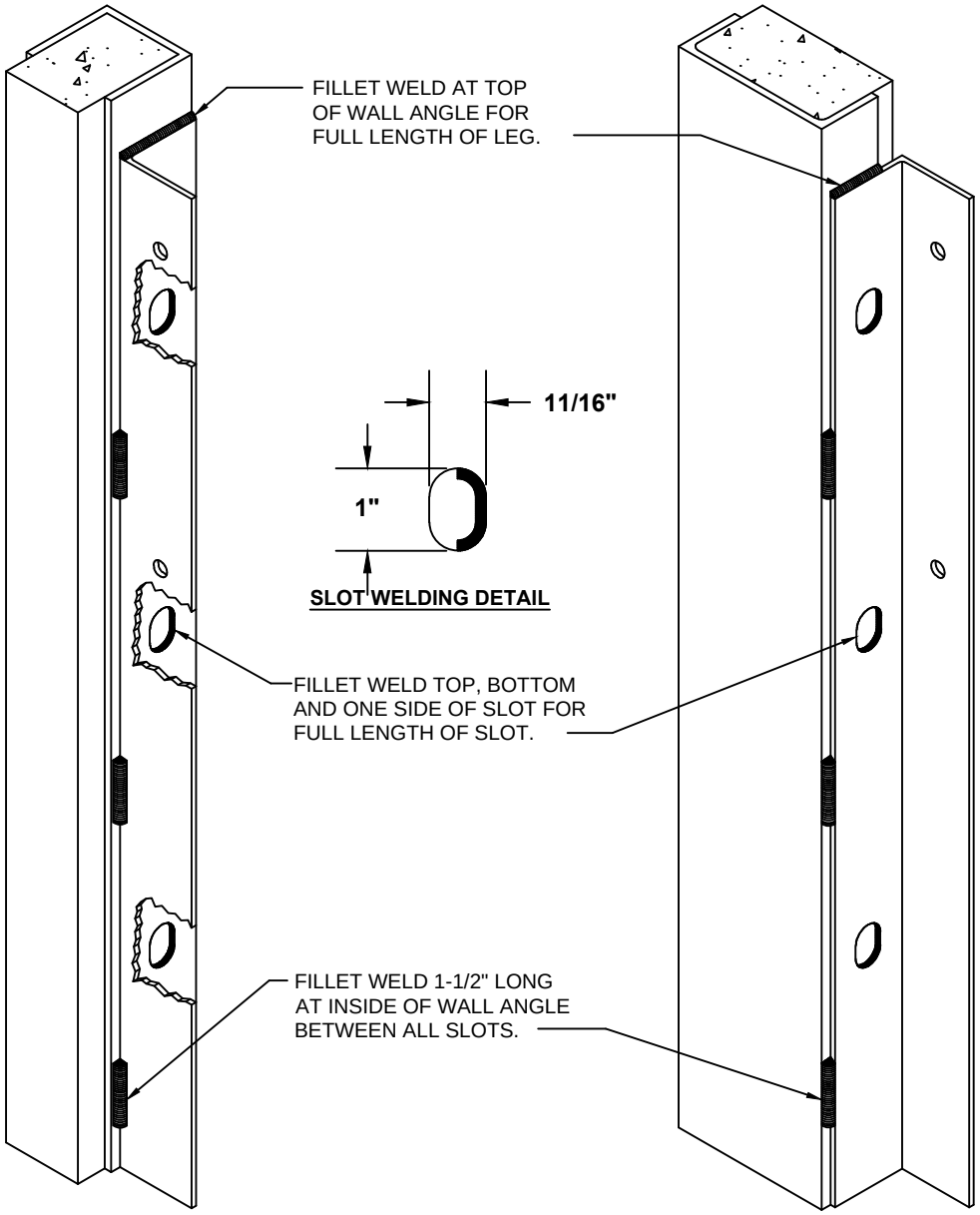

A5




A6

# OPTIONAL WELDED WALL ANGLE INSTALLATION
# APPVD FOR WARNOCK HERSEY AND UL LABELED DOORS

**NOTE: APPROVED FOR STRUCTURAL STEEL JAMBS ONLY.**




**METHOD 2**

**(WELDING ON INSIDE OF WALL ANGLE)**

**METHOD 1**

**(WELDING ON OUTSIDE OF WALL ANGLE)**

**A7**

FILLET WELD SIZES ARE TO BE EQUAL TO THE WALL ANGLE THICKNESS.
(FILLET WELDS TO BE MINIMUM 3/16" WIDE).
USE E6011/E6011 ELECTRODES OR ELECTRODES OF EQUIVALENT STRENGTH.
ALL WELDS TO BE DONE "VERTICAL-UP" (START FROM THE BASE OF AN INDIVIDUAL WELD AND WELD UPWARDS)
WELDING PROVISIONS TO BE IN COMPLIANCE WITH U.B.C. STD #27-6.

# FASTENER TABLE

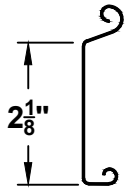
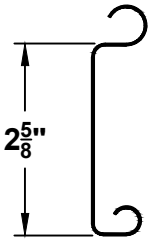
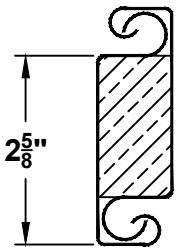
**NOTE: If doors are windload tested / certified refer to specific approval documentation for required mounting conditions/fasteners.**

| TYPE OF CONSTRUCTION TO WHICH FASTENER EMBEDS | TYPE OF FASTENER TO USE | HOLE SIZE (DRILL DIA.) | TAP SIZE (IF REQ'D) | DEPTH OF HOLE |
|---|---|---|---|---|
| WOOD | Ø1/2" X 3" LAG BOLT | Ø5/16" | ——— | 2-1/2" MAX |
| | Ø5/8" X 3-1/2" LAG BOLT | Ø7/16" | ——— | 3" MAX |
| CONCRETE | Ø1/2" X 5-1/2" WEDGE ANCH. | Ø1/2" CARBIDE | ——— | 4" MIN |
| | Ø5/8" X 6" WEDGE ANCH. | Ø5/8" CARBIDE | ——— | 5" MIN |
| | Ø3/4" X 8-1/2" WEDGE ANCH. | Ø3/4" CARBIDE | ——— | 6" MIN |
| MASONRY OR BRICK | Ø5/8" X 4-1/4" SLEEVE ANCH. (Ø1/2" BOLT) | Ø5/8" | ——— | 4" MIN |
| | Ø3/4" X 6-1/4" SLEEVE ANCH. (Ø5/8" BOLT) | Ø5/8" | ——— | 5" MIN |
| STEEL | Ø1/2" BOLT | Ø27/64" | 1/2"-13UNC | ——— |
| | Ø5/8" BOLT | Ø17/32" | 5/8"-11UNC | ——— |
| | Ø3/4" BOLT | Ø21/32" | 3/4"-10UNC | ——— |

**NOTE: See page 4 if the guides are to be welded to the jambs.**

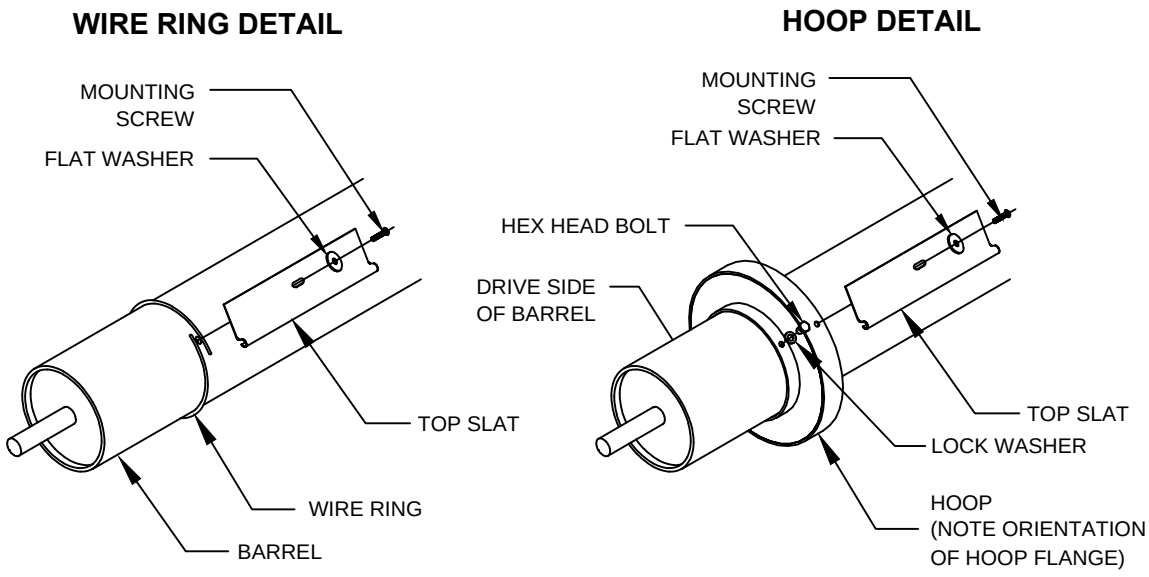
**NOTE: See page 31 for mounting of Florida Aprroved Doors.**

# GUIDE GROOVE DIMENSION TABLE

| SLAT NO. | 5 | 4 | 45 |
|---|---|---|---|
| SLAT PROFILE |   |   |   |
| DIM "A" | 1" | 1 1/8" | 1 1/4" |

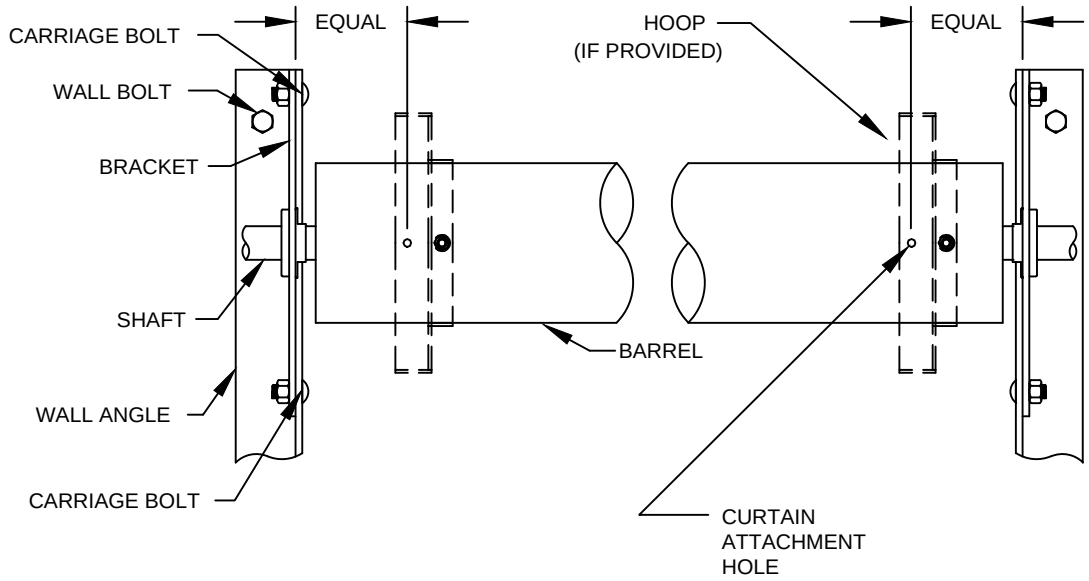
# BARREL AND BRACKET ASSEMBLY

1) Determine whether you have Right Hand (RH) or Left Hand (LH) drive, place the barrel below the opening in the position it takes when actually mounted. If you have hoops or wire rings consult FIG A8.




A8

2) Slide the mounting brackets onto their respective ends of the barrel and raise the entire assembly into position at the head of the opening.
3) Using the carriage bolts as shown in FIG A9, bolt the brackets to the wall angle.




A9

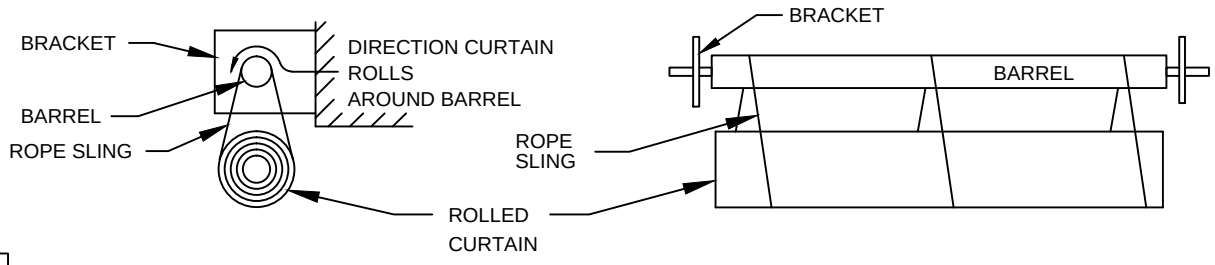
4) Position the barrel, with an equal distance from the first curtain attachment hole, to the inside face of both brackets. See FIG A9.

# CURTAIN ASSEMBLY

## IMPORTANT

**BE SURE THAT THE TENSION SHAFT IS FREE TO ROTATE**
**DO NOT INSTALL TENSION WHEEL AT THIS TIME**

1) PLACE THE ROLLED CURTAIN BELOW THE BARREL ASSEMBLY. HOIST THE CURTAIN APPROXIMATELY 3 FEET BELOW THE BARREL AND SUSPEND IT THERE BY MEANS OF TWO OR MORE SLINGS.



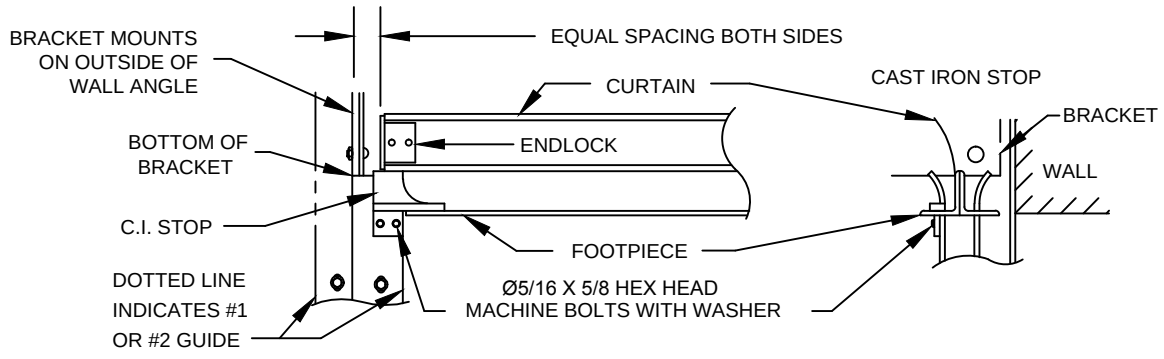

A10

2) USING SLINGS TIED THROUGH THE CENTER HOLE OF THE TOP SLAT OF THE CURTAIN; WRAP THE SLINGS AROUND THE BARREL IN THE DIRECTION OF COIL UP ROTATION, PULL THE TOP SLAT UP AROUND THE BARREL. IF HOOPS ARE USED; PLACE IN LINE WITH THE HOLES IN THE TOP SLAT, AND WITH THE TOP SLAT LINED UP STRAIGHT ON THE BARREL, SECURE THE HOOPS TO THE BARREL.

## IMPORTANT

**BE SURE THAT THE ENDS OF THE CURTAIN ARE EQUIDISTANT**
**FROM THE INSIDE FACES OF THE BRACKETS**

3) IF YOUR DOOR HAS A MEANS OF MANUALLY OPERATING, USE IT TO ROLL THE CURTAIN ONTO THE BARREL.
4) IF YOUR DOOR IS THE PUSH-UP TYPE, USE A TENSIONING BAR INSERTED INTO THE TENSION WHEEL TO ROTATE THE BARREL WHILE ROLLING THE CURTAIN ONTO THE BARREL. ROTATE THE TENSION WHEEL IN THE SAME DIRECTION THE BARREL TURNS WHEN THE CURTAIN ROLLS ONTO IT.
5) WITH THE CURTAIN COMPLETELY ROLLED ONTO THE BARREL, FEED THE BOTTOM BAR INTO THE GUIDES AND ATTACH THE STOPS AS SHOWN IN FIG A11.



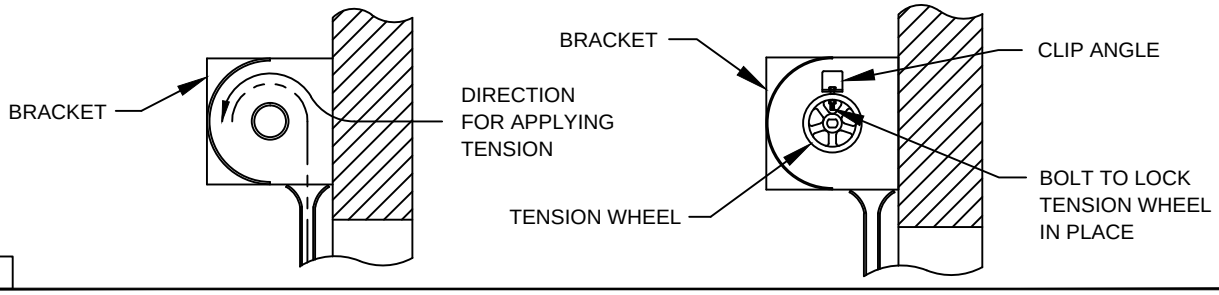

A11

# TENSIONING INSTRUCTIONS
# STANDARD TENSION WHEEL

## WARNING

**SERIOUS INJURY MAY BE INCURRED IF THE CURTAIN IS NOT FULLY COILED ON THE BARREL WHILE MAKING ADJUSTMENTS TO THE TENSION ASSEMBLY.**

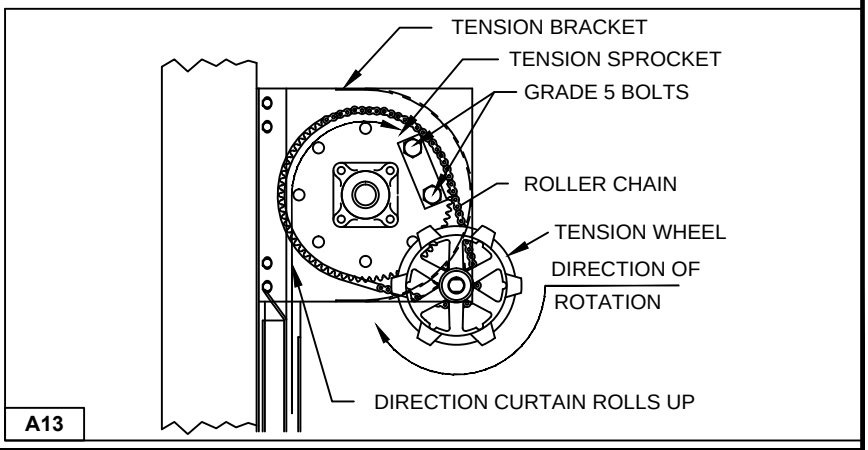
1) Raise the curtain to the full open position.
2) Install Tension Wheel onto Tension Shaft.
3) Rotate the tension wheel, by means of a bar inserted into the tension wheel. See installation information sheet for number of turns. Rotate in direction the curtain normally winds onto the barrel. See FIG A12.
4) Lock the tension wheel to the bracket with the supplied bolt. The bolt can be found in the angle clip that is welded to the bracket.
5) Test the door for operation. The balance should be such that the door remains stationary when at the top and bottom of the opening.




A12

# TENSIONING INSTRUCTIONS
# SPECIAL TENSION SPROCKET

1) Raise the curtain to the full open position. Tension should now be applied to springs by use of the tension wheel and tension sprocket. (Tension sprocket should be rotated in the same direction the barrel rotates when rolling up curtain on barrel) The number of turns to apply to the tension sprocket will be approximately two turns. The tension sprocket is bolted to the bracket with two Ø7/8 Grade 5 fasteners. See FIG A13.

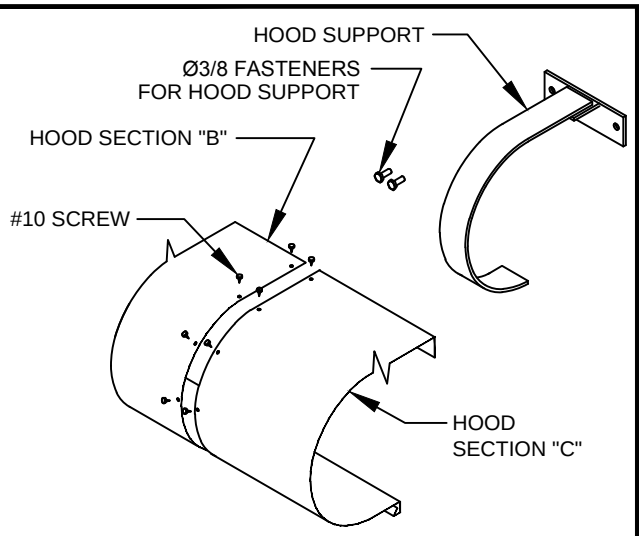



A13

## WARNING

**DONT MAKE ADJUSTMENTS TO TENSION WHEEL AT ANY POSITION BUT FULL OPEN POSITION AS SPRINGS ARE WOUND UP AND MAY CAUSE SERIOUS INJURY TO A PERSON TRYING TO ADJUST TENSION WHEEL.**

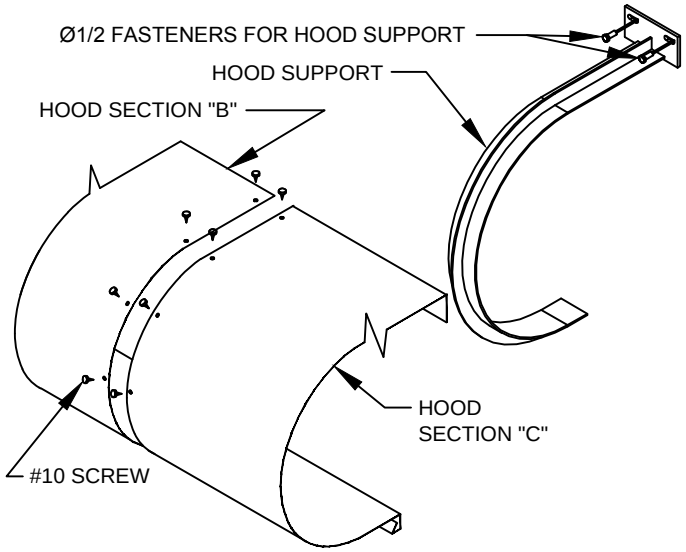
# HOOD SUPPORT MOUNTING INSTRUCTION




**MULTI-SECTION HOOD ASSEMBLY**

**UP TO 26" BRACKETS**

A14




**MULTI-SECTION HOOD ASSEMBLY**

**BRACKETS 28" AND OVER**

A15

Assembly of Multi Section Hood:

1) Verify support size by comparing to Bracket Plate Hood Band.
2) Locate support as per Table 2.
3) Layout and drill wall for hood support bolts (2 bolts per support) and attach hood support(s) to wall.
4) With the hood sections over the support, butt hood ends together, and center on the hood support(s). Cope ends of top flange if required.
5) Drill Ø.157 hole thru the hood and support. Fasten together with the #10 self tapping machine screws provided. Note: Screws should not interfere w/curtain; Verify.

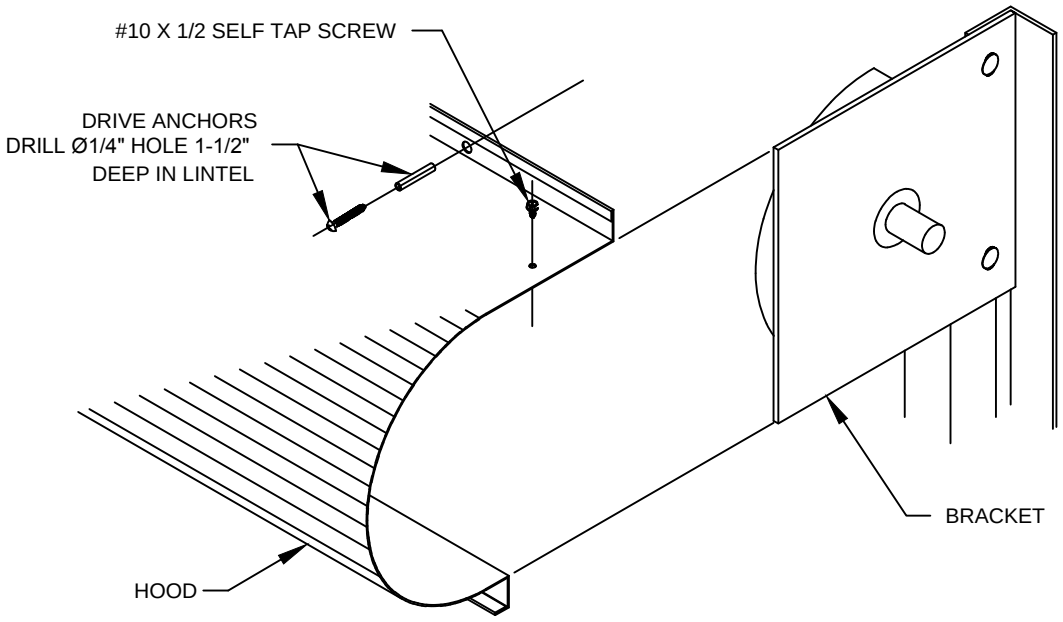
**TABLE 1**

| | MOUNTING MATERIAL | DRILL SIZE | DRILL DEPTH | MOUNTING BOLT |
|---|---|---|---|---|
| BRACKETS UP TO 26" | MASONRY/CONCRETE | 3/8" CARBIDE | 2" | Ø3/8" WEDGE ANCHOR |
| | WOOD | Ø3/16" | 1" | Ø3/8" X 2" LAG SCREW |
| | STEEL | Ø5/16" (TAP 3/8-16) | 1" | Ø3/8" X 1" HHMB |
| BRACKETS 28" AND OVER | MASONRY/CONCRETE | 1/2" CARBIDE | 3" | Ø1/2 X 2-3/4" WEDGE ANCHOR |
| | WOOD | Ø5/16" | 2-1/2" | Ø1/2 X 3 LAG SCREW |
| | STEEL | Ø7/16" (TAP 1/2-13) | 2" | Ø1/2 X 1-1/2 HHMB |

**TABLE 2**

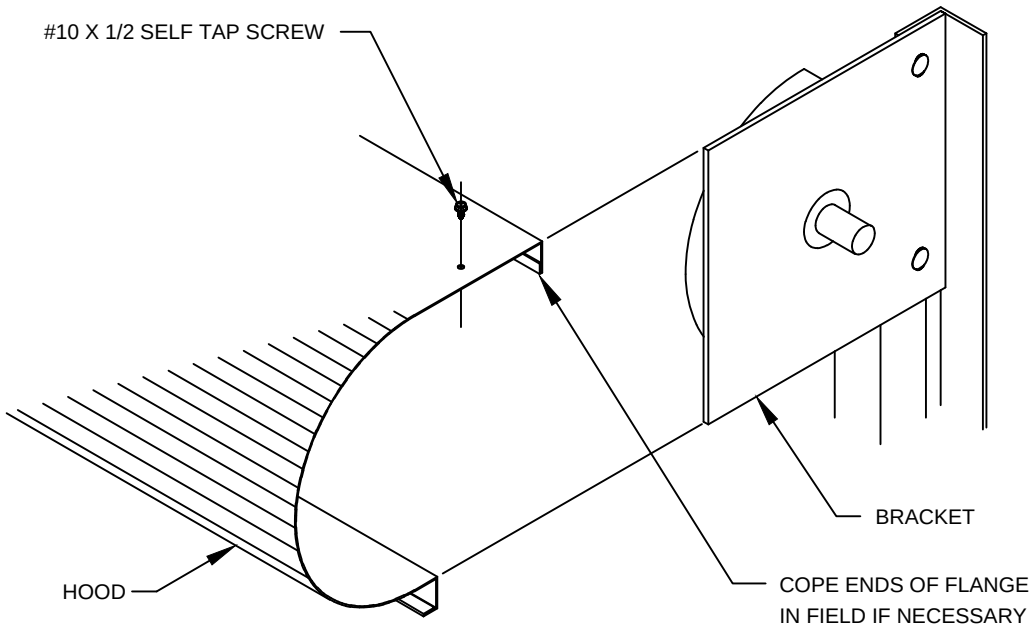
| HOOD LENGTH | SECTIONS | SUPPORTS | LOCATION |
|---|---|---|---|
| 0 TO 14'-0" | 1 | 0 | |
| 14'-0 1/8" TO 28'-0" | 2 | 1 | CENTER OF HOOD |
| 28'-0 1/8" TO 42'-0" | 3 | 2 | AT 1/3 POINTS |
| 42'-0 1/8" TO 56'-0" | 4 | 3 | AT 1/4 POINTS |

# HOOD INSTALLATION




A16

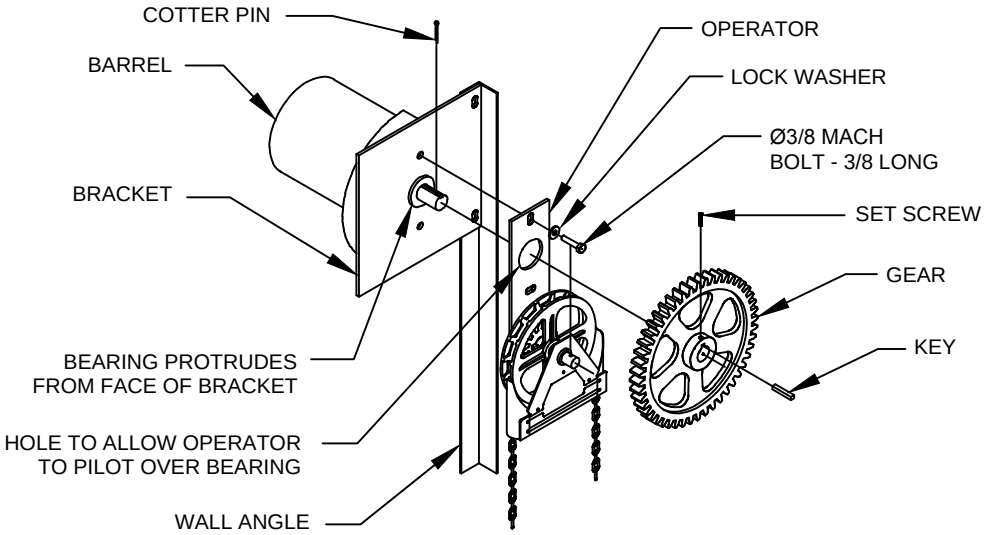
**SERVICE/FIRE DOORS HOOD FLANGE UP**




A17

**SERVICE/FIRE DOORS HOOD FLANGE DOWN**

# HAND CHAIN OPERATOR INSTALLATION

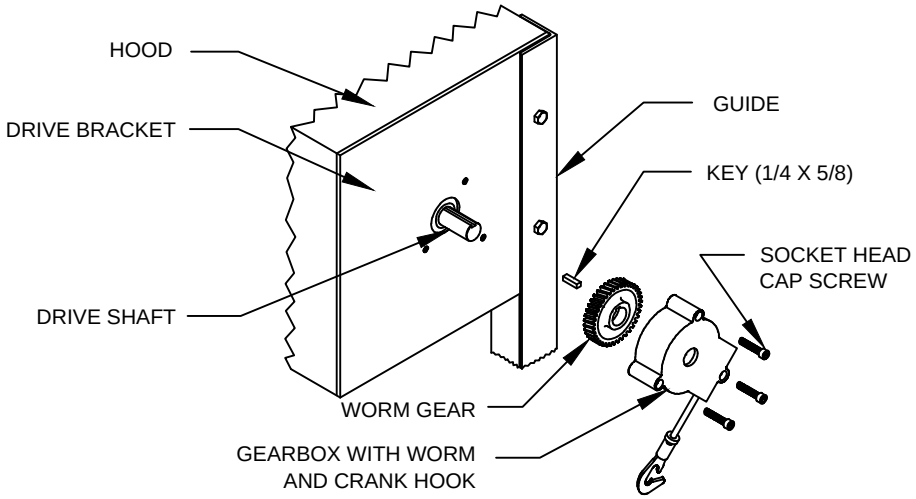



B1

1) Raise brackets and barrel into position and bolt brackets to wall angle.
2) Bolt operator to bracket.
3) Insert key in keyway and tighten set screw.

**NOTE: Right hand operator shown.**
**Left hand operator opposite as shown.**
**DOORS WITH SINGLE GEAR SYSTEM: Preposition gear to mesh with 3" pinion before installing operator on bracket.**
**DOORS WITH DOUBLE GEAR SYSTEM: Remove all gears from operator, install operator on bracket, then reinstall gears.**

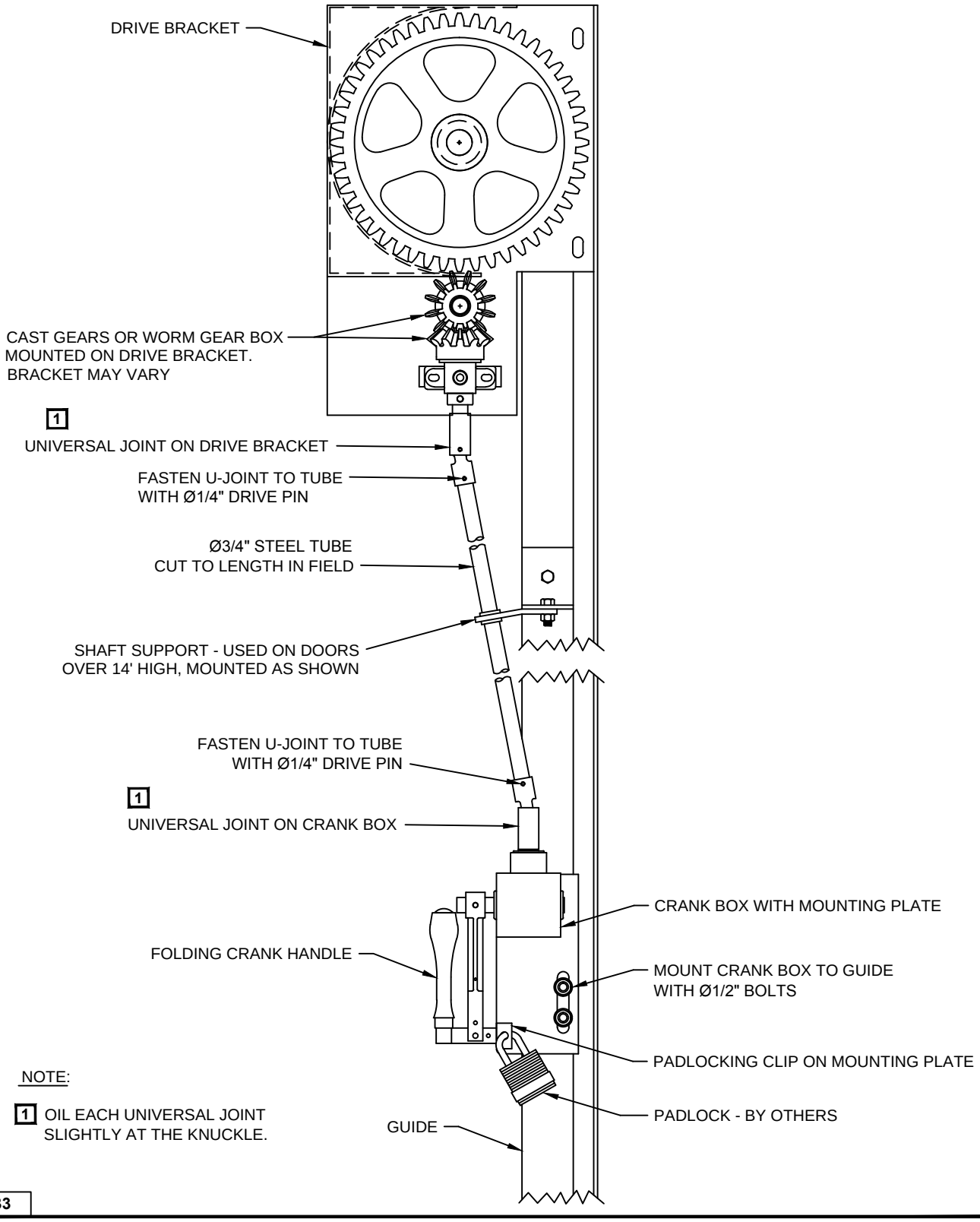
# CRANK GEARBOX ASSY - WORM GEAR TYPE




B2

NOTE:
1) Worm wheel and gearbox are shipped mounted to bracket.
2) Unbolt gearbox and assemble over drive shaft as shown above.
3) On between jamb doors, this is usually easiest done prior to assembling brackets to guides.

# SD/FD/GRILLE GUIDE MOUNTED
# CRANK OPERATED INSTALLATION INSTRUCTION

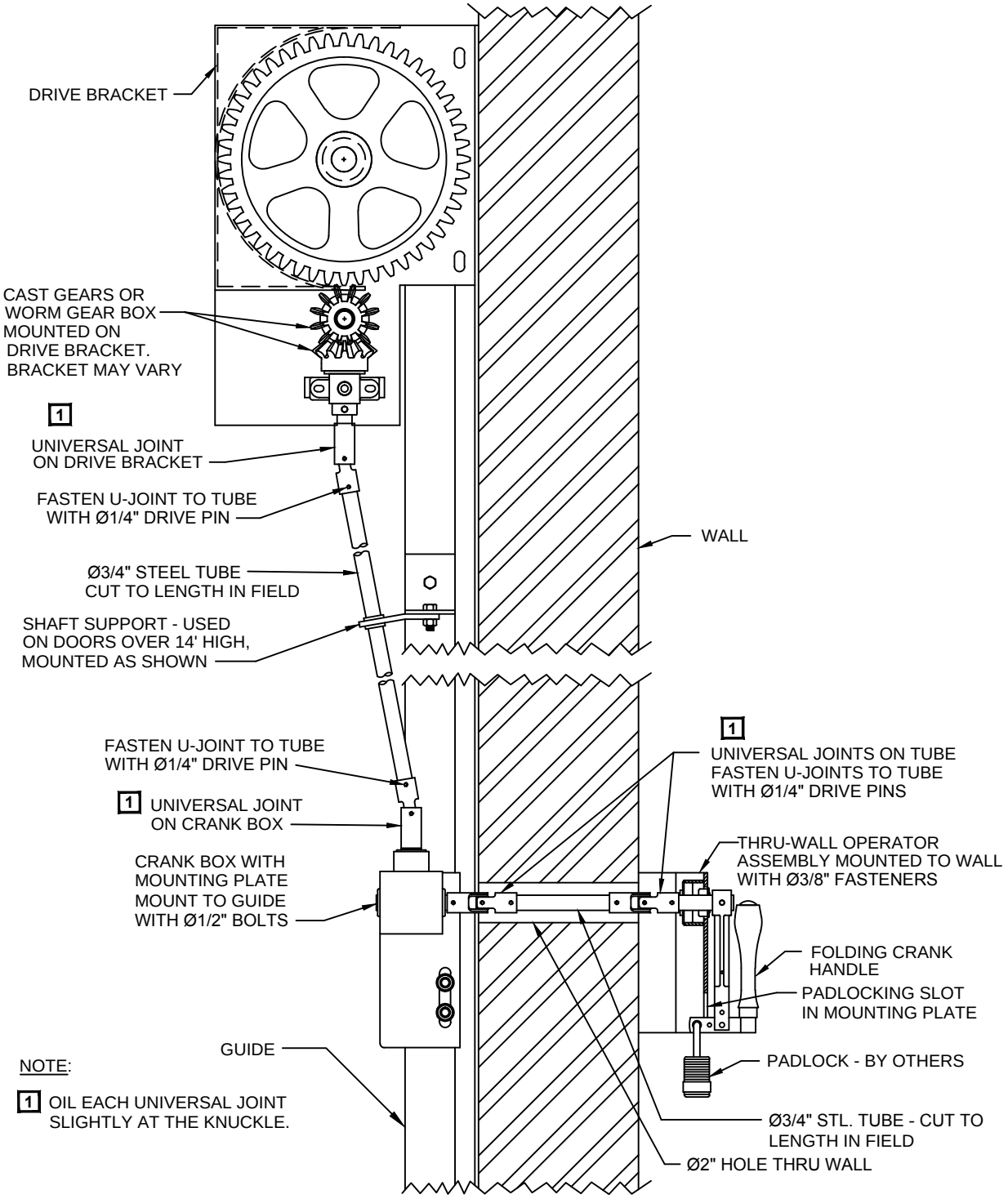



NOTE:

1 OIL EACH UNIVERSAL JOINT SLIGHTLY AT THE KNUCKLE.

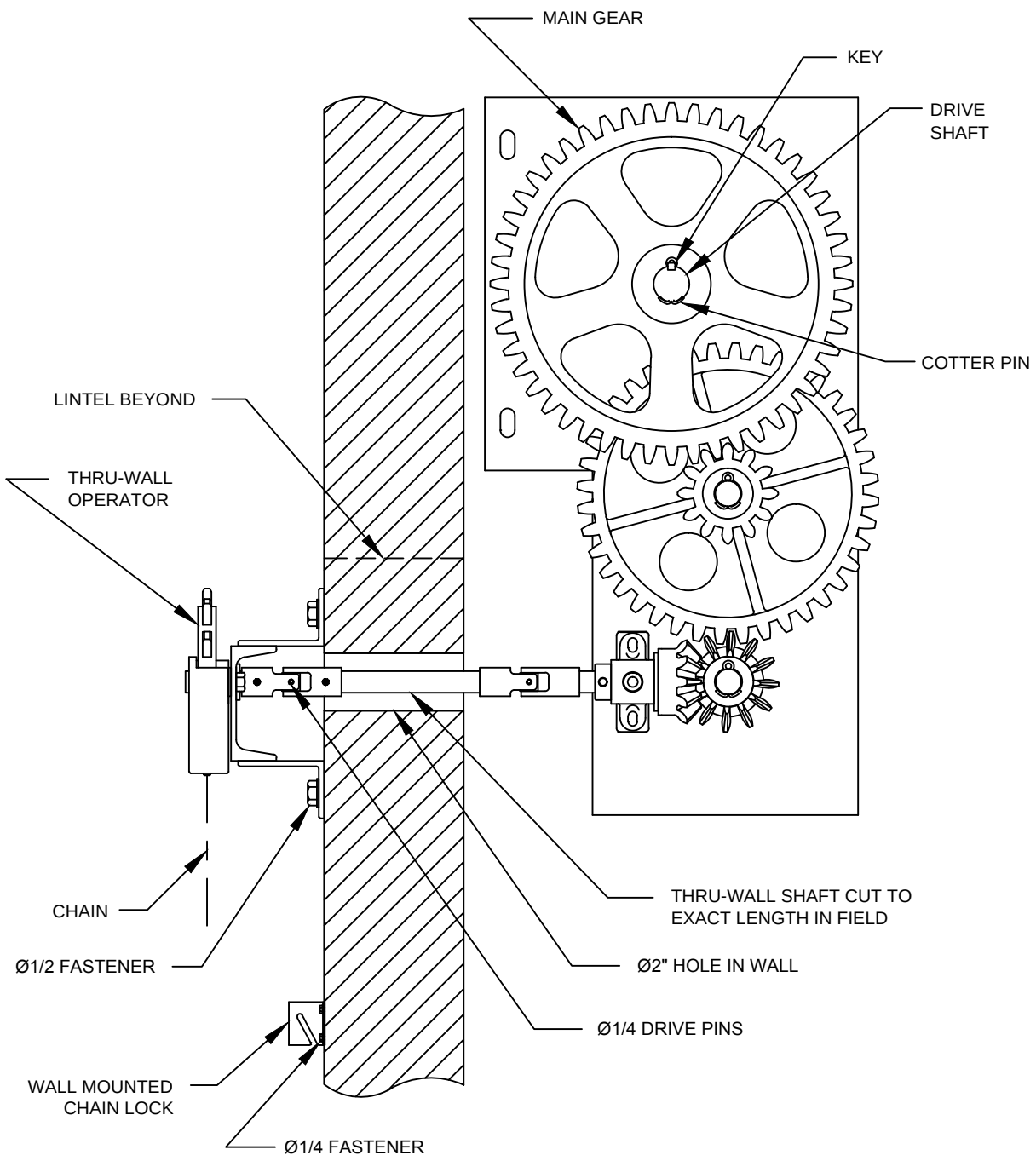
B3

# SD/FD/GRILLE GUIDE MOUNTED THRU-WALL CRANK OPERATED INSTALLATION INSTRUCTION




B4

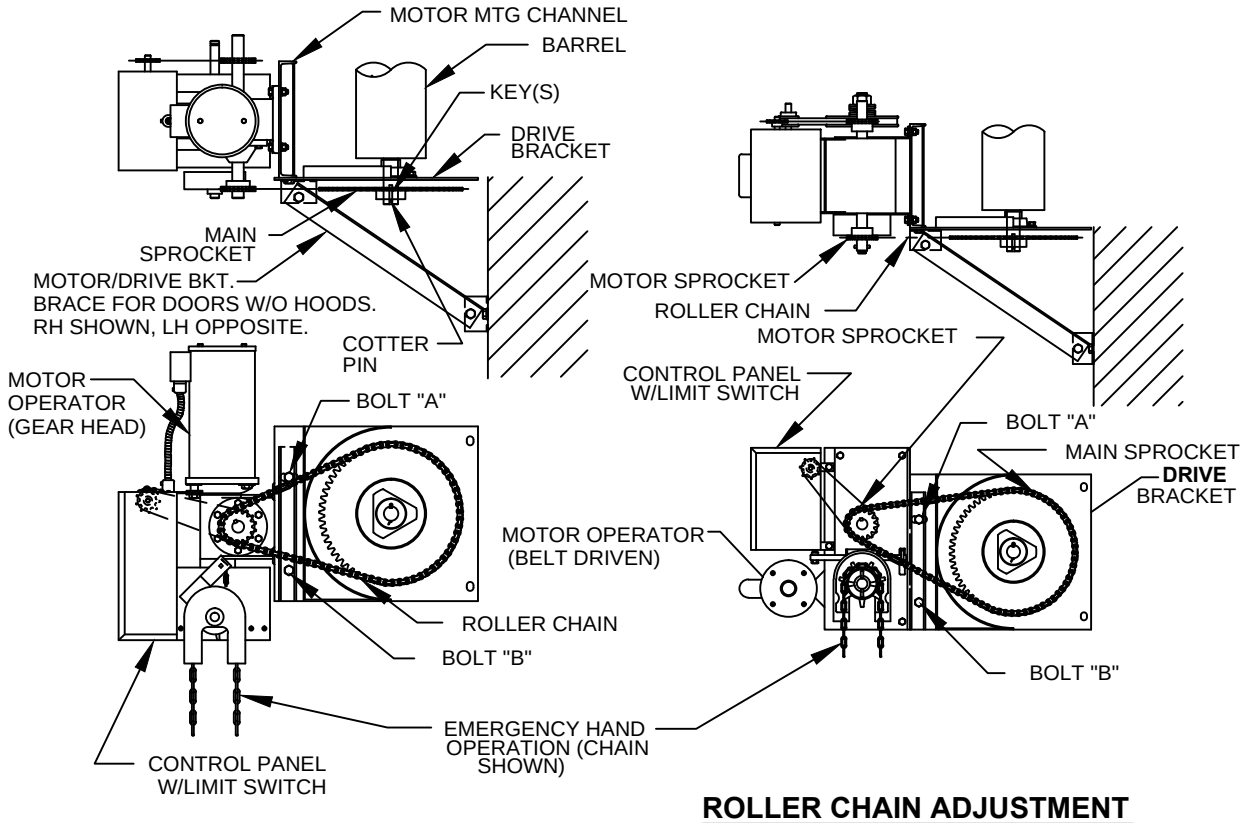
# THRU-WALL CHAIN OPERATED ASSEMBLY

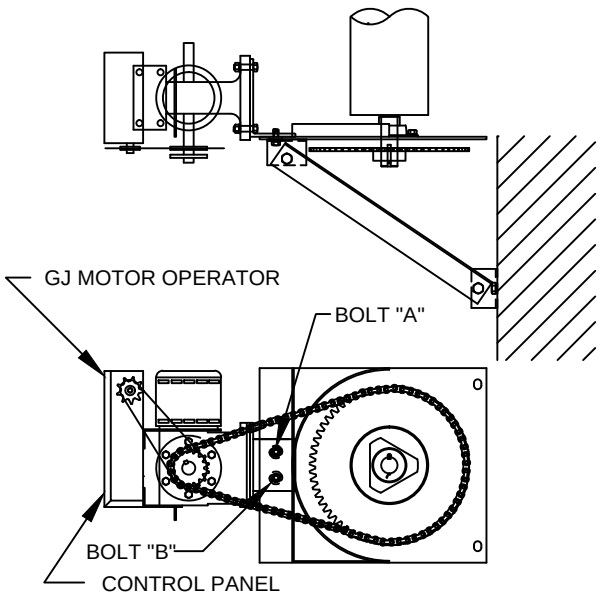



B5

# VERTICALLY MOUNTED MOTOR OPERATOR

**RIGHT HAND IS SHOWN - LEFT HAND IS OPPOSITE**




**ROLLER CHAIN ADJUSTMENT**

1. LOOSEN BOLT "A".
2. TIGHTEN CHAIN BY PIVOTING MOTOR MTG. CHANNEL ABOUT BOLT "B".
3. RETIGHTEN BOLT "A".

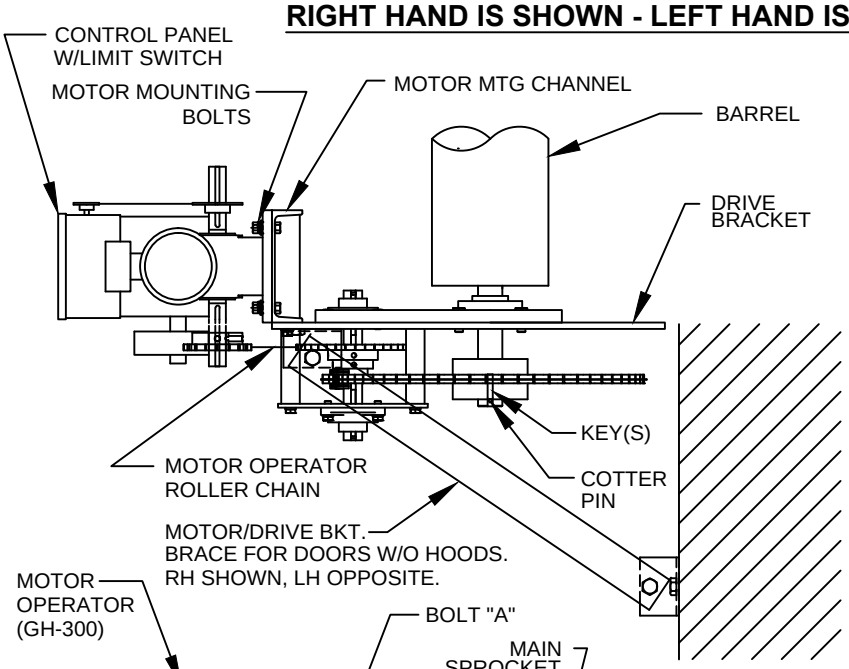
CAUTION: DOORS INSTALLED WITHOUT HOODS MUST HAVE MOTOR/BKT. BRACE INSTALLED TO AVOID FLEXING OF BRACKET AND POSSIBLE INJURY.

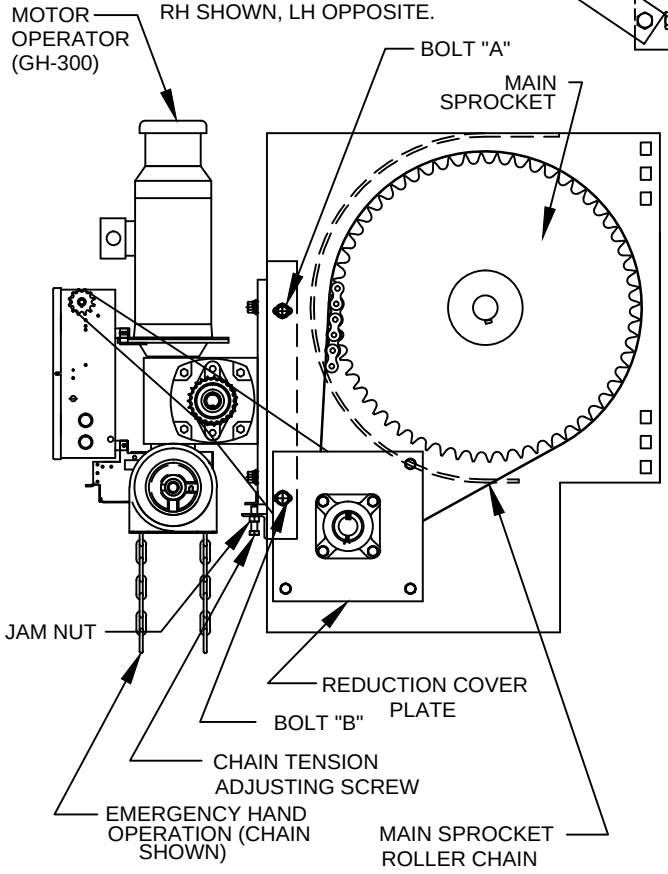
1) AFTER DOOR IS INSTALLED AND BRACKET PLATES ARE PERPENDICULAR TO WALL, ATTACH MOTOR/BKT BRACE TO BRACKET AND WALL AS SHOWN.

2) MAKE SURE THAT BOLTS ARE TIGHT AND BRACKET PLATE IS PERPENDICULAR TO WALL.

# VERTICALLY MOUNTED GH MOTOR OPERATOR
# 3 HP DOUBLE REDUCTION BRACKET

**RIGHT HAND IS SHOWN - LEFT HAND IS OPPOSITE**




ROLLER CHAIN ADJUSTMENT

1) LOOSEN BOLT "A".

2) TIGHTEN CHAIN BY PIVOTING MOTOR MTG. CHANNEL ABOUT BOLT "B".

3) RETIGHTEN BOLT "A".

FOR FINE TUNING CHAIN TENSION

1) LOOSEN (4) MTR MTG BOLTS.

2) LOOSEN CHAIN TENSION JAM NUT AND ADJUST SCREW.

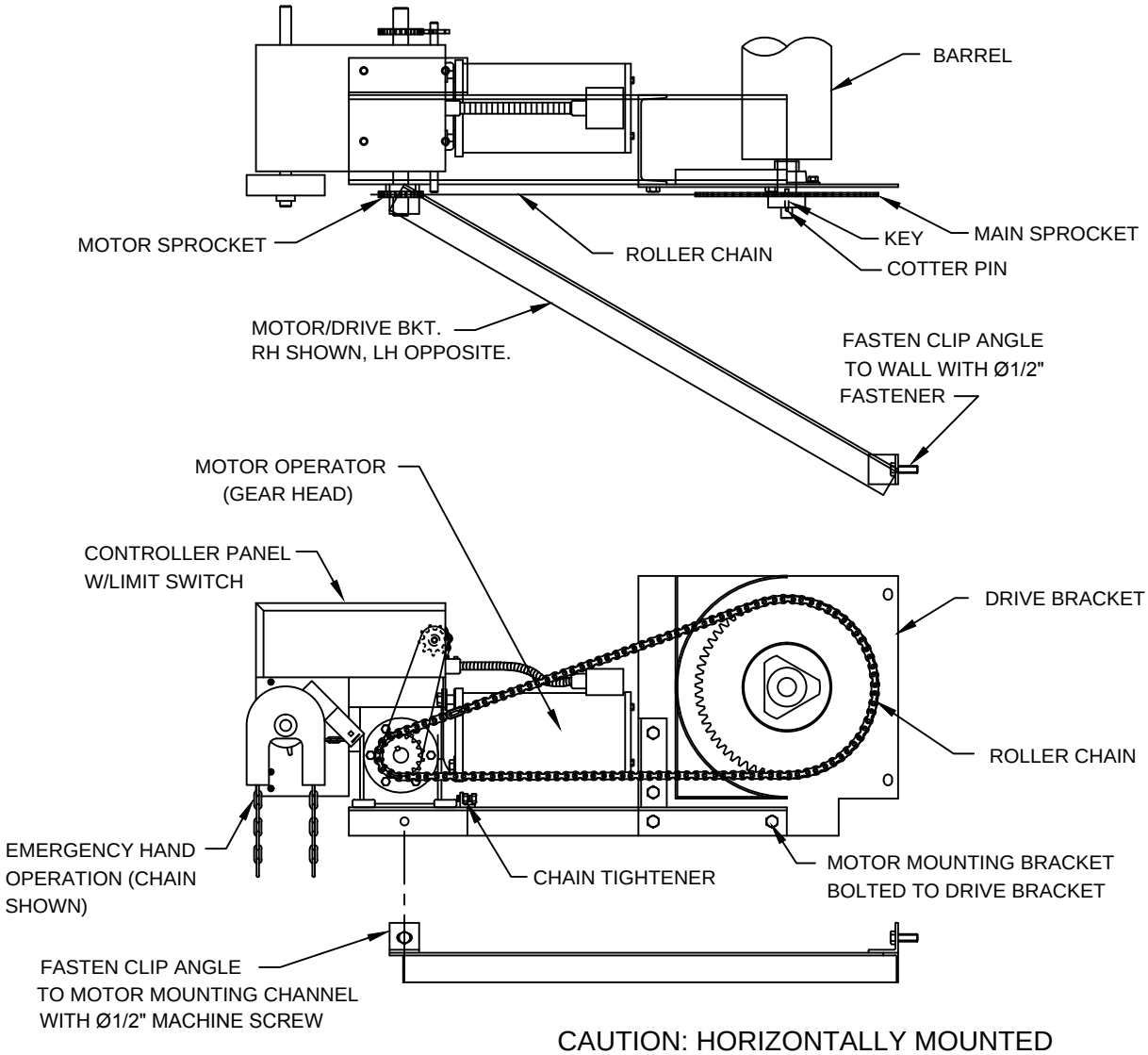
3) TIGHTEN JAM NUT & MTR MTG BOLTS.

CAUTION: DOORS INSTALLED WITHOUT HOODS MUST HAVE MOTOR/BKT. BRACE INSTALLED TO AVOID FLEXING OF BRACKET AND POSSIBLE INJURY.

1) AFTER DOOR IS INSTALLED AND BRACKET PLATES ARE PERPENDICULAR TO WALL, ATTACH MOTOR/BKT BRACE TO BRACKET AND WALL AS SHOWN.

2) MAKE SURE THAT BOLTS ARE TIGHT AND BRACKET PLATE IS PERPENDICULAR TO WALL.

# HORIZONTALLY MOUNTED GH MOTOR OPERATOR

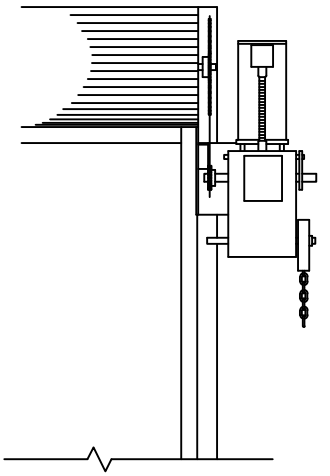



CAUTION: HORIZONTALLY MOUNTED MOTORS MUST HAVE MOTOR/BKT. BRACE INSTALLED TO AVOID FLEXING OF BRACKET AND POSSIBLE INJURY.

1) AFTER DOOR IS INSTALLED AND BRACKET PLATES ARE PERPENDICULAR TO WALL, ATTACH MOTOR/BKT BRACE TO BRACKET AND WALL AS SHOWN.

2) MAKE SURE THAT BOLTS ARE TIGHT AND BRACKET PLATE IS PERPENDICULAR TO WALL.

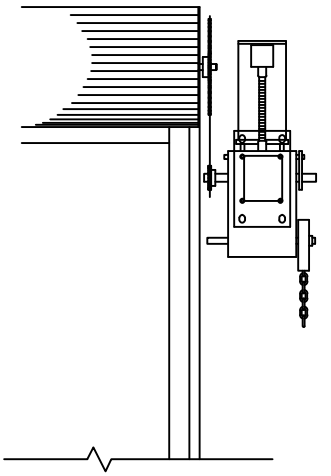
# SIDE MOUNT/WALL MOUNT GH MOTOR OPERATOR



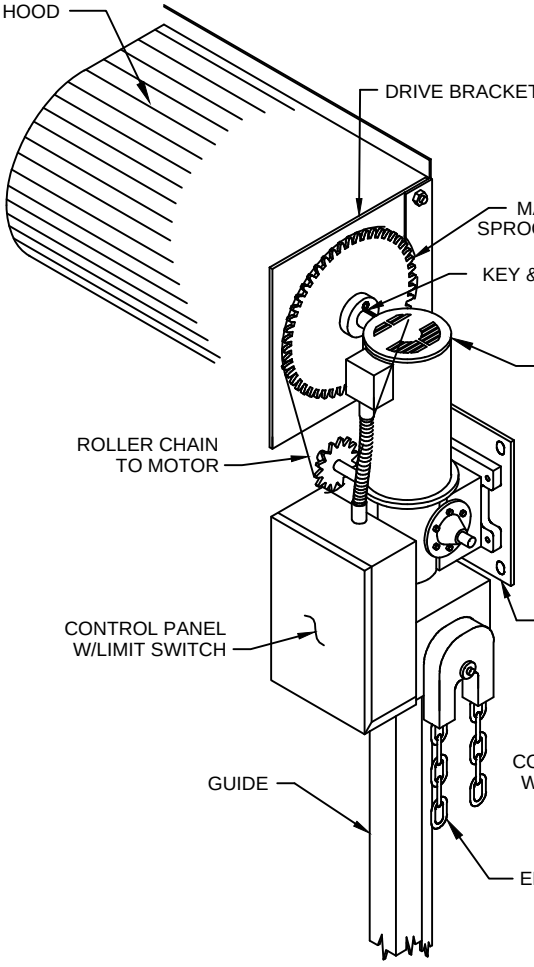
CAUTION: DOORS INSTALLED WITHOUT HOODS MUST HAVE MOTOR/BRK. BRACE INSTALLED TO AVOID FLEXING OF BRACKET AND POSSIBLE INJURY.

1) AFTER DOOR IS INSTALLED AND BRACKET PLATES ARE PERPENDICULAR TO WALL, ATTACH MOTOR/BKT BRACE TO BRACKET AND WALL AS SHOWN.

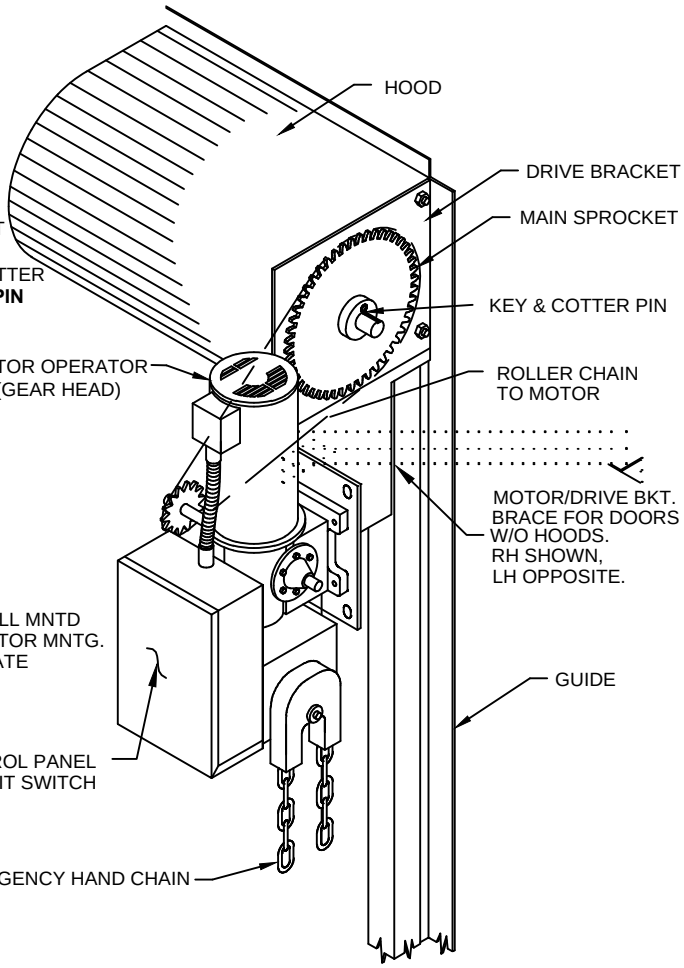
2) MAKE SURE THAT BOLTS ARE TIGHT AND BRACKET PLATE IS PERPENDICULAR TO WALL.



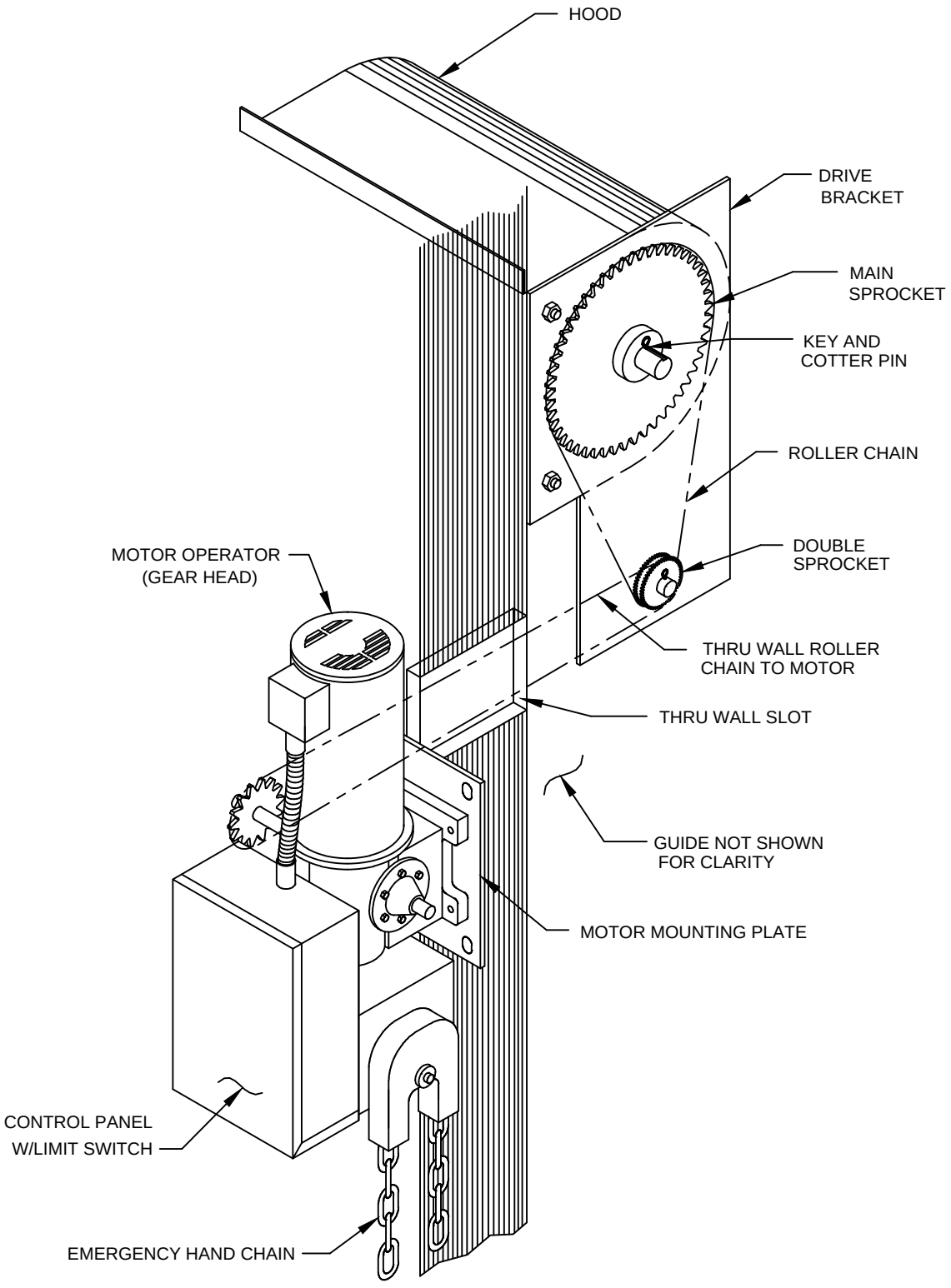
**WALL MOUNTED GH OPERATOR**



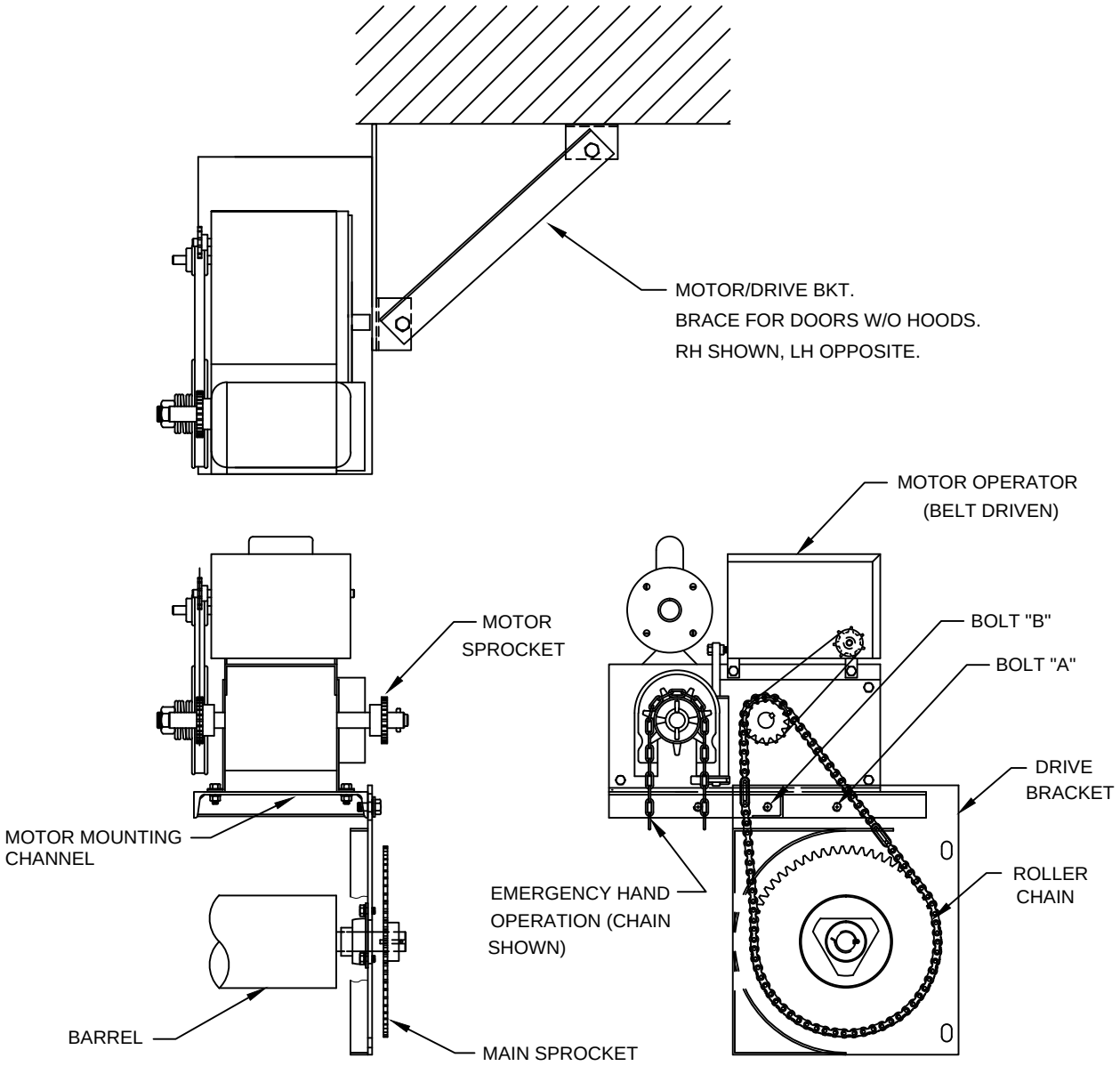

**SIDE MOUNTED GH OPERATOR**



# THRU WALL GH MOTOR OPERATOR



# BELT DRIVE MOTOR BRACKET ASSY- TOP MOUNT




**RIGHT HAND SHOWN - LEFT HAND IS OPPOSITE**

ROLLER CHAIN ADJUSTMENT

1) LOOSEN BOLT "A".

2) TIGHTEN CHAIN BY PIVOTING MOTOR MTG. CHANNEL ABOUT BOLT "B".

3) RETIGHTEN BOLT "A".

CAUTION: DOORS INSTALLED WITHOUT HOODS MUST HAVE MOTOR/BKT. BRACE INSTALLED TO AVOID FLEXING OF BRACKET AND POSSIBLE INJURY.

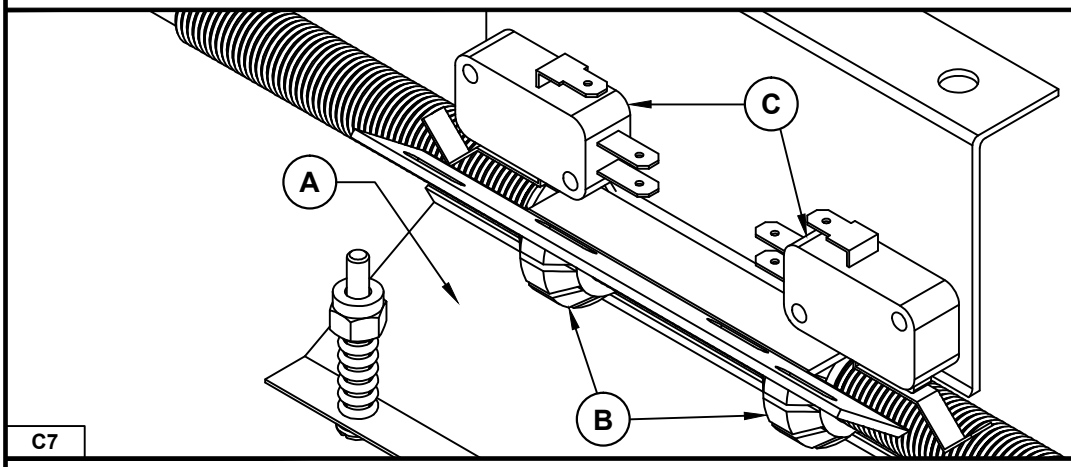
1) AFTER DOOR IS INSTALLED AND BRACKET PLATES ARE PERPENDICULAR TO WALL, ATTACH MOTOR/BKT BRACE TO BRACKET AND WALL AS SHOWN.

2) MAKE SURE THAT BOLTS ARE TIGHT AND BRACKET PLATE IS PERPENDICULAR TO WALL.

# INSTRUCTIONS FOR SETTING ROTARY LIMIT SWITCH

**CAUTION: ONLY ADJUST THE ROTARY LIMIT SWITCH WITH THE POWER "OFF".**
**ONLY TRAINED PERSONNEL SHOULD SET OR ADJUST THE LIMIT SWITCH.**

1) USING THE MANUAL OPERATOR, LOWER OR RAISE THE CURTAIN TO THE MIDPOINT OF THE OPENING.
2) OPEN THE LIMIT SWITCH BOX AND IDENTIFY ALL PARTS:
   Ⓐ DETENT PLATE Ⓑ CAM NUT Ⓒ BASIC SWITCHES
3) DEPRESS THE SPRING LOADED DETENT PLATE AND ROTATE EACH CAM NUT APPROXIMATELY 1/8" FROM THE BASIC SWITCHES AS SHOWN BELOW.



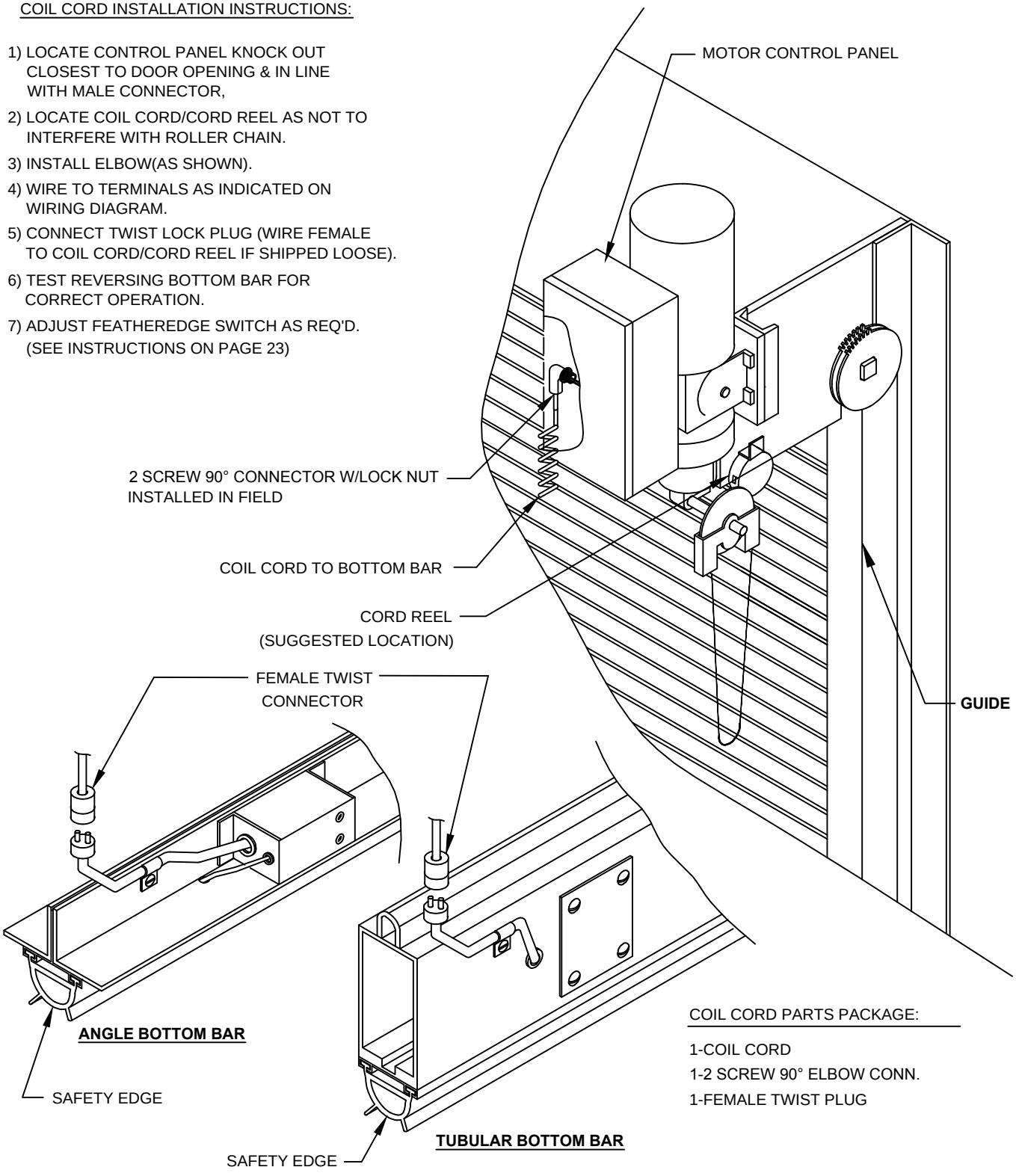
C7

4) APPLY POWER TO THE MOTOR AND TEST THE OPERATION OF THE DOOR. AS THE DOOR IS OPENING THE "OPEN" CAM NUT SHOULD BE TRAVELING TOWARDS THE "OPEN" BASIC SWITCH. AS THE DOOR IS CLOSING THE "CLOSE" CAM NUT SHOULD BE TRAVELING TOWARDS THE "CLOSE" BASIC SWITCH. THE CAM NUTS ARE DESIGNED TO ACTIVATE THE BASIC SWITCHES AND TERMINATE THE TRAVEL OF THE DOOR.
5) IMPORTANT: CHECK THAT THE MOTOR IS CORRECTLY WIRED IN REGARDS TO ROTATION AND DIRECTION. OPERATE THE OPEN AND CLOSE FUNCTIONS. IF THE MODE OF OPERATION IS INCORRECT (WHEN THE "OPEN" FUNCTIONS OF THE CONTROL STATION MAKES THE DOOR CLOSE OR THE "CLOSE" FUNCTIONS OF THE CONTROL STATION MAKES THE DOOR OPEN) OR THE ROTATION DIRECTION OF THE CAM NUT IS INCORRECT (CAM NUT TRAVELS TOWARD THE "OPEN" BASIC SWITCH WHEN CLOSING AND THE "CLOSE" BASIC SWITCH WHEN OPENING) DISCONTINUE OPERATION OF THE DOOR AND CHECK THE WIRING. ALL WIRING MUST BE CORRECT BEFORE PROCEEDING.
6) ONCE THE CORRECT ROTATION AND ORIENTATION OF THE CONTROL FUNCTIONS AND BASIC SWITCHES HAS BEEN DETERMINED, PROCEED WITH THE FINALIZED SETTING OF THE ROTARY LIMIT SWITCH.
7) TURN POWER OFF. WITH THE MANUAL OPERATOR LOWER THE DOOR TO THE FULLY CLOSED POSITION. ROTATE THE "CLOSE" CAM NUT TOWARD THE "CLOSE" BASIC SWITCH UNTIL THE SWITCH CLICKS. THE "CLOSE" BASIC SWITCH IS NOW SET. RAISE THE DOOR TO THE FULLY OPEN POSITION. ROTATE THE "OPEN" CAM NUT TOWARD THE "OPEN" BASIC SWITCH UNTIL THE SWITCH CLICKS. THE OPEN BASIC SWITCH IS NOW SET.
8) MAKE SURE THAT THE DETENT PLATE IS FULLY ENGAGED IN THE SLOTS OF EACH CAM NUT, REPLACE THE COVER ON THE LIMIT SWITCH AND APPLY POWER TO THE MOTOR OPERATOR TO TEST THE OPERATION OF THE DOOR. IF FURTHER FINE TUNING ADJUSTMENTS ARE REQUIRED MAKE SURE THAT THE POWER IS OFF BEFORE ADJUSTMENTS ARE MADE.

# SAFETY EDGE COIL CORD/ CORD REEL INSTALLATION INSIDE DOOR WITH MOTOR MOUNTED CONTROLLER

COIL CORD INSTALLATION INSTRUCTIONS:

1) LOCATE CONTROL PANEL KNOCK OUT CLOSEST TO DOOR OPENING & IN LINE WITH MALE CONNECTOR,
2) LOCATE COIL CORD/CORD REEL AS NOT TO INTERFERE WITH ROLLER CHAIN.
3) INSTALL ELBOW(AS SHOWN).
4) WIRE TO TERMINALS AS INDICATED ON WIRING DIAGRAM.
5) CONNECT TWIST LOCK PLUG (WIRE FEMALE TO COIL CORD/CORD REEL IF SHIPPED LOOSE).
6) TEST REVERSING BOTTOM BAR FOR CORRECT OPERATION.
7) ADJUST FEATHEREDGE SWITCH AS REQ'D. (SEE INSTRUCTIONS ON PAGE 23)

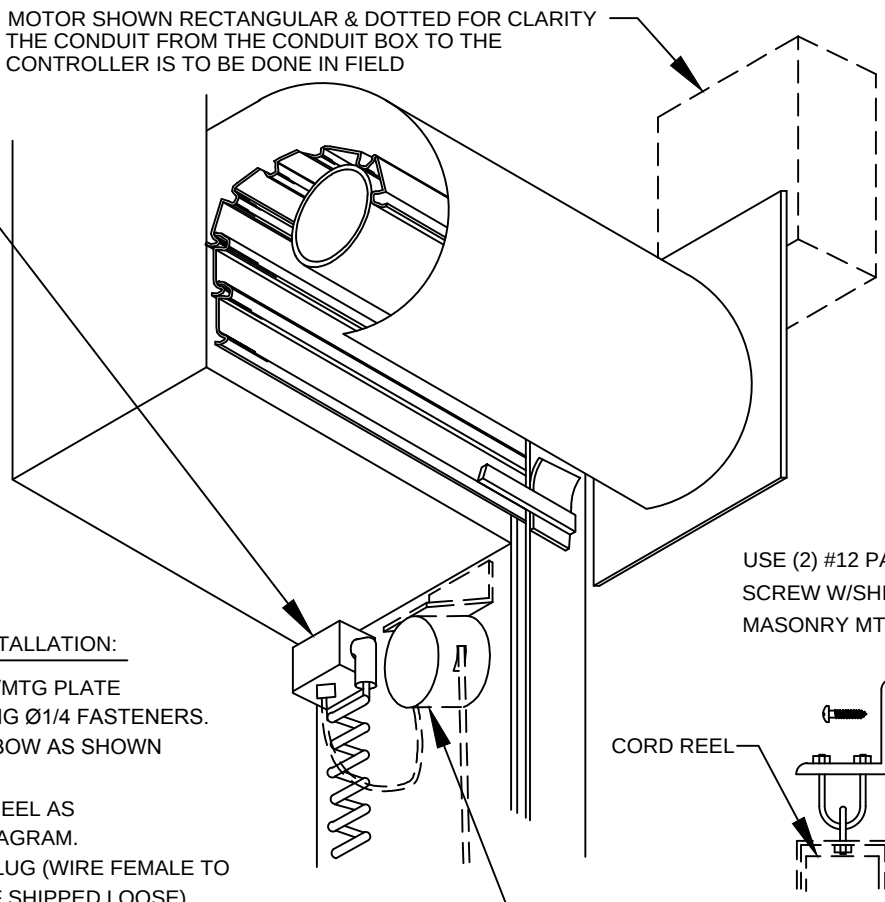



COIL CORD PARTS PACKAGE:

1-COIL CORD
1-2 SCREW 90° ELBOW CONN.
1-FEMALE TWIST PLUG

D1

# SAFETY EDGE COIL CORD/ CORD REEL INSTALLATION OUTSIDE AND ABOVE MOUNTED DOORS

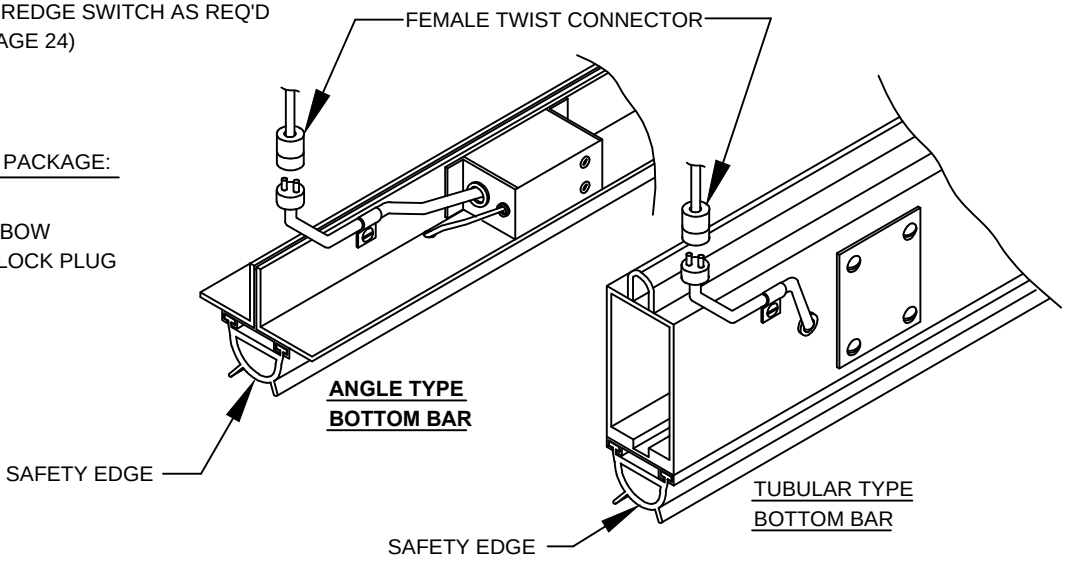



COIL CORD/CORD REEL INSTALLATION:

1) FASTEN CONDUIT BOX W/MTG PLATE TO WALL AS SHOWN USING Ø1/4 FASTENERS.
2) INSTALL 2 SCREW 90° ELBOW AS SHOWN IF USING COIL CORD.
3) WIRE COIL CORD/CORD REEL AS INDICATED ON WIRING DIAGRAM.
4) CONNECT TWIST LOCK PLUG (WIRE FEMALE TO COIL CORD/CORD REEL IF SHIPPED LOOSE).
5) TEST REVERSING BOTTOM BAR FOR CORRECT OPERATION.
6) ADJUST FEATHEREDGE SWITCH AS REQ'D (SEE INST. ON PAGE 24)

COIL CORD PARTS PACKAGE:

1 - COIL CORD
2 - 2 SCREW 90° ELBOW
3 - FEMALE TWIST LOCK PLUG

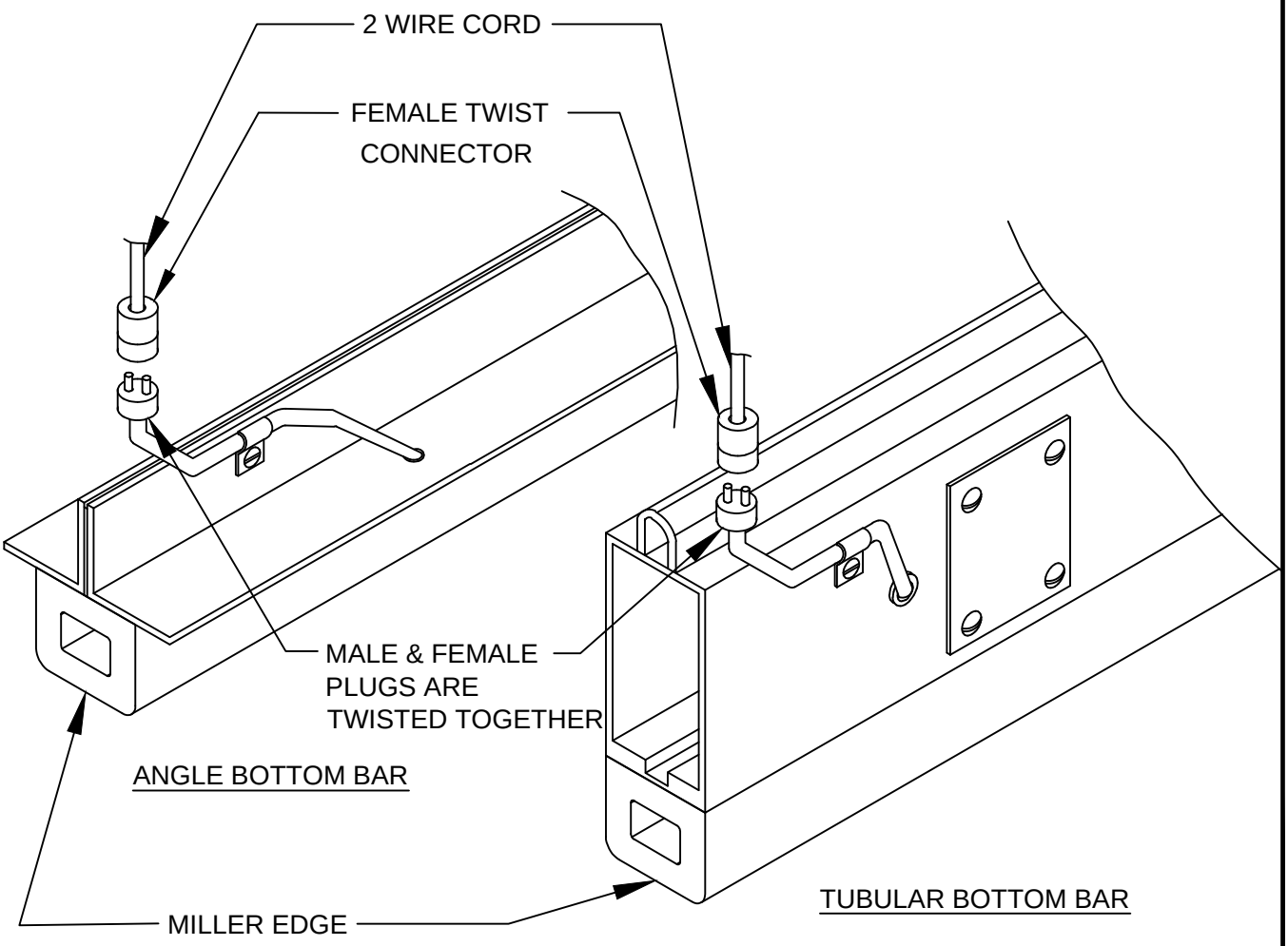



D2

# MILLER EDGE
# INSTALLATION INSTRUCTIONS

**<u>NOTE:</u> EDGE IS PROVIDED PREWIRED ON BOTTOM BAR. IF WIRELESS EDGE IS PROVIDED, FOLLOW THE INSTRUCTIONS FOUND INSIDE THE KIT BOX.**

1) LOCATE COIL CORD/CORD REEL AS NOT TO INTERFERE WITH ROLLER CHAIN.
2) WIRE THE FEMALE PLUG TO THE COIL CORD FOR WIRELESS EDGE KITS. FOLLOW THE INSTRUCTIONS FOUND INSIDE THE WIRELESS KIT BOX.
3) TEST BOTTOM BAR FOR CORRECT OPERATION.
4) IF MOTOR DOES NOT OPERATE OR EDGE SHOWS A FAULT CONDITION TEST EDGE CONTINUITY OR RESISTANCE. (MONITORED EDGES WILL HAVE A RESISTANCE OF 10K +/- 10%)(NON-MONITORED EDGES MUST SHOW CONTINUITY EVERY TIME THE EDGE IS DEPRESSED)



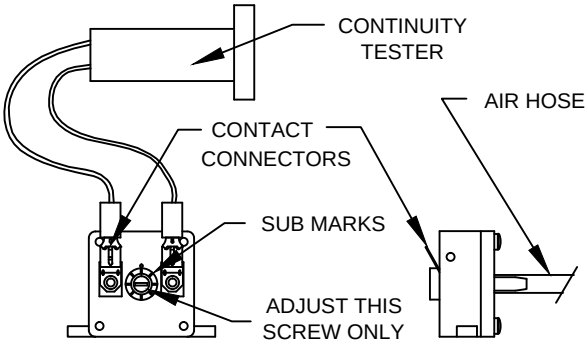

D3

# SETTING INSTRUCTIONS FOR FEATHEREDGE SWITCH

The Featheredge switch has been factory preset for normal operation from the supplier. The factory preset setting is 0.3mm to 0.4mm contact opening. Adjustment of the switch is not necessary unless operation will be under extremely unusual circumstances.

**ALTERATION OF THE FACTORY PRESET SWITCH**

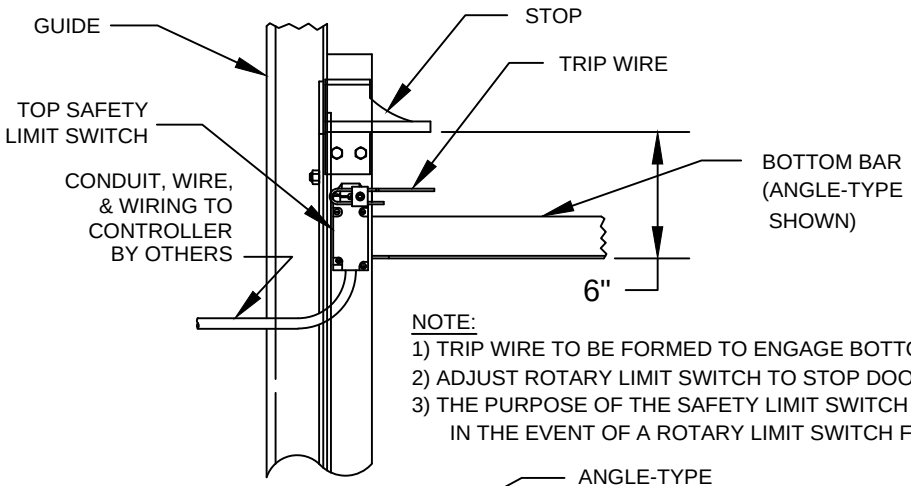
1) Connect a multimeter/continuity tester (Ohm range) to the contact connectors on the switch.
2) Turn contact screw in a clockwise direction until contact is acheived. (Contact opening = 0.0mm)
3) Turn the contact screw in a counter clockwise direction until the desired contact distance is reached. Scale division on the switch is: 1 Sub marking = 0.1mm of contact opening (Factory = 0.3mm to 0.4mm). The closer the setting is to 0.0mm, the more sensitive the switch becomes.



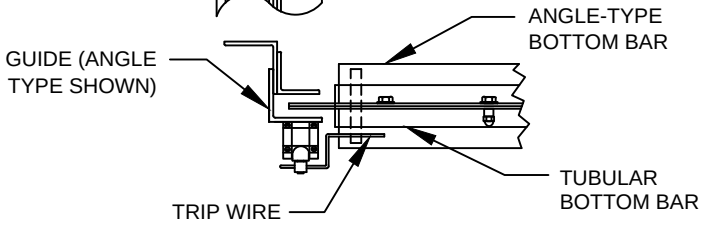

CONTACT ADJUSTMENT SCREW

D4

# TOP SAFETY LIMIT SWITCH INSTALLATION

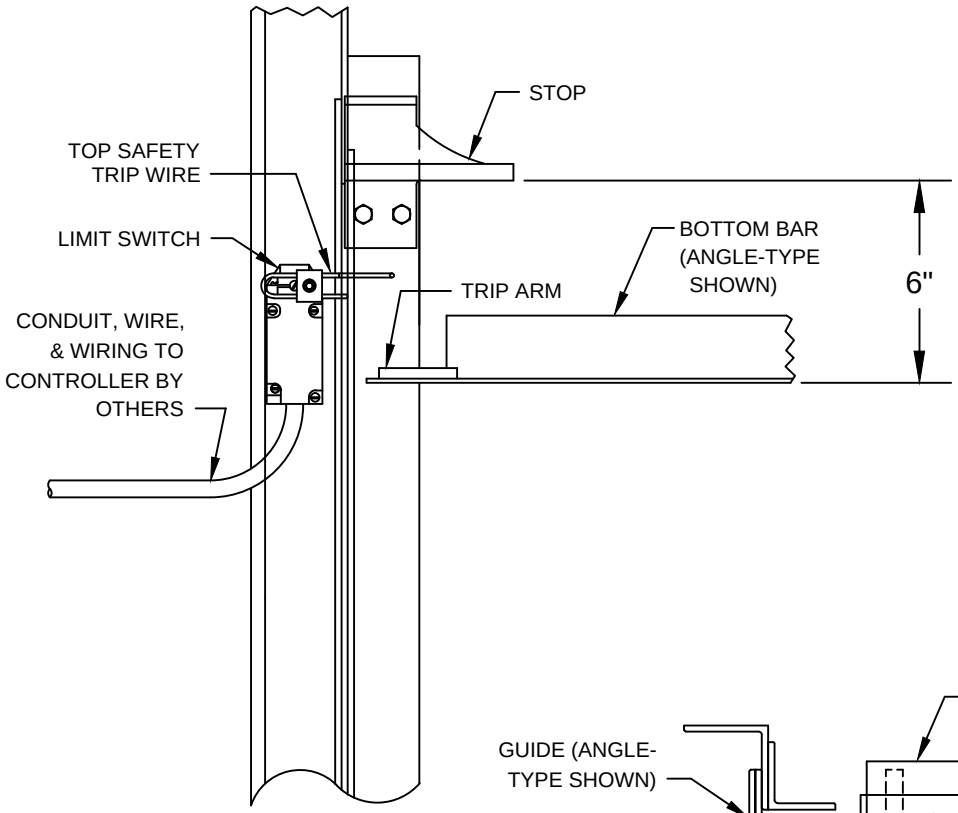


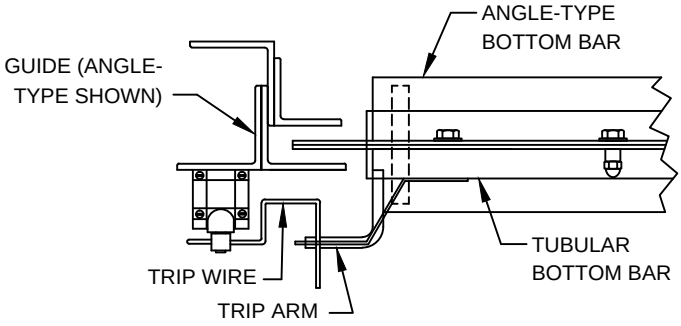

NOTE:
1) TRIP WIRE TO BE FORMED TO ENGAGE BOTTOM BAR AS SHOWN.
2) ADJUST ROTARY LIMIT SWITCH TO STOP DOOR 6" BELOW STOP.
3) THE PURPOSE OF THE SAFETY LIMIT SWITCH IS TO STOP THE DOOR IN THE EVENT OF A ROTARY LIMIT SWITCH FAILURE.

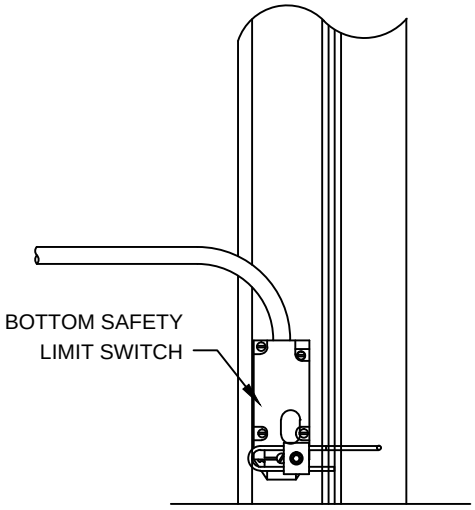



D5

# TOP AND BOTTOM SAFETY LIMIT SWITCH INSTALLATION



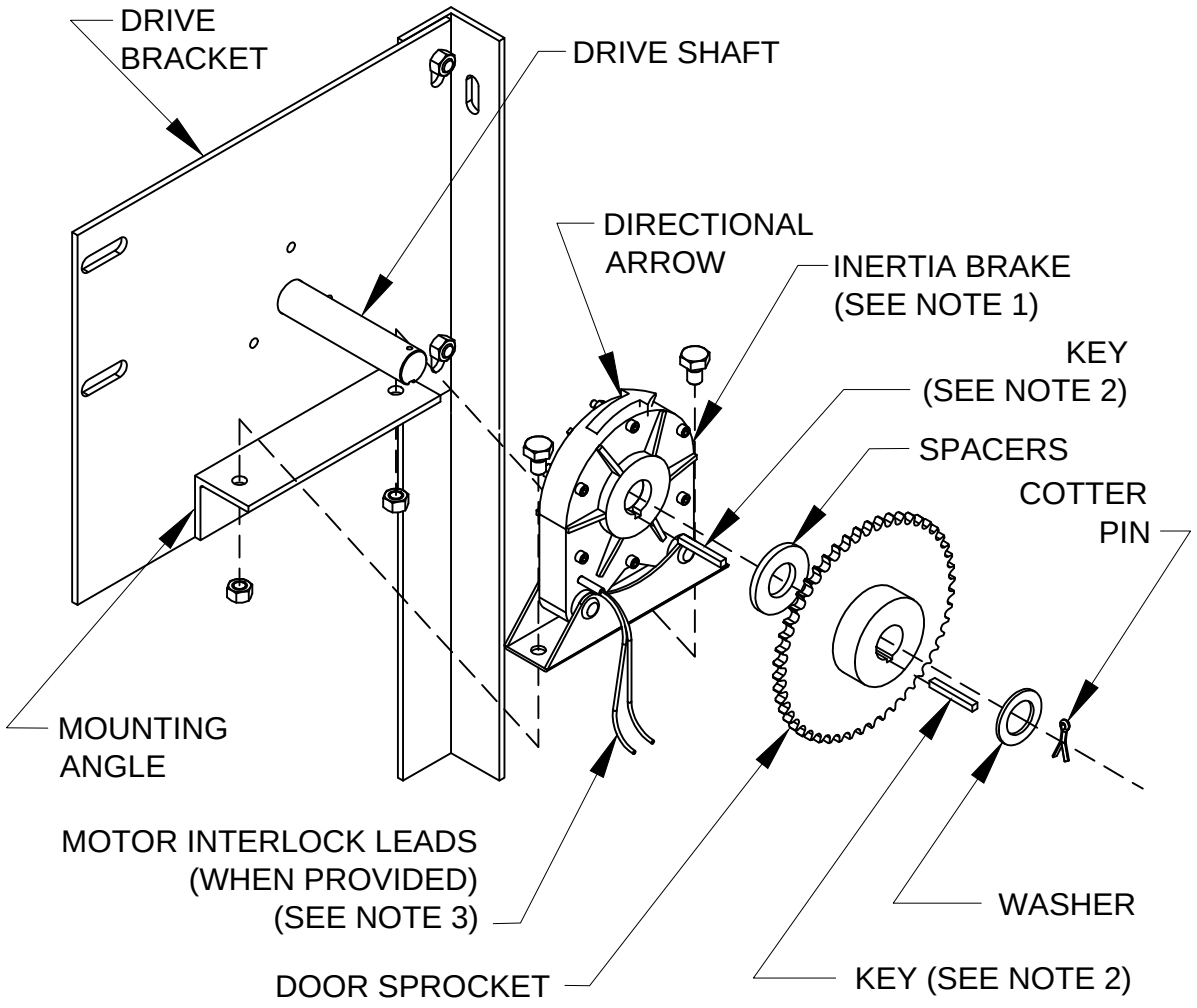




NOTE:

1) TRIP WIRE TO BE FORMED TO ENGAGE TRIP ARM AS SHOWN.
2) ADJUST ROTARY LIMIT SWITCH TO STOP DOOR 6" BELOW STOP.
3) THE PURPOSE OF THE SAFETY LIMIT SWITCHES ARE TO STOP THE DOOR IN THE EVENT OF A ROTARY LIMIT SWITCH FAILURE.

# INERTIA BRAKE
# INSTALLATION INSTRUCTIONS




D7

INSTRUCTIONS:

1) Remove Brake from Drive Bracket prior to mounting Barrel/Bracket Assy to Guides.
2) Slide Brake over end of Drive Shaft, align keyways and insert Key. IMPORTANT: Arrow on Brake must point in the direction the Barrel rotates when the door is closing.
3) Bolt Brake to Mounting Angle w/provided fasteners.
4) Install provided Spacers, Door Sprocket and Key as shown.
5) Align Sprocket with Motor Sprocket, tighten Sprocket Set Screws and install Washer & Cotter Pin to end of Drive Shaft.

NOTES:

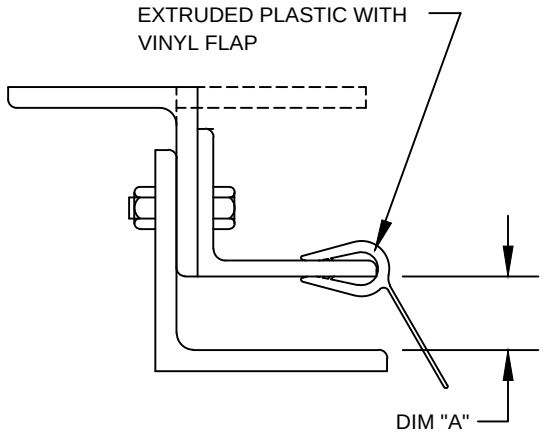
1) Directional arrow on Brake must point in the direction the Barrel rotates when the Door is closing. (Towards the wall)
2) Key length must be at least as long as Hub.
3) Wire Interlock to Motor Control Circuit.

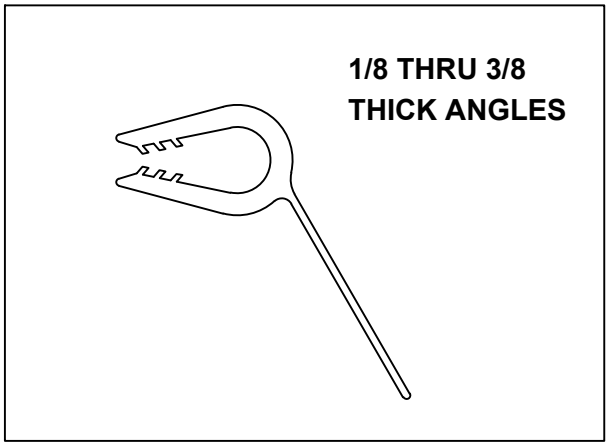
# GUIDE WEATHERSTRIP
# INSTALLATION INSTRUCTIONS

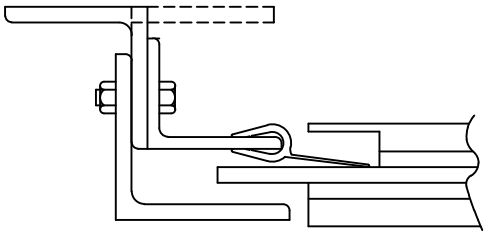
1) THIS DOOR(S) IS EQUIPPED WITH GUIDE WEATHERSTRIPPING, WHICH IS SHIPPED LOOSE AND PACKAGED WITH THE HOOD OR IN A SEPARATE TUBE. THE WEATHERSTRIPPING CONSISTS OF A PLASTIC EXTRUSION WITH A VINYL FLAP. IT IS DESIGNED TO BE INSTALLED WHEN THE DOOR(S) IS INSTALLED.
2) PRIOR TO INSTALLATION OF THE WEATHERSTRIP, MEASURE THE GUIDE'S CURTAIN SLOT THROUGH THEIR FULL HEIGHT. THESE SLOTS ARE FACTORY PRESET, BUT MIGHT BE ALTERED BY JARRING DURING SHIPMENT OR INSTALLATION. COMPARE THE MEASUREMENTS TO THE ILLUSTRATIONS BELOW. TO OPEN A TIGHT SLOT, LOOSEN THE GUIDE BOLTS AND MOVE THE GUIDE ANGLES UNTIL THE PROPER SLOT DIMENSION IS OBTAINED AND RETIGHTEN THE BOLTS.

**NOTICE: A RUBBER MALLET SHOULD BE USED TO PROPERLY INSTALL THE WEATHERSTRIP. <u>DO NOT</u> INSTALL THE WEATHERSTRIP USING A STEEL HAMMER. USE CAUTION WHEN INSTALLING THE WEATHERSTRIP BELOW FREEZING TEMPERATURES, AS IT MAY CRACK IF HANDLED OR INSTALLED IMPROPERLY. IF POSSIBLE STORE THE WEATHERSTRIP ABOVE FREEZING TEMPERATURES UNTIL INSTALL.**

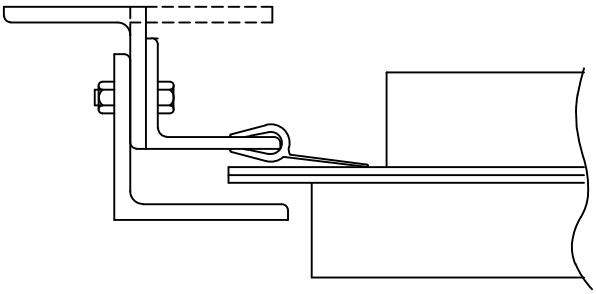
3) THE WEATHERSTRIP SHOULD COVER FROM THE BOTTOM OF THE BRACKET TO THE BOTTOM OF THE GUIDE. CHECK THIS BY EITHER MEASURING IT OR HOLDING IT UP TO THE GUIDE. IF THE WEATHERSTRIP DOES NOT COVER FROM THE GROUND TO THE BOTTOM OF THE BRACKET, A SPLICED SECTION IS NEEDED. PROCEED TO STEP 6. IF NO SPLICE IS NEEDED PROCEED TO STEP 4.
4) START AT THE TOP OF THE GUIDE AND WORK DOWNWARD. BE SURE THAT THE WEATHERSTRIP IS FULLY SEATED ON THE ANGLE. <u>NOTE</u>: STARTING AT THE BOTTOM MAY BE DIFFICULT, AS THE FLEXIBILITY OF THE MATERIAL WILL CAUSE IT TO PULL AWAY FROM THE GUIDE AS IT IS BEING INSTALLED.
5) RUN THE DOOR UP AND DOWN A FEW TIMES TO ENSURE THAT THE WEATHERSTRIP IS INSTALLED PROPERLY.



**<u>WEATHERSTRIP WITH TUBULAR BOTTOM BAR</u>**

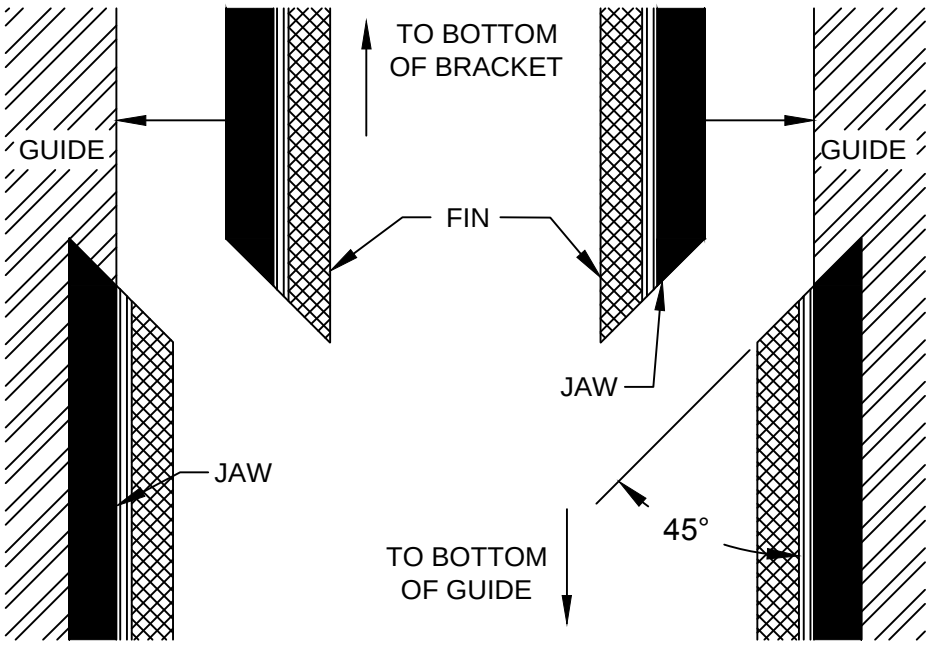


**<u>WEATHERSTRIP WITH ANGLE BOTTOM BAR</u>**

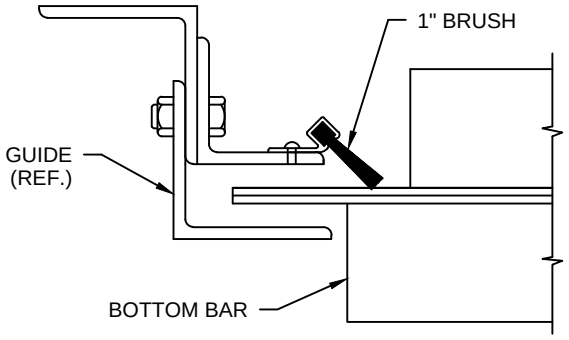
# GUIDE WEATHERSTRIP
# INSTALLATION INSTRUCTIONS (CONT)

**NOTICE: A RUBBER MALLET SHOULD BE USED TO PROPERLY INSTALL THE WEATHERSTRIP. DO NOT INSTALL THE WEATHERSTRIP USING A STEEL HAMMER. USE CAUTION WHEN INSTALLING THE WEATHERSTRIP BELOW FREEZING TEMPERATURES, AS IT MAY CRACK IF HANDLED OR INSTALLED IMPROPERLY. IF POSSIBLE STORE THE WEATHERSTRIP ABOVE FREEZING TEMPERATURES UNTIL INSTALL.**

6) A CRAFTSMAN HANDI-CUT UTILITY CUTTER IS RECOMMENDED (OR TIN SNIPS OR OTHER CUTTING DEVICE) FOR CUTTING THE WEATHERSTRIP. TRIM THE BOTTOM OF THE UPPER PIECE AT A 45 DEGREE ANGLE FROM THE CHANNEL THROUGH TO THE WIPER. TRIM THE TOP OF THE LOWER PIECE AT A 45 DEGREE ANGLE FROM THE WIPER AND CHANNEL. SEE FIGURE 38 FOR HOW TO TRIM THE WEATHERSTRIP. TAPE OR OTHER ADHESIVE CAN BE USED TO JOIN THE SPLICED WEATHERSTRIP, IF DESIRED.



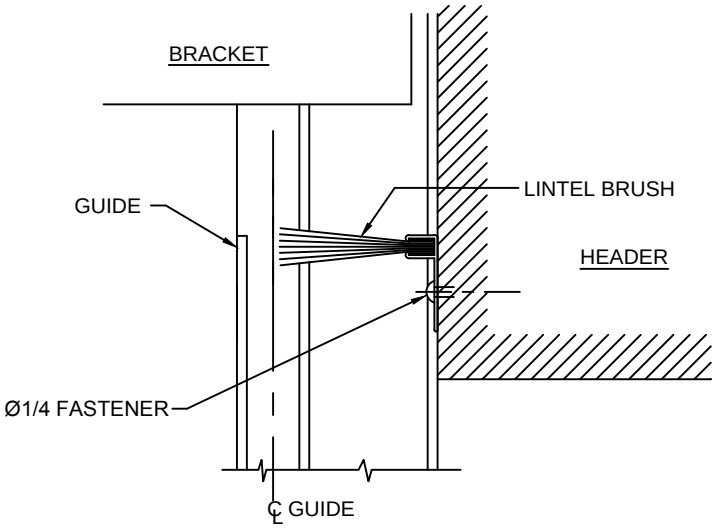
# BRUSH TYPE GASKETING INSTALLATION INSTRUCTION




**JAMB GASKET**

**(SHIP MOUNTED ON GUIDES)**

E3




**LINTEL GASKET**

E4

# FLORIDA APPROVED DOORS

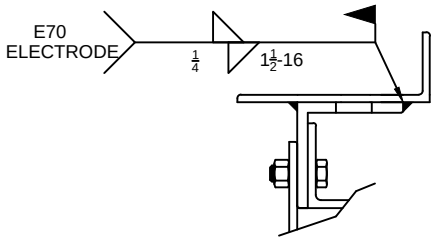
## FASTENER TABLE

| TYPE OF CONSTRUCTION TO WHICH FASTENER EMBEDS | TYPE OF FASTENER TO USE | MINIMUM EMBEDMENT | HOLE SIZE (DRILL Ø) | TAP SIZE (IF REQD) |
|---|---|---|---|---|
| CONCRETE 3000/4000 PSI | Ø1/2" X 4-1/2" HILTI KWIK BOLT 3 ** | 3-1/2" | --- | --- |
| | Ø3/4" X 5-1/2" HILTI KWIK BOLT 3 ** | 4-3/4" | --- | --- |
| STEEL | Ø1/2" BOLT | --- | Ø27/64" | 1/2-13 UNC |
| | Ø5/8 BOLT | --- | Ø17/32" | 5/8-11 UNC |
| | Ø3/4 BOLT | --- | Ø21/32" | 3/4-10 UNC |

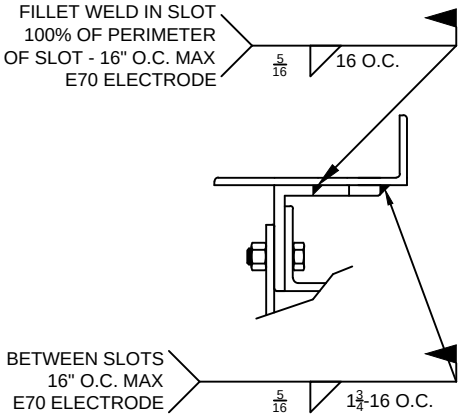
**ANCHORS TO BE INSTALLED PER MANUFACTURERS INSTRUCTIONS

## OPTIONAL WELDED WALL ANGLE INSTALLATION

### TYPE "A" DOORS



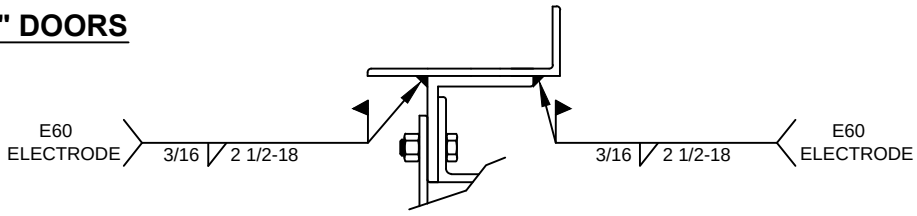

**WELDING TO STEEL JAMB**
**(FOR TYPE 2 GUIDE ONLY)**




**ALTERNATE WELDING TO STEEL JAMB**

**E5**

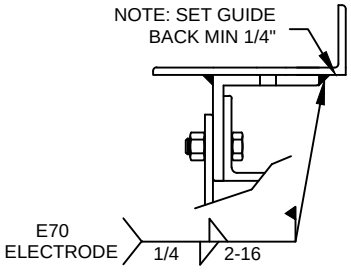
### TYPE "B" DOORS




**WELDING TO STEEL JAMB**
**(FOR TYPE 2 GUIDE ONLY)**

**E6**

### TYPE "C" DOORS

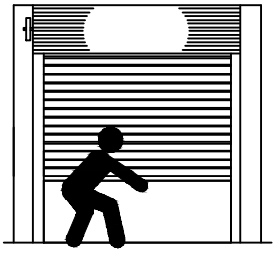


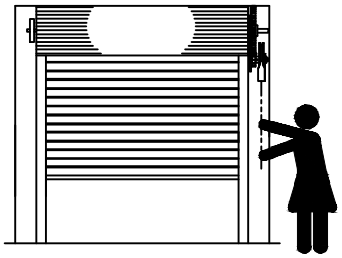

**WELDING TO STEEL JAMB**
**(FOR TYPE 2 GUIDE ONLY)**

**E7**

# OPERATING INSTRUCTIONS

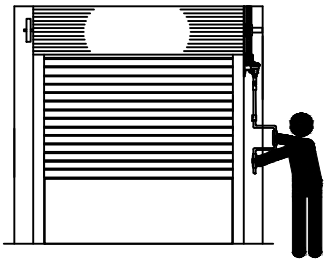
**PUSH-UP -** BE SURE THE ROLLING DOOR IS UNLOCKED, GRIP THE CENTER OF THE BOTTOM BAR & SMOOTHLY LIFT IN AN UPWARD MOTION. TO CLOSE, GENTLY PULL THE BOTTOM BAR DOWN TAKING CAUTION NOT TO LET THE DOOR FALL.

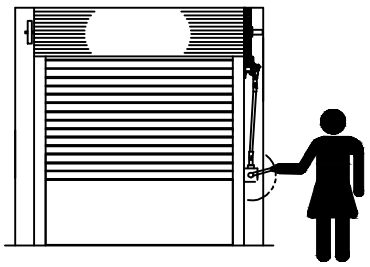




**CHAIN -** PULL THE OUTERMOST PART OF THE CHAIN LOOP (FARTHEST AWAY FROM THE DOOR) VERTICALLY DOWNWARD TO OPEN. TO CLOSE, PULL THE INNERMOST PART OF THE CHAIN LOOP (CLOSEST TO THE DOOR) VERTICALLY DOWNWARD. DO NOT LET THE DOOR FALL; ALWAYS CHAIN IT DOWN, MAINTAINING CONTROL OF THE CHAIN. USE BOTH HANDS TO CONTROL THE DESCENT OF THE DOOR.

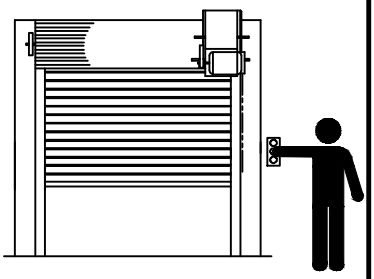
**CRANK -** INSERT TIP OF WINDING SHAFT INTO THE HOOK LOCATED ON THE DRIVE BRACKET. HOLDING THE LOWER OF THE CRANK ROD SECURE WITH ON HAND, CRANK THE MIDDLE PIECE CLOCKWISE WITH THE OTHER HAND. REVERSE THIS ACTION TO CLOSE THE DOOR.





**CRANK BOX -** WITH A SECURE GRIP ON THE HANDLE, CRANK THE HANDLE IN A CLOCKWISE DIRECTION TO OPEN THE DOOR. CRANK COUNTERCLOCKWISE TO CLOSE THE DOOR.

**MOTOR -** PRESS THE OPEN BUTTON TO OPEN THE DOOR, PRESS THE STOP BUTTON TO STOP THE MOVEMENT OF THE DOOR, AND PRESS THE CLOSE BUTTON TO CLOSE THE DOOR.



**WARNING: WHEN OPERATING A ROLLING DOOR ALWAYS MAKE SURE THERE ARE NO OBSTRUCTIONS BLOCKING THE PATH OF MOVEMENT. KEEP FEET AND OTHER LIMBS AWAY FROM THE DOOR WHILE IT IS IN MOTION. WHEN OPENING A PUSH-UP OPERATED DOOR, USE CAUTION TO LIFT WITH YOUR LEGS AND NOT YOUR BACK. THE MANUFACTURER AND AFFILIATES SHALL NOT BE RESPONSIBLE FOR INJURY OR DAMAGE DUE TO FAILURE TO FOLLOW OPERATING INSTRUCTIONS.**

# CURTAIN CARE AND TOUCH-UP INSTRUCTIONS

WHILE ROLLING DOOR FINISHES ARE ENGINEERED TO LAST, THE INHERENT DESIGN OF ROLLING DOOR PRODUCTS WILL EVENTUALLY ABRADE VIRTUALLY ANY APPLIED FINISH. CARE SHOULD BE TAKEN ON DIRTY OR DUSTY JOBSITES NOT TO USE THE DOORS UNLESS THEY HAVE BEEN CLEANED, OTHERWISE THE FINISH MAY BE DAMAGED. ROUTINE CARE AND MAINTENANCE WILL FURTHER HELP PROLONG FINISH LIFE BY REDUCING THE AMOUNT OF WEAR CAUSED BY FOREIGN SUBSTANCES ON THE DOOR CURTAIN. FOLLOWING THE CLEANING AND TOUCH-UP INSTRUCTIONS BELOW WILL HELP TO PROTECT AND MAINTAIN THE SURFACE FINISH.

TO FURTHER PROTECT THE DOOR, IT IS ALSO RECOMMENDED THAT IT BE DISABLED IN THE OPEN POSITION UNTIL PROJECT CLOSE OUT. IF THE DOOR IS TO BE UTILIZED BY OTHER TRADES DURING THE CONSTRUCTION PROCESS, THEN THE CONTRACTOR SHOULD ACCEPT OWNERSHIP OF IT AT THE TIME OF INSTALL TO ENSURE THAT THE DOOR IS TURNED OVER TO THE BUILDING OWNER IN ITS ORIGINAL "NEW" CONDITION.

CLEANING INSTRUCTIONS

1) CLEAN THE DOOR PRIOR TO USE, AND REGULARLY, USING A DAMP CLOTH OR LIGHT SPRAY WASH. REMOVE ALL DUST, DIRT AND DEBRIS FROM THE CURTAIN SURFACE.
2) FOR DOORS WHICH ARE SUBJECTED TO HEAVIER DIRT CONDITIONS, WASH THE DOOR WITH A MIXTURE OF LIGHT DISH SOAP AND WATER. USE 2 OZ OF SOAP FOR EACH GALLON OF WATER, THEN RINSE ALL SOAP FROM THE DOOR AND DRY.

TOUCH-UP INSTRUCTIONS

1) CLEAN THOROUGHLY AND ENSURE THAT THE DOOR IS COMPLETELY DRY.
2) MIX PAINT FOR ONE FULL MINUTE PRIOR TO USE.
3) APPLY MULTIPLE LIGHT COATINGS TO AVOID PAINT RUNS. FOR SPRAY APPLICATIONS, HOLD THE CAN APPROXIMATELY 8" TO 12" FROM THE SURFACE, COVERING ALL WEAR AREAS. FOR BRUSH APPLICATIONS, APPLY EVENLY ACROSS WEAR AREA AND EXTEND OVER COATED AREA.
4) LET DRY FOR 24 TO 48 HOURS BEFORE CYCLING THE DOOR.

# MAINTENANCE INSTRUCTIONS

REGULAR SCHEDULED MAINTENANCE:

ALL ROLLING DOORS SHOULD BE INSPECTED ON A REGULAR BASIS TO ENSURE PROPER AND SAFE OPERATION. THE FREQUENCY OF THE INSPECTION IS DEPENDANT ON THE USAGE OF THE DOOR BUT ALL DOORS SHOULD BE INSPECTED AT LEAST ONCE A MONTH. THE INSPECTION SHOULD CONSIST OF THE FOLLOWING:

A. VISUAL INSPECTION
   1) BENT BOTTOM BARS
   2) DAMAGED SLATS
   3) PINCHED GUIDES
   4) DENTED OR MISSING HOOD

B. CHECK ALL FASTENERS
   1) WALL ATTACHMENT BOLTS
   2) GUIDE ASSEMBLY BOLTS
   3) BRACKET ATTACHMENT BOLTS
   4) SET SCREWS ON GEARS AND SPROCKETS
   5) TENSION WHEEL SECURE
   6) KEYS SECURE

C. CHECK OPERATING ASSEMBLIES
   1) OPERATING ASSEMBLY
   2) GOVERNOR ASSEMBLY
   3) BARREL ASSEMBLY

D. LUBRICATE
   1) ALL PIVOT JOINTS
   2) SHAFTS
   3) ROLLER CHAIN

E. CHECK NORMAL OPERATION
   1) OPERATION
   2) SPRING TENSION
   3) BALANCE

# TROUBLESHOOTING GUIDE

**NOTE: FOR MAINTENANCE OR REPAIR OF THIS PRODUCT, PLEASE CONSULT YOUR LOCAL AUTHORIZED DISTRIBUTOR**

## BARREL

| PROBLEM | CAUSE | CORRECTION |
|---|---|---|
| DOOR STARTS DOWN THEN BINDS | 1) CURTAIN BINDS IN GUIDES.<br>2) SCREWS CONNECTING CURTAIN TO BARREL TOO LONG AND INTERFERING WITH TORSION SPRING.<br>3) INCORRECT BARREL FOR OPENING.<br>4) INTERNAL INTERFERENCE INSIDE BARREL. | 1) INCREASE GUIDE GROOVE OPENING. CURTAIN MUST BE LOOSE IN GUIDES.<br>2) REPLACE MACHINE SCREWS WITH SHORTER LENGTH. THEY MUST NOT PROTRUDE PAST BARREL WALL.<br>3) CHECK DOOR MARK. LOCATE CORRECT BARREL.<br>4) CONSULT DISTRIBUTOR. |
| TENSION WHEEL TURNS FREELY | 1) SPRING BROKEN.<br>2) BROKEN SHAFT TIE.<br>3) BROKEN BARREL TIE. | 1) CONSULT DISTRIBUTOR.<br>2) CONSULT DISTRIBUTOR.<br>3) CONSULT DISTRIBUTOR. |
| TENSION SHAFT SLIPPED INTO BARREL. | 1) DRIVE PIN FAILURE - SHIPPING DAMAGE.<br>2) BEARING FAILURE - SHIPPING DAMAGE. | 1) CONSULT DISTRIBUTOR.<br>2) CONSULT DISTRIBUTOR. |
| DOOR LOSES TENSION (SPRUNG DOORS ONLY) | 1) PAWL SLIPPING ON INTERNAL TENSION WHEEL BECAUSE PAWL IS BINDING ON ATTACHING RIVET.<br>2) DOOR DAMAGED CAUSING INCREASED DRAG.<br>3) HOOPS SLIPPING. | 1) LOOSEN PAWL PIVOT POINT.<br>2) CONSULT DISTRIBUTOR.<br>3) TIGHTEN HOOPS. |
| DRIVE SHAFT CROOKED | 1) BROKEN WELD OR SHIPPING DAMAGE. | 1) CONSULT DISTRIBUTOR FOR DETERMINATION IF FIELD REPAIR IS POSSIBLE. |

## CURTAIN

| PROBLEM | CAUSE | CORRECTION |
|---|---|---|
| CURTAIN ROLLS UP UNEVENLY | 1) TOP SLAT NOT IN LINE.<br>2) BARREL NOT LEVEL. | 1) LOOSEN TOP SCREWS AND STRAIGHTEN CURTAIN.<br>2) USE BUBBLE LEVEL TO LEVEL BARREL. |
| DOOR CURTAIN SEPARATES | 1) FREIGHT DAMAGE. | 1) CONSULT DISTRIBUTOR. |
| CURTAIN SEPARATES FROM BARREL | 1) MACHINE SCREWS PULLED THRU TOP SLAT.<br>2) INTERLOCKS NOT INSTALLED ON MOTOR OPERATED DOOR. | 1) INSTALL WASHER UNDER HEAD OF SCREWS.<br>1) INSTALL INTERLOCKS TO PREVENT MOTOR OPERATION WHEN DOOR IS LOCKED. |

# TROUBLESHOOTING GUIDE

**NOTE: FOR MAINTENANCE OR REPAIR OF THIS PRODUCT, PLEASE CONSULT YOUR LOCAL AUTHORIZED DISTRIBUTOR**

## CURTAIN (CONT)

| PROBLEM | CAUSE | CORRECTION |
|---|---|---|
| FINISH PROBLEMS | 1) DOOR CORRODES DUE TO ENVIRONMENTAL CONDITIONS. | 1) CLEAN DOOR PERIODICALLY. |
| CURTAIN APPEARS TO SAG AT CENTER | 2) CENTER OF CURTAIN IS AGAINST BARREL AND EDGE OF CURTAIN IS PULLED TOWARD LINTEL AS IT ENTERS GUIDES.<br>3) BARREL DEFLECTION OF WIDE DOORS. SHOULD NOT EXCEED .03 INCHES PER FOOT OF OPERATING WIDTH. | 2) CURVATURE OF CURTAIN MAKES IT APPEAR TO BE SAGGING WHILE IT IS ACTUALLY LEVEL. CHECK WITH CARPENTER'S LEVEL.<br>3) CONSULT DISTRIBUTOR.<br>1) CONSULT DISTRIBUTOR. |

## BOTTOM BAR

| PROBLEM | CAUSE | CORRECTION |
|---|---|---|
| SAFETY EDGE NOT WORKING | 1) OPEN CIRCUIT IN BOTTOM BAR. CONFIRM THIS BY DISCONNECTING PLUG AT BOTTOM BAR AND INSERTING CONTINUITY CHECKER. IF PRESSING UP ON SAFETY EDGE DOES NOT CLOSE CIRCUIT, PROBLEM IS OPEN CIRCUIT IN BOTTOM BAR.<br>2) OPEN CIRCUIT IN COIL CORD OR CORD REEL. CONFIRM THIS BY INSERTING VOLTMETER INTO PLUG. READING SHOULD BE 24VAC.<br>3) DOOR LOCATED IN EXTREMELY WET OR FLOOD ENVIRONMENT. | 1) DEFECTIVE SWITCH OR CONNECTION AT SWITCH TO PLUG. CHECK TO MAKE SURE ALL WIRES ARE SECURELY FASTENED. REPLACE SWITCH IF NECESSARY.<br>2) REPLACE COIL CORD OR CORD REEL.<br>3) ELIMINATE WATER. REPLACE SAFETY EDGE OR SAFETY EDGE SWITCH. |
| LOCKS INOPERATIVE | 1) CAM OF CYLINDER NOT IN CORRECT POSITION.<br>2) DAMAGE TO INTERNAL COMPONENTS | 1) REPOSITION CYLINDER AND FIRMLY SECURE WITH SMALL SCREW LOCATED BELOW CYLINDER.<br>2) REMOVE BOTTOM BAR FROM GUIDE. REPLACE LOCK MECHANISM. |
| ELECTRICAL INTER-LOCKS INOPERATIVE | 1) LOCK BOLT DOES NOT LINE UP WITH SWITCH ON GUIDE.<br>2) INTERLOCK DOES NOT PREVENT MOTOR FROM OPERATING. | 1) ADJUST SWITCH LOCATION WHERE IT IS MOUNTED ON GUIDES.<br>2) DEFECTIVE SWITCH. CHECK ELECTRICAL CONNECTION AND REPLACE IF NECESSARY. |

# TROUBLESHOOTING GUIDE

**NOTE: FOR MAINTENANCE OR REPAIR OF THIS PRODUCT, PLEASE CONSULT YOUR LOCAL AUTHORIZED DISTRIBUTOR**

## BRACKET

| PROBLEM | CAUSE | CORRECTION |
|---|---|---|
| BRACKETS NOT PERPENDICULAR TO BARREL | 1) WALL ANGLE FLANGE NOT SQUARE. | 1) BRACE BRACKET INTO POSITION. |
| DRIVE CHAIN TENSION | 1) SPROCKET POSITION OUT OF ADJUSTMENT. | 1) TIGHTEN CHAIN BY SLIDING OPERATOR OR REMOVE LINK FROM CHAIN. |
| BINDING IN BEVEL GEAR BOX | 1) LACK OF LUBRICATION. | 1) LUBRICATE GEAR BOX. |

## GUIDES

| PROBLEM | CAUSE | CORRECTION |
|---|---|---|
| CURTAIN BINDS IN GUIDE GROOVE | 1) INCORRECT GUIDE GROOVE OPENING.<br>2) INCORRECT TIP-TO-TIP DIMENSION OF GUIDES. | 1) REFER TO INSTALLATION INSTRUCTIONS AND ADJUST GUIDE GROOVE OPENING.<br>2) REFER TO INSTALLATION INSTRUCTIONS FOR TIP-TO-TIP DIMENSION AND ADJUST GUIDE SPACING. |

## HOODS

| PROBLEM | CAUSE | CORRECTION |
|---|---|---|
| INCORRECT DIMENSIONS, MATERIAL OE END COVERS | 1) ORDERING PROCESSING PROBLEM. OPENING. | 1) GET ALL DIMENSIONS OF MATERIAL SUPPLIED AND CONSULT DISTRIBUTOR. |

## MOTOR OPERATOR

| PROBLEM | CAUSE | CORRECTION |
|---|---|---|
| EMERGENCY HAND CHAIN OR CRANK FAILS OR IS DIFFICULT TO OPERATE DOOR. (THIS IS NORMAL ON UN-SPRUNG DOORS) | 1) DOOR MAY BE JAMMED OR OBSTRUCTED.<br>2) INCORRECT TENSION IN SPRING.<br>3) DOOR MAY BE LOCKED.<br>4) PROBLEM IN GEARBOX HOUSING. | 1) REMOVE OBSTRUCTION.<br>2) MAKE SURE THAT SPRING HAS CORRECT TENSION.<br>3) CHECK TO SEE IF LOCK IS DISENGAGED.<br>4) CONSULT DISTRIBUTOR. |
| EMERGENCY HAND OR CRANK TURNS BUT DOES NOT TURN THE OUTPUT SHAFT OF GEAR BOX | 1) KEYS FIXING GEARS TO SHAFTS ARE SHEARED. | 1) CHECK KEYS AND KEYWAYS. |

# TROUBLESHOOTING GUIDE

**NOTE: FOR MAINTENANCE OR REPAIR OF THIS PRODUCT, PLEASE CONSULT YOUR LOCAL AUTHORIZED DISTRIBUTOR**

## MOTOR OPERATOR (CONT)

| PROBLEM | CAUSE | CORRECTION |
|---|---|---|
| FINISH PROBLEMS | 1) DOOR CORRODES DUE TO ENVIRONMENTAL CONDITIONS. | 1) CLEAN DOOR PERIODICALLY. |
| CURTAIN APPEARS TO SAG AT CENTER | 2) CENTER OF CURTAIN IS AGAINST BARREL AND EDGE OF CURTAIN IS PULLED TOWARD LINTEL AS IT ENTERS GUIDES.<br>3) BARREL DEFLECTION OF WIDE DOORS. SHOULD NOT EXCEED .03 INCHES PER FOOT OF OPERATING WIDTH. | 2) CURVATURE OF CURTAIN MAKES IT APPEAR TO BE SAGGING WHILE IT IS ACTUALLY LEVEL. CHECK WITH CARPENTER'S LEVEL.<br>3) CONSULT DISTRIBUTOR.<br>1) CONSULT DISTRIBUTOR. |
| MOTOR FAILS TO RUN OR CONTROL CIRCUIT FAILS TO ENERGIZE | 1) FUSES BLOWN OR CIRCUIT BREAKER TRIPPED.<br>2) OPERATORS ARE PROTECTED FROM RUNNING IN OVERLOAD CONDITION BY THERMAL OVERLOAD DEVICES OF THE AUTOMATIC RESET TYPE.<br>3) IF CONTACTS FOR MOTOR CONTROLLER ENERGIZE BUT MOTOR STILL FAILS TO OPERATE.<br>4) PUSHBUTTONS ENERGIZE ON ONLY ONE SIDE OF THE CONTROL CONTACTS. | 1) CHECK FUSE OR CIRCUIT BREAKER BOX.<br>2) CONSULT DISTRIBUTOR.<br>3) CONSULT DISTRIBUTOR.<br>4) CHECK ALL ELECTRICAL CONNECTIONS FOR BROKEN OR LOOSE WIRES, ETC. CHECK ELECTRICAL CONNECTIONS FOR ANY OPTIONAL EQUIPMENT: CARD KEY, CYLINDER KEY SWITCH, PHOTO CELL, REVERSING BOTTOM BAR OR SPECIAL INTERLOCKS. |
| MOVEMENT OF THE DOOR IS IN AGREEMENT WITH PUSHBUTTON STATION, BUT THE LIMIT SWITCH DOES NOT STOP DOOR | 1) ELECTRICAL CONNECTIONS ARE SWITCHED. | 1) CHECK ELECTRICAL CONNECTIONS AND JUMPER WIRE LEAD BETWEEN THE MICRO SWITCHES. CONSULT DISTRIBUTOR. |
| LIMIT SWITCH DOES NOT HOLD ITS SETTING. | 1) SPROCKET SHAFT END PLAY TOO LARGE.<br>2) DRIVE CHAIN LOOSE.<br>3) LIMIT SWITCH DETENT PLATE LOOSE. | 1) END PLAY SHOULD NOT EXCEED 1/32".<br>2) CHECK DRIVE CHAIN.<br>3) THE PLATE MUST ENGAGE BOTH TRAVELING CAMS. |
| ELECTRICAL CONTROL CIRCUIT ENERGIZES BUT THE MOTOR DOES NOT RUN OR MOTOR OVERLOADS TRIP. | 1) INCORRECT WIRING. | 1) CONSULT DISTRIBUTOR. |

# TROUBLESHOOTING GUIDE

**NOTE: FOR MAINTENANCE OR REPAIR OF THIS PRODUCT, PLEASE CONSULT YOUR LOCAL AUTHORIZED DISTRIBUTOR**

## MOTOR OPERATOR (CONT)

| PROBLEM | CAUSE | CORRECTION |
|---|---|---|
| LOW VOLTAGE TO MOTOR. | 1) INCORRECT ELECTRICAL POWER TO MOTOR. | 1) CHECK VOLTAGE AGAINST THE CORRECT VOLTAGE STAMPED ON THE MOTOR. IF THE VOLTAGE IS 10% BELOW THE RATING, THERE IS NOT SUFFICIENT VOLTAGE TO RUN THE MOTOR. |
| MOTOR IS BURNED OUT. | 1) INCORRECT WIRING. | 1) CONSULT DISTRIBUTOR. |