

**MARK IV VERTICAL SLIDING HEAVY DUTY POWER
SPLIT DOOR INSTALLATION, OPERATION, MAINTENANCE,
LUBRICATION AND TROUBLE SHOOTING INSTRUCTIONS**

AFTER INSTALLING DOOR, FORWARD TO MAINTENANCE DEPARTMENT OR OWNER

JAMISON DOOR COMPANY
P. O. BOX 70
HAGERSTOWN, MD 21741

01-26-98

DJ-9032-23
S/N 996533

INDEX SHEET

I.	<u>INSTALLATION INSTRUCTIONS</u>	
	<u>GENERAL INFORMATION</u>	1
	MINIMUM CLEARANCES REQUIRED.....	2
	STANDARD CASING ERECTION.....	3
	FREEZER CASING ERECTION.....	4
	UPPER SPREADER ANGLE ATTACHMENT.....	5
	SECURING VERTICAL ANGLES TO BUCKS.....	6
	PLACING DOOR INTO TRACK.....	7
	RIGGING DETAILS FOR COUNTERWEIGHT.....	8
	LOWER SPREADER ANGLE ATTACHMENT.....	9
	TOP AND BOTTOM IDLER ASSEMBLY ATTACHMENT.....	10
	CONNECTING DRIVE CHAIN.....	11
	DOOR AND GASKET ADJUSTMENT.....	12
	COUNTERWEIGHT BOX ASSEMBLY.....	13
	WIRING CONNECTIONS TO DOOR PANEL.....	14
	PULL CORD SWITCH CONNECTIONS.....	15
	CONNECT MAIN POWER SUPPLY.....	16
	TEST DOOR OPERATION UNDER POWER.....	17
	TRAVEL LIMIT SWITCH INSTRUCTIONS.....	18
	MASTER LABEL PLATE.....	19
II.	<u>OPERATION INSTRUCTIONS</u>	20
III.	<u>MAINTENANCE ADJUSTMENTS AND LUBRICATION CHART</u>	
	1. SEALING GASKET ADJUSTMENT.....	21
	2. TRACK ADJUSTMENT.....	21
	3. DOOR DRIVE CHAIN ADJUSTMENT.....	22
	4. TRAVEL LIMIT SWITCH CHAIN ADJUSTMENT.....	22
	5. LUBRICATION CHART.....	23
IV.	<u>ELECTRICAL TROUBLE SHOOTING GUIDE</u>	24

GENERAL INFORMATION:

A. Contents of Crates and Carton

1. Frame component parts and assemblies shipped knocked-down.

NOTE: If frame has jambs, casings and jambs shipped in separate crate.

2. Split door panel sections shipped in separate crates with hardware attached where possible.
3. One carton containing:
 - a. Packing List
 - b. Installation Instructions
 - c. Operating Instructions (If Power Operated Door)
 - d. Miscellaneous parts.

B. Inspect for Damage and Shortage Immediately

1. Note on all copies of delivery receipt any apparent damages and shortages.
2. Open all shipping containers and inspect for concealed damage and shortages. Carefully repack to prevent further damage and pilferage.
3. Report within 15 days in writing to the transportation company, with a copy to us, any concealed damage and shortages. After 15 days, the law permits the transportation company to reject all claims.

C. Handle All Parts Carefully

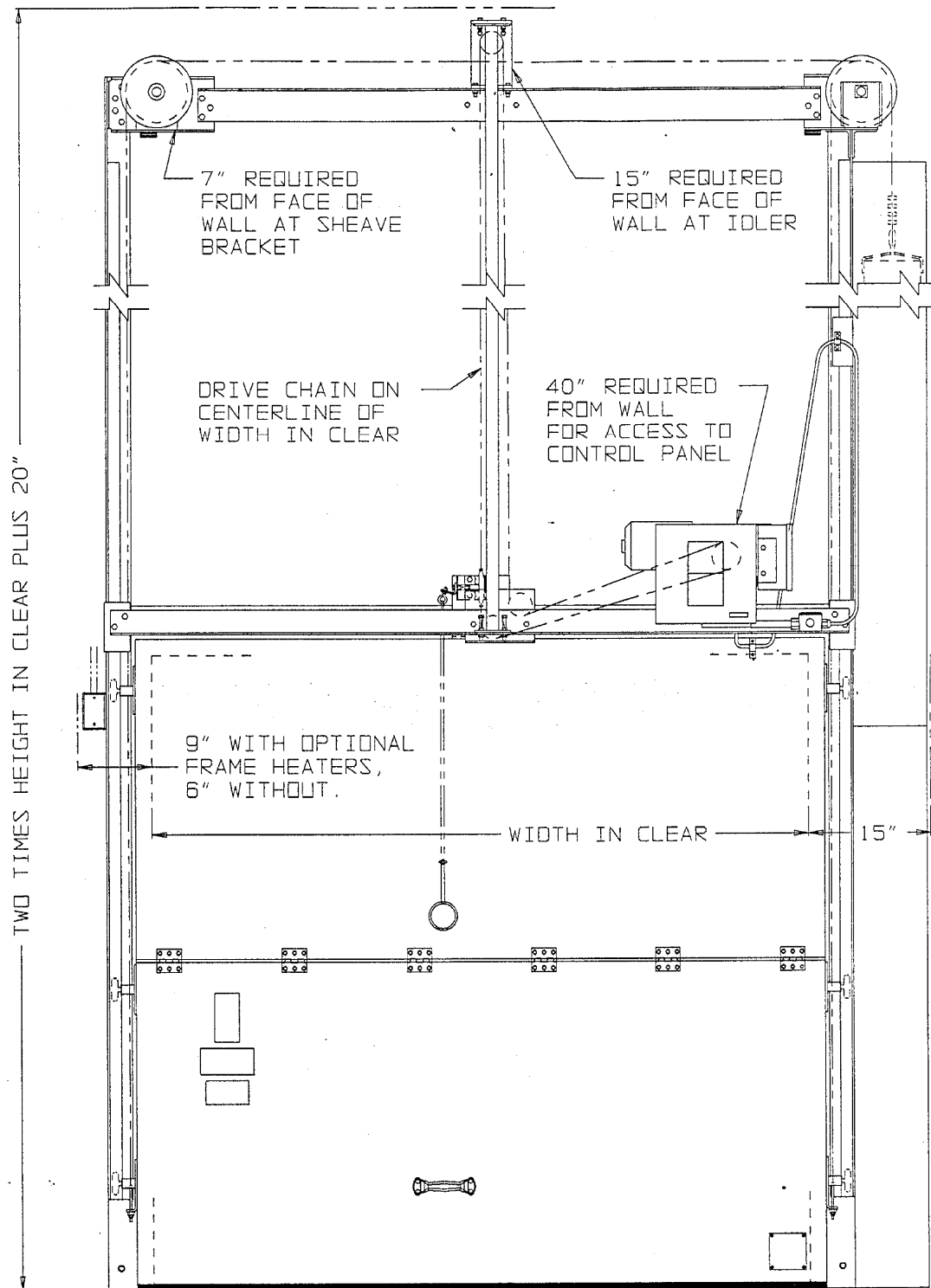
1. Certain parts such as gaskets, wiring, safety edges, etc. are vulnerable.

D. READ ALL INSTRUCTIONS BEFORE PROCEEDING WITH ERECTION

1. Instructions include basic drawings for all door types.
2. Use drawings applicable to your door.
3. Refer to job drawings for special features.

E. Plan Ahead

1. Choose installers who are millwrights or have equal qualifications.
2. Have all tools and materials necessary for installation readily available.



MARK IV POWER OPERATED HEAVY DUTY VERTICAL SLIDING DOOR
 MINIMUM CLEARANCES REQUIRED
 R.H. COUNTERWEIGHT SHOWN - L.H. COUNTERWEIGHT OPPOSITE

NOTE:

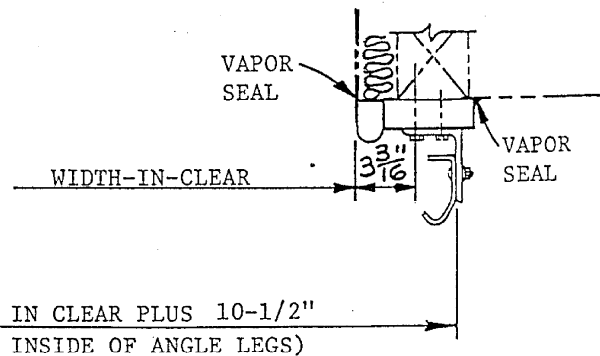
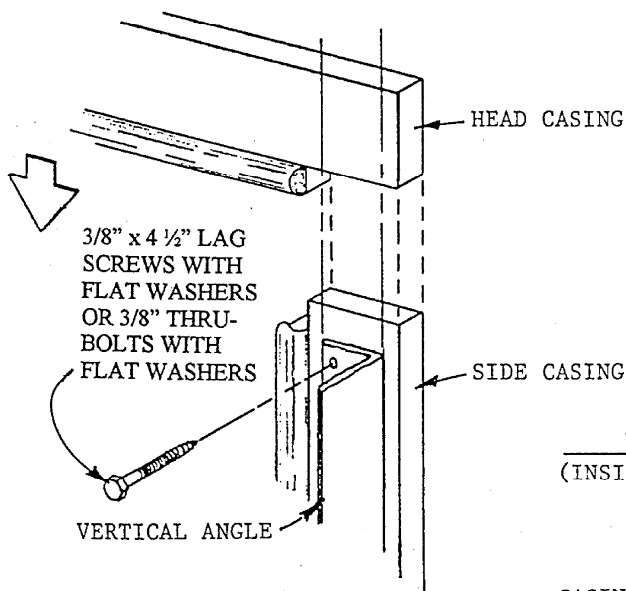
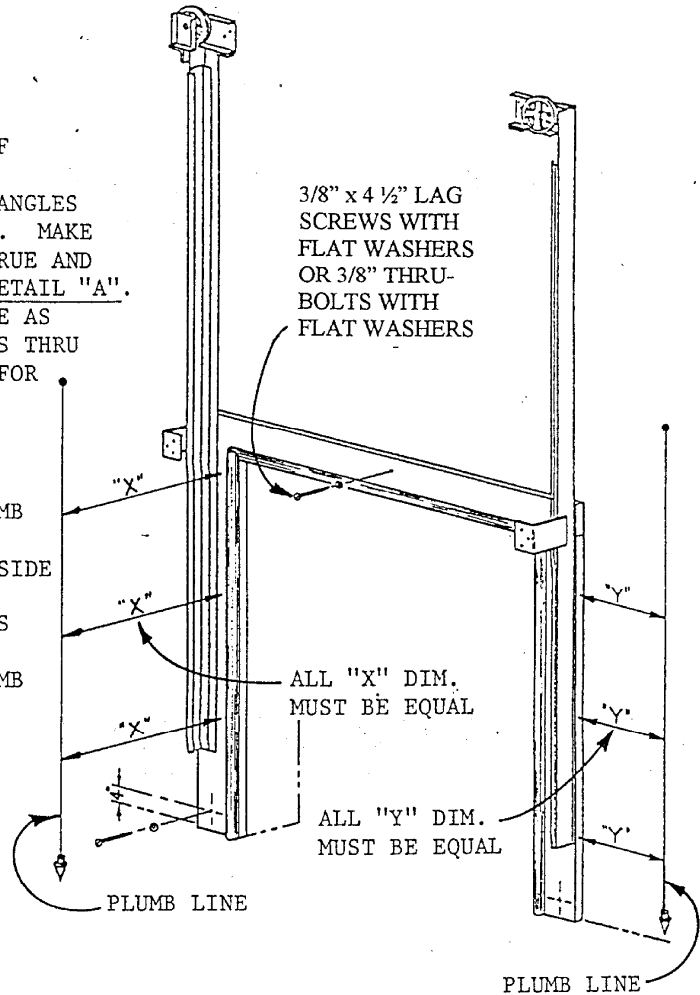
BUCKS FOR FRAME MUST BE PLUMB, TRUE AND SQUARE. FLOOR THROUGH DOOR OPENING MUST BE LEVEL FULL WIDTH TO PROVIDE PROPER DOOR OPERATION AND GASKET SEAL.

STEPS:

1. APPLY CAULKING COMPOUND TO BACK OF CASING MEMBERS.
2. BLOCK SIDE CASINGS WITH VERTICAL ANGLES ATTACHED AND HEAD CASING IN PLACE. MAKE SURE VERTICAL ANGLES ARE PLUMB, TRUE AND PARALLEL AND SPREAD AS SHOWN IN DETAIL "A". USE ROW OF HOLES NEAR TOE OF ANGLE AS TEMPLATE AND DRILL CLEARANCE HOLES THRU CASING AND PILOT HOLES INTO BUCK FOR 3/8" X 4-1/2" LG. LAG BOLTS.

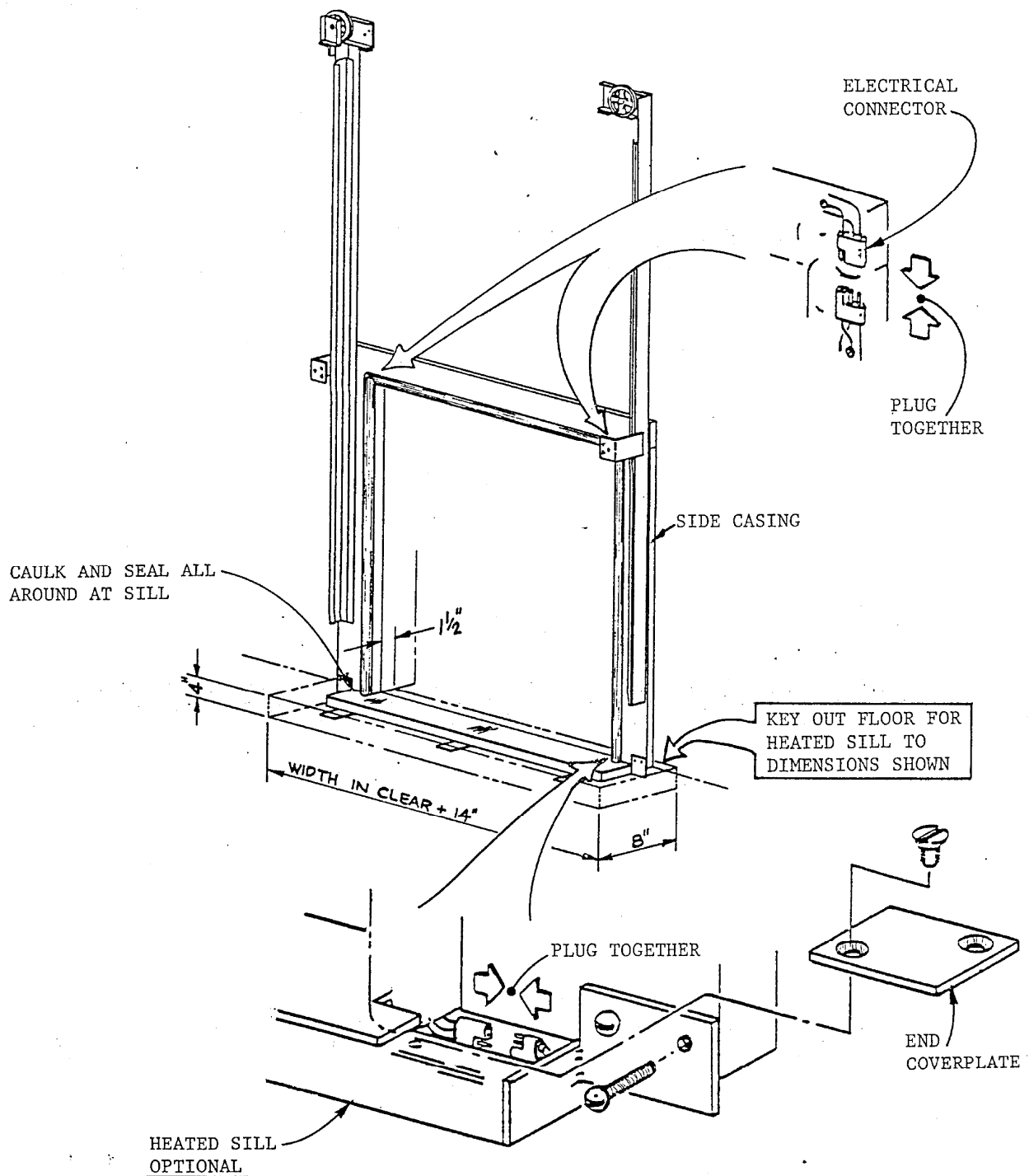
NOTE: DO NOT DRILL HOLES IN HEAD CASING AT THIS TIME. INSTALL LAG BOLTS INTO BUCKS, SHIM CASING IF NECESSARY TO MAINTAIN A FLAT, PLUMB AND TWIST FREE CASING.

3. ATTACH HEAD CASING AND BOTTOM OF SIDE CASINGS TO BUCKS USING FLAT HEAD WOOD SCREWS WITH FINISHING WASHERS UNDER HEADS, SHIM CASING IF NECESSARY TO MAINTAIN A FLAT, PLUMB AND TWIST FREE CASING.



DETAIL "A"

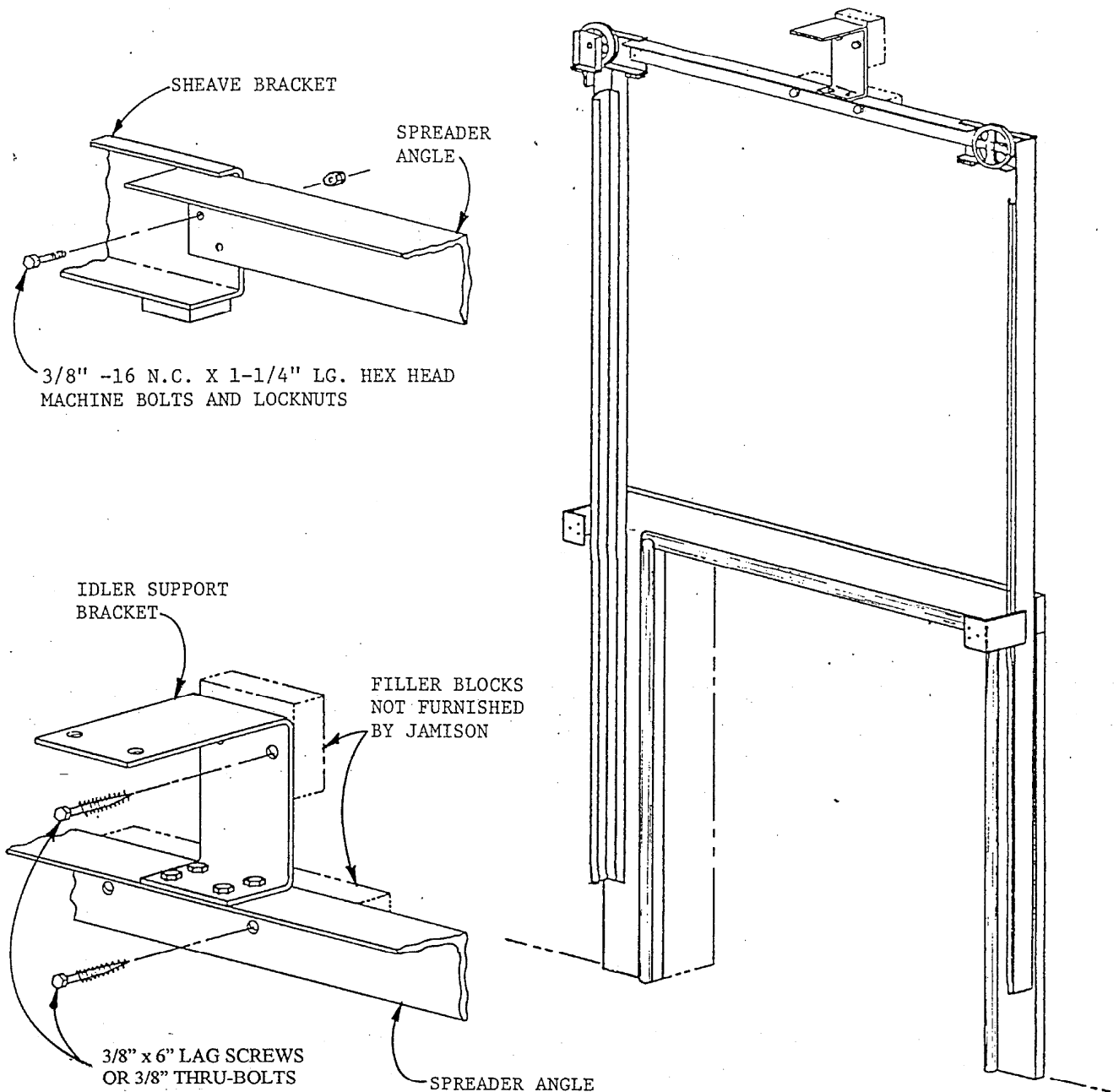
CASING ERECTION



STEPS:

1. ATTACH HEATED SILL TO CASING WITH FASTENINGS PROVIDED. SILL ASSEMBLY MUST BE LEVEL AND TRUE FROM CASING TO CASING.
2. PLUG ELECTRICAL CONNECTORS TOGETHER AT FOUR CORNERS OF FRAME AS SHOWN.
3. INSTALL END COVERPLATES, CAULK AND SEAL TO EXCLUDE MOISTURE.
4. BRACE HEATED SILL SECURELY AND GROUT IN FINISHED CONCRETE FLOOR AROUND SILL.

CASING ERECTION (SPECIAL FREEZER)



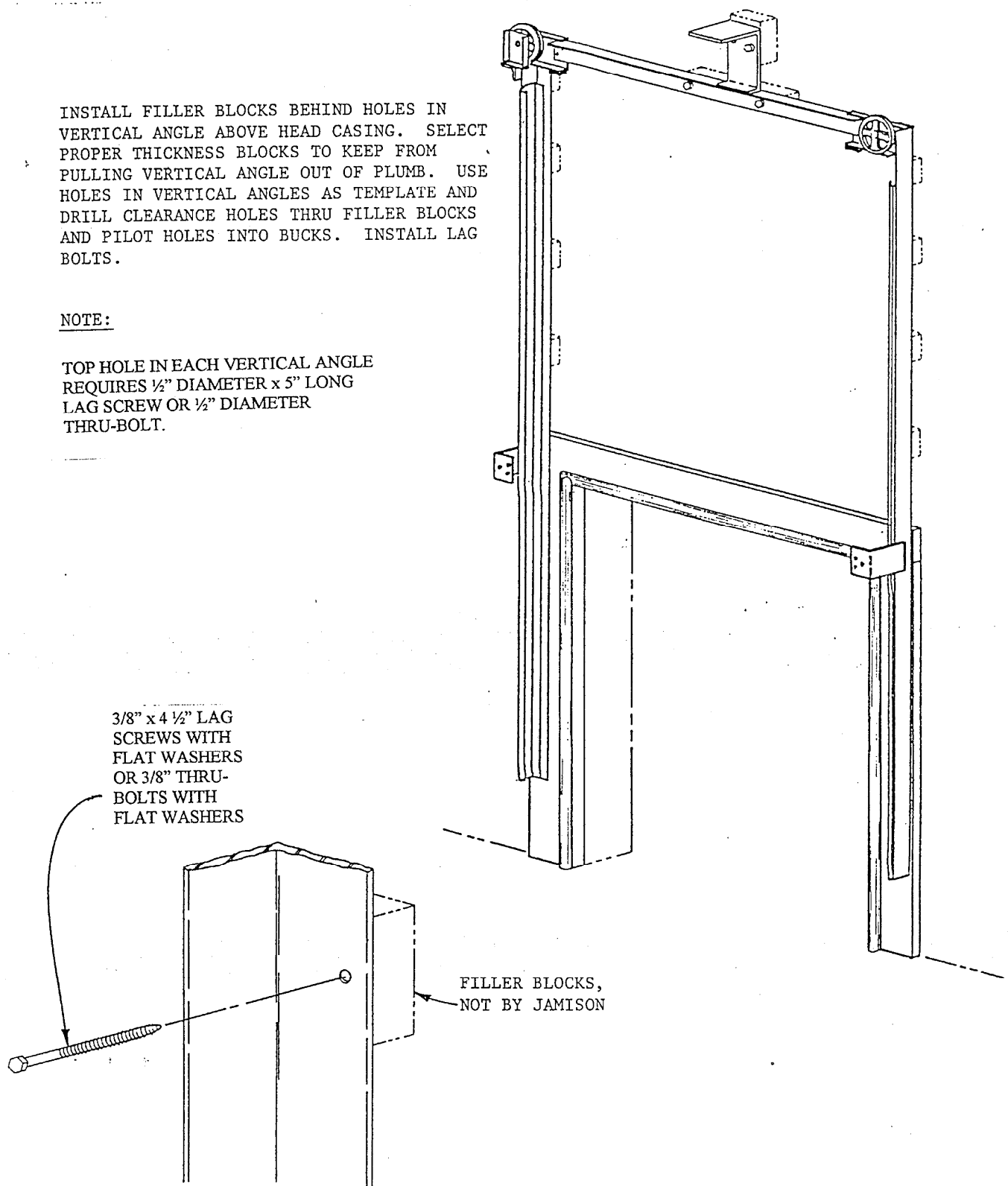
INSTALL HORIZONTAL SPREADER ANGLE WITH IDLER SUPPORT BRACKET ATTACHED BY BOLTING TO SHEAVE BRACKETS. INSTALL FILLER BLOCK AT FASTENING LOCATIONS BETWEEN BUCK AND SPREADER ANGLE AND IDLER SUPPORT BRACKET. SELECT PROPER THICKNESS BLOCKS TO KEEP FROM PULLING SPREADER ANGLE OUT OF ALIGNMENT. MAKE SURE VERTICAL ANGLES ARE PLUMB. DRILL CLEARANCE HOLES THRU FILLER BLOCKS AND PILOT HOLES INTO BUCKS, INSTALL LAG BOLTS.

UPPER SPREADER ANGLE ATTACHMENT

INSTALL FILLER BLOCKS BEHIND HOLES IN VERTICAL ANGLE ABOVE HEAD CASING. SELECT PROPER THICKNESS BLOCKS TO KEEP FROM PULLING VERTICAL ANGLE OUT OF PLUMB. USE HOLES IN VERTICAL ANGLES AS TEMPLATE AND DRILL CLEARANCE HOLES THRU FILLER BLOCKS AND PILOT HOLES INTO BUCKS. INSTALL LAG BOLTS.

NOTE:

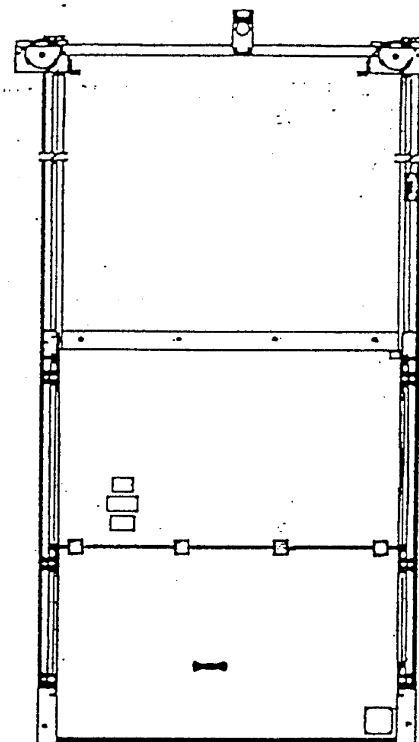
TOP HOLE IN EACH VERTICAL ANGLE REQUIRES $\frac{1}{2}$ " DIAMETER x 5" LONG LAG SCREW OR $\frac{1}{2}$ " DIAMETER THRU-BOLT.



SECURING VERTICAL ANGLES TO BUCKS

STEPS:

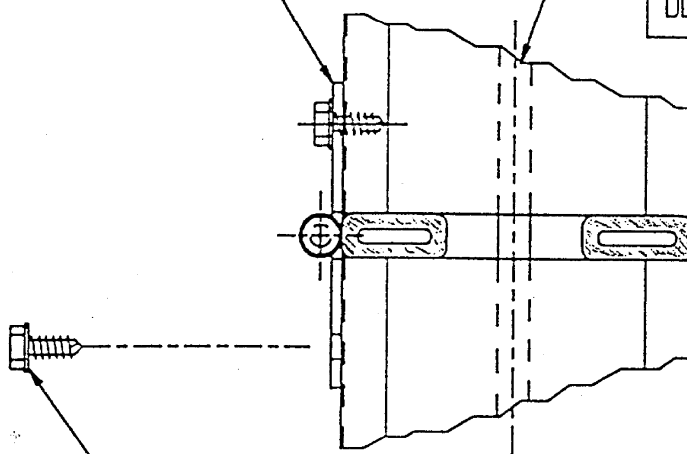
1. TEMPORARILY REMOVE UPPER SECTION OF TRACK FROM VERTICAL ANGLES.
2. LUBRICATE ROLLER SHAFTS AND INSERT ROLLERS INTO BRACKETS ON BOTTOM LEAF.
3. LIFT BOTTOM LEAF TO TOP OF VERTICAL TRACK, LOWER LEAF CAREFULLY TO FLOOR. INSTALL UPPER LEAF FOLLOWING SAME PROCEDURE LOWERING TO TOP OF LOWER LEAF.
4. ATTACH HINGE TO UPPER LEAF USING FACTORY DRILLED HOLES.
5. RE-INSTALL UPPER SECTION OF TRACK, ALIGNING WITH LOWER SECTION.
6. FREEZER DOOR ONLY SEE SHEET #14 FOR "FROSTOP" HOOK-UP.



HINGE

FREEZER DOORS

FEED WIRE EXTENDING FROM BOTTOM LEAF UP THRU HOLE IN BOTTOM OF TOP LEAF AND INTO JUNCTION BOX ON TOP OF DOOR WHEN INSTALLING DOOR LEAVES.



1/4" X 5/8" LG. HEX WASHER
HEAD SHEET METAL SCREW.

DETAIL "A"

PLACING DOOR IN TRACK

CAUTION:

USE FOUR (4) CABLE CLAMPS PER CABLE. U-BOLT MUST BE PLACED OVER DEAD END SIDE OF CABLE AS SHOWN.

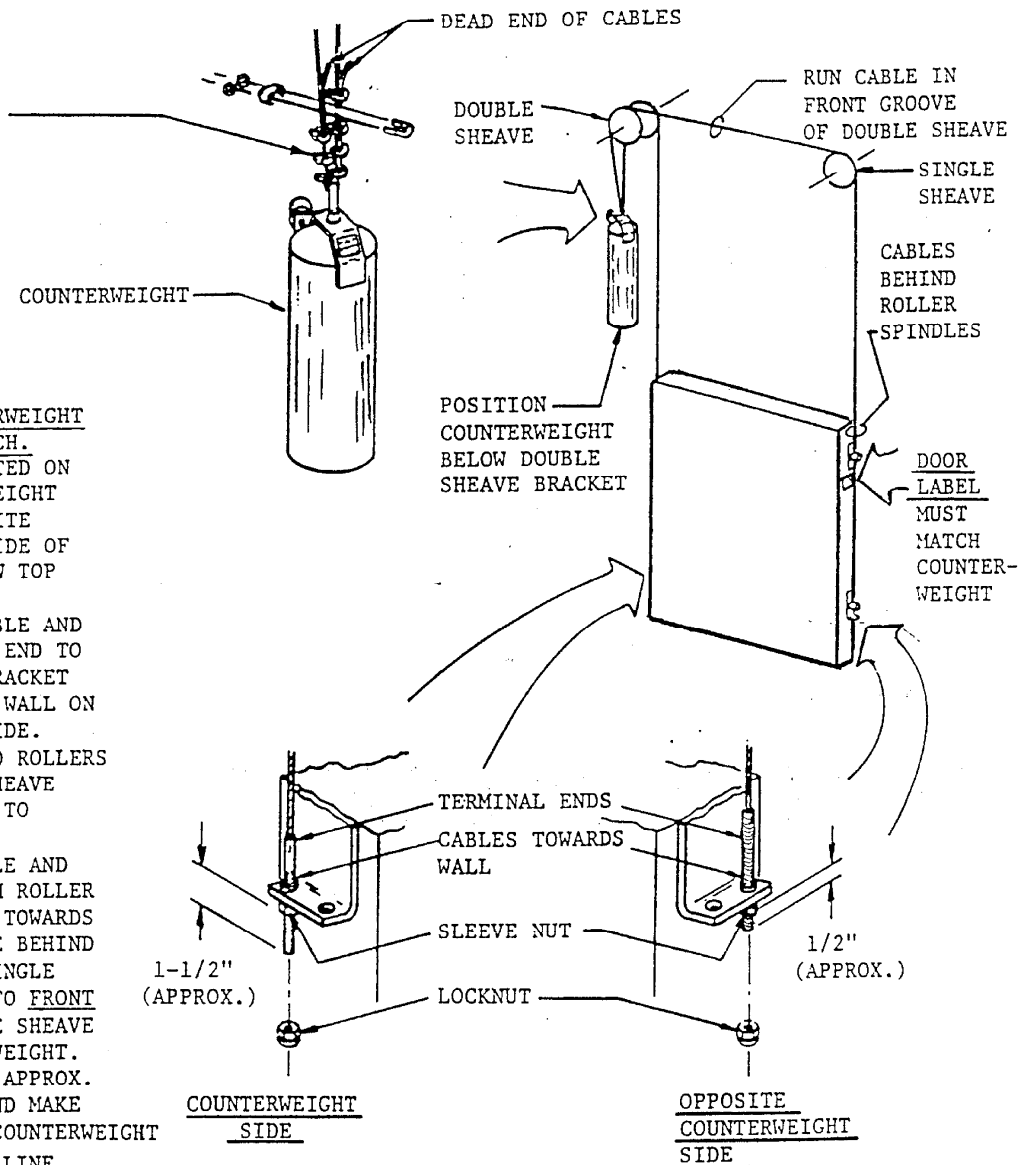
STEPS:

1. DOOR AND COUNTERWEIGHT LABELS MUST MATCH. LABELS ARE LOCATED ON TOP OF COUNTERWEIGHT STRAP AND OPPOSITE COUNTERWEIGHT SIDE OF DOOR PANEL BELOW TOP ROLLER BRACKET.
2. USE SHORTEST CABLE AND ATTACH TERMINAL END TO BOTTOM ROLLER BRACKET IN HOLE TOWARDS WALL ON COUNTERWEIGHT SIDE. RUN CABLE BEHIND ROLLERS AND OVER REAR SHEAVE GROOVE AND DOWN TO COUNTERWEIGHT.
3. USE LONGEST CABLE AND ATTACH TO BOTTOM ROLLER BRACKET IN HOLE TOWARDS WALL. RUN CABLE BEHIND ROLLERS, OVER SINGLE SHEAVE, ACROSS TO FRONT GROOVE OF DOUBLE SHEAVE DOWN TO COUNTERWEIGHT.
4. PULL CABLES FOR APPROX. EQUAL TENSION AND MAKE CONNECTIONS AT COUNTERWEIGHT AS SHOWN.

WALL LINE
ROLLER TOWARDS WALL WITH CABLES PARALLEL (NOT TWISTED)

COUNTERWEIGHT LABEL

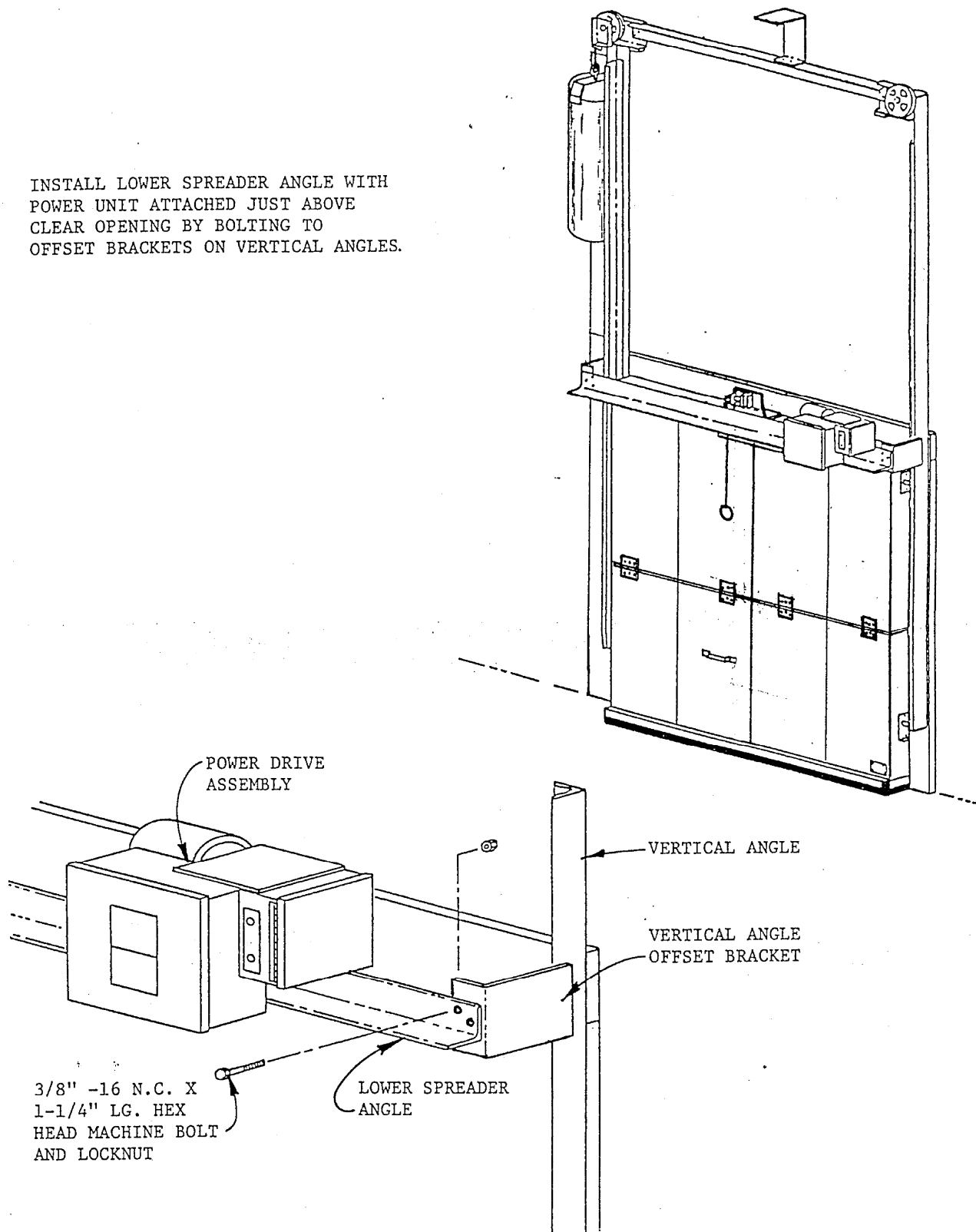
DOOR No.
TOTAL CWT
____ LBS.



STOP

DOOR NUMBER AND TOTAL WEIGHT MUST MATCH BETWEEN DOOR AND COUNTERWEIGHT. DO NOT INSTALL IF NUMBERS OR WEIGHTS DO NOT AGREE. CALL JAMISON DOOR COMPANY FOR INSTRUCTIONS.

INSTALL LOWER SPREADER ANGLE WITH
POWER UNIT ATTACHED JUST ABOVE
CLEAR OPENING BY BOLTING TO
OFFSET BRACKETS ON VERTICAL ANGLES.

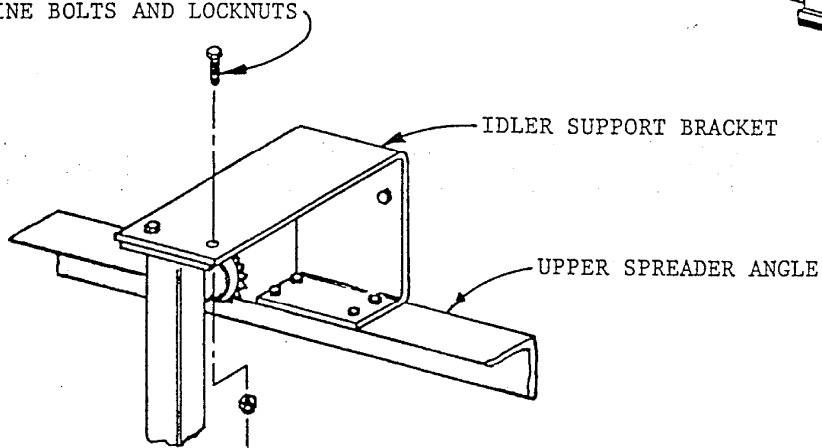


LOWER SPREADER ANGLE ATTACHMENT

STEPS:

INSTALL IDLER SUPPORT TUBE BY BOLTING TO LOWER SPREADER ANGLE AND IDLER SUPPORT BRACKET AS SHOWN BELOW WITH FASTENINGS PROVIDED.

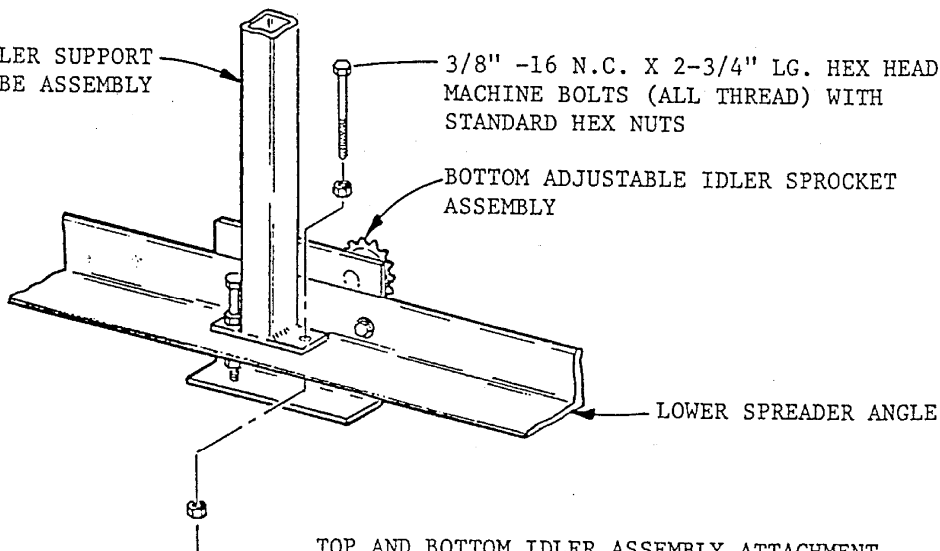
3/8" -16 N.C. X 1-1/4" LG. HEX HEAD
MACHINE BOLTS AND LOCKNUTS



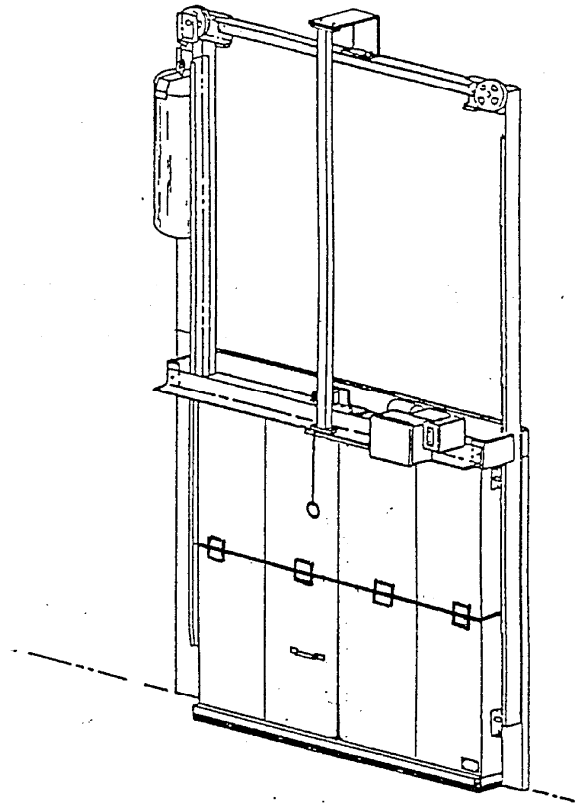
IDLER SUPPORT
TUBE ASSEMBLY

3/8" -16 N.C. X 2-3/4" LG. HEX HEAD
MACHINE BOLTS (ALL THREAD) WITH
STANDARD HEX NUTS

BOTTOM ADJUSTABLE IDLER SPROCKET
ASSEMBLY



TOP AND BOTTOM IDLER ASSEMBLY ATTACHMENT

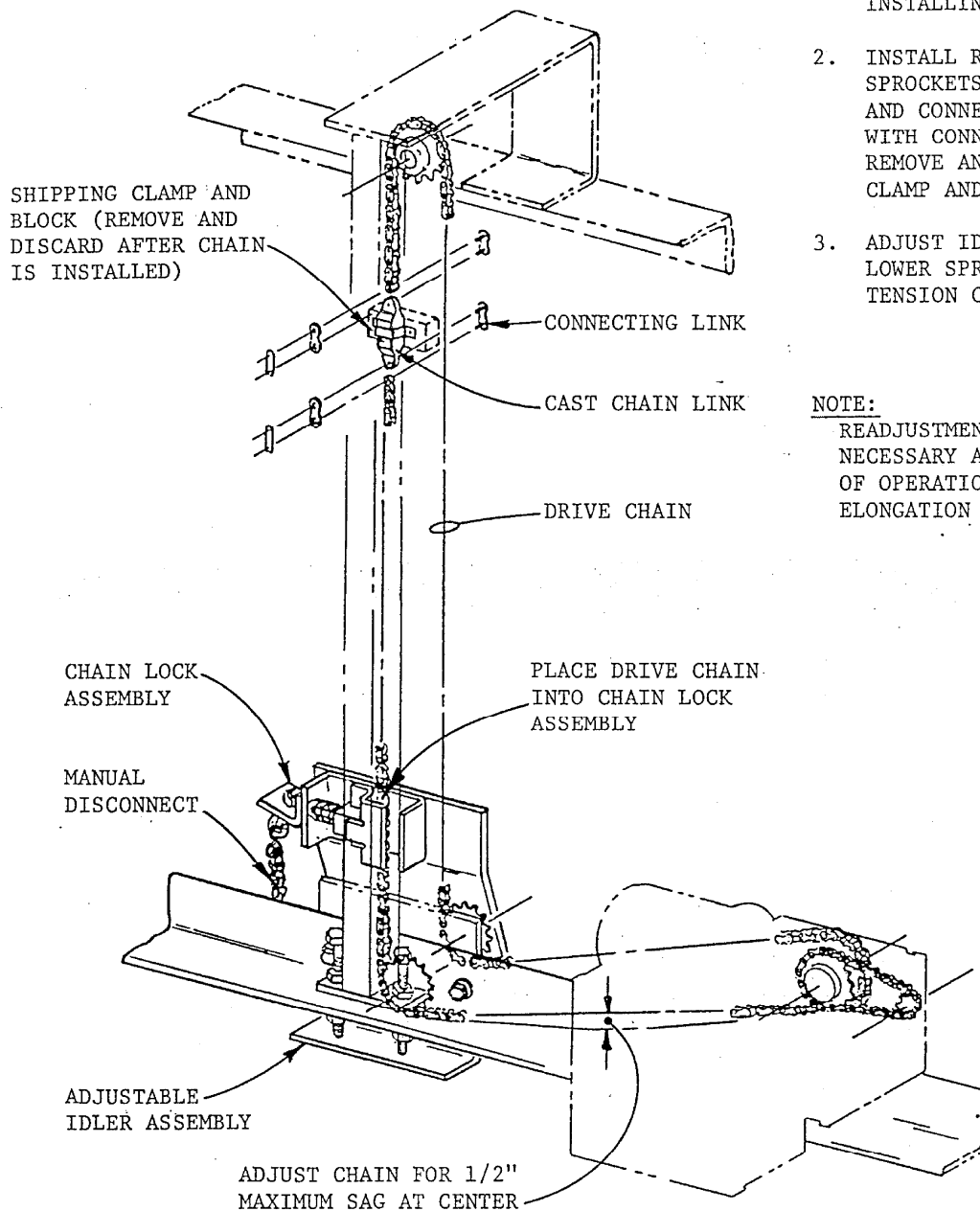


STEPS:

1. TO KEEP TRAVEL LIMIT SWITCHES AND POWER UNIT IN PROPER TIMING, DO NOT REMOVE CAST LINK FROM ITS SHIPPING CLAMP OR ROTATE DRIVE SPROCKET WHEN INSTALLING CHAIN.
2. INSTALL ROLLER CHAIN AROUND SPROCKETS, THROUGH CHAIN LOCK AND CONNECT ENDS TO CAST LINK WITH CONNECTING LINKS AS SHOWN. REMOVE AND DISCARD SHIPPING CLAMP AND BLOCK FROM CAST LINK.
3. ADJUST IDLER SPROCKETS ON LOWER SPREADER ANGLE TO TENSION CHAIN.

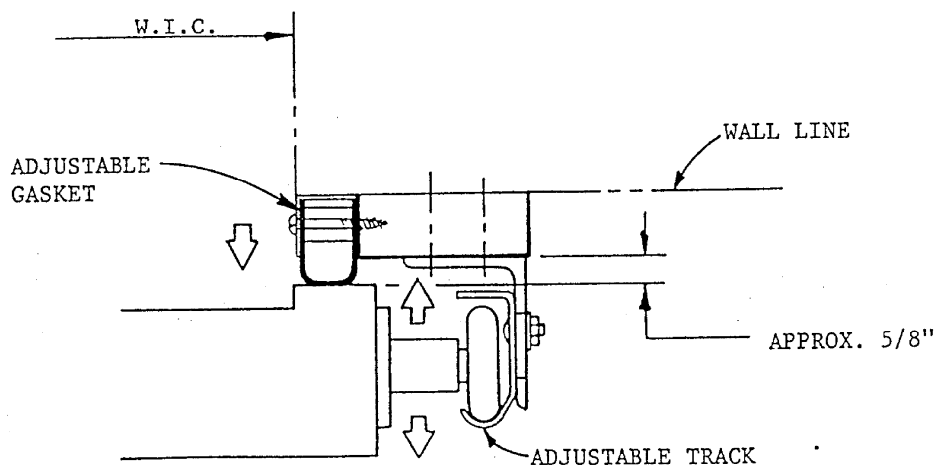
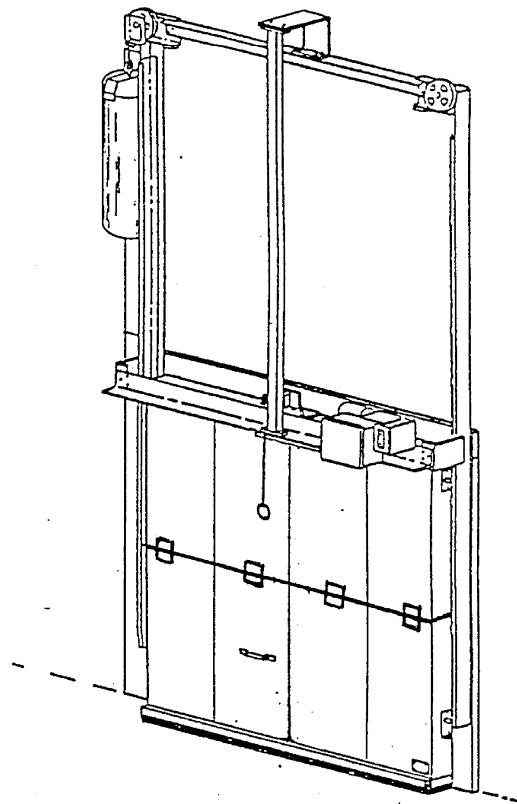
NOTE:

READJUSTMENT OF CHAIN MAY BE NECESSARY AFTER SEVERAL DAYS OF OPERATION TO REMOVE INITIAL ELONGATION OF CHAIN.



CONNECTING DRIVE CHAIN

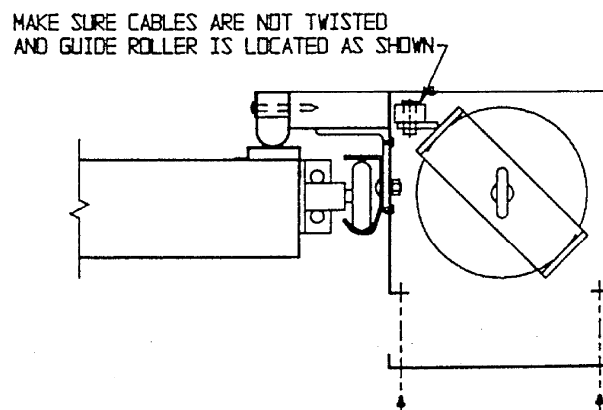
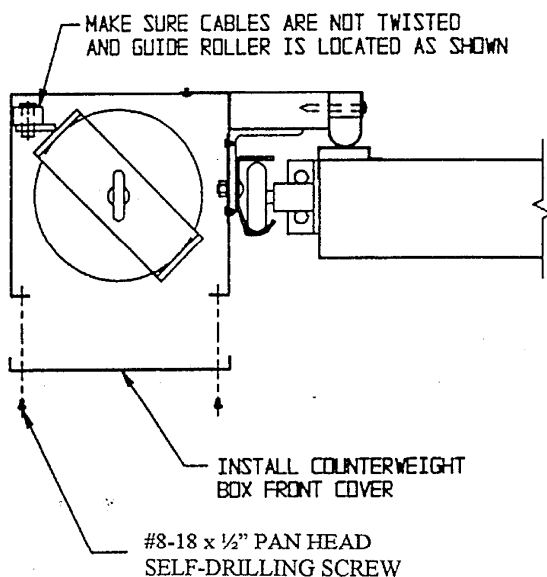
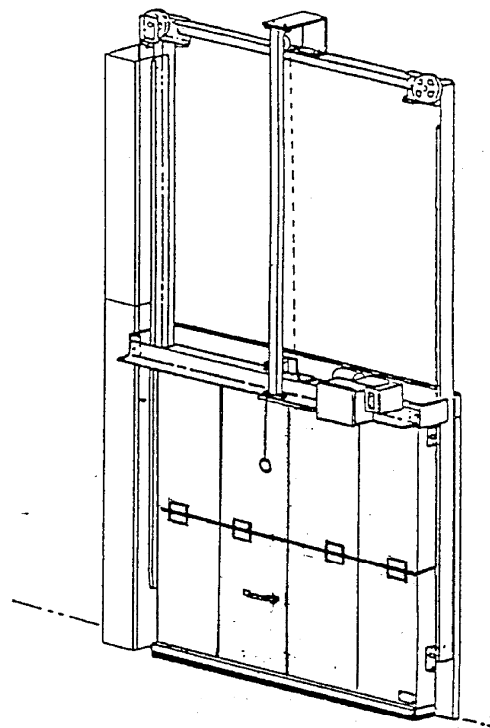
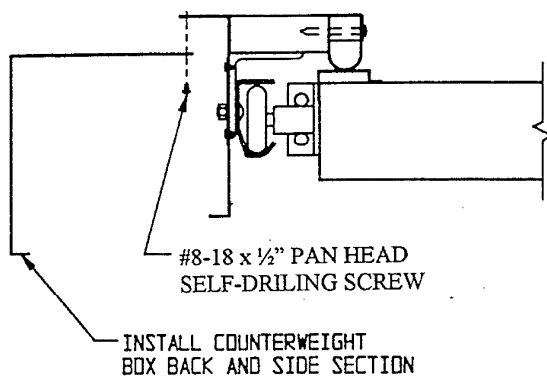
ADJUST DOOR FOR PROPER GASKET SEAL.
 LOOSEN TRACK FASTENINGS AND MOVE
 TRACK IN OR OUT AS REQUIRED TO
 ACHIEVE A GOOD GASKET SEAL.
SEE DETAIL "A" BELOW. TIGHTEN
 ALL TRACK FASTENINGS. A
 CONTINUOUS TOUCH CONTACT OF
 GASKET IS SUFFICIENT. DO NOT
OVER COMPRESS GASKET. ADJUST
 SLEEVE NUTS ON CABLE TERMINAL
 ENDS IF NECESSARY TO ACHIEVE
 SEAL ACROSS SILL, SEE PAGE 8.



DETAIL "A"

DOOR AND GASKET ADJUSTMENTS

INSTALL COUNTERWEIGHT BOX USING
FACTORY DRILLED HOLES, BOX SECTIONS
ARE IDENTIFIED ON INSIDE AS TO BOTTOM,
CENTER AND TOP .



RIGHT HAND COUNTERWEIGHT ASSEMBLY

LEFT HAND COUNTERWEIGHT ASSEMBLY

COUNTERWEIGHT BOX ASSEMBLY

STRAIN RELIEF CLAMP
AT TAPED AREA

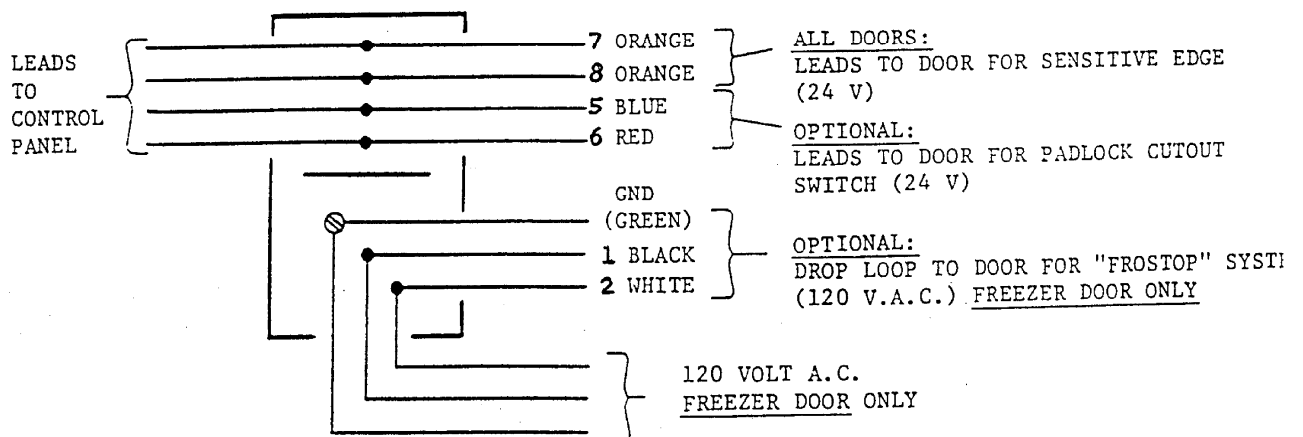
RUN DROP LOOP FROM DOOR PANEL
BEHIND LOWER SPREADER ANGLE AND
THROUGH STRAIN RELIEF CLAMP ON
TRACK BRACKET DOWN TO JUNCTION
BOX ON LOWER SPREADER ANGLE AS
SHOWN

SUPPORT
BRACKET

LOWER
SPREADER
ANGLE

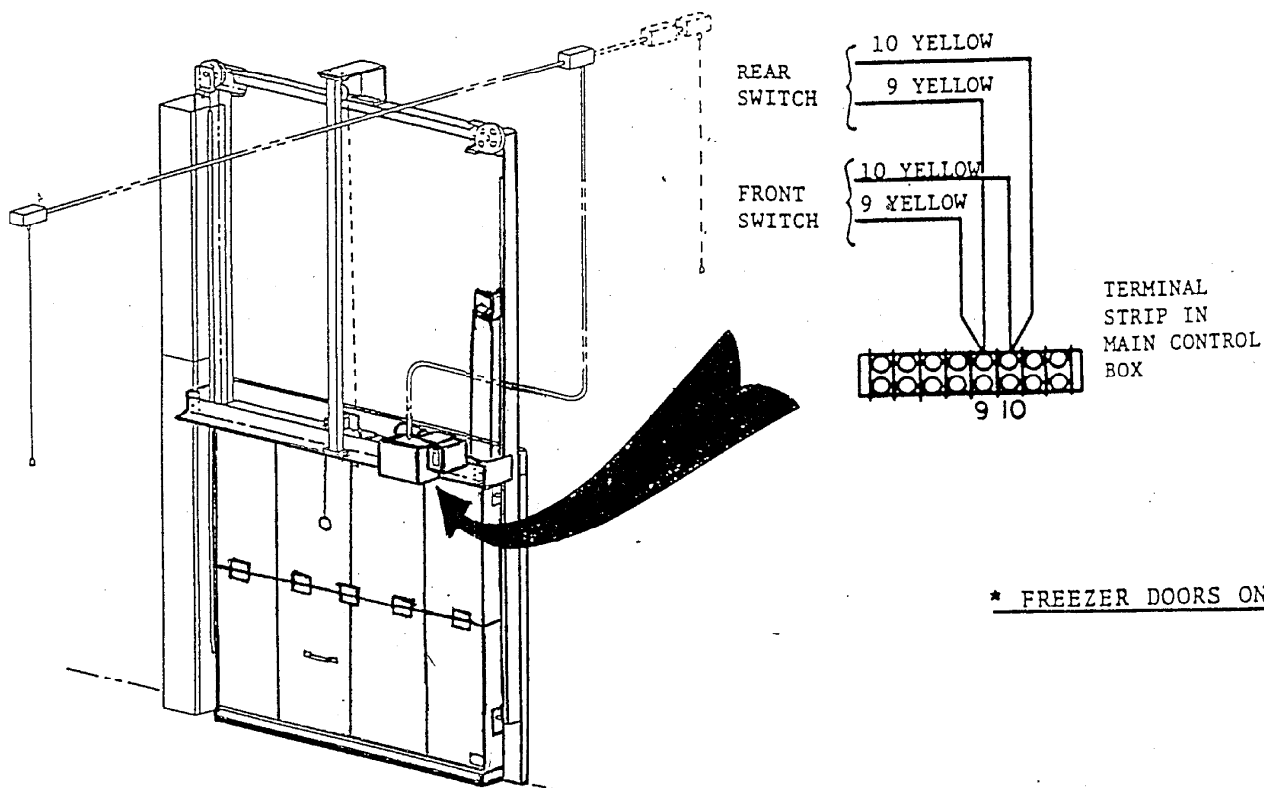
120 VOLT
A.C. FREEZER
DOOR ONLY

DOOR PANEL

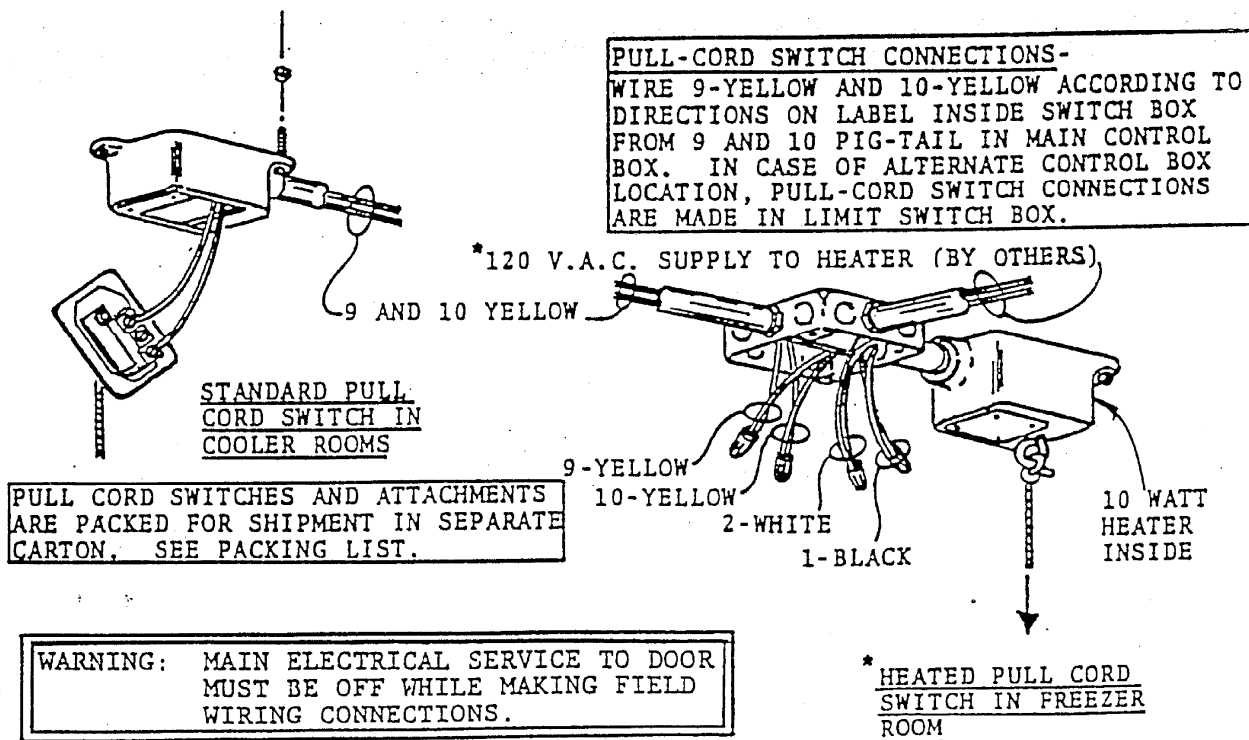


JUNCTION BOX ON
LOWER SPREADER ANGLE

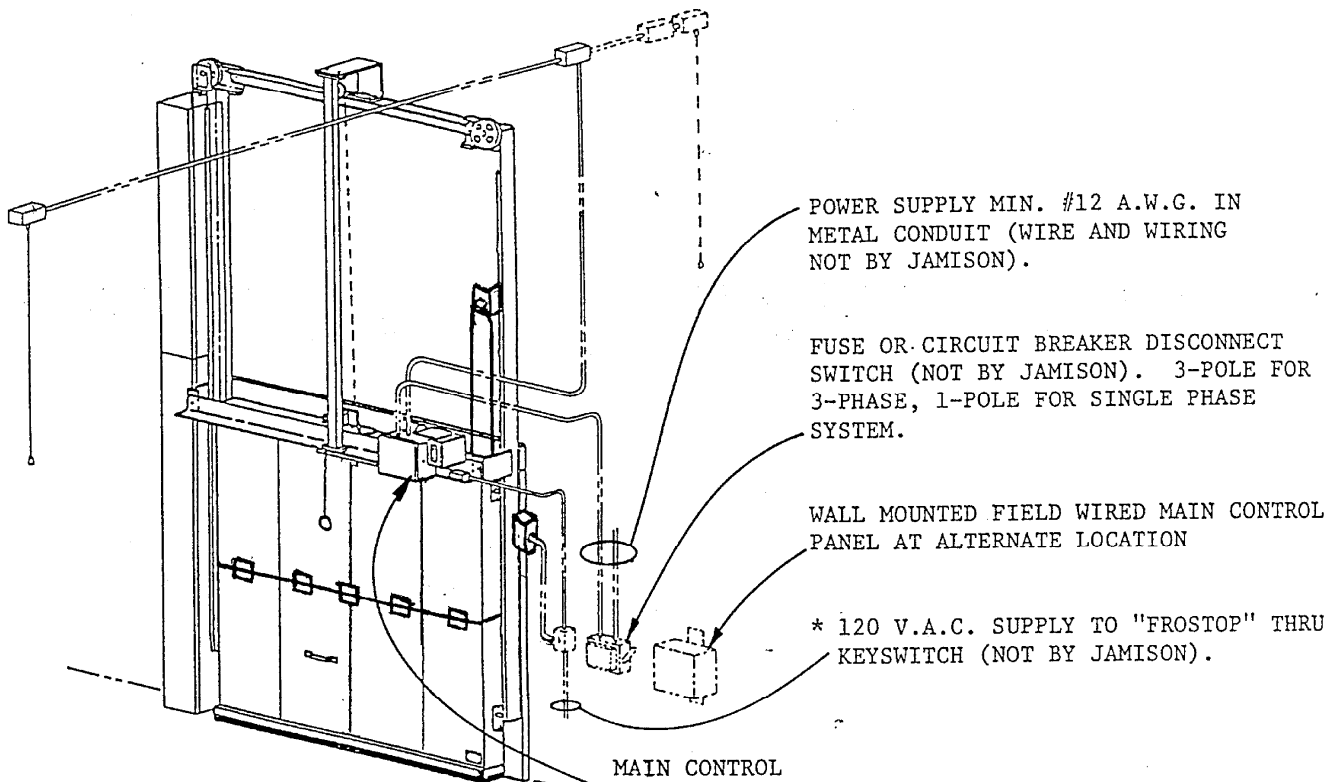
WIRING CONNECTION TO DOOR PANEL



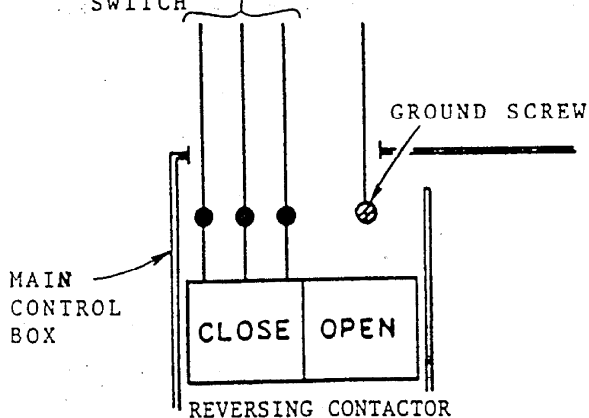
* FREEZER DOORS ONLY



PULL-CORD SWITCH CONNECTION WIRING AND CONDUIT
NOT BY JAMISON - SEE WIRING DIAGRAM



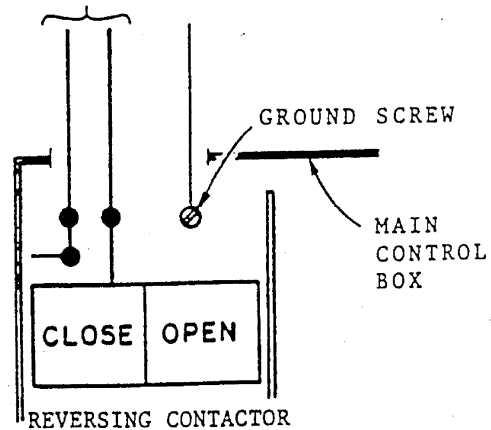
208/240/480 V.A.C., 3-PHASE
POWER SUPPLY THRU DISCONNECT
SWITCH



MAIN POWER CONNECTION
208/240/480 V.A.C.,
3-PHASE SYSTEM

CHECK MOTOR ROTATION: RIGHT SIDE
OF MOTOR STARTER RELAY MUST OPEN
DOOR. IF NOT, REVERSE ANY TWO
(2) LEADS ABOVE. THIS WILL CORRECT
PROBLEM. SEE PAGE 17.

120/240 V.A.C., 1-PHASE POWER
SUPPLY THRU DISCONNECT SWITCH

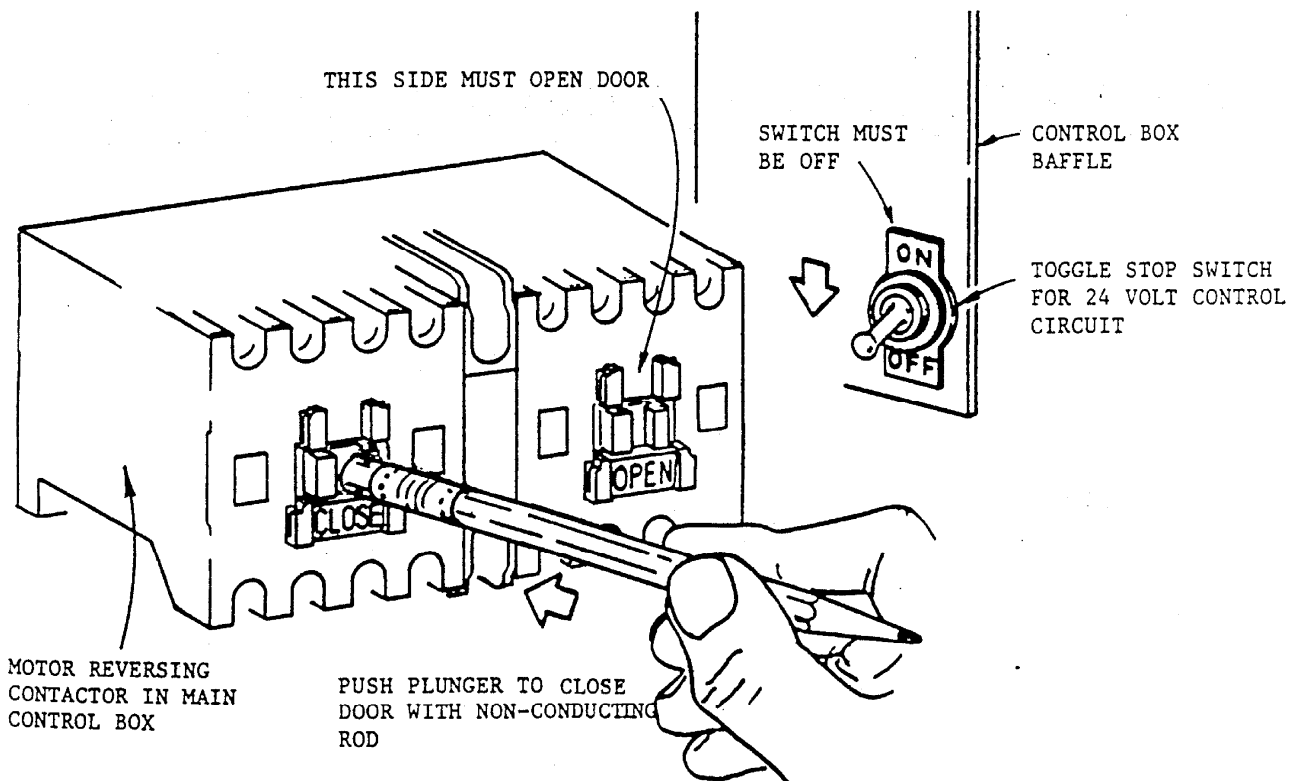


MAIN POWER CONNECTION
120/240 V.A.C., 1 PHASE
SYSTEM

CAUTION: DO NOT OPERATE DOOR UNTIL
ELECTRIC CHECK-OUT IS MADE,
SEE PAGE 17.

TEST OPERATION UNDER POWER

- A. ENGAGE DOOR TO DRIVE LINK BEFORE MAKING ELECTRICAL CONNECTIONS OUTLINE BELOW:
- B. WARNING: MAKE SURE TOGGLE STOP SWITCH IS IN OFF POSITION.
- C. TURN ON MAIN POWER SUPPLY TO DOOR OPERATOR.
- D. CHECK MOTOR ROTATION: (3 PHASE ONLY) 1-PHASE PROCEED TO STEP 3
STEPS:
 - 1. MOMENTARILY DEPRESS LEFT SIDE OF STARTER RELAY INSIDE MAIN CONTROL PANEL WHILE OBSERVING DOOR, DOOR MUST CLOSE.
 - 2. DOOR TRAVEL:
 - A. IF DOOR RUNS CLOSE PROCEED TO STEP NO. 3.
 - B. IF DOOR OPENS YOU HAVE REVERSE ROTATION OF MOTOR. TO CORRECT, TURN OFF MAIN POWER SUPPLY AND REVERSE ANY TWO (2) LEADS OF INCOMING POWER SUPPLY. CHECK BY REPEATING STEP #1 ABOVE.
 - 3. AFTER CHECKING MOTOR ROTATION - TURN STOP SWITCH TO ON POSITION.

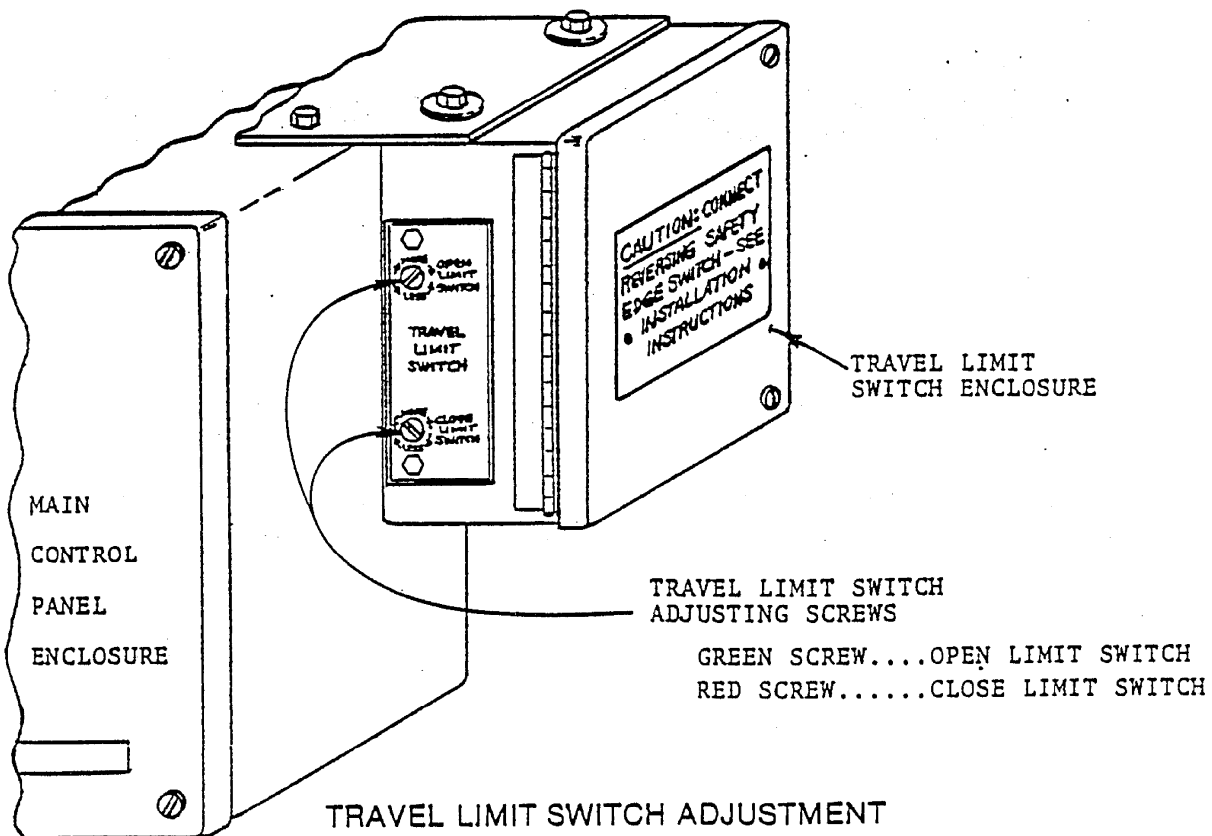


CAUTION: IF TEMPORARY ELECTRICAL HOOK-UP IS MADE, MAKE SURE MOTOR ROTATION IS NOT CHANGED WHEN PERMANENT POWER IS CONNECTED.

TO ADJUST TRAVEL LIMIT SWITCH

STEPS:

1. OPERATE DOOR MANUALLY FIRST. IF DOOR IS NOT ROLLING SMOOTHLY ON TRACK OR IS BINDING: RESOLVE PROBLEM THEN PROCEED WITH STEP NUMBER 2.
2. OPERATE DOOR UNDER POWER TO DETERMINE AMOUNT OF OVER-TRAVEL OR UNDER-TRAVEL, IF ANY. MAKE PROPER LIMIT SWITCH ADJUSTMENT PER INSTRUCTIONS ON OUTSIDE LABEL OF ENCLOSURE, SEE DRAWING BELOW. SCREW DRIVER TYPE ADJUSTMENT CAN BE MADE WITHOUT REMOVING ENCLOSURE COVER AS SHOWN. START WITH NO MORE THAN 1/4 TURN.....THEN PRECEDE UNTIL PROPER TRAVEL IS ACHIEVED. ADJUSTMENT SHOULD BE SUCH THAT DOOR WILL COAST TO A FULL OPEN OR CLOSED POSITION WITHOUT SLAMMING INTO DOOR STOPS.



TEST OPERATION UNDER POWER

1. THOROUGHLY TEST DOOR FOLLOWING "INSTRUCTIONS FOR OPERATION".
 - a. IF THE DOOR IS NOT FUNCTIONING PROPERLY, CAREFULLY RECHECK THE INSTALLATION PROCEDURE.
 - b. IF YOU CANNOT RESOLVE THE DIFFICULTY, CALL "SERVICE ENGINEER" AT HAGERSTOWN, MARYLAND 1-800-532-3667 OR MD PHONE (AREA CODE 301) 733-3100.

HAVE ALL INSTRUCTIONS IN FRONT OF YOU.

IMPORTANT: IN ALL COMMUNICATIONS, PLEASE STATE THE DOOR "MODEL NUMBER", "SERIAL NUMBER" AND "SERIES LETTER" FOUND ON MASTER LABEL PLATE ON THE FRONT OF THE CONTROL PANEL.

MODEL NO. <input type="text"/>	
SERIAL NO. <input type="text"/>	SERIES <input type="text"/>
POWER OPERATOR DATA <input type="text"/> VOLTS AC	
PHASE <input type="text"/>	HZ <input type="text"/> AMPS <input type="text"/>
RATING <input type="text"/> FOOT LBS. PER SECOND	
24 VOLT CONTROL CIRCUIT	
FROSTOP DATA: 120 VOLTS A.C.	
TOTAL AMPS <input type="text"/>	TOTAL WATTS <input type="text"/>
JAMISON DOOR COMPANY P.O. BOX 70 HAGERSTOWN, MARYLAND 21741	

MASTER LABEL PLATE ON FRONT OF CONTROL PANEL

MARK III VERTICAL SLIDING POWER DOOR

OPERATING INSTRUCTIONS

1. POWER OPERATION: (POWER MUST BE ON AND DRIVE LINK IN CHAIN LOCK ASSEMBLY.)

(a) TO OPEN:

1. WHEN DOOR IS CLOSED, PULL CORD ON "REMOTE CONTROL SWITCH."
2. WHEN DOOR IS IN MOTION CLOSING, CONTACT "SAFETY EDGE" UNDER DOOR.
(CONTACTING "SAFETY EDGE" WILL ALSO OPEN DOOR IF FULLY CLOSED).

CAUTION:

A QUICK (LIGHTENING LIKE) CONTACT WITH THE "SAFETY EDGE" WILL STOP THE DOOR. IF THIS HAPPENS THE "SAFETY EDGE" MUST BE GIVEN A FIRM CONTACT TO REACTIVATE THE CIRCUIT. UNTIL CIRCUIT IS REACTIVATED, DOOR CANNOT BE OPERATED BY REMOTE PULL SWITCH.

(b) TO CLOSE:

WHEN DOOR IS OPEN, PULL CORD ON "REMOTE CONTROL SWITCH".

2. MANUAL OPERATION: (IF POWER FAILS)

FROM FRONT OF DOOR: (STANDARD)

PULL DOWN ON PULL RING TO MANUALLY RELEASE DOOR AND LIFT UP ON DOOR PULL SIMULTANEOUSLY. THIS WILL MANUALLY DISCONNECT DOOR FROM POWER DRIVE CHAIN AT CHAIN LOCK ASSEMBLY. RAISE DOOR WITH DOOR PULL AS NECESSARY.

POWER OPERATION IS AUTOMATICALLY RE-ESTABLISHED:

IF DRIVE CHAIN FAILS TO PICK UP DOOR, PULL DOOR TO "PARTIALLY OPEN POSITION" AND AGAIN OPERATE BY "REMOTE PULL SWITCH".

DRIVE PICK-UP LINK MAY MOVE AWAY FROM DOOR ON FIRST PULL OF SWITCH. ALLOW TIME FOR CHAIN TO GO "FULLY OPEN" AND "FULLY CLOSED".

3. OPERATED DOORS BY POWER: (MANUAL OPERATION SHOULD ONLY BE USED WHEN NECESSARY)

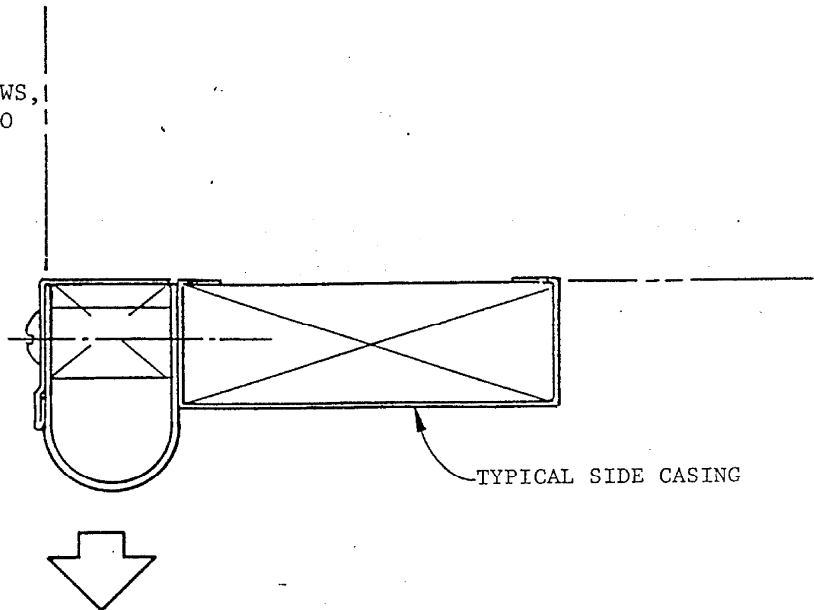
CAUTION:

IF YOU PULL CORD ON REMOTE CONTROL SWITCH AND MOTOR RUNS BUT DOORS DO NOT OPEN, CHECK FOR THE FOLLOWING.

- (a) SOMETHING MAY BE WEDGED UNDER OR BEHIND DOOR.
- (b) DOOR IS NOT ENGAGED WITH LINK IN MAIN DRIVE CHAIN.

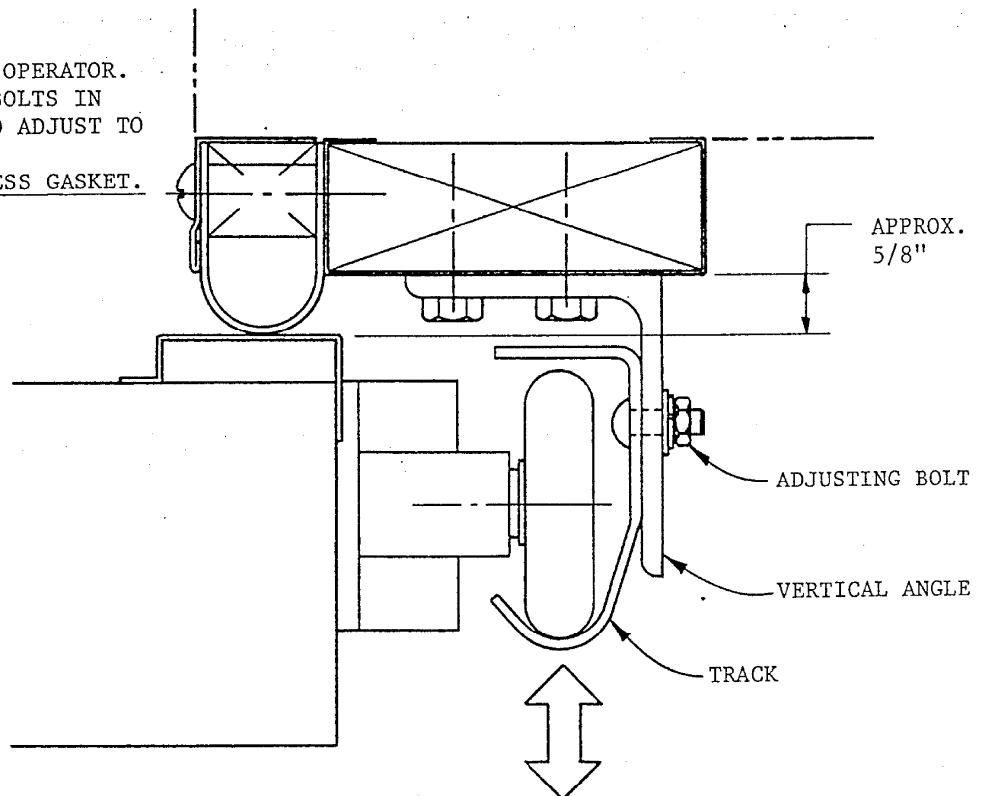
HOW TO ADJUST

1. TURN OFF POWER TO OPEATOR.
2. MOVE DOOR TO OPEN POSITION.
LOOSEN GASKET ATTACHMENT SCREWS,
PULL OUT GASKET AS REQUIRED TO
OBTAIN A GOOD GASKET SEAL
(APPROX. 1/8" COMPRESSION).
DO NOT OVER COMPRESS GASKET.
3. RE-TIGHTEN ATTACHMENT SCREWS.
4. CHECK FOR PROPER SEAL.



1 - SEALING GASKET ADJUSTMENT

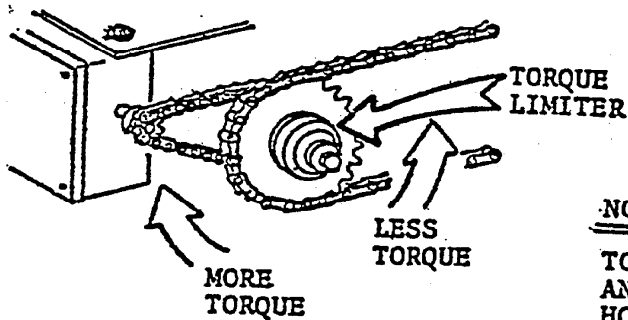
1. TURN OFF POWER TO OPERATOR.
2. LOOSEN ADJUSTING BOLTS IN
VERTICAL ANGLE AND ADJUST TO
SUIT AS SHOWN.
DO NOT OVER COMPRESS GASKET.



2 - TRACK ADJUSTMENT

TORQUE LIMITER ADJUSTMENT

TORQUE LIMITER IS LOCATED ON OUTPUT SPROCKET OF GEAR REDUCER.



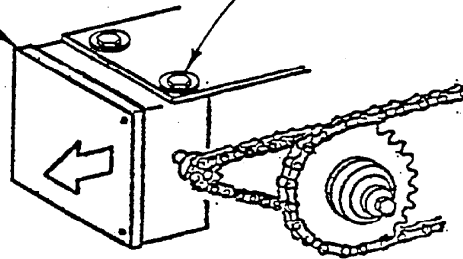
NOTE:

TORQUE LIMITER IS PRE-SET AT FACTORY AND SHOULD NOT NEED ADJUSTMENT. HOWEVER, IF NECESSARY, SEE DRAWING AT LEFT FOR MORE OR LESS TORQUE FOR POWER UNIT DRIVING FORCE.

TRAVEL LIMIT SWITCH CHAIN ADJUSTMENT

MOVE LIMIT SWITCH ENCLOSURE TO TIGHTEN LIMIT SWITCH CHAIN. DO NOT ALLOW CHAIN TO SAG.

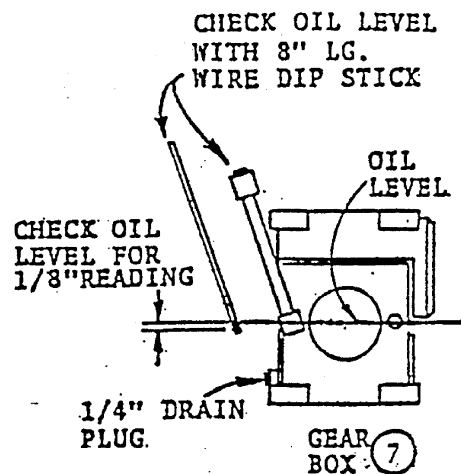
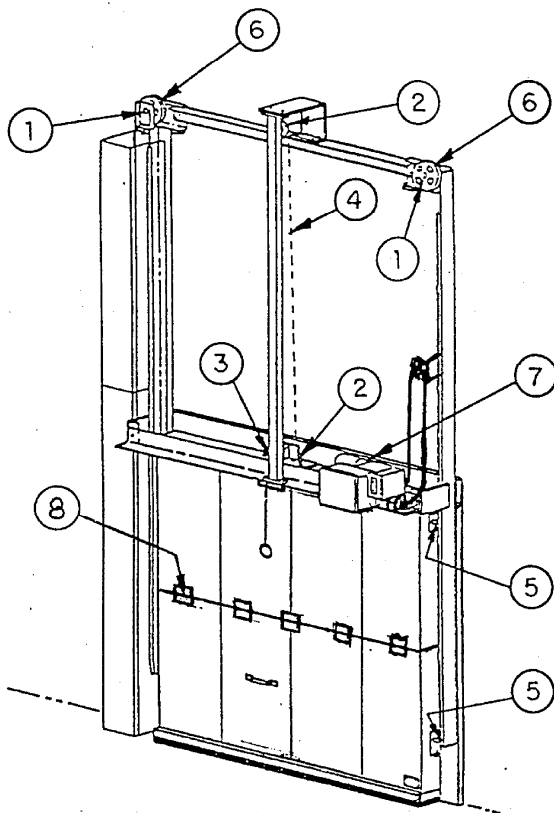
LOOSEN BOLTS TO ADJUST CHAIN AND RETIGHTEN.



CHAIN IS ADJUSTED AT FACTORY AND SHOULD NOT REQUIRE ADJUSTMENT. HOWEVER, IF NECESSARY, SEE DWG. ABOVE FOR ADJUSTMENT.

DRIVE CHAIN ADJUSTMENT

SEE SHEET NUMBER 11 AND MAKE DRIVE CHAIN ADJUSTMENT AS OUTLINED IN STEP 3. DO NOT OVERTIGHTEN.



LUBRICATION INSTRUCTIONS

LUBRICATE AT 3 MONTH INTERVALS

GREASE - TO BE GOOD GRADE OF LITHIUM BASE GREASE.

OIL ---- TO BE GOOD GRADE OF S.A.E. 30 NON-DETERGENT MOTOR OIL.

- ① CABLE SHEAVES BEARINGS - GREASE
- ② SPROCKET BEARINGS - OIL
- ③ CHAIN LOCK - GREASE
- ④ ROLLER CHAIN - OIL
- ⑤ ROLLERS - OIL
- ⑥ LIFTING CABLES - APPLY WIRE ROPE LUBRICANT
- ⑦ GEAR BOX OIL LEVEL, USE MOBIL S-H-C #626 OR EQUAL.
CHECK AT 6 MONTH INTERVALS.
- ⑧ HINGE KNUCKLES - OIL

MARK IV ELECTRICAL TROUBLE SHOOTING GUIDE

NOTE: DOOR MUST ROLL FREELY WITHOUT ANY DRAG OR BINDING DURING MANUAL OPERATION CHECK.

CAUTION: PRIOR TO THE FOLLOWING ELECTRICAL CHECK-OUT, DOOR MUST BE FULL OPEN OR FULL CLOSED.

TROUBLE SHOOTING STANDARD POWER CIRCUIT AND DRIVE SYSTEM

PROBLEM	PROBABLE CAUSE	REMEDY OR CHECK
A. DOOR WILL NOT RUN	1. NO POWER TO DOOR 2. STOP SWITCH IN OFF POSITION 3. PULL CORD SWITCHES 4. MOTOR OVERLOAD TRIPPED	1. CONNECT MAIN POWER SUPPLY TO DOOR 2. TURN STOP SWITCH ON 3. CHECK WIRES #9 & #10 4. RESET OVERLOAD
B. DOOR OPENS OR CLOSES APPROX. 6" THEN STOPS	1. DEFECTIVE HOLD SWITCH ON REVERSING CONTACTOR 2. OPEN OR CLOSED LIMIT SWITCH DEFECTIVE	1. REPLACE REVERSING CONTACTOR 2. REPLACE TRAVEL LIMIT SWITCH
C. DOOR WILL NOT CLOSE, OPENS OKAY	1. DEFECTIVE SENSITIVE EDGE (SHORTED)	1. REPAIR OR REPLACE SENSITIVE EDGE ASSEMBLY AS NECESSARY
D. DOOR WILL NOT OPEN BY SAFETY EDGE	1. DEFECTIVE SAFETY EDGE 2. DROP-LOOP WIRE BROKEN	1. REPAIR OR REPLACE SAFETY EDGE ASSEMBLY AS NECESSARY 2. REPLACE DROP-LOOP WIRE
E. 3-PHASE POWERTRON UNITS, DOOR TRAVELS IN WRONG DIRECTION-DOOR CLOSES BY SAFETY EDGE	1. CHECK MOTOR ROTATION	1. REVERSE ANY 2-LEADS OF MAIN POWER SUPPLY
F. DOOR OVERTRAVELS OR UNDERTRAVELS	1. TRAVEL LIMIT SWITCH ADJUSTMENT	1. RE-ADJUST SO DOOR COASTS INTO DESIRED POSITION
G. POWER UNIT RUNS (WILL NOT MOVE DOOR) AND MOTOR RUNNING LIGHT IS ON	1. BINDING IN DRIVE 2. TORQUE LIMITER	1. TURN OFF POWER, CHECK DOOR MANUALLY 2. TURN OFF POWER, THEN TIGHTEN TORQUE LIMITER SO DOOR WILL RUN SMOOTHLY WITHOUT A JERKY OPERATION