INSTALLATION MANUAL

FOR

OPERATOR MODELS

MCJ, MCJH, LCHJ,

AND HDCJ

GENERAL INFORMATION

MCJ, MCJH, LCHJ AND HDCJ Series Operators are designed for large sectional overhead type doors and steel rolling doors driven by a cross header shaft.

FEATURES

Power is developed by V belt and pulleys and heavy duty roller chain and sprockets reducing the speed of the motor from 1750 RPM to 10" Per Sec. for sectional doors and 6" to 8" Per Sec. for steel rolling doors. Driven Limit Switches (That are adjustable) shut off motor in both open and close positions. A solenoid brake stops and holds the door when power is off.

MCJ series operators do not have a chain hoist. A disconnect device operable from floor level is provided, allowing door to be operated by hand.

MCJH, LCHJ and HDCJ series have a manual operated chain hoist that is controlled from a disconnect device operable from floor level. An electrical interlock switch cuts power to operator during manual operation.

INSTALLATION INSTRUCTIONS
FOR MODELS: MCJ,MCHJ, LCHJ AND HDCJ

Unpack carton and check for possible damage. If damage in shipping is detected, file claim with freight carrier before proceeding further.

IMPORTANT : Be sure that the available power matches that on the operator Name Plate

The Carton should contain the following:

Model MCJ:

1 Power Unit Complete

1 Control Station

4 Ft. #41 Roller Chain

2 #41 Chain Connecting Links

1 5/16 x 1-1/2 Roll Pin

2 1/4 x 1-1/2 Keys, shaft

1 Sash Chain and Brackets (2/3 Door Hgt.)

2 Bearing Plate

1 Sprocket 41B36 (Door)

1 Sprocket 41B14 (Operator)

2 1" I.D. Shaft Collars

NOTE: Center distance for Spacer Bar is 12-1/8"
Chain Length is 36-1/2"

Model MCHJ Same as above except
Add 1 passing link hoist chain
1-1/2 x Door Height

MODEL LCHJ:

1 Power unit complete (Marked LCHJ)
1 Control station
4 Ft. #41 roller chain
2 #41 chain connecting links
1 5/16 x 1-1/2 rollpin
2 1/4 sq. shaft keys 1-1/2"
1 sash chain (2/3 door hgt.)
2 Bearing plates
1 lever release assembly
1 sprocket 41B14 x 1" I.D. (Operator)
1 sprocket 41B20 or 41B36 x 1" I.D.
(Stand. steel door)
2 1" shaft collars
1 passing link hoist chain 1-1/2 x door hgt.

NOTE: To set spacer bar assembly- Before installation cut roller chain (by driving out pins) 32-1/2" Bolt spacer bar (2 pieces) together, set centers of bearing holes 12- 3/16".
When 41B14 and 41B36 sprocket are used with 36-1/2" of #41 chain, the spacer bar center distance is 12-1/8". To make spacer bar, cut 1 piece of 2 x 2 x 1/8 angle to desired length, and punch or drill to obtain proper center distance. 3/16 x 2-1/2 Flat iron can also be used.

Model HDCJ:

1 Power unit complete
1 control station
4 ft. #50 roller chain
2 #50 chain connecting links
1 5/16 x 1-1/2 roll pin
2 1/4 sq. x 1-1/2 shaft keys
1 sash chain (2/3 door hgt.)
2 bearing plates
1 lever release assembly
1 sprocket 50B15 (Operator shaft)
1 sprocket 50B20 (Wood door) or 50B36 (Steel door)
2 1" I.D. shaft collars
1 chain hand hoist (1-1/2 x door hgt.)

NOTE: To set spacer bar assembly before installation, cut roller chain (by driving out pins) 31-3/4" long. Bolt spacer bar (2 pieces) together. Set centers of bearing holes 10-3/4 sprockets (15 to 20) for 10-3/4" centers.

MOUNTING OPERATOR

1. Figure I shows suggested mounting positions for wood or steel sectional overhead doors.

2. Figure II shows suggested mounting positions for steel rolling doors.

3. The center distance between the door shaft and the operator shaft is usually between 10" and 15". A more accurate measurement is determined by the diameter of the sprockets and the length of the roller chain. We try to hold this center distance by a bearing spacer bar. See figure III for standard measurements.

4. When a standard measurement cannot be used, it will be easier to hang the operator temporarily by the sprockets and the roller chain (cut to desired length) on one side, and a rope on the other side. As shown in figure III. Mount the bearing brackets as shown, but leave off the connecting bar (3/16 x 9-1/2 x 3)- (A longer piece of flat bar or a piece of 2 x 2 x 1/8 angle iron can be used instead) with operator hanging in place by length of roller chain and apiece of rope tied to support opposite ends of shaft, mark and drill or punch holes in the connecting bar (or 2 x 2 x 1/8 angle iron) and fasten with 4 3/8 x 1" bolts and nuts.

5. Holes to mount operator can now be marked and drilled.

6. Operator should be mounted on the wall using 3/8" through bolts for a secure mounting. If wall is constructed to prohibit the use of through bolts, lag bolts and shields of suitable size may be used instead.

CLUTCH ADJUSTMENT

7. 1/4" shaft key is furnished with operator. If no key way is provided in the door shaft, drill a 5/16" hole through sprocket and door shaft and insert 5/16 x 1-1/2 roll pin.

8. After operator is installed, adjust the clutch.
   Note: More problems are caused by an improperly adjusted clutch than by any other cause.
   (a) Remove cotter pin from nut on clutch shaft. (Note: MCJ & MCJH have elastic stop nut instead of cotter pin)
   (b) Back off clutch nut until there is insufficient tension on clutch to drive door.
   (c) Tighten clutch nut gradually until there is just enough tension on spring to permit operator to move door smoothly, but to allow clutch to slip if door is obstructed.
   (d) When clutch is properly adjusted and door is properly adjusted, it is possible to stop the door by hand during travel.
   (e) Replace cotter pin after each adjustment.

9. Limit switch adjustment:
   After operator is installed and connected to door, remove cover from electrical enclosure and observe traveling nuts on limit shaft. Move door up by hand hoist, or large belt pulley. Be sure that the traveling nut is moving away from the closest switch arm. The purpose of this is to determine if the operator and the door are syncronized.(That is: to determine if the operator was hooked to the door shaft when the door and the operator were in the Down position*** or was the operator in the Down position and the door in the UP position).

   The correction is made by depressing the traveling nut retaining bracket and rotating the traveling nuts to the opposite end. Re-engage retaining bracket. See Fig.IV.

10. NOTE-CAUTION**
    3 phase operators must be checked for correct rotation before limit switch adjustment.

11. This can be determined by having the door up off the floor about 2 feet, push DOWN button. If the door starts down, the phase and rotation are correct. Be sure to use STOP button until limit switches are set.

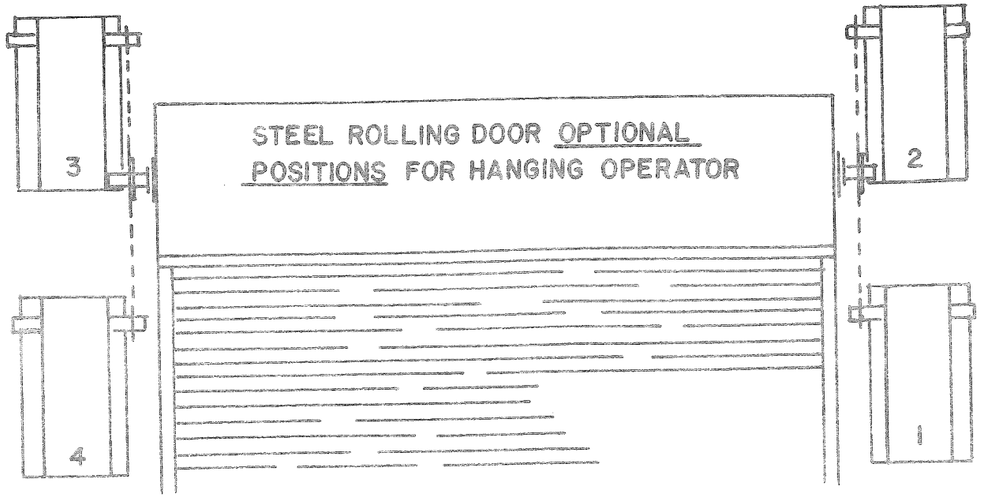
12. If phase is wrong, two wires from power have to be interchanged.

13. You can now proceed to set limit switches. Run door to down position. Depress traveling nut retaining bracket and rotate traveling nut until it touches the down limit arm, and a click is heard or the switch is opened. Run door up about two feet, then down to the floor again. (Be ready to stop door with stop button, just in case the adjustment was not correct) If the door stopped too soon, disengage traveling nut and rotate away from down limit switch. If door did not stop in time, rotate traveling nut toward down limit switch.

14. Repeat until correct adjustment is obtained.
    Repeat same adjustment for Up limit.
    Traveling nut retaining bracket must be re-engaged each time limit switch is adjusted.

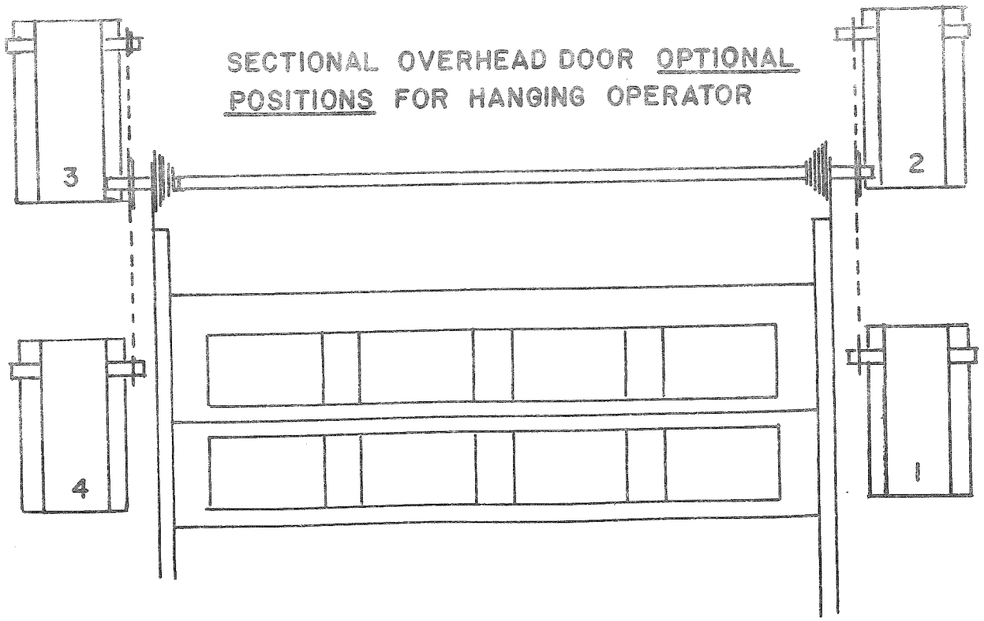
15. Temporary use of push button can be obtained by matching wire colors from operator to button and fastening with wire nuts. This will allow you to operate the door without moving too far away from limit switch.

WALL MOUNT OPTIONAL POSITIONS



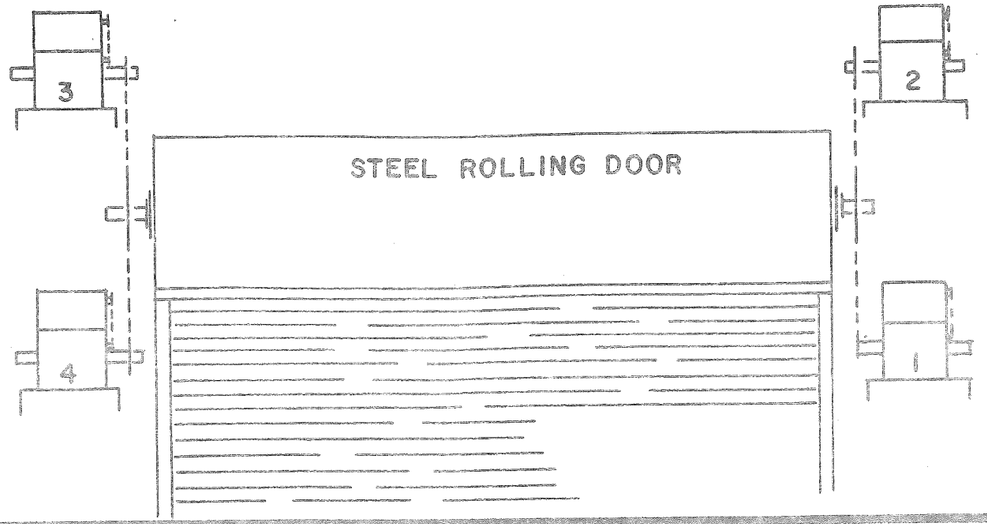
STEEL ROLLING DOOR OPTIONAL POSITIONS FOR HANGING OPERATOR

SECTIONAL OVERHEAD DOOR OPTIONAL POSITIONS FOR HANGING OPERATOR



POSITION 2 MCJ AND MCJH ONLY

SHELF MOUNT OPERATOR OPTIONAL POSITIONS



SECTIONAL OVERHEAD DOOR

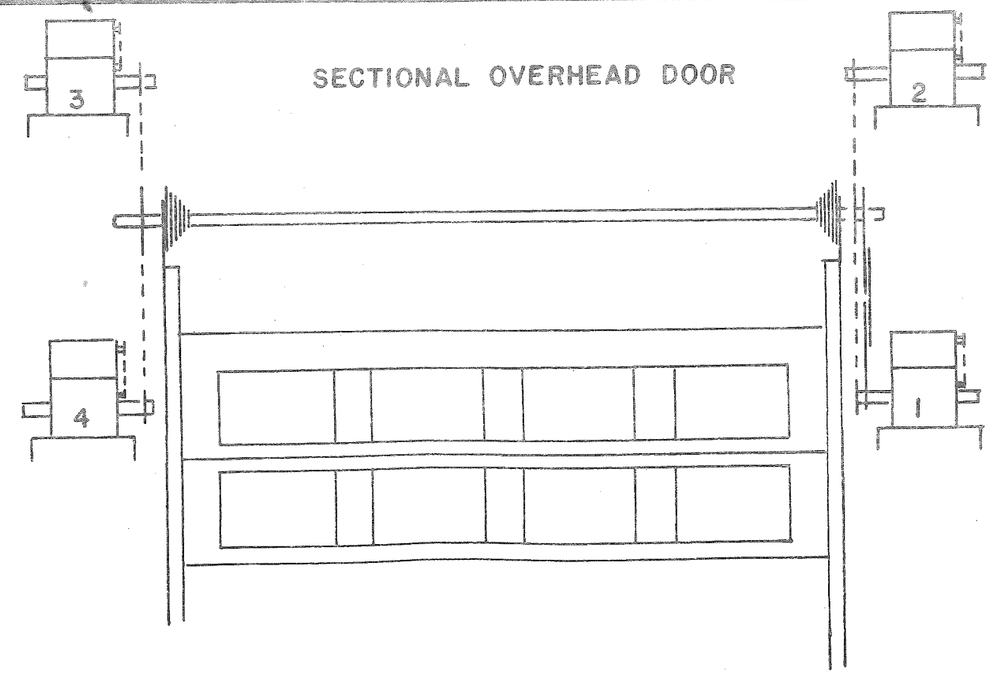
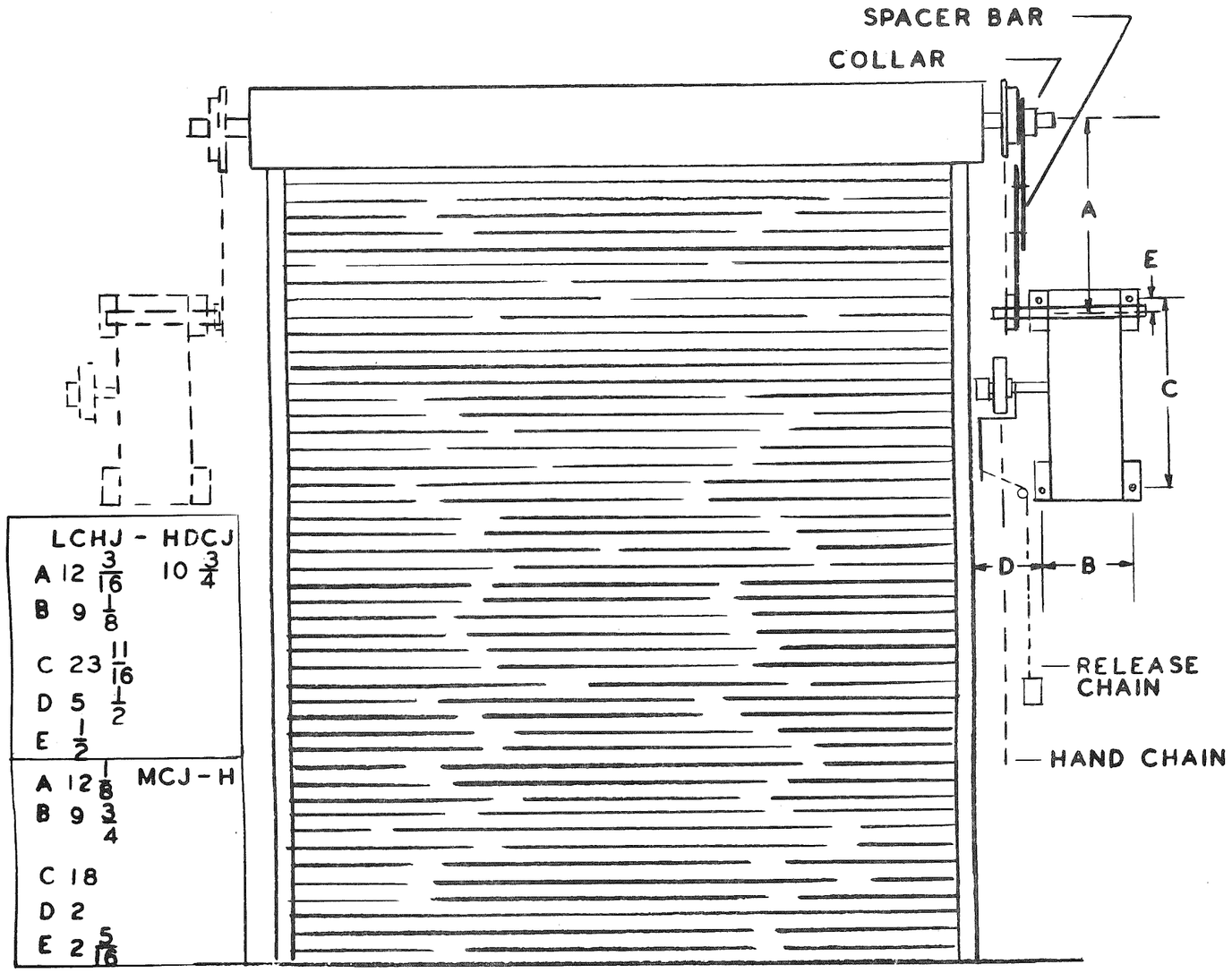


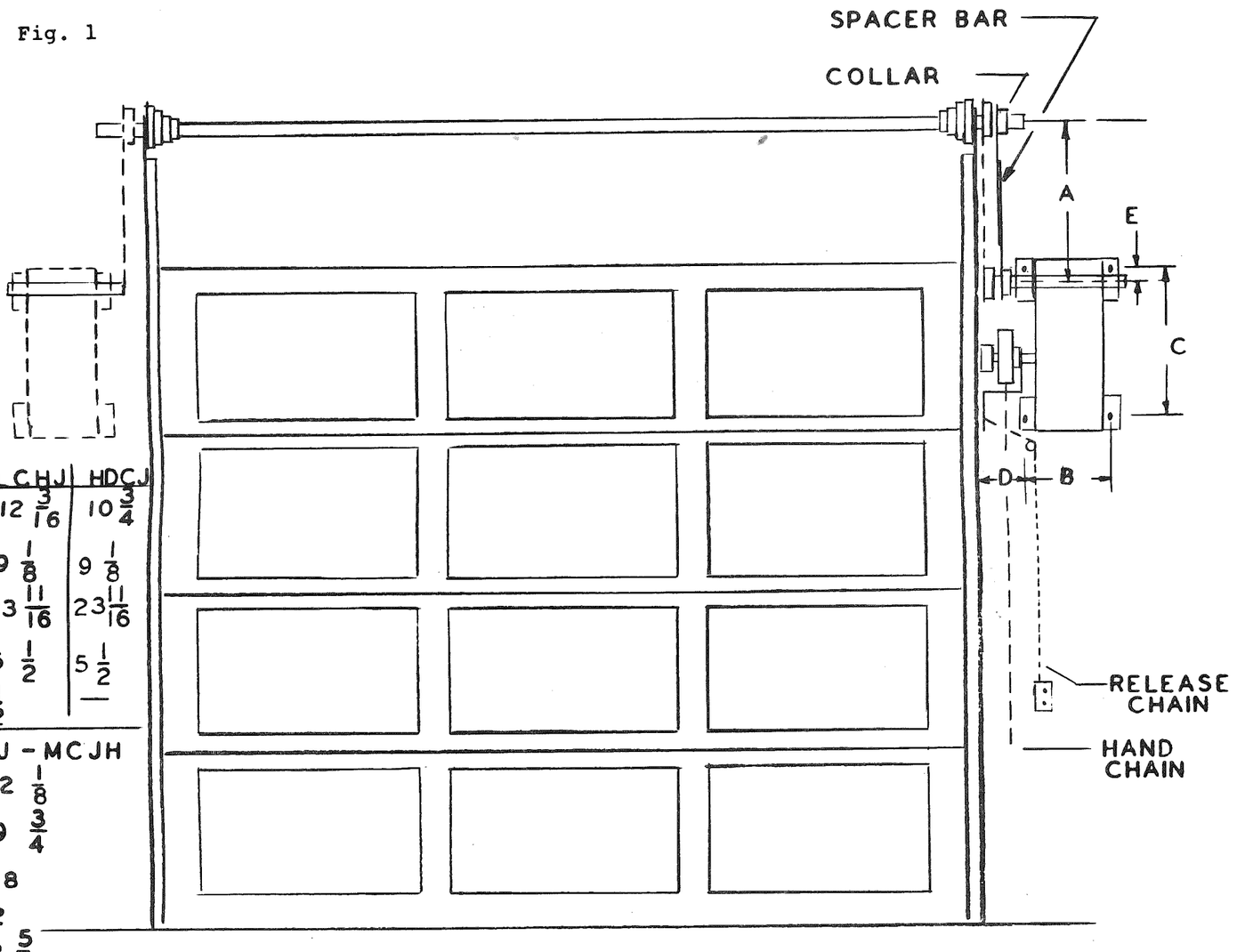
FIG. 2



	LCHJ - HDCJ	
A	12 3/16	10 3/4
B	9 1/8	
C	23 11/16	
D	5 1/2	
E	1/2	

	MCJ - H
A	12 1/8
B	9 3/4
C	18
D	2
E	2 5/16

Fig. 1

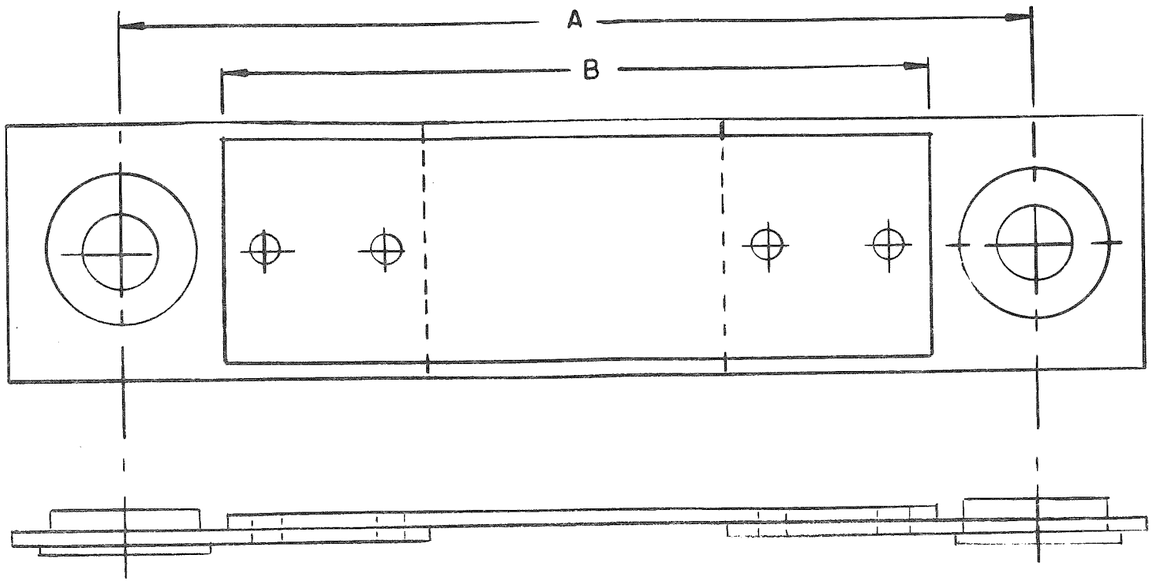


	LCHJ	HDCJ
A	12 3/16	10 3/4
B	9 1/8	9 1/8
C	23 11/16	23 11/16
D	5 1/2	5 1/2
E	1/2	

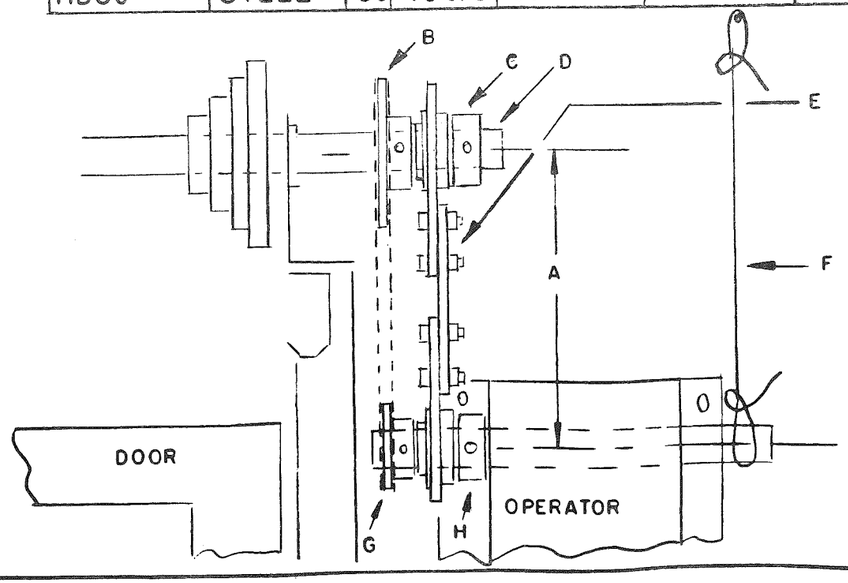
	MCJ - MCJH
A	12 1/8
B	9 3/4
C	18
D	2
E	2 5/16

FIG. 3

BEARING SPACER BAR



MODEL	DOOR	CHAIN NO.	CHAIN LENGTH	OPERATOR SPROCKET	DOOR SPROCKET	DIMENTION (A)	DIMENTION (B)
MCJ-MCJH	WOOD	41	36 1/2"	41B14	41B36	12 1/8"	9 1/2"
MCJ-MCJH	STEEL	41	38 1/2"	41B14	41B45	11 13/16"	9 1/2"
LCHJ	WOOD	41	32 1/2	41B14	41B20	12 3/16"	9 1/2"
LCHJ	STEEL	41	38 1/2"	41B14	41B45	11 13/16"	9 1/2"
HDCJ	WOOD	50	31 3/4"	50B15	50B20	10 3/4"	8 1/2"
HDCJ	STEEL	50	40 5/8"	50B15	50B45	10 13/16	8 1/2"

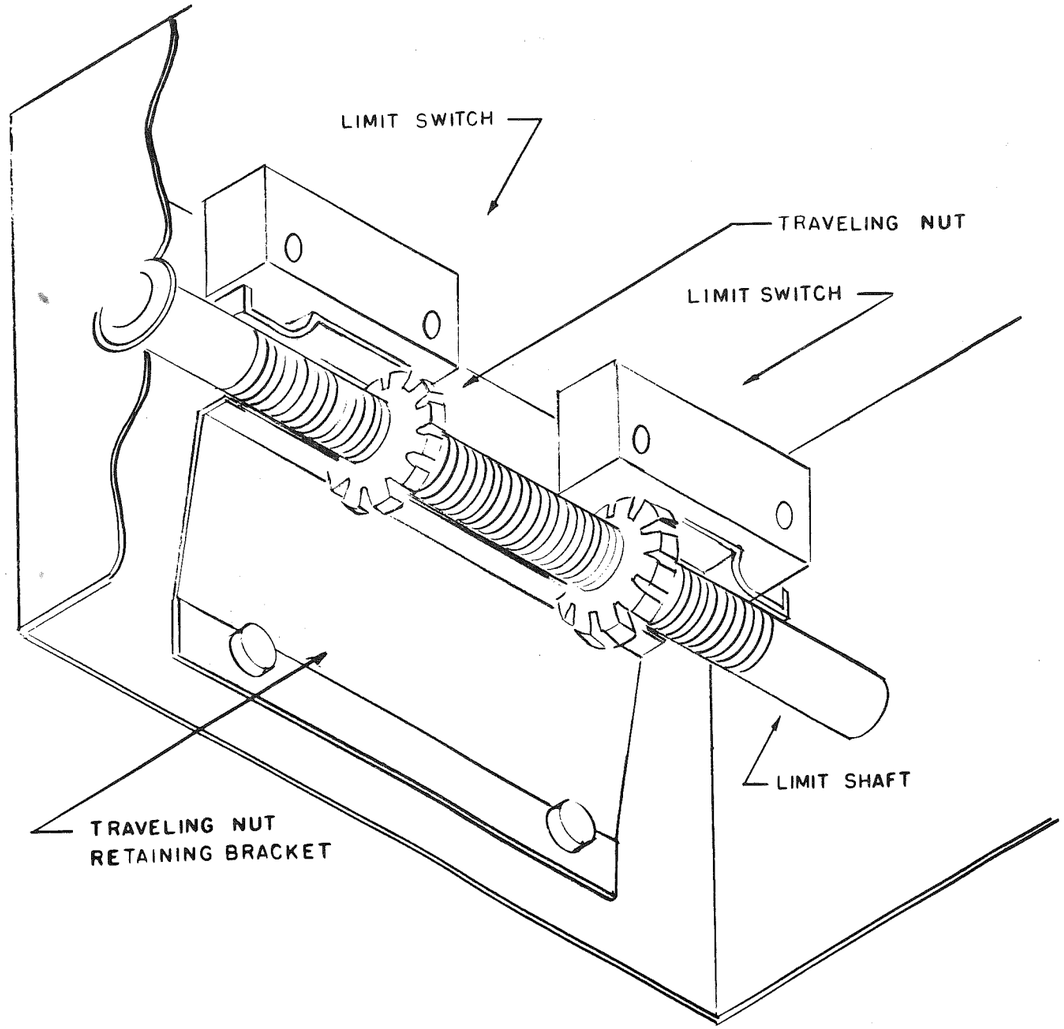


A. SPACER BAR CENTER DISTANCE.
B. DOOR SPROCKET
C SHAFT COLLAR
D. DOOR SHAFT
E. SPACER BAR
F. TEMPORARY ROPE HANGER.
G. OPERATOR SPROCKET
H. SHAFT COLLAR

FIG. 4

LIMIT ADJUSTMENT

1. REMOVE COVER FROM ELECTRICAL ENCLOSURE.
2. DEPRESS TRAVELING NUT RETAINING BRACKET AND TURN TRAVELING NUT.
3. TURNING NUT TOWARD CENTER OF SHAFT INCREASES DOOR TRAVEL.
4. TURNING NUT TOWARD SWITCH DECREASES DOOR TRAVEL.
5. BE SURE RETAINING BRACKET ENGAGES IN SLOT AFTER EACH ADJUSTMENT.
6. USE STOP BUTTON TO STOP DOOR UNTIL LIMITS ARE SET IN CORRECT POSITION.



FOR CHAIN HOIST MODELS

1. THREAD HOIST CHAIN OVER THE POCKET SHEAVE AND CONNECT ENDS.
2. ATTACH PULL CHAIN TO THE RELEASE ARM USING COTTER PIN.
3. INSTALL THE CHAIN RELEASE LEVER ASSEMBLY AS SHOWN BELOW.