



Rolling Doors

**COUNTER FIRE DOORS
INSTALLATION INSTRUCTIONS**

TUBULAR MOTOR OPERATED BRACKET DETAIL

- A) BEFORE ASSEMBLING THE BRACKETS ONTO THE BARREL INSERT THE TUBULAR MOTOR INTO THE BARREL ASSEMBLY. ALIGN THE PLASTIC TAB ON THE MOTOR AND THE SLOT ON THE SLEEVE ADAPTER AND SLIDE THE TUBULAR MOTOR ALL THE WAY INTO THE SLEEVE ADAPTER. AS SHOWN IN FIGURE 18. REFER TO TUBULAR MOTOR INSTALLATION INSTRUCTIONS AND OPERATION MANUAL FOR DETAILS.

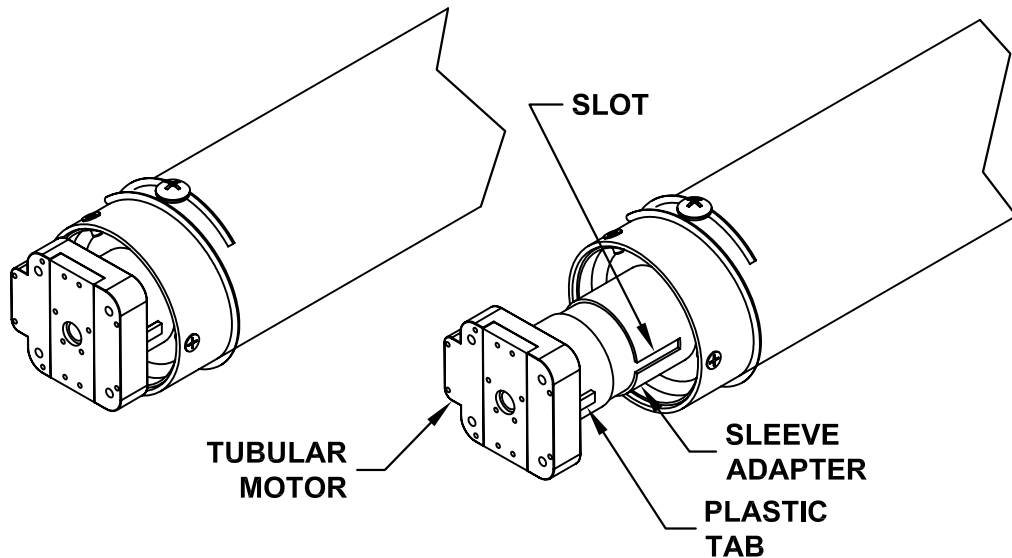


FIG 16

- B) ASSEMBLE THE BRACKETS ONTO THE BARREL AS SHOWN IN FIGURE 19. ATTACH THE OCTAGONAL MOTOR MOUNTING PLATE TO THE MOTOR AND THE DRIVE BRACKET TO THE MOTOR ASSEMBLY. ON THE SUPPORT SIDE, SLIDE THE 5/8" SHAFT THROUGH THE BEARING ON THE BRACKET AND THE ELECTROMAGNETIC CLUTCH.

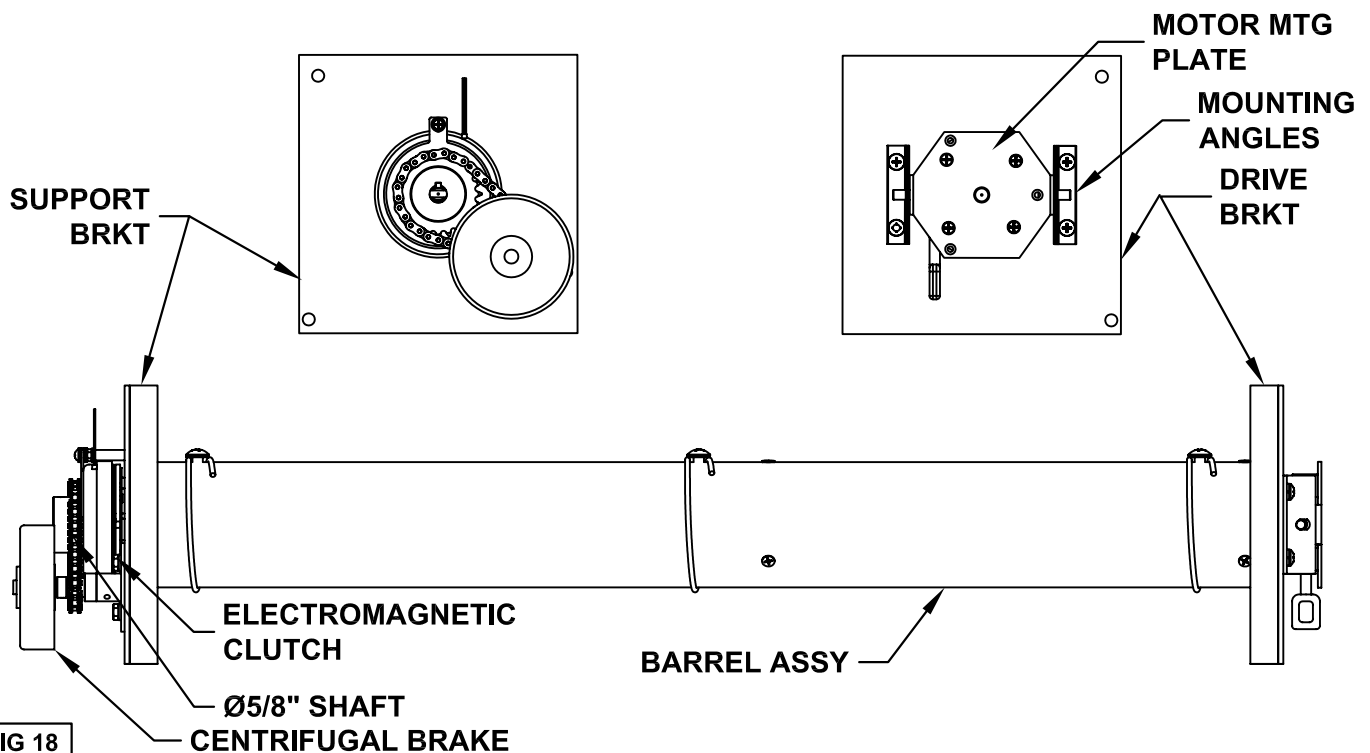


FIG 18

SERVICE COUNTER FIRE DOOR INSTALLATION INSTRUCTIONS

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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.

FOLLOW THE DIRECTIONS BELOW:

CONCEALED DAMAGE:

- (a) Must be inspected by carrier's representative within 15 days from date of delivery.
- (b) Consignee must obtain copy of Inspection Report.
- (c) Material should not be moved from point of delivery to other premises prior to discovery and/or reporting of damage.
- (d) Container and packing should be retained by consignee until inspection is made.

VISIBLE DAMAGE:

- (a) Must be inspected by carrier's representative within 15 days from date of delivery.
- (b) Consignee must obtain copy of Inspection Report.
- (c) Material should not be moved from point of delivery to other premises prior to discovery and/or reporting of damage.
- (d) Container and packing should be retained by consignee until inspection is made.

NOTE: IF DAMAGE IS CERTAIN, GOODS SHOULD NOT BE UNPACKED UNTIL INSPECTION IS MADE. IF DAMAGE IS UNCERTAIN, PACKAGES MAY BE OPENED BUT PACKING MATERIAL MUST BE SAVED UNTIL INSPECTION IS MADE.

INCOMPLETE DELIVERY:

- (a) Should be noted on delivery receipt.
- (b) Acknowledged by driver's signature.
- (c) Start tracing immediately.
- (d) Notify shipper.

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.

PRE-INSTALLATION INSTRUCTIONS



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



**READ AND FOLLOW THESE INSTRUCTIONS THOROUGHLY - THE COOKSON
COMPANY 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 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 parts.

SAFETY CHECK LIST

**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 45° 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 owner or his/her representative in the proper method of operating this door.

SERVICE COUNTER FIRE DOOR GUIDE INSTALLATION

DEPENDING ON YOUR DOOR TYPE YOU HAVE RECEIVED EITHER FACE MOUNTED OR BETWEEN JAMB MOUNTED GUIDES. PLEASE REFER TO THE APPROPRIATE INSTRUCTION.

FACE MOUNTED GUIDES

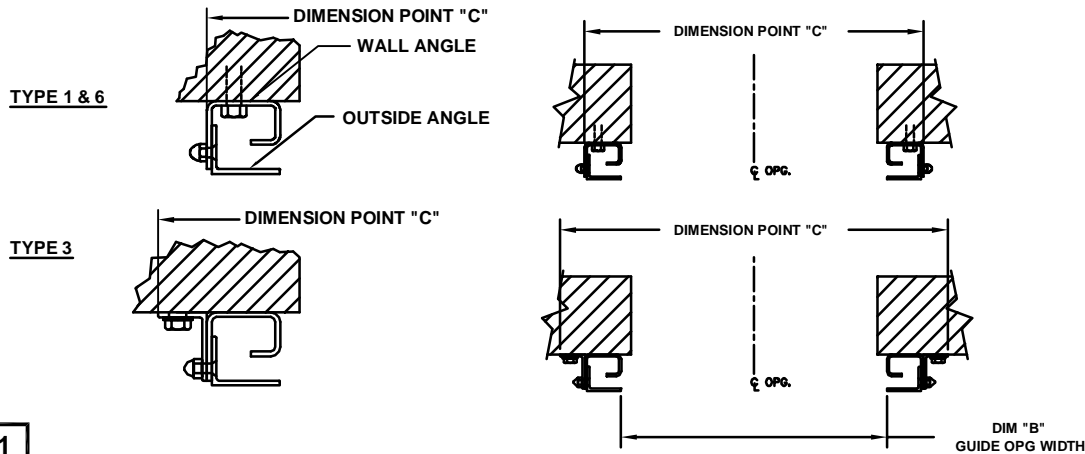


FIG. 1

BETWEEN JAMB MOUNTED GUIDES

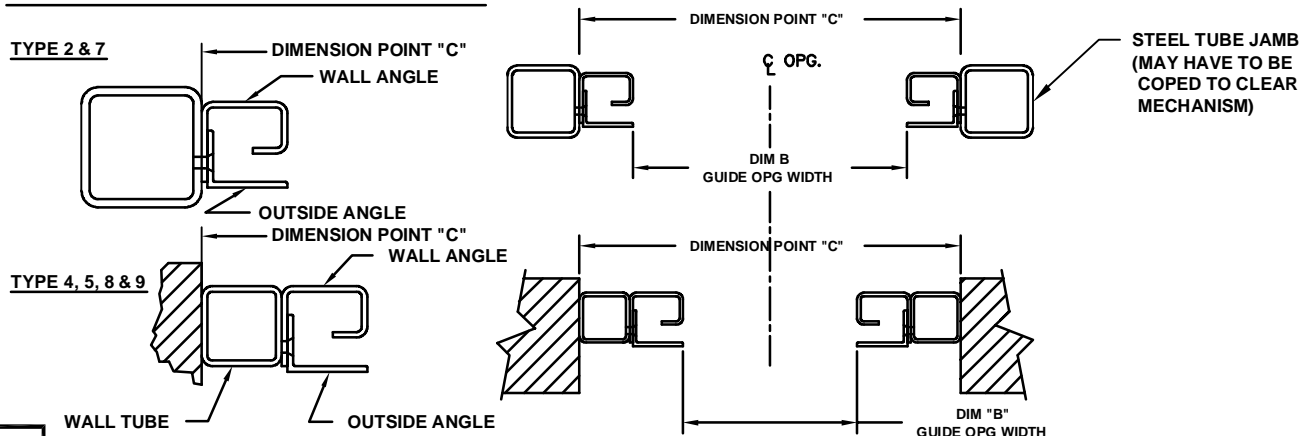


FIG. 2

- 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 1, 6 and 3 (See FIG. 1 & 2) 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 1 & 2) **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 4, 5, 8 & 9 have to be disassembled.
- 6) Drill mounting holes for wall fasteners and mount the guides. (See PG 5 for fastener type) Reassemble guides if necessary.

SERVICE COUNTER FIRE DOOR SMOKE DOOR GUIDE INSTALLATION

DEPENDING ON YOUR DOOR TYPE YOU HAVE RECEIVED EITHER FACE MOUNTED OR BETWEEN JAMB MOUNTED GUIDES. PLEASE REFER TO THE APPROPRIATE INSTRUCTION.

INSTRUCTIONS FOR FACE MOUNTED GUIDES

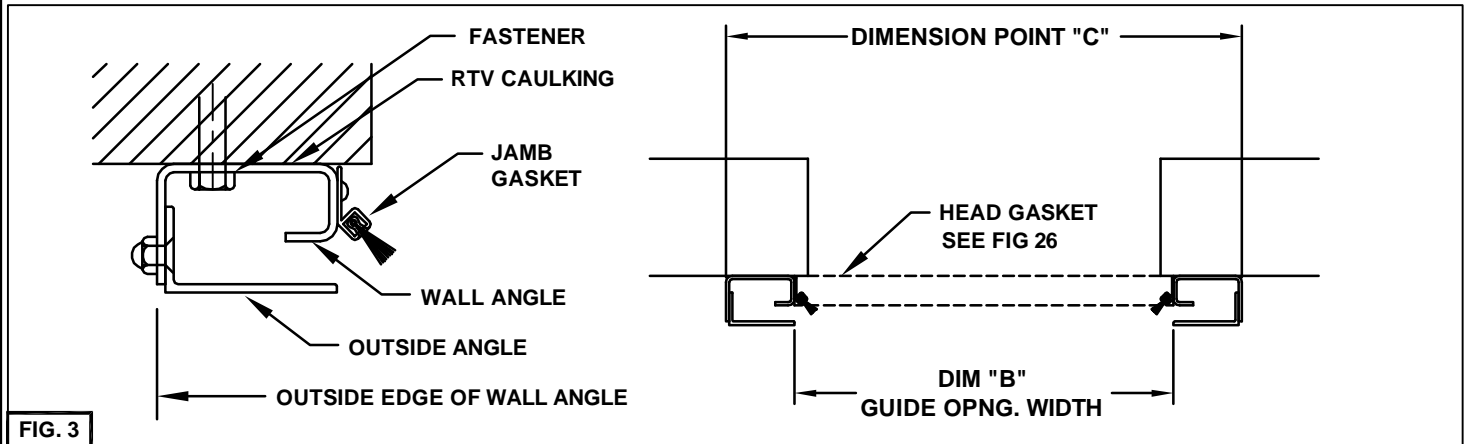


FIG. 3

- 1) WITH THE WALL ANGLE PLACED AGAINST SCRIBED LINE, LOCATE GUIDE MOUNTING HOLES.
- 2) APPLY 1/8" CONTINUOUS VERTICAL BEAD OF RTV CAULKING (PROVIDED.)
- 3) MOUNT GUIDE & CLEAN UP EXCESS CAULKING.

INSTRUCTIONS FOR BETWEEN JAMB GUIDES

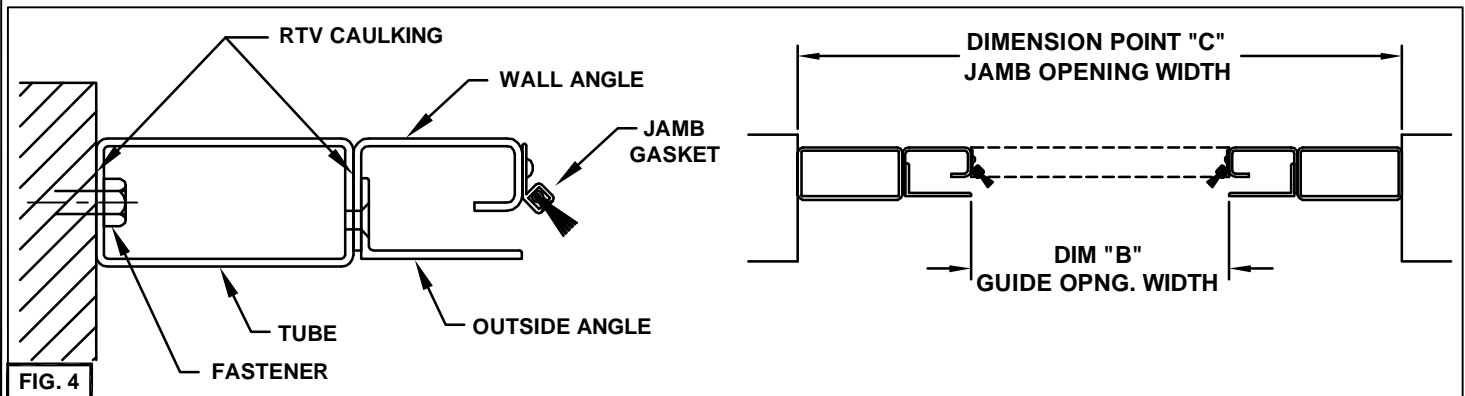


FIG. 4

- 1) DISASSEMBLE WALL AND OUTSIDE ANGLE FROM TUBE AND PLACE TUBE AGAINST JAMB. LOCATE GUIDE MOUNTING HOLES.

IMPORTANT: THE TOPS OF EACH GUIDE MUST LIE IN A LEVEL LINE.

- 2) APPLY 1/8" CONTINUOUS VERTICAL BEAD OF RTV CAULKING (PROVIDED.)
- 3) MOUNT TUBE & REASSEMBLE GUIDE, CLEAN UP EXCESS CAULKING.

SERVICE COUNTER FIRE DOORS

GUIDE INSTALLATION (CONT.)

3) DRILL HOLES IN JAMBS AS FOLLOWS:

CONCRETE BRICK OR MASONRY: DRILL COMPLETELY THROUGH THE WALL WITH 1/2" DIAMETER MASONRY DRILL.

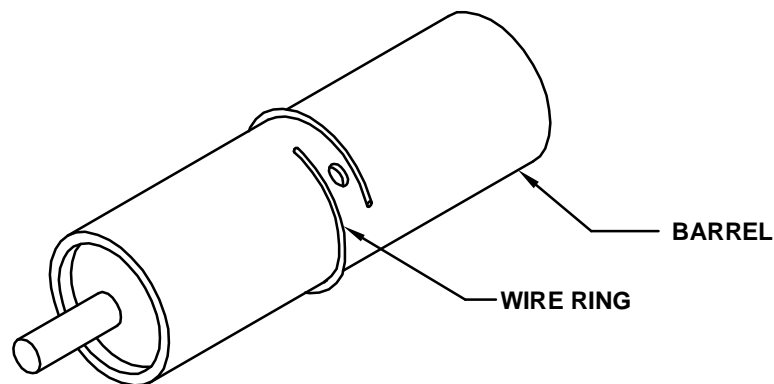
CONCRETE BRICK OR MASONRY: DRILL 3/8" DIAMETER X 3" DEEP HOLE. INSERT 3/8" DIAMETER EXPANSION ANCHOR (FURNISHED), OR EQUAL TO THAT SPECIFIED IN SECTION 6-4.1.3 OF THE LATEST EDITION OF N.F.P.A. BULLETIN 80.

STEEL STRUCTURAL: DRILL STEEL JAMB WITH 5/16" DRILL AND TAP HOLE WITH 3/8"-16 N.C. TAP.

STEEL STUD: USE Ø1/4 SELF TAPPING FASTENERS.

4) SECURE GUIDE TO WALL. REASSEMBLE ALL GUIDE COMPONENTS. REMOVE THE STOPS LOCATED AT THE TOP OF EACH GUIDE.

5) INSTALL WIRE RINGS ON THE BARREL.



WIRE RING INSTALLATION INSTRUCTION

FIG. 5

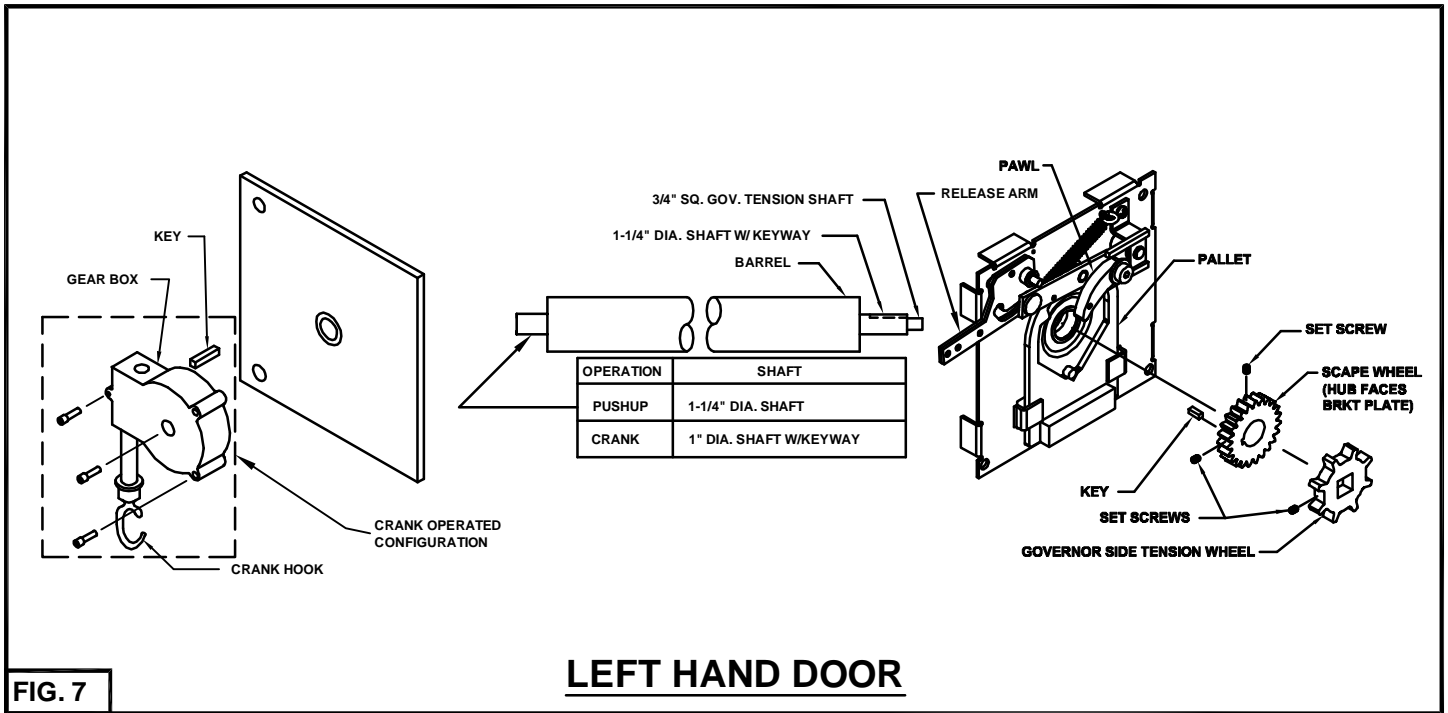
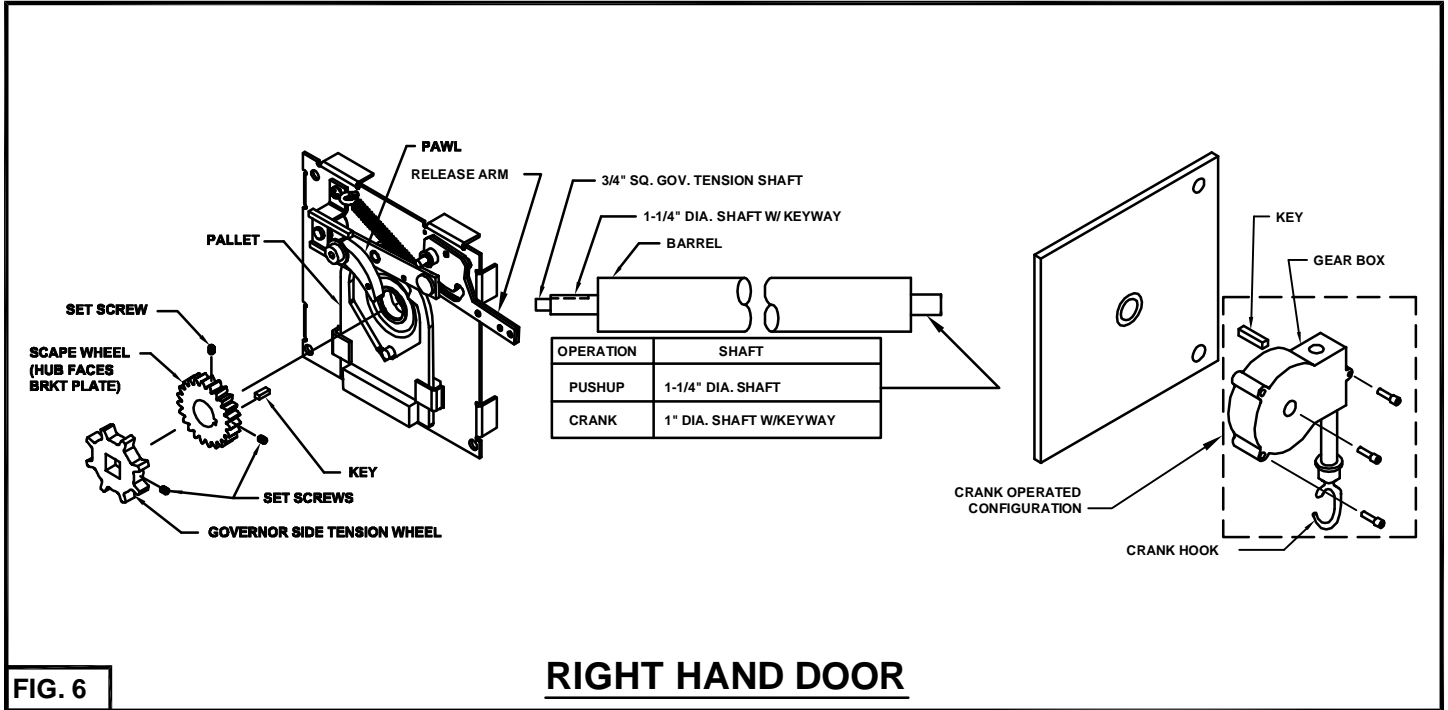
6) PLACE BARREL AND BRACKET ASSEMBLIES IN THE CORRECT MOUNTING POSITION IN FRONT OF THE OPENING.

REFER TO THE FOLLOWING APPROPRIATE INSTRUCTIONS.

CAUTION: EACH ASSEMBLY IS HANDED RIGHT OR LEFT. SEVERE SPRING DAMAGE AND PRODUCT FAILURE MAY OCCUR IF DOORS ARE NOT MOUNTED WITH CORRECT HANDING.

MANUALLY OPERATED BRACKET DETAIL (SINGLE SPRING)

A) ASSEMBLE STANDARD/DRIVE BRACKET AND TENSION/GOVERNOR BRACKET AND BARREL AS SHOWN IN FIG. 6 & 7.



MANUALLY OPERATED BRACKET DETAIL (DUAL SPRING)

A) ASSEMBLE STANDARD/DRIVE BRACKET AND TENSION/GOVERNOR BRACKET AND BARREL AS SHOWN IN FIG.8 & 9.

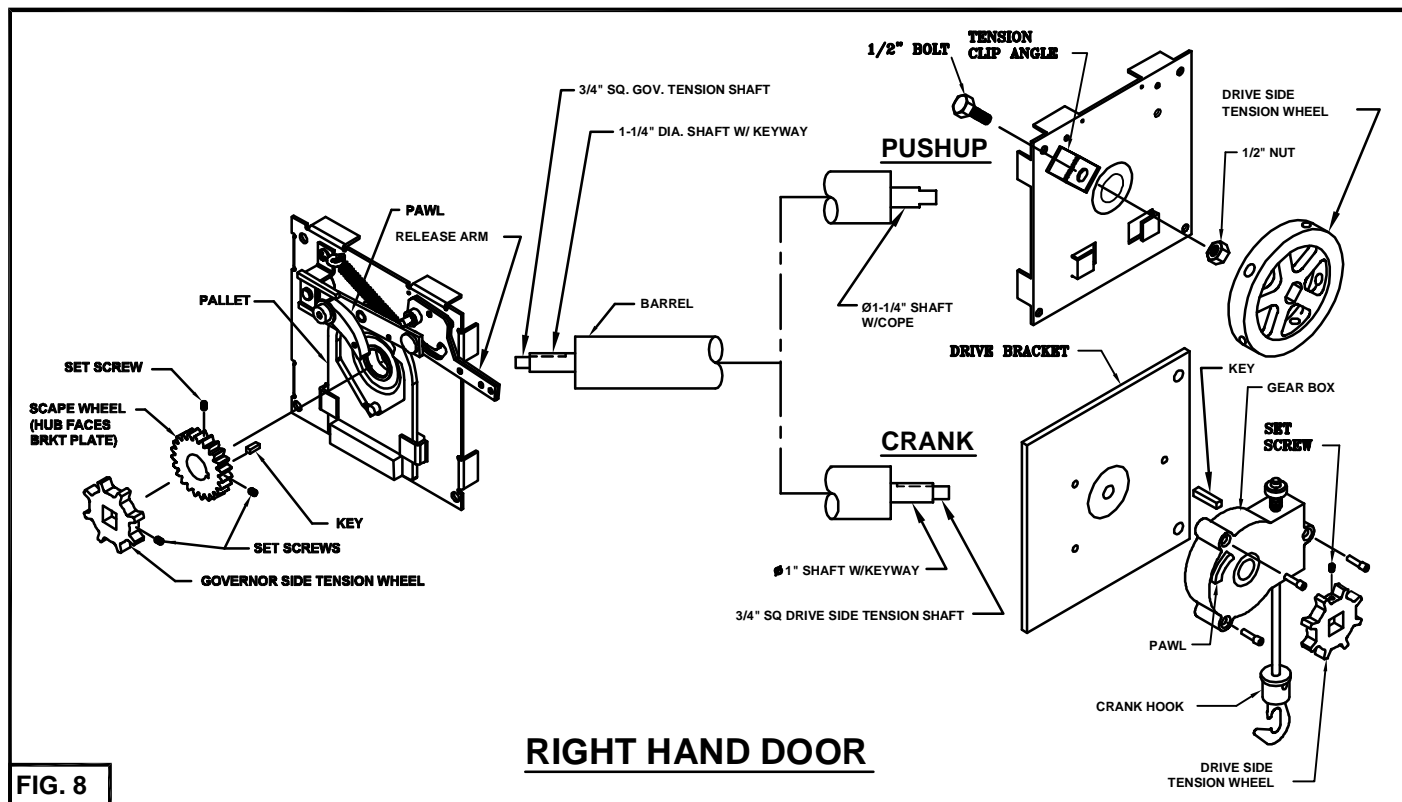


FIG. 8

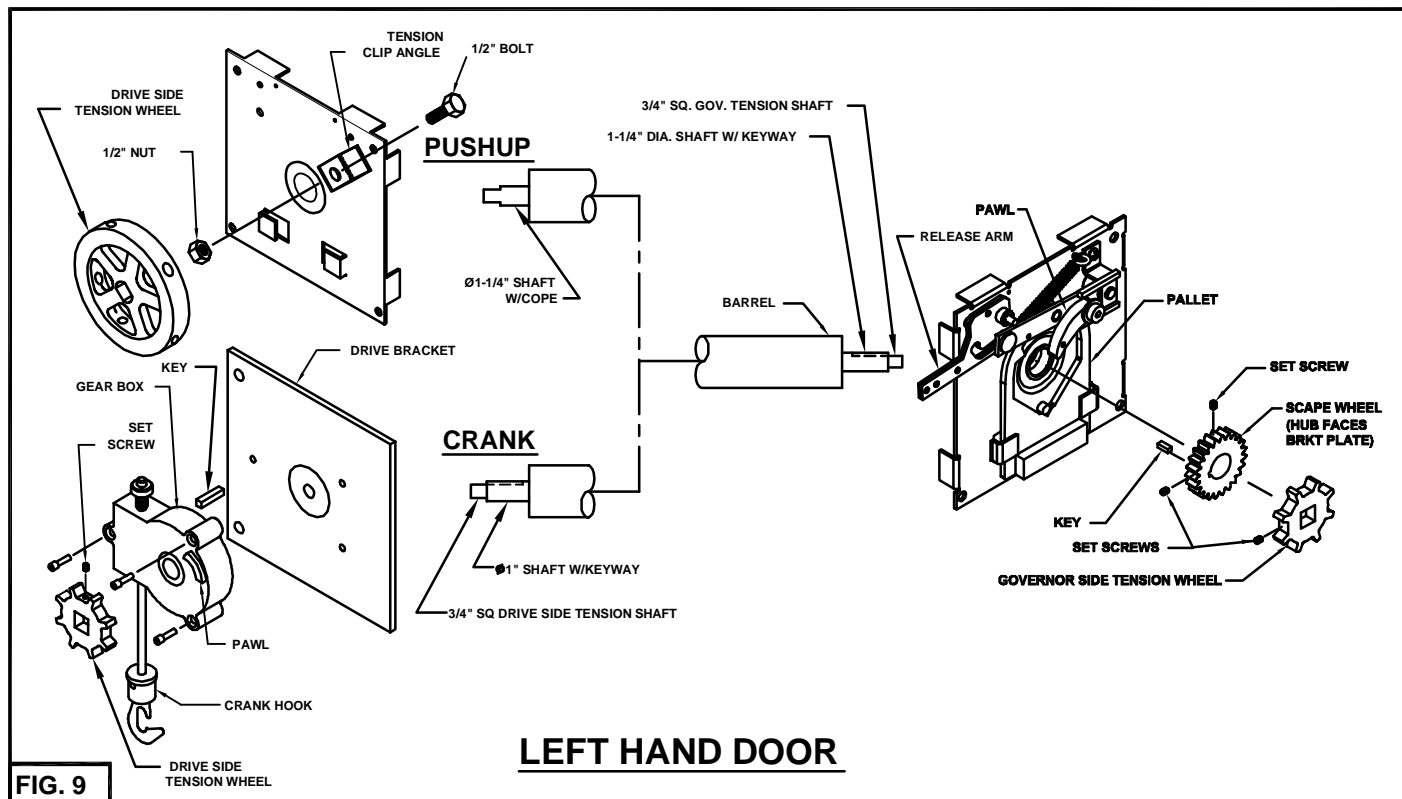
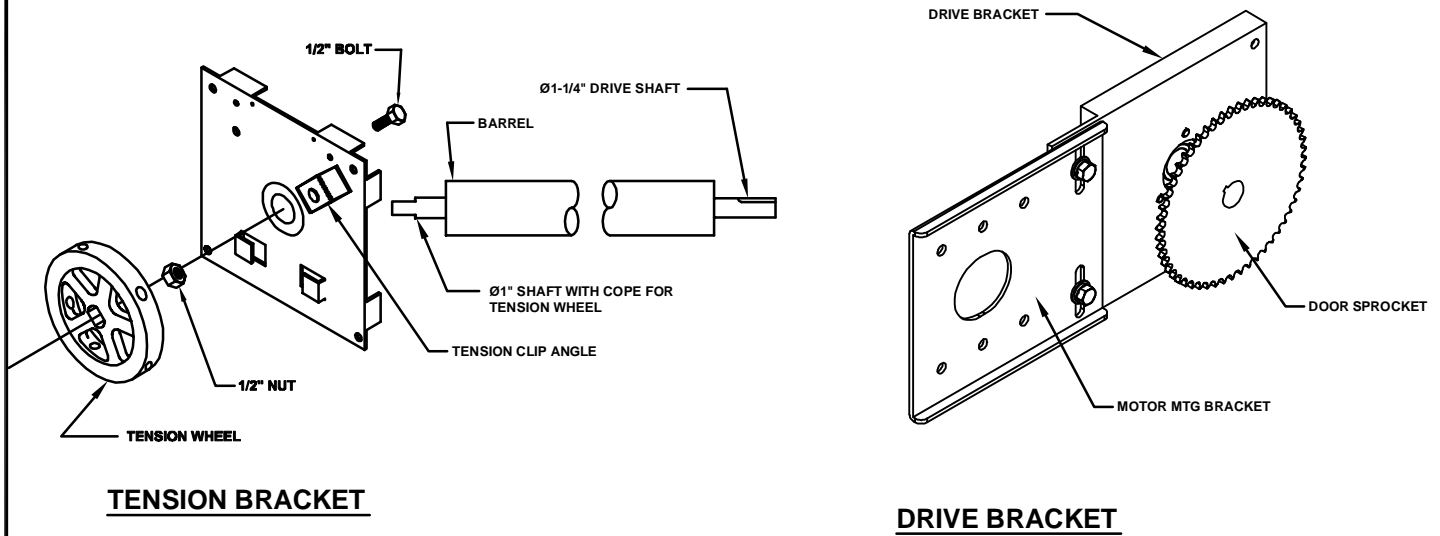


FIG. 9

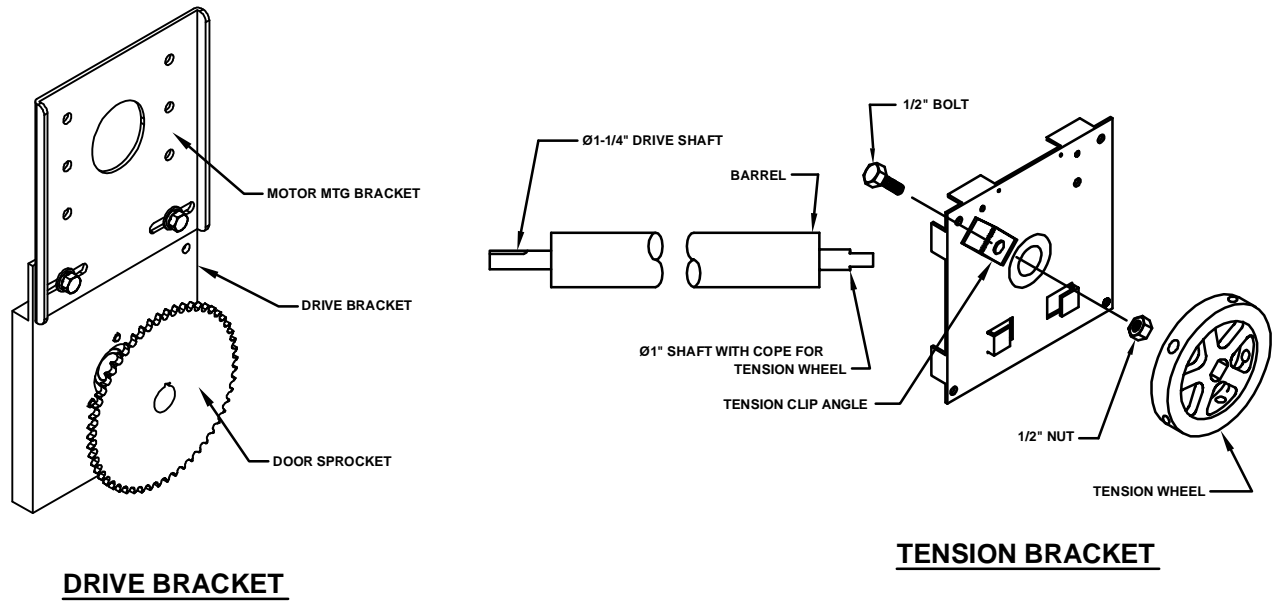
MOTOR OPERATED FDO-RM BRACKET ASSY

A) ASSEMBLE THE BRACKETS ONTO THE BARREL AS SHOWN IN FIGURE 12 & 13.



VERTICAL MOUNT DOOR

FIG. 10



TOP MOUNT DOOR

FIG. 11

MOTOR OPERATED LGJ/MGJ BRACKET DETAIL

A) ASSEMBLE THE BRACKETS ONTO THE BARREL AS SHOWN IN FIGURE 14 & 15.

IMPORTANT:
SCAPE WHEEL HUB MUST FACE TOWARD BRACKET FOR PROPER GEAR CONTACT

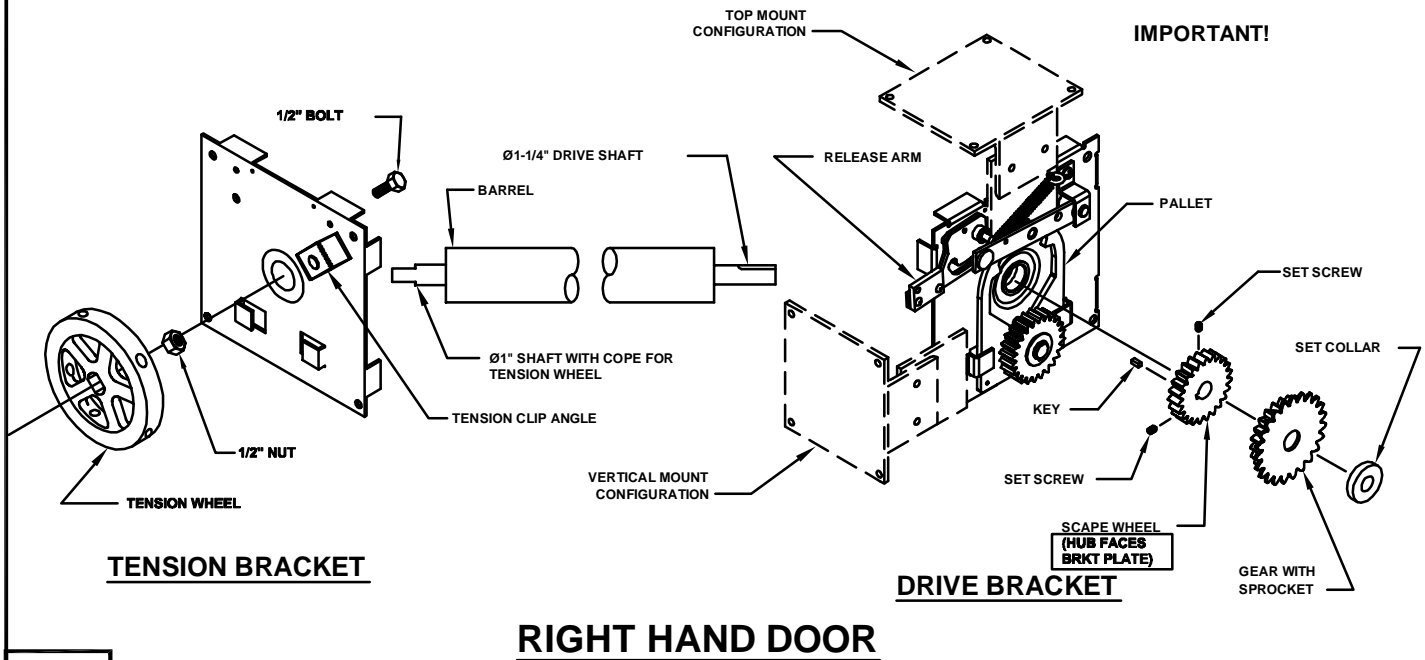


FIG. 12

RIGHT HAND DOOR

IMPORTANT:
SCAPE WHEEL HUB MUST FACE TOWARD BRACKET FOR PROPER GEAR CONTACT

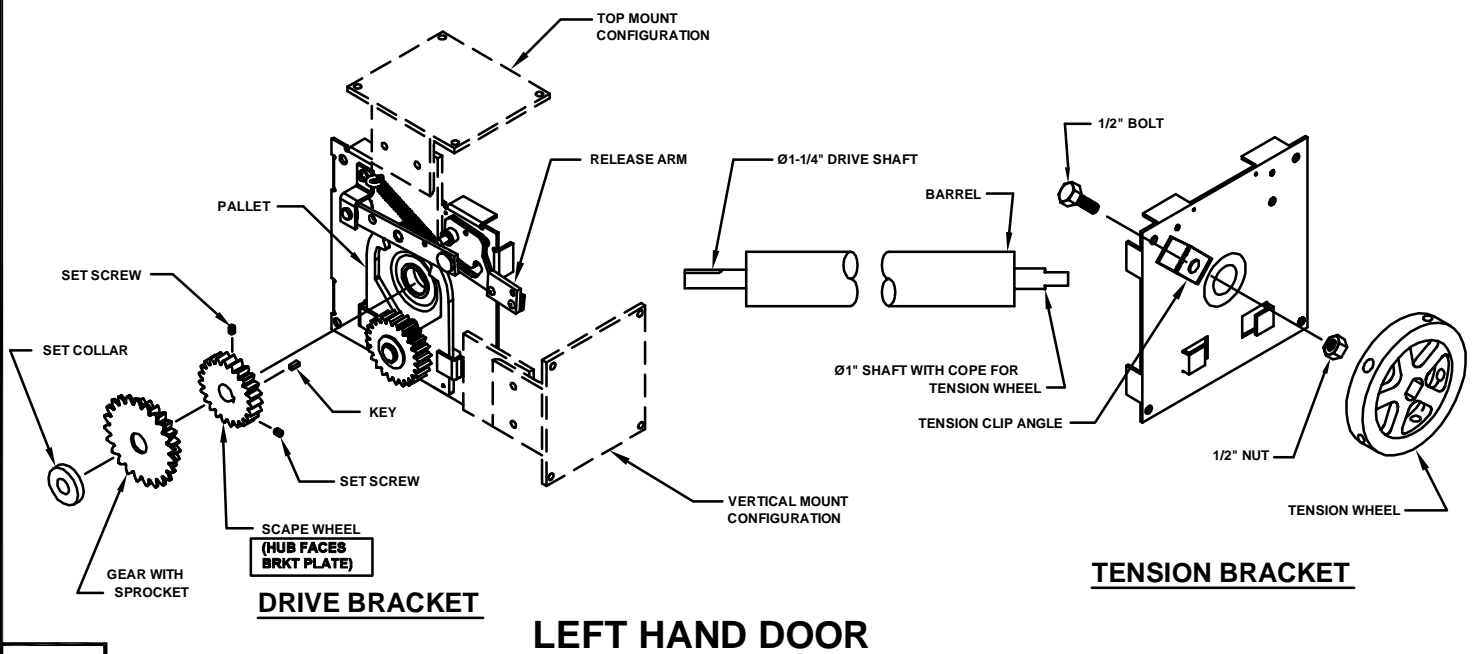
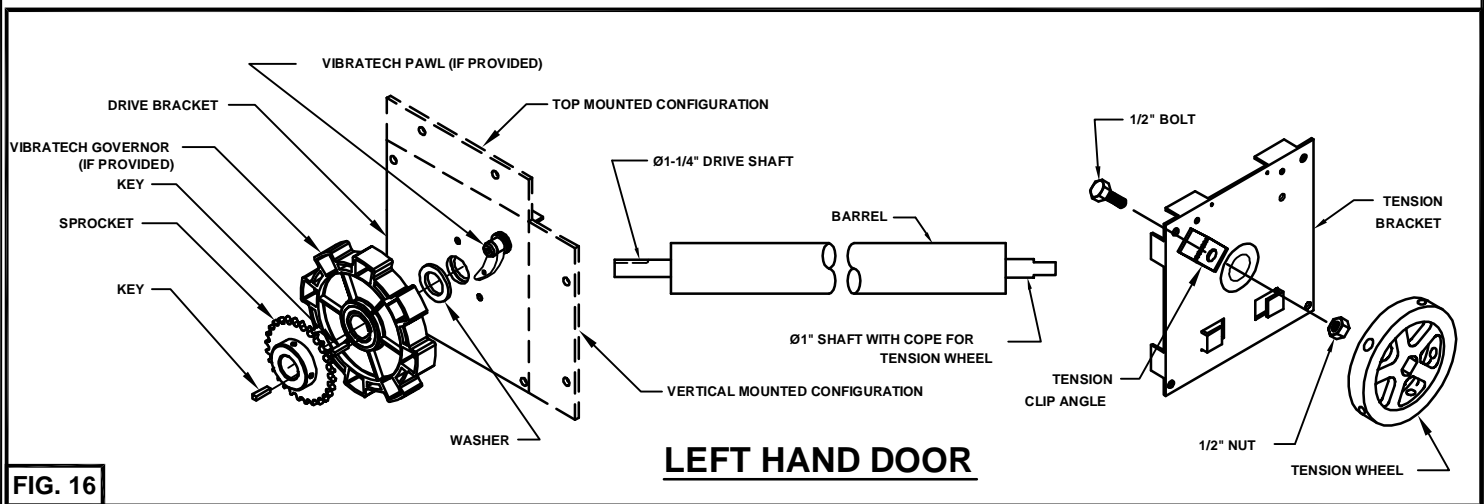
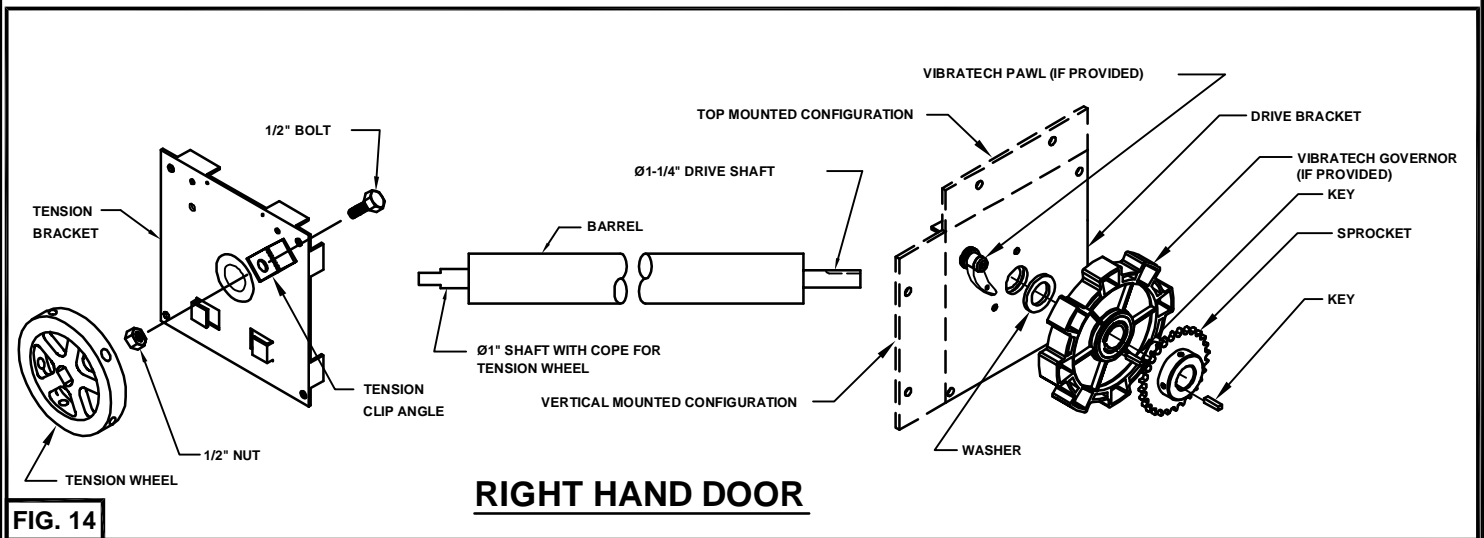


FIG. 13

LEFT HAND DOOR

MOTOR OPERATED FDO-A10 BRACKET DETAIL

A) ASSEMBLE THE BRACKETS ONTO THE BARREL AS SHOWN IN FIGURE 16 & 17.



TUBULAR MOTOR OPERATED BRACKET DETAIL

- A) BEFORE ASSEMBLING THE BRACKETS ONTO THE BARREL INSERT THE TUBULAR MOTOR INTO THE BARREL ASSEMBLY. ALIGN THE PLASTIC TAB ON THE MOTOR AND THE SLOT ON THE SLEEVE ADAPTER AND SLIDE THE TUBULAR MOTOR ALL THE WAY INTO THE SLEEVE ADAPTER. AS SHOWN IN FIGURE 18. REFER TO TUBULAR MOTOR INSTALLATION INSTRUCTIONS AND OPERATION MANUAL FOR DETAILS.

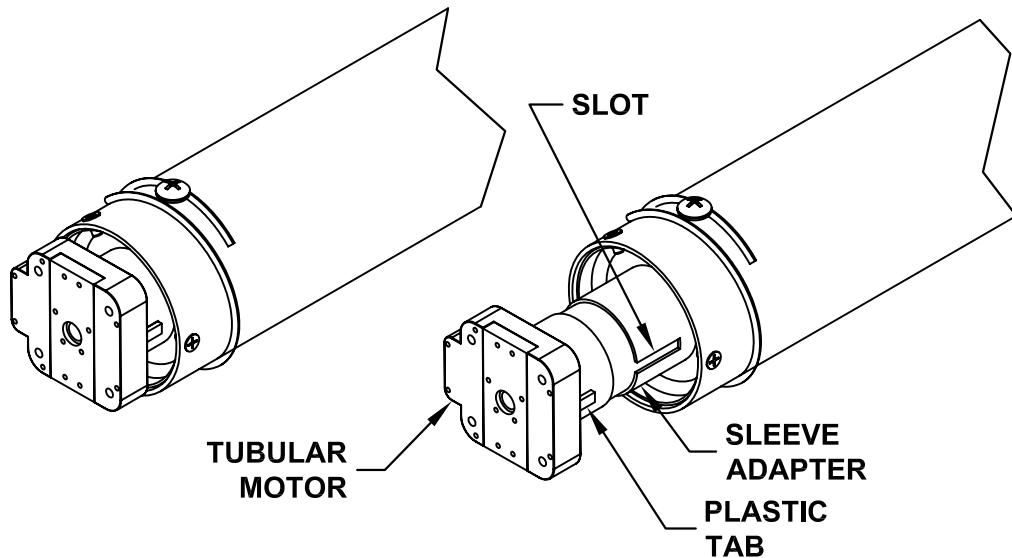


FIG 16

- B) ASSEMBLE THE BRACKETS ONTO THE BARREL AS SHOWN IN FIGURE 19. ATTACH THE OCTAGONAL MOTOR MOUNTING PLATE TO THE MOTOR AND THE DRIVE BRACKET TO THE MOTOR ASSEMBLY. ON THE SUPPORT SIDE, SLIDE THE 5/8" SHAFT THROUGH THE BEARING ON THE BRACKET AND THE ELECTROMAGNETIC CLUTCH.

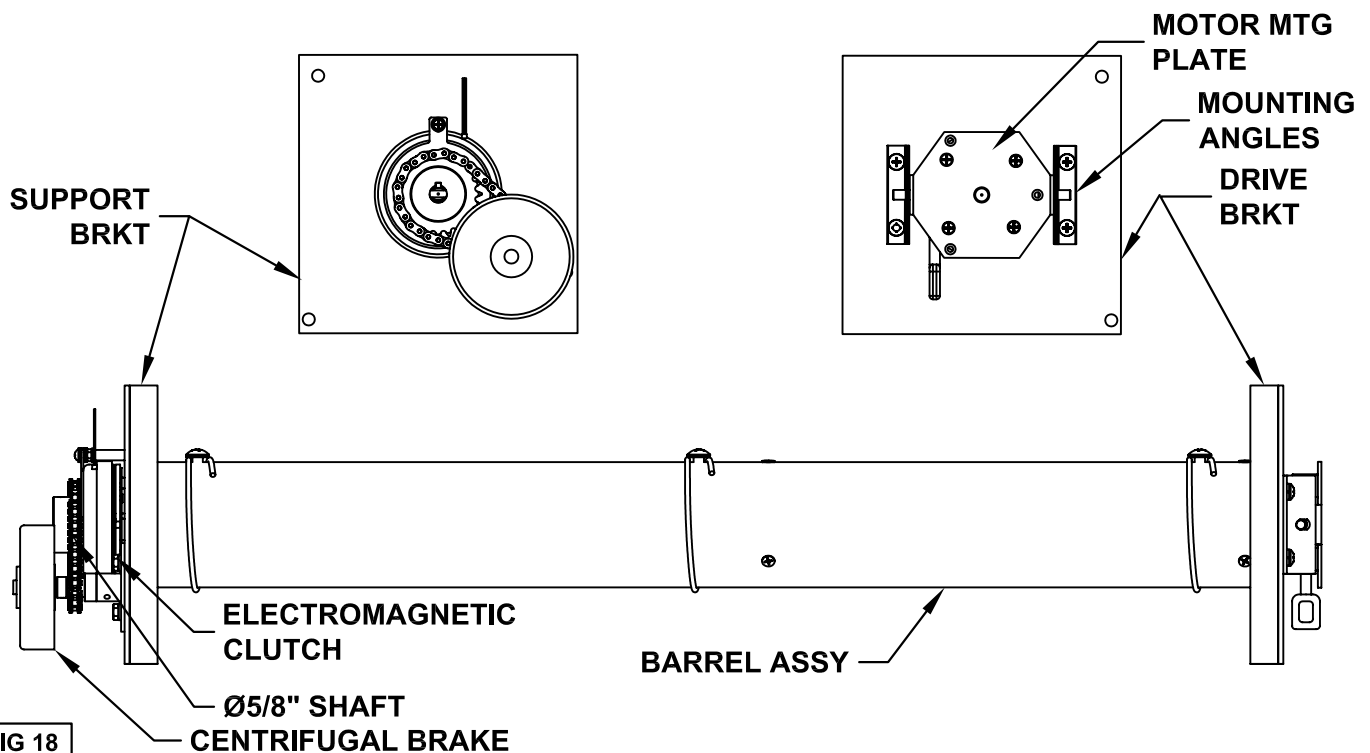
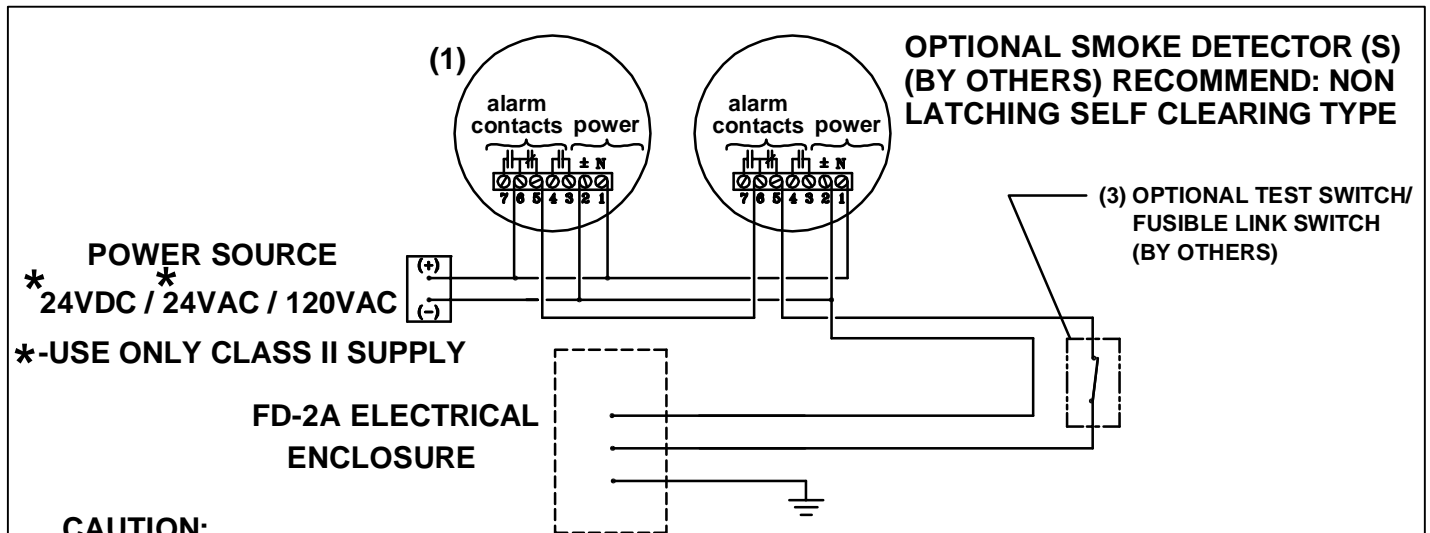


FIG 18

ELECTRICAL CONNECTIONS FOR FD-2A PANEL TO ALARM SYSTEM/SMOKE DETECTORS

Unit requires one switched power input, 24VDC or 24VAC or 115VAC according to wiring diagram and local codes. Minimum wire size is 20GA copper. (Use heavier wire for long runs)



CAUTION:

DISCONNECT POWER BEFORE WORKING ON CIRCUIT!!

NOTES:

INSTALLATION INSTRUCTIONS MUST BE FOLLOWED TO ASSURE PROPER INSTALLATION.

- 1) See NFPA 80 and NFPA 72 for proper placement of detector.
Note: End of line relay required per UL 864 (By others) if smoke detector power source is separate.
- 2) All external wiring is by others.
- 3) Optional keyed test switch must be located within line of sight of door.

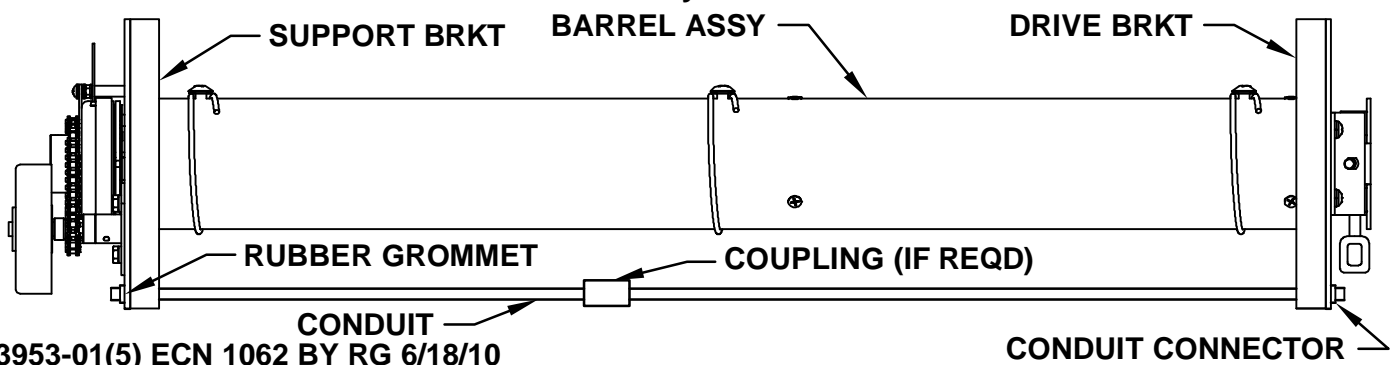
FIG. 18

ADDITIONAL INFORMATION

The FD-2A control panel is wall mounted. A parts package is provided with the door to allow mounting of the control panel on the motor side of the door. The parts package contains: (2) wire connector splices, (2) wire cable clips, 1/2" EMT conduit, (1) conduit connector, (1) conduit insulated bushing, (1) conduit coupling (if required), and electric wire.

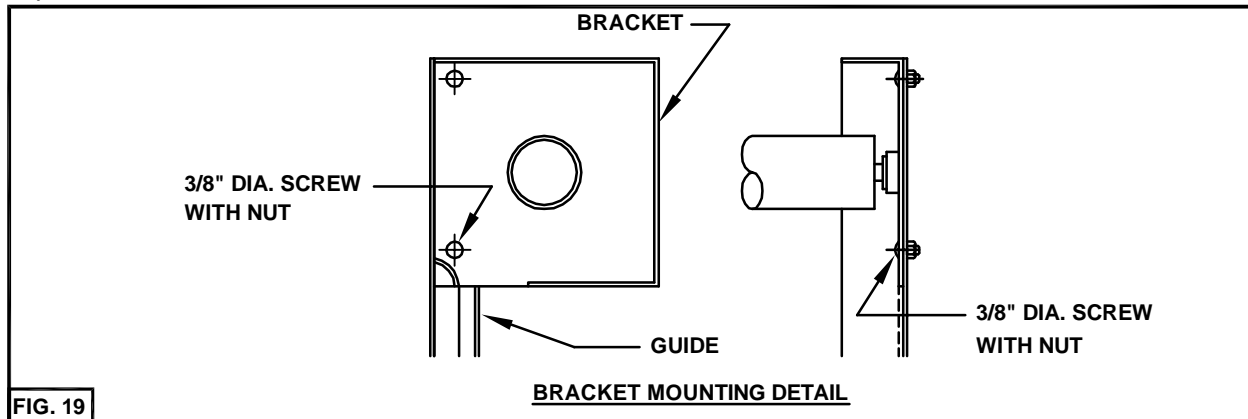
After installing the door and before attaching the hood and end covers, run the EMT conduit between the door brackets:

- Cut the EMT conduit to the required overall length (distance between brackets plus 1/2").
If the conduit comes in two sections, use the conduit coupling to connect them.
- Run the electric wire through the EMT conduit and cut to desired length.
- Mount the conduit between the door brackets. For the drive bracket use the conduit connector provided. At the support bracket, run the conduit through the grommet on the bracket plate. Insert the insulated bushing in the conduit for wire protection.
- Use the connector splice to connect the clutch wires.
- Use the cable clips to secure wires on the door brackets.
- Run the door in open position and check for any interferences between the curtain and conduit.
- Install hood and end covers. Check for any interference between the hood and the conduit.

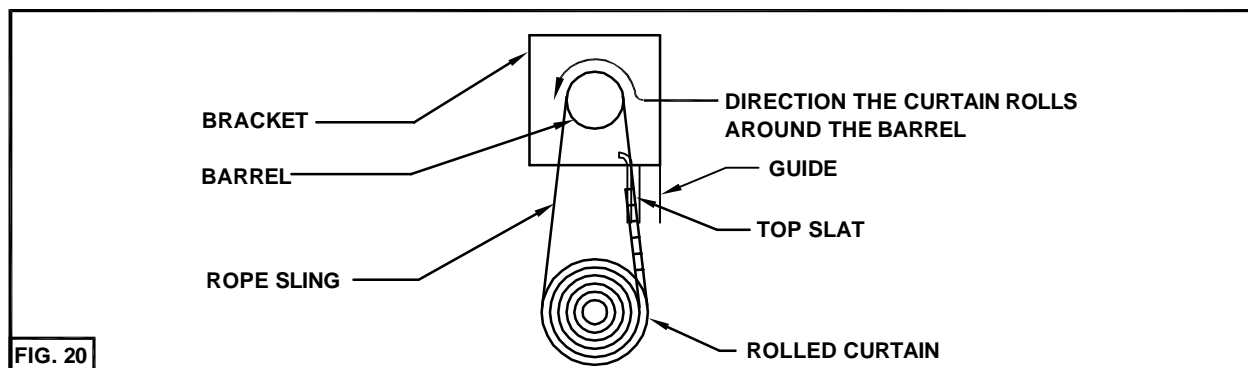


SERVICE COUNTER FIRE DOOR CURTAIN INSTALLATION

7) RAISE ENTIRE ASSEMBLY INTO POSITION AND BOLT BRACKETS TO GUIDES AS SHOWN IN FIG. 21.



- 8) ON DOORS OPERATED BY A TUBULAR MOTOR, AFTER THE BRACKETS ARE BOLTED TO THE GUIDES AND THE BARREL IS IN POSITION, AND BEFORE ATTACHING THE CURTAIN TO THE BARREL;
- VERIFY THAT THE $\varnothing 5/8$ " SHAFT AT THE SUPPORT END OF THE BARREL ROTATES FREELY.
 - VERIFY THAT THE BARREL ROTATES FREELY.
 - CONNECT THE TUBULAR MOTOR TO A POWER SOURCE AS SHOWN IN THE WIRING DIAGRAM.
 - VERIFY THAT THE ELECTROMAGNETIC CLUTCH IS PROPERLY ATTACHED TO THE SUPPORT BRACKET AND THAT THE $3/16$ " KEY IS IN PLACE.
 - SLIDE THE 35B24 SPROCKET ONTO THE $\varnothing 5/8$ " SHAFT; ALIGN IT WITH THE SPROCKET ON THE CLUTCH ROTOR AND INSTALL THE ROLLER CHAIN PROVIDED. INSERT THE KEY AND TIGHTEN THE SPROCKET SET SCREWS.
 - WIRE THE ELECTROMAGNETIC CLUTCH IN TO THE CONTROL PANEL AS SHOWN IN THE WIRING DIAGRAM. POWER THE CONTROL PANEL AND VERIFY THAT THE ELECTROMAGNETIC CLUTCH ON THE SUPPORT BRACKET ENGAGES AND DISENGAGES CORRECTLY. DO NOT TIGHTEN THE SCREW THAT SUPPORTS THE ELECTROMAGNETIC CLUTCH. VERIFY THAT A GAP OF $\pm 1/16$ " BETWEEN THE CLUTCH'S MOUNTING TAB AND THE WASHERS ON THE SUPPORTING SCREW EXISTS AND THAT THE MOUNTING TAB CAN MOVE FREELY.
 - WITH THE ELECTROMAGNETIC CLUTCH ENGAGED, VERIFY THAT THE MOTOR TURNS THE BARREL IN BOTH DIRECTIONS. (MOTOR TRAVEL LIMIT SWITCH MIGHT REQUIRE ADJUSTMENT - SEE MOTOR INSTRUCTIONS).
- 9) PLACE THE ROLLED CURTAIN ON THE FLOOR BELOW THE BARREL. HOIST THE CURTAIN UNTIL IT IS APPROXIMATELY TWO FEET BELOW THE BARREL. SUSPEND THE CURTAIN FROM THE BARREL USING TWO OR MORE ROPE SLINGS.



IMPORTANT:
ALL TENSION WHEELS MUST BE FREE TO ROTATE DURING THE INSTALLATION OF THE CURTAIN.

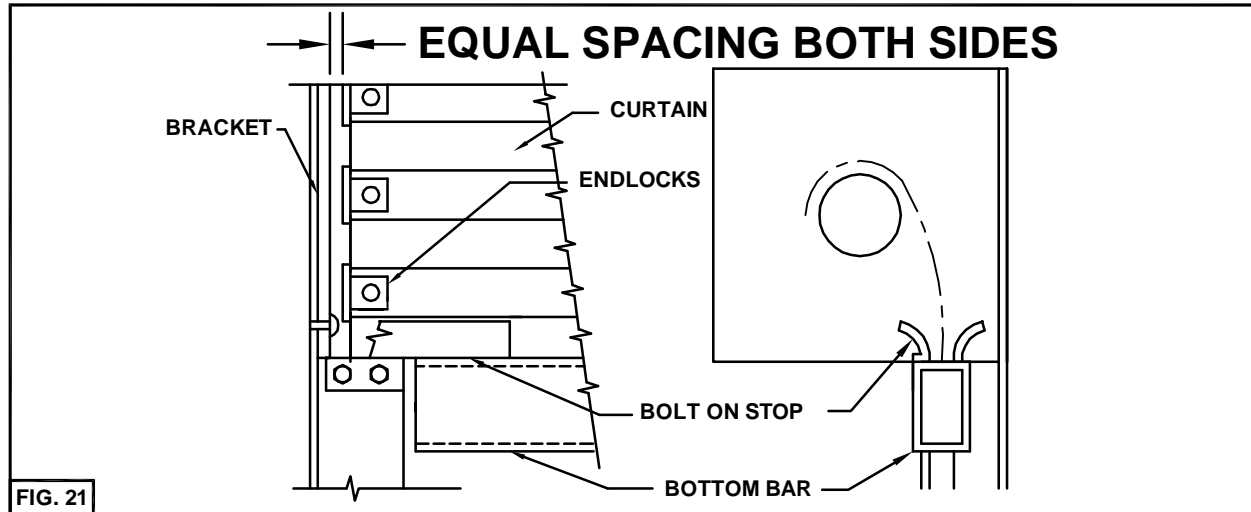
PULL THE TOP SLAT AROUND THE BARREL AND LINE UP THE SLOTS WITH THE HOLES IN THE BARREL. THE CLEARANCE BETWEEN THE END OF THE CURTAIN AND THE BRACKETS MUST BE THE SAME ON EACH END. BOLT THE CURTAIN TO THE BARREL WITH THE SCREWS PROVIDED.

CAUTION: THE USE OF LONGER SCREWS THAN PROVIDED WILL INTERFERE WITH AND DAMAGE THE OPERATION OF THE TORSION SPRING IN THE BARREL.

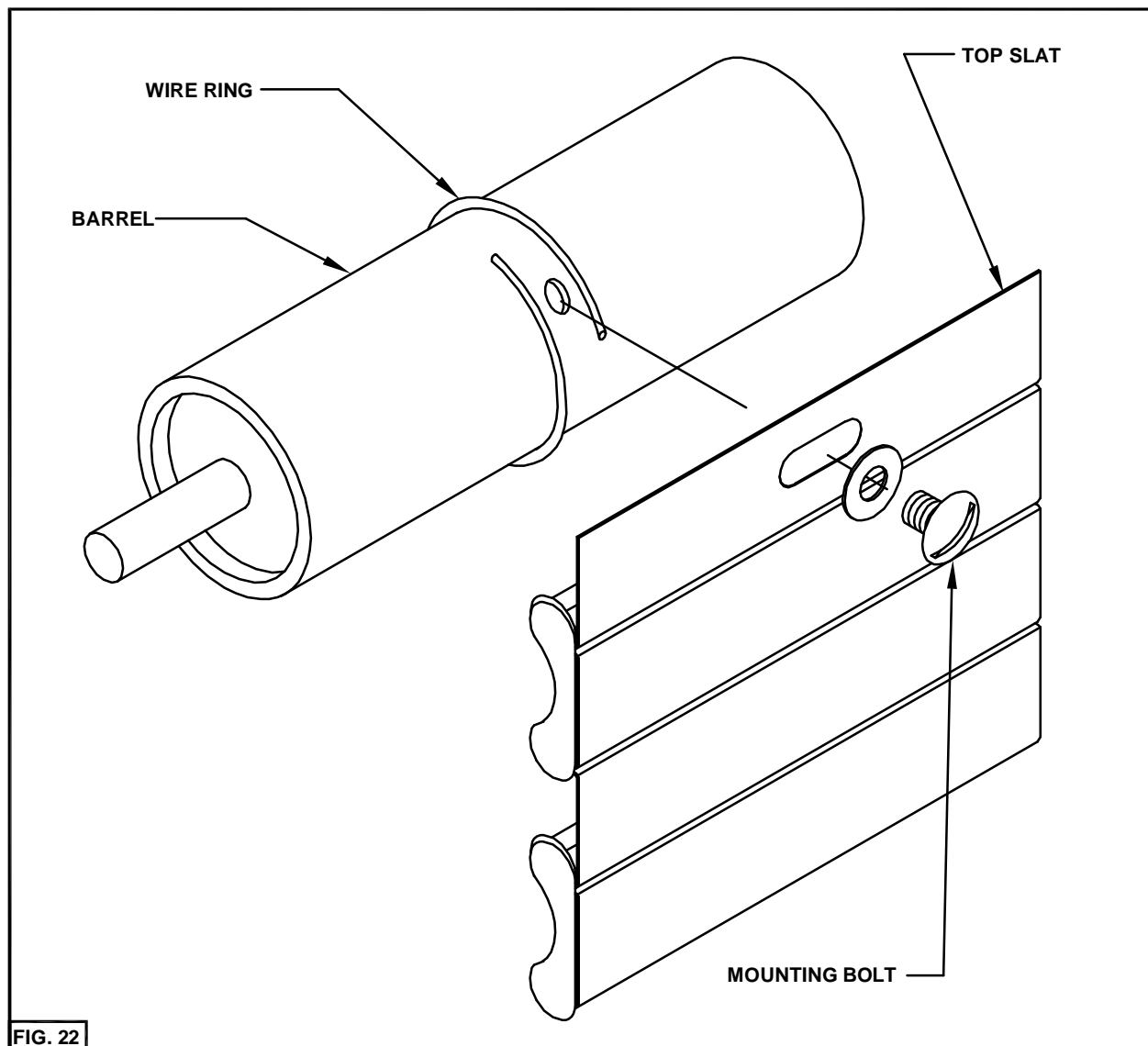
NOW ROLL THE CURTAIN AROUND THE BARREL WITH THE ROPE SLINGS IN PLACE. WHEN THE CURTAIN IS COMPLETELY WRAPPED AROUND THE BARREL, FEED THE BOTTOM BAR INTO THE GUIDE GROOVES.

REINSTALL STOPS ON THE GUIDES.

ON DOORS OPERATED BY TUBULAR MOTOR, MAKE SURE THAT THE ELECTROMAGNETIC CLUTCH IS ENGAGED BEFORE ATTEMPTING TO ROLL THE CURTAIN AROUND THE BARREL. OPERATE THE MOTOR TO ROTATE THE BARREL AND TO ROLL THE CURTAIN AROUND THE BARREL.



SERVICE COUNTER FIRE DOOR TOP SLAT MOUNTING INSTRUCTIONS



SERVICE COUNTER FIRE DOOR COUNTERBALANCING

SINGLE SPRING BALANCE ARRANGEMENT

- A) TO CHARGE THE COUNTERBALANCE SPRING, THE CURTAIN IS TO BE IN THE RAISED POSITION WITH THE BOTTOM BAR POSITIONED APPROXIMATELY 6" BELOW THE GUIDE STOPS. PLACE A "C" CLAMP ACROSS THE THROAT OF THE DOOR'S GUIDES TO PREVENT THE CURTAIN FROM DRIFTING TO THE CLOSED POSITION.
- B) WITH A WRENCH GRIPPED TO THE SQUARED END OF THE TENSION/GOVERNOR SHAFT, AND THE RELEASE ARM IN THE ENGAGED POSITION, ROTATE THE SHAFT IN THE DIRECTION THE BARREL ROTATES WHEN COILING THE CURTAIN ON THE BARREL. THE SHAFT IS TO BE ROTATED UNTIL THE BOTTOM BAR RAISES UP TO THE GUIDE STOPS AND REMAINS IN THAT POSITION. FOR OPTIMUM OPERATION YOU MAY FIND MORE TURNS ARE REQUIRED, OR IN SOME CASES, LESS TURNS ARE REQUIRED.

CAUTION: UNDER NO CIRCUMSTANCES SHOULD MORE THAN ONE FULL TURN BE ADDED OVER THAT REQUIRED TO HOLD THE CURTAIN'S BOTTOM BAR AT THE GUIDE STOPS.

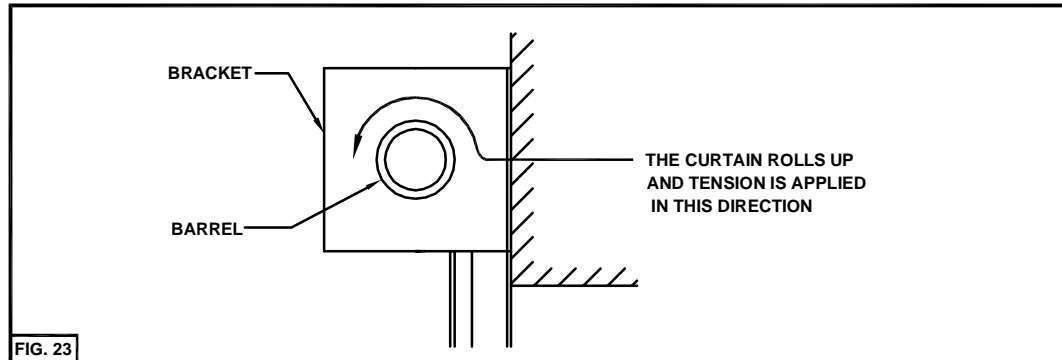
- C) NOW TEST THE DOOR FOR NORMAL OPERATION.
- D) AFTER NORMAL OPERATION TESTS HAVE BEEN MADE, IT REMAINS TO TEST THE AUTOMATIC CLOSE FEATURE. PROCEED AS FOLLOWS:



WARNING

ONLY TRAINED DOOR SYSTEMS TECHNICIANS SHOULD DROP TEST DOOR

- E) WITH DOOR IN THE FULL OPEN POSITION, DROP THE RELEASE ARM. THE PALLET ARM WILL DROP, ALLOWING THE "PALLET" TO ENGAGE THE "SCAPE WHEEL", AND AT THE SAME TIME DISENGAGE THE PAWL FROM THE TENSION/GOVERNOR WHEEL, RELEASING THE COUNTERBALANCE SPRING. THE DOOR SHOULD NOW DESCEND TO THE FULLY CLOSED POSITION.
- F) THE CLOSING TIME SHOULD APPROXIMATE AN AVERAGE CLOSING SPEED OF 6"-2 FEET PER SECOND.
- G) IF THE CLOSING VELOCITY GREATLY EXCEEDS THE AVERAGE SPEED OF 6"-2 FEET PER SECOND, AND THE COUNTERBALANCE SPRING ADJUSTMENTS HAVE BEEN MADE, CONTACT THE COOKSON COMPANY FOR FURTHER INSTRUCTIONS. WHEN CONTACTING US, BE SURE TO ADVISE US AS TO THE TIME IT TOOK IN SECONDS FOR THE DOOR TO CLOSE, AND THE NUMBER OF TURNS OF INITIAL TENSION APPLIED.
- H) TO RESET THE DOOR, SEE THE INSTRUCTIONS ON PAGE 19 & 20.
- I) CONNECT THE FUSE LINK SYSTEM TO THE RELEASE ARM AS SHOWN ON PAGE 18.



SERVICE COUNTER FIRE DOOR COUNTERBALANCING

DUAL SPRING BALANCE ARRANGEMENT

- A) TO CHARGE THE COUNTERBALANCE SPRING, THE CURTAIN IS TO BE IN THE RAISED POSITION WITH THE BOTTOM BAR POSITIONED APPROXIMATELY 6" BELOW THE GUIDE STOPS. PLACE A "C" CLAMP ACROSS THE THROAT OF THE DOOR'S GUIDES TO PREVENT THE CURTAIN FROM DRIFTING TO THE CLOSED POSITION.
- B) NOW APPLY TENSION TO THE DRIVE SIDE COUNTERBALANCING SPRING. ROTATE THE DRIVE SIDE TENSION WHEEL IN THE DIRECTION THE CURTAIN NORMALLY WINDS ONTO THE BARREL. SEE THE INSTALLATION INFORMATION SHEET FOR NUMBER OF TURNS. NOW LOCK TENSION WHEEL IN PLACE TO THE DRIVE BRACKET.
- C) NEXT, WITH A WRENCH GRIPPED TO THE SQUARED END OF THE TENSION/GOVERNOR SHAFT AND THE RELEASE ARM IN THE ENGAGED POSITION, ROTATE THE SHAFT IN THE DIRECTION THE BARREL ROTATES WHEN COILING THE CURTAIN ON THE BARREL. THE SHAFT IS TO BE ROTATED UNTIL THE BOTTOM BAR RAISES UP TO THE GUIDE STOPS AND REMAINS IN THAT POSITION. FOR OPTIMUM OPERATION YOU MAY FIND THAT MORE TURNS ARE REQUIRED. IMPORTANT: UNDER NO CIRCUMSTANCES SHOULD MORE THAN ONE FULL TURN BE ADDED OVER THAT WHICH IS REQUIRED TO HOLD THE CURTAIN'S BOTTOM BAR AT THE GUIDE STOPS.
- D) NOW, TEST THE DOOR FOR NORMAL OPERATION.
- E) AFTER NORMAL OPERATION TESTS HAVE BEEN MADE, IT REMAINS TO TEST THE AUTOMATIC CLOSE FEATURE. PROCEED AS FOLLOWS:

WARNING

ONLY TRAINED DOOR SYSTEMS TECHNICIANS SHOULD DROP TEST DOOR

- F) WITH THE DOOR IN THE FULL OPEN POSITION, DROP THE RELEASE ARM. THE PALLET ARM WILL DROP, ALLOWING THE "PALLET" TO ENGAGE THE "SCAPE WHEEL", AND AT THE SAME TIME DISENGAGE THE PAWL FROM THE TENSION/GOVERNOR COUNTERBALANCE SPRING. THE DOOR SHOULD NOW DESCEND TO THE FULLY CLOSED POSITION.
- G) THE CLOSING TIME SHOULD APPROXIMATE AN AVERAGE CLOSING SPEED OF 6" TO 2 FEET PER SECOND.
- H) IF THE CLOSING VELOCITY GREATLY EXCEEDS THE AVERAGE SPEED OF 2 FEET PER SECOND, AND THE COUNTERBALANCE SPRING ADJUSTMENTS HAVE BEEN MADE, CONTACT THE COOKSON COMPANY FOR FURTHER INSTRUCTIONS. WHEN CONTACTING US, BE SURE TO ADVISE US AS TO THE TIME IT TOOK IN SECONDS FOR THE DOOR TO CLOSE, AND THE NUMBER OF TURNS OF INITIAL TENSION APPLIED.
- I) TO RESET THE DOOR SEE THE INSTRUCTIONS ON PAGE 19 & 20.
- J) CONNECT THE FUSE LINK SYSTEM TO THE RELEASE ARM AS SHOWN ON PAGE 18.

SERVICE COUNTER FIRE DOOR COUNTERBALANCING

MOTOR OPERATED ARRANGEMENT

- A.) TO CHARGE THE COUNTERBALANCE SPRING, THE CURTAIN MUST BE IN THE RAISED POSITION WITH THE BOTTOM BAR POSITIONED APPROXIMATELY 6" BELOW THE GUIDE STOPS. NOW PLACE A "C" CLAMP ACROSS THE THROAT OF THE DOOR'S GUIDES TO PREVENT THE CURTAIN FROM DRIFTING TO THE CLOSED POSITION.
- B.) ROTATE THE TENSION WHEEL IN THE DIRECTION THE CURTAIN NORMALLY WINDS ONTO THE BARREL. SEE THE INSTALLATION INFORMATION SHEET FOR THE NUMBER OF TURNS. NOW LOCK THE TENSION WHEEL IN PLACE TO THE BRACKET. FOR OPTIMUM OPERATION YOU MAY FIND MORE TURNS ARE REQUIRED, OR IN SOME CASES, LESS TURNS ARE REQUIRED.

IMPORTANT: UNDER NO CIRCUMSTANCES SHOULD MORE THAN ONE FULL TURN BE ADDED OVER THAT WHICH IS LISTED ON INSTALLATION INFORMATION SHEET.

- C.) NOW TEST THE DOOR FOR NORMAL OPERATION.
- D.) AFTER NORMAL OPERATION TESTS HAVE BEEN MADE, IT REMAINS TO TEST THE AUTOMATIC CLOSE FEATURE. PROCEED AS FOLLOWS:

WARNING

ONLY TRAINED DOOR SYSTEMS TECHNICIANS SHOULD DROP TEST DOOR

- E.) WITH THE DOOR IN THE FULLY OPEN POSITION, DROP THE RELEASE ARM. THE PALLET ARM WILL DROP, ALLOWING THE "PALLET" TO ENGAGE THE "SCAPE WHEEL", AND AT THE SAME TIME, DISENGAGE THE MOTOR. THE DOOR SHOULD NOW DESCEND TO THE FULLY CLOSED POSITION.
- F.) THE CLOSING TIME SHOULD APPROXIMATE AN AVERAGE CLOSING SPEED OF 6" TO 2 FEET PER SECOND.
- G.) IF THE CLOSING VELOCITY GREATLY EXCEEDS THE AVERAGE SPEED OF 2 FEET PER SECOND, AND AFTER COUNTERBALANCE SPRING ADJUSTMENTS HAVE BEEN MADE, CONTACT THE COOKSON COMPANY FOR FURTHER INSTRUCTION. WHEN CONTACTING US, BE SURE TO ADVISE US AS TO THE TIME IT TOOK, IN SECONDS, FOR THE DOOR TO CLOSE AND THE NUMBER OF TURNS OF INITIAL TENSION APPLIED.
- H.) TO RESET THE DOOR, SEE RESET INSTRUCTIONS ON PAGE 19 & 20.
- I.) CONNECT THE FUSE LINK SYSTEM TO THE RELEASE ARM AS SHOWN ON PAGE 18.

SERVICE COUNTER FIRE DOOR COUNTERBALANCING

FDO-A10 MOTOR OPERATED ARRANGEMENT

- A.) TO CHARGE THE COUNTERBALANCE SPRING, THE CURTAIN MUST BE IN THE RAISED POSITION WITH THE BOTTOM BAR POSITIONED APPROXIMATELY 6" BELOW THE GUIDE STOPS. NOW PLACE A "C" CLAMP ACROSS THE THROAT OF THE DOOR'S GUIDES TO PREVENT THE CURTAIN FROM DRIFTING TO THE CLOSED POSITION.
- B.) ROTATE THE TENSION WHEEL IN THE DIRECTION THE CURTAIN NORMALLY WINDS ONTO THE BARREL. SEE THE INSTALLATION INFORMATION SHEET FOR THE NUMBER OF TURNS. NOW LOCK THE TENSION WHEEL IN PLACE TO THE BRACKET. FOR OPTIMUM OPERATION YOU MAY FIND MORE TURNS ARE REQUIRED, OR IN SOME CASES, LESS TURNS ARE REQUIRED.

IMPORTANT: UNDER NO CIRCUMSTANCES SHOULD MORE THAN ONE FULL TURN BE ADDED OVER THAT WHICH IS LISTED ON INSTALLATION INFORMATION SHEET.

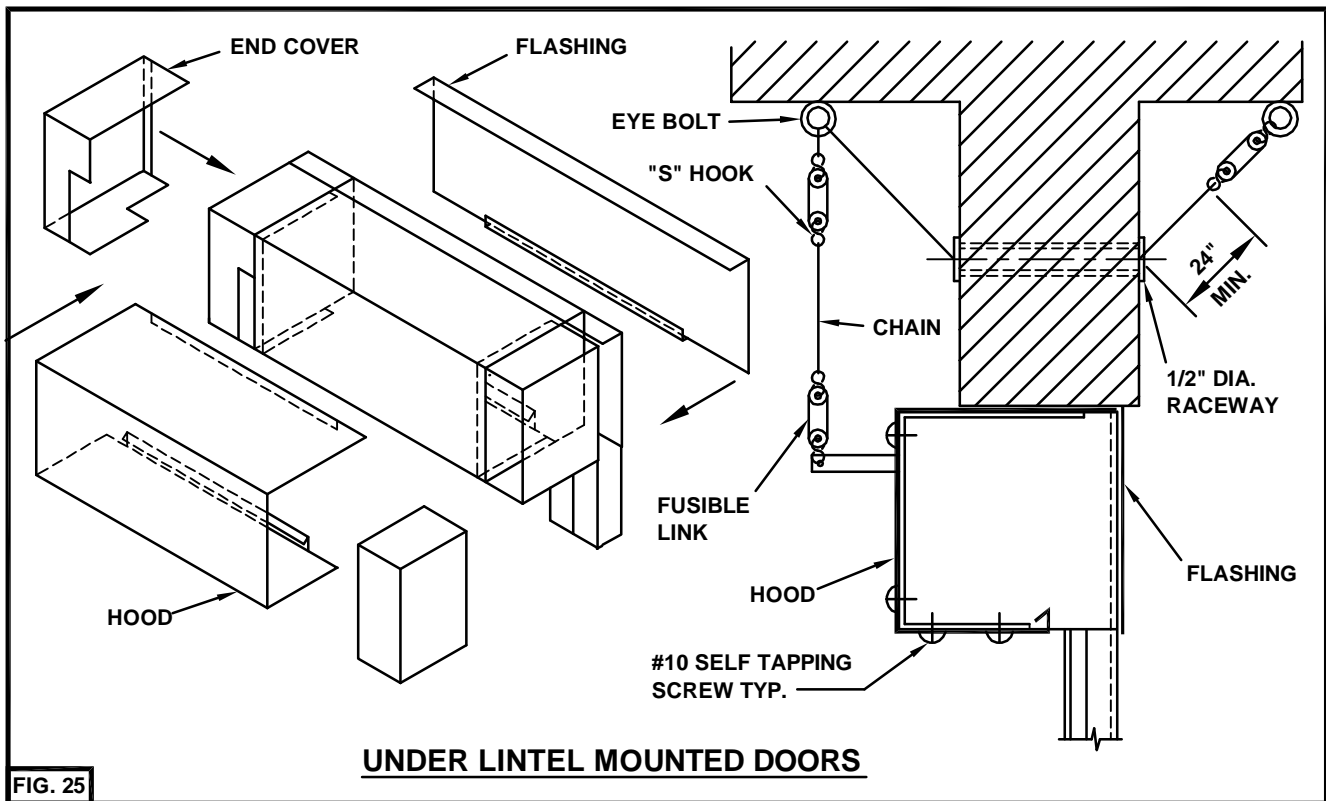
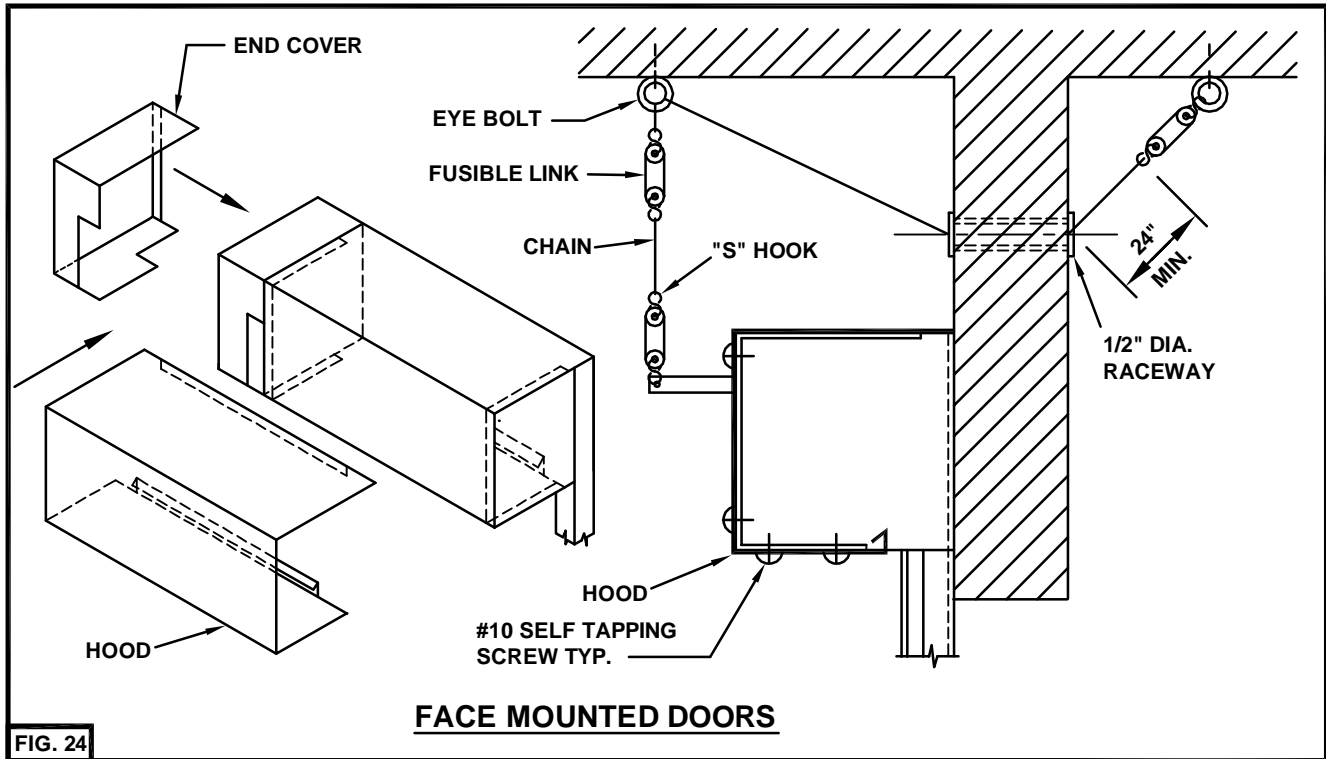
- C.) NOW TEST THE DOOR FOR NORMAL OPERATION.
- D.) AFTER NORMAL OPERATION TESTS HAVE BEEN MADE, IT REMAINS TO TEST THE AUTOMATIC CLOSE FEATURE. PROCEED AS FOLLOWS:

WARNING

ONLY TRAINED DOOR SYSTEMS TECHNICIANS SHOULD DROP TEST DOOR

- E) WITH THE DOOR IN THE FULLY OPEN POSITION, REMOVE POWER FROM THE DOOR CONTROLLER EITHER BY ACTIVATING THE OPTIONAL KEYED TEST STATION OR BY TURNING THE CIRCUIT BREAKER OFF. THE DOOR SHOULD CLOSE VIA GRAVITY WITH THE DOOR SPEED CONTROLLED BY THE MOTOR AND GOVERNOR (IF PROVIDED). THE DOOR SHOULD DESCEND AT AN AVERAGE RATE OF AT LEAST 6 IN/SECOND NOT TO EXCEED 24 IN/SECOND.
- F) IF THE DOOR CLOSING TOO SLOWLY OR NOT AT ALL, RESTORE POWER AND FULLY OPEN DOOR. REMOVE 1/5 TURN OF TENSION REPEAT STEP (E) UNTIL DOOR DESCENT RATE IS ADEQUATE.
NOTE: NEVER BACK WIND THE SPRING.
- G) IF DOOR CLOSING TOO RAPIDLY FOLLOW STEP (F) EXCEPT ADD 1/5 TURN OF TENSION THEN REDO STEP (E).
- H) TO RESET THE DOOR, RESTORE POWER AND CLEAR ALARM.

SERVICE COUNTER FIRE DOOR HOOD COVER INSTALLATION



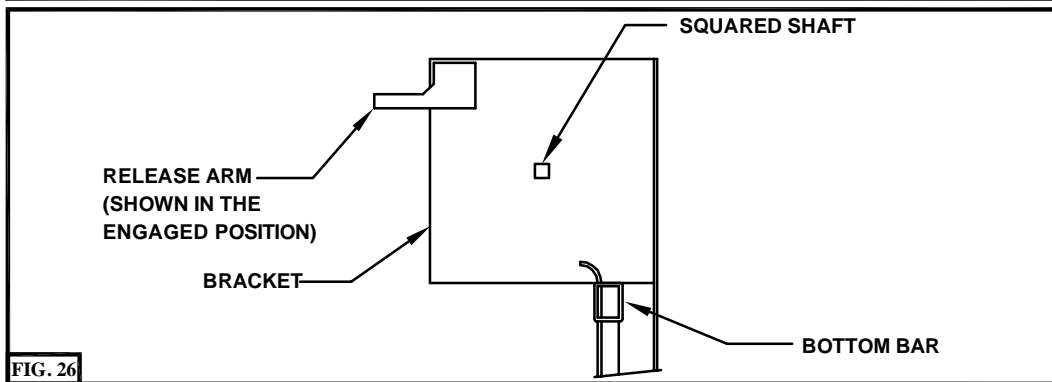
- NOTES: 1) RIGHT HAND OPERATED DOOR IS SHOWN - LEFT HAND OPERATED DOOR IS OPPOSITE.
 2) HOOD FASTENS TO BRACKET WITH #10 X 3/8 PAN HEAD SELF TAPPING SCREW.
 3) FLASHING FASTENS TO GUIDE WITH #10 X 3/8 PAN HEAD SELF TAPPING SCREW.
 4) THE END COVERS FIT OVER THE HOOD.

SERVICE COUNTER FIRE DOOR RESETTING INSTRUCTIONS MANUAL OPERATION - WITH SINGLE SPRING BALANCE ARRANGEMENT

CAUTION: ONLY TRAINED PERSONNEL SHOULD RESET FIRE DOORS

1. THE CURTAIN IS TO BE IN THE RAISED POSITION WITH THE BOTTOM BAR POSITIONED APPROX. 6" BELOW THE GUIDE STOPS. PLACE A "C" CLAMP ACROSS THE THROAT OF THE DOOR'S GUIDES TO PREVENT THE CURTAIN FROM DRIFTING TO THE CLOSED POSITION.
2. RAISE THE RELEASE ARM TO THE ENGAGED POSITION. CONNECT THE RELEASE ARM TO THE FUSIBLE LINK SYSTEM OR OTHER APPROVED RELEASE DEVICE.
3. WITH A WRENCH GRIPPED TO THE SQUARED END OF THE TENSION/GOVERNOR SHAFT, ROTATE THE SHAFT IN THE DIRECTION THE BARREL ROTATES WHEN COILING THE CURTAIN ON THE BARREL. THE SHAFT IS TO BE ROTATED UNTIL THE BOTTOM BAR RAISES UP TO THE GUIDE STOPS, AND REMAINS IN THAT POSITION.

CAUTION: UNDER NO CIRCUMSTANCES SHOULD MORE THAN ONE FULL TURN BE ADDED OVER THAT REQUIRED TO HOLD CURTAIN'S BOTTOM BAR AT THE GUIDE STOPS.



SERVICE COUNTER FIRE DOOR RESETTING INSTRUCTIONS MANUAL OPERATION - WITH DUAL SPRING BALANCE ARRANGEMENT

CAUTION: ONLY TRAINED PERSONNEL SHOULD RESET FIRE DOORS

1. THE CURTAIN IS TO BE IN THE RAISED POSITION WITH THE BOTTOM BAR POSITIONED APPROX. 6" BELOW THE GUIDE STOPS. PLACE A "C" CLAMP ACROSS THE THROAT OF THE DOOR'S GUIDES TO PREVENT THE CURTAIN FROM DRIFTING TO THE CLOSED POSITION.
2. RAISE THE RELEASE ARM TO THE ENGAGED POSITION. CONNECT THE RELEASE ARM TO THE FUSIBLE LINK SYSTEM OR OTHER APPROVED RELEASE DEVICE.
3. WITH A WRENCH GRIPPED TO THE SQUARED END OF THE TENSION/GOVERNOR SHAFT, ROTATE THE SHAFT IN THE DIRECTION THE BARREL ROTATES WHEN COILING THE CURTAIN ON THE BARREL. THE SHAFT IS TO BE ROTATED UNTIL THE BOTTOM BAR RAISES UP TO THE GUIDE STOPS AND REMAINS IN THAT POSITION.

CAUTION: UNDER NO CIRCUMSTANCES SHOULD MORE THAN ONE FULL TURN BE ADDED OVER THAT WHICH IS REQUIRED TO HOLD THE CURTAIN'S BOTTOM BAR AT THE GUIDE STOPS.

SERVICE COUNTER FIRE DOOR RESETTING INSTRUCTIONS

MOTOR OPERATION

CAUTION: ONLY TRAINED PERSONNEL SHOULD RESET FIRE DOORS AND ADJUST THE LIMIT SWITCH. ONLY ADJUST THE LIMIT SWITCH WITH THE POWER OFF!!!

WARNING: AFTER A MECHANICAL FIRE DROP THE DOOR AND LIMIT SWITCH POSITIONS MUST BE SYNCHRONIZED. FAILURE TO FOLLOW STEP 1 IN RESETTING PROCEDURE MAY RESULT IN DAMAGE TO DOOR.

- 1.) BEFORE RAISING RELEASE ARM WITH MOTOR DISENGAGED FROM DOOR, ACTIVATE THE "CLOSE" CONTROL AND ALLOW THE MOTOR TO RUN UNTIL IT IS STOPPED BY THE DOWN LIMIT SWITCH. THIS REALIGNS THE DOOR POSITION WITH THE LIMIT SWITCH POSITION.
- 2.) RAISE THE RELEASE ARM TO THE ENGAGED POSITION. CONNECT THE RELEASE ARM TO THE FUSIBLE LINK SYSTEM OR OTHER APPROVED RELEASE DEVICE.
- 3.) ACTIVATE THE "OPEN" CONTROL AND ALLOW THE DOOR TO OPEN. STOP THE DOOR BY ACTIVATING THE "STOP" CONTROL WHEN THE BOTTOM BAR IS APPROXIMATELY 3" BELOW THE STOPS AT THE TOP OF THE DOOR.
- 4.) DISCONNECT THE POWER.
- 5.) THE UP LIMIT SWITCH CAN NOW BE IDENTIFIED AS THE ONE WITH THE CAM NUT CLOSEST TO IT. DEPRESS THE LOCKING PLATE AND ROTATE THE CAM NUT TOWARD THE LIMIT SWITCH UNTIL A "CLICK" CAN BE HEARD. THE UP LIMIT SWITCH IS NOW SET.
- 6.) RECONNECT THE POWER.
- 7.) ACTIVATE THE "CLOSE" CONTROL AND ALLOW THE DOOR TO CLOSE. STOP THE DOOR BY ACTIVATING THE "STOP" CONTROL WHEN THE BOTTOM BAR IS APPROXIMATELY 3" ABOVE THE FLOOR.
- 8.) DISCONNECT THE POWER.
- 9.) THE DOWN LIMIT SWITCH CAN NOW BE IDENTIFIED AS THE ONE WITH THE CAM NUT CLOSEST TO IT. DEPRESS THE LOCKING PLATE AND ROTATE THE CAM NUT TOWARD THE LIMIT SWITCH UNTIL A "CLICK" IS HEARD. THE DOWN LIMIT SWITCH IS NOW SET.
- 10.) RECONNECT THE POWER.
- 11.) TEST THE DOOR OPERATION AT THE TOP AND BOTTOM AND FINE ADJUST AS DESIRED, BUT DO NOT ALLOW THE MOTOR TO FORCE THE BOTTOM BAR AGAINST THE STOPS OR THE FLOOR.
- 12.) TEST THE ENTIRE DOOR MOTOR OPERATION.

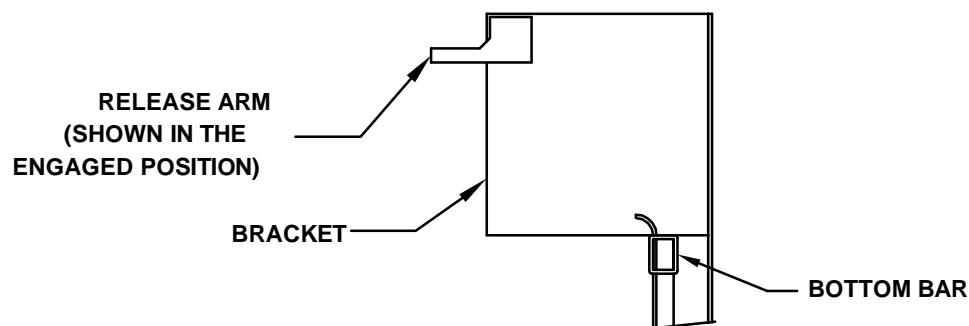


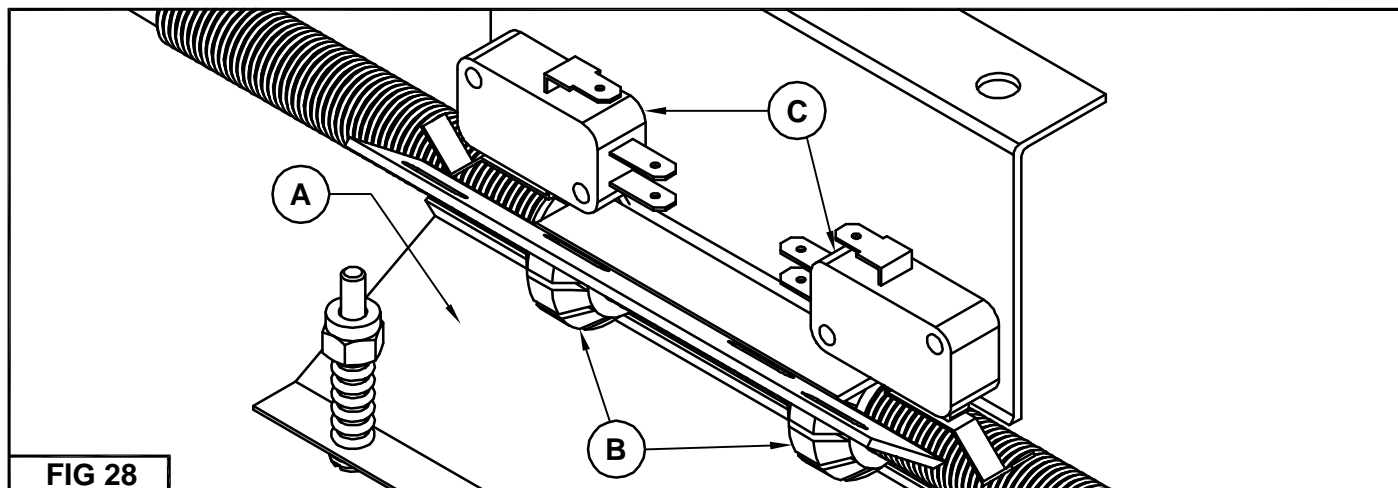
FIG. 27

NOTE: TUBULAR MOTOR DOES NOT REQUIRE LIMIT SWITCH ADJUSTMENT AFTER A MECHANICAL FIRE DROP OF THE DOOR.

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. (A) DETENT PLATE (B) CAM NUT (C) BASIC SWITCHES
- 3) Depress the spring loaded detent plate and rotate each cam nut approximately 1/8" from the basic switches as shown below.



- 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.

INSTRUCTIONS FOR TUBULAR MOTOR LIMIT SWITCH ADJUSTMENT

Limit switch adjustment tool and instructions are provided with the tubular motor.

Refer to Tubular Motor Installation Instructions Manual for limit switch adjustment.

Note: The motor has a built in thermal cutoff. If after several minutes of use the motor will not run in either direction, allow the motor to cool for approximately 20 minutes.

MAINTENANCE INSTRUCTIONS

SERVICE COUNTER FIRE DOOR

CAUTION: ONLY TRAINED PERSONNEL SHOULD PERFORM MAINTENANCE

1.) INSPECT FOR CONFORMANCE TO NFPA 80:

- A. INSTALLATION**
- B. FUSE LINKS**
- C. MOUNTING**

2.) INSPECT THE CONDITION OF:

- A. CURTAIN**
- B. BOTTOM BAR**
- C. HOOD**
- D. BRACKET**
- E. GUIDE**
- F. BARREL**
- G. OPERATING ASSY.**
- H. GOVERNOR ASSY.**
- I. FUSE LINKS**
- J. RELEASE HOLDERS**
- K. SMOKE DETECTORS**
- L. RACEWAYS**
- M. CABLING**

3.) LUBRICATE:

- A. ALL PIVOT POINTS**
- B. SHAFTS**
- C. ROLLER CHAIN**

4.) CHECK THE NORMAL OPERATION OF:

- A. OPERATION**
- B. SPRING TENSION**
- C. BALANCE**

5.) TEST DROP THE DOOR.

6.) CAUTION: ONLY TRAINED PERSONNEL SHOULD TEST AND RESET FIRE DOORS.

- A. RESET PER MANUFACTURER'S INSTRUCTIONS ONLY.**

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.

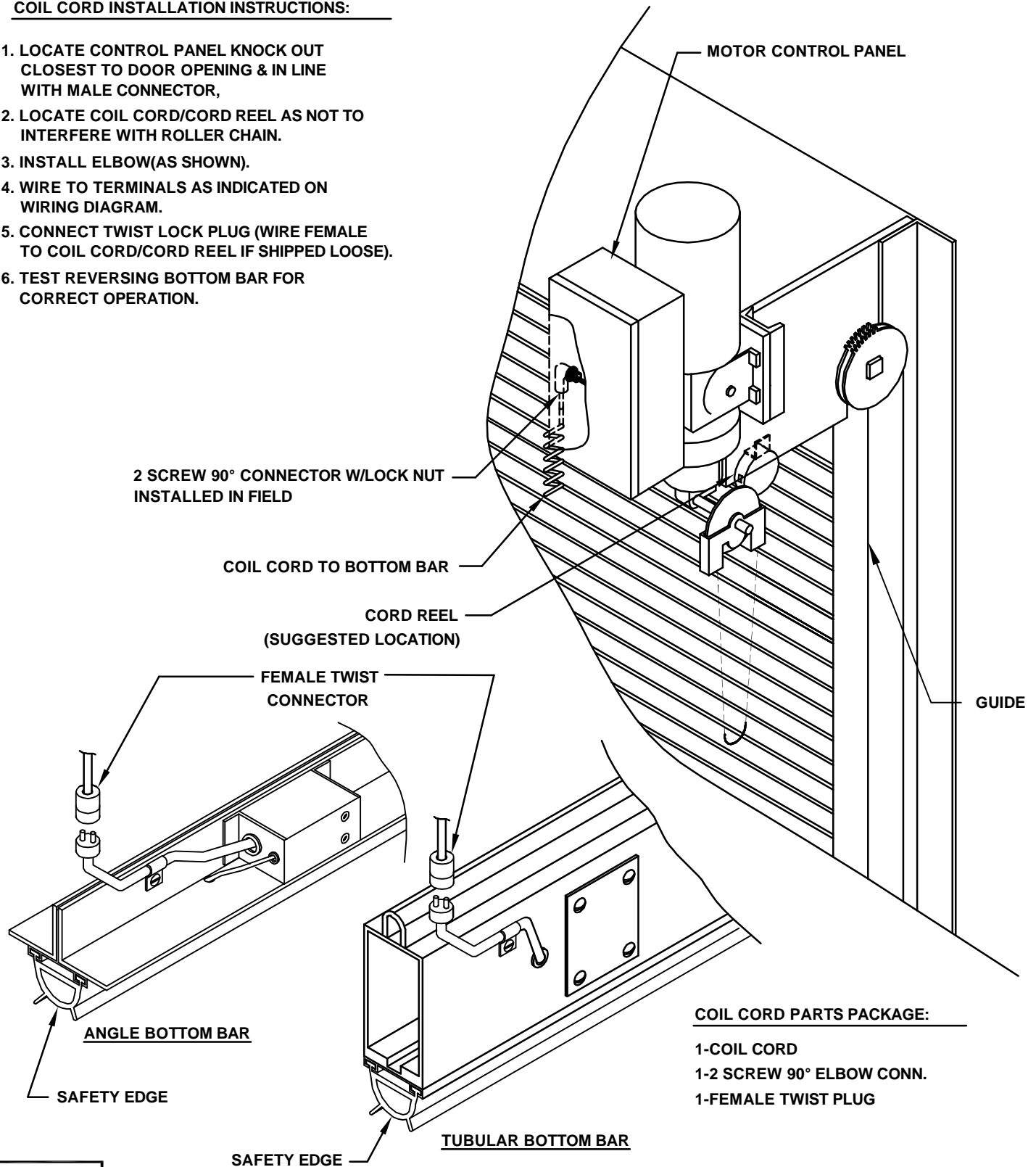


FIG 29

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

MOTOR SHOWN RECTANGULAR & DOTTED FOR CLARITY
THE CONDUIT FROM THE CONDUIT BOX TO THE
CONTROLLER IS TO BE DONE IN FIELD

COIL CORD OPTION:
2 X 4 CONDUIT BOX

CORD REEL OPTION:
CONDUIT BOX W/2 PRG
OUTLET TO BE SUPPLIED
BY OTHERS.

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.

USE (2) #12 PAN HD
SCREW W/SHIELDS FOR
MASONRY MTG.

CORD REEL

CORD REEL (SUGGESTED LOCATION)
SEE ABOVE DETAIL

COIL CORD PARTS PACKAGE:

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

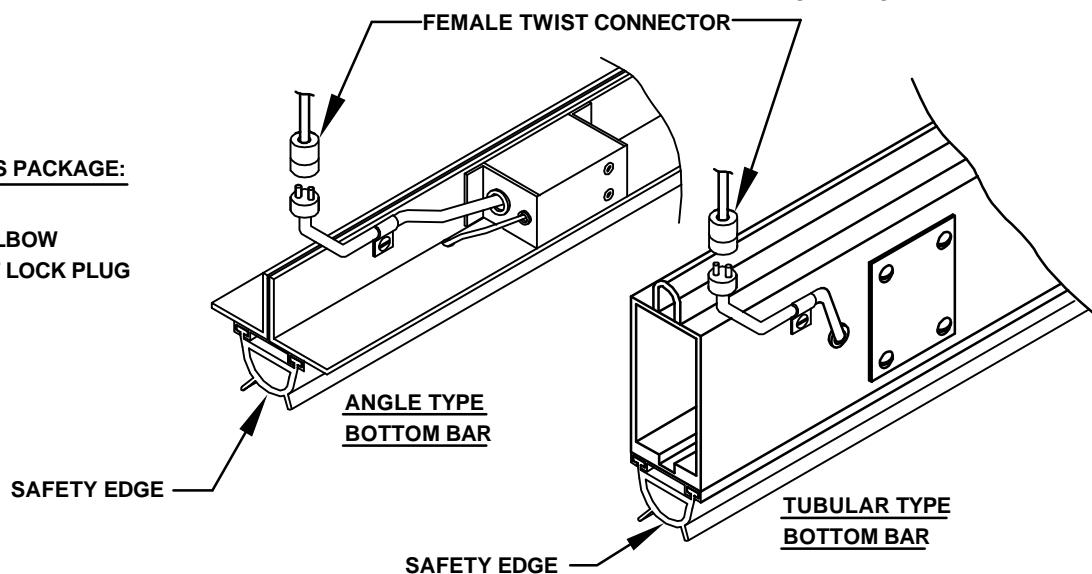


FIG 30

SERVICE COUNTER FIRE DOOR SMOKE LINTEL GASKET INSTALLATION (AIR LEAKAGE RATED DOORS)

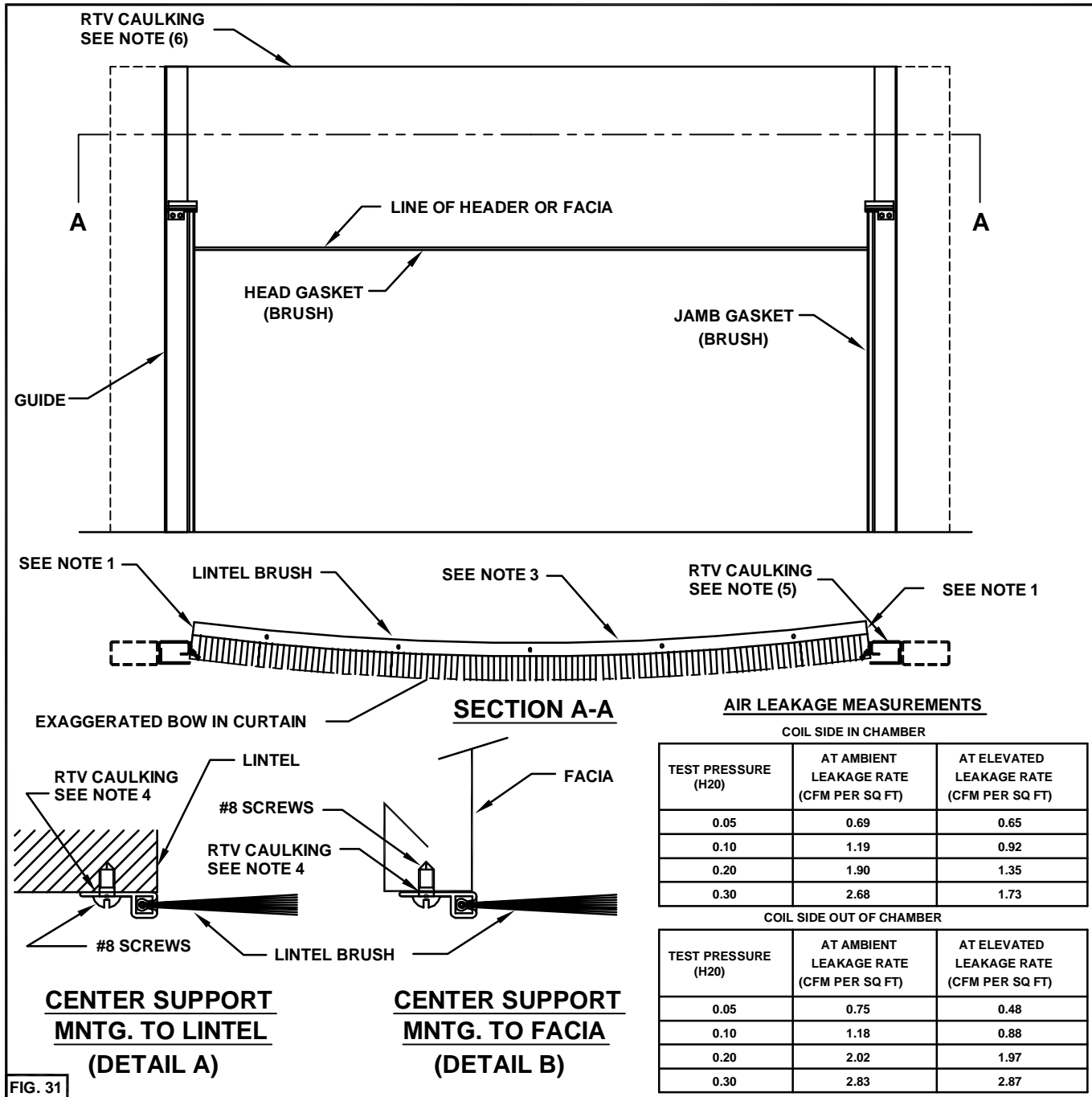
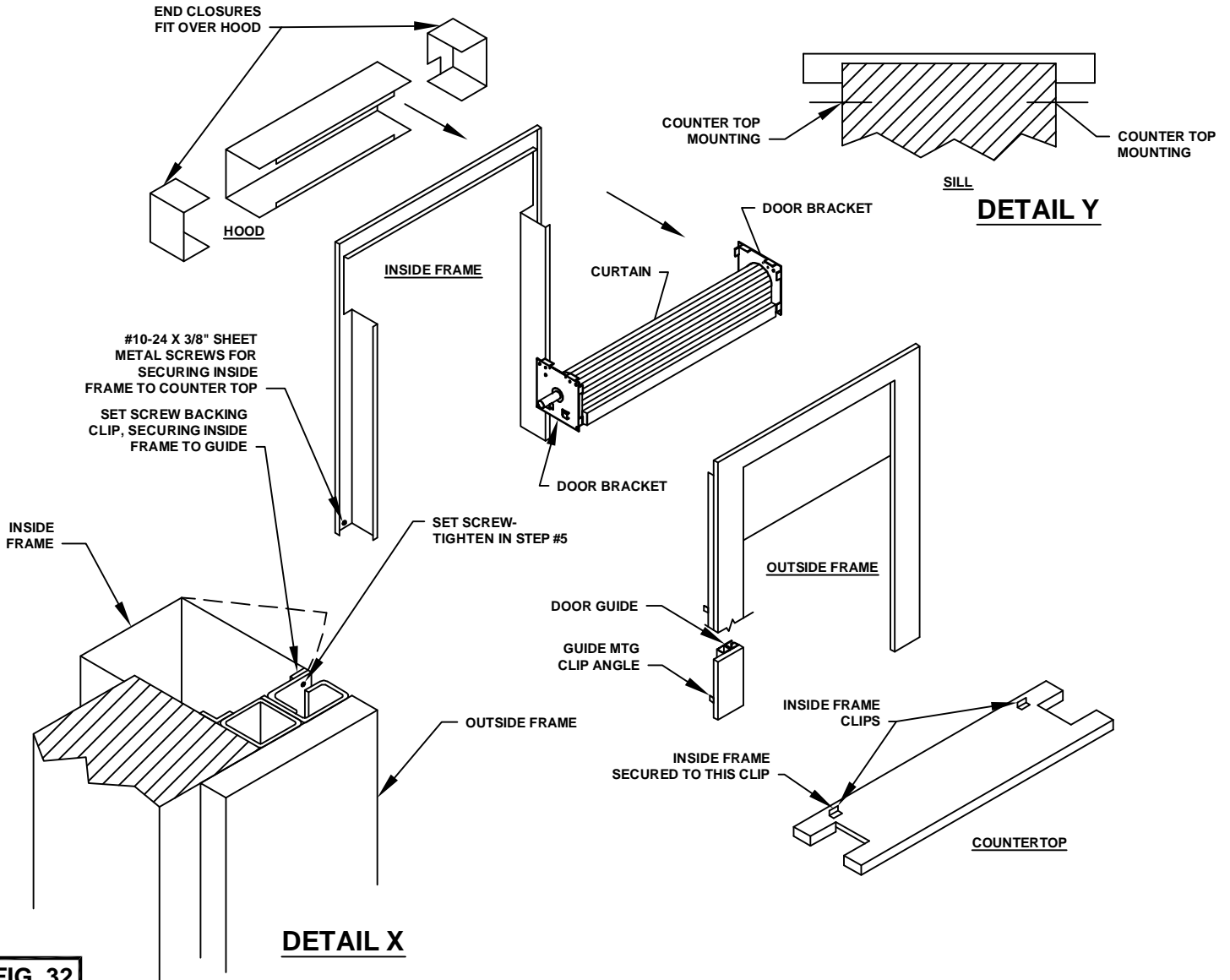


FIG. 31

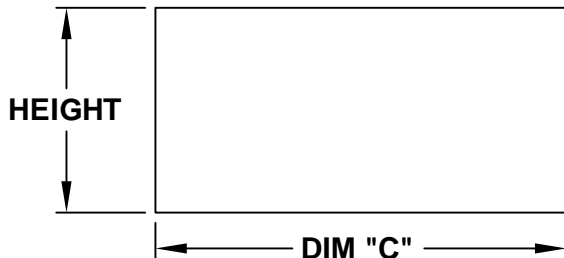
NOTE:

1. IF DOOR IS FACE MOUNTED AT THE HEAD (BRACKETS), MOUNT BRUSH TO LINTEL. TRIM ALUMINUM HOLDER FLANGE TO CLEAR JAMB.
2. IF DOOR IS BETWEEN JAMB MOUNTED WITH A FACIA, ATTACH GASKET TO BOTTOM OF FACIA (SEE DETAIL B.)
3. BOW CENTER OF BRUSH INWARDS UNTIL IT PRESSES ON CURTIAN (CURTIAN MUST BE IN CLOSED POSITION.)
4. APPLY 1/8" CONTINUOUS BEAD (HORIZONTAL) OF RTV CAULKING (PROVIDED.)
5. APPLY 1/8" x 14" BEAD (VERTICAL) OF RTV CAULKING (PROVIDED,) BETWEEN FACIA & GUIDE. (FOR BETWEEN JAMB DOORS WITH FACIA.)
6. SEAL TOP GAP BETWEEN FACIA & HEADER W/ RTV CAULKING. (FOR BETWEEN JAMB DOORS W/ FACIA.)

SERVICE COUNTER FIRE DOOR FRAME INSTALLATION INSTRUCTIONS



INSTALLATION PROCEDURE



- 1) CHECK OPENING HEIGHT AND WIDTH (DIM "C").
- 2) CHECK SILL TO SEE THAT IT IS LEVEL. NOW PLACE COUNTERTOP ON SILL PER DETAIL "Y".

- 3) PLACE OUTSIDE FRAME ON COUNTERTOP AND TILT INTO POSITION AND SECURE TO JAMB. SEE DETAIL "X" AND GUIDE INSTALLATION SECTION.
- 4) INSTALL BRACKET, BARREL AND CURTAIN PER APPROPRIATE INSTALLATION SECTIONS.
- 5) AFTER CHECKING THAT THE AUTOMATIC DROP AND DOOR OPERATION IS SATISFACTORY, INSTALL INSIDE FRAME. MAKE SURE FRAME IS FLUSH WITH GUIDE AND TIGHTEN SET SCREW PER DETAIL "X". SECURE INSIDE FRAME TO COUNTERTOP.
- 6) NOW SECURE HOOD PER HOOD COVER INSTALLATION SECTION.

FIG. 33