



General Contractors

Tormax iMotion[®]
TN 110 In-Floor Swing Door Operator

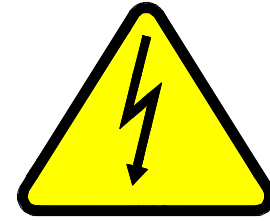
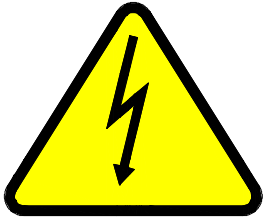
Retro-Fit Installation Manual

Surface Mounted, LH operator

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PREP WORK



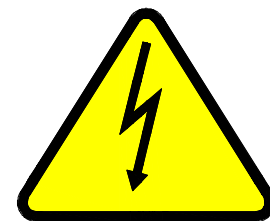
WARNING
HIGH VOLTAGE!

**** DISCONNECT MAIN POWER
SOURCE ****

*This task must be completed by a qualified electrician. All wiring
practices must comply with city, county, and state codes.*

Do not proceed until main power is off

**CAUTION: Failure to properly disconnect main
power source may result in serious injury or
death.**



PREP WORK



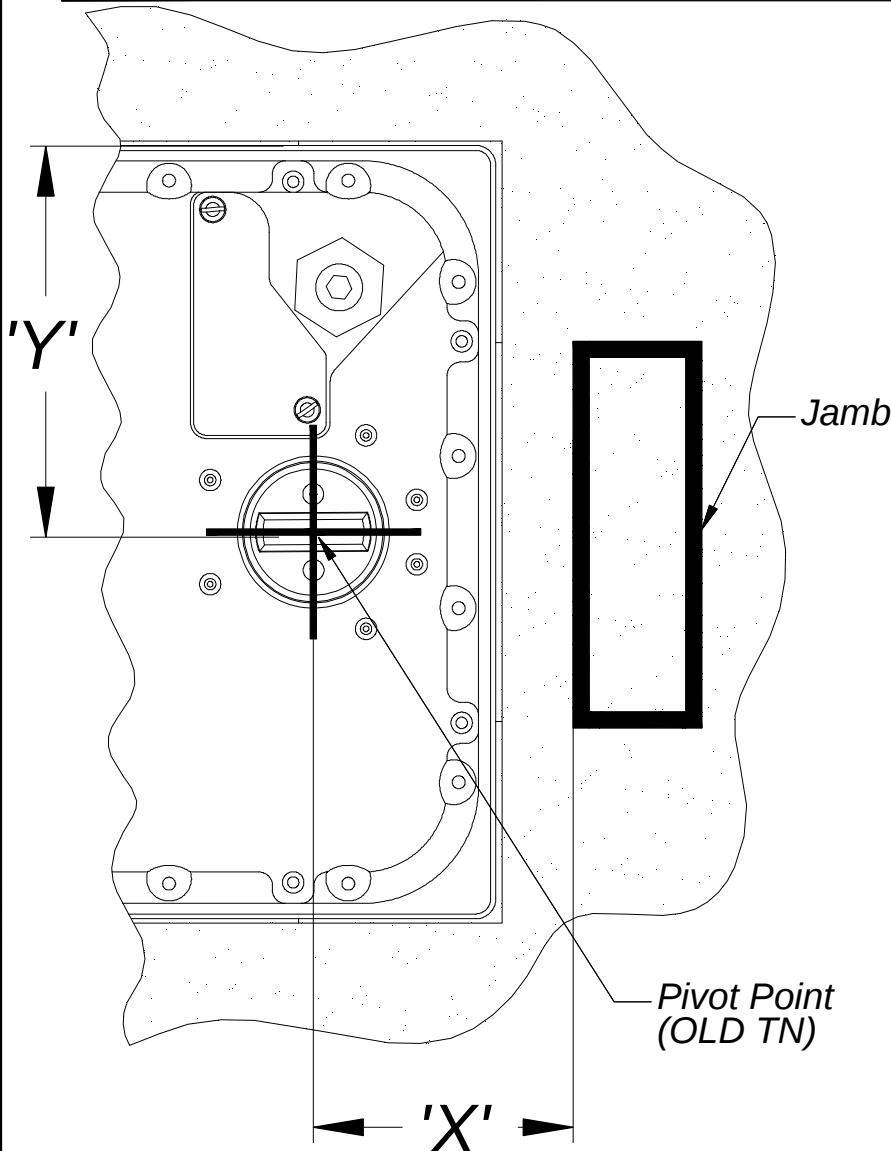
CAUTION: ENSURE POWER SOURCE IS OFF



PROCEDURE

- (1) REMOVE THE DECORATIVE PLATE COVER
- (2) WITH THE OPERATOR IN PLACE, TAKE THREE MEASUREMENTS AND RECORD THEM
 - (a) measure the distance from the center of the pivot point to the jamb ('X' distance)
 - (b) measure the distance from the center of the pivot point to the long edge of the box ('Y' distance)
 - (c) measure the height from the floor to the top of the pivot cylinder ('Z' distance)

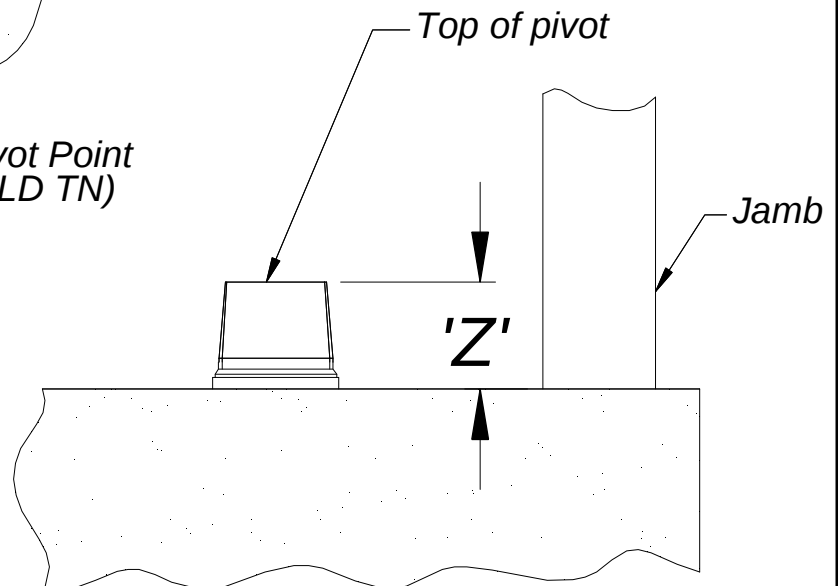
*These measurements are required in ensure your new operator will be properly located.



X = _____

Y = _____

Z = _____



PREP WORK - ELECTRICAL



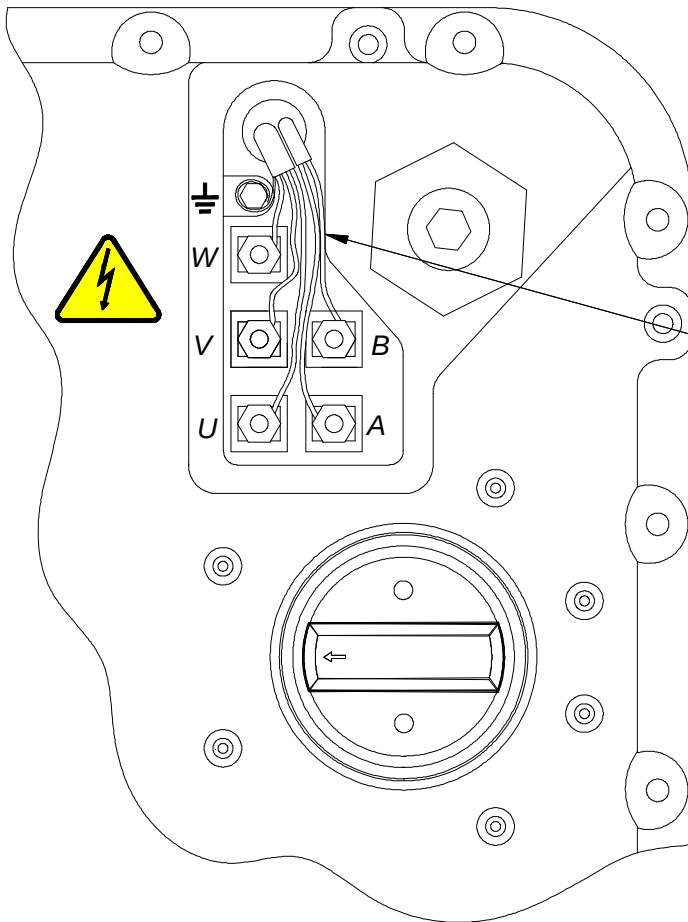
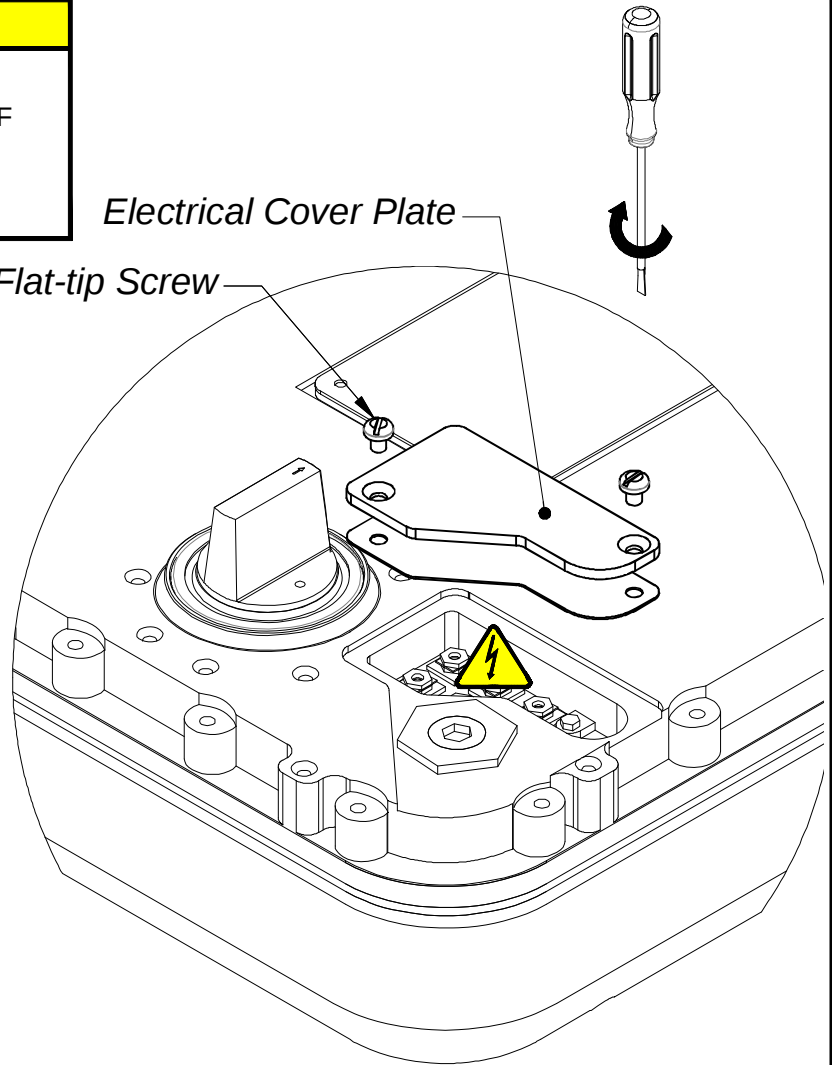
CAUTION: ENSURE POWER SOURCE IS OFF



REMOVAL PROCEDURES

- (1) REMOVE ELECTRICAL COVER PLATE
 **CAUTION: HIGH VOLTAGE ENSURE POWER IS OFF
- (2) DISCONNECT ALL WIRES FROM TN OPERATOR

Electrical Cover Plate
 2x Flat-tip Screw



Remove power (u,v,w), ground ($\perp$), and thermal overload (a,b) wires. 7mm



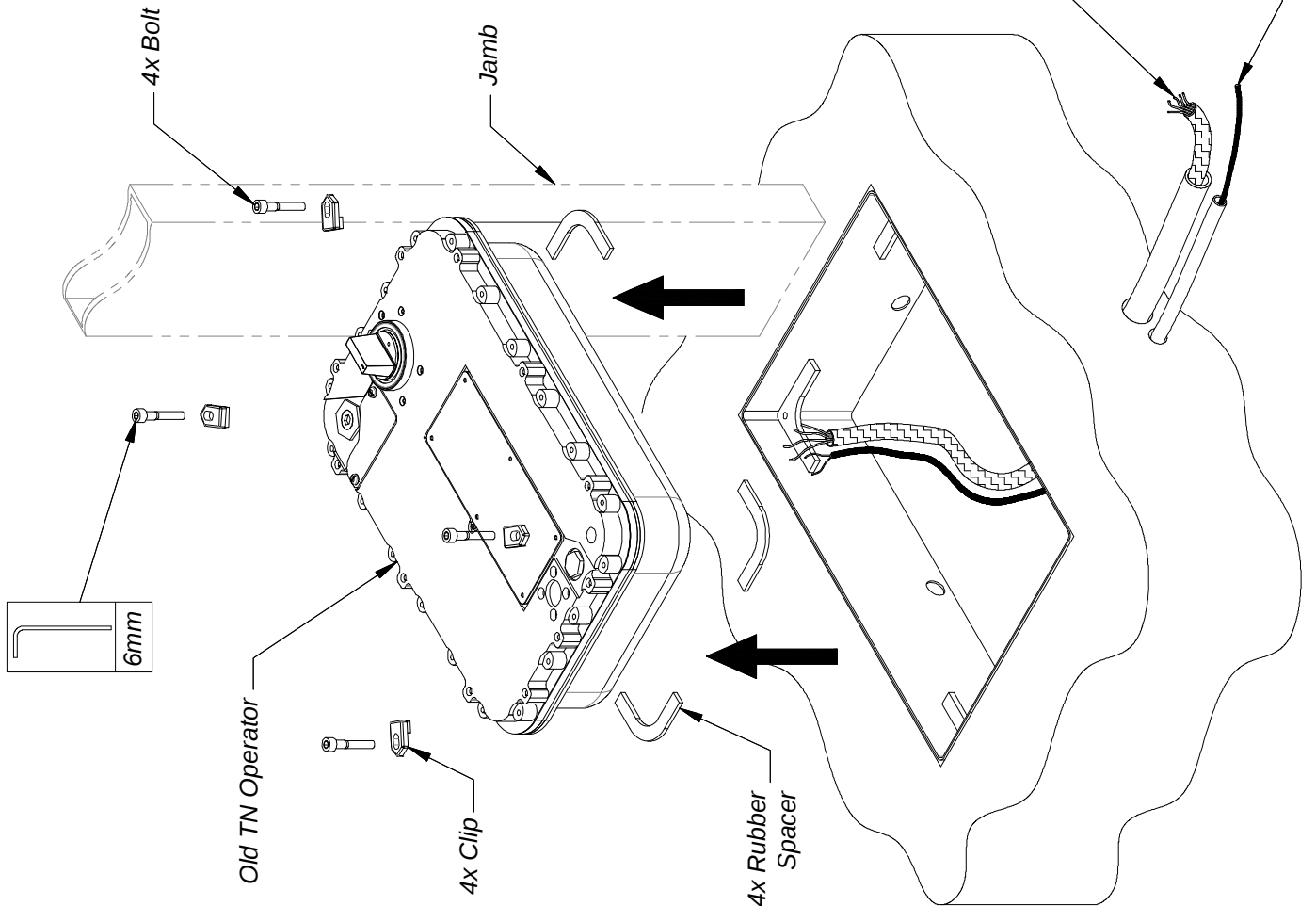


CAUTION: ENSURE POWER SOURCE IS OFF



REMOVAL PROCEDURES

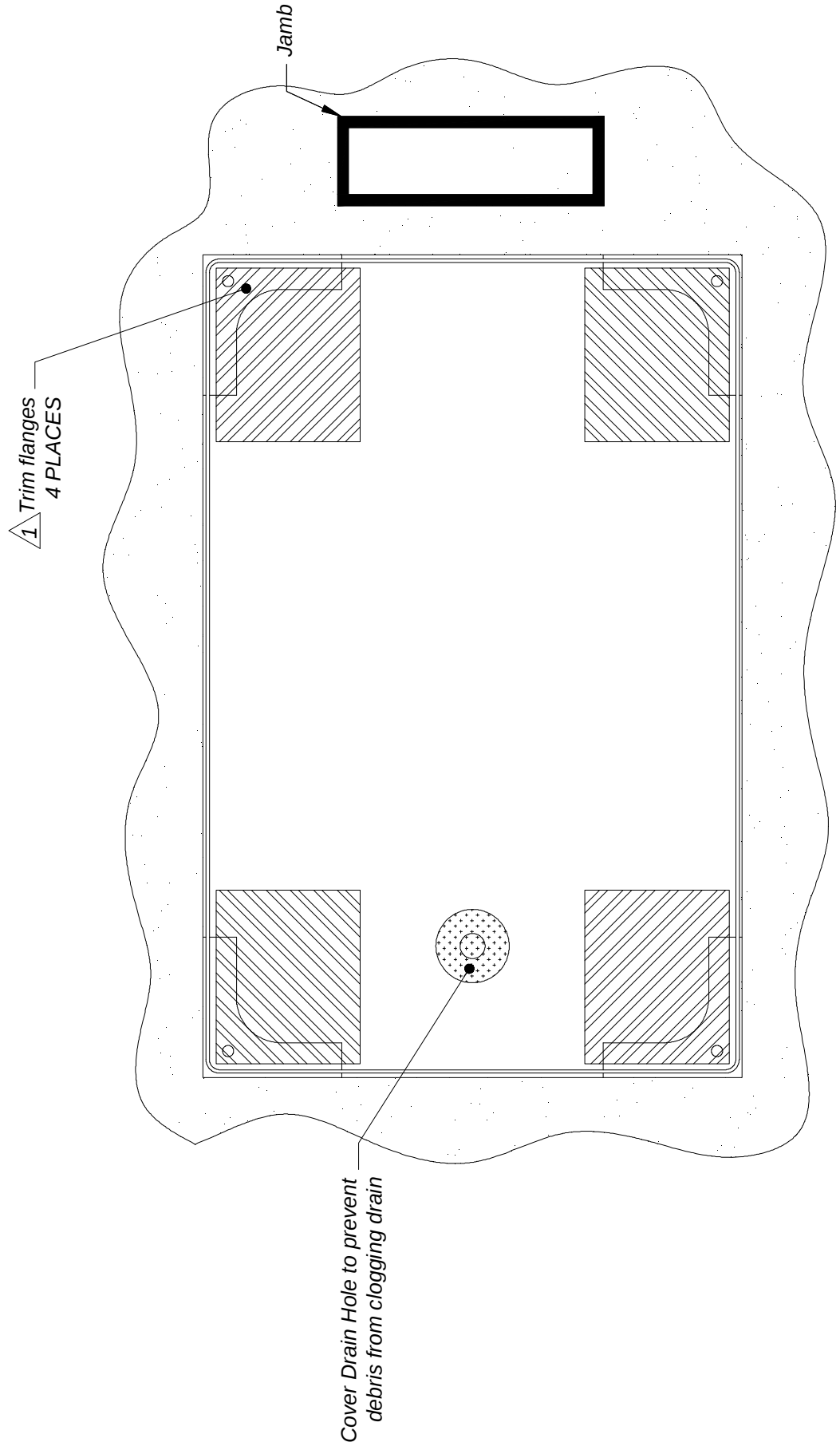
- (1) REMOVE 4X BOLT (6mm hex).
- (2) REMOVE 4X CLIP
- (3) PULL TN OPERATOR OUT OF BOX.
- (4) REMOVE 4X RUBBER SPACER FROM BOX
- (5) REMOVE 230VAC POWER CABLE & THERMAL OVERLOAD WIRE COMPLETELY FROM BOX



1 Flange does not need to be cut flush with side of box. Permissible to have up to 1/8" lip

TRIM PROCEDURES

- (1) TEMPORARILY COVER DRAIN HOLE (DUCT TAPE) TO PREVENT DEBRIS FROM CLOGGING DRAIN.
- (2) TRIM FLANGES INSIDE BOX (4 PLACES).
- (3) CLEAN DEBRIS FROM BOX.
- (4) UN-COVER THE DRAIN HOLE.

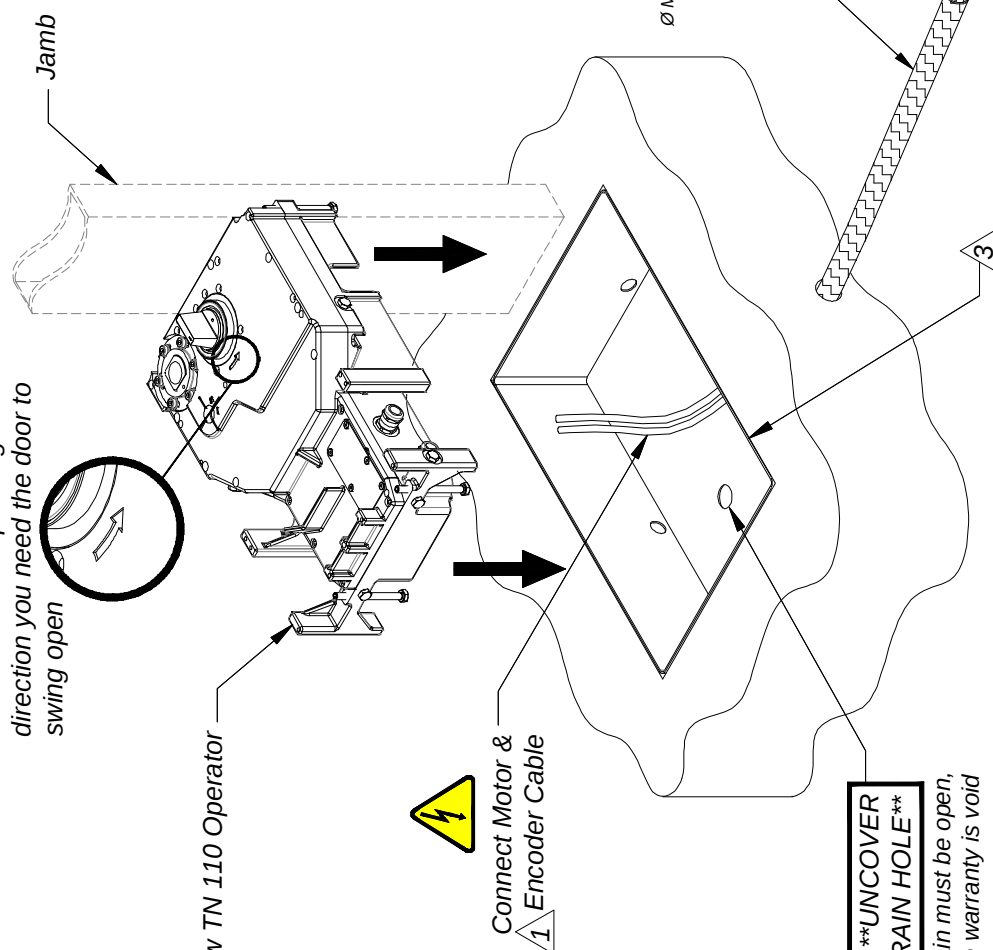


INSTALLATION - OPERATOR

- ① Reference Tormax Technologies TN110 In-Floor Swing Door Operator Installation Manual for further instructions
- ② Power source to TN Control Box must be ONE of the following:
 - (a) Modify the existing 230, 3 Phase Cable per instructions provided in APPENDIX A of this manual.
 - (b) Provide a new 110VAC / 15A power cable.
- ③ Reference APPENDIX B of this manual for proper electrical access to the TN Box.

**Ensure arrow is pointing in direction you need the door to swing open*

New TN 110 Operator -



****UNCOVER
DRAIN HOLE****

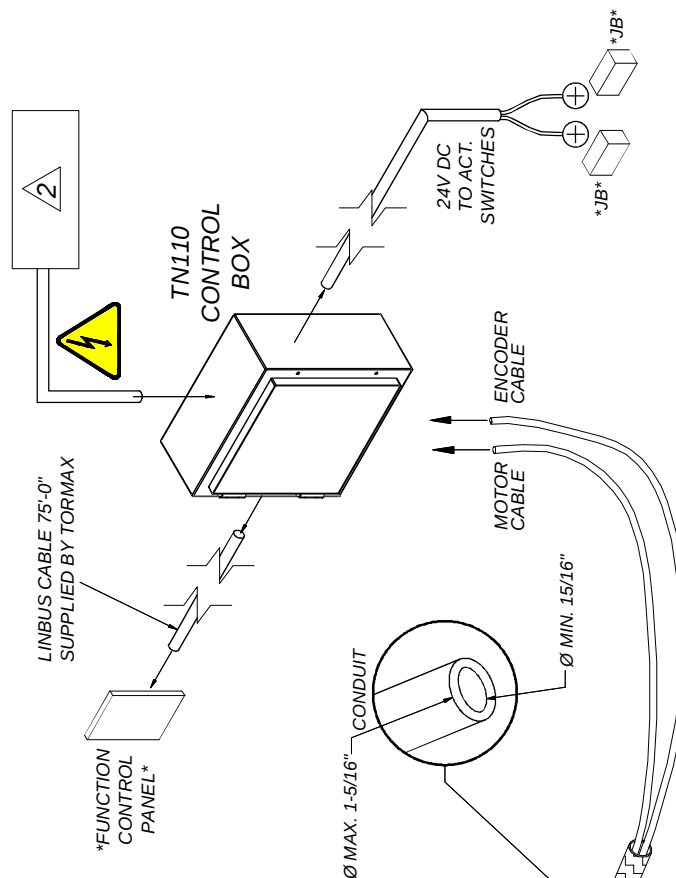
***Drain must be open,
else warranty is void***

CAUTION: ENSURE POWER SOURCE IS OFF



INSTALLATION PROCEDURES

- (1) RUN THE NEW MOTOR & ENCODER CABLE TO THE TTN-110 OPERATOR AND CONNECT TO THE TN CONTROL BOX. (SEE NOTES 1 & 3).
- (2) INSTALL COMPONENTS AS SHOWN IN PICTORAL
- (3) CONNECT THE OTHER END OF POWER CABLE TO TTN-110 CONTROL BOX (see following pages)
- (4) INSTALL THE FUNCTION CONTROL PANEL.
CONNECT IT TO CONTROL BOX WITH LINBUS CABLE.
- (5) FOR POWER SOURCE TO TN CONTROL BOX, SELECT FROM THE FOLLOWING:
 - (a) Modify the existing 230, 3 Phase cable per instructions provided in Appendix A of this manual.
 - (b) Provide a new 110VAC / 15A cable.



ELECTRICAL CONNECTIONS

For all electrical connections, internal stop adjustments, and function control panel (FCP) setup, reference Tormax Technologies, Inc. document:

***US801461 TN-110 INSTALLATION AND
OPERATING MANUAL***

INSTALLATION - SHIMS

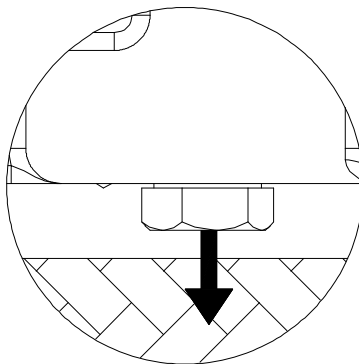
INSTALLATION PROCEDURES

- (1) LOCATE SHIMS APPROXIMATELY AS SHOWN.
- (2) FOR EACH SHIM, LOOSEN THE BOLTS ON THE OPERATOR UNTIL THE BOLT IS TIGHT AGAINST THE SHIM. OPERATOR SHOULD NOT BE ABLE TO MOVE

Loosen bolt until
 bolt head is tight
 against the shim



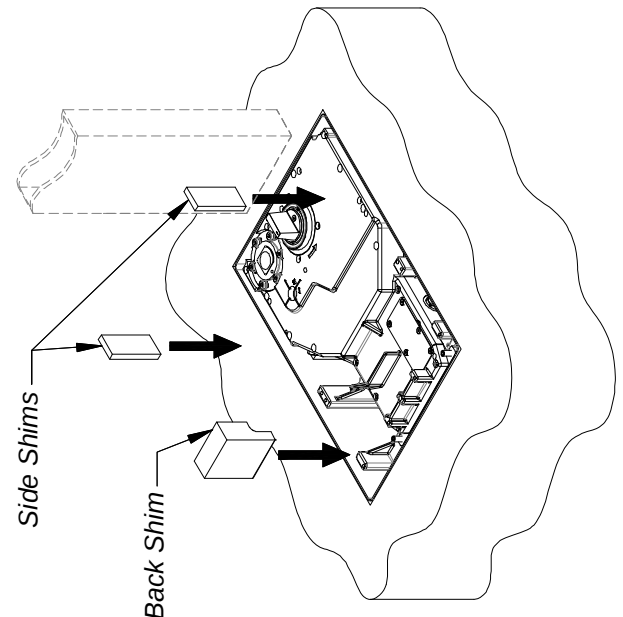
13mm



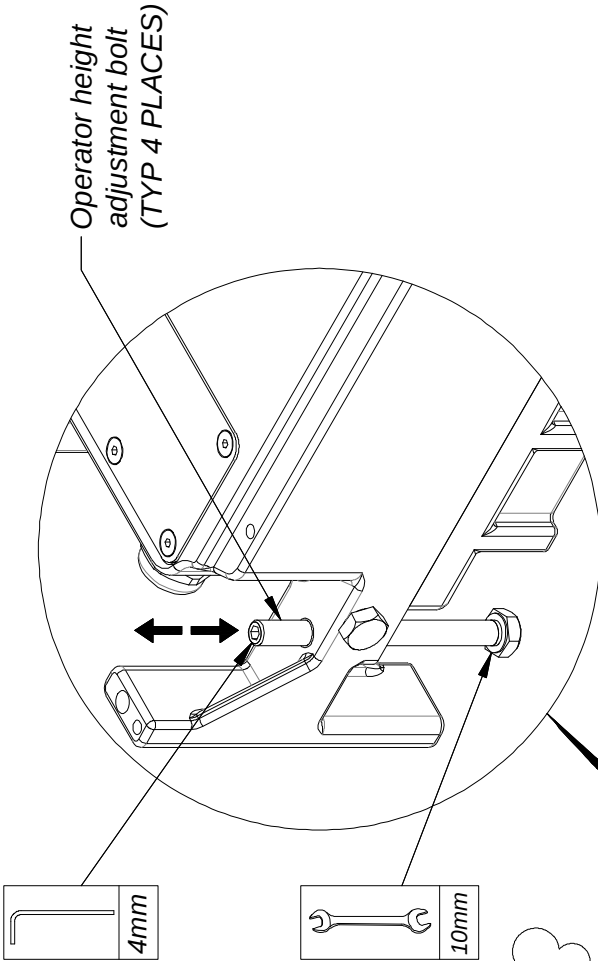
****SHIMS BY
 OTHERS****

Back Shim

DETAIL A
 TYP 3 PLACES



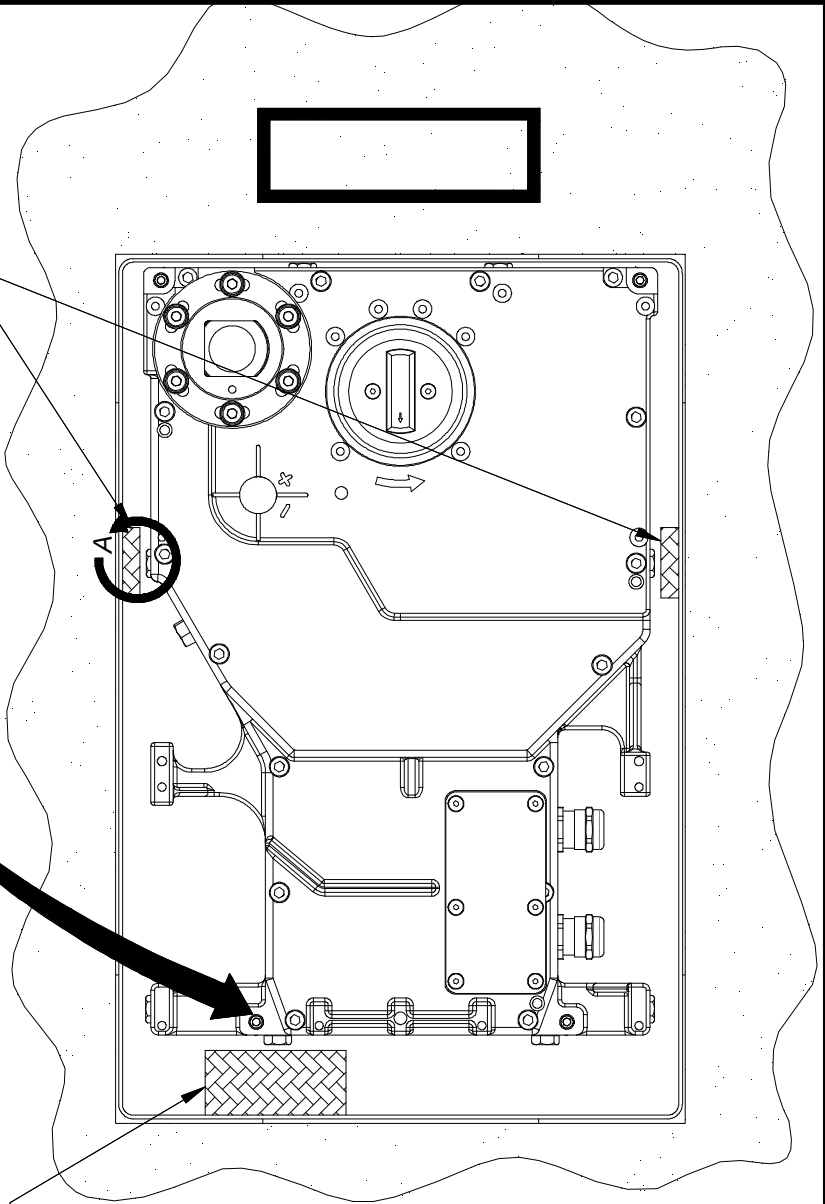
Side Shims



Operator height
 adjustment bolt
 (TYP 4 PLACES)

4mm

10mm



INSTALLATION CHECK



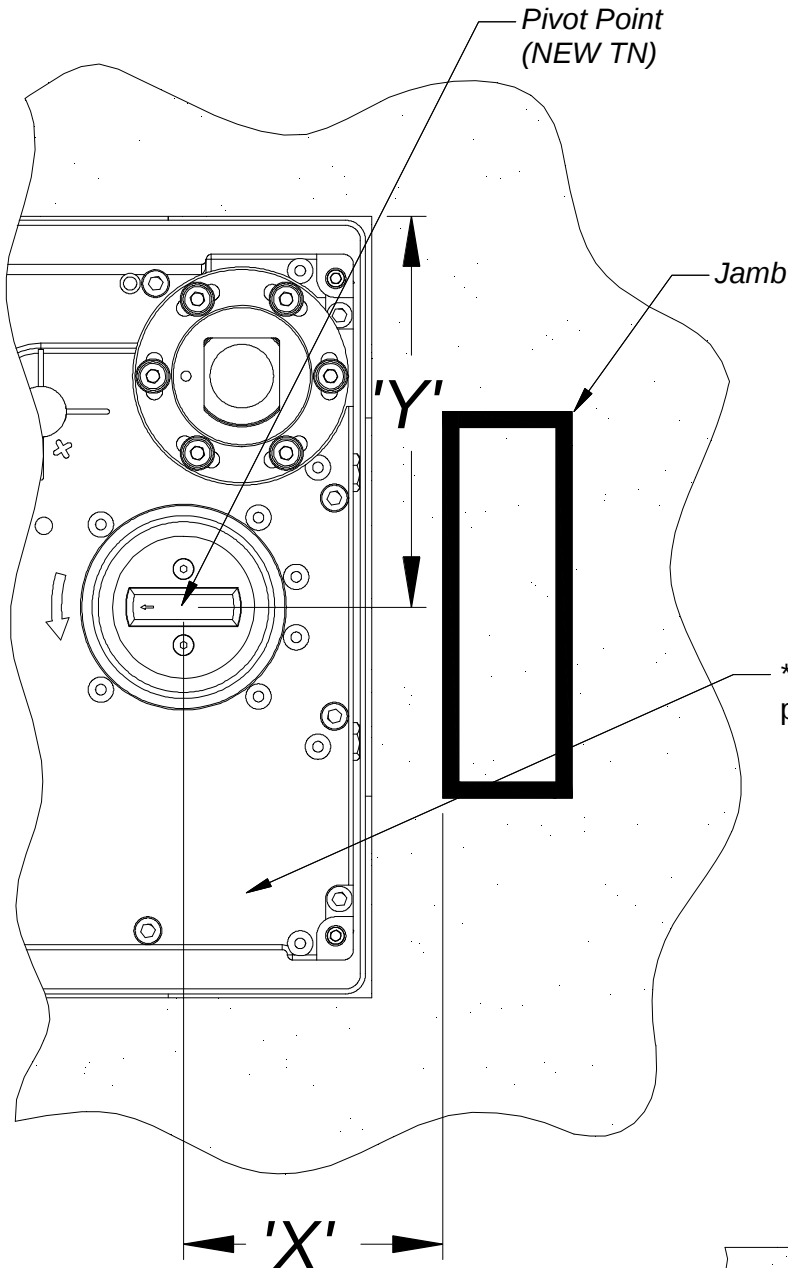
CAUTION: ENSURE POWER SOURCE IS OFF



PROCEDURE

- (1) MEASURE AND RECORD THE 'X', 'Y', AND 'Z' COORDINATES MENTIONED ON SHT 3.
- (2) COMPARE THESE NUMBERS TO THE NUMBERS RECORDED ON SHT 3. IF THESE NUMBERS DO NOT MATCH, REFER BACK TO SHT 9 TO MAKE ADJUSTMENTS.

*These measurements are required to ensure your new operator will be properly located.

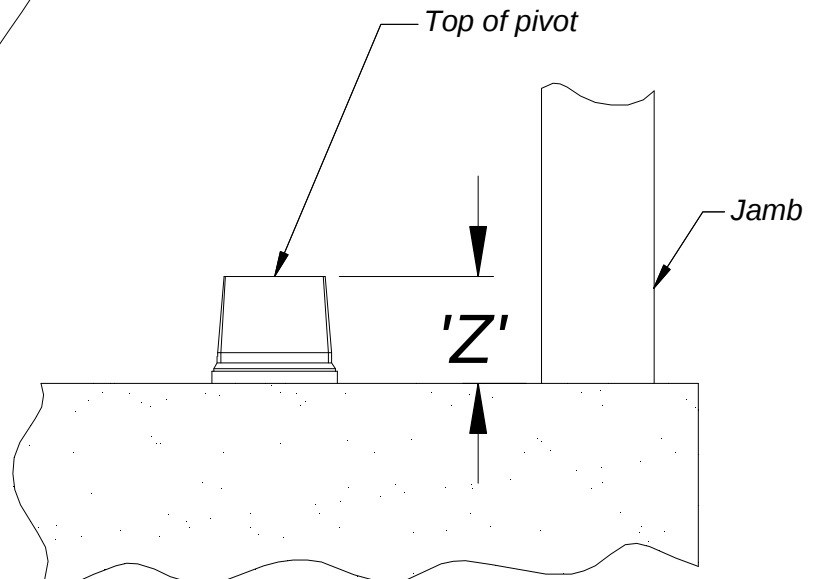


X = _____

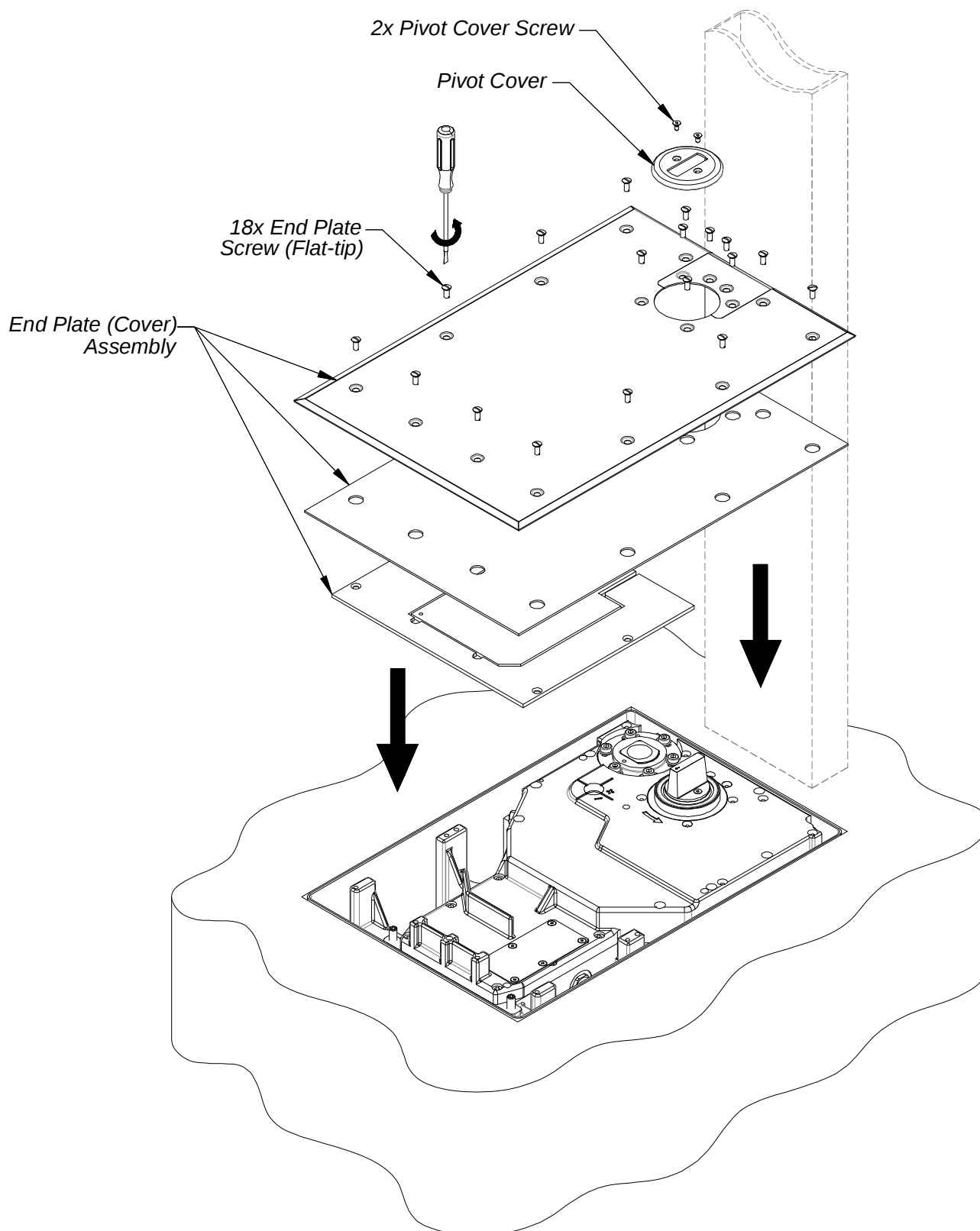
Y = _____

Z = _____

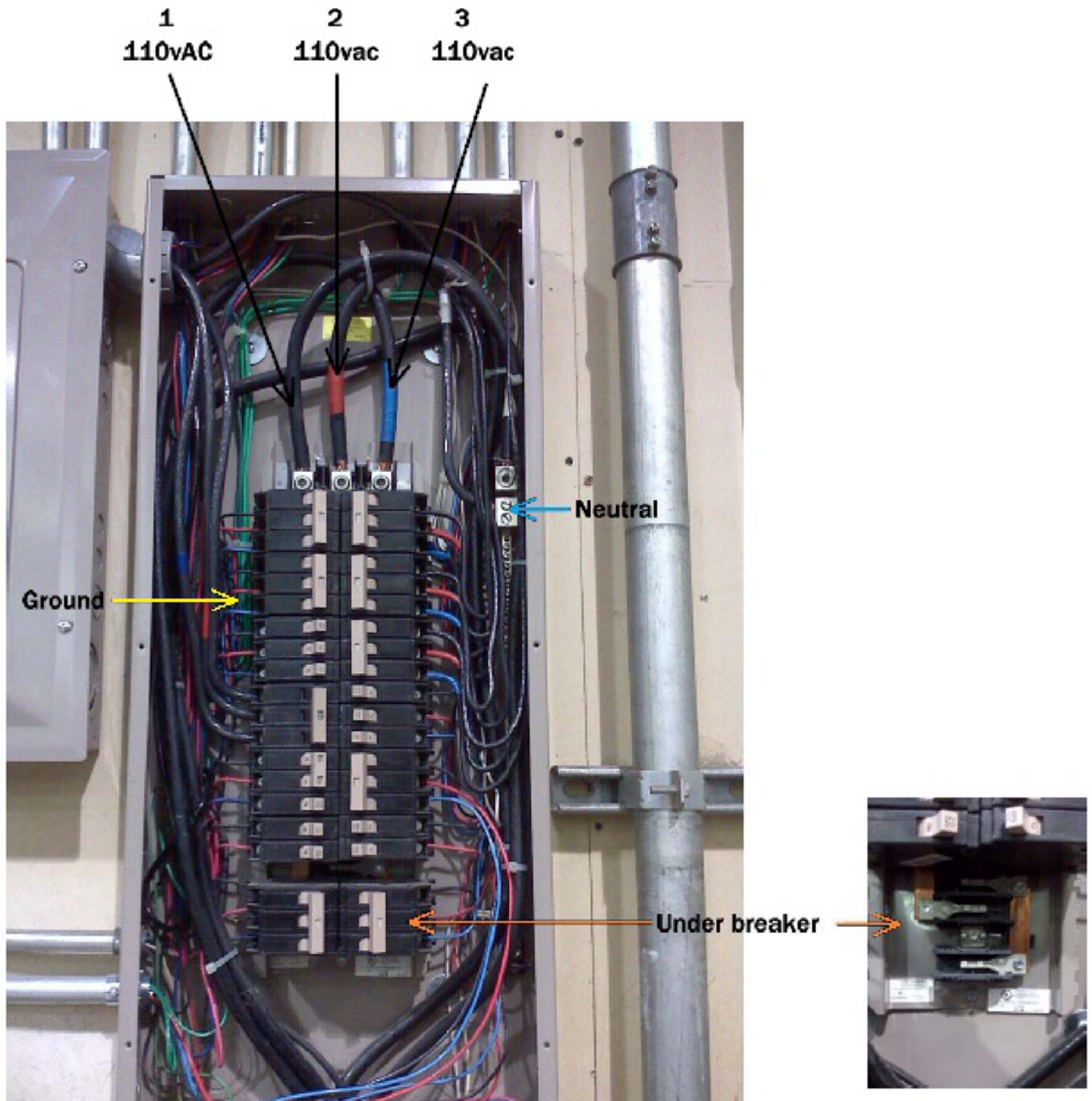
*Refer to Tormax TN-110 Installation Manual for positive stop adjustment settings.



INSTALL END PLATE (COVER)



230V, 3 Phase Conversion



ELECTRICAL ACCESS OF TN BOX PER OPERATOR HANDING

