

15L Slant-PRO Lathe Enclosure Installation

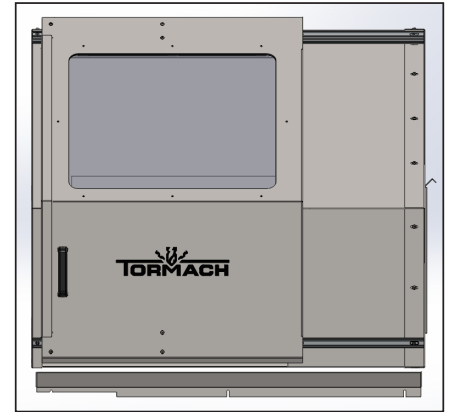
Product Identification: 15L Slant-PRO Lathe Enclosure Kit (PN 34713)

Purpose: The purpose of this document is to guide you through assembly and installation of the 15L Slant-PRO Lathe enclosure. There are four sections to this installation: *Enclosure Kit Parts*, *Enclosure Assembly*, *Enclosure Installation*, and *Limit Switch Trigger Plate Installation and Limit Switch Adjustment*.



WARNING! Transport and Lift Hazard: The transport, lifting, and moving of lathe enclosure should be done by qualified professionals. Failure to do so may result in machine damage, serious injury or death.

IMPORTANT: If using a turret, it must be installed prior to installing the lathe enclosure kit.



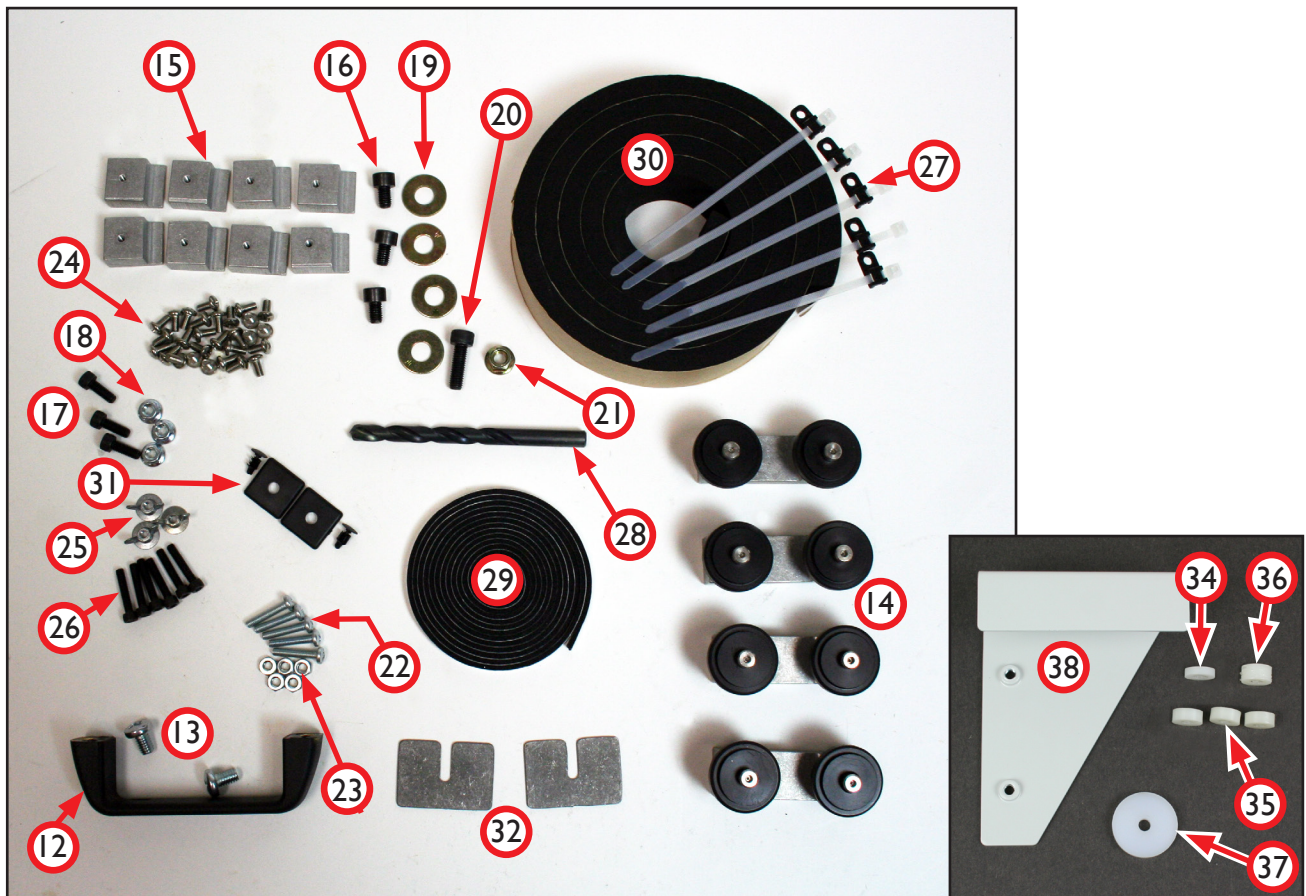
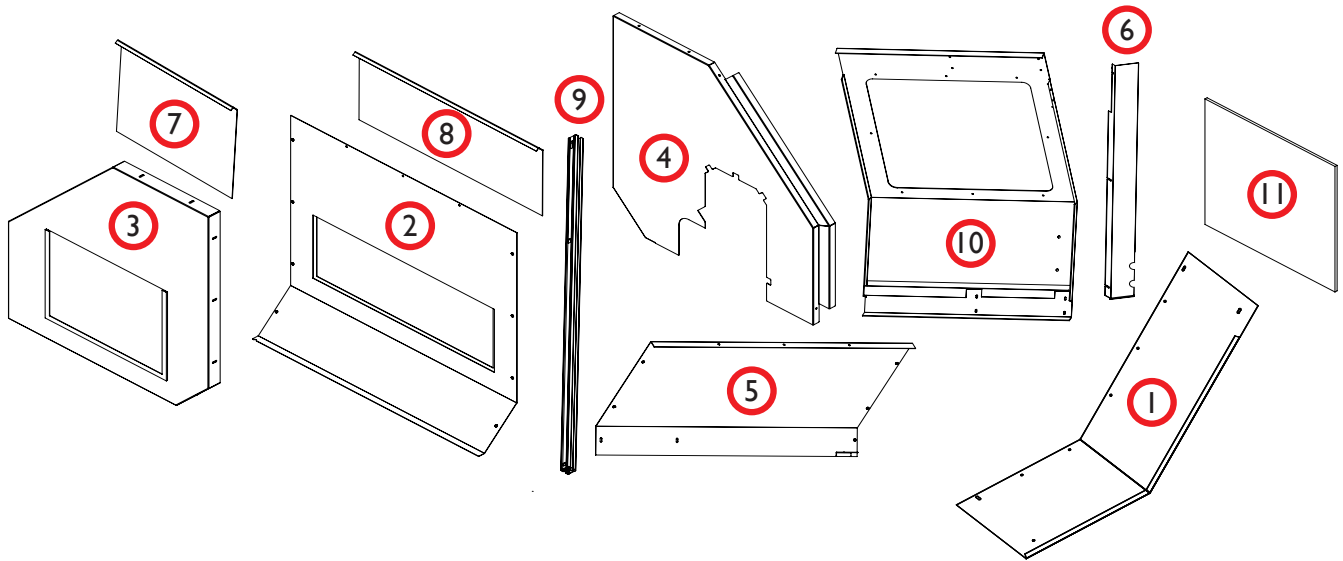
Required Tools

- Phillips Screwdriver
- Drill
- Metric Hex Wrench Set
- 3/8" Wrench
- Hammer
- Center Punch
- Razor Blade

Enclosure Kit Parts

Review enclosure kit contents before starting installation:

Item#	Lathe Enclosure Kit (PN 34713)	Qty	Item #	Lathe Enclosure Kit (PN 34713)	Qty
1	Front Right Panel	1	20	M8 × 25 mm Socket Head Cap Screw	1
2	Rear Panel	1	21	M8 Flange Nut	1
3	Right Side Panel	1	22	10-32 × 1" Pan Head Screws	5
4	Left Side Panel	1	23	10-32 Hex Nuts	5
5	Top Panel	1	24	10-32 × 3/8" Pan Head Screws	35
6	Drip Tray	1	25	10-32 Flange Nuts	3
7	Right Access Panel	1	26	10-32 × 1.5" Socket Head Cap Screws	6
8	Rear Access Panel	1	27	Wire Tie Holders and Ties	5
9	Door Rail	2	28	3/8" Drill	1
10	Door	1	29	1/4" Foam Gasket Tape	7'
11	Door Window	1	30	1.5" × 1/4" Thick Foam Tape	75"
12	Door Handle	1	31	Plastic End Caps w/ Lock Screws	2
13	5/16" × 3/4" Pan Head Screws (Door Handle)	2	32	Shims	2
14	Door Roller Brackets	4	33	1.5" × 1/2" Thick Foam Tape (not shown)	6"
15	Door Window Clips	8	34	Door Rail Spacer 1/2" × 1/8"	1
16	M8 × 12 mm Socket Head Cap Screws	3	35	Door Rail Spacer 1/2" × 3/16"	3
17	M6 × 16 mm Socket Head Cap Screws	3	36	Door Rail Spacer 1/2" × 1/4"	1
18	M6 Flange Nuts	3	37	Door Rail Spacer 1" × 1/8"	1
19	M8 Flat Washers	4	38	Limit Switch Trigger Plate	1



Enclosure Assembly

The Left Side Panel has a slot in the lower left corner which is used to fasten this corner to the lathe. Use the slot as a template to mark the location to drill the fastener hole as follows:

- I. Using Left Side Panel as a template, temporarily place it on lathe as shown in **Figure 1**. Hold it in place by loosely attaching panel's back corner to lathe using one M8 × 12 mm Socket Head Cap Screw. Using a level, confirm panel is level (see **Figure 2**). Mark a drill hole through slot with a hole punch as shown in **Figure 1 inset**. Using the (included) 3/8" Drill, drill a hole through the lathe casting (see **Figure 3**). Remove panel for installation later.

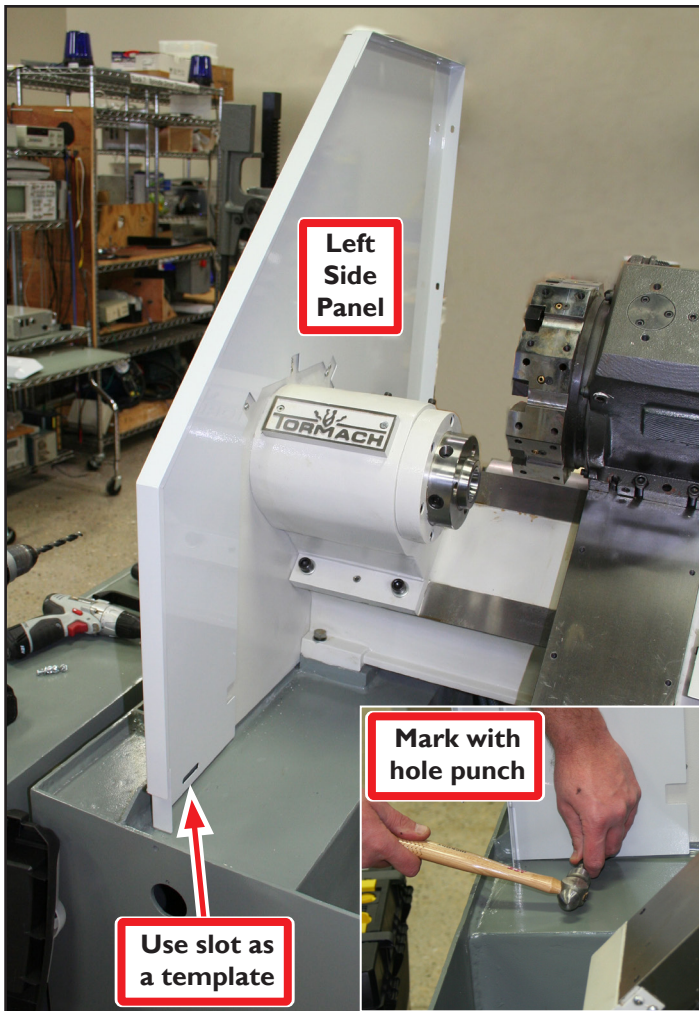


Figure 1

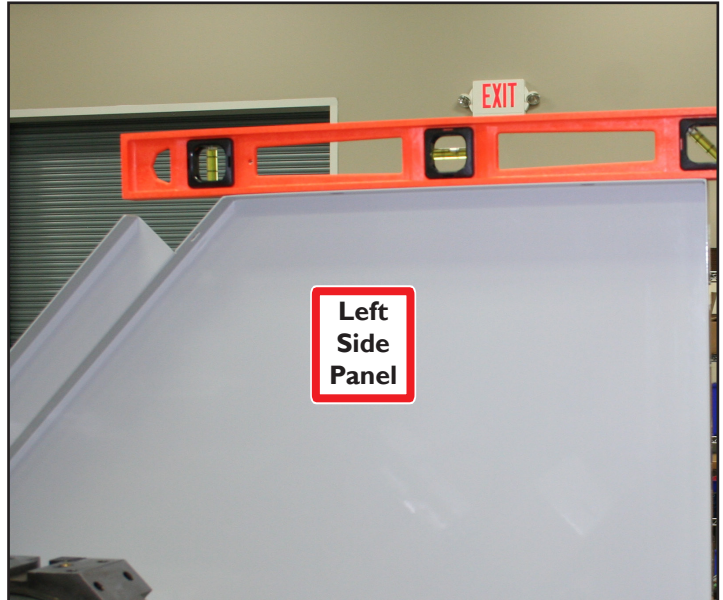


Figure 2



Figure 3

NOTE: Lathe enclosure should be assembled on the floor.

2. Slide the Rear Panel into the inside lip of the Right Side Panel; secure with four 10-32 $\times$ 3/8" Pan Head Screws (see **Figure 4**).

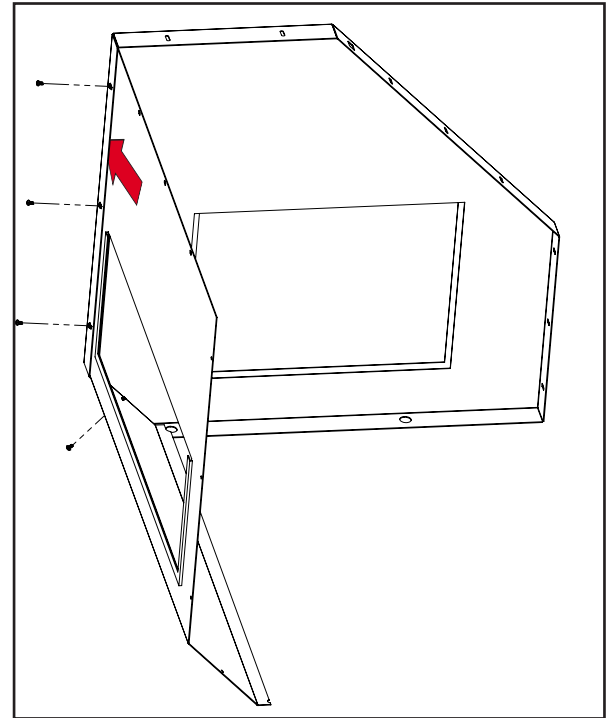


Figure 4

3. Slide the Top Panel under the lip of the Right Side Panel and against the Rear Panel; secure with five 10-32 $\times$ 3/8" Pan Head Screws (see **Figure 5**).

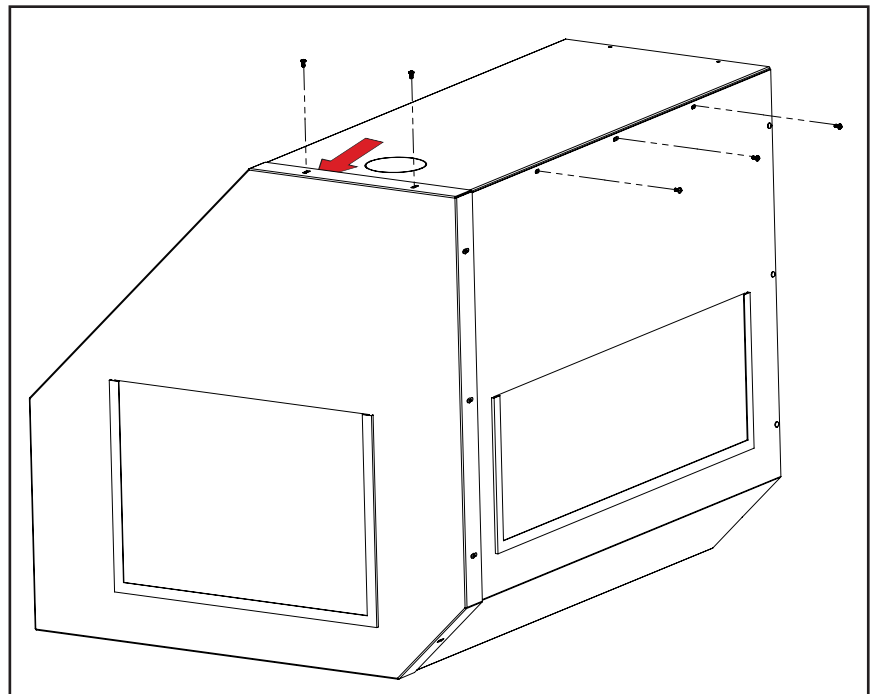


Figure 5

4. Slide the Front Right Panel under the lip of the Right Side Panel and over the Top Panel; secure with six 10-32 $\times$ 3/8" Pan Head Screws (see **Figure 6**).

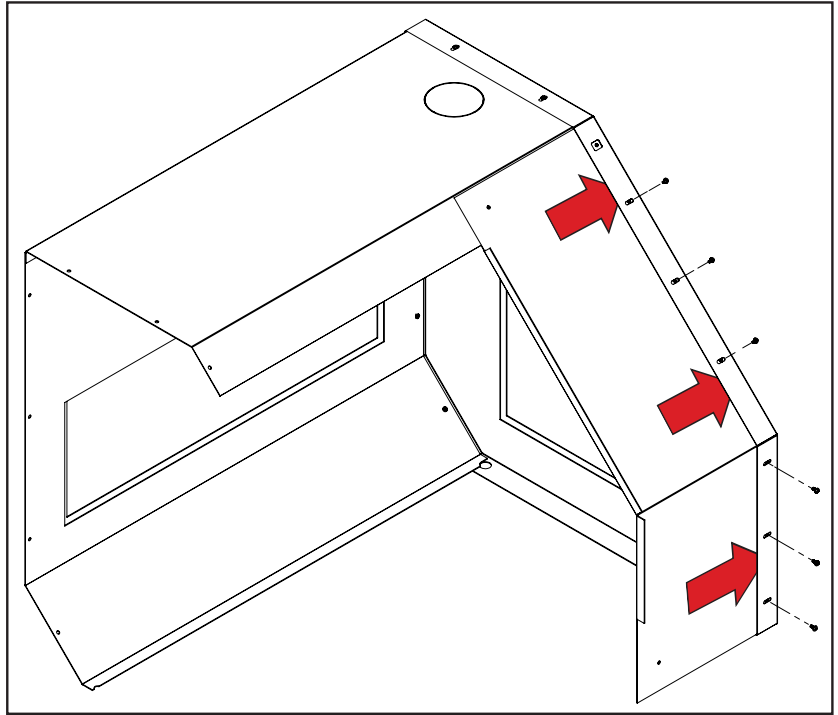


Figure 6

5. Slide the Left Side Panel over the edge of the assembly; secure using five 10-32 $\times$ 1" Pan Head Screws and one 10-32 $\times$ 3/8" Pan Head Screw as shown in **Figure 7**.

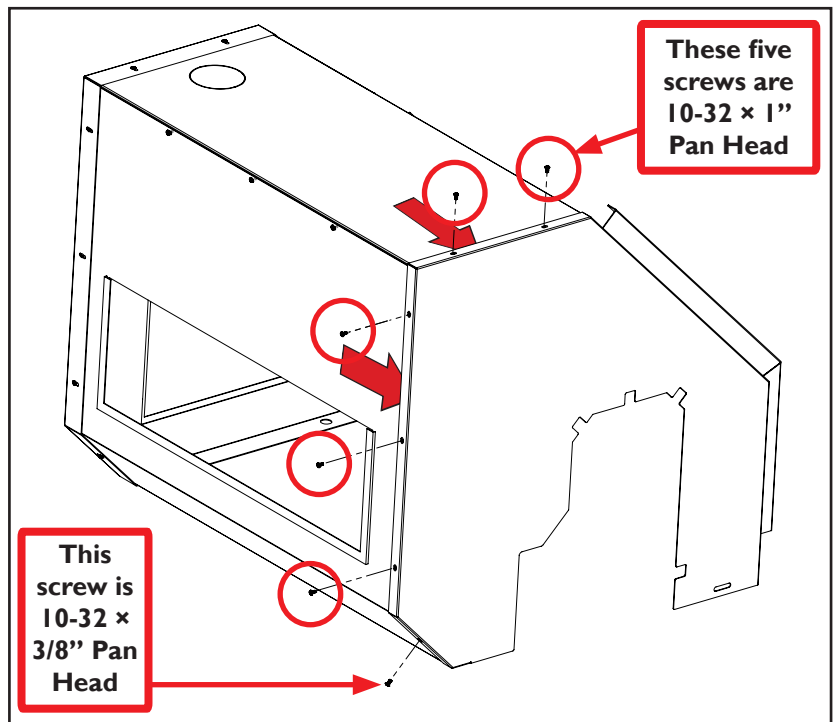


Figure 7

6. Secure each of the two Door Rails to the top and bottom of the enclosure with three 10-32 x 1.5" Socket Head Cap Screws (see **Figure 8**). Insert Door Rail Spacers between each Door Rail and enclosure for support (see **Figure 8**). Three of the six Door Rail screws are fastened with 10-32 Flange Nuts as shown in **Figure 8**.

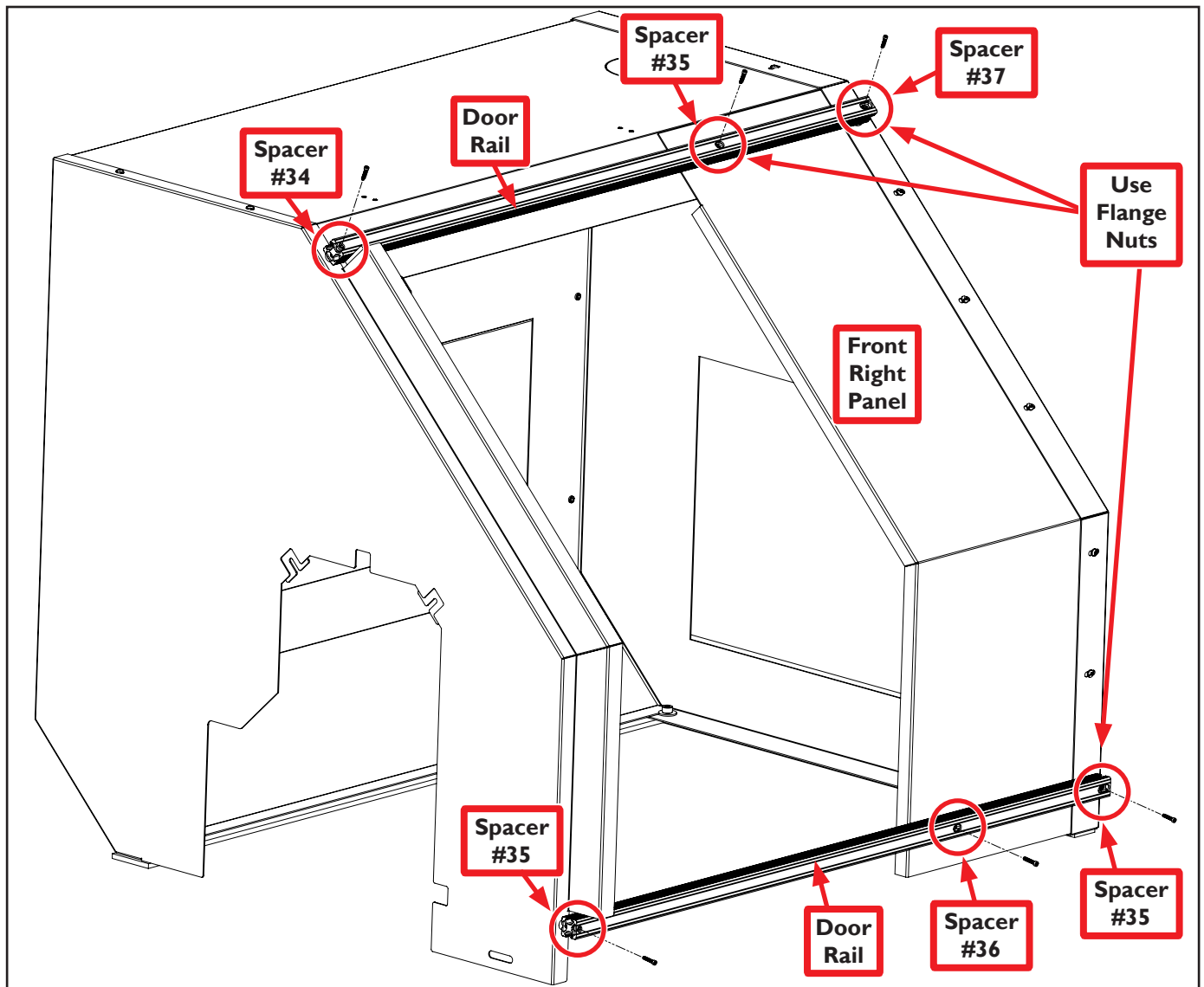


Figure 8

7. Measure, cut, and adhere 1.5" x 1/4" Thick Foam Tape to bottom of enclosure as shown in **Figure 9**.
8. Measure, cut, and adhere 1.5" x 1/2" Thick Foam Tape to door area as shown in **Figure 9**.
9. Measure, cut, and adhere 1.5" x 1/2" Thick Foam Tape to inside flange (not shown) of Front Right Panel (see **Figure 9**).

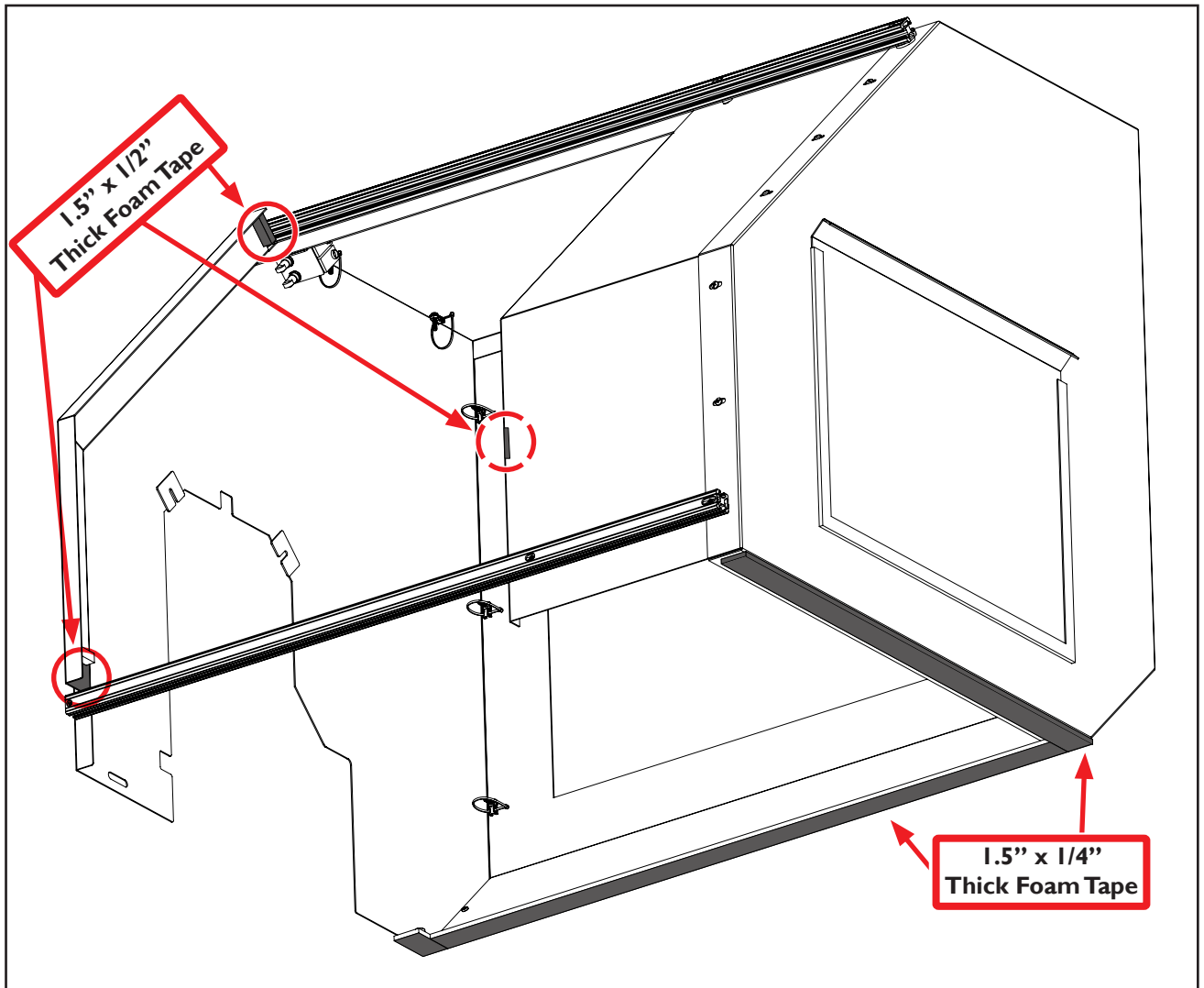


Figure 9

10. Measure, cut and adhere 1/4" Foam Gasket Tape to form a seal around the inside of the Door Window Opening; peel off backing and adhere to Door (see **Figure 10**).
11. Attach Door Window to Door using eight Door Window Clips with eight 10-32 × 3/8" Pan Head Screws (see **Figure 10**); attach Door Handle using two 5/16" × 3/4" Pan Head Screws. Set door aside for later installation.

NOTE: Do not install the Limit Switch Trigger Plate at this time.

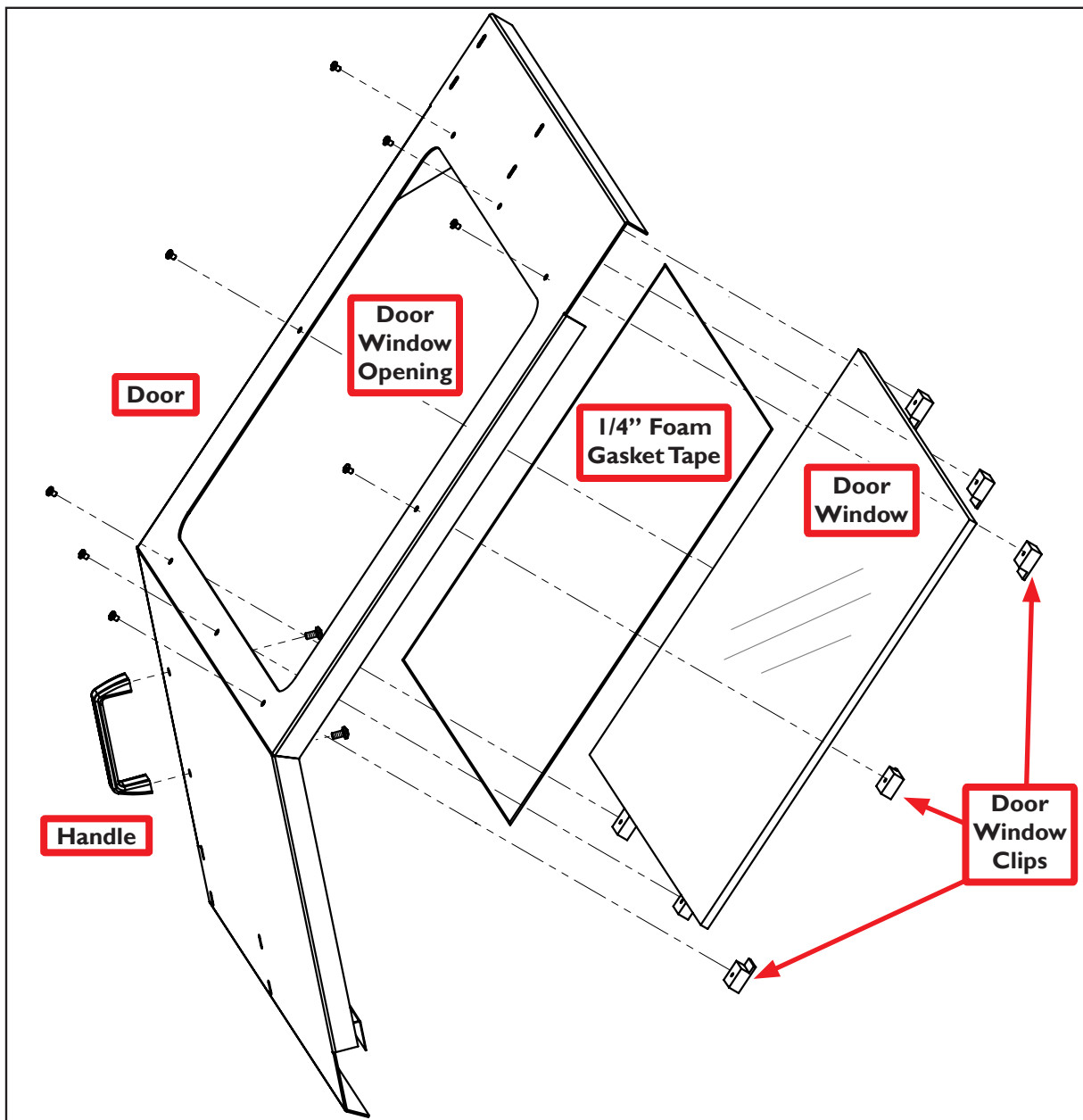


Figure 10

Enclosure Installation

1. Remove the lathe's Half-moon Plate located next to the Rotary Encoder see **Figure 11**); set aside.
2. Unscrew and disconnect the Encoder Cable (see **Figure 11 inset**).
3. Loosen six Phillip's head screws and remove the Spindle Belt Cover (see **Figure 12**); set aside.
4. Loosen six socket head cap screws attaching Mounting Plate to headstock enough to create a Side Cutout Gap (see **Figures 12 and 13**).

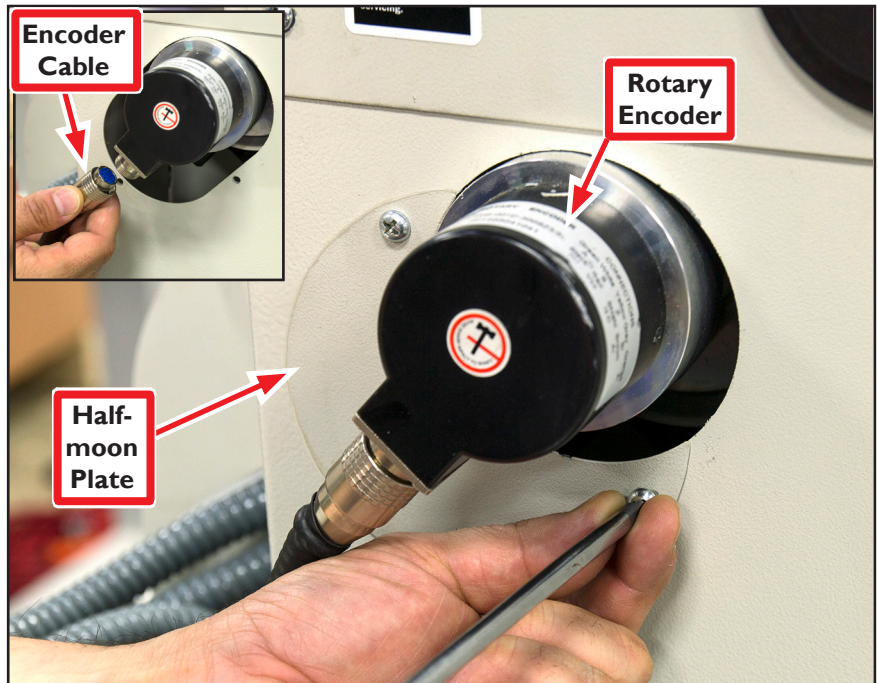


Figure 11

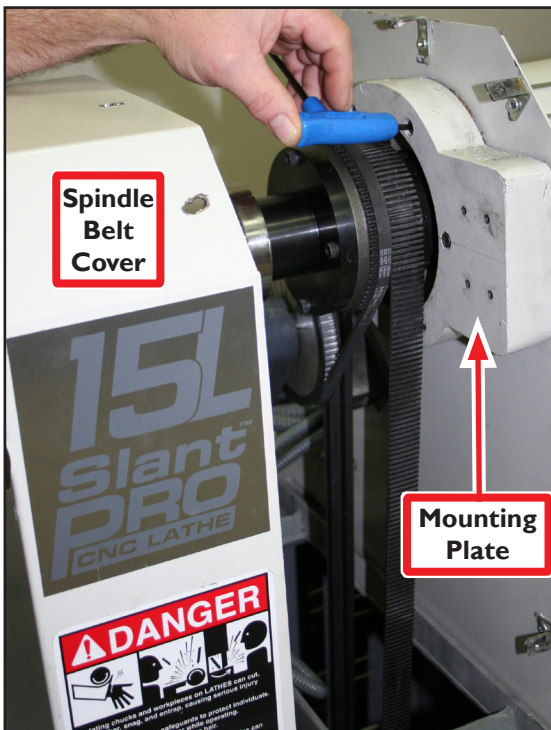


Figure 12

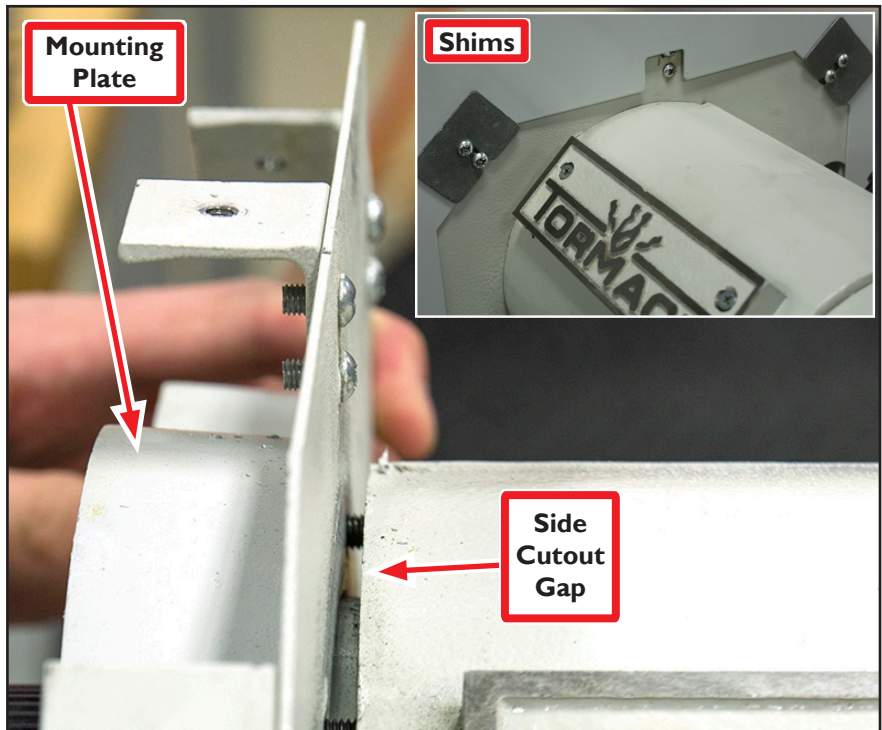


Figure 13



WARNING! Transport and Lift Hazard: The transport, lifting, and moving of lathe enclosure should be done by qualified professionals. Failure to do so may result in machine damage, serious injury or death.

5. With Door not yet attached, carefully maneuver enclosure up and over lathe (see **Figures 14** and **15**); lower slowly ensuring the Side Cutout is inserted into the Side Cutout Gap shown in **Figures 13, 14, and 15**.

IMPORTANT: Make sure cables routed through Lathe Casting Access Hole do not get pinched (see **Figure 16**).

IMPORTANT: If necessary, Shims (included) can be used to snug Left Side Panel to Mounting Plate (see **Figure 13 inset**).



Figure 14



Figure 15

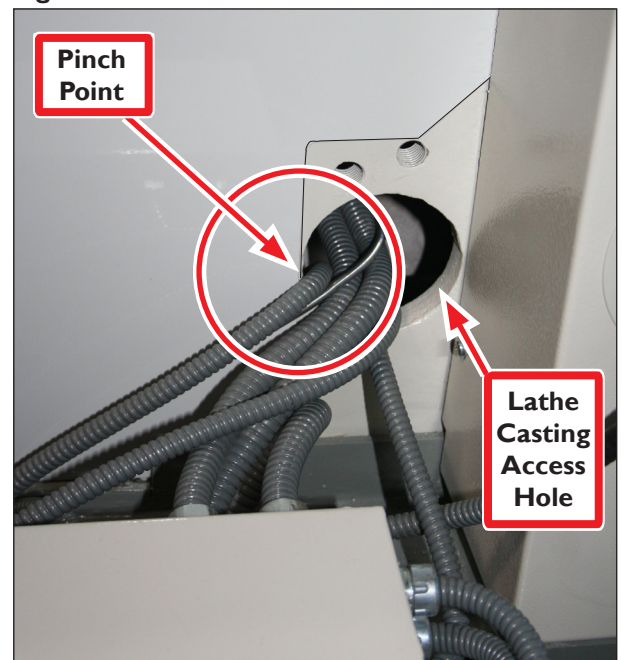


Figure 16

NOTE: Portions of the enclosure may need some fasteners loosened to allow for proper adjustment of and fitting to the lathe.

6. Attach each of the three internal corners of the enclosure shown in **Figure 17** to the lathe casting with one M8 × 30 mm Socket Head Cap Screw and one M8 Flat Washer.
7. Attach the fourth enclosure corner (front left) via the 3/8" hole made in step 1 using one M8 × 25 mm Socket Head Cap Screw, one M8 Flange Nut, and one M8 Flat Washer (see **Figure 18** and inset).



Figure 17

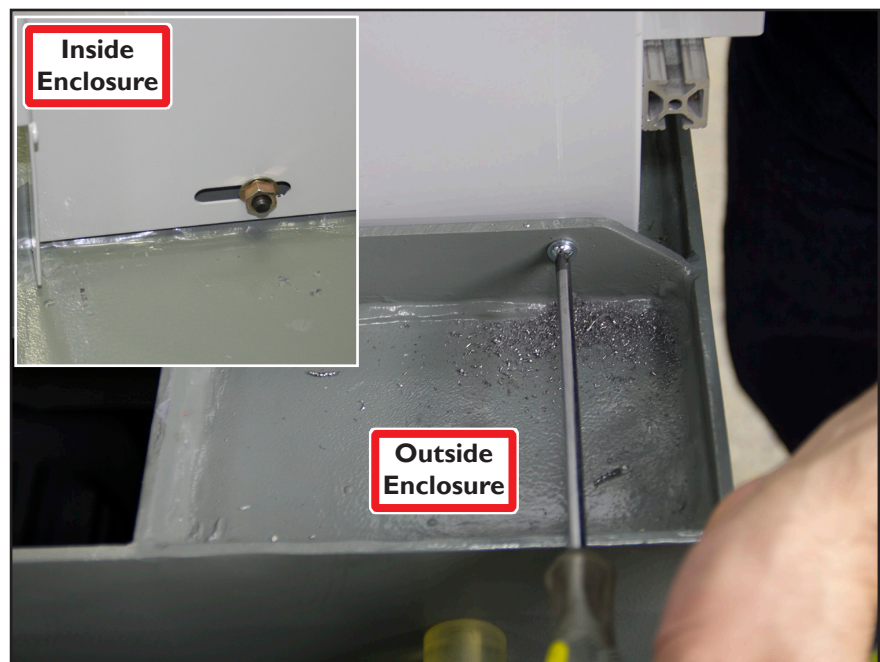


Figure 18

8. Slide two Door Roller Brackets onto both the top and bottom Door Rails as shown in **Figure 19**.

NOTE: Do not attach enclosure Door at this time.

9. Locate two loose limit switches (LS1 and LS2 on lathe) and route them through Lathe Casting Hole and under Lathe Casting (see **Figures 20** and **21**).

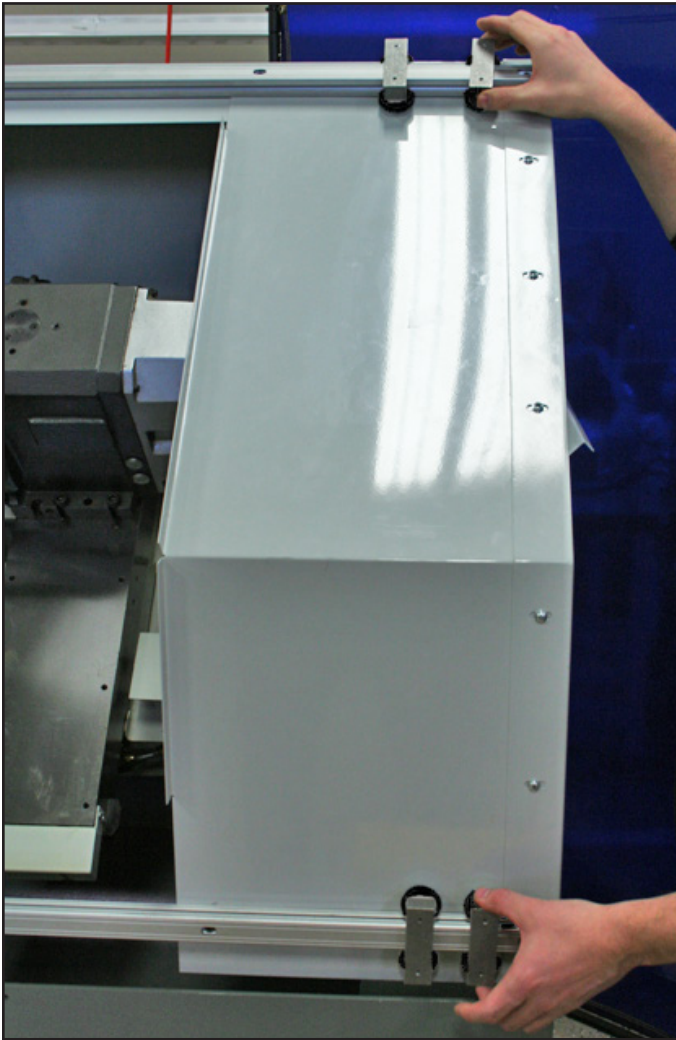


Figure 19

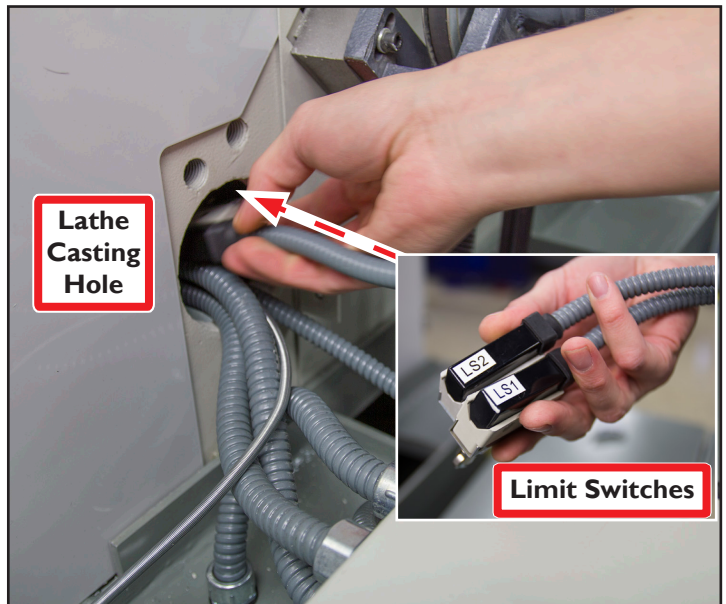


Figure 20

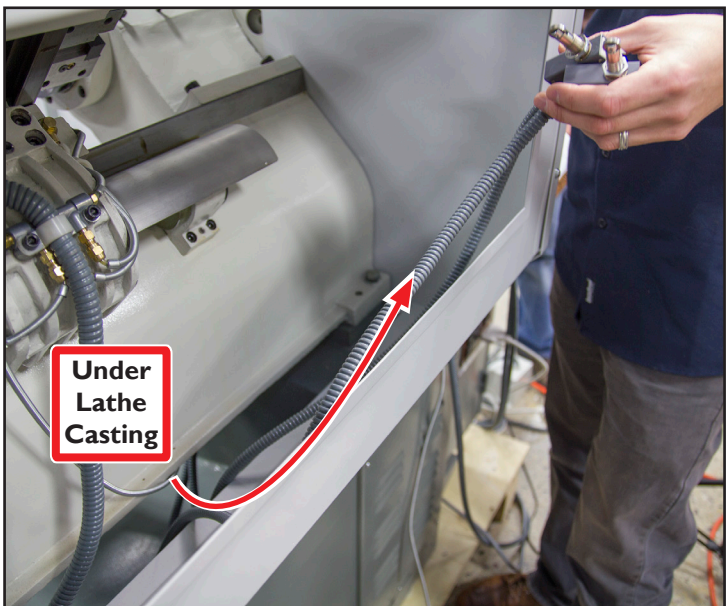


Figure 21

10. Continue to feed limit switch cables through enclosure from back to front; attach Limit Switches loosely to Enclosure Door Bracket for later adjustment (see **Figure 22**).
11. Attach five Wire Tie Holders and Ties to five 10-32 x 1" Pan Head Screws installed through the Back Panel in step 5 (see **Figure 23** and **inset**); secure Limit Switch cables to ties.



Figure 22



Figure 23

12. Hang Door on Door Rails ensuring Door Roller Brackets are aligned on the top and bottom of Door.
13. Using eight 10-32 × 3/8" Pan Head Screws, loosely attach top and bottom of Door to two the respective Door Roller Brackets (see **Figures 24** and **25**). Adjust these eight screws as necessary to ensure smooth Door motion.

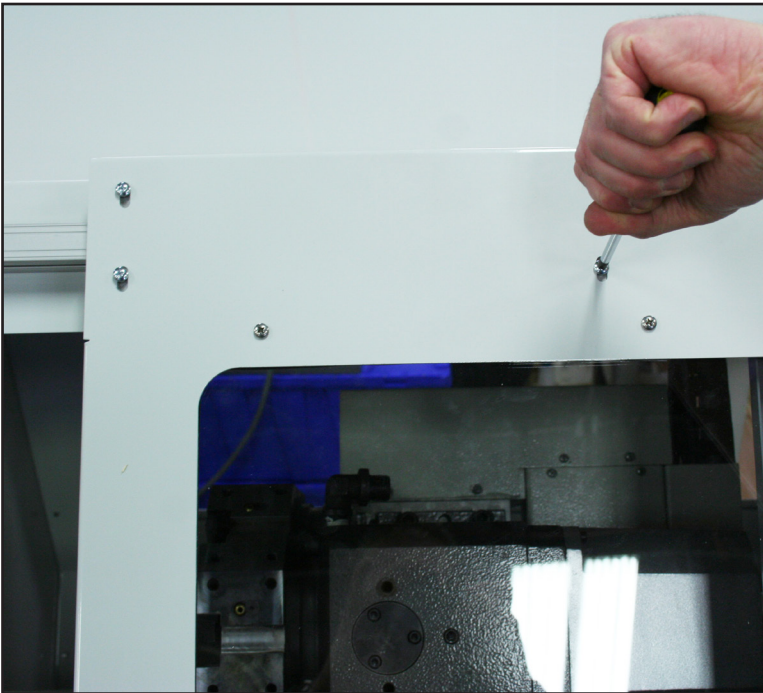


Figure 24



Figure 25

14. Install two Plastic End Caps w/ Lock Screws on the right ends of the Door Rails (see **Figure 26**).

NOTE: Two Plastic End Caps on left end of Door Rails are pre-installed.



Figure 26

- 15.** Attach the Drip Tray to the front of the lathe using three M6 × 16 mm Socket Head Cap Screws and M8 Flange Nuts (see **Figure 27** and **inset**); tighten snugly.



Figure 27

- 16.** Re-tighten six Mounting Plate bolts snugly (see **Figure 12**).
17. Re-attach Spindle Belt Cover using six Phillip's head screws (see **Figure 12**).
18. Re-attach the Half-moon Plate next to the Rotary Encoder (see **Figure 11**).
19. Re-connect the Encoder Cable (see **Figure 11** and **inset**).

Limit Switch Trigger Plate Installation and Limit Switch Adjustment

1. Open Door as shown in **Figure 28**. Using two 10-32 x 3/8" Screws, install Limit Switch Trigger Plate to Door (see **Figure 28**).

NOTE: Initially, position the Limit Switch Trigger Plate in the middle of the Mounting Slots to allow for adjustment (see **Figure 28**).

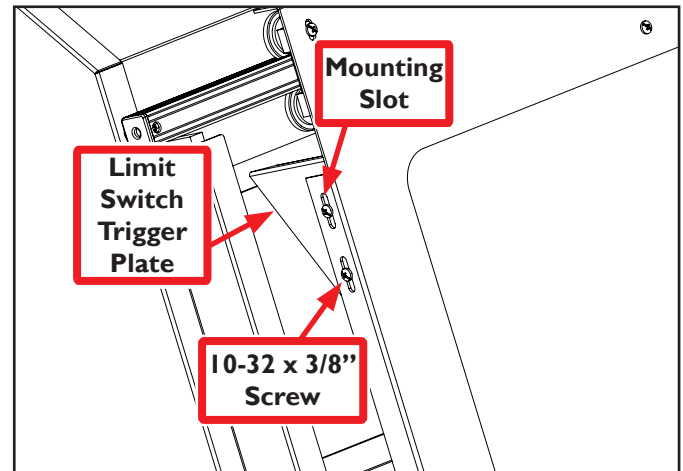


Figure 28

2. Assess the amount of Limit Switch adjustment required by carefully closing door until Limit Switch Rollers come in contact with Limit Switch Trigger Plate (see **Figure 29**).

NOTE: Viewing Limit Switches through the back access panel may make adjustment assessment easier.

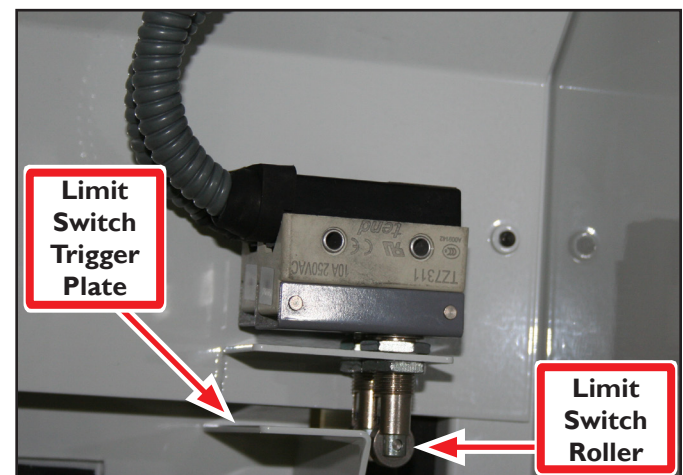


Figure 29

3. Adjust Limit Switch Roller height by removing Limit Switches from bracket and unscrewing Outer Lock Nut (see **Figure 30**).
4. Next, adjust Inner Lock Nut to desired height (see **Figure 30 inset**).
5. Reinstall one Limit Switch and check roller height by closing door. Adjust as needed; repeat for second Limit Switch.
6. Once correct height is determined, double check to ensure Limit Switches are engaging properly. If correctly adjusted, two clicks are heard as the rollers run across the Limit Switch Trigger Plate. If sound is not heard, adjust switch height accordingly.

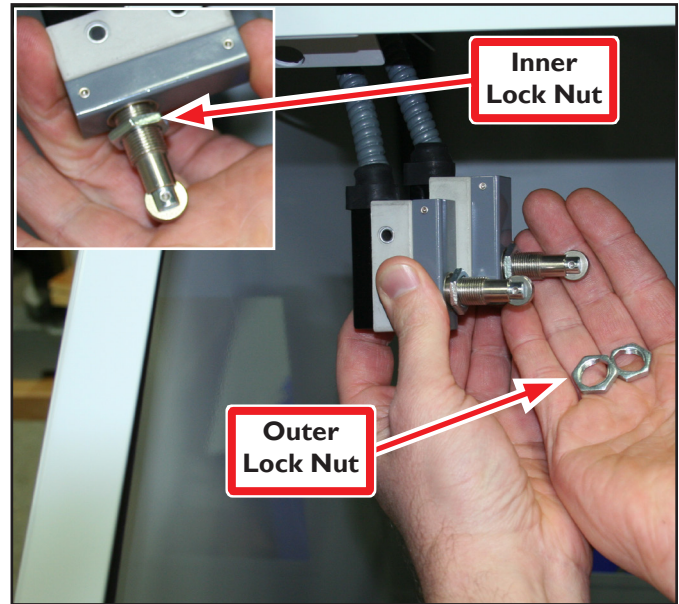


Figure 30

7. Fine tune Limit Switch Trigger Plate height by loosening the screws and adjusting the plate up and down as necessary (see **Figure 31**).

NOTE: The Limit Switch Trigger Plate should engage the Limit Switches enough so that the door will not open with a slight bump, but not so much that the Limit Switches are bottomed out in their travel.

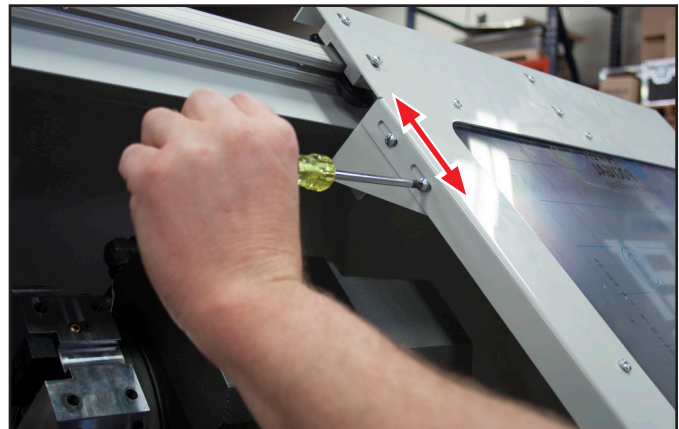


Figure 31