BEND-TECH

DRAGON A400

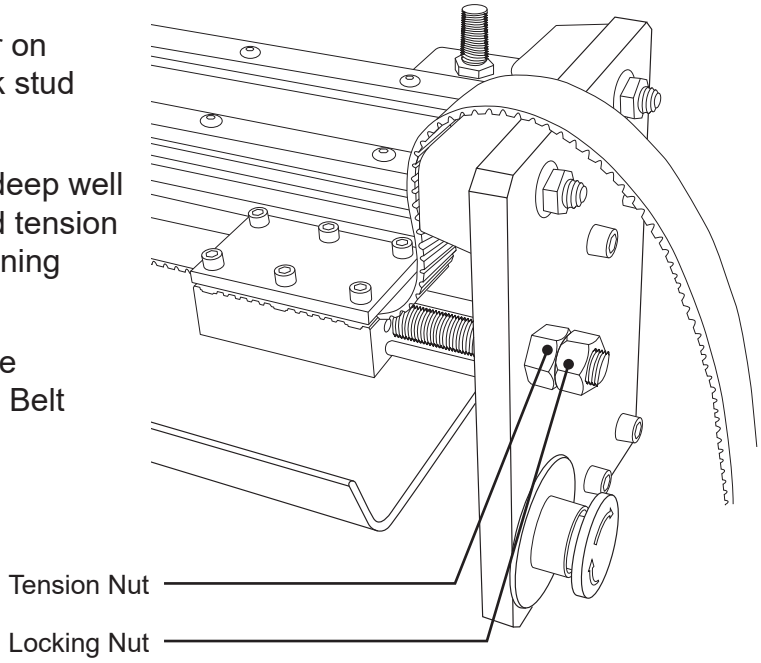
Servicing the Drive Belt Pulley

Loosening the Drive Belt

Tools Required

- ¾ in. Wrench or Deep Well Socket

1. Place a piece of tape or similar on the Drive Belt Tensioning Block stud threads to marks its position.
2. Using a ¾ in. wrench or ¾ in. deep well socket, remove the locking and tension nuts from the Drive Belt Tensioning Block adjustment stud.
3. The Drive Belt should now have enough slack to allow for Drive Belt Pulley replacement.



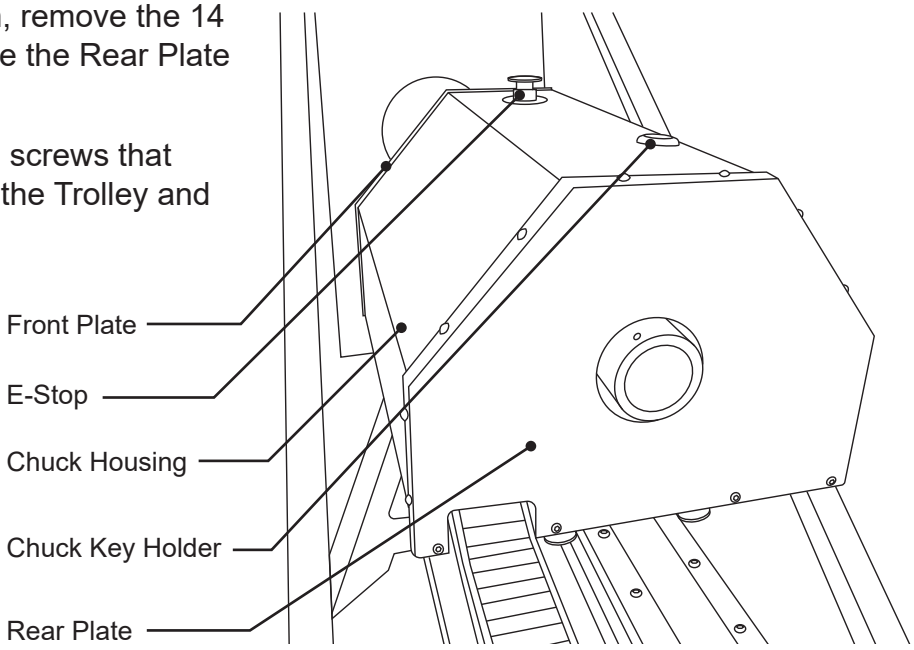
Remove the Trolley Cover

Tools Required

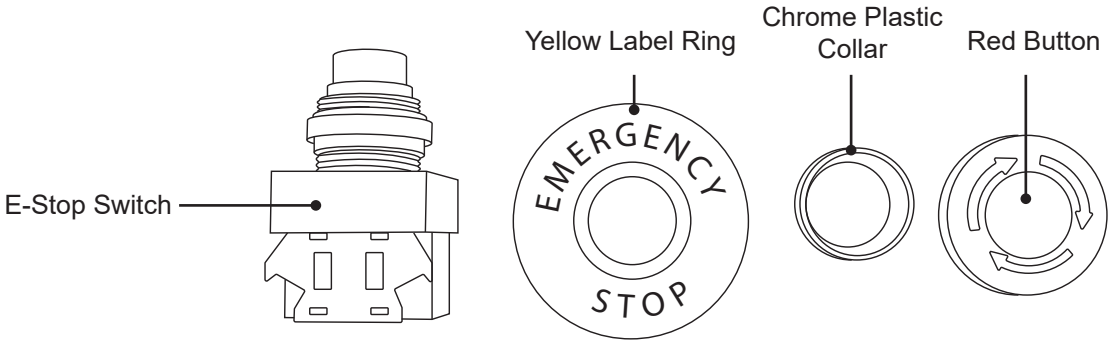
- ⅛ in. Allen Wrench

1. Using a ⅛ in. Allen wrench, remove the 14 Allen head screws that secure the Rear Plate on the Trolley Cover.

2. Remove the 18 Allen head screws that attach the Chuck Housing to the Trolley and Front Plate.



3. While supporting the Chuck Housing, remove the red button on the E-stop switch by unscrewing it counterclockwise. Reach inside the Chuck Housing and support the E-stop switch with one hand. Remove the chrome plastic collar on the switch by unscrewing it counterclockwise. Remove the yellow label ring. Remove the E-stop switch from the inside of the Trolley Cover.



4. Remove the Chuck Housing and set aside.

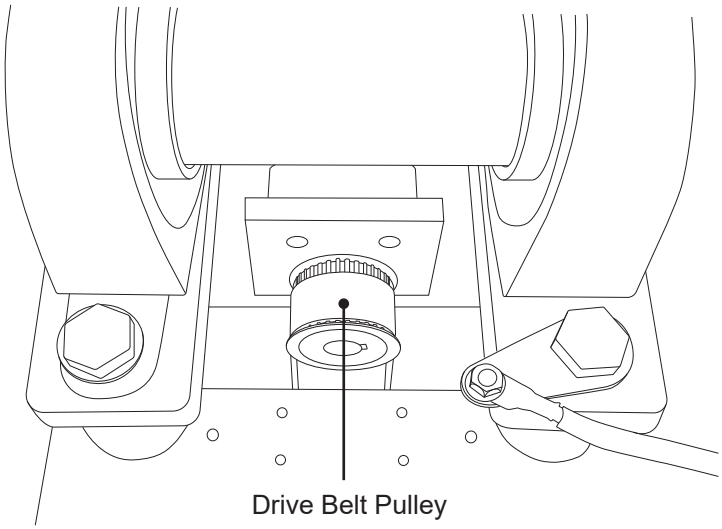
5. Reassemble the yellow label ring, chrome collar and red button. Set the E-stop switch on the Trolley, out of the way.

Removing the Drive Belt Pulley

Tools Required

- Loctite 638 Retaining Compound
- Loctite Blue 242
- ⅛ in. Allen Wrench
- Heat Gun
- Heat resistant gloves
- Small Pry Bar
- Loctite Cleaning Solvent or similar non-residue cleaner degreaser such as acetone

1. Move the Drive Belt off the Drive Belt Pulley. Be careful not to damage the Drive Belt.
2. Using a ⅛ in. Allen wrench, loosen the two set screws that secure the Drive Belt Pulley.
3. Using a heat gun, warm the Drive Belt Pulley. This will break the bond of the Loctite 638 Retaining Compound. The Drive Belt Pulley will be hot, take care not to handle the component without using protection such as heat resistant gloves.



Drive Belt Pulley

Note: Ensure the Drive Belt is not subjected to direct heat from the heat gun.

4. With the pulley warm, it is possible it can be removed without using tools. If it will not come free of the gear box shaft, use a small pry bar and carefully pry it off the shaft.

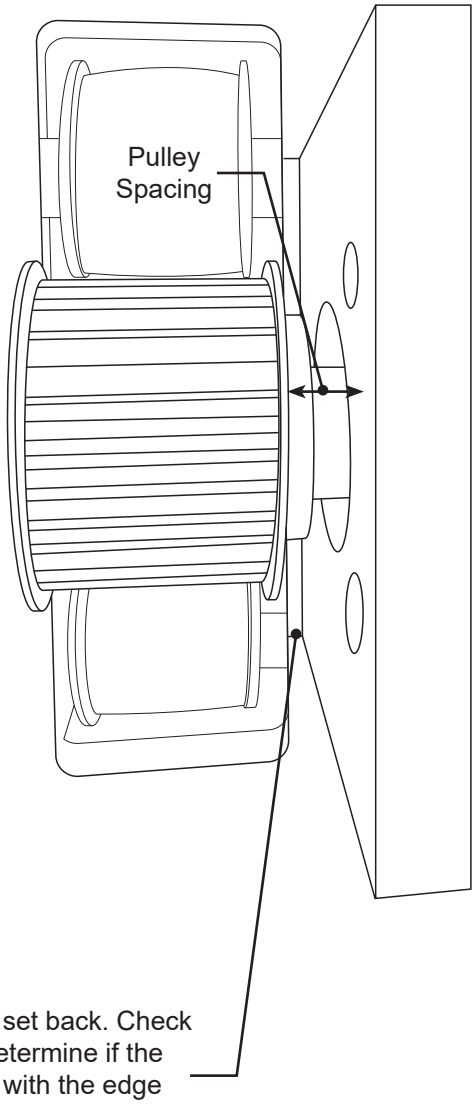
Installing the Drive Belt Pulley

Note: Loctite 638 Retaining Compound can tolerate a certain level of contaminants upon application. However, for best results, Bend-Tech recommends cleaning the motor shaft and Drive Belt Pulley with Loctite Cleaning Solvent or similar. Allow the shaft to dry before applying the Retaining Compound.

1. Place retaining compound on the motor shaft and set the pulley location according to the type of gear box the Dragon A400 is equipped with. The Installer can determine pulley spacing by observing how the gear box is mounted on the Trolley Plate. Refer to the illustration and chart below.

Gear Box Location	Pulley Spacing
Gear Box Mount Flush With Edge	.168 in.
Gear Box Mount Set Back From Edge	.375 in.

2. With the Drive Belt Pulley set in its location, apply Loctite 242 to the Drive Belt Pulley set screw and thread it into the pulley. Tighten the set screw down to the shaft and give another ¼ turn.
3. Allow the Loctite 638 Retaining Compound to cure for 24-hours before using the machine.



Gear Box Mount set back. Check this spacing to determine if the gear box is flush with the edge or set back from the edge.

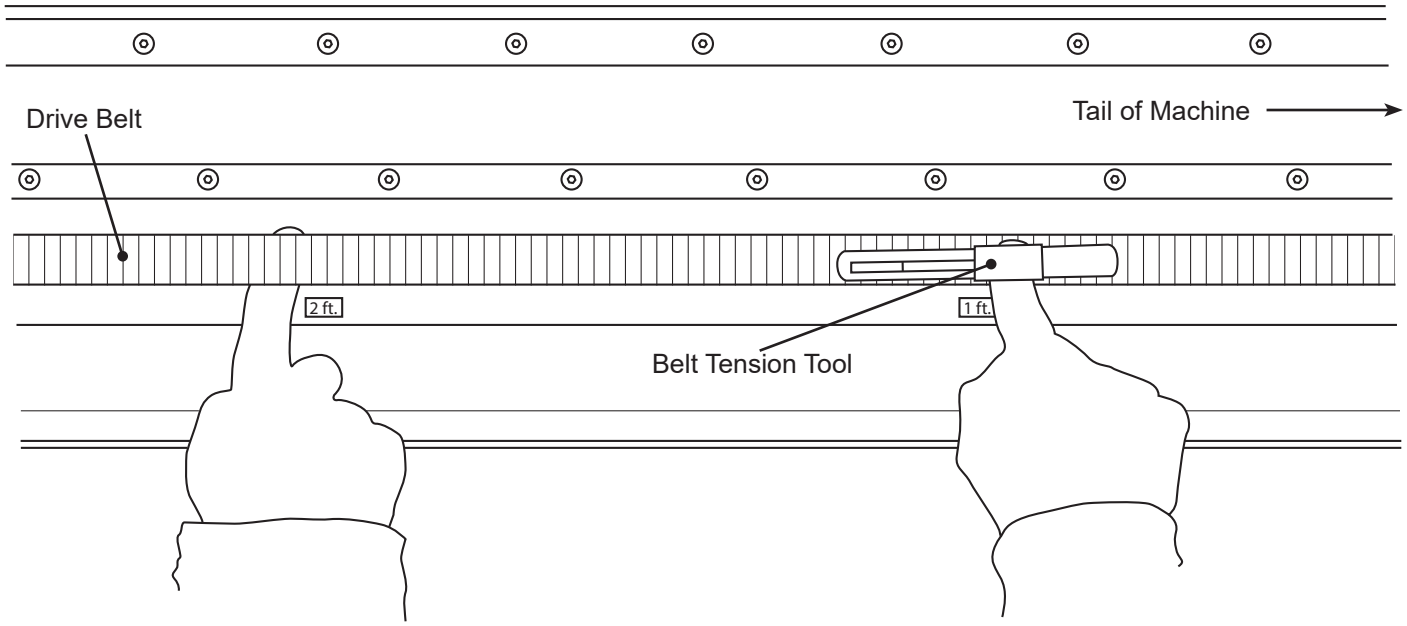
Drive Belt Tensioning Procedure

Ensure the Trolley is positioned at the center of the Rail. Route the Drive Belt around the idler pulleys and the Drive Belt Pulley.

Tools Required

- ¾ in. wrench
- ¾ in. deep well socket and ratchet
- Tape measure
- Belt tensioning gauge

1. Use a ¾ in. wrench or deep well socket to turn the adjusting nut. Turn clockwise to increase tension, turn counterclockwise to reduce tension. Tighten the Drive Belt Tensioning Block to the position marked using tape in Step 1 of Loosening the Drive Belt.
2. Lay a tape measure on the cable track with 0 on the ruler positioned where the Drive Belt enters the Drive Belt Clamp Block.
3. Using the Belt Tension Tool, position the tool one foot from the Drive Belt Clamp Block.
4. Place a finger under the Drive Belt two feet from the end of the Drive Belt Clamp Block.



5. Push straight down on the Belt Tension Tool with the right index finger while supporting the Drive Belt with the left hand. Do not lift on the Drive Belt, only support it so it does not contact the Cable Track Tray.
6. When the Belt Tension Tool clicks, observe where the top face of the lever crosses the plane on the body of the tool. This position indicates belt tension.

7. Adjust Drive Belt so the tension gauge reads 120 lbs.

Belt Tension	120 lbs.

9. To lock in Drive Belt tension, thread the second ¾ in. nut onto the Drive Belt Tensioning Block stud. Tighten the locking nut with a ¾ in. socket and ratchet or ¾ in. wrench against the adjustment nut by turning it clockwise.
10. Re-check Drive Belt tension.

Drive Belt Check

1. With the Trolley cover off, jog the Trolley up and down the Rail. Observe the Drive Belt and where it rides on the Drive Pulley. The Drive Belt will drift back and forth, but it should not contact the inside or outside Drive Pulley washers.
2. If the Drive Belt is riding too far to the inside or outside of the Drive Belt Pulley and refer to the Drive Belt Troubleshooting documentation or contact a Bend-Tech Service Technician.
3. When the procedure is complete, reattach the Chuck Housing. Rear Plate and E-stop switch.