

# TigerTurbo Belt Replacement

## Overview of procedure

- Disassemble the TigerTurbo feed table mounting and end assemblies, so that the belt can be safely accessed and removed.
- Inspect the pulleys as well as the belt for damage.
- Replace the belt and any other components that are damaged or worn.
- Reassemble TigerTurbo, reinstall it to the feed tables, run auto setup and check accuracy.

## Tools needed

ball peen or standard hammer  
punch  
dead blow mallet  
sharp pair of tin snips  
set of Allen wrenches (inches)  
1/2" combination wrench  
marker (Sharpie)

## A. Prepare TigerTurbo for belt replacement

1. **Switch OFF power (Fig. 1), and unplug the power cord** before working on the machine.
2. Detach the pusher from the carriage by removing the attachment bolts (Fig. 2).

The pusher can be a pusher arm (Fig. 3) or a heavy duty spring buffer (Fig. 4).

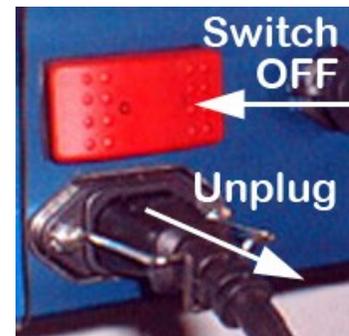


Fig. 1 — Switch OFF and unplug power.

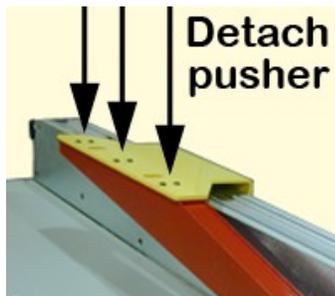


Fig. 2 — Remove 6 bolts to detach pusher.

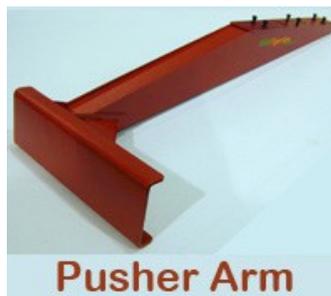


Fig. 3 — Pusher arm.



Fig. 4 — Heavy duty spring buffer.

If TigerTurbo is mounted in such a manner on feed tables that it is impossible to remove either the motor or the idle end plates, then it must be moved back from the tool that it's being used with.

3. Loosen the mounting bolts attaching TigerTurbo to the feed table to disengage it from its mounting (Fig. 5).



Fig. 5 - Mounting bolts.



Fig. 6 - TigerTurbo pivoted away.

4. Slide or pivot TigerTurbo away from tool, to remove the end plate (Fig. 6).

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### B. Uncover the pulleys and remove the belt

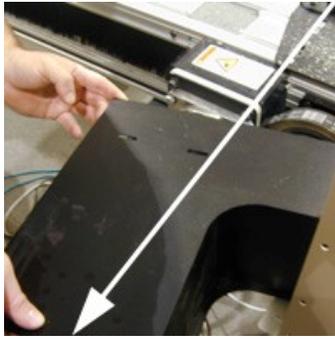


Fig. 7 — Remove the motor box cover.

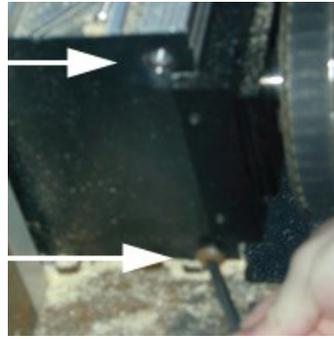


Fig. 8 — Remove the motor end plate.



Fig. 9 — Motor end pulley.

1. Undo the fasteners and slide the motor box cover off (Fig. 7).
2. Undo the bolts, remove the motor plate (Fig. 8), and uncover the motor pulley (Fig. 9).
3. Remove the idle end plate (Fig. 10), by undoing the bolts (C) securing the pulley, then the screws (A) securing the plate.
4. Remove also the black plastic plugs that fit into the sighting holes (B) in the plate. When the end plate is removed, the damaged or worn belt will be visible along with the idle pulley, now lying loosely inside the loop of the belt.

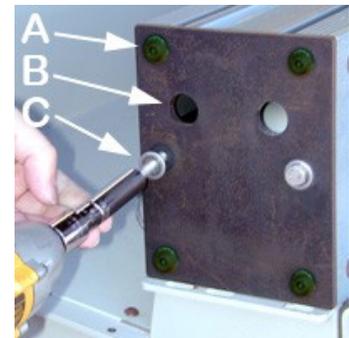


Fig. 10 — Remove the idle end plate.

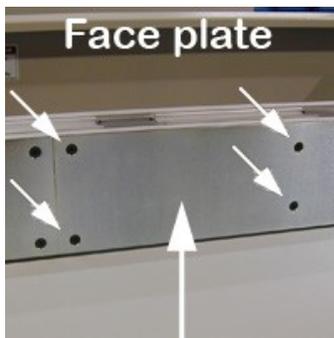


Fig. 11 — TigerTurbo face plate.

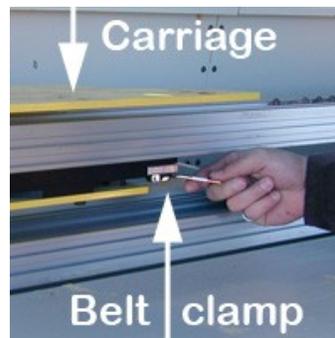


Fig. 12 — Loosen the belt clamps.



Fig. 13 — Remove one belt clamp.

5. Undo the screws securing a section of the TigerTurbo face plate (Fig. 11) and remove the plate, to let the carriage and belt clamps be accessed.
6. Slide the carriage over to the section where the face plate has been removed. Loosen the bolts fastening the belt clamps (Fig. 12) and free both ends of the old belt.
7. Completely remove the belt clamp closest to the idle end (Fig. 13). This will be used as a template to mark alignment holes.
8. Remove the old belt by pulling it out of the TigerTurbo at the motor end (Fig. 14) or at the idle end of the beam.

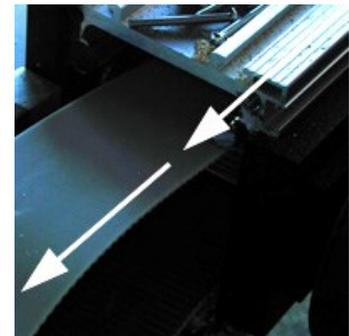


Fig. 14 — Remove the old belt.

### C. Install the replacement belt

The replacement belt comes oversized in length. The alignment holes also must be punched, and the belt cut to the correct length, on site.



Fig. 15 — Mark first belt punch hole.

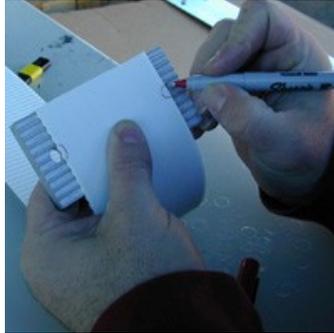


Fig. 16 — Mark second belt punch hole.



Fig. 17 — Punch the first hole.

1. Lay the replacement belt on a work surface and unroll enough of it to be able to mark and punch the alignment holes. Using a belt clamp as a template, place the end of the belt in mesh with the ridges of the clamp and mark one hole (Fig. 15) and then mark the other (Fig. 16) to show where to punch the holes.
2. Using a punch and hammer, punch the first hole (Fig. 17), and then the other (Fig. 18), in the end of the new belt.



Fig. 18 — Punch the second hole.

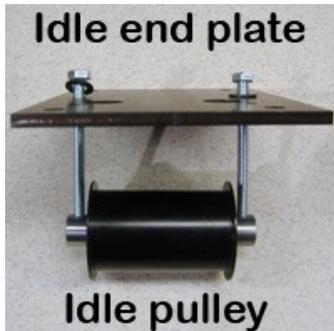


Fig. 19 — Reassemble idle pulley to plate.

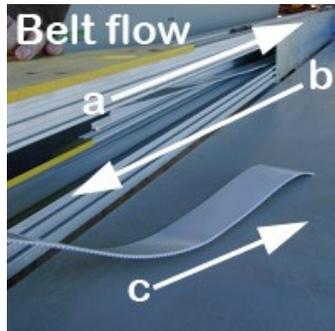


Fig. 20 — Flow of the drive belt.



Fig. 21 — Clamp the end of the belt.

3. Reassemble the idle pulley to the idle end plate (Fig. 19), and have it ready to insert into the idle end of the TigerTurbo beam when the belt is pulled through.
4. Entering through the motor end of the Turbo beam, pull the punched end of the replacement belt into position in the first belt clamp (Fig. 21) and retighten the bolts. The belt will flow from the first clamp (Fig. 20, a), over the motor pulley, then toward the idle end (Fig. 20, b), over the idle pulley and finally toward the second clamp (Fig. 20, c).
5. Hold on to one end of the replacement belt by angling it through the full length slot in the back of the Turbo beam, and pull the belt inside the full length of the machine from the motor end (Fig. 20, b), and let it hang out the idle end.
6. Reattach the other belt clamp loosely by just one bolt.
7. Pull the loose end of the belt over the idle end pulley and reinsert the pulley-end plate assembly into the end of the beam.

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8. Pull the belt toward the other belt clamp (Fig. 24, c) and hold it firmly in line with the remaining belt clamp. Then mark on the belt where the end of it should be (Fig. 26). Undo the belt clamp and remove it to use as a template again.

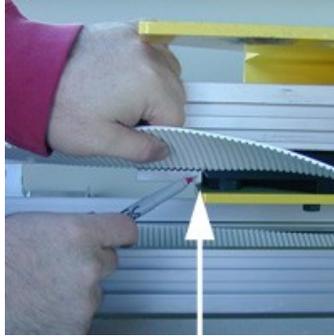


Fig. 22 — Mark the other end of the belt.



Fig. 23 — Repeat steps 1 and 2.

9. Pull the end of the belt back out and cut it to the length marked with a pair of tin snips.
10. Then, using a belt clamp as a template, repeat steps 1 and 2 above, marking the two holes and punching them (Fig. 23).
11. Reattach the second belt clamp.
12. Pull the end of the belt into the belt clamp and tighten the bolts. Tighten all the belt clamp bolts firmly.

### ***D. Final belt tensioning and TigerTurbo re-assembly***

1. Put back the motor end plate and tighten the bolts.
2. Slide the motor cover back on and tighten the fasteners.
3. Insert and tighten the fasteners in the idle end plate (Fig. 10, A).
4. Tighten the tensioning bolts (Fig. 10, C) to a torque of 20 inch-pounds.
5. Reattach the steel face plate (Fig. 11) that was removed to access the belt.
6. **Plug in the power cord and switch ON power** (Fig. 25), and move TigerTurbo back and forth, while an assistant inspects belt tracking through the sighting holes (Fig. 24) in the idle end plate.
7. Push TigerTurbo back to its original mounting position on the tables and tighten all mounting bolts (Fig. 5).

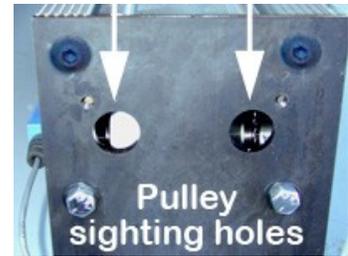


Fig. 24 — Inspect belt tracking.

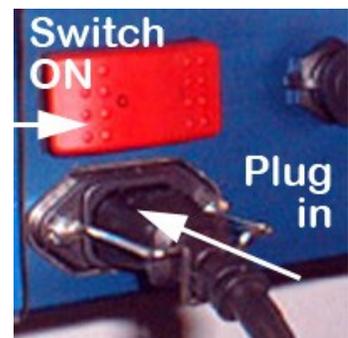


Fig. 25 — Plug in, and switch ON power.

***Danger! NEVER switch ON power before plugging in the power cord!***

***ALWAYS plug in the power cord, THEN switch ON power!***



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# Safety First!

IMPORTANT SAFETY INFORMATION. READ ALL WARNINGS BEFORE OPERATING THIS PRODUCT.



## GENERAL WARNINGS

WARNING: Installation of your TigerStop Product must be done by a person trained in the safe design and installation of automation products, and in the safe operation of power equipment. Ensure that such installation meets all legally required safety requirements and guidelines, and that proper guarding and safety devices are provided on all sides of the equipment to preclude unintended access during operation. Consult with and follow the recommendations of a qualified safety engineer.

WARNING: TigerStop Products are components intended for use in conjunction with potentially dangerous machinery. The use of TigerStop Products does not make other machinery safe. TigerStop Products are not intended to substitute, in any manner, for safe operating practices in general, or for safety features present in other machines designed to make those machines as safe as possible. **TIGERSTOP PRODUCTS, IF USED OR INSTALLED IMPROPERLY, MAY CAUSE PERSONAL INJURY OR DEATH AND SHOULD ONLY BE OPERATED BY PERSONS TRAINED IN THEIR SAFE OPERATING PROCEDURES.** Illustrations of TigerStop Products in use do not show, and are not intended to show, all safety features and practices necessary for their safe operation.



## INSTALLATION WARNINGS

WARNING: TigerStop Products must be installed in accordance with all local, state, and federal regulations. Only personnel properly trained in the safe design and installation of automation machinery and related power equipment should install TigerStop Products onto other equipment, to ensure a safe and proper work station. TigerStop Products should not be operated without proper training, both in the operation of TigerStop Products, and in the operation of related equipment.

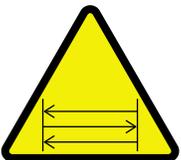
### IMPORTANT CAUTION:

The motor box (compartment) contains DC voltage with potentially FATAL amperage. NEVER attempt any unauthorized actions inside the motor box.



## INTERCONNECTS

WARNING: Using a TigerStop interconnect does not relieve you of the responsibility for making sure that your saw or other tool has all the necessary safety equipment in place. All installations must meet all legally required safety requirements and guidelines. Installation and training should be done following the recommendations of a qualified safety engineer.



## OPERATION

DANGER: This machine can start, move and stop automatically. Keep hands and loose clothing clear of moving parts while operating. Moving parts can crush and cut. When used with a saw or other cutting equipment, bodily injury and death may result if operated without safety guards on all machines. Do not operate with guards removed. Operators must wear adequate eye and ear protection.

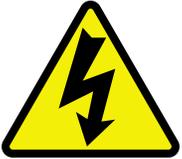


DANGER! Don't get pinched by the push feeder. Keep your hands away when in motion!

**IMPORTANT SAFETY INFORMATION. READ ALL WARNINGS BEFORE OPERATING THIS PRODUCT.**



Keep the work area clean and well lighted to avoid accidental injury.



Do not use TigerStop machines in a dangerous environment. Using power tools in damp or wet locations or in rain can cause shock or electrocution.



Do not operate near flammable liquids or in gaseous or explosive atmospheres!



Wear proper apparel, no loose clothes, long hair or jewelry which could get pulled into moving machinery or materials.  
Wear non slip footwear, safety glasses, ear protection and a dust mask.



Use only 3- wire extension cords that have 3-prong grounding type plugs and 3-pole receptacles that accept the tools plug for 120VAC. Use only 5-wire cords and plugs when using 3 phase.



Do not open motor compartment or controller keypad. DC Voltage with potentially FATAL amperage!  
Disconnect power before servicing. No user-serviceable parts inside.

DO NOT operate this or any machine under the influence of drugs or alcohol!



No one should operate this machine except for fully qualified personnel.  
Read the manual!