Kodak

Automatic Pallet Loader

Replacing a Pusher X-Belt

15 Jan 2008

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Revision History

Revision	Date	Author	Comments
1	04 Jan 2008	A.Blignaut	First draft release
2	15 Jan 2008	A.Blignaut / J.Hogewoning	Edits added from Jeff.

1. OVERVIEW

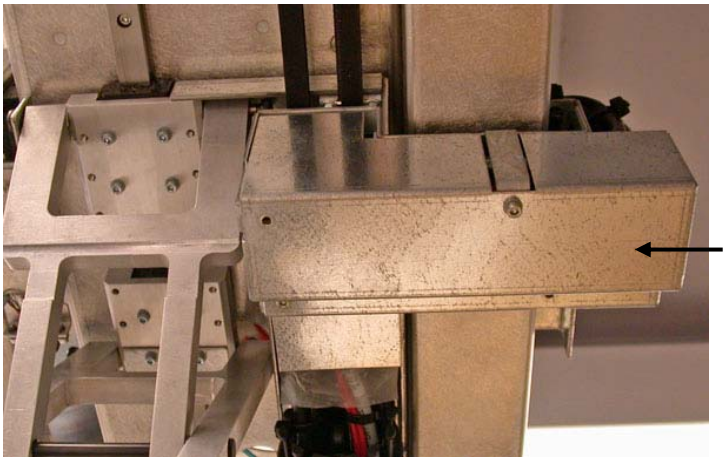
The pusher X-belts must be inspected during the preventive maintenance procedure. If a belt is worn or damaged, then it must be replaced. This procedure describes how to replace and adjust a pusher X-belt. The procedure is identical for both pushers.

2. PARTS/TOOLS NEEDED

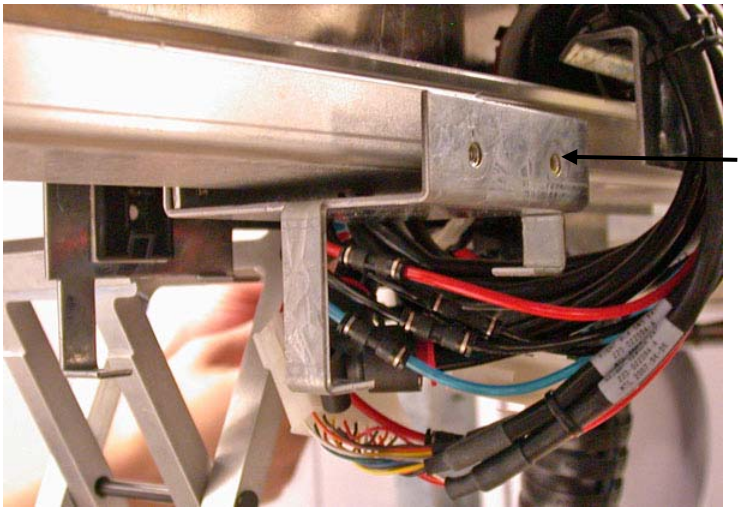
- Replacement belt (346-00056)
  The replacement belt should be approximately 5.75 m (226 in.) long.
- 5.5 mm wrench or socket

3. REPLACING A PUSHER X-BELT

1. Unclamp the picker from the Y-belt. Type `>>apl picker belt off .`
2. Idle the pusher. Type `>>apl pusher y idle .`
3. Unlock the APL doors. Type `>>apl unlock .`
4. Open the rear doors to get access to the pusher.
5. For easier access to the pusher, move the pusher to the rear of the APL by hand.
6. To get access to the belt adjuster and belt clamps, remove the cable guide bracket cover.

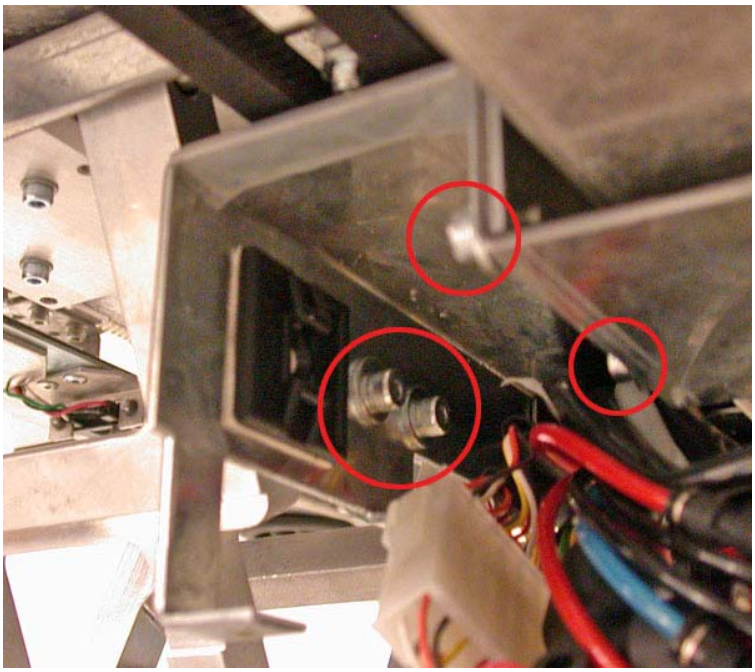


7. Cut the cable ties that secure the cables and tubes to get access to the cable guide bracket screws on the inside of the bracket.

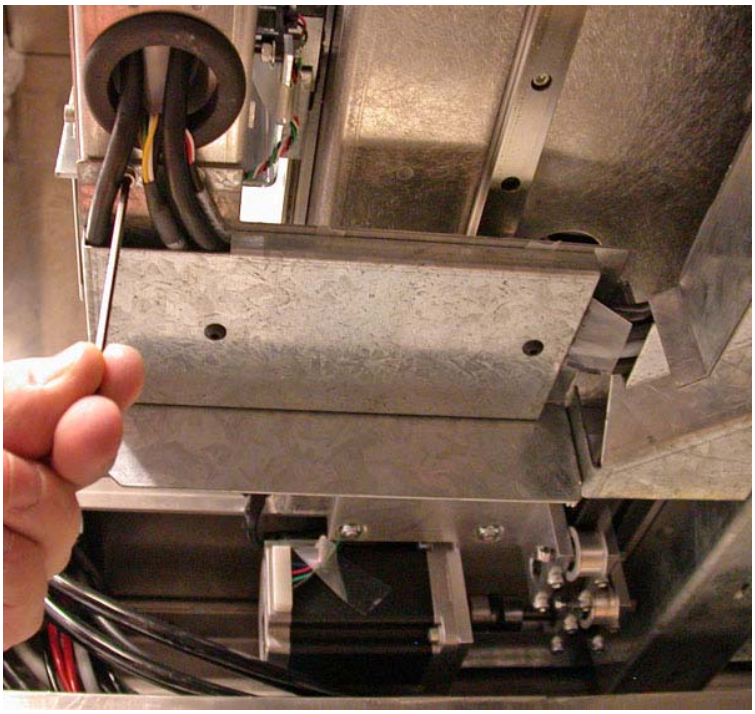


8. Remove the cable guide bracket—there are six screws in total that secure the bracket. Take note where washers are used as spacers when removing the screws so that the washers can be installed in the same place during assembly.

   Four screws are located as shown below.

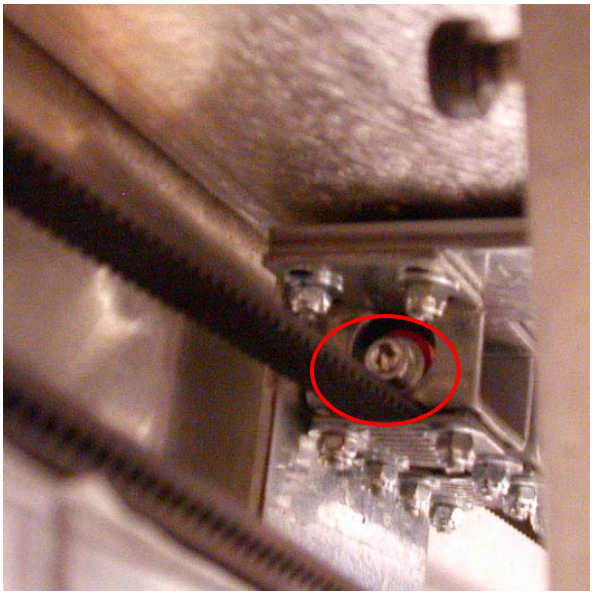


   The other two screws are located on the other end of the bracket by the large cable port.



With all six screws removed, move the cable guide bracket downwards to get access to the belt adjuster and clamps.

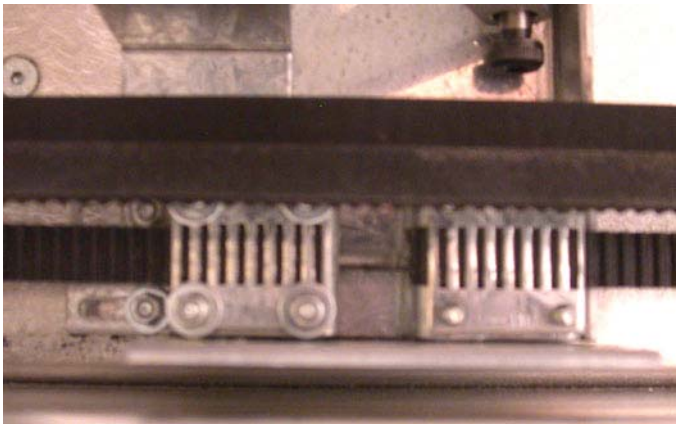
9. Back off the belt adjusting screw to unload the tension spring and release the tension in the belt.



10. Loosen the two nuts above the adjusting screw using a 5.5 mm wrench or socket. This will allow the floating belt clamp to be moved. The other belt clamp is fixed and cannot be moved or adjusted.

11. Pry the moving belt clamp away from the other clamp as far as possible and tighten the two nuts again to hold them apart.

12. Remove the belt from both belt clamps.

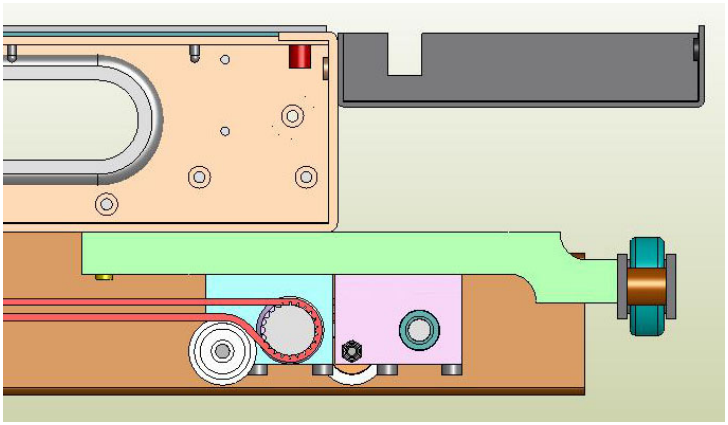


13. On the X-motor coupling to the pulley, loosen one of the setscrews so that the pulley can rotate freely.

14. Take note of the belt routing and remove the belt from the pusher assembly.

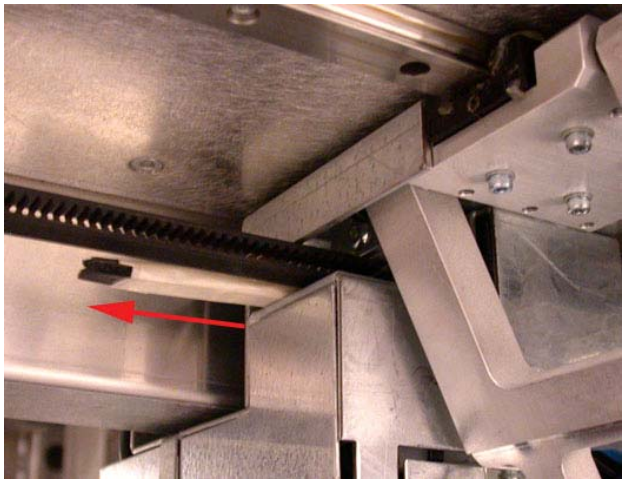
15. To install the new belt, start at the side opposite the pusher X-motor.

    Feed the belt up over the top of the outer pulley, through between the two pulleys, and over the top of the inner pulley.



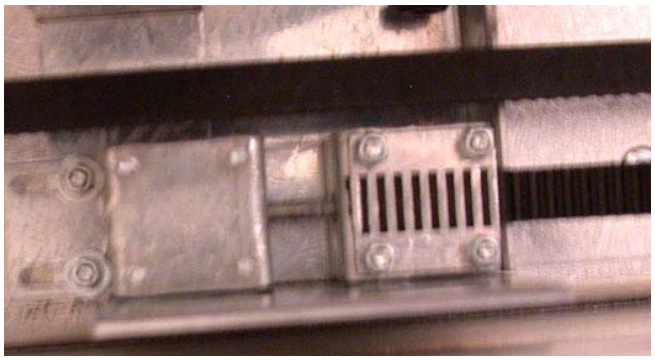
16. Tape the two belt ends together to make the next part of the routing easier. Make sure that the belt is not twisted before taping the ends together.

17. Feed the belt ends over the top of the cable guide bracket. The two pusher X-belts should be side by side as shown below.



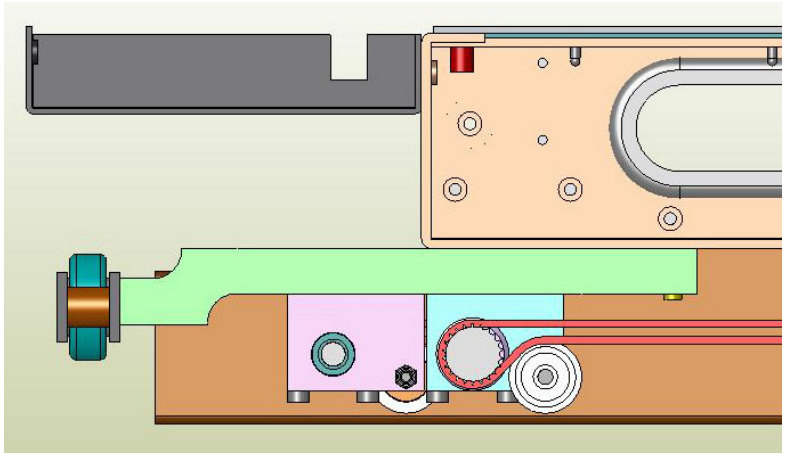
18. Remove the tape to free the belt ends.

19. Attach the one belt end to the fixed belt clamp. The belt must be captured the whole length of the clamp.

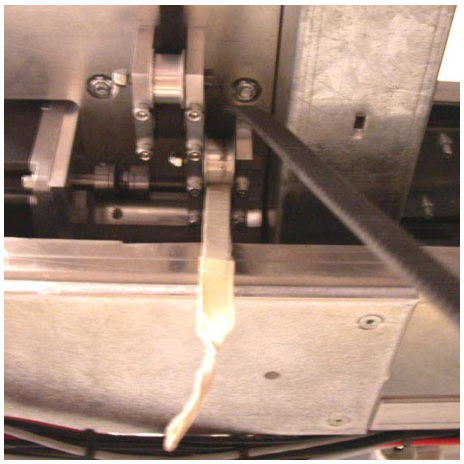


20. Run the other end of the belt to the motor side of the pusher.

21. Feed the belt over the top of the inner pulley, down between the two pulleys, and around the outer pulley so that the belt is on top of the outer pulley.



Tip: Adding a tape pigtail to the end of the belt makes it easier to route the belt around the pulleys.



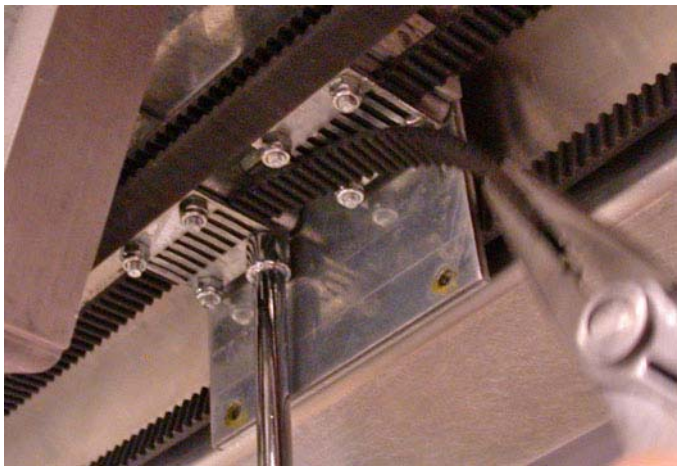
22. Remove the tape from the belt end and pull the belt tight around all the pulleys. Ensure that there are no twists in the belt.

23. Attach the belt end to the floating belt clamp:

    a) Loosely attach the slotted clamping plate to the other half of the clamp with the two screws.

    b) Feed the belt through between the two plates and use a pair of pliers to pull the belt tight.

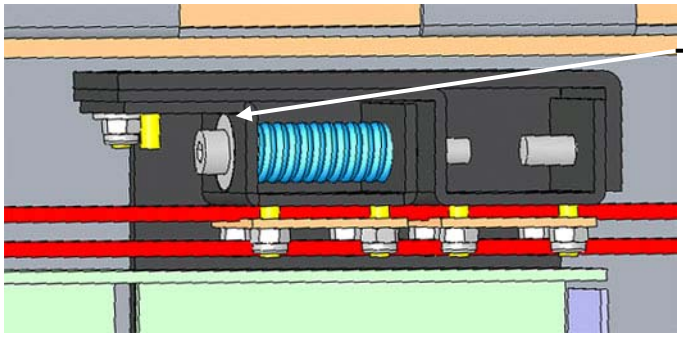
    c) Make sure that the belt's teeth mate with the slots in the clamping plate and tighten the two screws while maintaining the tension on the belt with the pliers.



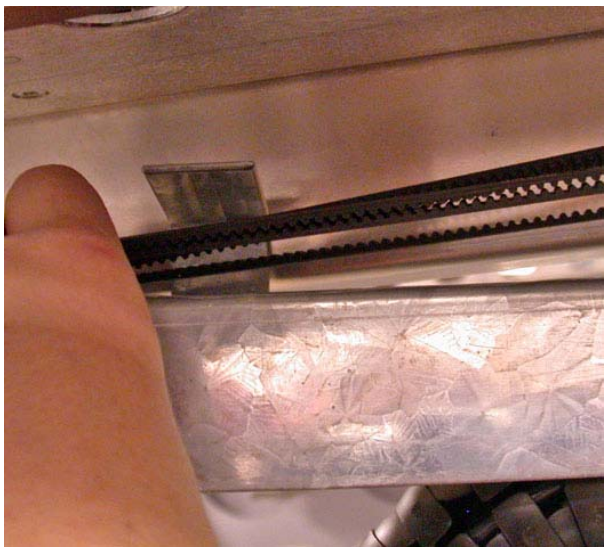
    d) Cut off the excess length of belt flush with the clamping plate.

24. Loosen the two nuts above the adjusting screw that are holding the floating clamp open.

25. Tighten the adjusting screw until the washer face is flush with the outside surface of the belt clamp. Ensure that the adjusting screw or washer has not hung up on the belt clamp—it should pass through the hole in the belt clamp.



26. Tighten the two nuts above the adjusting screw.
27. Tighten the setscrew on the motor collar.
28. Check that the belt is tight and does not sag anywhere. Also make sure that the belt passes in front of and below the sheet metal belt guide.



29. Install the cable guide brackets with the six screws.
30. Secure the cables and tubes inside the cable guide bracket with cable ties.
31. Install the cable guide bracket cover.