Aligning the Autoloader using the Alignment Jigs

Internal document number: 719-00932A Rev B

Product

- Kodak® Trendsetter® Autoloader
- Kodak Trendsetter NEWS™

Machines affected All MPE, MCE and GMCE based Trendsetter AL and NEWS devices with picker V3

Component Autoloader assembly

Background

After the picker upgrades from FCO CA13213 have been installed, the autoloader alignment needs to be checked and corrected.

This procedure guides you through the steps of alignment using new jigs. The jigs mount on the engine side plates so the autoloader can be aligned to the engine instead of to the frame.

Solution

Set up the autoloader so that it consistently loads plates onto the drum without any interference that can cause image skew or plate fly-offs.

Important considerations are:

- The plate must be free from the suction cups when vacuum is released.
- The angle of the plate must be correct when entering the leading edge clamps (LECs).
- There must be sufficient clearance to unload plates without hitting the air jets.

Note: When an automatic plate preloader (like the NELA PL-T) is installed, the proximity switch on the preloader may need to be adjusted after these alignments are made, to ensure proper plate hand-off to the Trendsetter.

Time required 1 to 4 hours (device dependent)

Prerequisite FCOs

- FCO CA13403: Picker move locking solenoid valve

The following FCOs are not requirements for this procedure, but are strongly recommended:

- FCO CA11580 or CA10840: Picker up/down sensor upgrade
- FCO CA13213: Picker reliability upgrade

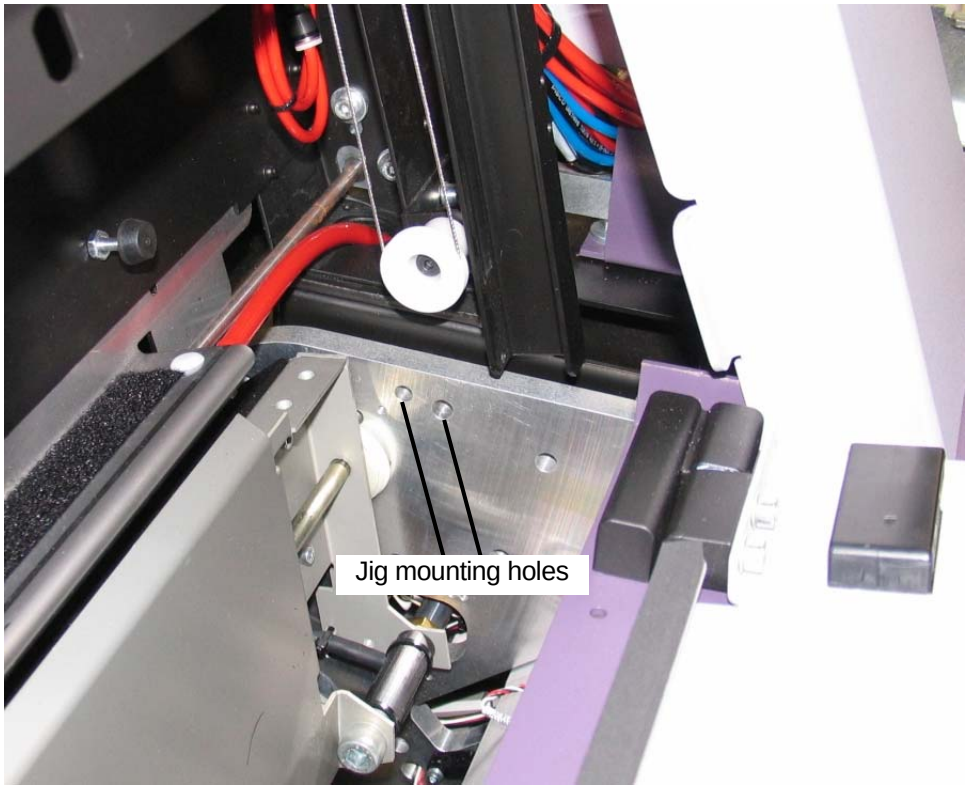
Parts required

Part Number	Part Name	Quantity
516-00032A	KIT,JIGS,PICKER ALIGNMENT,TS8	1

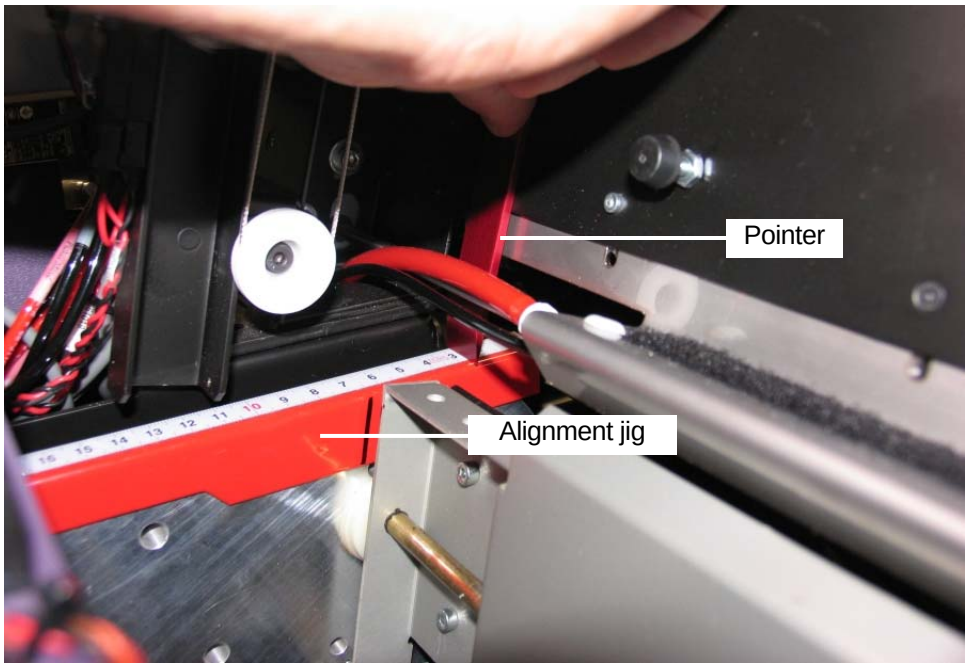
Note: Order kit 516-00032A only once, and use the jigs on all devices that require alignment.

Procedure

1. Before you begin, ensure that the picker move locking solenoid valve is installed. See FCO CA13403.
2. Make sure the new picker up/down sensors are installed. See FCO CA11580 and CA10840. (The autoloader alignment procedure can be performed without these FCOs, but they are highly recommended.)
3. Confirm that the picker reliability upgrade FCO (CA13213) is installed. (The autoloader alignment procedure can be performed without this FCO, but it is highly recommended.)
4. Move the picker up by entering the **`picker up`** command.
5. Move the unload table down by entering the **`table down`** command.
6. Turn off the power to the Trendsetter device.
7. Remove the shoulder panels and the side panels from the autoloader.
8. Place the left and right alignment jigs on top of the engine side plates so that the 0 markers on the rulers are closest to the plate bay. Apply a small amount of grease to the o-rings on the jig so they slide into the side plate holes easily.



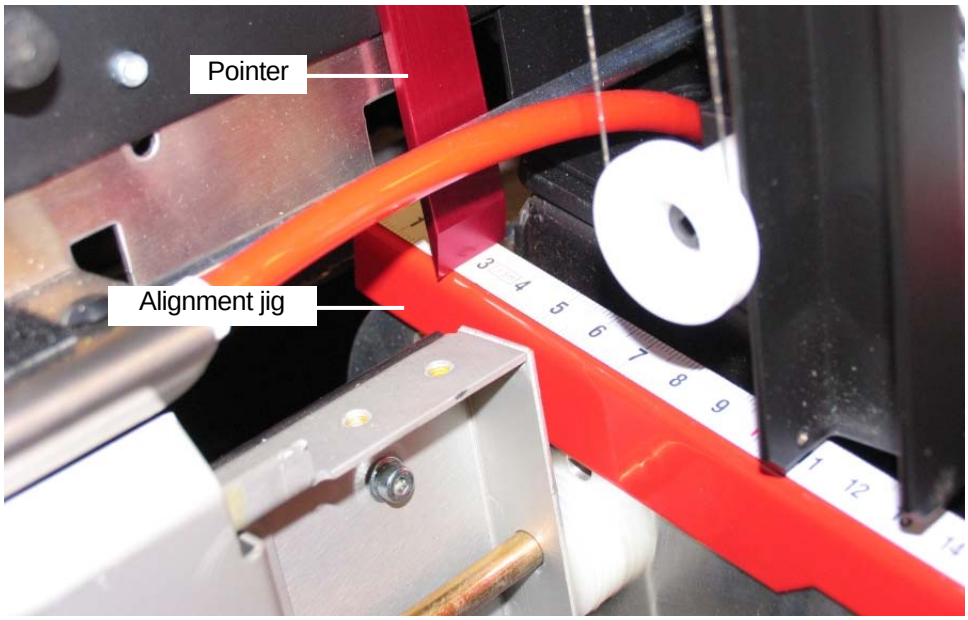
9. Place a pointer on top of the jig with the magnet side against the bay. Hold the pointer in place while reading, as the magnets don't stick to the bay in this position.



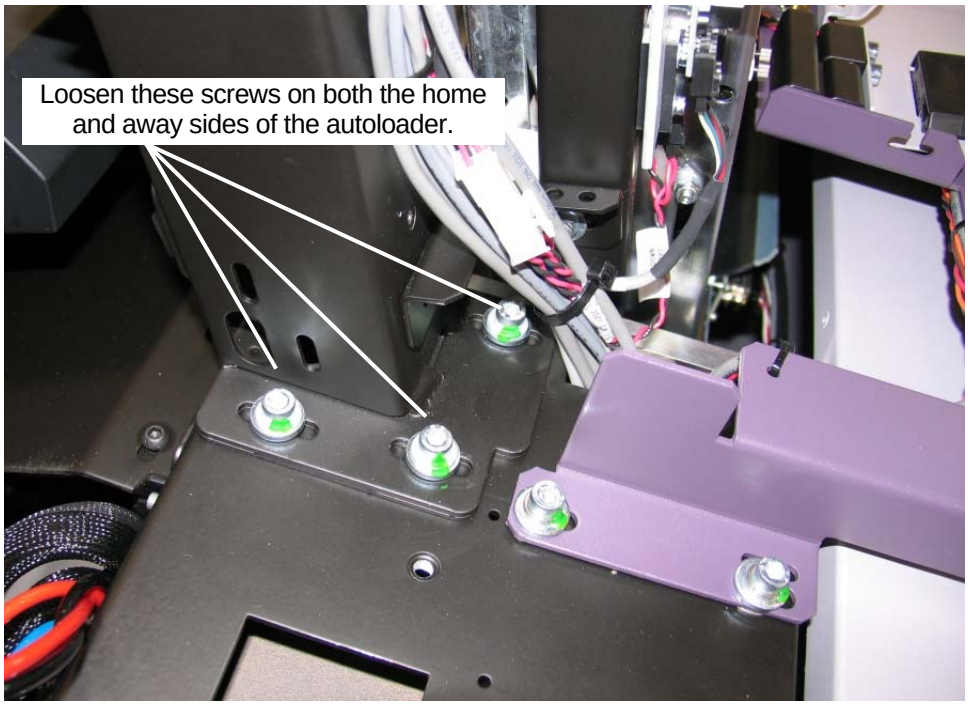
10. Check to see whether the autoloader is mounted parallel within 1 mm to the engine by reading the numbers from the front of the pointer on both the left and the right alignment jigs.

    If the device has the wide plate ledge, ensure that the pointer meets the ruler on the jigs at 30 ± 1 mm on both the home and the away side of the device as a starting point for the alignments.

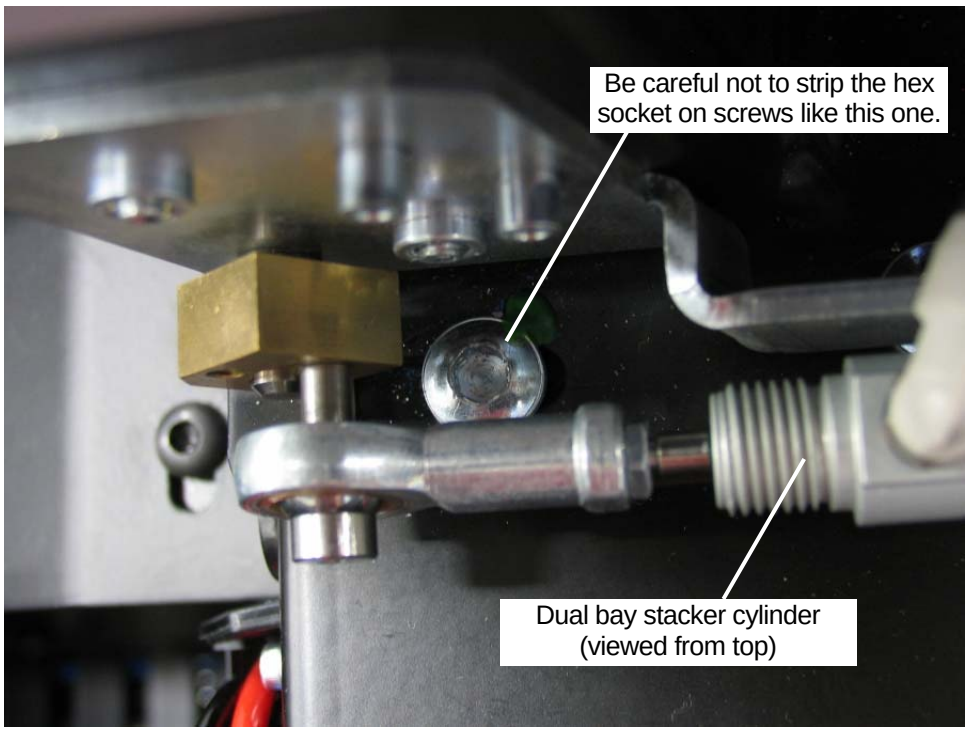
    If the device has the narrow plate ledge, ensure that the pointer meets the rulers at 35 ± 1 mm on both the home and the away side of the device as a starting point for the alignments.



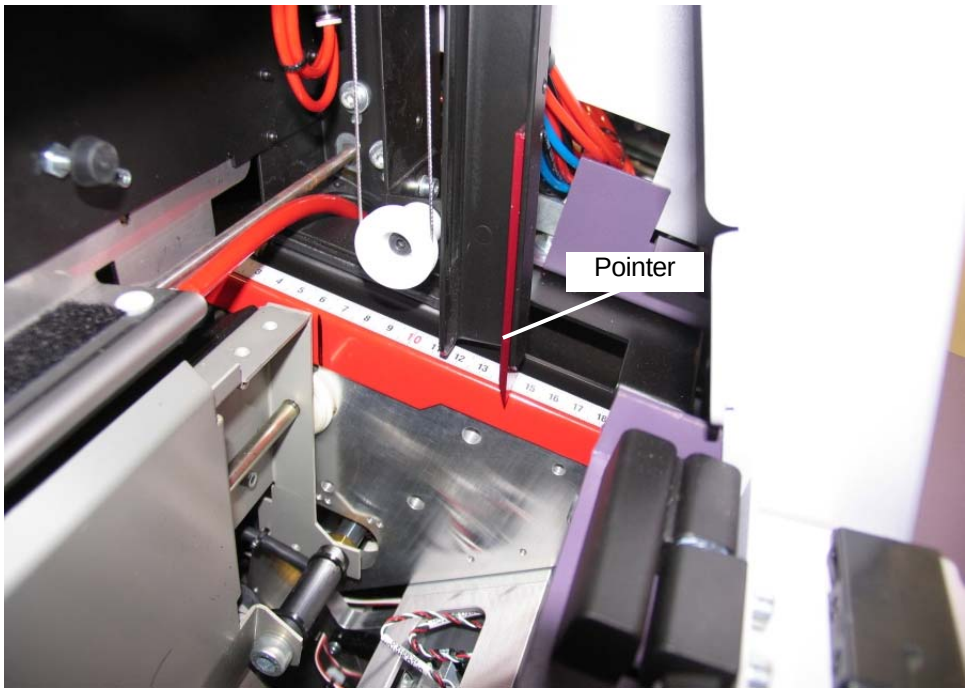
11. Loosen, but do not remove the three screws on each side of the autoloader that hold the autoloader assembly to the Trendsetter frame.



Note: Take special care when loosening these screws on devices with the dual-bay option. On these devices, space is limited because of the location of the stacker cylinder, and screws with shallower hex sockets are used. It is easy to strip these screw heads if you use the ball end of an inferior hex key. It is also easy to damage the stacker sensor if you are not careful.



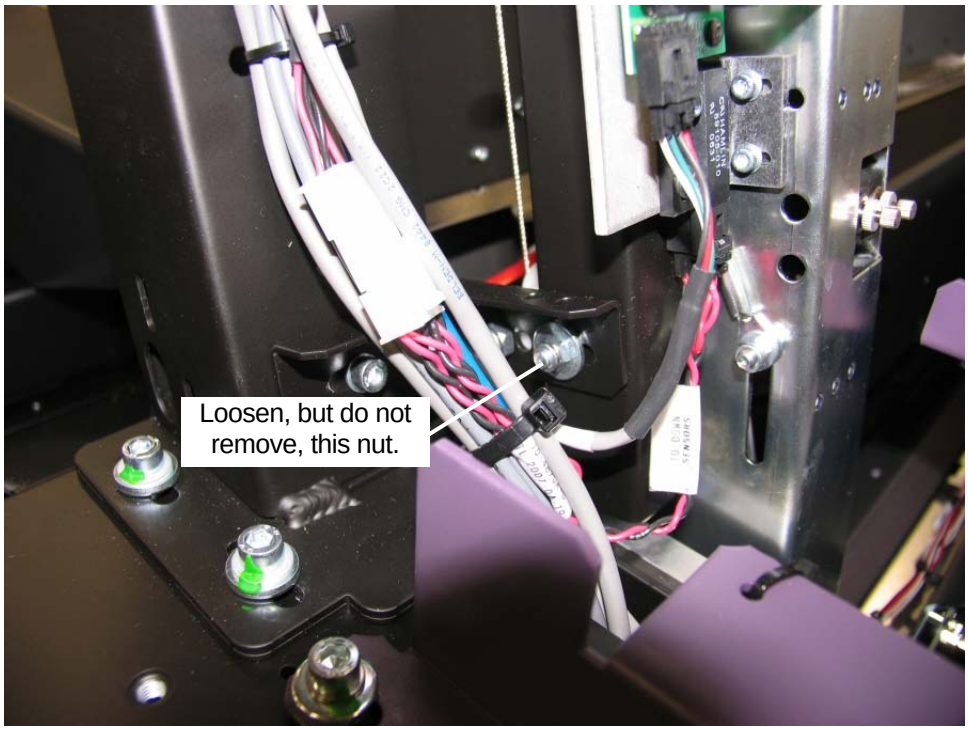
12. On the back of the loading bay, loosen the top screws on the bay support brackets to allow for easy movement of the bay. If not loosened, the bay will move back to its original position before you can retighten the bolts later.
13. Adjust the position of the entire autoloader until you read 30 ± 1 mm for the wide plate ledge or 35 ± 1 mm for the narrow plate ledge on both sides of the device.
14. Tighten the bolts and support bracket screws.
15. Move the pointers to the picker rails and place them with the magnetic side against the inside of the front part of the picker guide rails.



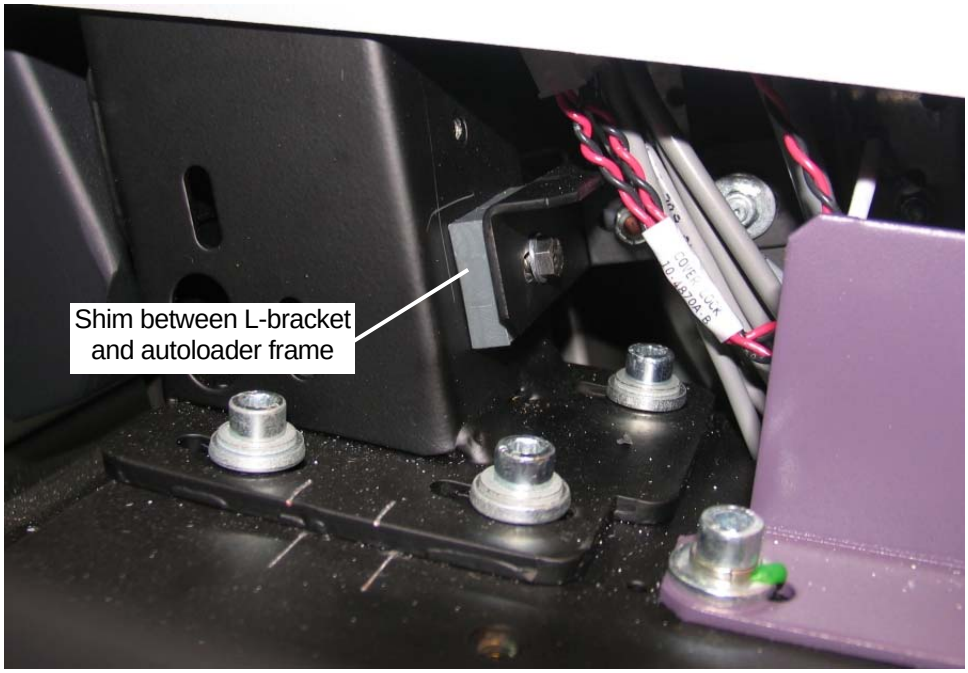
16. Verify that each pointer points to 146 ± 1 mm on both the home and away sides of the autoloader, both for models with wide plate ledges and those with narrow plate ledges.



17. If the pointer does not point to the correct position on the jig's ruler, loosen, but do not remove, the single nut that holds the rail to the L-shaped bracket, and slide the rails in or out to correct to 146 mm as a starting point.



18. If you cannot get the pointer to point to 146 mm on the ruler due to lack of play in the slotted hole, you need to install the supplied aluminum shim between the L-shaped bracket and the autoloader frame.

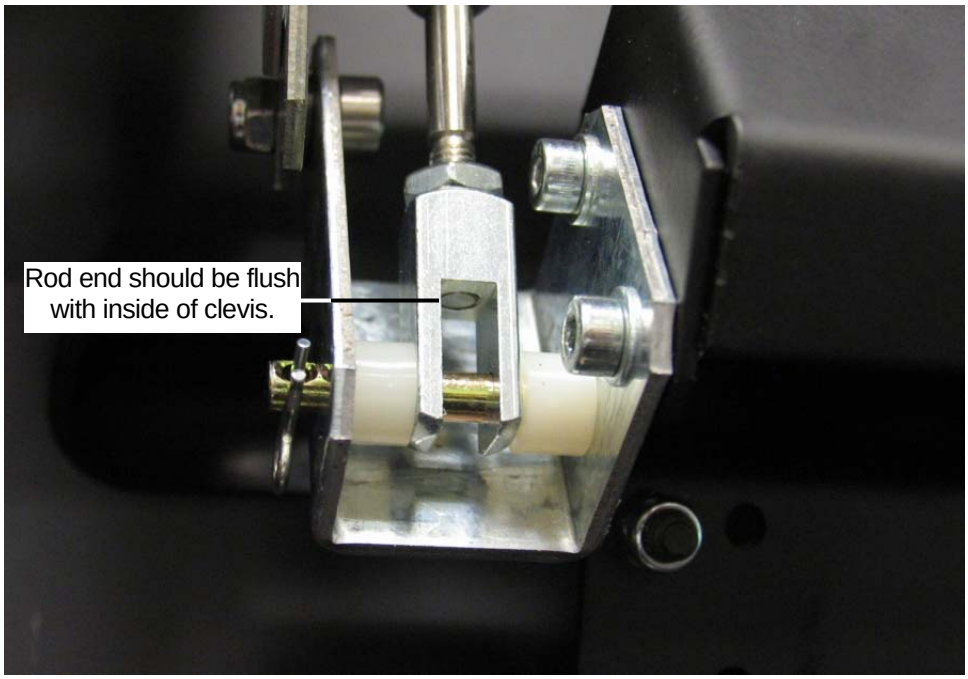


Test to Ensure that the Autoloader Is Correctly Aligned

1. Remove the magnetic pointers from the picker guide rails.
2. Make sure the clevises are installed correctly onto the to the wrist cylinders.

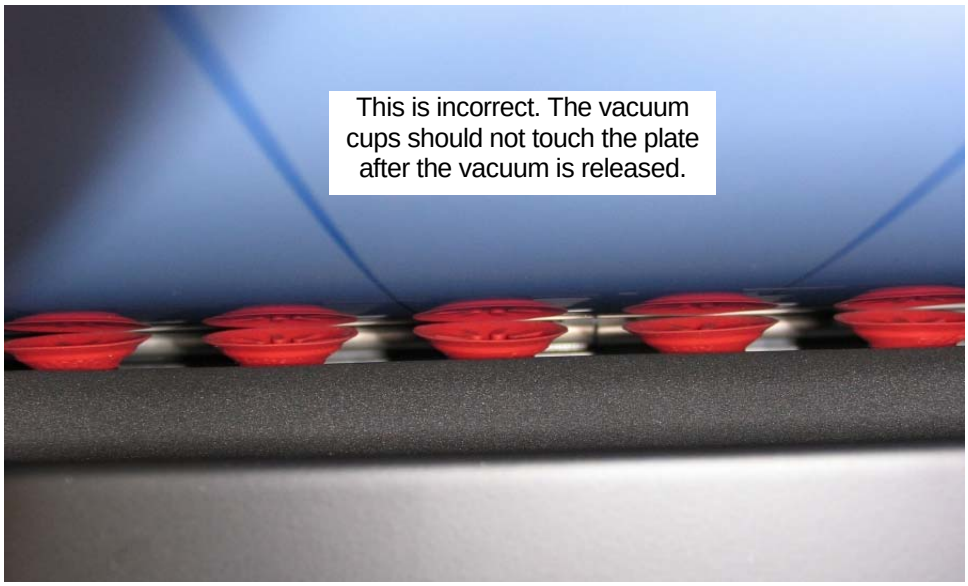
   The rod end should be flush with the inside of the clevis on both sides of the picker.

   Note: This adjustment strongly affects the angle of the plate as it enters the LECs. Adjust the position of the rod end in the clevis only if necessary.



3. Move the picker down by pressing the button on the Picker Move solenoid valve.
4. With the picker in the down position, manually place a plate on the registration blocks in the LECs and let it sit there without touching it.

5. Look down with a flashlight to verify that the picker vacuum cups are neither touching the plate nor more than 5 mm away from the plate.

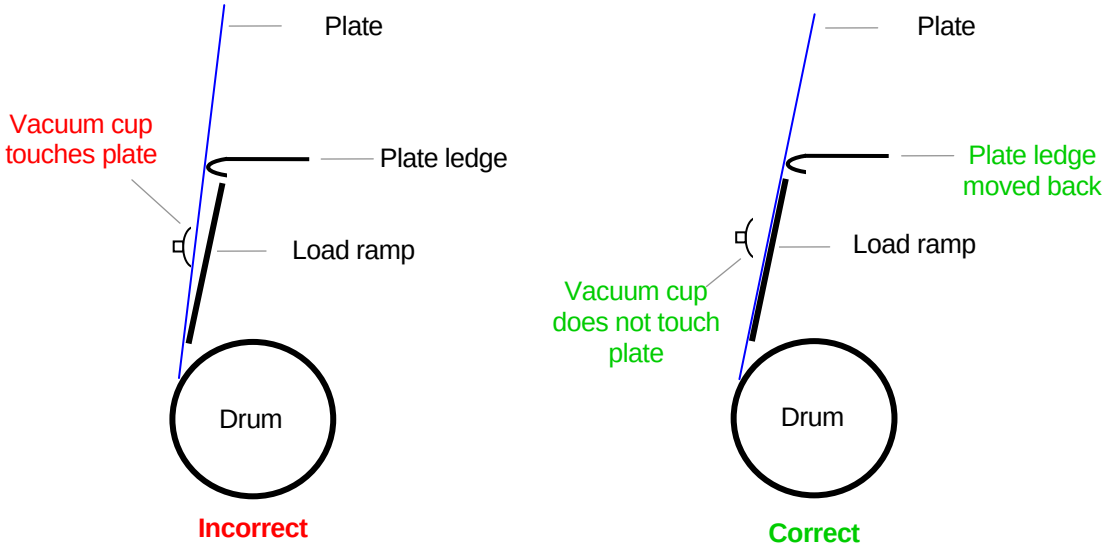


If the cups still make contact with the plate:

Make sure the plate is straight (has no curl to it) and if so, move the entire autoloader 2 mm back (away from you).
Then reattach the pointers to the inside front of the picker guide rails, and move the rails forward (towards you) until the pointers again read 146 mm on the jig's ruler. Recheck the gap between the cups and the plate and adjust the rails accordingly. The gap only needs to be a few millimeters.

If the gap between the cups and the plate is too large (> 5 mm):

Make sure the plate is straight (has no curl to it) and if so, move the entire autoloader 2 mm forward (towards you).
Then reattach the pointers to the inside front of the picker guide rails, and move the rails back (away from you) until the pointers again read 146 mm on the jig's ruler. Recheck the gap between the cups and the plate and adjust the rails accordingly. The gap only needs to be a few millimeters.



6. Remove the plates you manually placed on the load ramp.
7. Pick a large plate (or two broadsheet plates) by entering the command:

   `picker pick`
8. Open the front door of the device.
9. Move the picker down by pressing the buttons on the solenoid valve until the plate just touches the drum.
10. Verify that the plate comes down onto the drum about 2.5 cm (1 in.) above the LECs. This ensures that the plate slides smoothly into the LECs.
11. If necessary, adjust the position of the picker rails, keeping in mind that there must be a gap no larger than 5 mm between the vacuum cups and the plate.
12. If the plate-drum contact point of 2.5 cm above the LEC cannot be achieved without maintaining the correct gap between cups and plate, adjust the clevis on the wrist cylinders as required, in ¼ turn steps (see step 2 on page 7).
13. You may have to revisit each adjustment a couple of times to get the best results for a particular device.
    If you were able to achieve a plate-drum contact point of 2.5 cm above the LEC, while maintaining a small gap between cups and plate, check the distance of the plate drop onto the drum registration blocks, as this may have changed slightly.
    The plate drop distance should be 2–2.5 mm for the last plate in the bay. If necessary, adjust the plate ledge height to achieve this distance.
14. Turn on the power to the output device and run approximately 15 plates through a load/unload cycle to ensure that no plates are hitting the bottom of the plate ledge during unload.
15. If the plates do hit the bottom on the plate ledge during unload, the autoloader may have been moved too far back and needs to be corrected. In this case, you need to go back to step 4 on page 2.
16. Run some customer jobs to ensure everything works properly.

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