6

Removal and Replacement

Contents

Safety Precautions

(Safety symbols ➧ Immediately after the table of contents.)

Review WARNING and CAUTION symbols and instructions before you service the plotters. Follow these warnings and cautions for your protection and to avoid damaging the plotter.

W A R N I N G

Serious shock hazard leading to death or injury may result if you do not take the following precautions:

Ensure that the ac power outlet (mains) has a protective earth (ground) terminal.

Switch the plotter off, and disconnect it from the power source prior to performing any maintenance.

Prevent water or other liquids from running onto electrical components or circuits, or through openings in the enclosure.

Electrostatic Discharge (ESD) Precautions

To prevent damage to the plotter circuits from high-voltage electrostatic discharge (ESD)

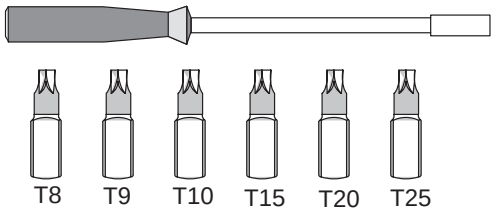
1. Do not wear clothing that is subject to static build-up.
2. Do not handle integrated circuits (ICs) in carpeted areas.
3. Do not remove an IC or a printed circuit assembly (PCA) from its conductive foam pad or conductive packaging until you are ready to install it.
4. Ground (earth) your body while disassembling and working on the plotter.
5. After removing a cover from the plotter, attach an earthing (ground) lead between the PCA common and earth ground. Touch all tools to earth ground to remove static charges before using them on the plotter.
6. After removing any PCA from the plotter, place it on a conductive foam pad or into its conductive packaging to prevent ESD damage to any ICs on the PCA.

Reassembly

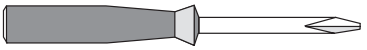
Most of the procedures in this chapter describe how to disassemble the plotter. Unless otherwise specified, reassemble the parts in the reverse order of disassembly.

Required Tools

The following tools are required to disassemble and repair the plotters.

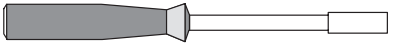


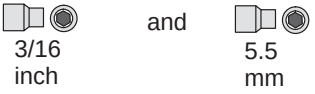
Long Torx screwdriver with the indicated attachments.



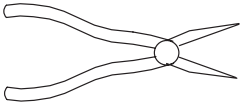
Pozidrive PZ1 screwdriver.

Small flat-blade screwdriver.

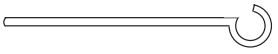




Nut driver with the indicated attachments.



Needle-nose pliers.



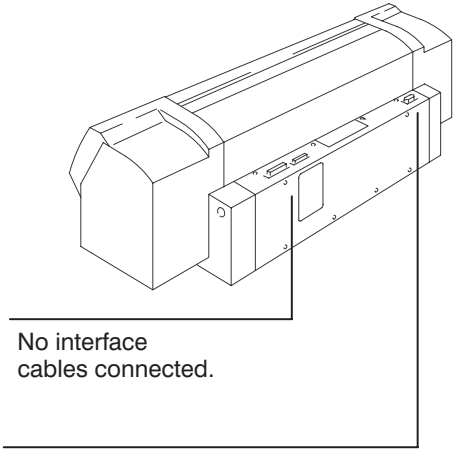
Spring hook.

10X Magnifier.

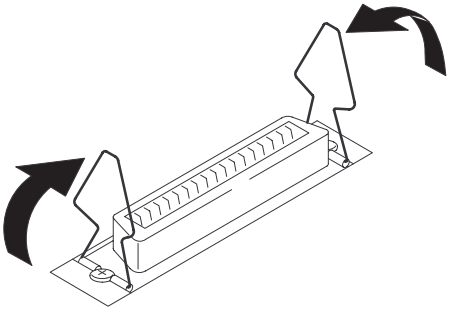
Loopback connector
(HP Part Number 07440-60302).

Removing the Electronics-Enclosure Cover

1 Ensure that the plotter is switched **off** and that the power cord and interface cable(s) are not connected to it.

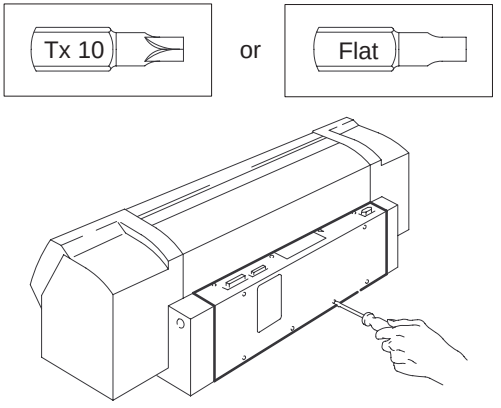


2 At the back of the plotter, ensure that the two small wire clamps of the parallel port are positioned vertically.

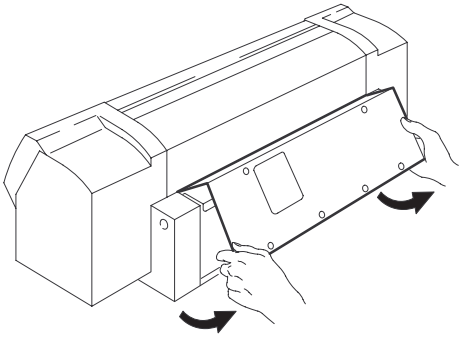


3 Remove the screws that attach the cover to the electronics enclosure.

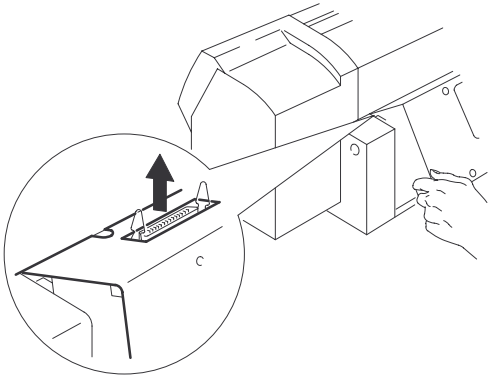
D/A1-size plotters have six screws.
E/A0-size plotters have eight screws.



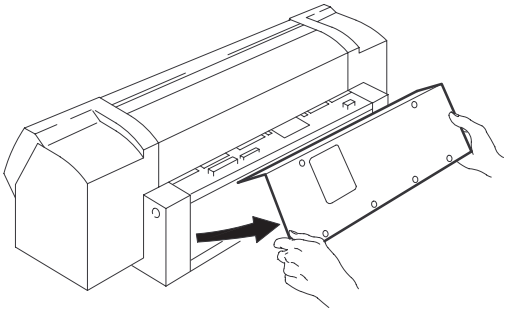
4 Gently lift up the cover to an angle of 45°.



5 Push the cover up so that the tabs can slide out of the slots at the top of the electronics enclosure.



6 Carefully pull the cover clear of the plotter.

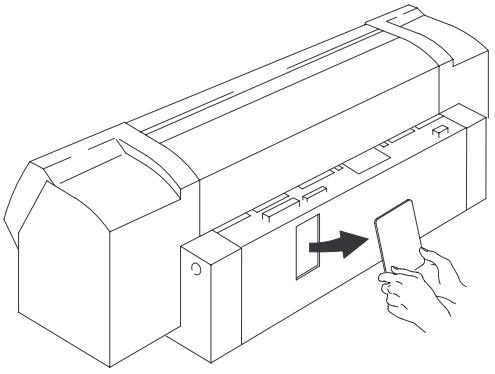


Removing a Memory Module (DRAM/ROM SIMM)

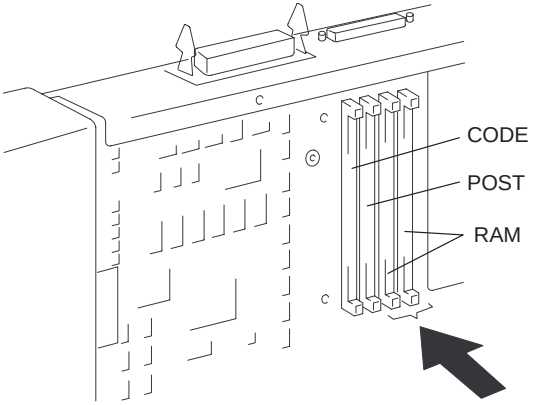
The user may have installed an optional DRAM/ROM SIMM in the plotter. Perform the following procedure, if you need to remove it.

1 Read *ESD Precautions* ➧ page 6-3.

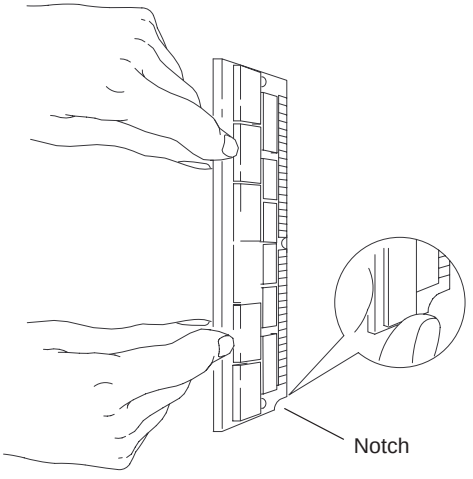
2 Unscrew the SIMM cover at the back of the plotter and remove it.



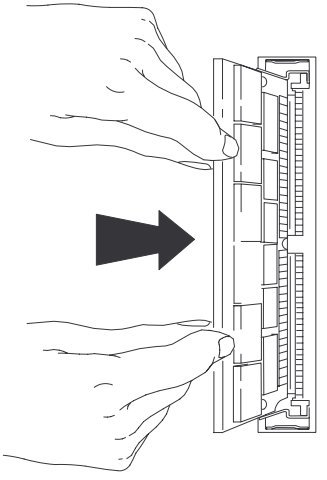
3 Locate the DRAM SIMM slots, using the second from the right first.



4 Hold the module with its nonmetallic edge towards you and the small notch down.



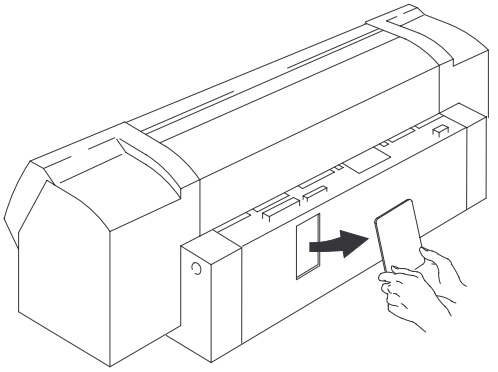
5 Press the nonmetallic edge to the right, and remove the module from the slot.



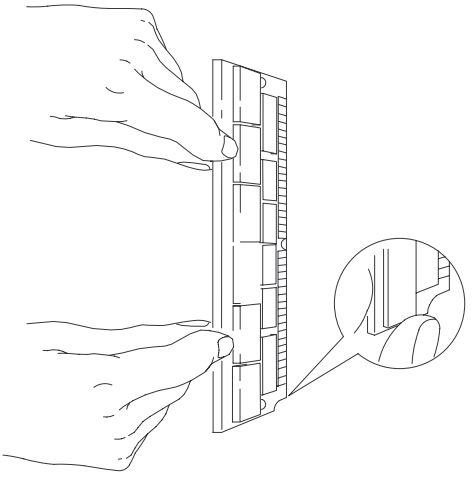
Reinstalling a Memory Module (DRAM/ROM SIMM):

1 Read *ESD Precautions* ➧ page 6-3.

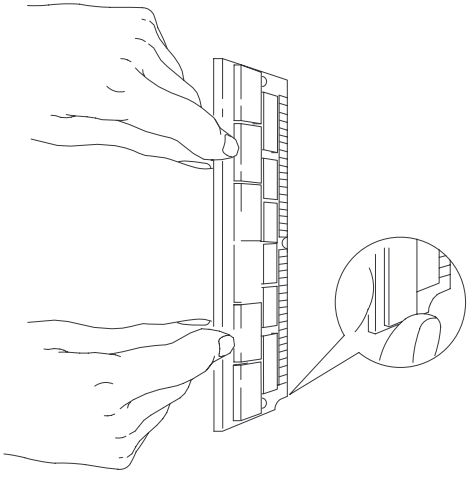
2 Unscrew the SIMM cover at the back of the plotter and remove it.



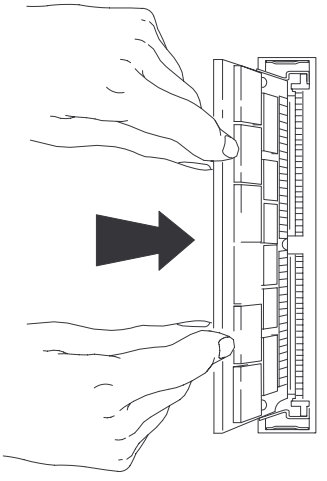
3 Take the memory module out of its bag, holding the module only by the edges.



4 Hold the memory module by its edges with the non-metallic edge toward you and the notch facing down.



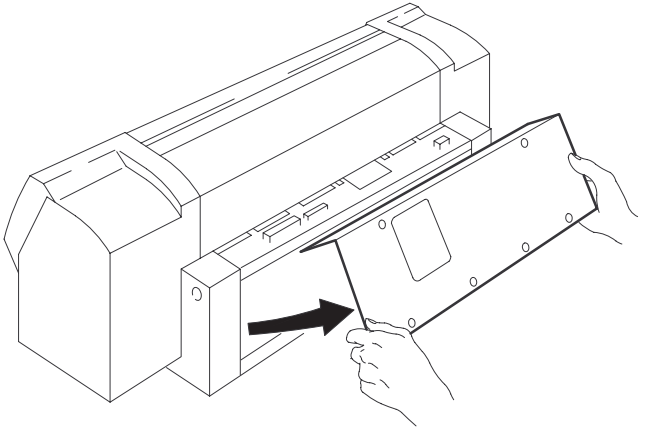
5 Tilt the non-metallic edge rightwards (arrow) and firmly push the module into the slot. Pull the non-metallic edge towards the left until the module clicks into place.



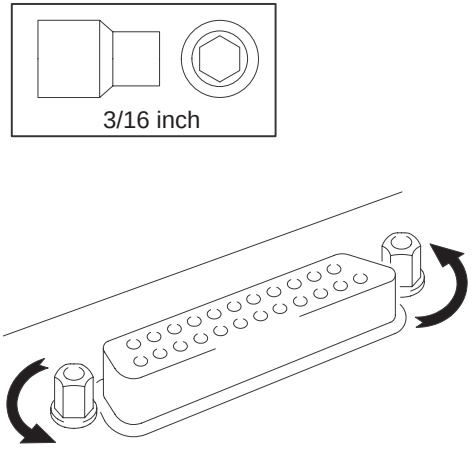
Removing the Main PCA

1 Remove the electronics-enclosure cover ⏵ page 6-5.

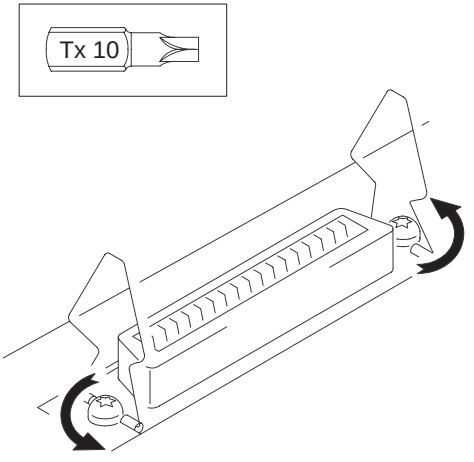
*If you have **PC-based Diagnostics,** save the EEROM data before removing the main PCA. Once you have installed the new PCA, load the EEROM data to the main PCA. For information on **PC-based diagnostics** ⏵ page 8-54.*



2 Remove the two screws from the serial (RS-232-C) connector.



3 Remove the two screws from the parallel connector.

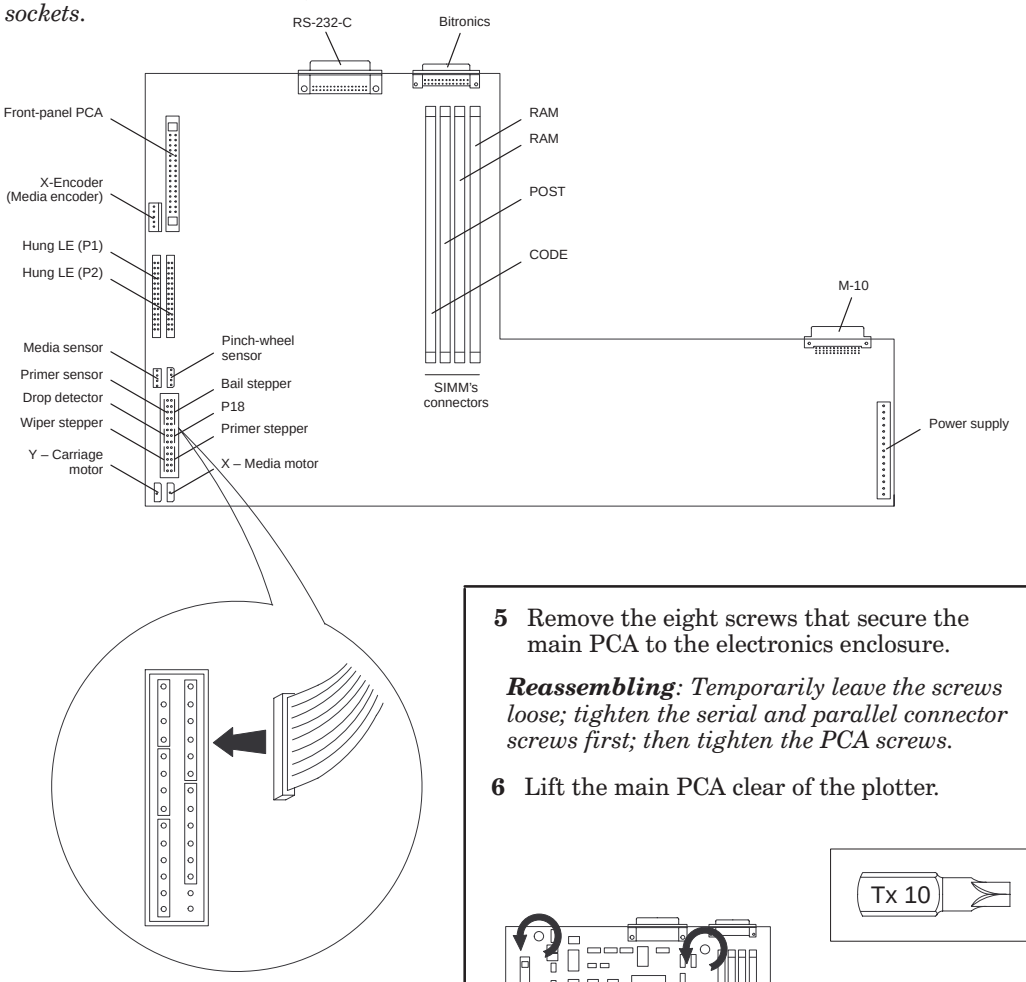


4 Disconnect all cable connectors from the main PCA.

CAUTION

Do not force the front-panel PCA cable out of its clamp. First pull the clamp gently towards you to release the cable; then pull the cable easily out of the clamp.

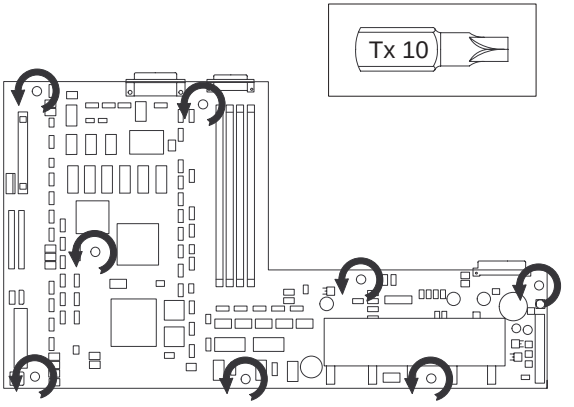
***Reassembling**: Make sure you connect all cables in the correct orientation and in the correct sockets.*



5 Remove the eight screws that secure the main PCA to the electronics enclosure.

***Reassembling**: Temporarily leave the screws loose; tighten the serial and parallel connector screws first; then tighten the PCA screws.*

6 Lift the main PCA clear of the plotter.

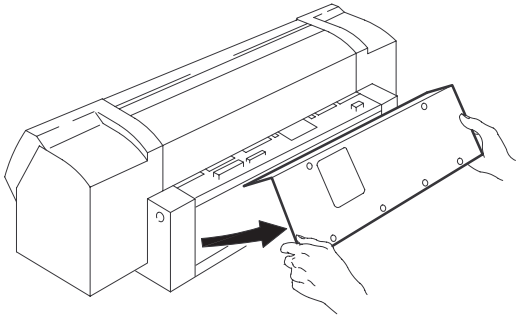


***Calibrations:** After installing a new main PCA, if the EEROM data has not been saved and loaded (see 6-9 note), then the following calibrations must be performed in the order listed:*

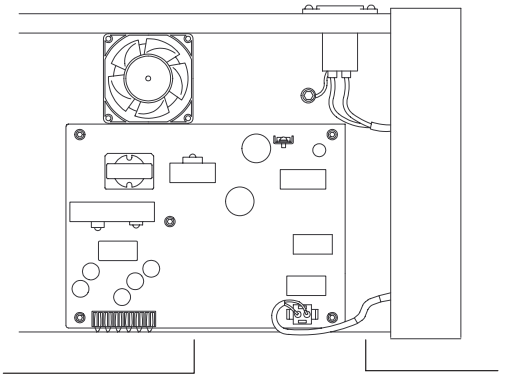
1. Drop-detector calibration ⏵ page 7-4.
2. Line-sensor calibration ⏵ page 7-5.
3. Accuracy calibration ⏵ page 7-6.

Removing the Power-Supply PCA

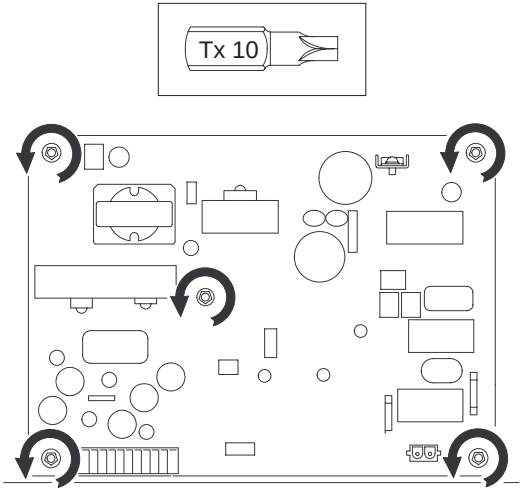
1 Remove the electronics-enclosure cover ➧ page 6-5.



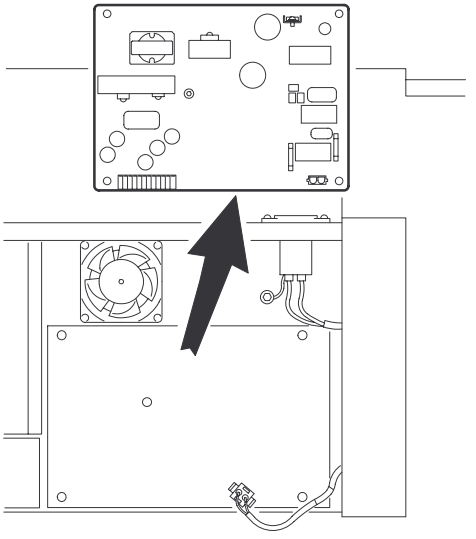
2 Disconnect the ac connector and the dc power-distribution connector from the power-supply PCA.



3 Remove the screws that attach the power-supply PCA to the electronics enclosure.

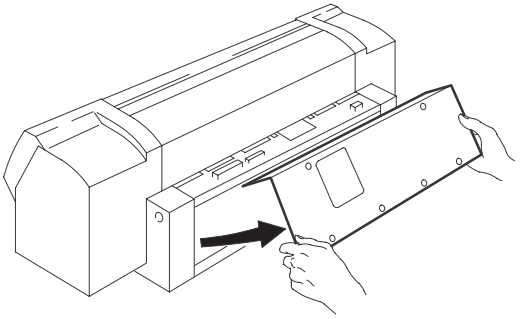


4 Lift the power-supply PCA clear of the plotter.

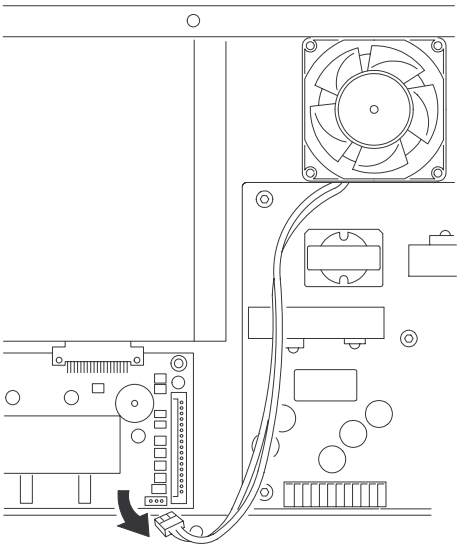


Removing the Fan

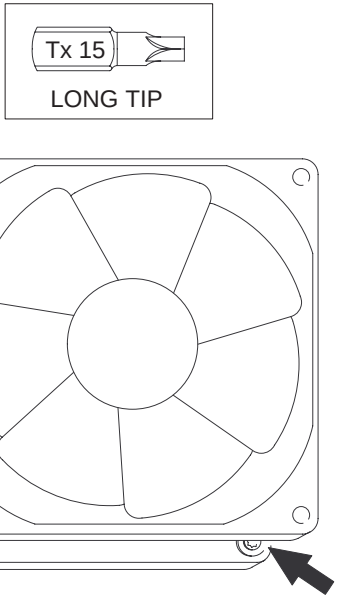
1 Remove the electronics-enclosure cover ➧ page 6-5.



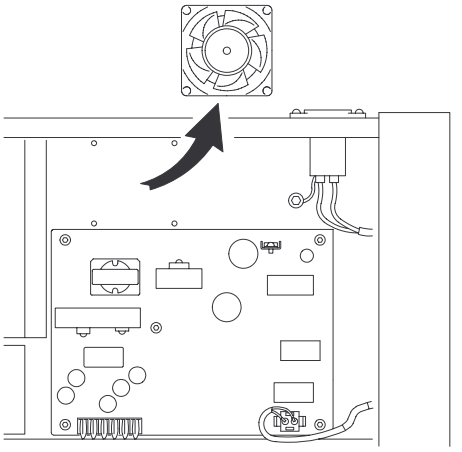
2 Disconnect the fan connector from the main PCA and the attachment clip.



3 Remove the two screws that attach the fan to the electronics enclosure.



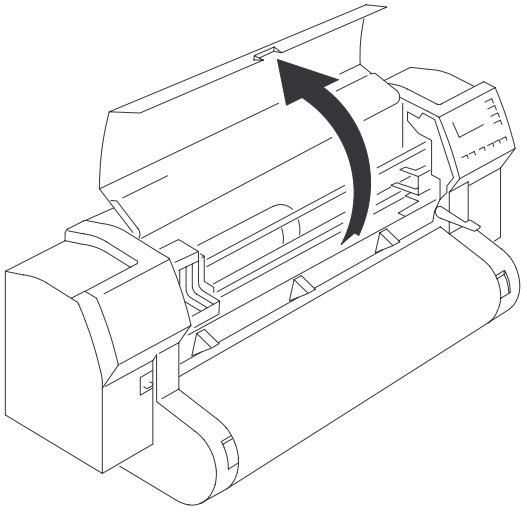
4 Lift the fan clear of the plotter.



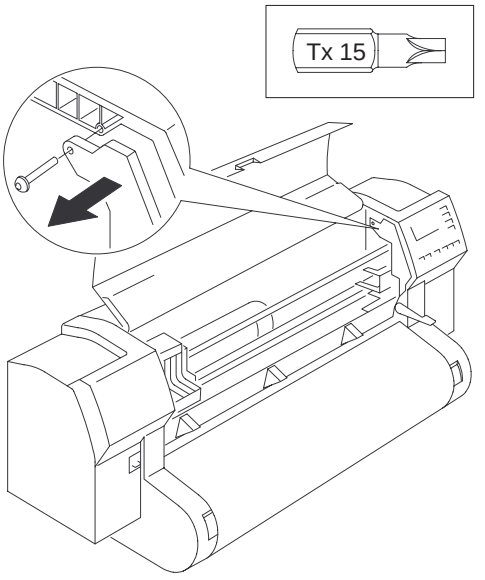
Reassembling: *Airflow should be inwards. See indication on fan.*

Removing the Window

1 Open the window.

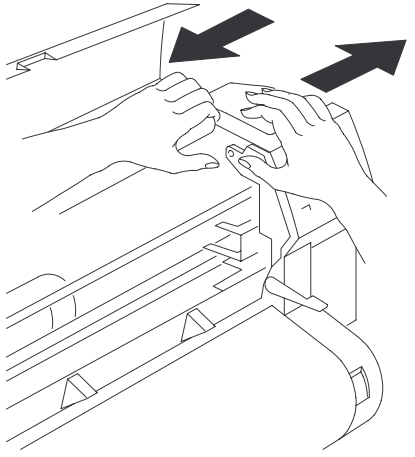


2 **Loosen** the top screw of the right and left front trim (two full turns).



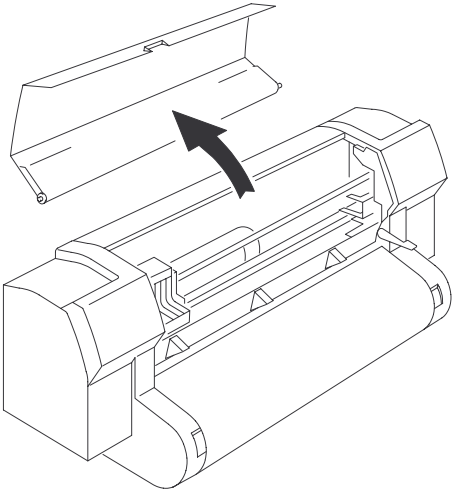
3 Carefully push the right endcover and the window apart, far enough to lift the window up so that the right pivot just clears its socket.

Do not lever the window up more than is necessary, so as not to strain or break the left pivot.



4 Move the window to the right so that the left pivot slides out of its socket. Lift the window clear of the plotter.

Do not let the window-pivot springs drop out of the endcovers.



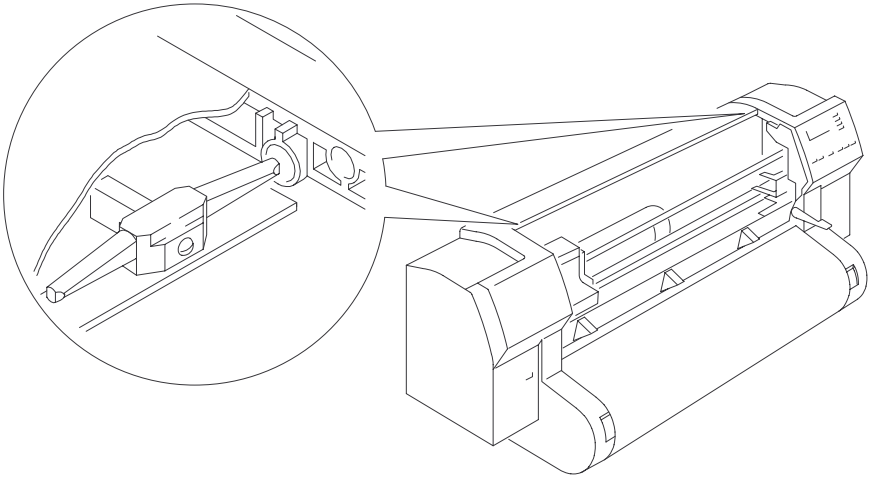
Removing the Center Cover

1 Remove the window ⧫ page 6-13.

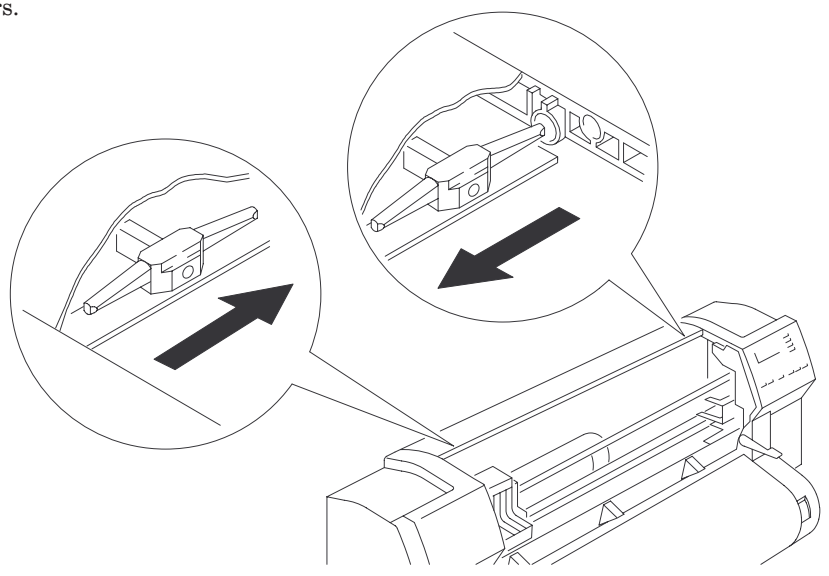
WARNING

In the following steps, take care neither to cut yourself on the encoder strip, nor to damage the strip.

2 Loosen the two latch screws on the underside of the center cover.



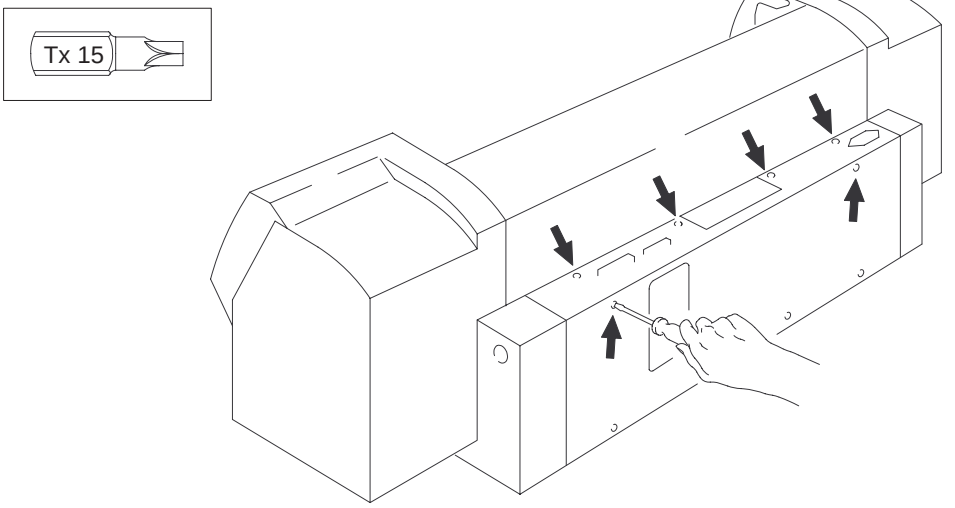
3 Slide the two latches horizontally towards the center of the plotter, clear of the two endcovers.



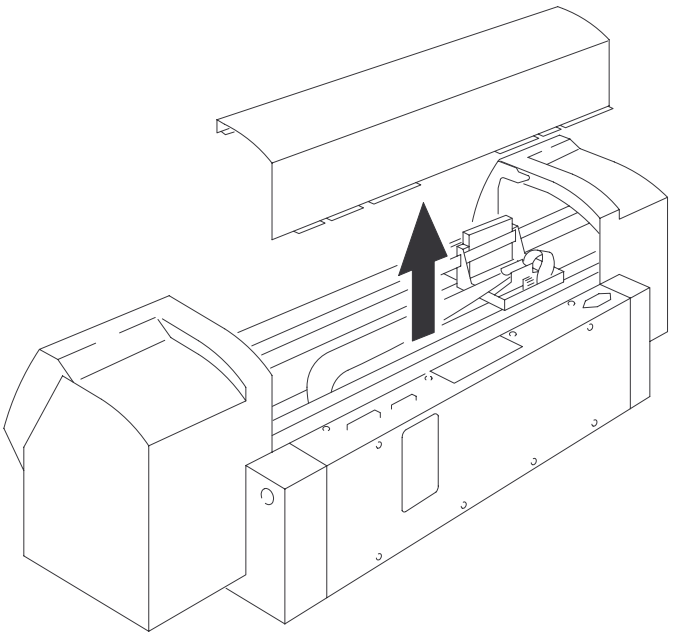
4 Loosen the screws on top of the electronics-enclosure cover and the top two rear screws.

D/A1 size plotters have four screws. E/A0 have six.

When reassembling, first tighten the rear screws.



5 Slide the center cover out from under the screws and lift it clear of the plotter.

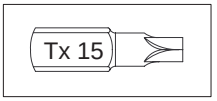


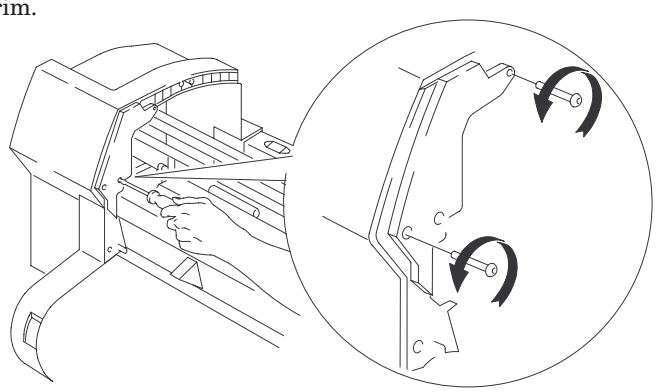
Removing the Left Endcover

1 Remove the window ➧ page 6-13.

2 Remove the center cover ➧ page 6-14.

3 Remove the two screws on the left trim.

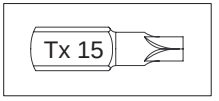


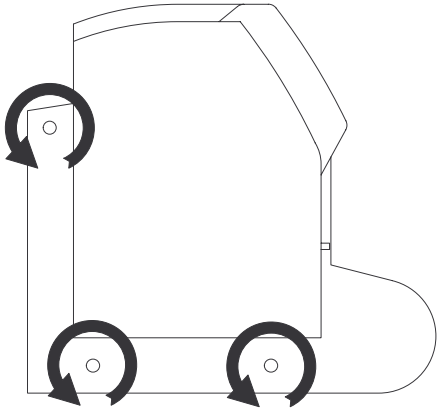


CAUTION

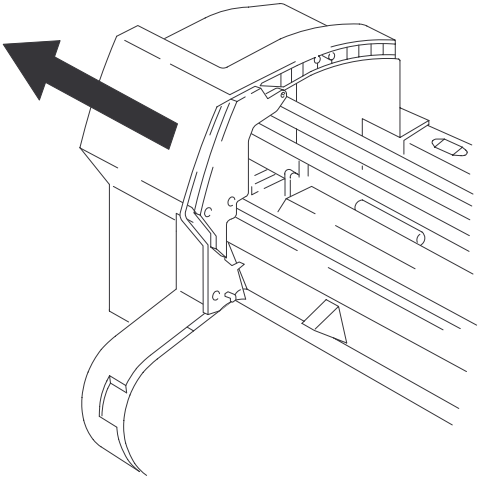
Reassembling: When replacing screws on any plastic part, always begin by gently twisting the screw in an anticlockwise direction with your hand, until the screw finds the thread path and clicks, and then twisting the screw in clockwise with your hand, before using a screwdriver. This is to avoid cross-threading and damaging the threads. Do not over-tighten the screws.

4 Remove the three screws from the left side of the left endcover.





5 Maintaining an even pressure on the top and bottom of the endcover, pull it to the left, away from the plotter.

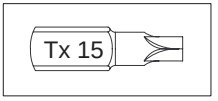


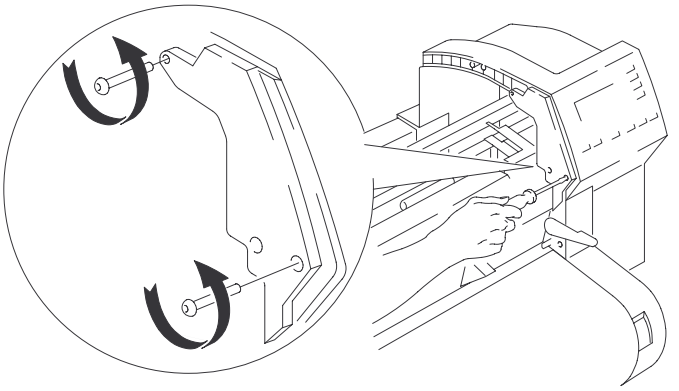
Removing the Right Endcover

1 Remove the window ➧ page 6-13.

2 Remove the center cover ➧ page 6-14.

3 Remove the two screws on the right trim.

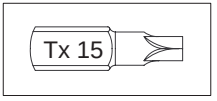


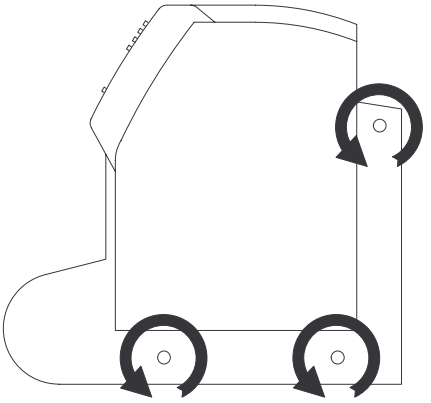


CAUTION

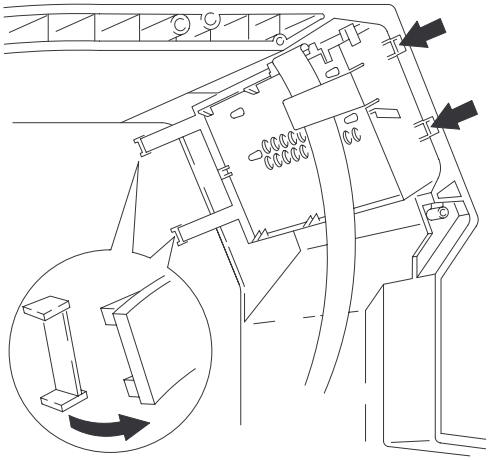
Reassembling: When replacing screws on any plastic part, always begin by gently twisting the screw in an anticlockwise direction with your hand, until the screw finds the thread path and clicks, and then twisting the screw in clockwise with your hand, before using a screwdriver. This is to avoid cross-threading and damaging the thread. Do not over-tighten the screws.

4 Remove the three recessed screws from the right side of the right endcover.





5 Maintaining an even pressure on the top and bottom of the endcover, pull it to the right, away from the plotter.



Reassembling: *Note that the upper and lower grooves of the endcover engage on the front panel.*

Removing the Front-Panel Assembly

1 Remove the electronics-enclosure cover ➧ page 6-5.

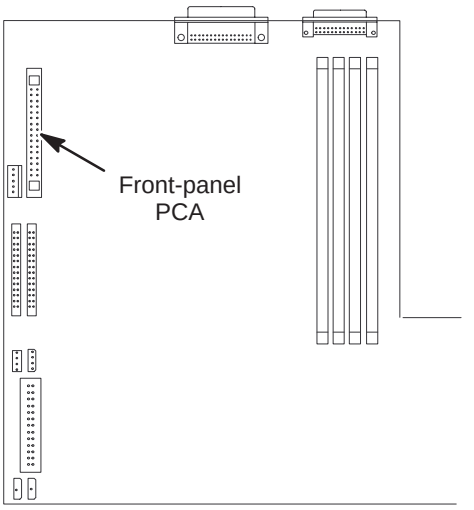
2 Remove the window ➧ page 6-13.

3 Remove the center cover ➧ page 6-14.

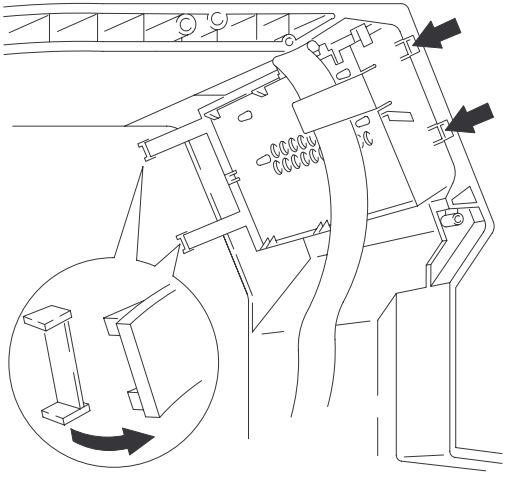
4 Remove the right endcover ➧ page 6-17.

5 Take note of the correct positioning of the front-panel cable for reassembling. Incorrect positioning can cause obstruction of the cartridge carriage or motor gears.

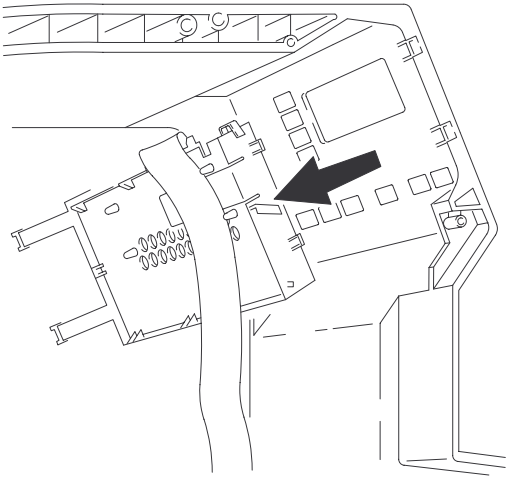
6 Release the front-panel cable from its connector on the main PCA.

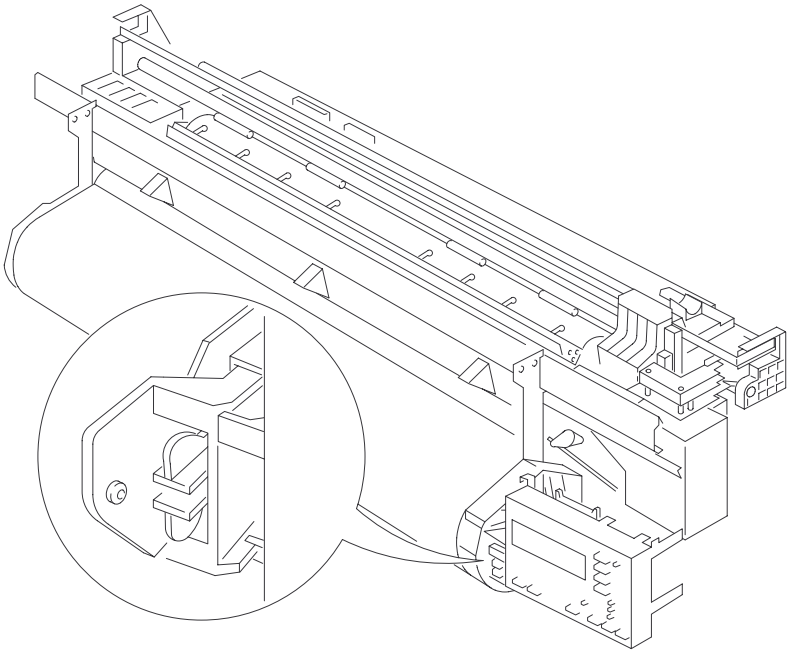


7 Release the front-panel cable by pulling out its holding clips.



8 Lift the Front-Panel Assembly clear of the plotter.





To help with maintenance, push the front-panel assembly onto the right end of the rollfeed where the clamps will hold it in place.

Removing the Window Sensor

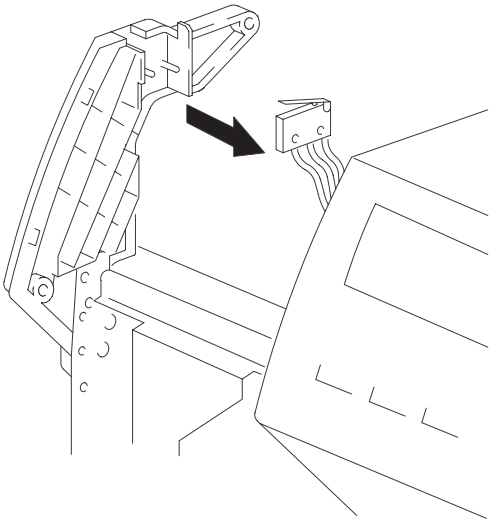
1 Remove the electronics-enclosure cover ⧫ page 6-5.

2 Remove the window ⧫ page 6-13.

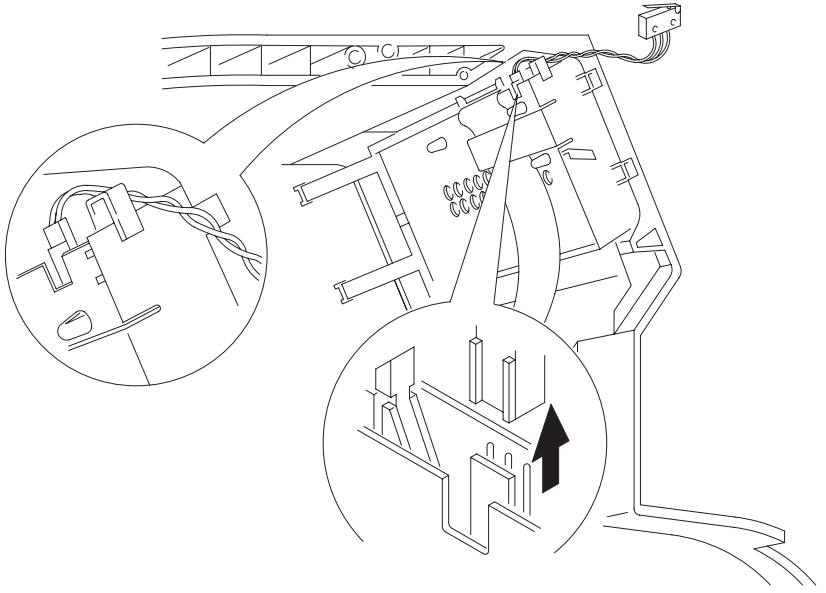
3 Remove the center cover ⧫ page 6-14.

4 Remove the right endcover ⧫ page 6-17.

5 Slide the connector out from the two pivots.



6 Disconnect the window-sensor cable connector from the front-panel assembly.



Removing the Pinch-Wheel Sensor

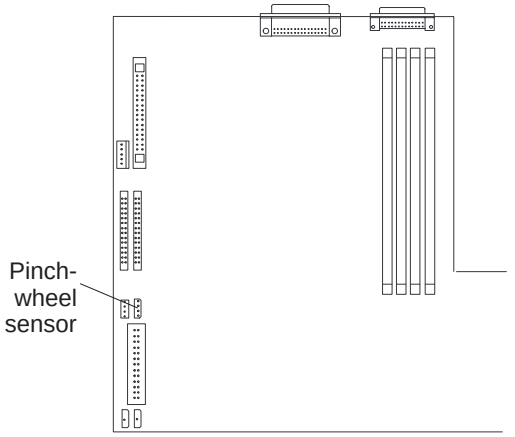
1 Remove the window ➧ page 6-13.

2 Remove the center cover ➧ page 6-14.

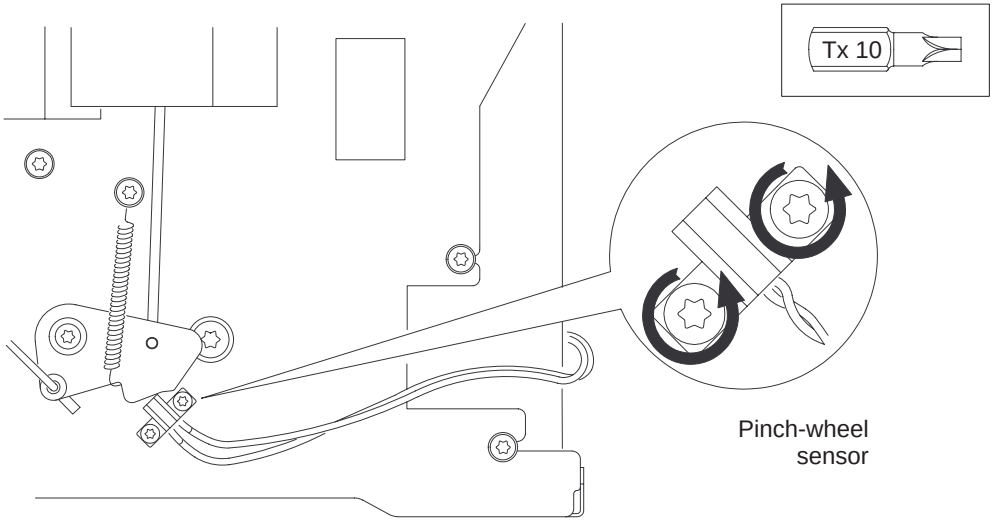
3 Remove the electronics-enclosure cover ➧ page 6-5.

4 Remove the right endcover ➧ page 6-17.

5 Disconnect the pinch-wheel-sensor cable connector from the main PCA.



6 Remove the two screws that attach the pinch-wheel sensor to the right sideplate.



7 Move the pinch-wheel sensor, including the cable, clear of the plotter.

Removing the Media Sensor

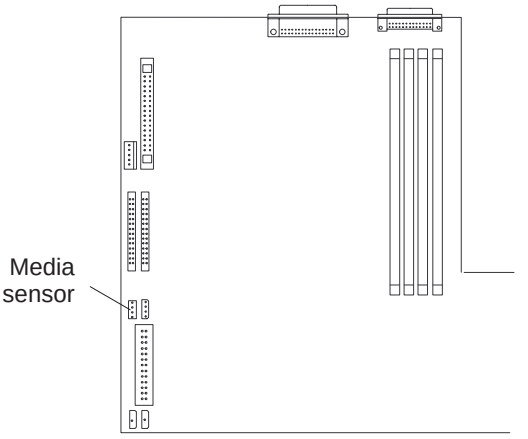
1 Remove the electronics-enclosure cover ➧ page 6-5.

2 Remove the window ➧ page 6-13.

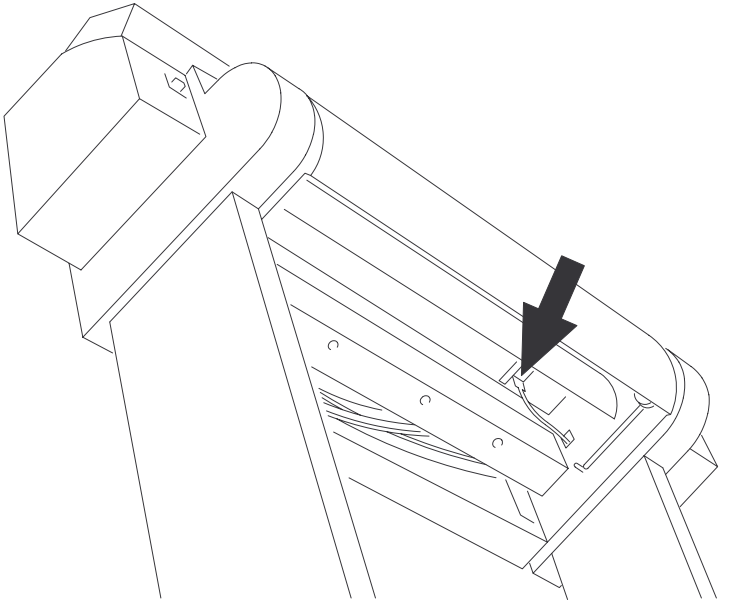
3 Remove the center cover ➧ page 6-14.

4 Remove the right endcover ➧ page 6-17.

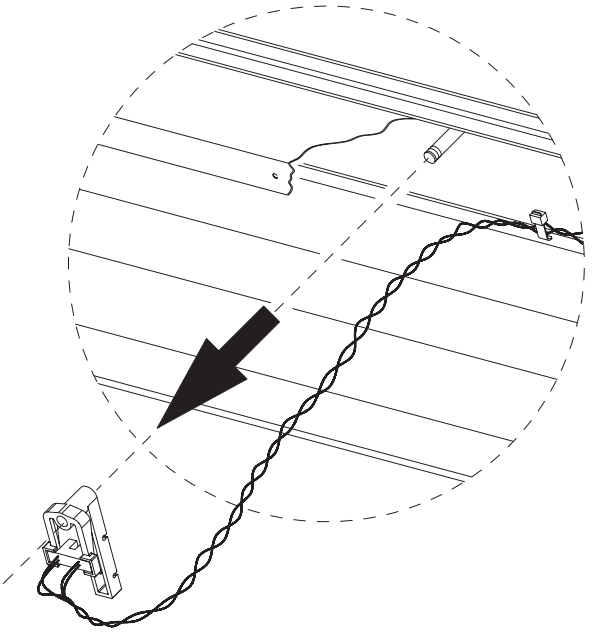
5 Disconnect the media-sensor cable connector from the main PCA.



6 Remove the media bin to make access to the media-sensor easier.



7 Pull the media sensor straight out towards you, freeing it from the underside of the entry platen.



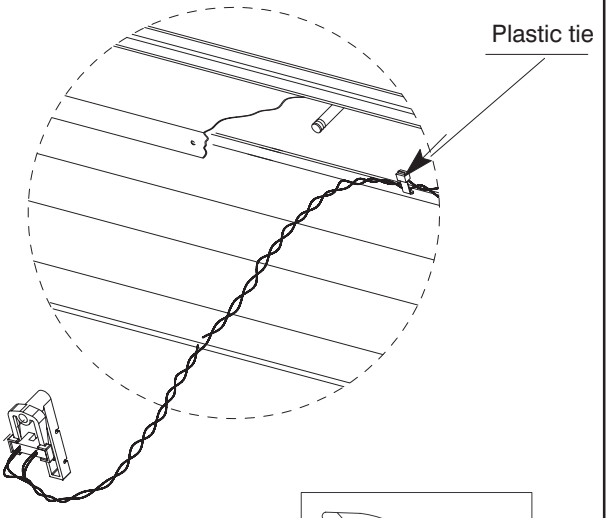
8 Cut the plastic tie that fastens the media-sensor cable to the underside of the entry platen.

CAUTION

Take care not to cut the media-sensor cable itself.

9 Lift the media sensor and cable clear of the plotter

Reassembling: *Ensure that the two flags on the media sensor are correctly positioned.*



Removing the Carriage (Y-Axis) Motor

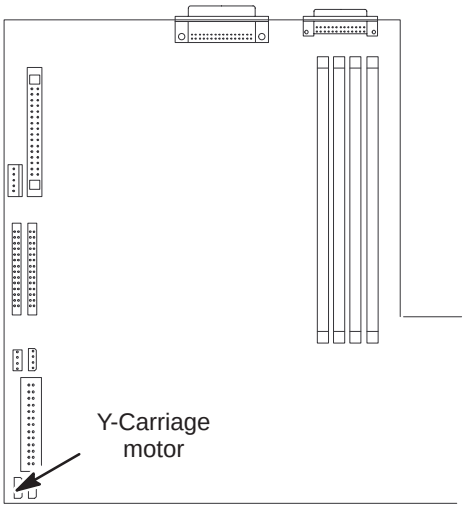
1 Remove the electronics-enclosure cover ⧫ page 6-5.

2 Remove the window ⧫ page 6-13.

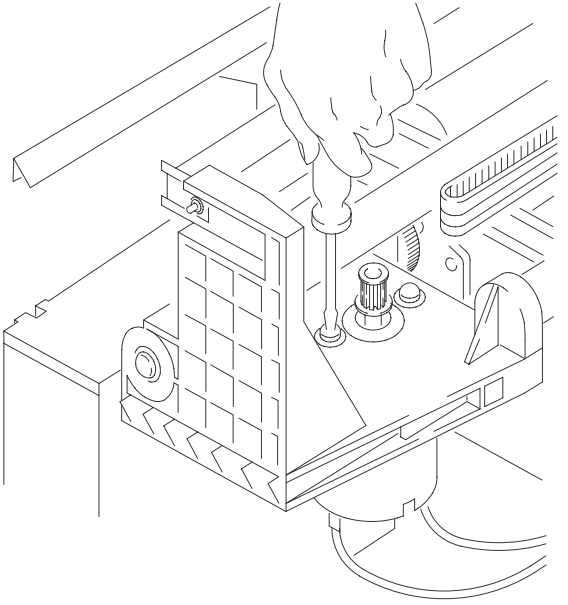
3 Remove the center cover ⧫ page 6-14.

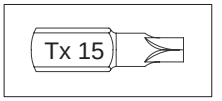
4 Remove the right endcover ⧫ page 6-17.

5 Disconnect the carriage-motor cable from the main PCA (connector labelled Y).



6 Remove the two screws that attach the carriage-motor to the structure. Hold the motor in a secure position.





Reassembling: *Position the Y-axis drive belt before positioning the screws, and ensure that the belt is correctly positioned around the carriage-motor gear and the lower part of the pulley.*

Removing the Media (X-Axis) Motor

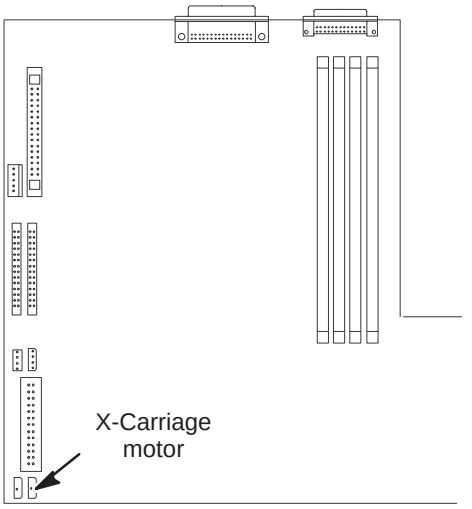
1 Remove the electronics-enclosure cover ➧ page 6-5.

2 Remove the window ➧ page 6-13.

3 Remove the center cover ➧ page 6-14.

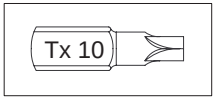
4 Remove the right endcover ➧ page 6-17.

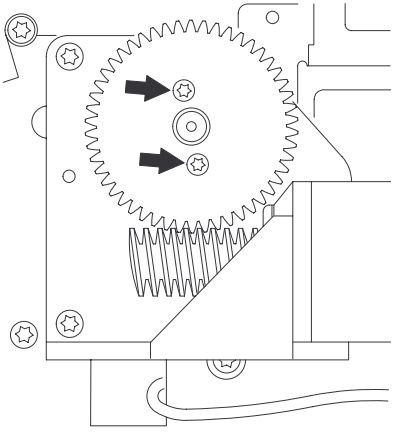
5 Disconnect the carriage-motor cable from the main PCA (connector labelled X).



6 Remove the spittoon ➧ page 6-44.

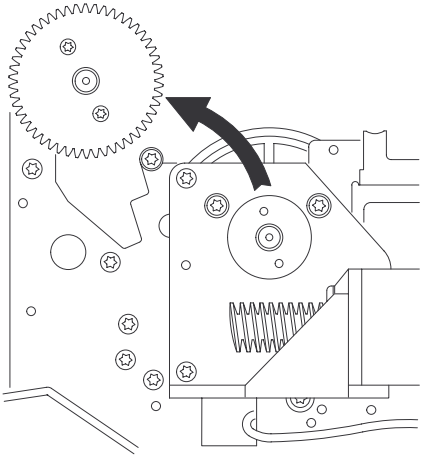
7 Remove the two screws that attach the drive-roller gear to the drive-roller shaft.





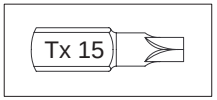
8 Remove the drive-roller gear from the drive-roller shaft.

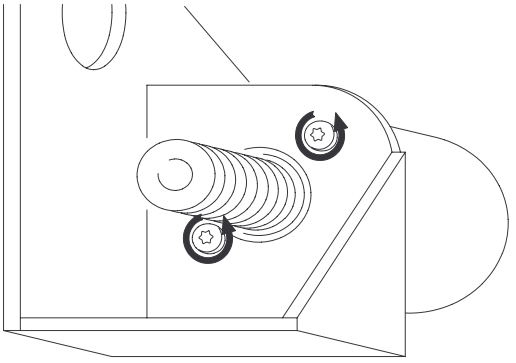
The gear may be stiff to remove.



Reassembling: *Push the gear onto the shaft as far as it will go. Align the holes on the gear with the holes on the shaft.*

9 Remove the two screws that secure the media motor to the media-motor mount.





10 Pull the media motor towards the rear of the plotter.

11 Disconnect the flat encoder cable from the motor, and lift the motor clear of the plotter.

Reinstalling: *The worm pinion and drive-roller gear mesh slightly during use. Do not install a new motor and an old gear, or vice versa:* ***install the gear that comes with the motor****. Apply the grease that comes with the new motor onto the worm pinion and drive-roller gear.*

Calibration: *After reassembling the plotter, perform the accuracy calibration (Details* *➧ page 7-6**).*

Removing the Encoder Strip

WARNING

In the following steps, take care neither to cut yourself on the encoder strip, nor to damage the strip.

CAUTION

The encoder strip is fragile. Do not damage it. Lay it on a flat surface when it is not in the plotter.

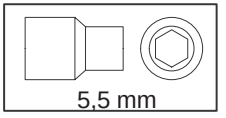
1 Remove the window ➧ page 6-13.

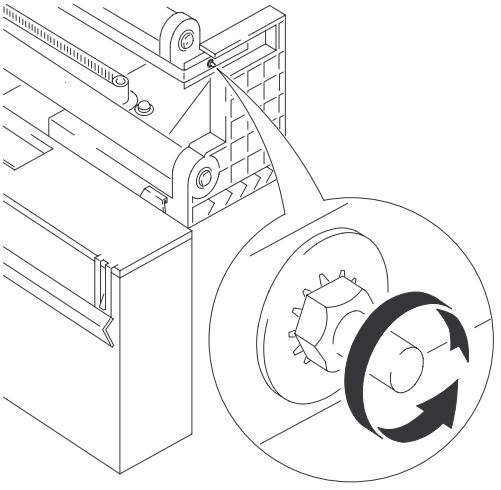
2 Remove the center cover ➧ page 6-14.

3 Remove the right endcover ➧ page 6-17

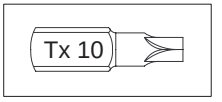
4 Remove the left endcover ➧ page 6-16.

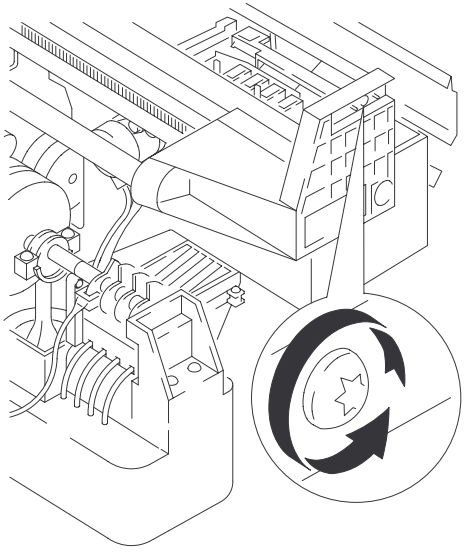
5 Remove the nut and washer that attach the encoder strip to the bracket on the right side of the plotter.



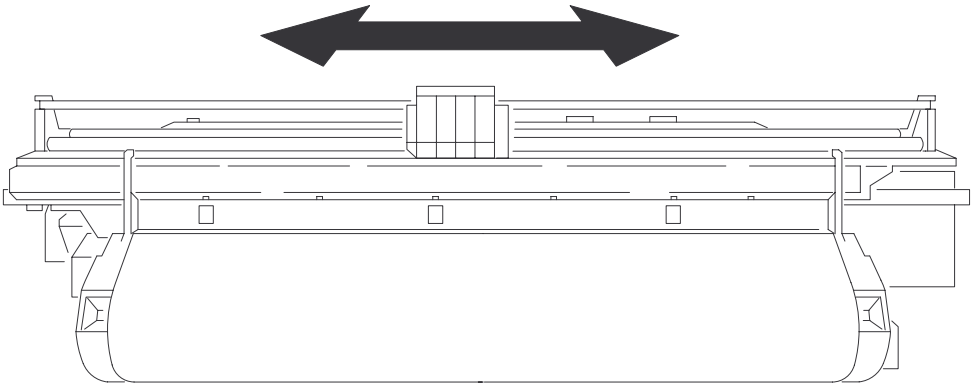


6 Remove the screw and washer that secure the encoder strip to the bracket on the left side of the plotter.





7 Carefully pull the encoder strip through and out of the carriage assembly.

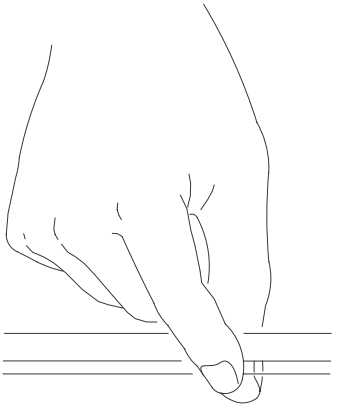


8 Lay the encoder strip on a flat surface.

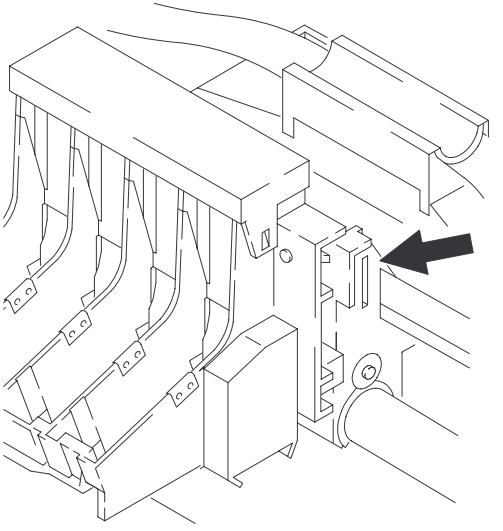
Reinstalling: *See following procedure.*

Reinstalling the Encoder Strip

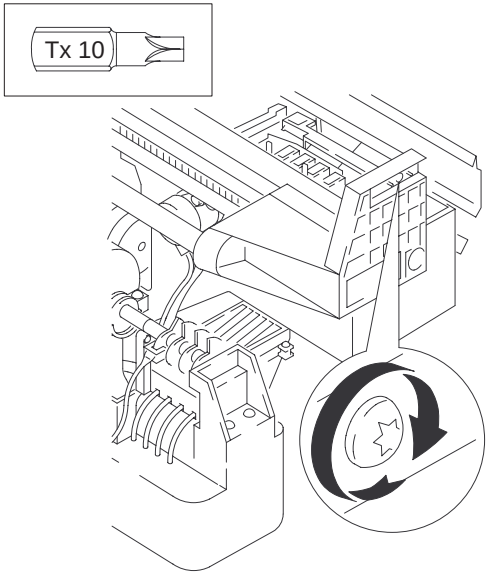
1 Ensure that the encoder strip is oriented with the transparent area down.



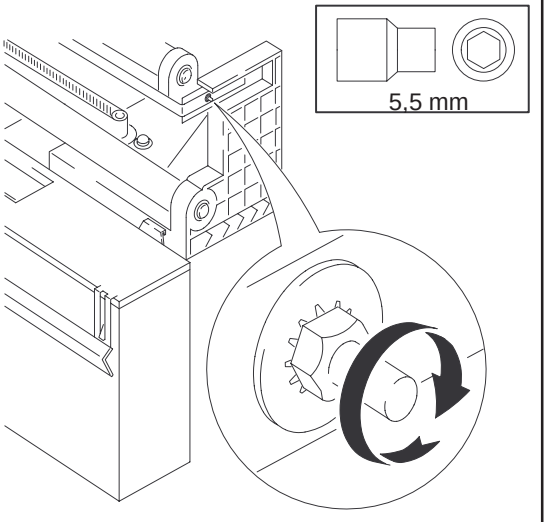
2 Feed the strip through the apertures in the cartridge-carriage assembly.



3 Use a washer and screw to attach the encoder strip to the bracket on the left side of the plotter.



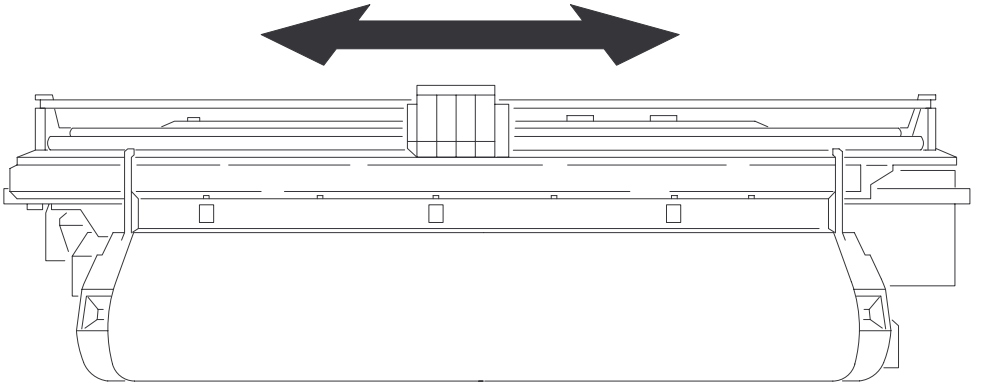
4 Use a washer and screw to attach the encoder strip to the bracket on the right side of the plotter.



Ensure that the metallic tensioner is correctly positioned in the holder.

5 Slide the carriage along the length of its travel to ensure free movement.

Make sure that the encoder strip does not bind or rub on the carriage.



Removing the Y-Tensioner Housing

1 Remove the window ➧ page 6-13.

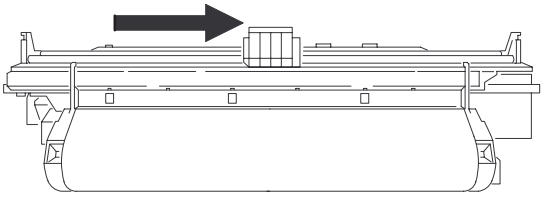
2 Remove the center cover ➧ page 6-14.

3 Remove the left endcover ➧ page 6-16.

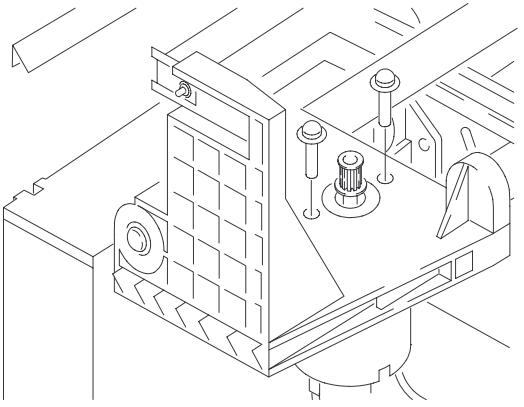
4 Remove the right endcover ➧ page 6-17.

5 Remove the encoder strip ➧ page 6-27.

6 Slide the cartridge carriage towards the center of the plotter to get access to the tensioner.

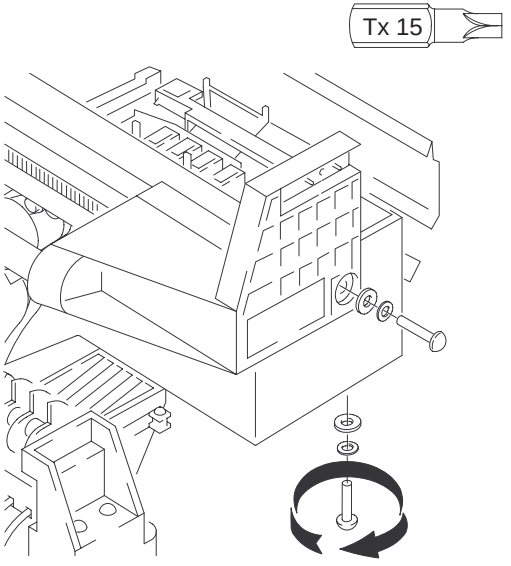


7 Remove the Y-axis motor ➧ page 6-24.



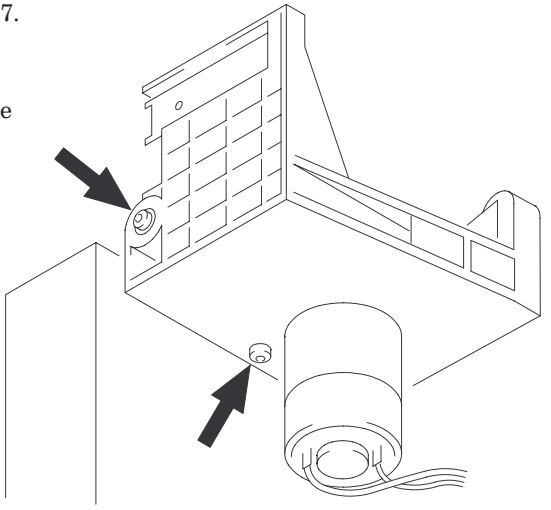
8 Remove the screws that attach the Y-tensioner housing.

9 Remove the Y-tensioner housing.



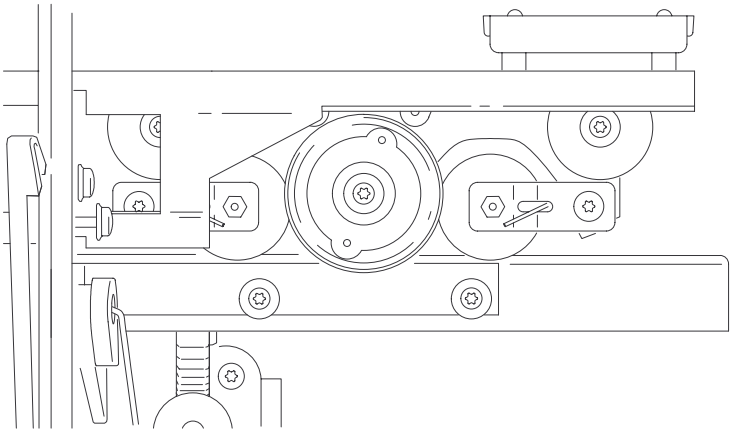
Removing the Y-Axis Motor Holder

1. Remove the window ➧ page 6-13.
2. Remove the center cover ➧ page 6-14.
3. Remove the right endcover ➧ page 6-17.
4. Remove the Y-axis motor ➧ page 6-24.
5. Remove the two screws that attach the Y-axis motor holder to the structure.
6. Remove the Y-axis motor holder.



Removing the Cutter

1. Remove the window ➧ page 6-13.
2. Remove the right endcover ➧ page 6-17.
3. Remove the Y-axis motor holder ➧ page 6-32.
4. Holding the cutter wheels in towards the center of the cutter carriage assembly, move the cutter assembly to the right and remove it from the front slider bar.
5. Slowly release the wheels to relax the spring tension on the wheel arms and lift the cutter assembly clear of the plotter.



Reassembling: *Ensure that the cutter is over the overdrive blade.*

Removing the Cartridge Carriage and Drive Belt

1 Remove the window ⧫ page 6-13.

2 Remove the center cover ⧫ page 6-14.

3 Remove the left endcover ⧫ page 6-16.

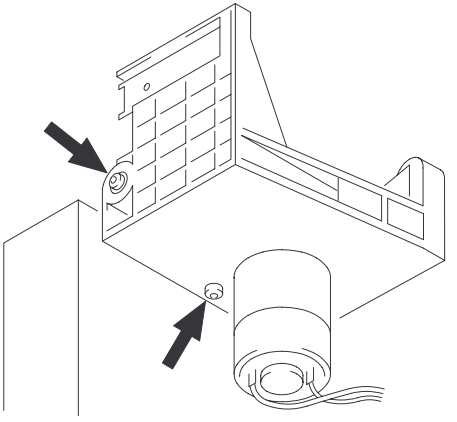
4 Remove the right endcover ⧫ page 6-17.

5 Remove the encoder strip ⧫ page 6-27.

6 Remove the trailing-cable ⧫ page 6-36.

7 Remove the Y-axis motor ⧫ page 6-24.

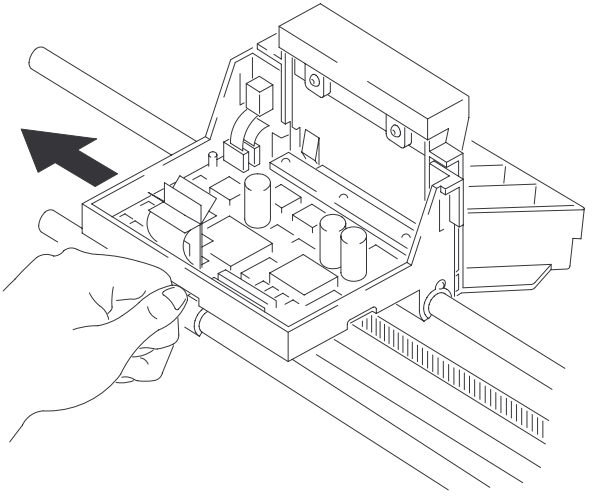
8 Remove the Y-axis motor holder ⧫ page 6-32.



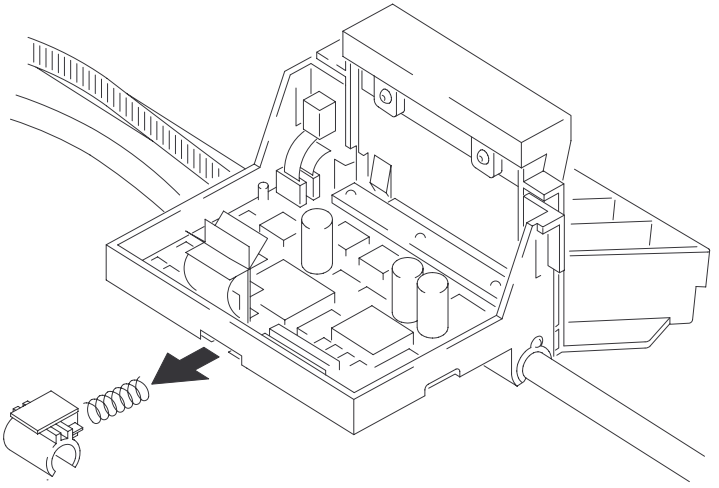
9 Remove the cutter ⧫ page 6-33.

10 Slide the cartridge carriage to the right side of the plotter.

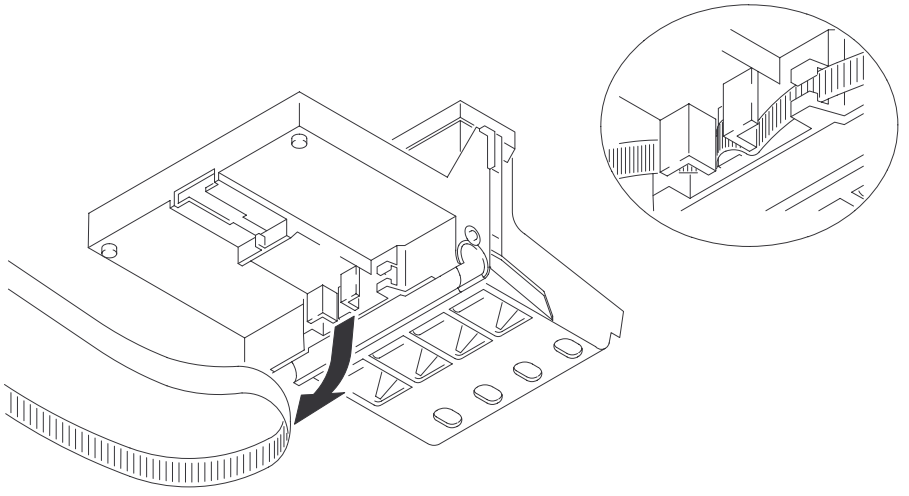
11 Hold the carriage rear bushing (mounted on the rear slider rod) and move the carriage to the right side of the plotter and free from the slider rods.



12 Separate the rear bushing and spring from the carriage assembly and carefully remove the carriage assembly and main drive belt from the plotter.



13 Remove the drive belt from the carriage assembly.



Calibration: *After reassembling the plotter, perform:*

- *Pen alignment test* ➧ *page 8-40*.
- *Line-sensor calibration* ➧ page 7-5.
- *Accuracy calibration* ➧ page 7-6.
- *Drop-detect calibration* ➧ *page 7-4*.

Removing the Trailing Cable

1 Remove the window ➧ page 6-13.

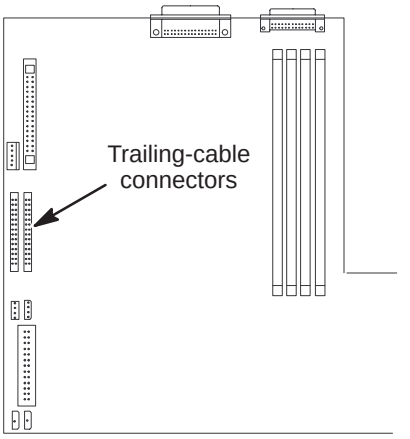
2 Remove the center cover ➧ page 6-14.

3 Remove the electronics-enclosure cover ➧ page 6-5.

4 Remove the left endcover ➧ page 6-16.

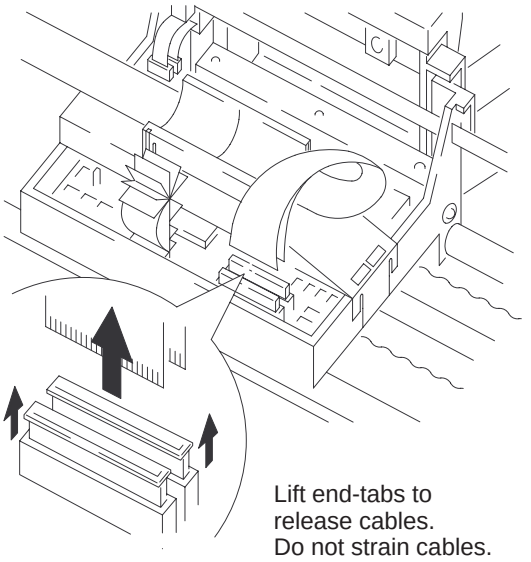
5 Remove the right endcover ➧ page 6-17.

6 Disconnect the trailing-cable connector from the main PCA, using needle nose pliers.

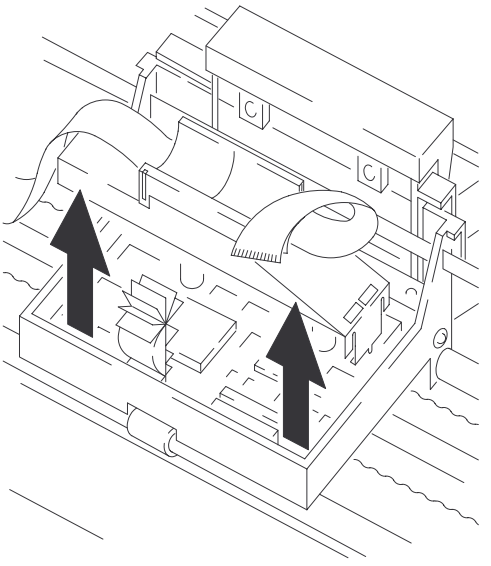


***Reassembling**: The connector will have the lever up. Put the cable into the connector. Lower the lever, making sure that the cable is positioned correctly.*

7 Use needle nose pliers to disconnect the trailing-cable connectors from the carriage PCA.

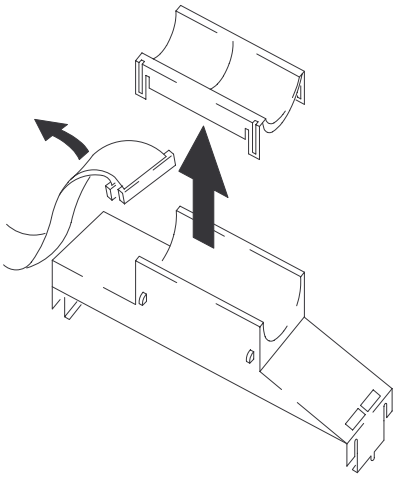


8 Remove the cable guide from the carriage PCA by pulling the sides out to unclip them and lifting the strip.



9 Remove the trailing-cable guide clip by pressing out its legs.

10 Gently force apart one corner of the guide and the trailing cable. This will release the cable from the retaining mechanism at that corner. Repeat for the other three corners.

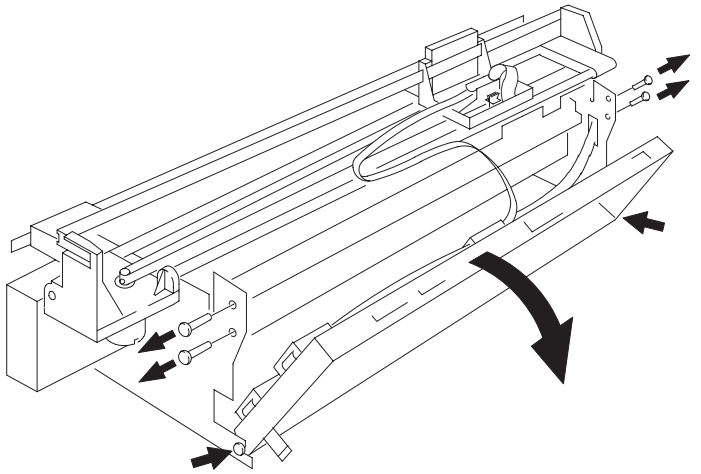


In order to access the trailing cable behind the electronics enclosure, perform the following steps:

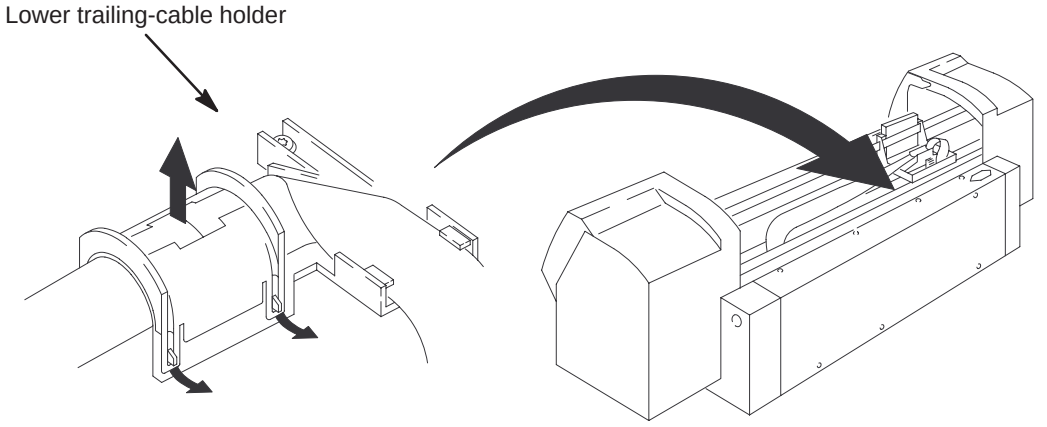
11 Remove the screw that attaches the trailing cable holder to the chassis.

12 Disconnect the following cables from the Main PCA: front-panel cable, X-axis motor encoder-cable, trailing cable, pinch-wheel sensor and media sensor cables, and X-axis motor and Y-axis motor cables.

13 Remove the two upper screws that attach the electronics enclosure to the sideplates from both the right and left sides, and loosen the two bottom screws. Swing the electronics enclosure outwards on its hinges. Release the trailing cable passing it through the ferrites.



14 Remove the clip from the lower trailing cable holder.



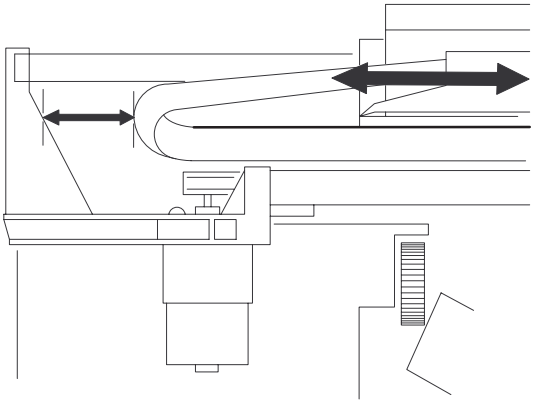
Reinstalling the Trailing Cable

Reinstall the trailing cable following the previous steps in the reverse sequence. After reinstalling, two adjustments are required to ensure correct functionality:

LENGTH ADJUSTMENT

1 Move the carriage to the maximum right-end position (interacting with the Y-axis motor holder).

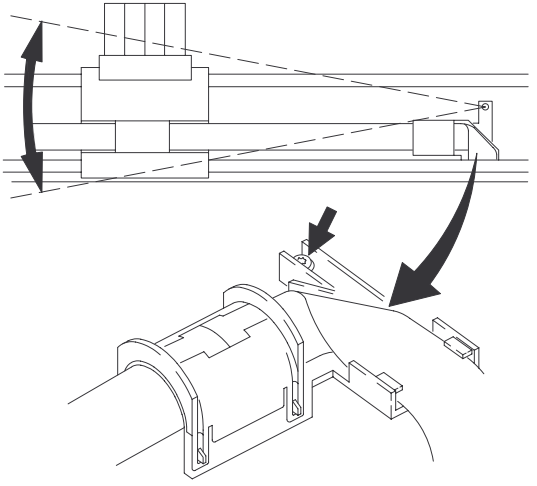
2 Release the trailing-cable clip on the carriage, and adjust the length of the trailing cable to avoid interaction with the Y-axis motor holder. The minimum distance between the trailing cable and the holder should be 0.5 cm.



ANGULAR ADJUSTMENT

1 Loosen the screw that attaches the lower trailing-cable holder to the chassis.

2 Perform the angular adjustment to align the trailing cable with the slider rods and belt.



Removing the Starguard Assembly

1 Remove the window ➧ page 6-13.

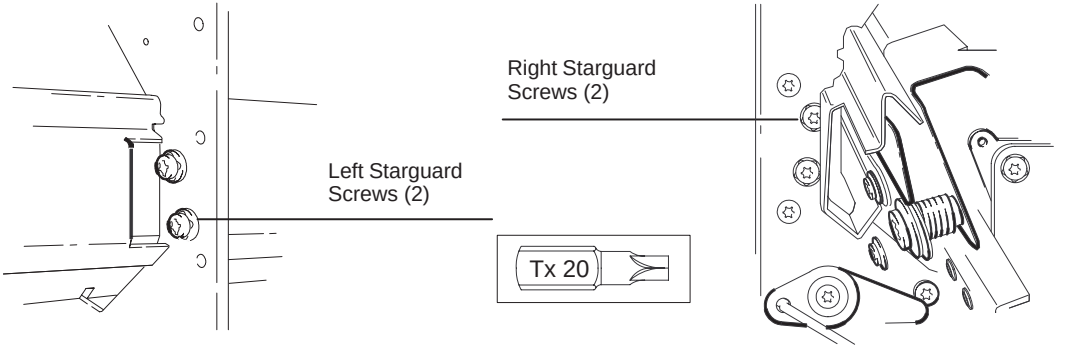
2 Remove the left endcover ➧ page 6-16.

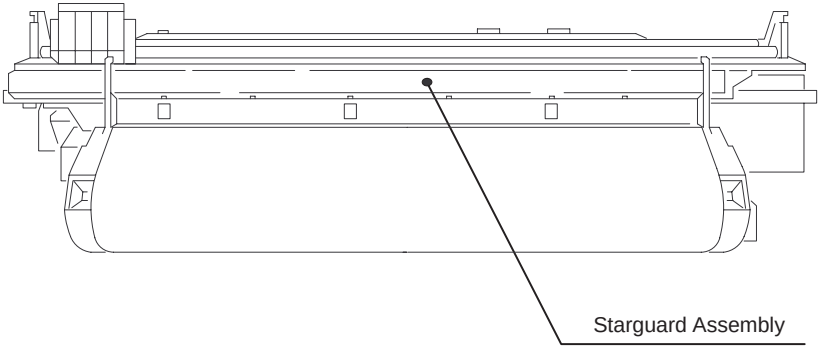
3 Remove the right endcover ➧ page 6-17.

4 Remove the cutter ➧ page 6-33.

5 Loosen the two upper screws that attach the starguard assembly to the left and right sideplates until the ends of the screws are flush with the inner surfaces of the sideplates.

6 Rotate the top of the starguard assembly toward the rear of the plotter so that it clears the sideplate.



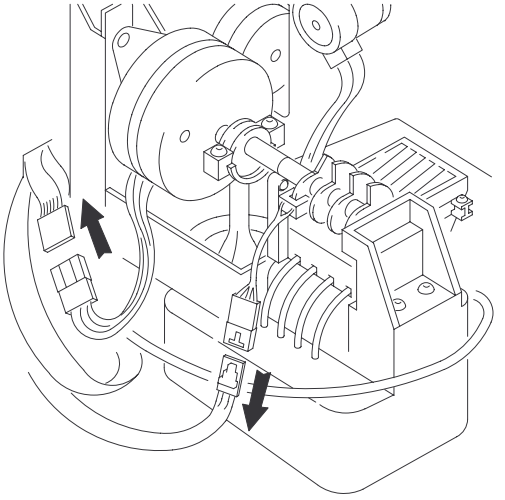


Removing the Primer

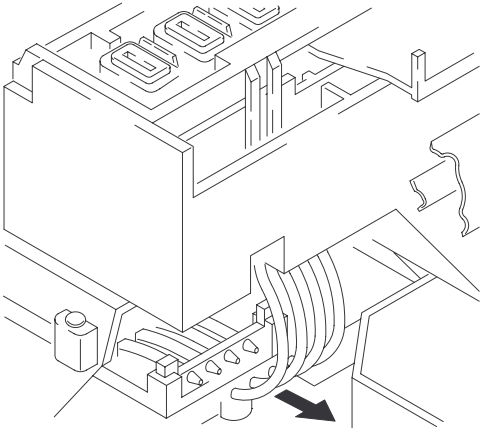
1 Remove the window ➧ page 6-13.

2 Remove the left endcover ➧ page 6-16.

3 Disconnect the primer assembly and sensor cable connectors.

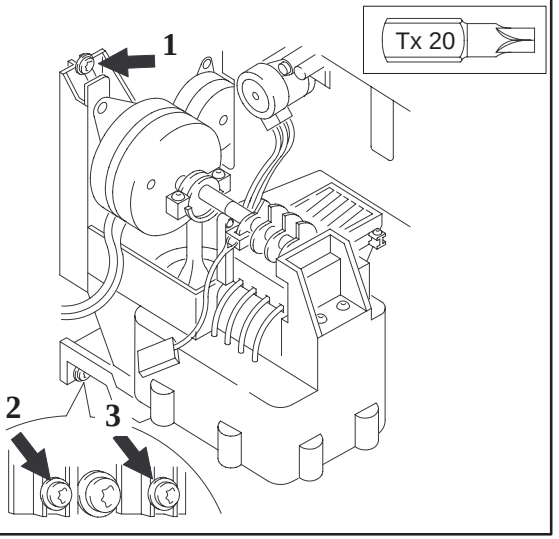


4 Disconnect the four rubber tubes from the primer assembly.



5 Loosen the bottom screws and remove the top screw that attaches the primer assembly to the left sideplate.

6 Slide the primer assembly out of the plotter.



Removing the Service Station

When performing this procedure, be careful to avoid staining your hands and clothing with ink deposited in the service station.

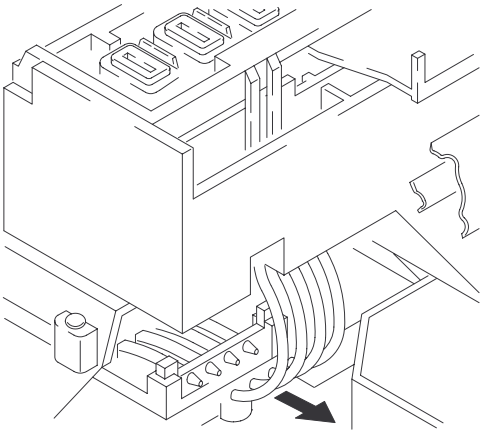
1 Remove the window ➧ page 6-13.

2 Remove the center cover ➧ page 6-14.

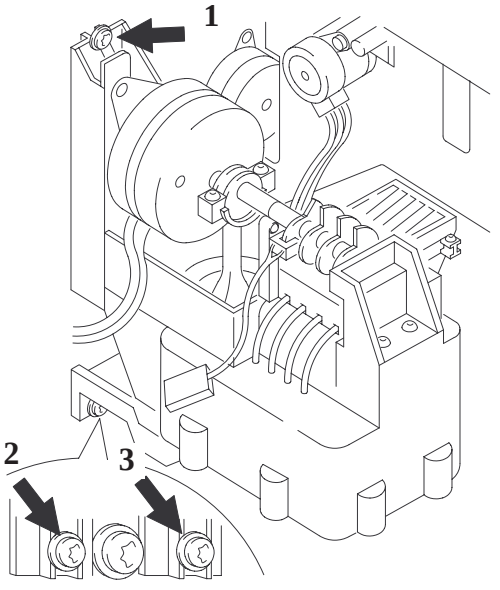
3 Remove the left endcover ➧ page 6-16.

4 Move the cartridge carriage to the center of the plotter.

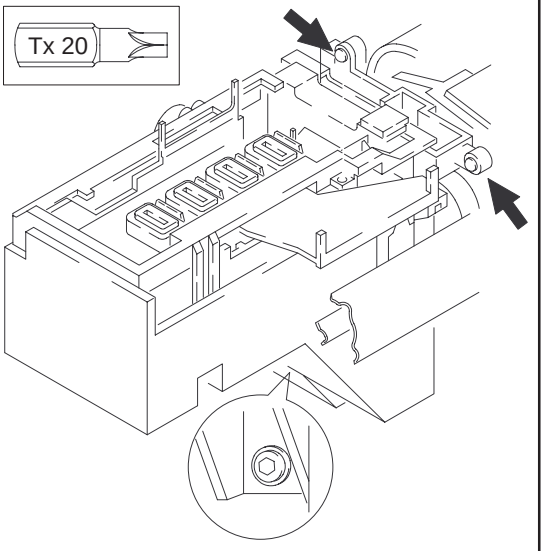
5 Disconnect the four rubber tubes from the primer assembly.



6 Remove the primer



7 Remove the three screws that attach the service-station housing to the left sideplate.



WARNING

Do not turn upside down. The spittoon may be full of ink.

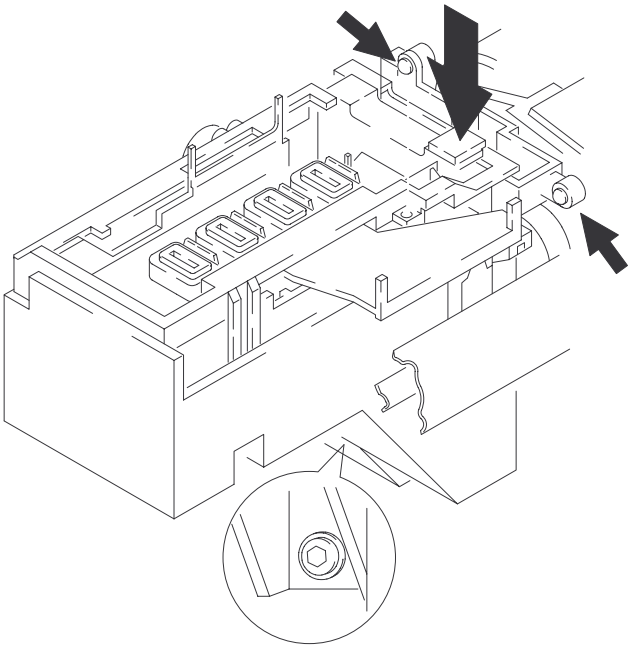
Reassembling:

1 *Install the two upper screws leaving them loose.*

2 *Press down on the sloping plastic and tighten the left upper screw as shown. Prevent any slackness or motion of the service station while it is being screwed in place. This is very important.*

3 *Tighten the right upper screw.*

4 *Install the bottom screw.*



WARNING

Be careful not to damage the self-torque screws or place them incorrectly

Calibration: *After reassembling the plotter, perform:*

- *Accuracy calibration* ➧ page 7-6.
- *Drop-detect calibration* ➧ *page 7-4.*

Removing the Spittoon

1 Remove the window ➧ page 6-13.

2 Remove the center cover ➧ page 6-14.

3 Remove the right endcover ➧ page 6-17.

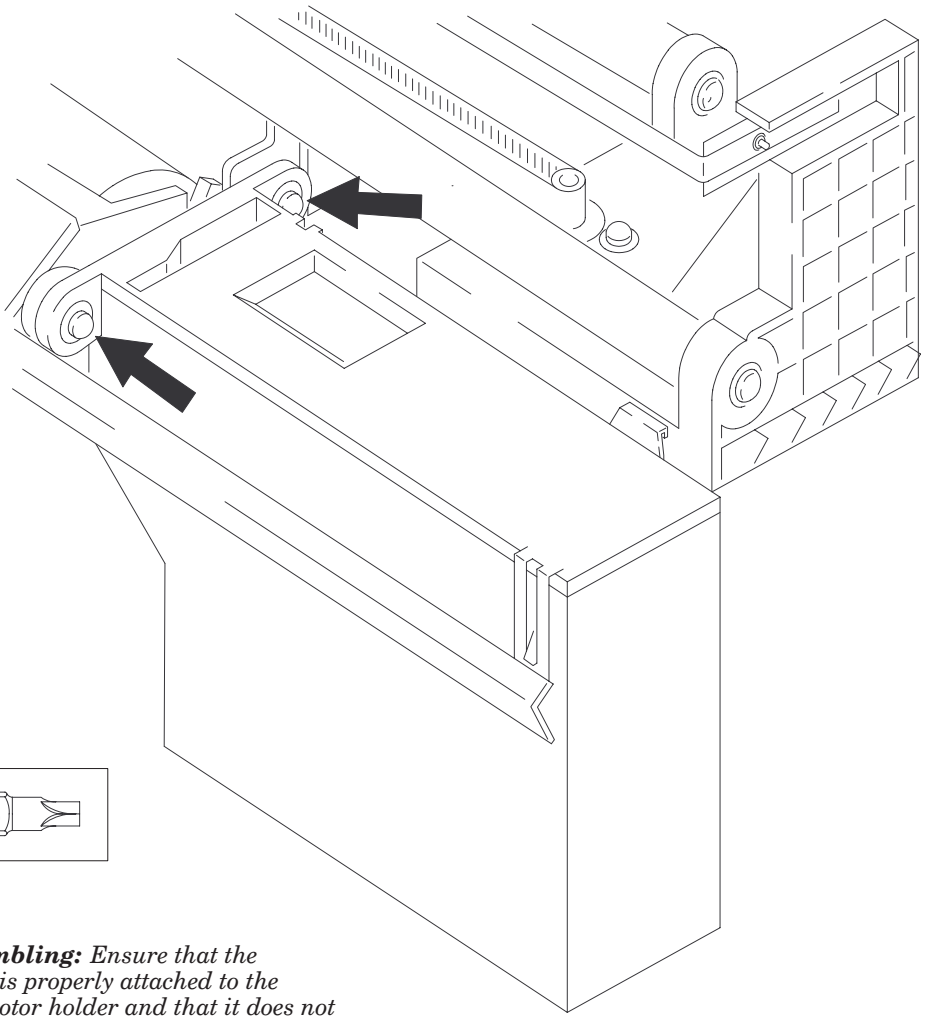
4 Identify the location of the spittoon.

WARNING

Do not turn up-side down. The spittoon may be full of ink.

5 Remove the screws that attach the spittoon to the structure.

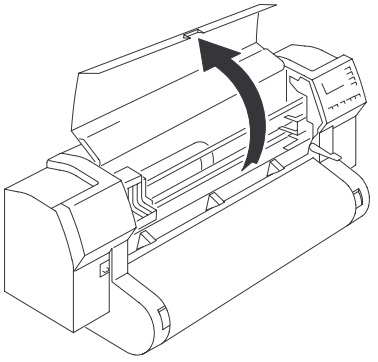
6 Remove the spittoon.



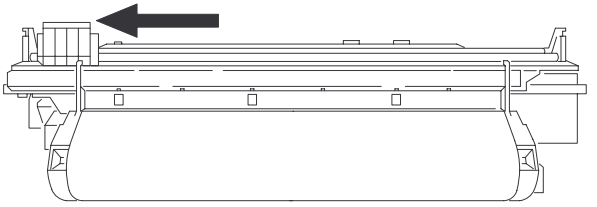
Reassembling: *Ensure that the spittoon is properly attached to the Y-axis motor holder and that it does not interact with the cartridge carriage.*

Removing the Bail Assembly

1 Open the window.



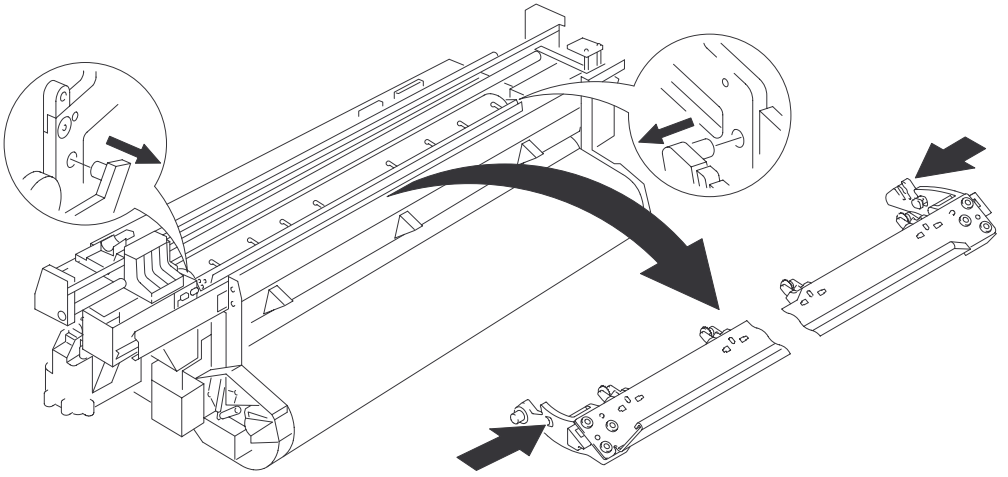
2 Move the cartridge-carriage to the left side of the plotter.



WARNING

In the following step, take care not to cut yourself on the encoder strip.

3 Push both of the plastic ends of the bail assembly towards each other to release them from the holes in the sideplates. Lift the bail assembly up and clear of the plotter.



Removing the Bail Stepper Motor

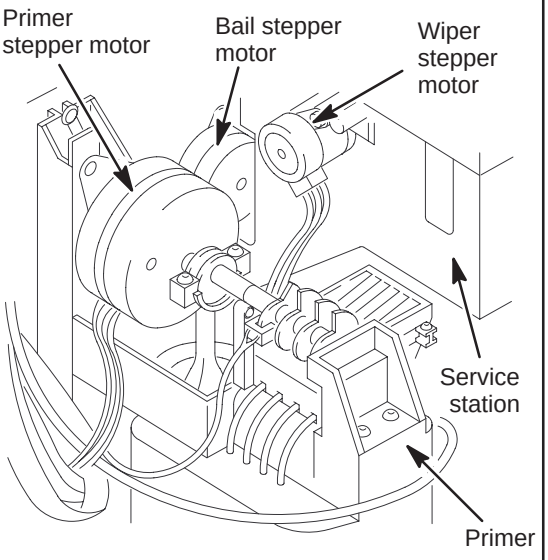
1 Remove the window ➧ page 6-13.

2 Remove the left endcover ➧ page 6-16.

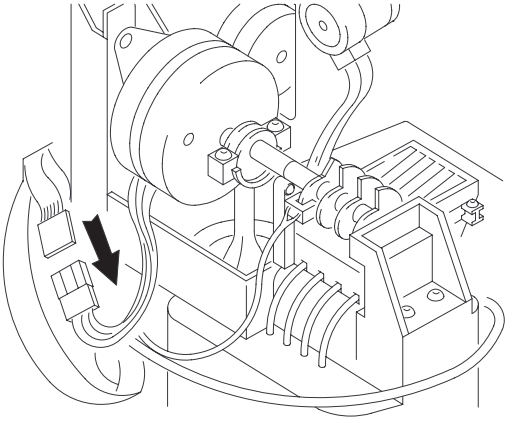
3 Remove the primer ➧ page 6-41.

4 Remove the service station ➧ page 6-42.

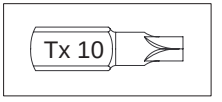
5 Locate the three stepper motors.

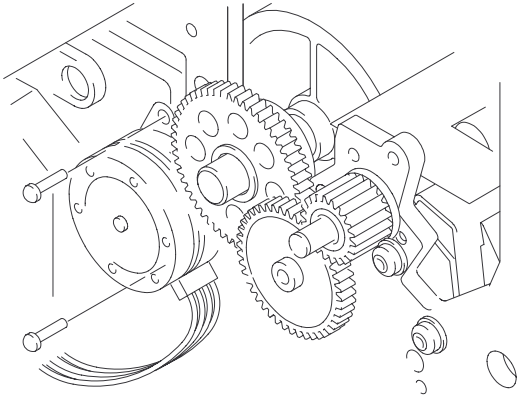


6 Disconnect the short motor cable from the cable assembly to the main PCA.



7 Remove the two retaining screws. Remove the motor, being careful not to force any gear engagements.

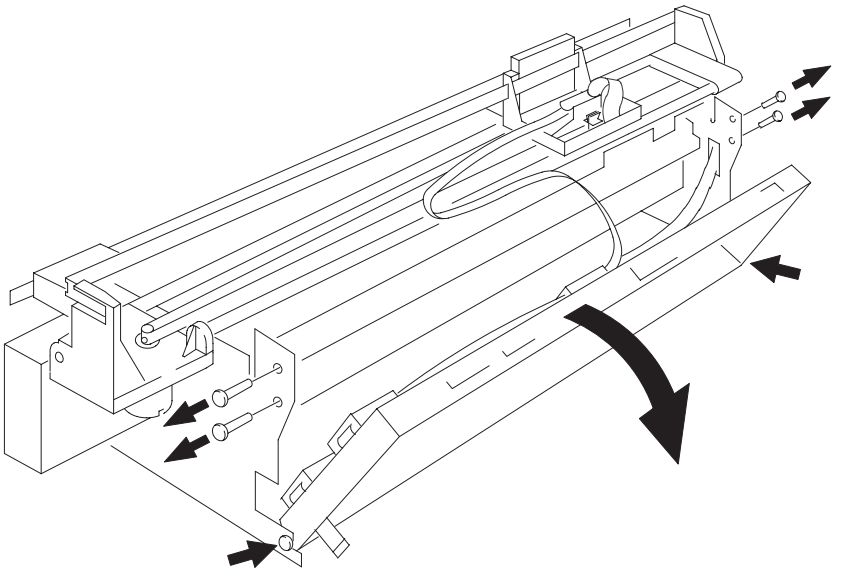




Reassembling: *Rest the bottom arm of the linkage on top of the stepper-motor shaft.*

Removing the Cable Assembly

1. Remove the window ⧫ page 6-13.
2. Remove the center cover ⧫ page 6-14.
3. Remove the electronics enclosure cover ⧫ page 6-5.
4. Remove the right endcover ⧫ page 6-17.
5. Remove the left endcover ⧫ page 6-16.
6. Remove the main PCA ⧫ page 6-9.
7. Remove the screw that attaches the trailing-cable holder to the chasis.
8. Remove the two upper screws that attach the electronics enclosure to the side plates. Loosen the two bottom screws.
9. Swing the electronics enclosure outwards on its hinges.
10. Release the cable assembly.



Removing the Overdrive Assembly

1 Remove the window ➧ page 6-13.

2 Remove the center cover ➧ page 6-14.

3 Remove the left endcover ➧ page 6-16.

4 Remove the right endcover ➧ page 6-17.

5 Remove the bail assembly ➧ page 6-45.

6 Remove the encoder strip ➧ page 6-27.

7 Remove the carriage (Y-axis) motor ➧ page 6-16.

8 Remove the Y-axis motor holder ➧ page 6-32.

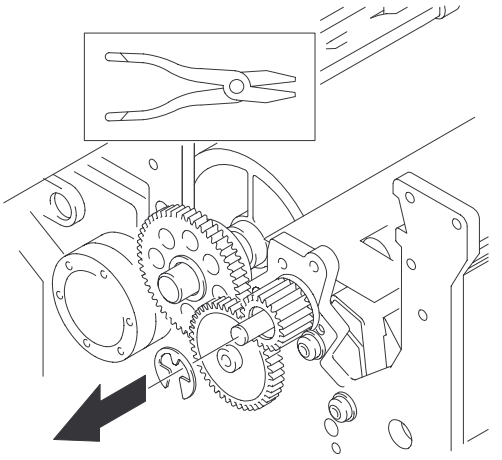
9 Remove the cutter ➧ page 6-33.

10 Remove carriage ➧ page 6-34.

11 Remove the primer ➧ page 6-41.

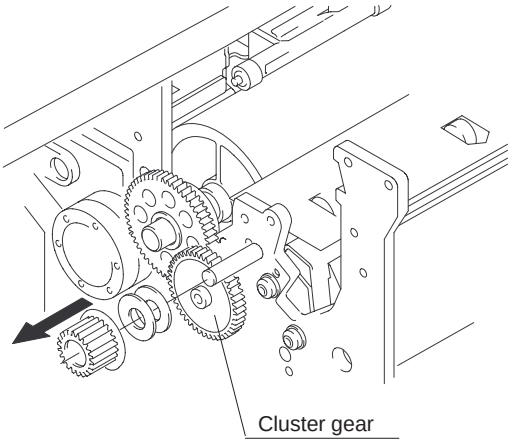
12 Remove the service station ➧ page 6-42.

13 Remove the clutch retaining ring that secures the overdrive clutch to the overdrive roller.



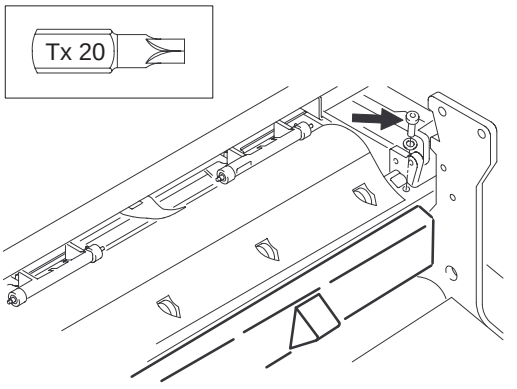
14 Remove the clutch and washers

15 Remove the overdrive cluster gear from the plotter.



Reassembling: *Ensure that you install the clutch as shown in the figure. If you install it in reverse, it will cause ink-smearing and paper jam problems.*

16 Remove the screw from the top of each of the overdrive support mounts.



17 Pull the right side of the overdrive assembly up.

18 Rotate the top of the assembly towards the back of the plotter and pull the assembly to the right, out from the left side-plate.

Be careful not to lose the bushing on the left side of the overdrive roller.

Removing the Drive Roller Assembly

1 Remove the electronics-enclosure cover ➧ page 6-5.

2 Remove the window ➧ page 6-13.

3 Remove the center cover ➧ page 6-14.

4 Remove the left endcover ➧ page 6-16.

5 Lift the left front trim clear of the plotter.

6 Remove the right endcover ➧ page 6-17.

7 Remove the front-panel assembly ➧ page 6-18.

8 Remove the carriage motor ➧ page 6-24.

9 Remove the media motor ➧ page 6-25.

10 Remove the encoder strip ➧ page 6-27.

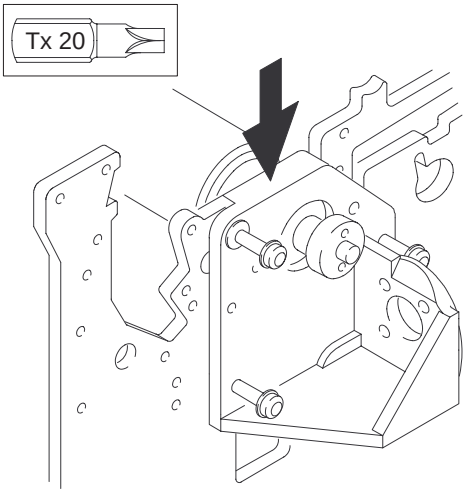
11 Remove the bail assembly ➧ page 6-45.

12 Remove the service station ➧ page 6-42.

13 Remove the overdrive assembly ➧ page 6-48.

14 Remove the three screws that attach the media-motor mount to the right sideplate.

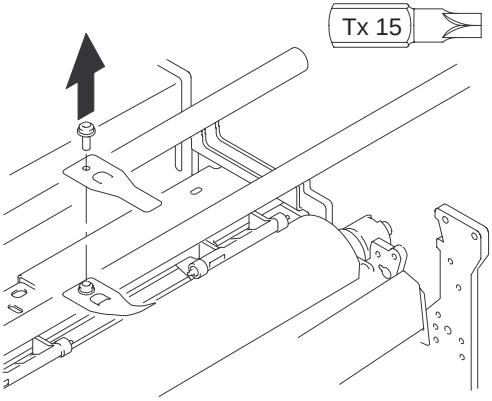
Reinstalling: *Press down on the media mount as you replace the three screws. This is to ensure correct spacing between the drive roller and the cartridge nozzles.*



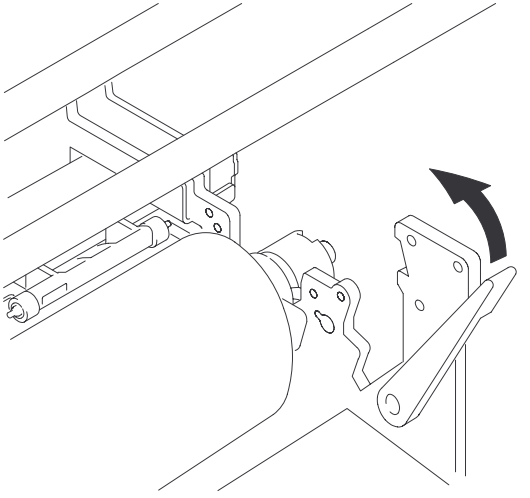
15 Unclip the cables from the holding clip underneath the media-motor mount.

16 Lift the mount clear of the plotter.

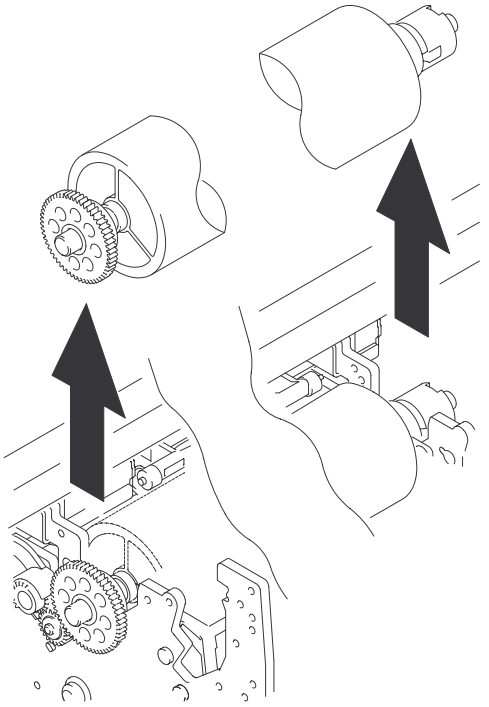
17 Remove the screw that attaches the media director to the chassis assembly. Remove the media director.



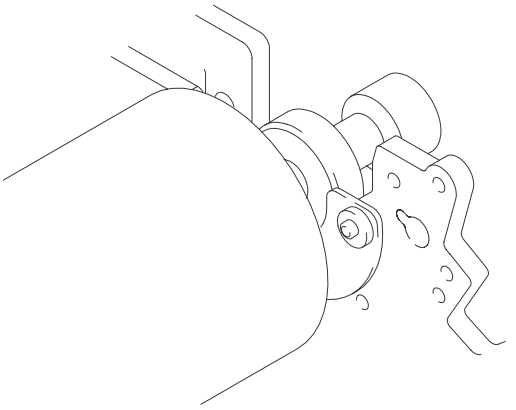
18 Pull the pinch-arm lever forward to raise the pinch-arm assembly.



19 Remove the drive roller from the plotter.



Reassembling: *Ensure that the bearing assembly at the right end of the drive roller is seated in the right sideplate and completely on the right side of the axial bias plate.*

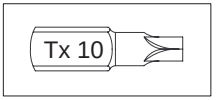


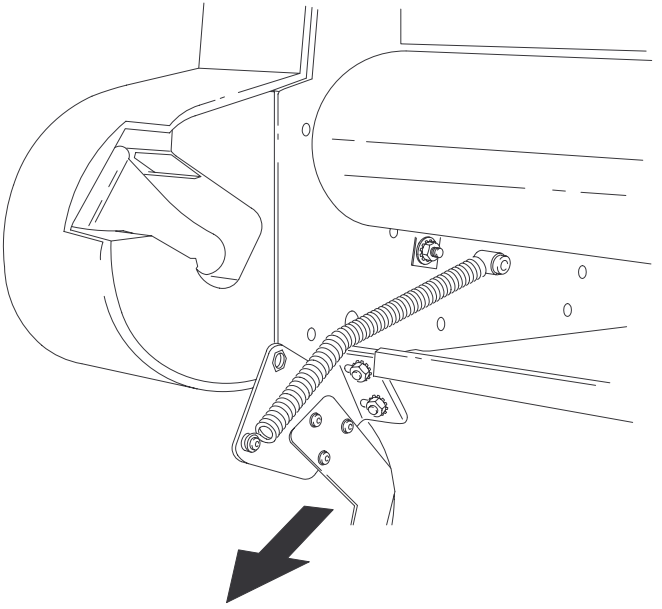
Calibration: *After reassembling the plotter, perform:*

- *Accuracy calibration* ➧ page 7-6.
- *Drop-detect calibration* ➧ *page 7-4.*

Removing the Rollfeed Cover Assembly

1. Lower the rollfeed cover and hold it about halfway open.
2. Remove the screws and washers that attach the left and right springs to the pivot spring anchor pins.
3. Loosen the two nuts that attach each end of the rollfeed cover to the pivots.
4. Pull the rollfeed cover clear of the plotter.





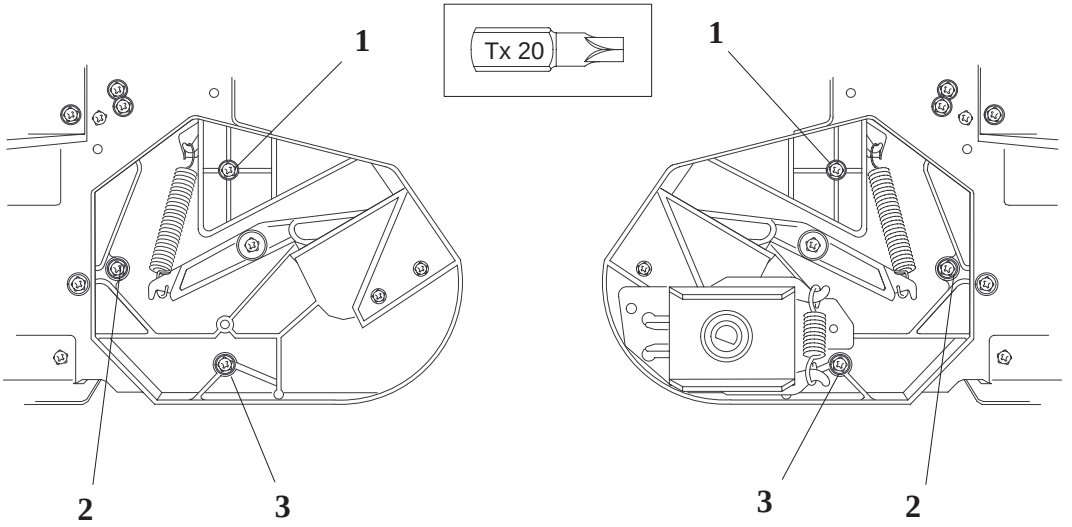
Removing the Rollfeed Module Assemblies (Left and Right)

1 Remove the left endcover ⧫ page 6-16.

2 Remove the right endcover ⧫ page 6-17.

3 Remove the rollfeed cover assembly ⧫ page 6-51.

4 Remove the three screws that attach the rollfeed module assembly to each sideplate.



Removing the Entry Platen

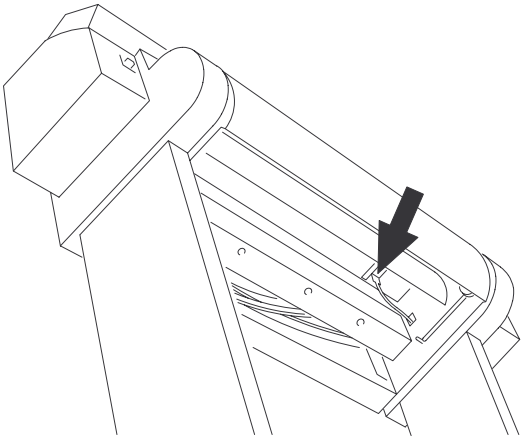
1 Remove the window ➧ page 6-13.

2 Remove the center cover ➧ page 6-14.

3 Remove the left endcover ➧ page 6-16.

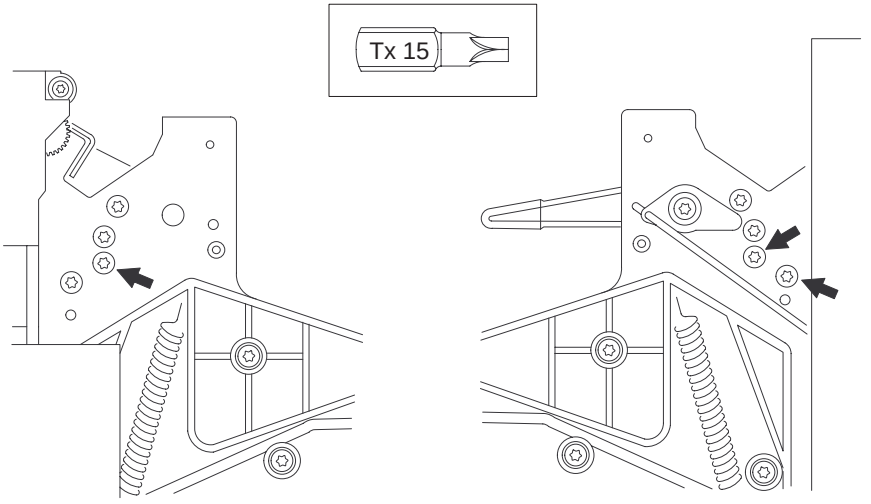
4 Remove the right endcover ➧ page 6-17.

5 Release the media sensor cable from all the clamps. Remove the media sensor from the entry platen.

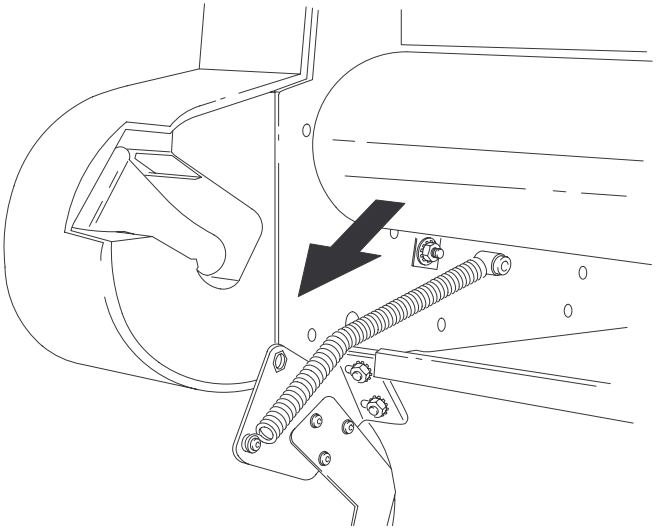


6 Lower the rollfeed cover to the open position.

7 Loosen the wedge screws that attach the entry platen to the left and right sideplates.



8 Pull the entry platen down, forward and clear of the plotter.



Removing the Cutter-Enclosure Assembly

1 Remove the left endcover ➧ page 6-16.

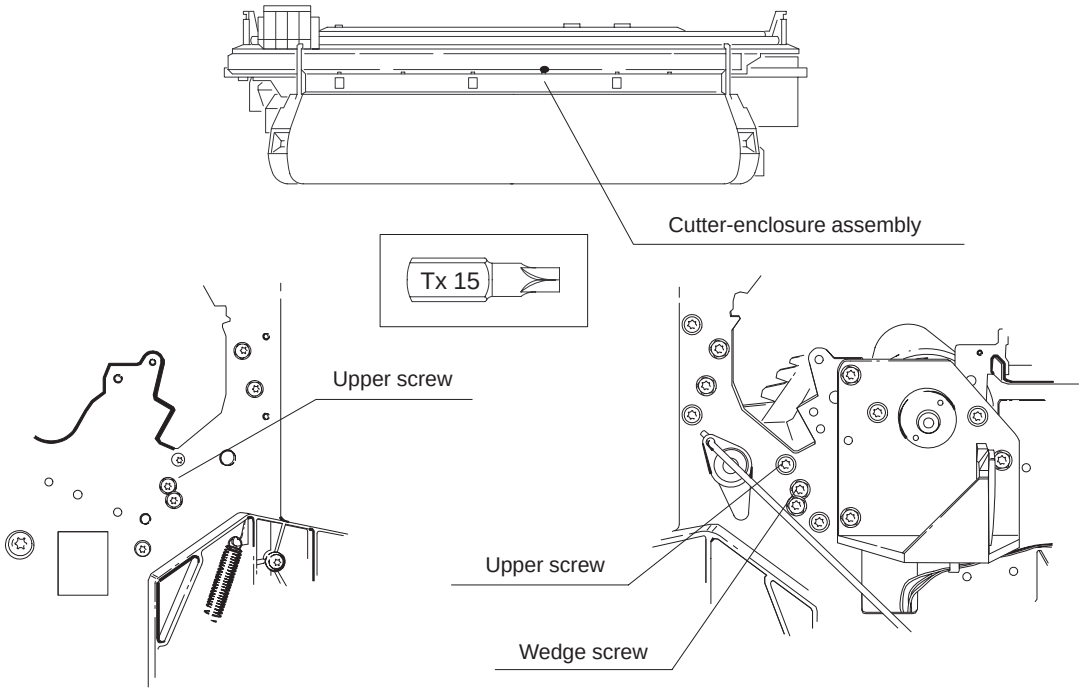
2 Remove the right endcover ➧ page 6-17.

3 Remove the overdrive assembly ➧ page 6-48.

4 Remove the upper screw from the left side plate.

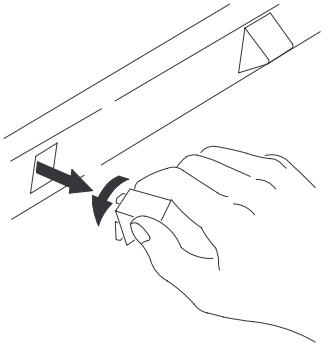
5 Remove the wedge screw and the upper screw from the right side-plate.

6 Pull the cutter-enclosure assembly forward and clear of the plotter.



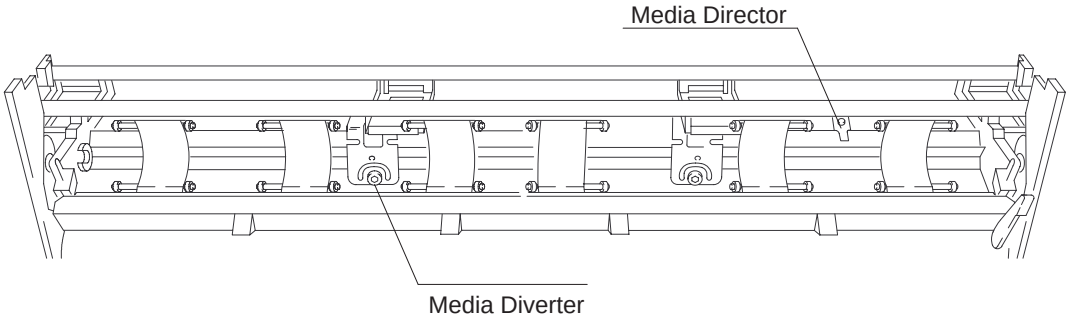
7 To remove the media guides from the cutter enclosure, grasp each one firmly, twist it counter-clockwise, and pull it clear of the enclosure.

***Reassembling**: The rear edge of the cutter enclosure assembly slides in between the two rear pins on the left and right sideplates during replacement.*



Removing the Media Diverter

1. Remove the window ➧ page 6-13.
2. Remove the left endcover ➧ page 6-16.
3. Remove the right endcover ➧ page 6-17.
4. Remove the encoder strip ➧ page 6-27.
5. Remove the bail assembly ➧ page 6-45.
6. Remove the overdrive assembly ➧ page 6-48.
7. Remove the drive-roller assembly ➧ page 6-49.
8. Carefully bend each media diverter and pull it free from the chassis assembly.



Removing the Pinch-Arm Assemblies

1 Remove the drive roller assembly ➧ page 6-49.

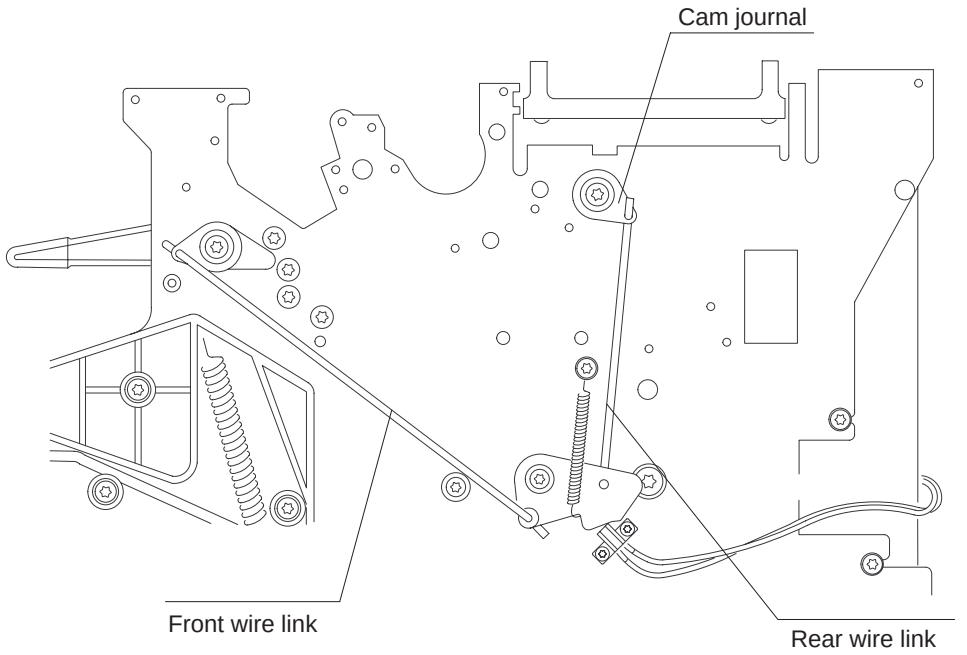
2 Push the pinch-arm lever (located on the right side of the entry platen) into the down position.

3 On the right side of the plotter, disconnect the rocker-plate tension spring to relieve any remaining tension on the pinch-arm lift mechanism.

4 On the right side of the plotter, loosen the cam-journal screw by turning it 12 times counter-clockwise and push the screw in towards the center of the plotter.

5 Repeat step **4** and try to pull the cam journal and rear wire link to the right and clear of the bar cam.

If unsuccessful, turn the cam-journal screw two more times counter-clockwise, push the screw in towards the center of the plotter and try again to pull the cam journal and rear wire link to the right and clear of the bar cam. Repeat these actions until successful.



Reassembling: *Before reinstalling the cam journal, tighten the nut and screw just to the point where the nut is inside the journal. Reinstall the journal and slightly tighten the screw.*

CAUTION

Reassembling: *Do not overtighten the cam-journal screw. Doing so could break the journal, cause the bar cam to enter the sideplate hole and thus restrict the action of the pinch-arm lever.*

6 Hold the cam journal on the left side of the plotter with your left hand.

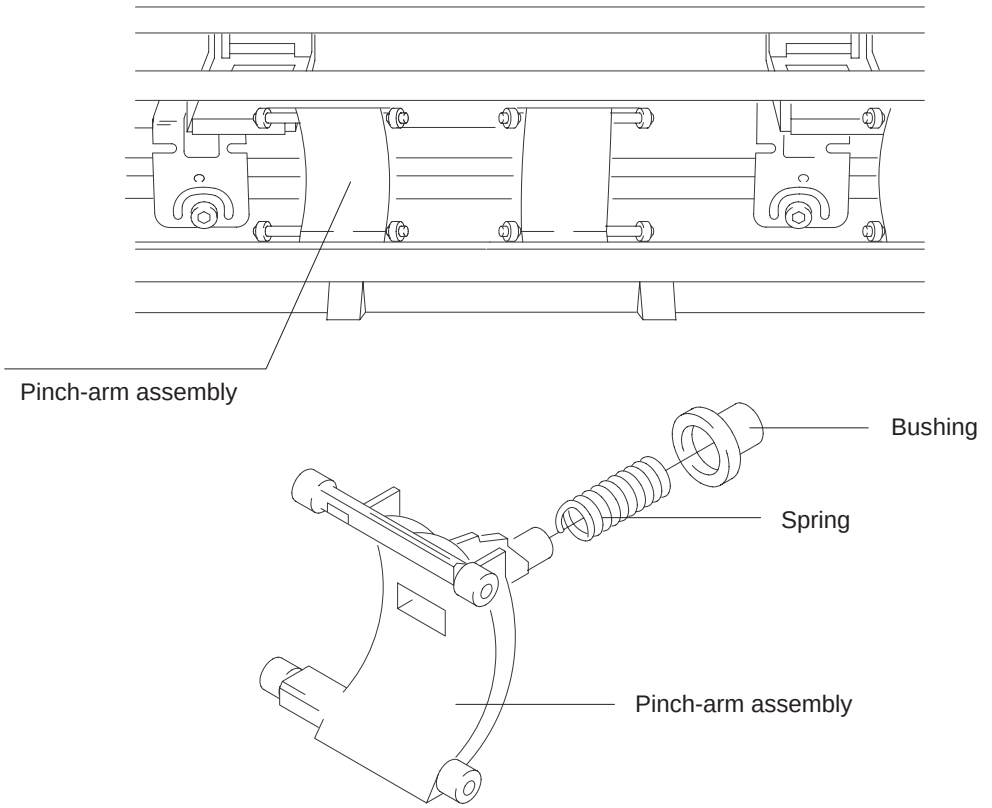
7 Reach around to the front of the plotter and push the top of the bar cam slightly towards the rear of the plotter, simultaneously pulling the cam journal to the left, so that the bar cam can begin to slide out of the left sideplate.

Reassembling: *Position the bar cam* ***between*** *the left and right sideplates, or the lift mechanism will not work.*

8 While pressing the right-most pinch-arm assembly towards the rear of the plotter against its spring tension, slide the bar cam left until it clears that pinch-arm assembly.

9 Remove the pinch-arm assembly and spring from the chassis.

Take care that the spring does not fall.



10 Repeat the steps **8** and **9** until all of the pinch-arm assemblies have been removed or until you have removed the pinch-arm assembly that is to be replaced.