Installation Guide:
Thermal 3 head on a Magnus VLF

Visual Reference Guide English

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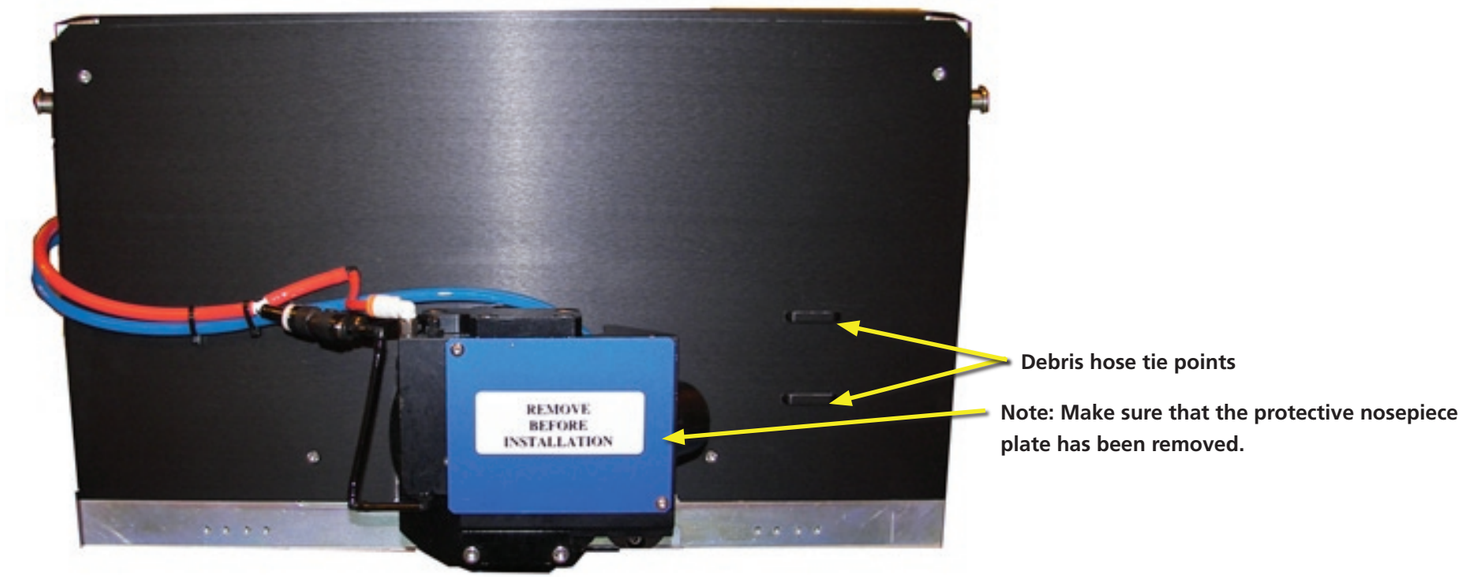
719-00438A-EN Rev C

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May 2008

Installation Overview

1. Prepare the device.
2. Adjust the yaw.
3. Install the flexures and blocks.
4. Install the head on the carriage.
5. Connect the cables and hoses.
6. Set up the head.
7. If needed, optimize the sum and error.
8. Re-assemble the device.



Thermal 3 head - front



Thermal 3 head - rear

Prepare the device

1. If required, remove the edge detect camera (see the device-specifc procedures on TechPlanet).
2. Gather details about the media types and NVS parameters to be loaded into the thermal head.
3. Load a plate on the drum to facilitate centering the new head. Be careful to choose the correct plate thickness.
4. Position the carriage using the command `>> carriage moveto 1096`
5. Unlock the door using the command `>> door unlock`
6. Open the door.
7. Turn off the *Kodak Magnus* VLF platesetter.
8. Remove all necessary service panels.
9. If this is a head replacement, perform these additional procedures:

   • Remove the old head.
   See the procedure *TH3 Head Lifting Crane (http://techplanet.creo.com/output/computer_to_plate/magnus_vlf_al/content/docs/agile/719-00564A-A.pdf)*.
   • Purge the coolant from the old head (see the procedure *Draining the coolant from a TH3 head*).
   • Replace the filters.
   See the procedure *Installing or Replacing TH3 Head Air Filters* (http://techplanet.creo.com/AgileContent/Extranet/719-00776A-A98108909.pdf).

Laser and mechanical safety



CAUTION:
Ensure that you follow all necessary laser and device safety precautions when completing this procedure.
To use this document the FSE (Field Service Engineer) must have attended and passed a thermal head introductory course and be familiar with the necessary safety precautions.
The FSE must be familiar with the safety procedures for the device.

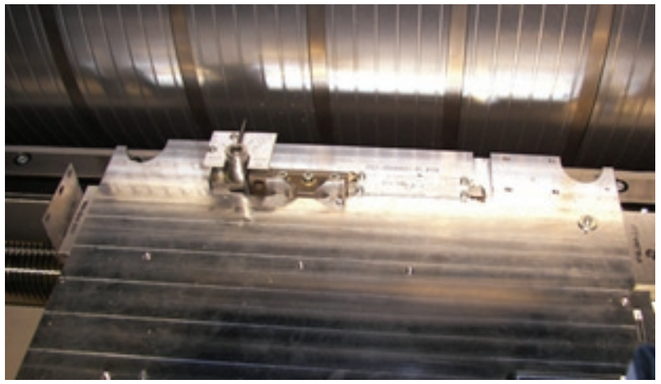
Care in handling



CAUTION:
Potential high voltage hazard. The TH3 Head has a switched power supply that operates at 380 VDC, 5A.
Do not disable any safety interlocks that protect against this potential high voltage hazard.
The TH3 Head weighs 45KG (~100lbs) and must only be lifted or moved using the head lifting crane designed for this purpose. Do not attempt to lift or move the TH3 Head without using the head lifting crane.

1

Locate the yaw adjustment on the carriage. Check that the yaw setting on the carriage matches the yaw setting on the label, and that the head is using the correct polarity as indicated on the label.



2

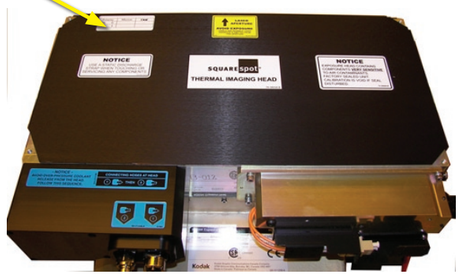
If the polarity setting is incorrect, adjust it by using the coomand:

>>`lvd mode plot` [`high` or `low`]

If the yaw setting is incorrect, note the yaw value on the label on top of the head.



In this example, the polarity of the head is Low and the value is -0.12.



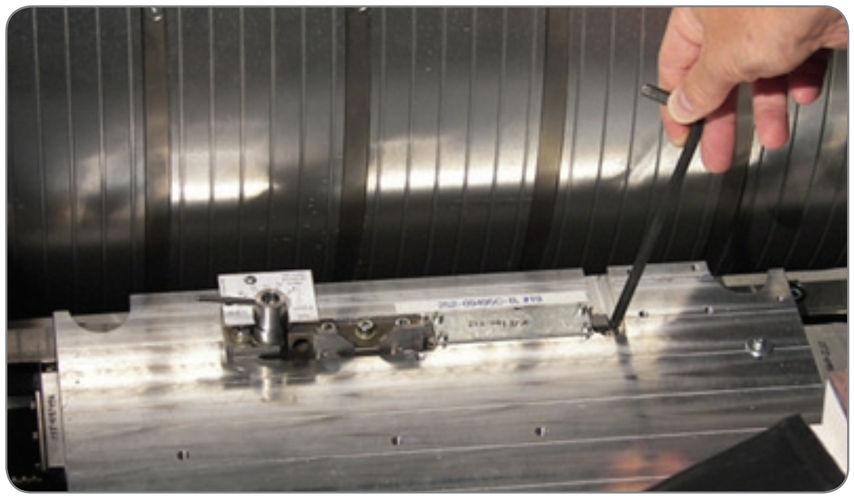
3

Loosen the three M4 screws in the front V–groove. Loosen the screw in the center of the yaw adjustment knob.



4

Using an 8mm hex key, reposition the rod, place the head of the hex key beside the rod and gently twist. This will apply pressure to the rod and move it to the left.



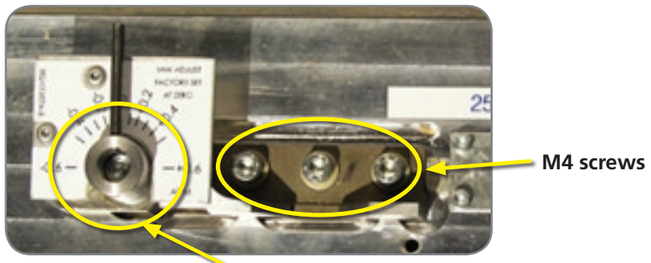
5

Using an 8mm hex key, apply steady downward pressure on the mechanical reference points. Turn the yaw adjustment knob to the setting indicated on the label. If the setting is negative you must reposition the rod again (see step 3).



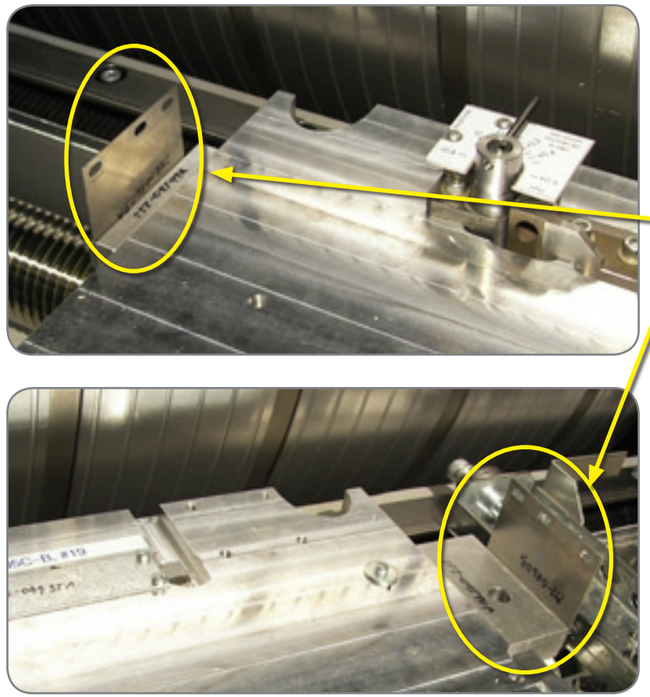
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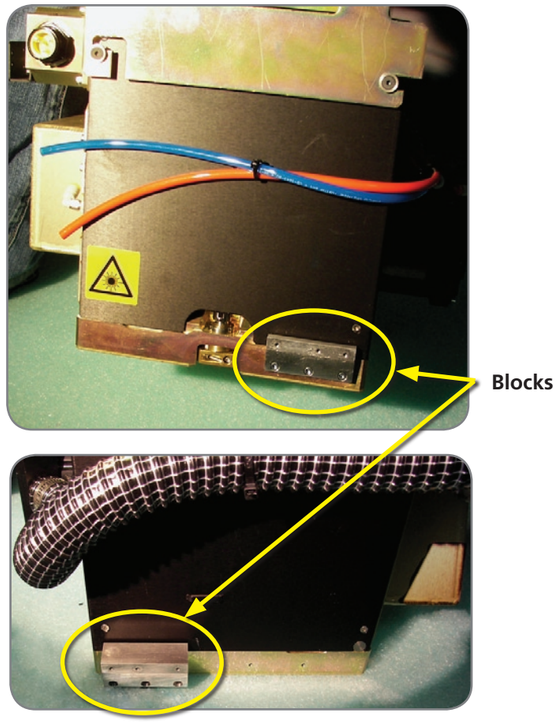
Tighten the three M4 screws. Tighten the screw in the center of the adjustment knob.



Install the flexures and blocks

1. Install the flexures on the carriage, and install the blocks on the sides of the head as shown. Tighten the screws finger-tight.





2. Remove the protective lens cover by removing the two screws.

Install the head on the carriage

1. Install the head on the carriage using the head lifting crane.

   See the procedure *TH3 Head Lifting Crane (http://techplanet.creo.com/output/computer_to_plate/magnus_vlf_al/content/docs/agile/719-00564A-A.pdf)*.

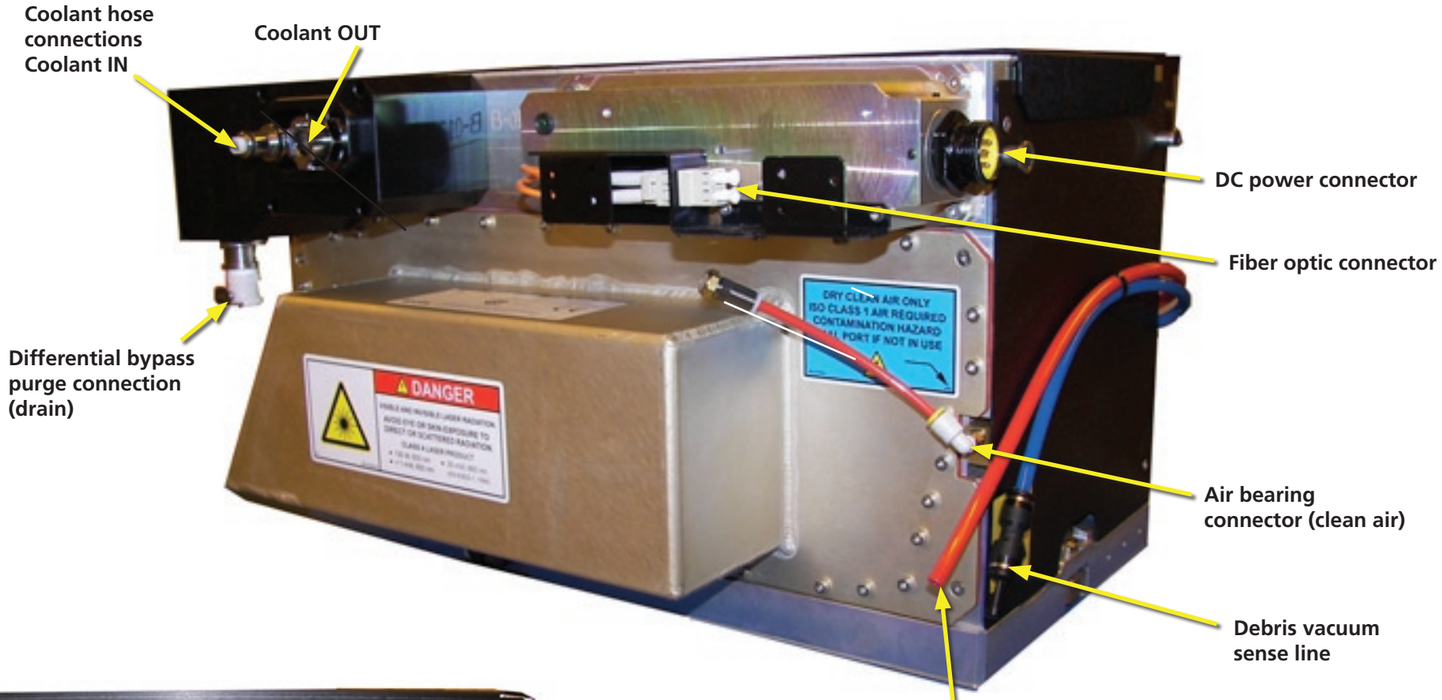
2. Turn off the air supply to the device.

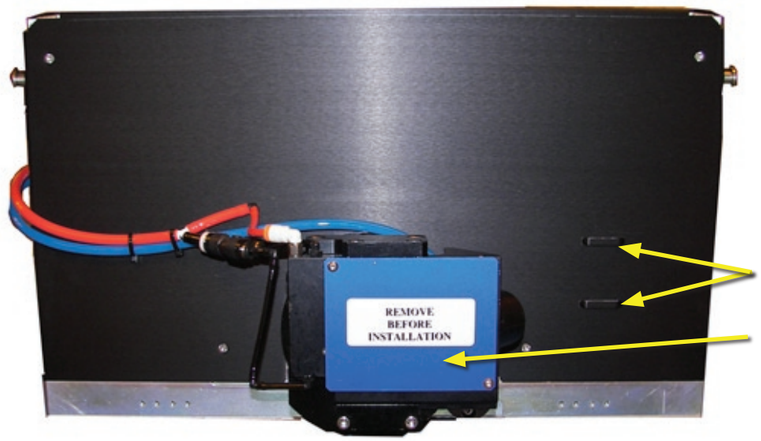
1. Remove the shipping plugs from the fiber optic connector and the air bearings.

NOTE: The connectors are very susceptible to contamination. Make sure your hands are clean before you begin. If this is replacement head, make sure the surrounding area in the device is clean.

2. Plug in the device air line and connect the fiber optic line.
3. Connect the debris removal vaccuum hose clamp to the front of the head. Connect the air jet/whisker jet air line (device-regulated). Connect the debris vacuum sense line.
4. Connect the DC power connector to the head.
5. Connect the two coolant hoses to the head.
6. Connect the differential bypass purge hose.
7. Turn on the air supply and electrical power to the device.

NOTE: if the door interlocks are broken there will be no power to the head. The override key will not enable the head.





1

Note: Before installing the laser shroud panels, the load table and unload table travelers must be moved to the front of the device.

Install the laser shroud panels:
Slide the top panel into place, then install the front panel and turn the two quick-release screws on the front of the panel.



2

Note: Make sure the interlock system is enabled and the override key is *not* in place.

To ensure that the device is ready, type:
`GMCE>> door`
or
`GMCE>> safety`
The head should start automatically.

Here is an example of the command >>door:

```
Magnus VLF CL>> door
Panel Status
------------
All doors are closed.
All Autoloader doors are closed.
*** Command Complete
```

Here is an example of the command >>safety:

```
Magnus VLF CL>> safety
Safety Loop Status
------------------
Emergency Stop Switch:          Off
Away Side Panels:               On
Rear Hood:                      On
Lock Solenoid:                  On
Home Side Panels:               On
Home Head Panel:                On
Away Head and Bridge Panel:     On
Front Hood:                     On
Slipsheet Bin Panels:           On
Safety Write Laser              On
Safety Loop Status              On
Safety Override (Key Switch):   Off
*** Command Complete
```

3 Confirm that there is a plate on the drum. Type the command:
`>> loaded`

4 Type:
`GMCE>> head install on`
Note: Make sure that the carriage is the correct position (1096) and that there is a plate centered on the drum.

5 Confirm the sum and error. The sum should be 750 and the error should be 0, +/- 10 microns.
If these values are not correct, complete the next section, ***Optimize the sum and error.***

6 If not already done, tighten the screws on the flexures.

7 If necessary, adjust the tilt. See the procedure *Adjusting Tilt on a Thermal Head (http://techplanet.creo.com/AgileContent/Extranet/719-00424A-EN-C-PR0191938372.pdf)*.

8 Optimize edge detection by running the Service Shell script called edgesim.spt.
Confirm the results by typing:
`>> edge test`

9 Verify the media setup. For details see the media technical note which is available on the Thermal Plates page of the Media site: http://techplanet.creo.com/consumables/media/nav/thermal_plates.htm.

10 From the GMCE, run a plot.
For example, plot 117 or some other similar plot.

11 Unload the plate. Type:
`GMCE>>  unload`

THIS STEP IS REQUIRED ONLY IF THE SUM AND ERROR ARE INCORRECT.

1

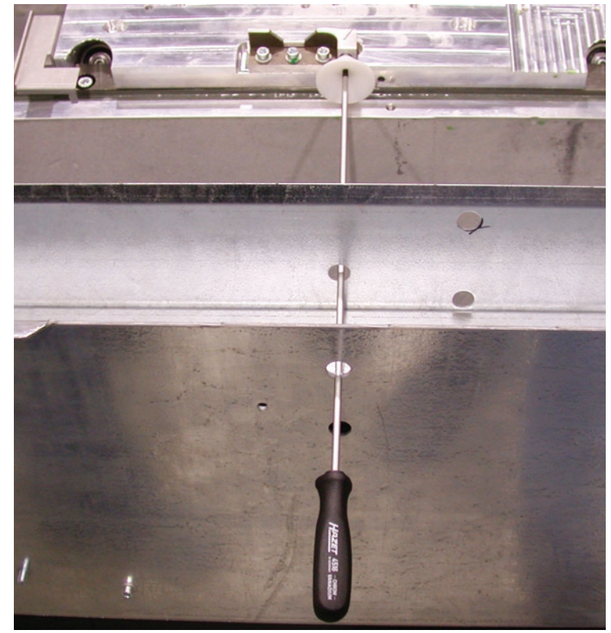
If required, remove the laser shroud panels and loosen the flexures on the sides of the carriage.
Replace the laser shroud panels.

2

Insert the head adjustment tool into the alignment holes.



The tool should slide easily into the outlet in the device (see the photo below).



3

Adjust the error to +/–10 microns. The sum should be approximately 750.

Note: If the sum is too low, type:

```
TH3>> foc cal rcvrgain
```

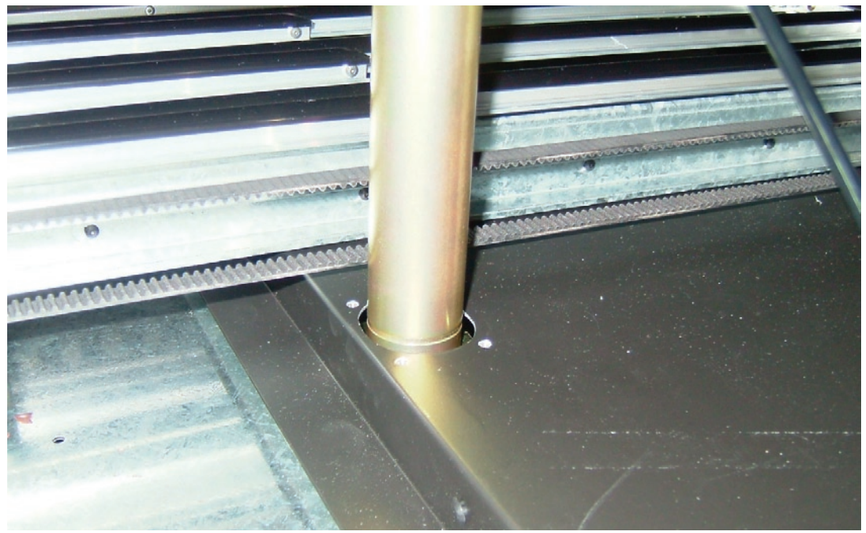
then type:

```
GMCE>> head install on.
```

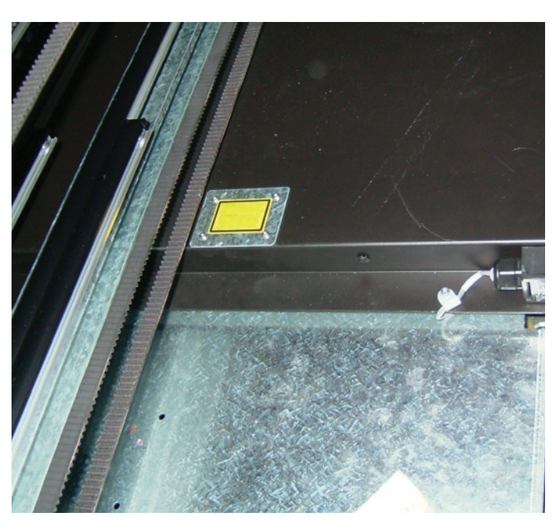
4

Remove the laser shroud panels and tighten the flexures. Replace the laser shroud panels.

1 Remove the lifting crane assembly from its mounting bracket.
Remove the lifting crane support column from the mounting bracket.



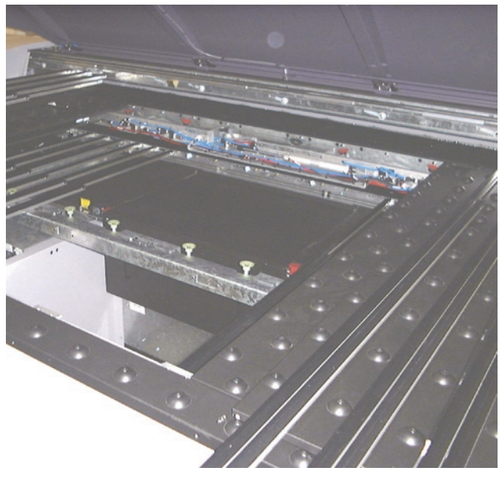
2 Attach the lifting crane support column (yellow) access panel.



3 Move the picker bar to the rear of the load table.



4 Slide in the LSR shroud top panel and, using a Philips screwdriver, attach the LSR shroud center panel.



5 Install the four central load table rail assemblies and fasten the table rails retaining bar (6 half-turn fasteners).



6 Install the four central load table panels.

