

TEH 1.x DEBRIS REMOVAL NOZZLE

Installation Procedure

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50-2117C-B-PR01

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Revision History

Revision	Date	Author	Comments
A	Jan 26, 2001	L Walker / V Beyer	New Doc for Version B, fixed orifice
C-A	Oct 18, 2001	Vince Beyer	Update for ver C nozzle block
C-B	Feb 13, 2003	David Brown	Update TS8 nozzle location to same as TSV

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1. SPECIFIC TOOLS REQUIRED

- 2.5mm hex key
- scissors, diagonal cutters or knife to cut hose and cable ties
- measuring tape or ruler

2. PREREQUISITES FOR INSTALLATION

The debris removal nozzle can only be installed on thermal heads that have version C or later of the air jet block (a.k.a. "nosepiece") Creo P/N 57-0687C that features an angled cut-out for the suction nozzle. This nosepiece is shown in Figure 1 below.

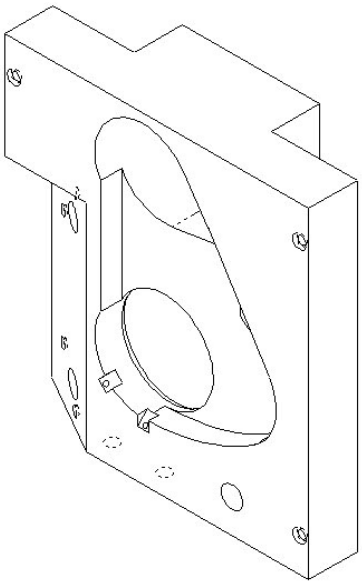


Figure 1 Air Jet Block with Nozzle Cut-Out

The nozzle assembly can only be installed once the air jet plate kit Creo P/N 30-1163B has been installed (refer to document 30-1163B-A-PR01 for details). **As this nozzle has a fixed orifice restrictor controlling the air curtain flow rate, it cannot be installed with an older air jet plate that uses throttle valves to set the flow.** Ensure that the thermal head has parts installed as shown in Figure 2 prior to nozzle installation, and that there is a pressure regulator and gage installed at the back of the Thermal Head.

Ensure that the proper hose has been installed in the output device for sensing the vacuum at the nozzle inlet. There should be ¼" or 6mm blue hose in the cable track for this purpose. Consult with the output device debris removal installation documentation for further details.

With the air jet plate installed, all parts required for the installation of the nozzle itself are included in the assembled kit 50-2117C. Ensure that the kit contains the following parts:

- Nozzle assembly
- red, ¼" pneumatic tubing
- blue, ¼" pneumatic tubing
- elbow fitting for ¼" to 6mm tube
- three M3 x 10 screws
- five M3 belleville washers

- two elbow fittings for ¼” tube
- six cable ties

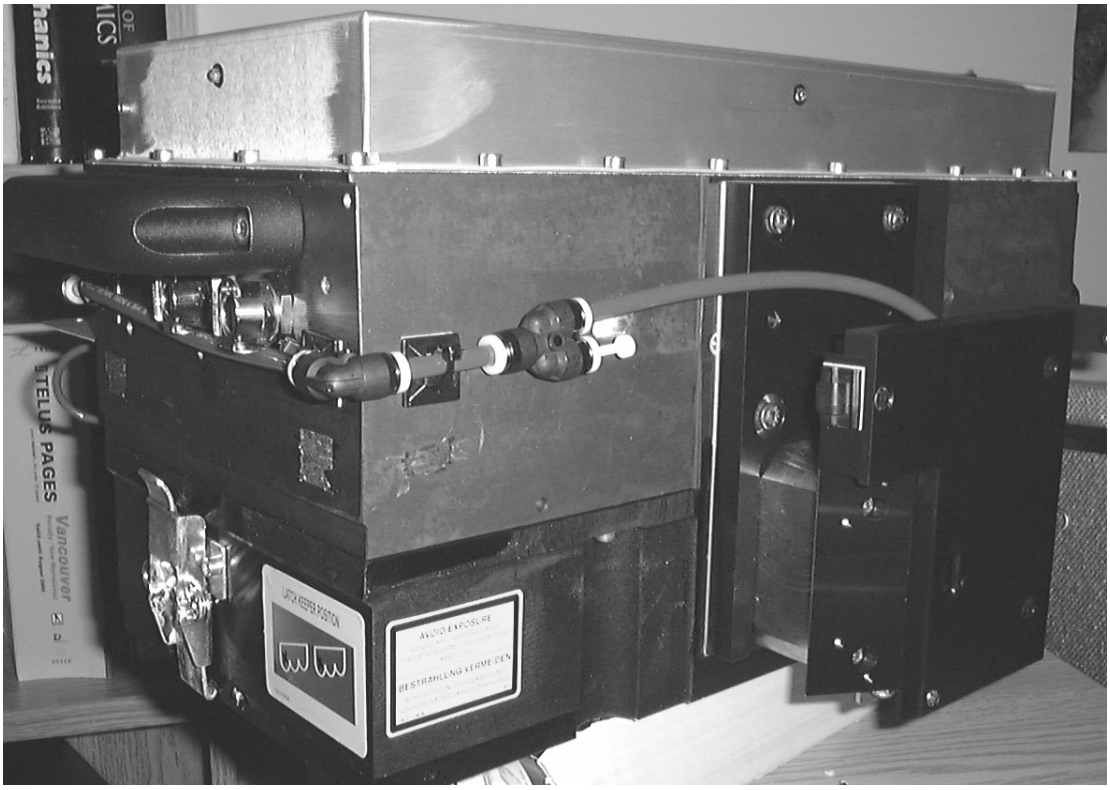


Figure 2 Prerequisite Hose Configuration

3. INSTALLATION PROCEDURE

1. Remove the Thermal Head as detailed in the Thermal Head Installation Document (Creo P/N 77-0038B).

2. Ensure the proper air jet plate configuration is installed as per Figure 2.

3. Determine whether low profile clamps are installed on the output device. In general, VLF engines will NOT have low profile clamps, 4 and 8 page devices will. This will govern the nozzle installation position.

   CAUTION: Failure to install the nozzle in the correct position for the output device may result in mechanical interference with the rotating drum clamps and damage to the output device and thermal head.

4. As per Figure 3, install the nozzle with two of the M3 screws, using two belleville washers per screw. Do not overtighten these screws as the threads are easily stripped. Note that a spare screw and washer are included in the kit and should not be used unless necessary. The mounting holes nearest the sharp end of the nozzle should be used in applications where low profile clamps are NOT installed (VLF) and regular media TS8 allowing the nozzle to sit flush with the air jet plate as shown in Figure 4. The second set of mounting holes should only be used in applications where low profile clamps are

installed (newer 4, 8 page Trendsetters) and process-less media is in use causing the nozzle to protrude several millimeters from the air jet plate as shown in Figure 5.

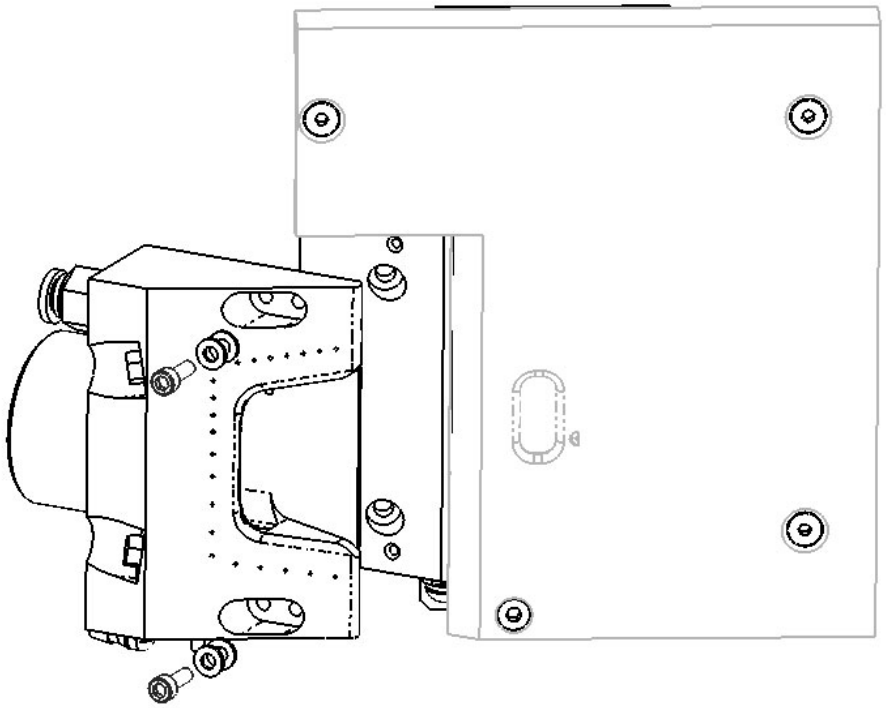


Figure 3 Installation Diagram

5. Remove the plastic plug in the "Y" fitting supplying air to the air jet plate (see Figure 2 above). Insert one end of the of red, ¼" pneumatic tubing included in the kit into the "Y" fitting, and the second end into the fixed orifice fitting on the nozzle as shown in Figure 6.

6. Cut a ~160mm length of blue ¼" pneumatic hose from the hose included in the kit, and slide one end of the hose over the barb fitting on the nozzle as shown in Figure 6. Note that the position of this fitting has moved from the top of the nozzle to the bottom of the nozzle around November 2001 (ver B to ver C nozzle). Although the bottom position is the newer, preferred design, nozzles with the top fitting location are still acceptable to use. Install a ¼" to ¼" elbow fitting on the end of the blue hose.

7. Cut a ~230mm length of the blue ¼" pneumatic hose and insert one end into the elbow fitting at the corner of the head. This hose should run along the side of the head, directly below the existing red pneumatic hose. Install another ¼" to ¼" elbow fitting on the end of this hose as shown in Figure 7. **NOTE: If installing on a Trendsetter, with 6mm hose in the cable track, then the ¼" to 6mm elbow adapter fitting should be substituted for the ¼" elbow at the rear of the Thermal Head in this step. The adapter can be identified as one of the collars on the fitting is black and one white.**

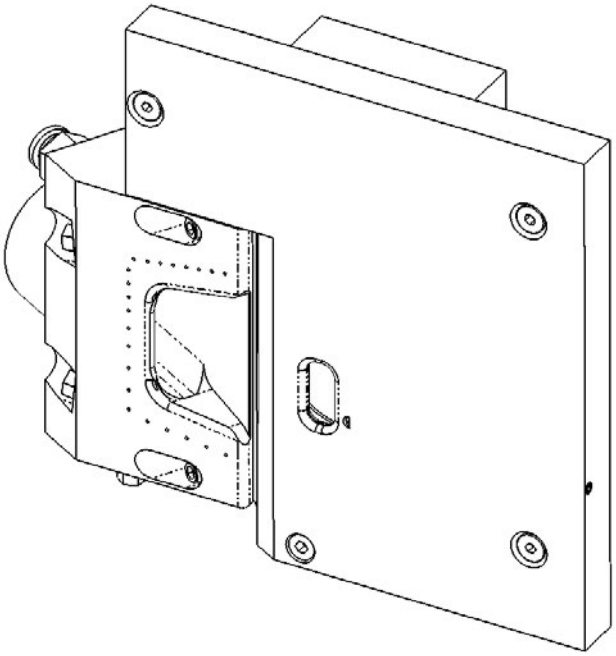


Figure 4 Nozzle Installed for VLF & TS8 Regular Media

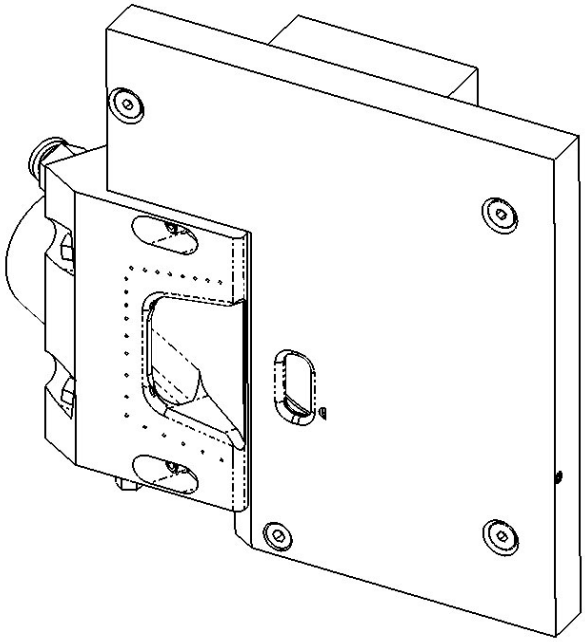


Figure 5 Nozzle Installed for TS8 Process-less Media

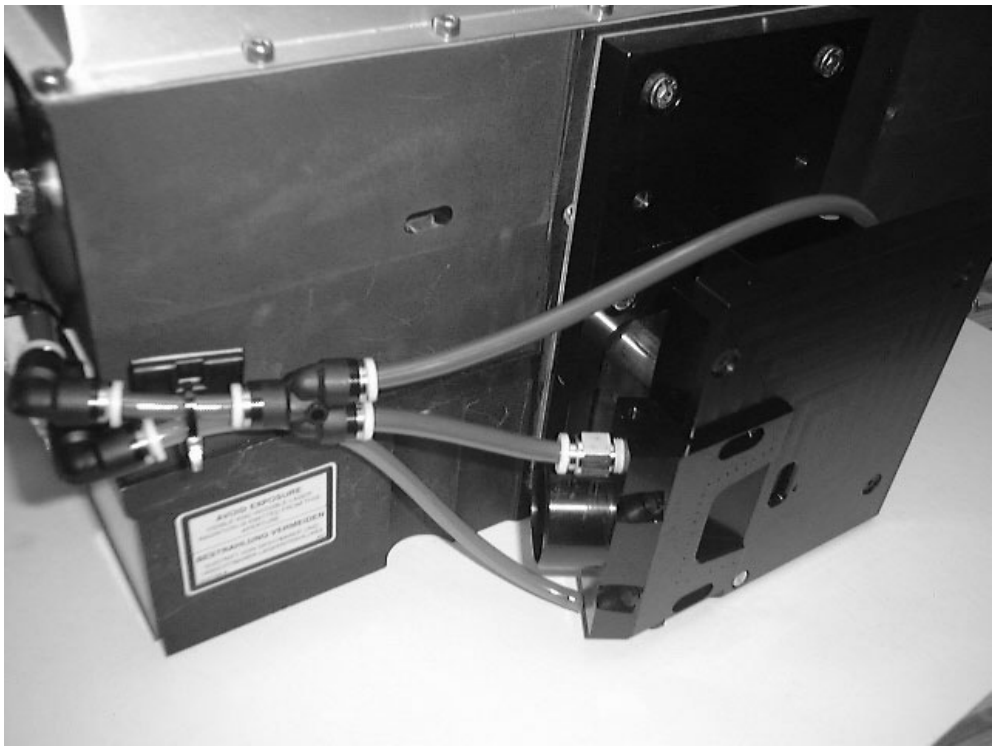


Figure 6 Pneumatic Hose Configuration

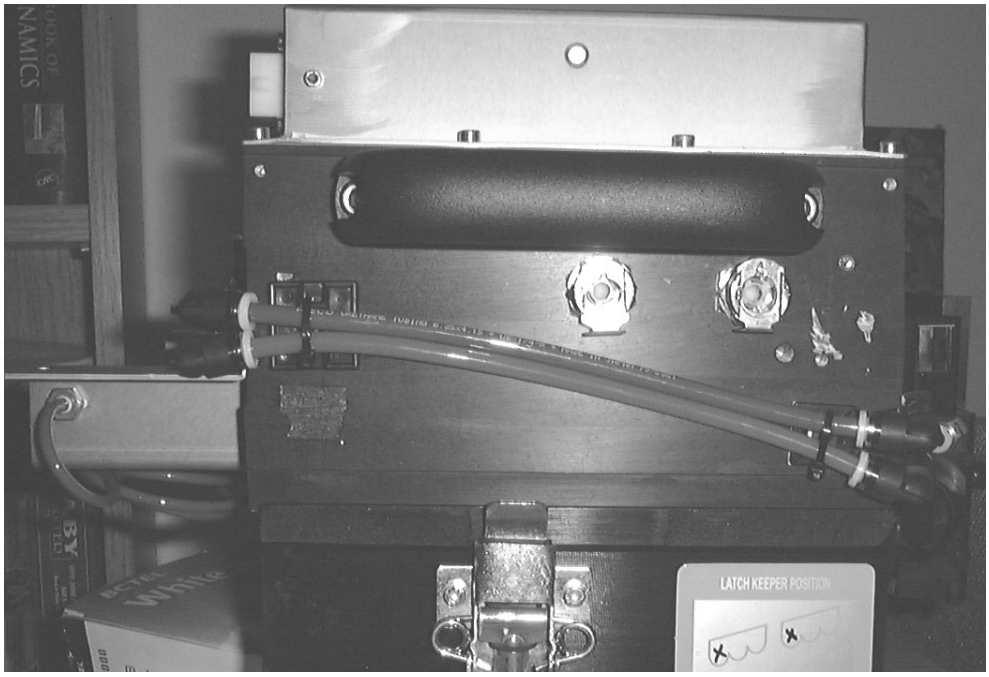


Figure 7 Hose Installation at Side of Thermal Head

8. Trim the blue hoses as necessary to provide the best fit. Cut the tie wraps securing the red pneumatic hose and discard. Use the cable ties provided to secure both the red and blue hoses to the existing mounts as shown in Figure 6 and Figure 7. Do not overtighten the cable ties as this will crimp the hoses and restrict the flow. Ensure that the hoses do

not interfere with the quick release cooling hose fittings on the head, or the latching mechanism.

9. Re-install the Thermal Head as per the install document. After the head is installed on the carriage, idle the drum and rotate it by hand and check that there is no mechanical interference between the nozzle and the drum clamps before imaging.

10. Connect the ¼" (or 6mm) compressed air supply from the device cable track to the regulator inlet on the back of the Thermal Head. Connect the ¼" (or 6mm) vacuum sensing hose from the cable track to the elbow on the blue hose at the rear of the Thermal head, shown in Figure 7. Activate the air jet supply (e.g. "act dblow on" or "act dr on") and confirm that air is blowing out of the air jet, and the air curtain on the nozzle. With the air flowing, confirm that the regulator at the rear of the Thermal Head is set to the pressure indicated on the regulator's label. Readjust if necessary.

    NOTE: If there is insufficient pressure to adjust the regulator to the value indicated on the regulator's label,

    - **Check if there is a speed control or throttle valve installed inline with the air jet tubing at the manifold and if so, that it is set fully open**
    - **Check that the air jet tubing in the device cable track is 6mm or ¼". If this tubing is a smaller size, then it will have to be upgraded – see output device documentation.**
    - **Check the air jet tubing for kinks. Repair any kinks found.**

11. Route the suction hose from the nozzle and test the vacuum sensor port as per the output device debris removal documentation.

12. A test plot should be done to ensure that there is no degradation in image quality as a result of the nozzle installation.