Kodak

Trendsetter VLF

F-speed to V2.8 Upgrade Questionnaire
Site Questionnaire and Parts Order Form

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725-00021A-C

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Revision History

Revision	Date	Author	Comments
A	13 Jan 2003	Angus Gillon	Based on F to V2.5 upgrade questionnaire (72-3094B-B)
B	09 Mar 2004	Al Edge	Revised line frequency for Japan
C	14 May 2007	Al Edge	Revised procedure for end of life of 20W heads

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CONTENTS

Revision History i

1. Background 1

2. Ordering Parts for Imaging Speed Upgrades 1

3. Tools Needed 2

4. Questionnaire 2

5. Estimating Time Requirements 11

6. Order Fax Form (F to V2.8 TS VLF Upgrade) 12

1. BACKGROUND

As of January 2007, no new 1.0 air-cooled thermal heads are being built. These heads are only available as a reworked unit to support existing customers.

All Trendsetter VLFs that are upgraded from S-speed will require the installation of a 40W water-cooled thermal head. If a device is upgraded from S-speed to F-speed, then a 1.7 water-cooled head must be installed. Hardware and firmware changes are necessary to accommodate the water-cooled head and to achieve faster imaging. The actual procedures for this upgrade are described in documents 72-3086 (Water Cooled Head Upgrade), 72-3428 (Debris Upgrade), and 725-00023 (V2.8 Speed Upgrade).

This questionnaire will assist the Kodak Field Service Engineer and Kodak Order Management to determine the parts needed for a field upgrade of any F-model or Packaging Series Trendsetter VLF (TS-VLF) to the faster V2.8 model.

For Trendsetter VLF devices that already have the 40W water cooled 1.7x head, a simpler site questionnaire can be used: 725-00022A, *V to V2.8 Upgrade, Site Questionnaire and Parts Order Form.*

The requirements for parts, tools, work effort, and downtime will vary depending upon the serial number of the Trendsetter VLF and the Field Change Orders that have been applied. A site visit is the only way to ensure an accurate assessment of upgrade needs for a particular device*.*

2. ORDERING PARTS FOR IMAGING SPEED UPGRADES

To assess what parts are needed for a debris removal upgrade:

a) Remove the right-hand (motor side) panel, front (motor/power box) panel, front center panel, rear panels, and card cage door (see Figure 1).

b) Power the device ‘Off’.

c) Put on a static strap and ground it properly to the device.

d) Perform the checks in Questions 1-19.

e) Complete the Order Fax Form and send it in to:

Order Management- Trendsetter VLF, Kodak
Fax #: 604.451.2785

A worksheet is also provided to help estimate how long the upgrade will take. Be sure to schedule adequate downtime with the customer.

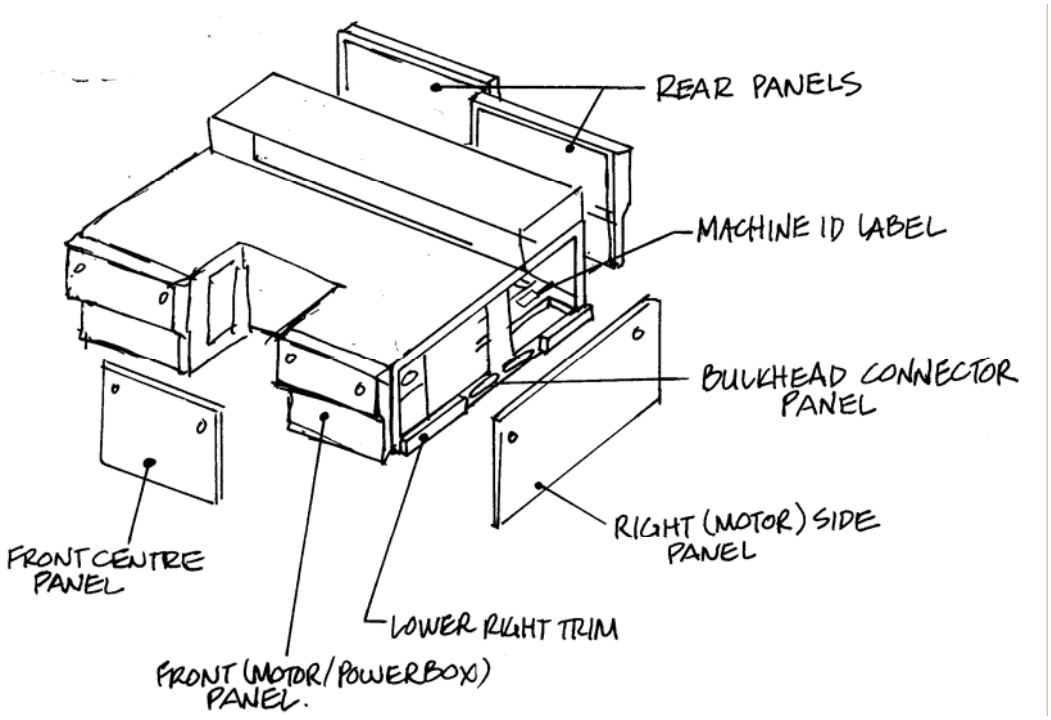


Figure 1: Trendsetter VLF Panels

3. TOOLS NEEDED

- 8mm and 4mm hex keys
- Large straight-slot screwdriver
- Static strap
- Small mirror
- Flashlight

4. QUESTIONNAIRE

Does the device have a debris removal system?

Look for a vacuum nozzle on the thermal head, with a 1.5” diameter hose connecting the head to an external debris removal cabinet near the device.

What to Order: If you do not see a debris removal system, order part #11-0866A (UDRC cabinet), 518-00028A (UDRC to VLF parts kit), and 11-1068B or 11-1069B (UDRC attachment kits) on the fax form.

Does the device have a dehumidifier unit (DHU)?

Look for the DHU box attached to the home side of the head, with a blue drainage hose coming from it.

What to Order: If you do not see a DHU, order kit #05-0244 on the fax form.

Does the device have the power-loss resistive brake?

The power-loss brake slows the drum rapidly if AC power is lost or switched off while the drum is turning. If the brake is already installed, it is located inside the left-hand end of the power box below the drum servo amp beside the ventilation fan. Look for three relays and three power resistors mounted on a 4" by 6" (100mm by 150mm) metal bracket, with a cable and ferrite choke plugged into the top of the servo amp.

What to Order: If you do not see the resistive brake, then order part #11-1013A on the fax form.

Does the device have the new trailing edge clamps?

To avoid any risk of plate slippage, the device must have the updated trailing edge clamps. These clamps are clearly marked with a square green V2.5+ label. In other respects, the old and new clamps look very similar. Devices after B535 should already have the new clamps installed.

What to Order: If the TECs do not have the green V2.5+ label, they must be replaced. Order part #50-2374A on the fax form.

Has the EMI filter been relocated?

With the right (motor side) end panel removed, check for the AC inlet and EMI filter cover and bracket mounted to the base-frame near the bulkhead connector panel (see Figure 2). Devices after B199 should already have the EMI filter in the new location.

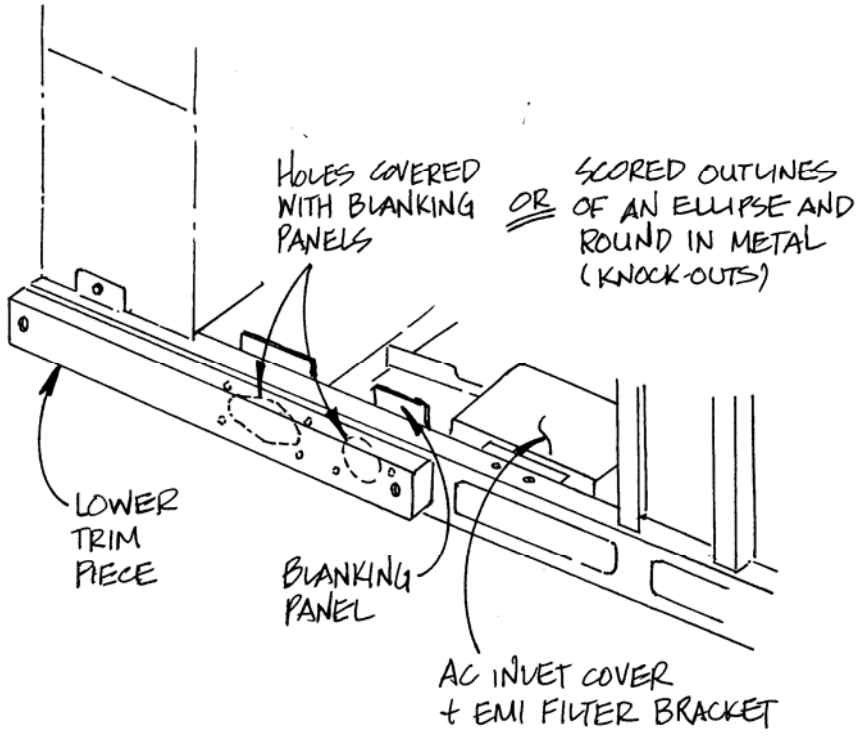


Figure 2: Covered Holes (Knock-Outs) and Relocated EMI Filter

What to Order: If the EMI filter has not yet been relocated, order kit #05-0109 on the fax form (ECO C826).

Has the device been upgraded for RFI immunity?

With the right (motor side) end panel removed, look at the main cable entering the flex track from the power box. If you find a thin, 32 mm (1-1/4 in.) wide bonding strap tie-wrapped to this cable, then the RFI immunity upgrade has been done (see Figure 3). Devices after B199 should already be upgraded for RFI immunity.

Note: If you find a thick, yellow, flat cable in the flex track, the RFI immunity upgrade is not required.

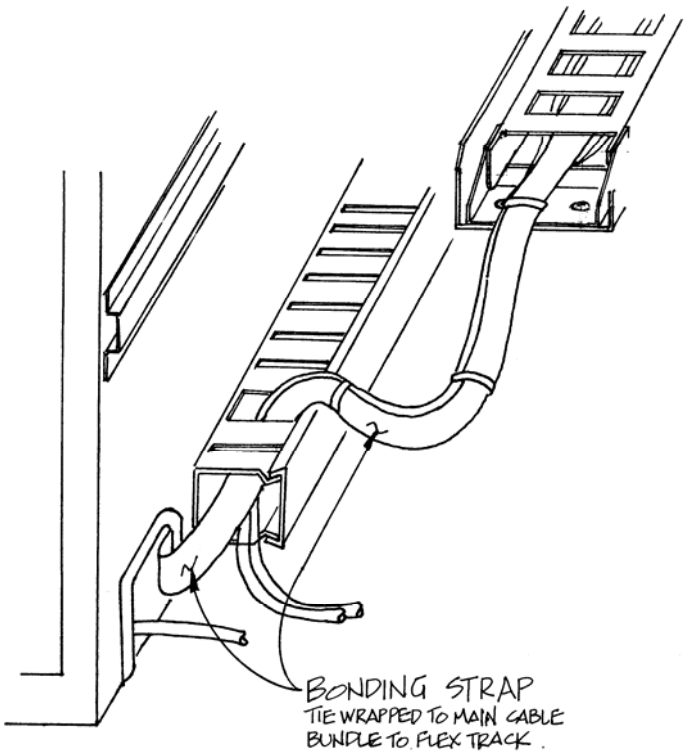


Figure 3: Bonding Strap

What to Order: If the RFI immunity upgrade has not been done, order kit #05-0106 on the fax form (ECO C826).

Has the carriage been upgraded with pockets, and the head mounted using a triple draw latch and keeper system?

If the carriage is version 50-1211**A**, then there will not be any machined pockets on the carriage and the head will not be latch mounted (see Figure 4). Carriage versions 50-1211**B** and 50-1211**C** will have machined pockets on the carriage, but the head may not be mounted using the triple draw latch and keeper system. In each of these cases, the carriage must be replaced.

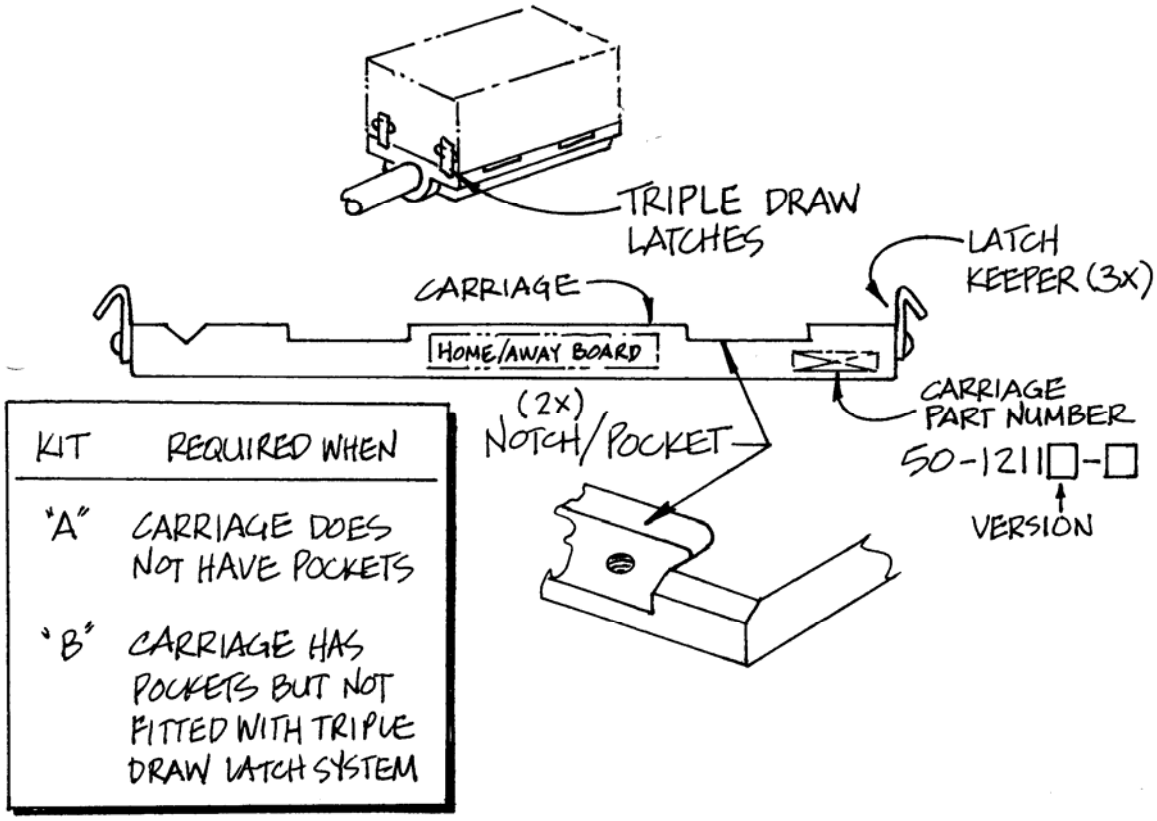


Figure 4: Choosing a Carriage Upgrade Kit (if required)

What to Order:

- If the carriage does not have pockets, order Kit A on the fax form.
- If the carriage has pockets, but the head is not fitted with the triple draw latch system, order Kit B[1] on the fax form.

[1] Kit B is also known as carriage upgrade kit #3.

Does the device have the new-style bulkhead connector panel?

Inspect the printed labels on the bulkhead connector panel on the lower right base-frame (see Figure 5). The new style bulkhead connector panel features a 15-pin cutout for an internal chiller-filter cable. Devices with serial numbers B082 to B117, B123, B131 and onwards should already have the new bulkhead connector panel.

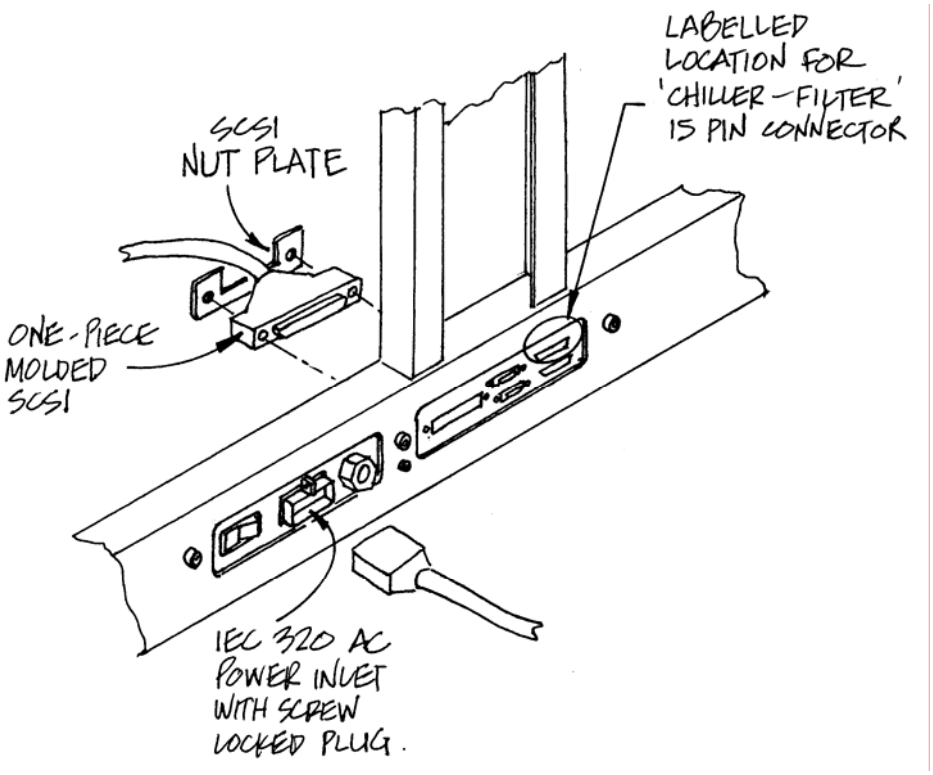


Figure 5: Bulkhead Connector Panel

What to Order: If you do not see the connector label "Chiller/Filter", then order part #05-2038 on the fax form. A new hard-wired AC power cord and a longer 'serial' cable (10-1430A) will be included with the new 2 piece bulkhead plates.

Does the device have the SIO laser safety interlock keyswitch?

Remove the panel covering the power box. This highly visible key switch is mounted on the frame brace located at the lower right hand corner (see Figure 6). Devices after B121 should already have the key switch.

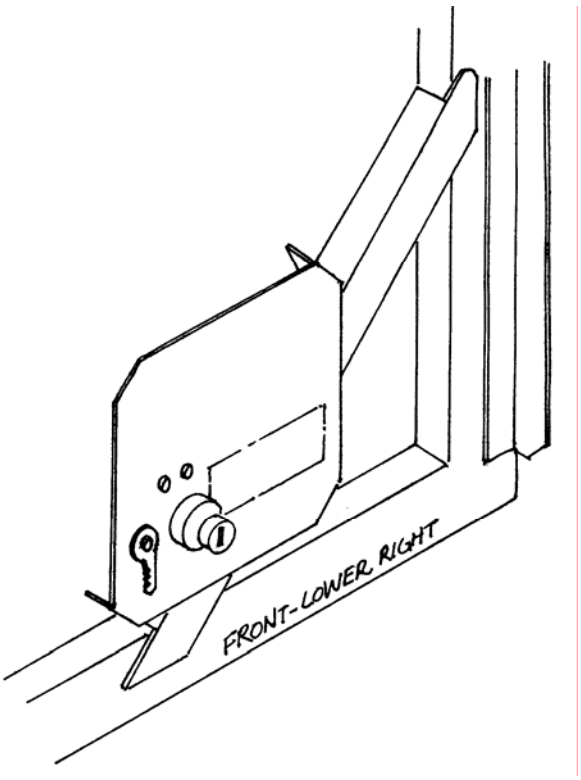


Figure 6: Location of SIO Laser Safety Key switch

What to Order: If you do not see the key switch, order kit #05-0048 on the fax form (ECO C216).

Does the device have a Fast DPE (FDPE) board?

Open the card cage door and look at the printed circuit board located in the first slot from the left. If this board is labeled 10-3672A (or a later version), it is an FDPE board (see Figure 7). Devices after B85 should already have an FDPE board.



Avoid touching the boards in the card cage. Visual inspection is all that is required.

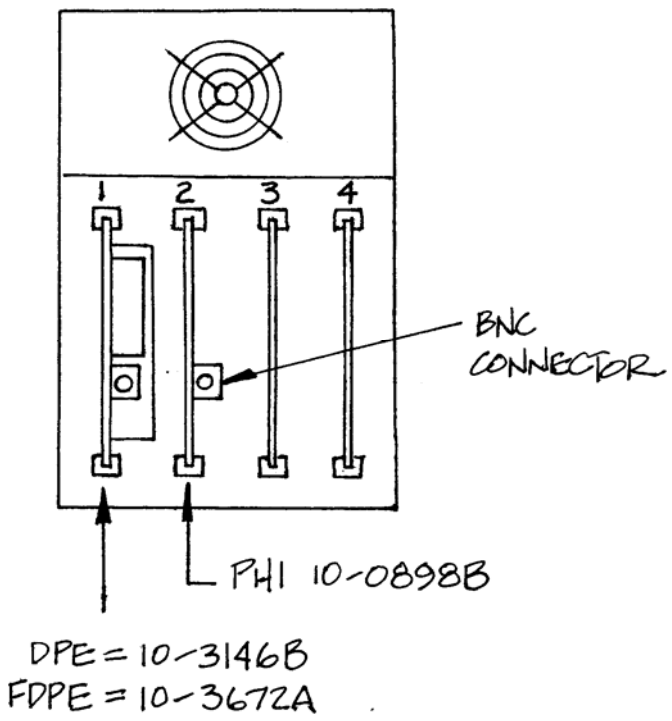


Figure 7: DPE vs FDPE Board in the Card Cage

What to Order: If the board is not an FDPE, order part #10-3762B on the fax form.

Does the device have the new ALE board?

Type the diagnostic command `fw dir`. If the correct ALE board is installed in the card cage, the text displayed will include "ALE LCA E … YES". The correct ALE board has the part number 10-3691A[2]. Devices after B85 should already have this ALE board.

What to Order: If it is not the correct ALE board, order part #10-3691A on the fax form.

Does the device have the new MPE board?

Type the diagnostic command `fw dir`. If the correct MPE board is installed in the card cage, the text displayed will include "MPE LCA E … YES". The correct MPE board has the part number 10-3692A[3]. Devices after B85 should already have this MPE board.

What to Order: If it is not the correct MPE board, order part #10-3692A on the fax form.

[2] Earlier ALE versions 10-1311A or B are not suitable for the speed upgrade.

[3] Earlier MPE versions 10-0733A or B are not suitable for the speed upgrade.

Does the device have the latest base frame?

Check for two holes in the base-frame that will accommodate the debris removal hose components (see Figure 2). One is elliptical in shape and the other circular, and they are covered by a lower exterior trim piece. Instead of removing this trim piece, peer through the right side of the device near the corner of the power box. Look at the inside frame-rail (a mirror comes in handy) for two screw mounted panels or two fitted 'knock-outs' covering these holes. The 'knock-outs' are flush with the frame member but are outlined by a visible seam. Devices with serial numbers after B077 should have the holes pre-punched.

What to Order: If you do not find evidence of pre-punched or 'knock-out' holes, order kit #50-1606A in advance from the Regional Office.

Does the device have a sheet-metal hose tray insert?

The hose tray is located in the front and carries ∅1-3/4" air-cooling hoses that are attached to the head. Hose trays that are made of sheet metal require an insert for the imaging speed upgrade. Devices after B55 should have a wire hose tray.

What to Order: If the hose tray is made of sheet-metal, order part #57-5680A on the fax form.

Does the device have the improved plate fly-off detector?

Remove the encoder rear panel and look at the encoder end of the device. If you find both a laser emitter and laser receiver at that end, as shown in Figure 8, then the plate fly-off upgrade has been done.

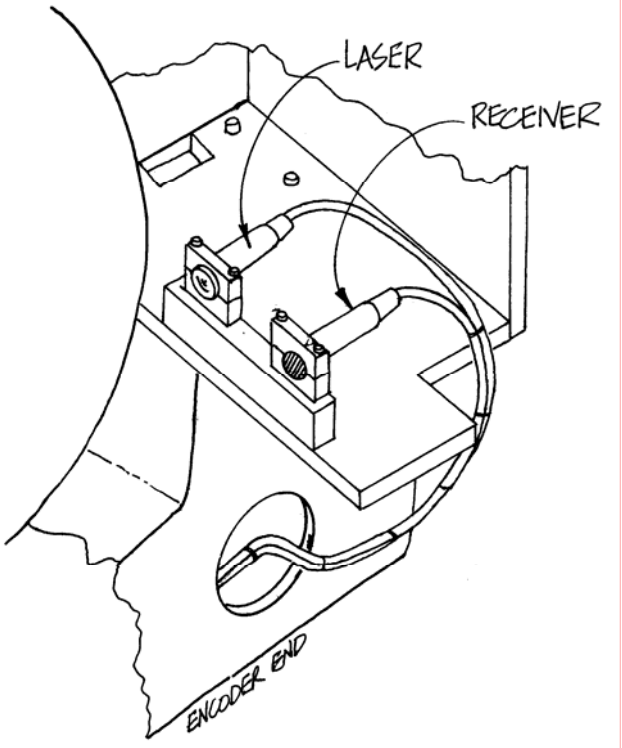


Figure 8: Improved Plate Fly-off Detection System.

What to Order: If only the laser emitter is at the encoder end, and the laser receiver is at the opposite end, then the device has the outdated system and it needs upgrading. For a 5080 device, order part #05-0034 (ECO B573). For a 5880 device, order part #05-0035 (ECO B573).

Is the MPE firmware version 1.53/1.20 or later?

MPE firmware version 1.53 or later is required for the semi-automatic base Trendsetter VLF, and version 1.20 or later is required for the Autoloader.

What to Order: Order the latest Controlled Release version available. The CD part # and ordering information is available on TechPlanet at:
Trendsetter VLF
http://techplanet.creo.com/output/computer_to_plate/vlf_trendsetter/nav/control-set.htm

Trendsetter VLF AL
http://techplanet.creo.com/output/computer_to_plate/vlf_trendsetter_al/nav/control-set.htm

Is an electrical receptacle ready for the heat exchanger?

The heat exchanger requires a separate AC power outlet.

- In North America this must be a 15A, 120VAC branch circuit with 5-15R receptacle.
- In Europe, Australia and SE Asia it must be a 10A, 240VAC branch circuit with 10A plug and receptacle must be supplied.
- In Japan, both 50 Hz and 60 Hz are in use, depending on the part of the country. Areas that are west of the Oi river (Osaka, Kyoto, Nagoya, Hiroshima) use 60 Hz. Eastern Japan (Tokyo, Kawasaki, Sapporo, Yokohama, and Sendai) uses 50 Hz. Please confirm the line frequency in use at the site so that the correct chiller is ordered.
- In both cases, the receptacle must be located within 8 feet (2.5 meters) of the TS-VLF.

Is an electrical receptacle ready for the Debris Removal Cabinet?

The Debris Removal cabinet requires a separate AC power outlet.

- In North America: a dedicated 15A, 200-240V branch circuit and L6-15R receptacle.
- In Europe, Australia, and S.E. Asia: A dedicated 16A, 200-240V branch circuit with standard receptacle and mating plug.
- In Japan: A dedicated 15A, 200V branch circuit and L6-15R wall-mount receptacle or wiring to connect to the supplied L6-20P plug.

For details, see Document #72-3428 (*Debris Upgrade)*.

Does the customer have an adequate oven?

A special heavy-duty plate oven is required for proper processing of large plates imaged by the 40W V-Head. (Some plate types do not require an oven.)

5. ESTIMATING TIME REQUIREMENTS

Use your answers to the questionnaire to select tasks in the right-hand table that will need to be completed. Tasks in the left-hand table will always need doing. Add up both tables to estimate the total time required for the imaging speed upgrade.

Hrs.	Work tasks always required
0.25	Backup old firmware and parameters
0.75	Remove 20W head and related hoses
0.75	Install 'chiller-filter' connector and cable to bulkhead panel
3.0	Complete power supply upgrade
1.75	Install V-Head water-cooling components such as: hose brackets, water hoses, hose cuff, strain relief bracket, hose support(s)
1.75	Install debris removal (Question #!)
0.5	Install 40W head
1.0	Chiller connections and setup
0.25	Set NVS firmware parameters
3.0	Integration and testing
12.0	Contingency for troubleshooting
25	+

√ Hrs.	Work tasks sometimes required (Answers from Upgrade Questionnaire)
0.5	Replace trailing edge clamps (Question #4)
1.5	Install improved plate fly-off detectors (Question #15)
2.0	Install SIO laser safety keyswitch (Question #9)
0.5	Install power-loss resistive brake (Question #3)
0.25	Add FDPE board (Question #10)
0.1	Replace ALE board (Question #11)
0.1	Replace MPE board (Question #12)
1.75	Replace carriage – Kit A (Question #7)
0.5	Replace carriage – Kit B (Question #7)
4.0	Add RFI upgrade (Question #6)
4.0	Cut holes in base-frame (Question #13)
1.0	Replace bulkhead connector panel (Question #8)
0.1	Install wire hose tray (Question #14)
4.0	Relocate EMI filter (Question #3)
1.0	INSTALL DHU (QUESTION #2)
0.75	Install new firmware (Question #14)
	=

6. ORDER FAX FORM (F TO V2.8 TS VLF UPGRADE)

Fill in the parts required for this specific Imaging Speed Upgrade, based on your answers to the questionnaire. Order Management will use this information to supply all the kits you need.

Fax to:

Order Management- Trendsetter VLF, Kodak
Fax #: 604.451.2785

DESCRIPTION	YES	NO	IF YES, KITS/PARTS REQUIRED
Thermal Imaging Head	√		32-4141A (F-speed) 32-4182A (V-speed)
Power Supplies	√		10-3981A
60Hz Chiller North America, South America, Japan[6]	√		Chiller 11-0564A Cooling Kit 11-0626A
50Hz Chiller Europe, Australia, SE Asia, Japan[6]	√		Chiller 11-0574A Cooling Kit 11-0626A
UDRC Cabinet			11-0866A
UDRC to VLF Parts Kit			518-00028A
UDRC Attachment Kit			North America, South America, Japan 11-1068B Europe, Australia, SE Asia 11-1069B
DHU Kit			05-0244
Power Loss Resistive Brake			11-1013A
Trailing Edge Clamps – B01 to B535			50-2374A (10pcs)
EMI Filter Kit – B01 to B199			05-0109
RFI Immunity Kit – B01 to B199			05-0106
Carriage Upgrade Kit – B95 to B148			05-0051
Bulkhead Panel Kit – B01 to B130 North America, South America, Japan			Panel kit: 05-2038 Power cord: 16-4030A
Bulkhead Panel Kit – B01 to B130 Europe, Australia, SE Asia			Panel kit: 05-2038 Power cord: 16-4190A
SIO Keyswitch Kit – B01 to B121			05-0048
Carriage Replacement – B01 to B94			Carriage assembly: 50-2699A

			Flex tube: 57-3407A
FDPE Board – B01 to B85			10-3762B
ALE Board – B01 to B85			10-3691A
MPE Board – B01 to B85			10-3692B
Frame Punch Toolkit – B01 to B77			50-1606A Order from Regional Office
Hose Tray Kit – B01 to B55			57-5680A
Fly-off Detector Kit – B01 to B32			5080: 05-0034
			5880: 05-0035

Report completed by: _____ Date: _____

Device Serial Number[4]: _____ Thermal Head Serial Number[5]: _____

Device Model[4]: 4557__ 5067__ 5080__ 5467__ 5880__

Cycles/Frequency at Site[4,6]: _____

Site Name: _____

Site Location:_____

[4] The device serial number, model number, and electrical frequency are on the Device ID Label (see Figure 1 for location of label)

[5] The label containing the head serial number is attached to the head.

[6]Eastern Japan uses 50 Hz (Tokyo, Kawasaki, Sapporo, Yokohama, and Sendai); Western Japan uses 60 Hz (Osaka, Kyoto, Nagoya, Hiroshima). The dividing line is the Oi river in Shizuoka prefecture.