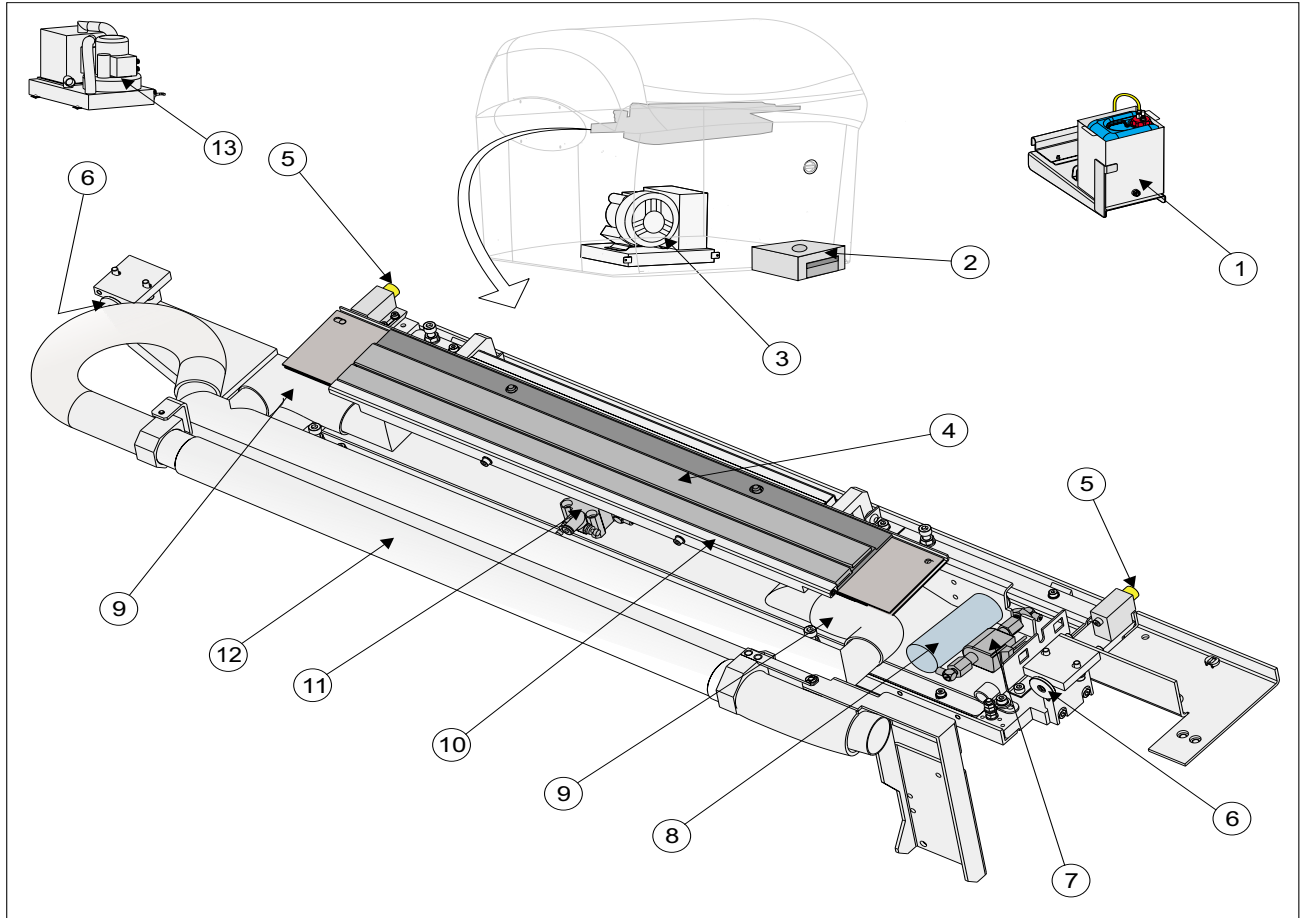


CHAPTER 21 VORTEX PLUS UNDER SCREEN CLEANER MODULE

OVERVIEW



Item	Description	Item	Description
1	External Solvent Tank	8	Oscillation Motor
2	Remote Solvent Tank	9	Vacuum Inlets (2 positions)
3	VF35i Vacuum Filtration Unit	10	Solvent Spray Bar
4	Vortex Cleaning Cassette	11	Pneumatic Cylinder
5	Permanent Magnet (2 positions)	12	Tubular Vacuum Arms
6	Electromagnetic Clamp (2 positions)	13	VF25 Vacuum Filtration Unit
7	Solvent Pump		

The Vortex Plus under screen cleaner (USC) is designed to wipe the Vortex cleaning cassette, consisting of both a wet and a dry cell, across the underside of the screen during a clean operation. The Vortex Plus cleaner is available in four widths, 320mm, 420mm, 520mm and 620mm. The cleaning frequency is programmable in the product file.

When a screen cleaner operation is required, the two electromagnetic clamps holding the screen cleaner unit in the home position are de-energized. The screen cleaner is attached to the camera carriage by using two permanent magnets.

The Vortex Plus cleaning regime comprises of a single stroke. On the rearward stroke the cleaner is not in contact with the screen so no cleaning occurs. On the forward stroke the cleaner is raised radially into contact with the screen enabling cleaning to occur. The cleaning stroke consists of both a wet and dry wipe, with or without vacuum. During the cleaning stroke the wipers are moved side to side, this oscillation enhances the cleaning action.

Used solvent fumes and excess solder paste are drawn from the underside of the screen, through the dry cell of the cleaning cassette into a filter, by the vacuum created in the vacuum channel beneath the filter.

NOTE

For information on the Vacuum Filtration Unit, refer to the Blue Under Screen Cleaner Module chapter of this manual.

The solvent pump supplies solvent to the wet cell, via the solvent spray bar, from either the remote or external solvent tank. A load cell in the external solvent tank enables the software to calculate the percentage level of solvent within the tank.

DEK only recommend the DEK-PRO EF (Environmentally Friendly) USC solution to be used in the Vortex Plus USC. The following are available from DEK:

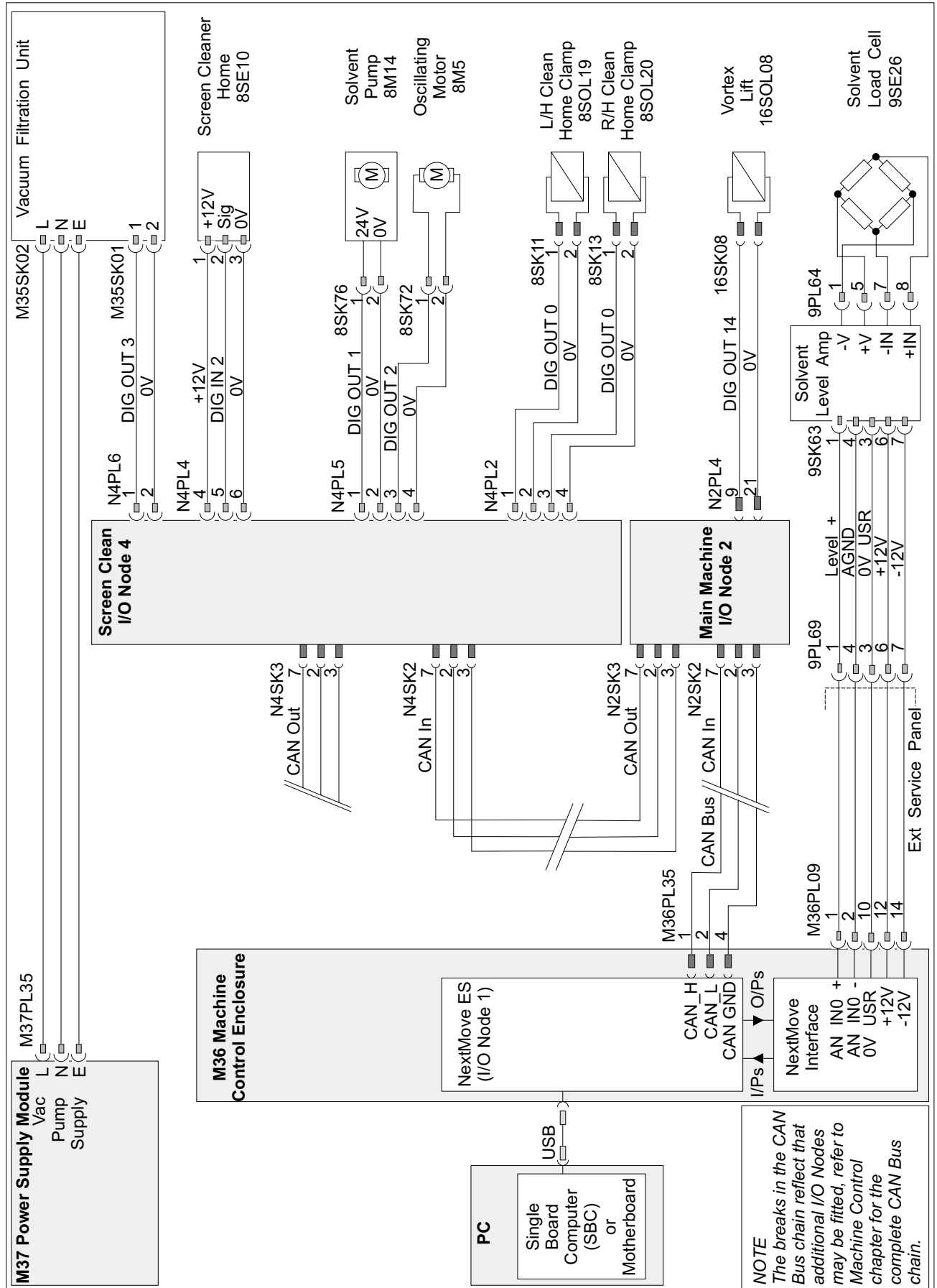
Description	Size	Part No
DEK-PRO EF Under Screen Clean Solution	1 Litre	173482
DEK-PRO EF Under Screen Clean Solution	5 Litre	173484

NOTE

*The following solvents **MUST NOT** be used in the under screen cleaner unit, however, this list is not complete and does not mean that any solvent not mentioned is compatible, with DEK machines.*

- Rosstech 106 FE
- Rosstech 162 ND
- Acetone

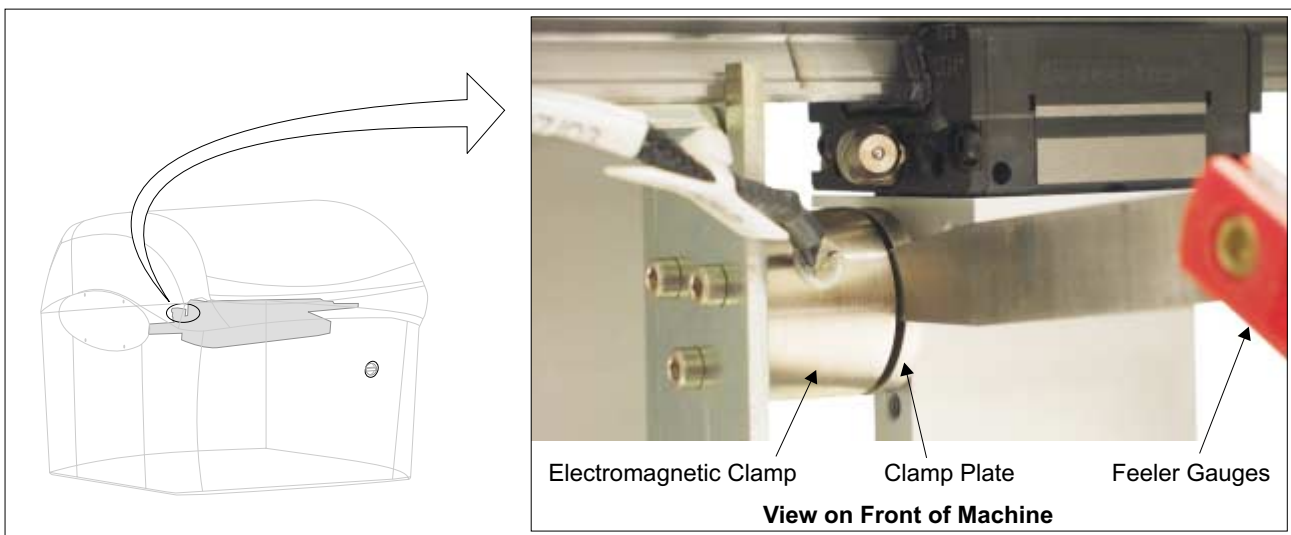
ELECTRICAL SCHEMATIC



ADJUSTMENTS AND SETTINGS

Screen Cleaner Home

1. From the Start menu, select **Show Classic**.
2. In Diagnostics select **Screen Cleaner** module.
3. To release the cleaner, select **Toggle Screen Cleaner Home Clamp**. Ensure the clamps have de-energized.
4. Move the cleaner by hand towards the rear of the machine until the error message '**Screen Cleaner Error**' message is displayed.
5. Using a **2.0mm** feeler gauge positioned between the left hand screen cleaner home electromagnetic clamp (8SOL19) and the clamp plate, pull the cleaner towards the front of the machine. With the clamp plate held lightly against the feeler gauge, ensure that the error message remains displayed.

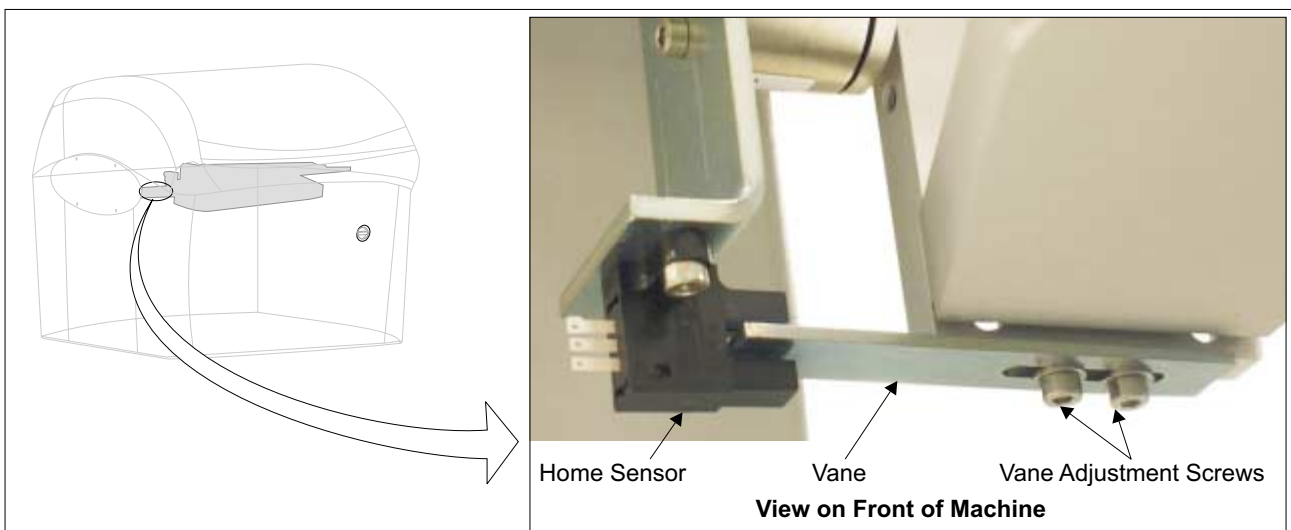


6. Repeat step 5 using a **1.5mm** feeler gauge, ensure the error message has extinguished.

NOTE

The error message may remain displayed for up to 5 seconds.

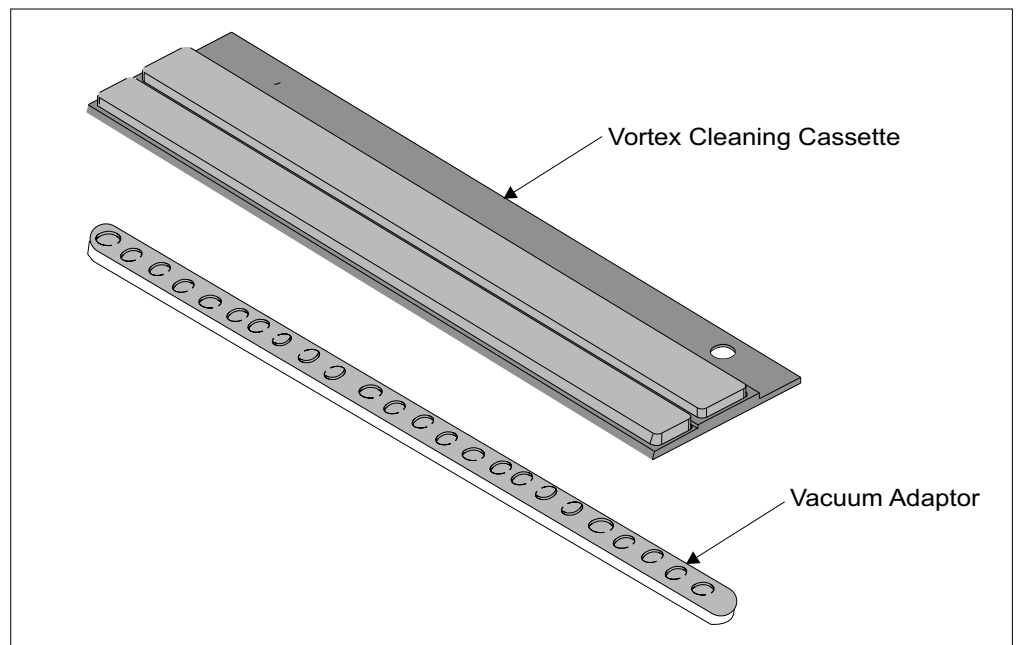
7. If adjustment is needed, move the cleaner towards the rear of the machine until the vane securing screws are accessible.



8. Loosen the securing screws, adjust the vane and re-tighten the securing screws.
9. Repeat steps 5 and 6 and re-adjust if necessary.
10. Select **Exit** from Diagnostics.

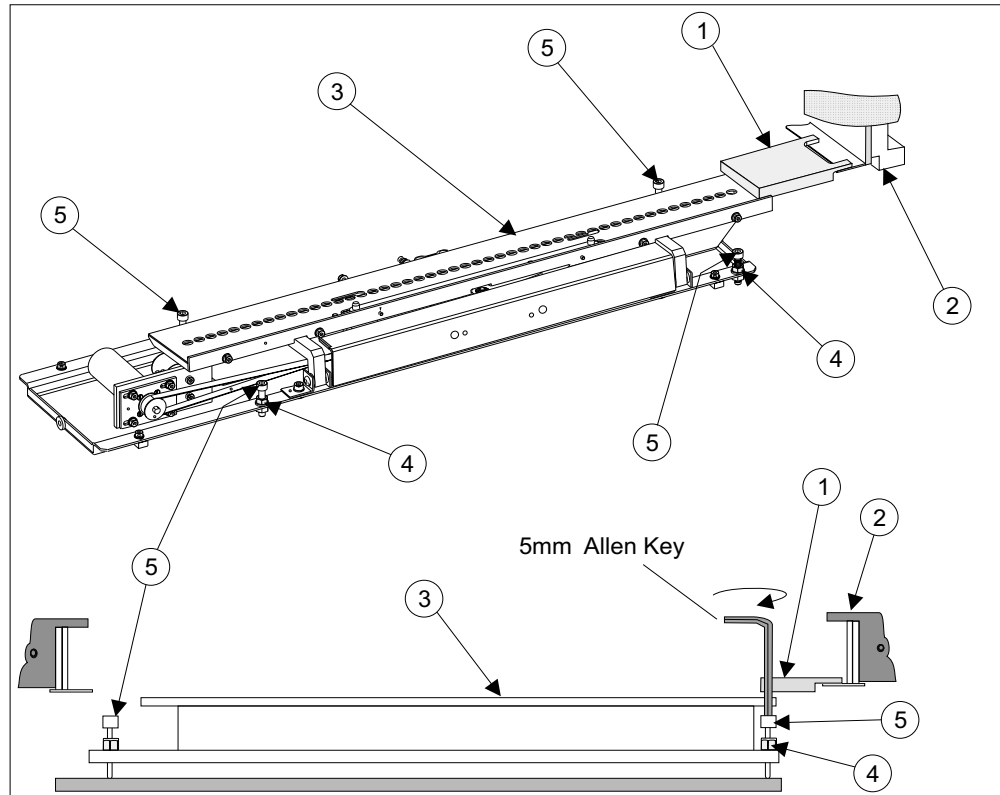
**Screen Cleaner
Height Adjustment**

1. If a screen is present in the printer, remove it.
2. From the Start menu, select **Show Classic**.
3. In Diagnostics select **Print Carriage** module.
4. Select **Home Print Carriage** and select **Exit**.
5. Select **Screen Cleaner** module.
6. Select **Toggle Dry Wipe Blade** to raise the body assembly to the horizontal position.
7. Open the front printhead cover/shutter.
8. If a 520mm or a 620mm cleaner is fitted, remove the Vortex cleaning cassette and the vacuum adaptor.



9. With reference to the figure below, place the jig (1), part number 161130, on one end of the top plate (3), so that the lugs of the jig rest on the screen guide rails (2). The jig should be level with the body assembly and the screen guide rail.

10. If necessary, slacken the two 10mm locking nuts (4) on the two adjusters (5) at the end of the cleaner nearest the jig. Adjust the adjuster, using a 5mm Allen key, so that the jig is level on both the cleaner and the screen rail. This gives the correct foam compression.



11. Repeat Steps 9 and 10 with the jig fitted to the other end of the body assembly, If necessary slacken the two 10mm locking nuts (4) on the two adjusters (5) at the end of the cleaner nearest the jig.
12. Repeat Steps 9 - 11 until the jig is level at both ends of the body assembly.
13. Tighten the four locking nuts (4), re-check that the jig is level.
14. On 520mm or 620mm cleaners, refit the vacuum adaptor and the Vortex cleaning cassette.
15. Close the front printhead cover/shutter and press the **System** button.
16. Select **Toggle Dry Wipe Blade** to lower the body assembly.
17. Exit Diagnostics.

NOTE

For stepped screens use a feeler gauge the same size as the step, between the jig and the PTFE Gasket and ensure that both ends are level. This ensures that the correct height is set for the screen.

CALIBRATIONS**WARNING**

RECOMMENDED SOLVENTS. ANY SOLVENTS USED MUST COMPLY WITH LOCAL ENVIRONMENTAL GUIDELINES. DEK RECOMMEND USING SOLVENTS THAT ARE ENVIRONMENTALLY FRIENDLY, IE CFC FREE AND WATER BASED. SOLVENTS USED MUST HAVE FAST EVAPORATION RATES AND FLASHPOINT SPECIFICATIONS GREATER THAN 39°C.

**WARNING**

SOLDER PASTE AND SOLVENTS. WHEN USING OR HANDLING ANY SOLDER PASTE OR SOLVENT FORMULATION THE MANUFACTURERS' RECOMMEND SAFETY PRECAUTIONS MUST BE STRICTLY ADHERED TO.

**WARNING**

PROTECTIVE CLOTHING. APPROVED PROTECTIVE CLOTHING SHOULD BE WORN BY SOLDER PASTE AND SOLVENT HANDLERS AT ALL TIMES TO ELIMINATE FUME INHALATION, EYE CONTACT, SKIN CONTACT AND INGESTION.

**WARNING**

SOLVENT SOLUTION. DO NOT MIX SOLVENT SOLUTIONS. FLUSH THE SOLVENT TANK THOROUGHLY WHEN CHANGING TO A DIFFERENT SOLVENT SOLUTION.

**WARNING**

SOLVENT SPRAY. THE UNDERSCREEN CLEANER SPRAYS A FINE JET OF SOLVENT SOLUTION ON TO THE CLEANER. APPROVED PROTECTIVE CLOTHING SHOULD BE WORN.

Solvent

For the Time To Go (TTG) to work correctly, the software needs to know the weight of the remote solvent tank when empty and when full of the solvent to be used.

NOTE

Due to solvents having different gravities, the weight of a full tank must be recalibrated when changing solvents.

To calibrate the software carry out the following procedure:

1. Select **Start - Setup Machine - Options Parameters**.
2. Check that the Screen Cleaner is set to **FITTED**.
3. Check that the Cleaner Model Control is set to **VORTEX**.
4. Select **Exit**.
5. Ensure that the remote solvent tank is empty and on level ground.
6. From the Start menu, select **Show Classic**.
7. Select **Maint..**
8. Select **Calib Machine**.
9. Select **Solvent**.
10. Select **Set Solv Empty** and confirm by selecting **Yes**.
11. Remove the lid on the remote solvent tank.
12. Using a suitable funnel, fill the solvent tank with the solvent to be used.

13. Replace the lid.
14. Select **Set Solv Full** and confirm by selecting **Yes**.
15. Select **Exit**.
16. Select **Exit**.
17. Select **Exit**.
18. Select **Open Cover** and lift the front printhead cover/shutter.
19. Select **Prime Solvent** and when prompted press the two button control until the cleaning cassette wet cell is impregnated with solvent (this may take several attempts before solvent is sprayed onto the wet cell).
20. Select **Exit**.
21. Select **Hide Classic** to return to the main screen.
22. Close the front printhead cover/shutter and press the **System** button.