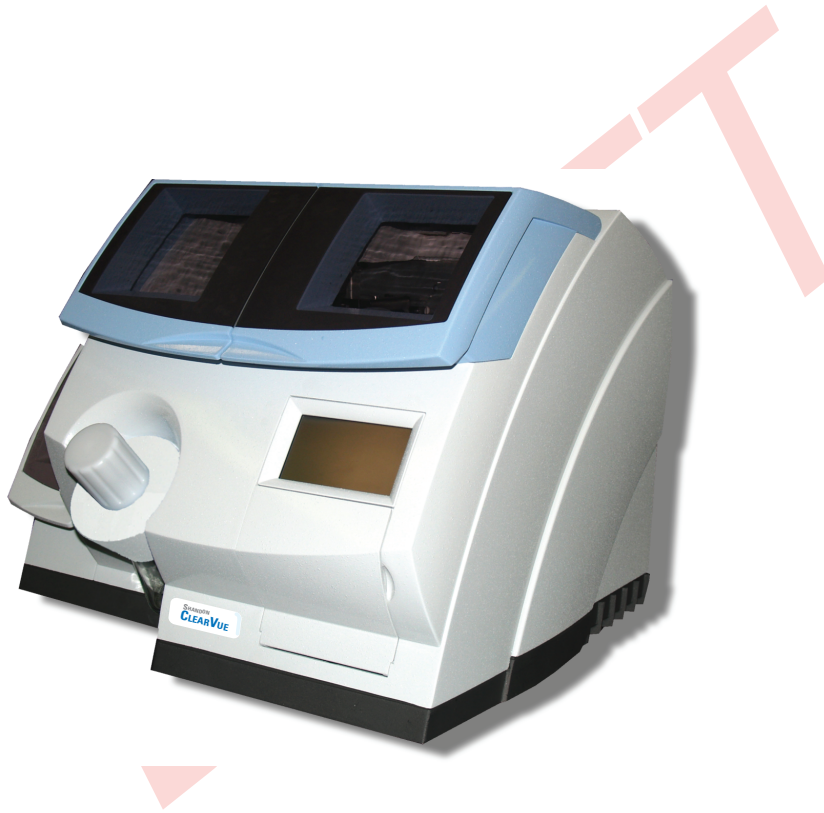


**Shandon ClearVue™
Operator Guide - English
A79210100 - Issue 2**



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Contact addresses

Anatomical Pathology
93-96 Chadwick Road
Astmoor, Runcorn
Cheshire, WA7 1PR, UK

Tel: +44 (0) 1928 562600
Fax: +44 (0) 1928 562627
www.thermo.com/pathology

Anatomical Pathology
4481 Campus Drive
Kalamazoo,
MI 49008, USA

Tel: 1-800-522-7270
Fax: +1 269-372-2674
www.thermo.com/pathology



The Shandon ClearVue meets the following CE Mark requirements:

In Vitro Diagnostic Directive 98/79/EC

Low Voltage Directive 2006/95/EC, as amended by 93/68/EEC.



The Shandon ClearVue™ is referred to throughout this document as the Shandon ClearVue.

Symbols

The following symbols and conventions are used throughout this manual and on the instrument.



THIS SYMBOL IS USED ON THE EQUIPMENT, OR IN A DOCUMENT, TO WARN THAT INSTRUCTIONS MUST BE FOLLOWED FOR SAFE AND CORRECT OPERATION. IF THIS SYMBOL APPEARS ON THE INSTRUMENT, ALWAYS REFER TO THIS OPERATOR GUIDE.



THIS SYMBOL IS USED ON THE EQUIPMENT, OR IN A DOCUMENT, TO WARN THAT THERE MAY BE A BIOHAZARD ASSOCIATED WITH THE INSTRUMENT. ALWAYS ACT WITH COMMON SENSE AND BE AWARE OF THE SAMPLES USED. TAKE SUITABLE PRECAUTIONS.



THIS SYMBOL IS USED ON THE EQUIPMENT, OR IN A DOCUMENT, TO WARN THAT HARMFUL CHEMICALS ARE USED WITH THE INSTRUMENT. REFER TO THE MATERIAL SAFETY DATA SHEETS FOR THE CHEMICALS USED. ALWAYS ACT WITH COMMON SENSE AND BE AWARE OF LOCAL LABORATORY PROCEDURES. TAKE SUITABLE PRECAUTIONS.

A warning is given in the document if there is a danger of personal injury or damage to samples or equipment.

Note

Notes give more information about a job or instruction but do not form part of the instructions.

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How to Use This Guide

Introduction The Shandon ClearVue is a high throughput, automated coverslipper intended for use in laboratories by operators familiar with coverslipping techniques and laboratory equipment.

Before operating this instrument the user should have read and understood the **Safety** section of the **Safety and Warranty Booklet (A79910001)**.

Chapter Summary

Chapter 1 - Introducing the Shandon ClearVue - This chapter gives a tour of the instrument and its features. It describes the different parts of the instrument and gives general information with regards to interfacing with the system.

Chapter 2 - Basic Operation - This chapter is intended to supplement the information given in the **Quick Start Guide (A79210120)**.

Chapter 3 - Advanced Operation - This chapter covers the more advanced features available on the Shandon ClearVue. The information contained in this chapter is intended to allow experienced operators to increase the versatility of the Shandon ClearVue.

Chapter 4 - Troubleshooting - This chapter is intended to help operators identify and cure common problems.

Chapter 5 - Cleaning and Maintenance - This chapter lists the day-to-day cleaning routines required for the safe and reliable operation of the Shandon ClearVue. It also contains the methods required to perform many of the remedies listed in the **Troubleshooting** section of this document.

1 - Introducing the Shandon ClearVue

1-1 - Introduction

The Shandon ClearVue is a high-throughput, precision engineered, slide coverslipper, capable of coverslipping 400 slides every hour in a precise and efficient manner.

The Shandon ClearVue has been designed for general laboratory use, and can handle baskets from the following stainers:

- **Shandon Varistain® Gemini** (Inc. ES Variant)
- **Shandon Varistain® 24-4**
- **Leica Autostainer**
- **Sakura Tissue-Tek® DRS 2000™ Series**

The Shandon ClearVue is capable of having multiple baskets loaded at once in any order from any of the above stainers.

1-2 - Compatibility

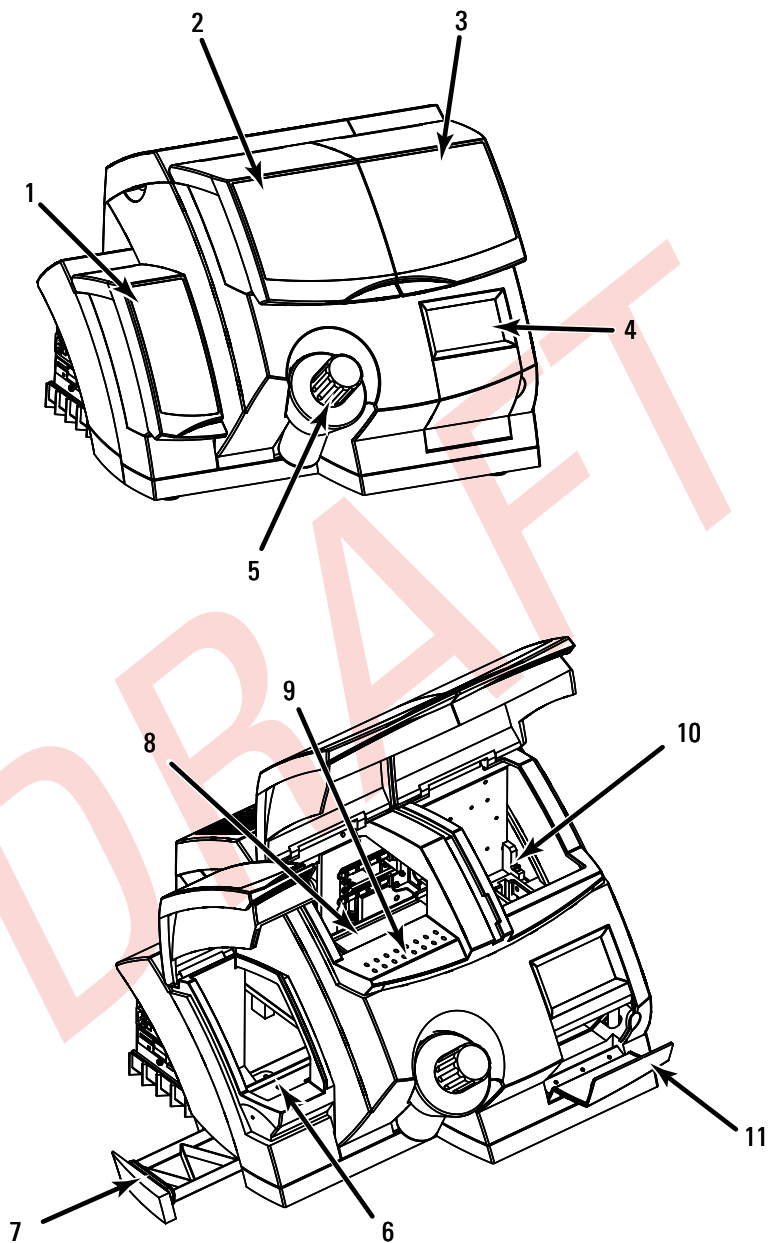
The Shandon ClearVue is compatible with the following sizes of coverslips:

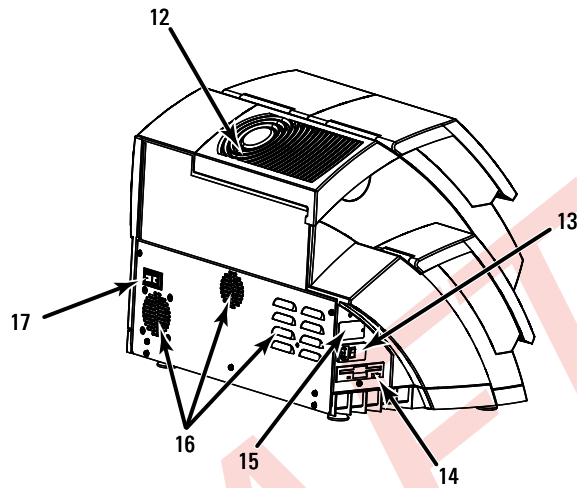
- **No. 1.0 x 24 x 40 mm**
- **No. 1.0 x 24 x 50 mm**
- **No. 1.5 x 24 x 40 mm**
- **No. 1.5 x 24 x 50 mm**
- **No. 1.5 x 24 x 55 mm**

The following slide dimensional tolerances are permissible:

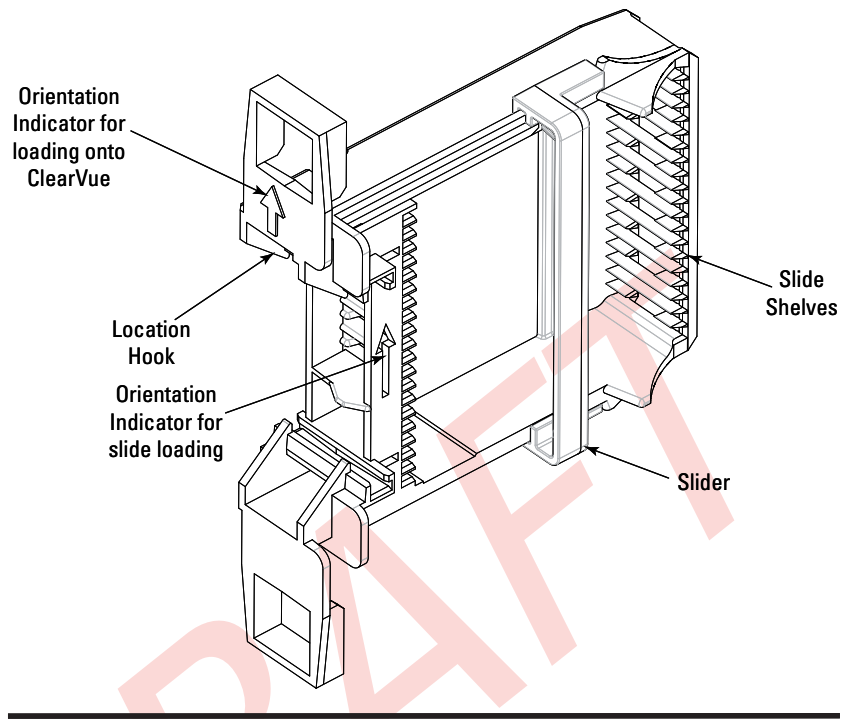
Length	74.5 -76.0 mm
Width	24.5 - 26.0 mm
Thickness	0.8 - 1.2 mm

1-3 - Identification of Parts





1. Load Door
2. Unload Door
3. Access Door
4. Touch Screen
5. Mountant Bottle
6. Load Rail
7. Xylene Tray
8. Unload Rail
9. Downdraft Ventilation
10. Coverslip Preparation Area
11. Debris Tray Door
12. Filter Cover
13. Main Power Switch, Fuses and Connector
14. 3½" Floppy Disk Drive
15. Rating Label
16. Vents for Electronics Enclosure
17. Battery Isolation Switch



1-4 - System Interfacing

The **Touch Screen** panel is the primary user interface mode on the Shandon ClearVue.

It is used to input data, operate the manual functions and inform the user of instrument data.

In addition, the Shandon ClearVue will issue audible alerts when appropriate.

General operation of the Shandon ClearVue is started by opening and closing the **Load Door**.

Stopping and restarting the Shandon ClearVue is controlled by the software to ensure safety, whilst at the same time making sure that the samples are not compromised.



Opening any of the doors will not necessarily cause the Shandon ClearVue to stop running; therefore care should be taken when adding or removing baskets.

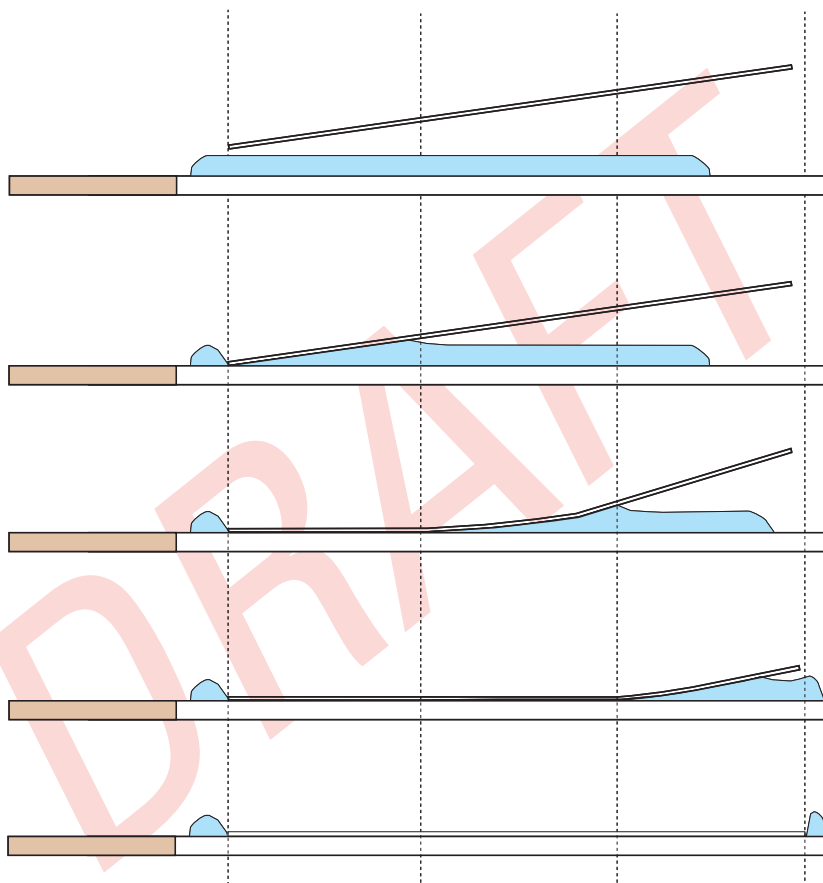
1-5 - System Specification

Dimensions		
Height	500 mm	19.7"
Width	645 mm	25.4"
Depth	575 mm	22.6"
Weight	48 kg	106 lbs
Electrical Specification		
Voltage	100 - 240 V _{ac}	
Frequency	50 / 60 Hz	
Power (max)	300 VA	
Earth Leakage	< 500 μA at 110-120 V _{ac}	
Fuses	T 6.3 A, 250 V	
Internal Batteries	Sealed Lead Acid type. Not user replaceable.	
Environmental Requirements		
Warning - For Indoor Use Only		
Temperature (Operating Limits)	+5°C to +40°C (+41°F to +104°F)	
Temperature (Recommended Operation)	+15°C to +30°C (+59°F to +86°F) <i>Note: Performance may deteriorate when operated outside of this temperature range.</i>	
Temperature (Storage)	-25°C to +55°C (-13°F to 131°F) +70°C (158°F) for short exposure	
Relative Humidity	Max. 80% RH up to 31°C Decreasing linearly to 50% RH at 40°C	
Altitude	Up to 2000 m (6,500 ft)	
Pollution Degree	2	
Over Voltage Category	II	

1-6 - Coverslipping Method

The Shandon ClearVue has been specifically designed to ensure consistent, high quality, coverslipping.

The following diagram shows how the coverslip is laid:



This method of coverslipping has been proven, through rigorous testing, to minimize bubbles and ensure complete adhesion to the slide.

2 - Basic Operation

The following chapter describes the basic operational tasks required to run the Shandon ClearVue on a daily basis.

- 2-1 - Daily Tasks
 - 2-2 - Weekly Tasks
 - 2-3 - Changing the Carbon Filter
 - 2-4 - Filling the Xylene Tray
 - 2-5 - Filling the Mountant Bottle
 - 2-6 - Changing the Purge Tray and Debris Tray
 - 2-7 - Starting up the Shandon ClearVue
 - 2-8 - Filling the Dispense Head Cleaning Station
 - 2-9 - De-Gassing the Mountant Bottle
 - 2-10 - Flushing the System
 - 2-11 - Purging the System
 - 2-12 - Changing the Coverslip Hopper
 - 2-13 - Loading Baskets
 - 2-14 - Unloading Baskets
 - 2-15 - Shutdown Procedure
-

2-1 - Daily Tasks

The following tasks should be carried out at least once a day:



Top-up the Dispense Head Cleaning Station -
see Section 2-8.



Wipe the Dispense Head with a Xylene damp cloth.



Wipe the top of the Dispense Head Cleaning Station with a Xylene damp cloth.



Check the number of Coverslips in the Hopper and replace if necessary - *see Section 2-12.*



Check the level of Mountant and top-up if necessary - *see Section 2-5.*



Ensure that the Suction Cup is clean and free from debris - Replace if necessary - *see Section 5-2-4.*

2-2 - Weekly Tasks

The following tasks should be carried out at least once a week:



Empty, clean and refill the Dispense Head Cleaning Station - see Section 5-2-3.



Remove any discarded coverslips from the Slip Dispense Area.



Remove the Coverslip Transfer Head - see Section 5-2-4 - to check that the Pads and Suction Cup are clean and free of Mountant.

Replace the Suction Cup if necessary - see Section 5-2-4 - and wipe the Pads with a xylene damp cloth to clean



Top up the Xylene Tray - see Section 2-4



Empty the Debris Tray - see Section 2-6.



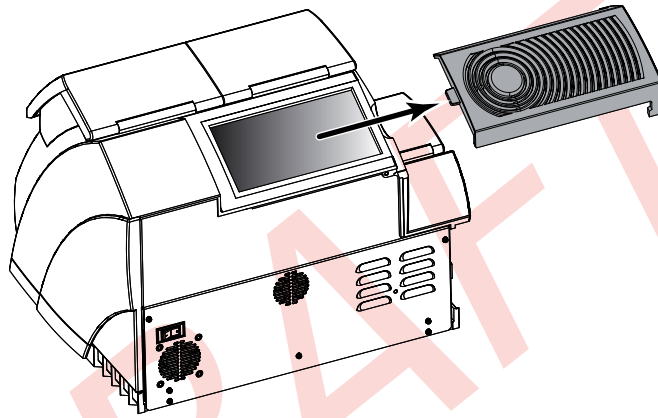
Check the Purge Tray and replace if necessary - see Section 2-6.

2-3 - Changing the Carbon Filter

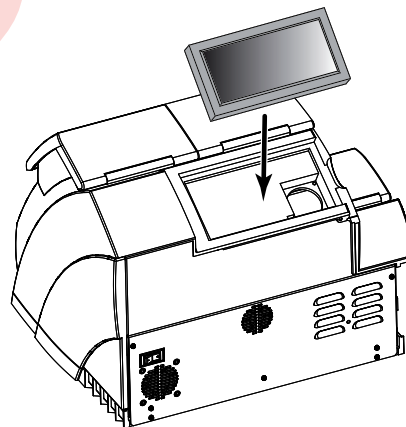
The **Carbon Filter** should be changed every **3 Months** to ensure it functions correctly.

To change the **Carbon Filter**:

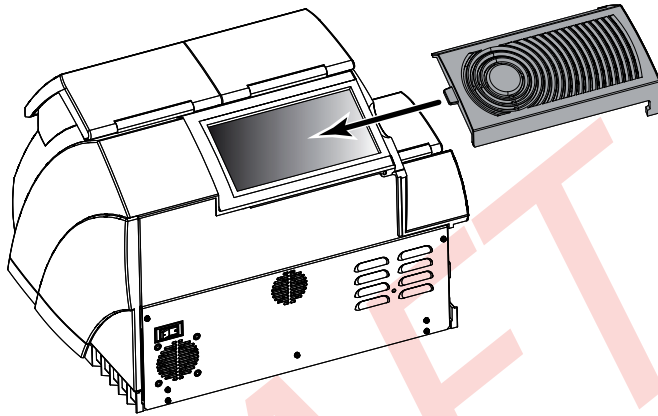
1. Slide the **Filter Cover** off to gain access to the **Carbon Filter**.



2. Lift the **Carbon Filter** out of the chamber and dispose of according to local regulations.
3. Remove the cellophane wrapping from a new **Carbon Filter** and place into the chamber.



4. Slide the **Filter Cover** back into position making sure it is firmly clipped into place.



The Carbon Filter should be changed every 3 months - write the installation date on the Carbon Filter using a marker to ensure proper record keeping.

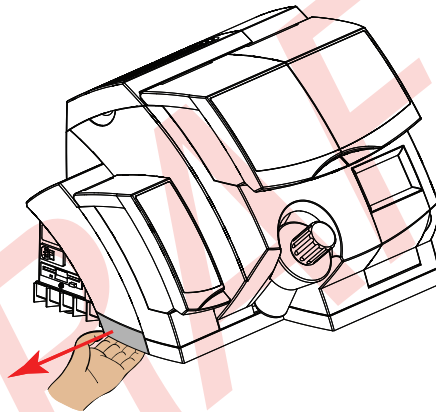
2-4 - Filling the Xylene Tray

The **Xylene Tray** is intended to provide a xylene rich atmosphere to prevent slides on the **Load Rail** from drying out.

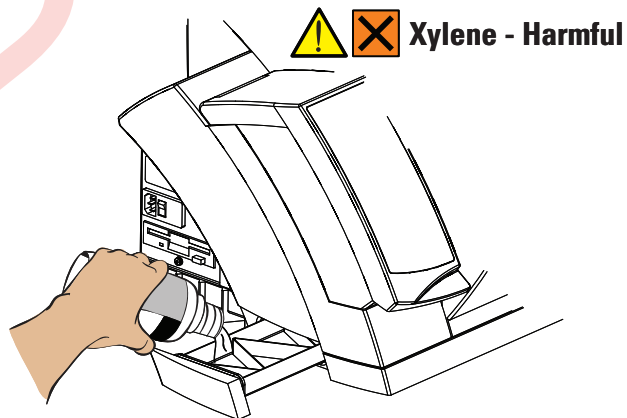
The **Xylene Tray** should be checked **every week** and topped up as required.

To fill the **Xylene Tray**:

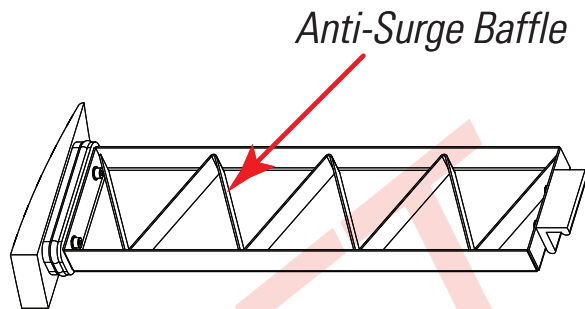
1. Slide the **Xylene Tray** out about half-way, taking care not to spill any remaining xylene.



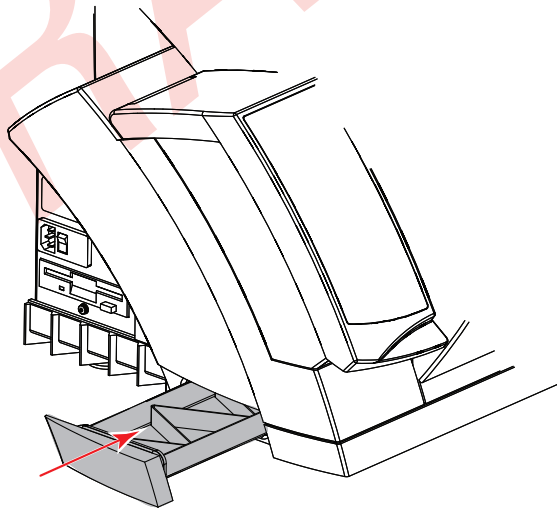
2. Carefully pour xylene into the **Xylene Tray**.



3. The depth of the xylene should be no higher than the top of the **Anti-Surge Baffle**.



4. Slowly close the **Xylene Tray** completely to ensure that the seal is properly engaged.



2-5 - Filling the Mountant Bottle

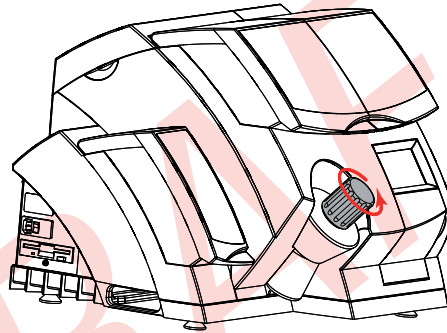
The Mountant Bottle supplies **Mountant** to the **Dispense Head**. It is strongly advised not to allow the **Mountant Bottle** to run dry.



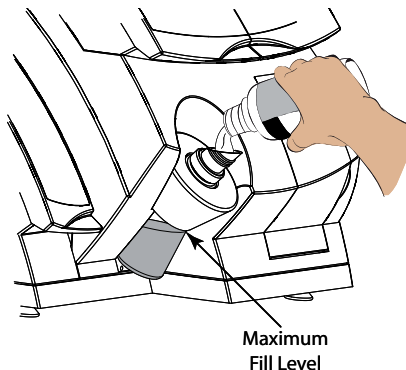
Some mountants are harmful!

To fill the **Mountant Bottle**:

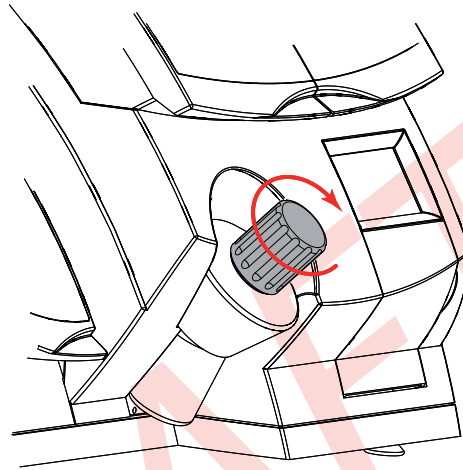
1. Remove the **Mountant Bottle** lid by screwing it anti-clockwise.



2. Carefully pour **Mountant** into the open end of the **Mountant Bottle**, making sure to avoid getting mountant on the outside of the bottle, until the liquid reaches the bottom of the collar as shown.



3. Replace the **Mountant Bottle** lid and tighten it fully.



Do not overfill the Mountant Bottle.

Ensure no mountant reaches the Air Vent on the spout as this will cause the instrument to cease operation.

Note:

De-Gas the Mountant Bottle (see Section 2-9) after filling.

2-6 - Changing the Purge Tray and Debris Tray

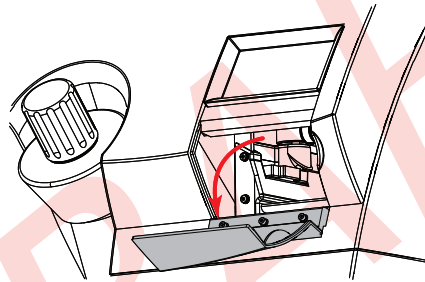
The **Purge Tray** is used as a receptacle for expelled **Mountant** and **Xylene**.

The volume of fluid in the **Purge Tray** should be checked prior to carrying out either a **Flush** or **Purge** function.

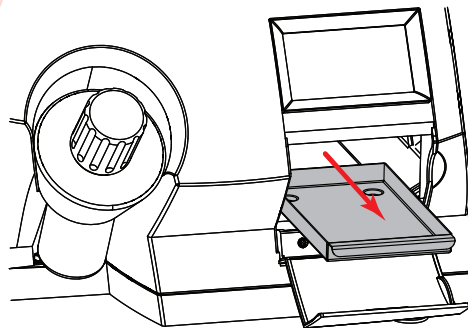
The **Debris Tray** contains any **Coverslips** which have been discarded or broken during coverslipping.

To change the **Purge Tray** and empty the **Debris Tray**:

1. Open the **Debris Tray Door**.

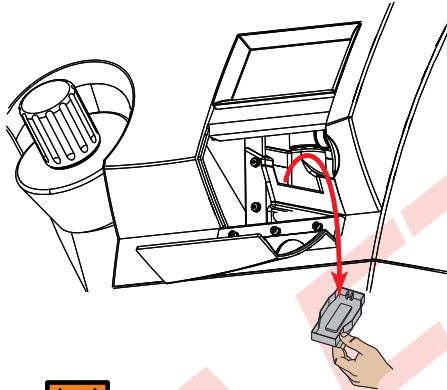


2. Remove the **Debris Tray** and dispose of the contents according to local regulations.



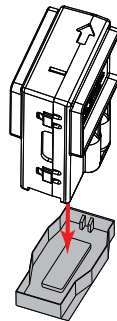
Broken Glass

3. Reach into the instrument as shown and, using the tab, carefully lift the **Purge Tray** down off its shelf.



Harmful Chemicals

4. Dispose of the used **Purge Tray** according to local regulations.
5. Either:
Unpack a new **Coverslip Hopper**; the end cap doubles as a new **Purge Tray**.
or
Use one of the spare **Purge Trays** supplied with the instrument.



6. Place the new **Purge Tray** onto its shelf.
 7. Replace the **Debris Tray**.
 8. Close the **Debris Tray Door**.
-

DRAFT

2-7 - Starting Up the Shandon ClearVue




To start up the Shandon ClearVue:

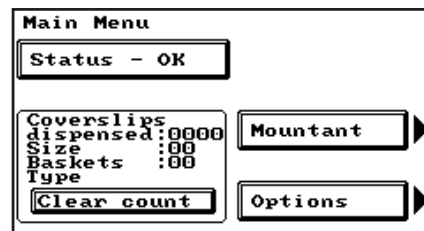
1. Turn the **Mains Power Switch** to the On position 'I'.



2. Turn the **Battery Isolation Switch** to the On position 'I'.



3. When the **Language Select** screen appears, use the  and  keys on the **Touch Screen** to highlight the required language, and then press .
4. The **Main Menu** will now be displayed. After power on the system will carry out a series of automated checks, the Status will show 'Initialising'. When complete the Status will show 'OK'. The instrument is now ready to use.



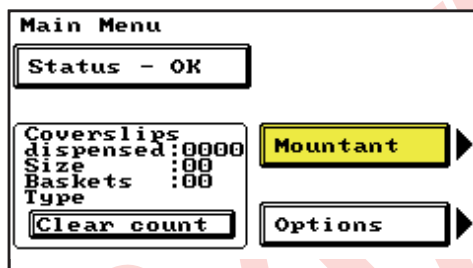
2-8 - Filling the Dispense Head Cleaning Station

The **Dispense Head Cleaning Station** ensures the **Dispense Head** does not get blocked with **Mountant**.

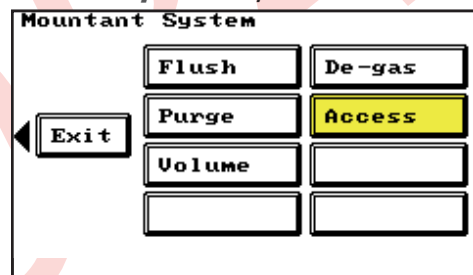
The **Dispense Head Cleaning Station** should contain enough Xylene for there to be a visible pool in the central well.

To Fill the **Dispense Head Cleaning Station**:

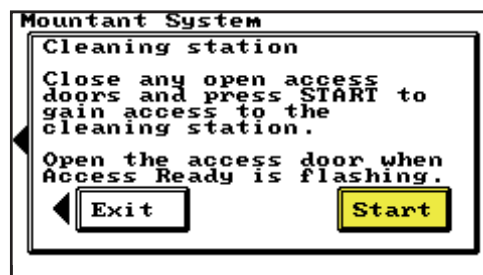
1. From the **Main Menu**, press the **Mountant** key on the **Touch Screen**.



2. Press the **Xylene** key on the **Touch Screen**.



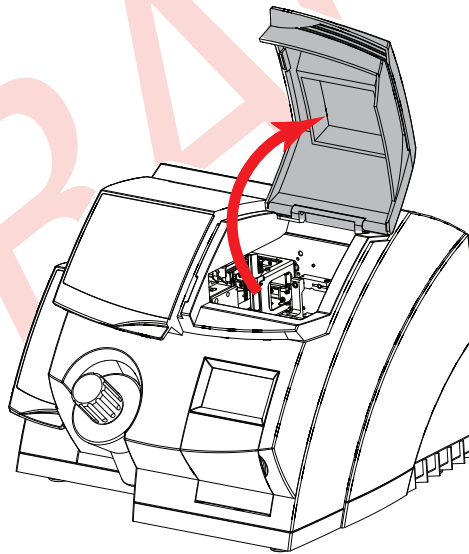
3. Press the **Start** key on the **Touch Screen**.



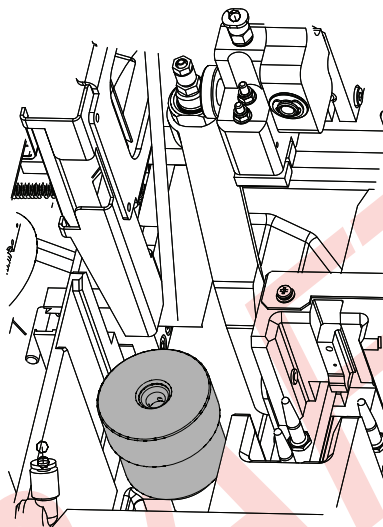
4. Wait for activity within the Shandon ClearVue to stop, and **Access Ready** to flash on the **Touch Screen**.



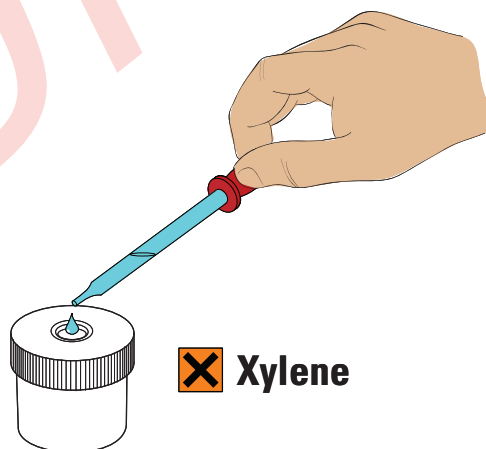
5. Open the **Access Door**.



6. The **Dispense Head Cleaning Station** should now be accessible from above.



7. Drip Xylene into the **Dispense Head Cleaning Station** until it is at a level where it can be seen in the central well (approx. 18ml).



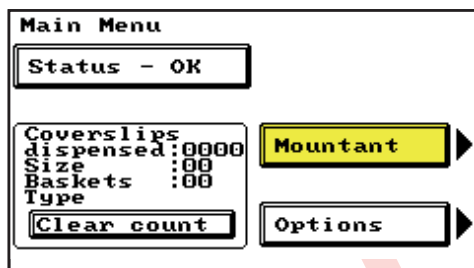
8. When finished, close the **Access Door** and press the **Complete** key on the **Touch Screen**.



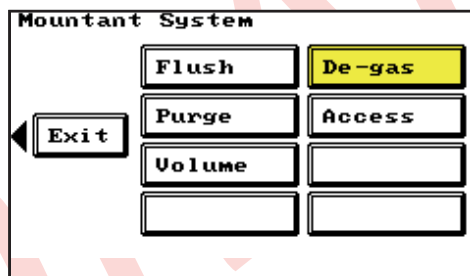
2-9 - De-Gassing the Mountant Bottle

To De-Gas the **Mountant Bottle**:

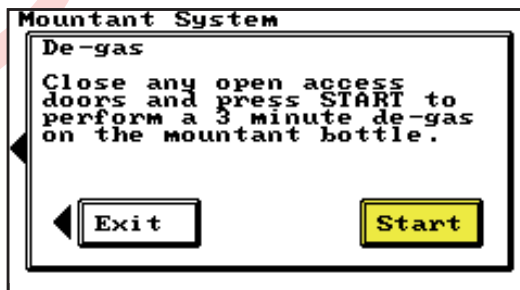
1. From the **Main Menu**, press the **Mountant** key on the **Touch Screen**.



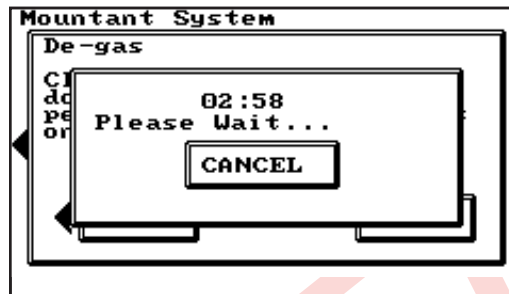
2. Press the **De-gas** key on the **Touch Screen**.



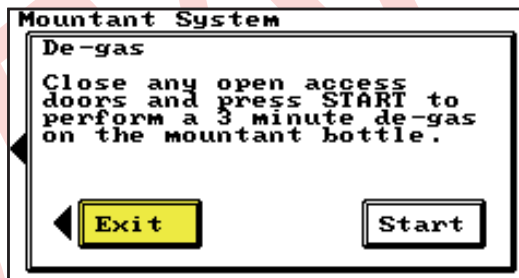
3. Press the **Start** key on the **Touch Screen**.



4. The Shandon ClearVue will now de-gas the **Mountant Bottle**.



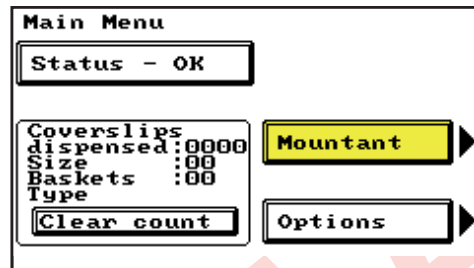
5. When the Shandon ClearVue has stopped de-gassing the **Mountant Bottle** press the **Exit** key on the **Touch Screen**.



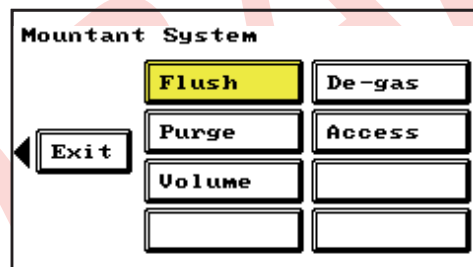
2-10 - Flushing the System

To flush the system:

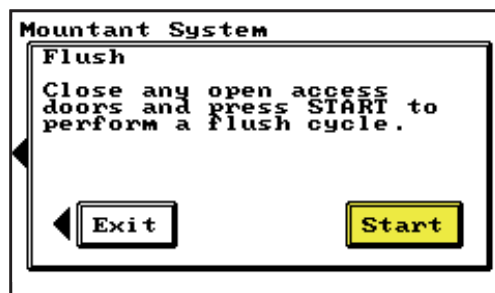
1. Ensure the **Access Door** is closed.
2. From the **Main Menu**, press the **Mountant** key on the **Touch Screen**.



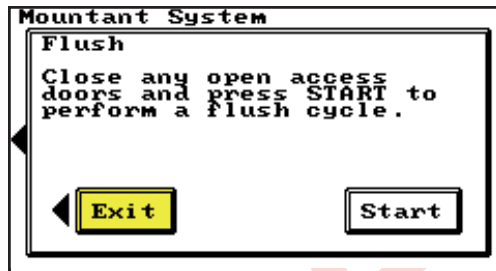
3. Press the **Flush** key on the **Touch Screen**.



4. Ensure the **Purge Tray** is empty and that there is sufficient mountant in the **Mountant Bottle**.
5. Press the **Start** key on the **Touch Screen**.



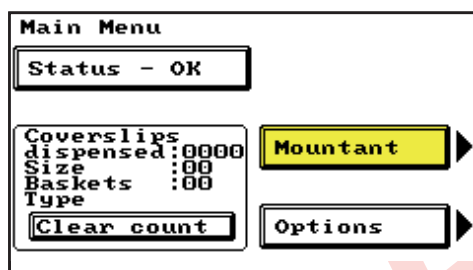
6. Wait for the activity within the Shandon ClearVue to stop, and then empty or discard the **Purge Tray** as described in *Section 2-6*.
7. Press the **Exit** key on the **Touch Screen**.



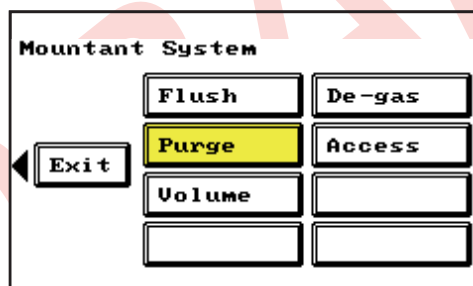
2-11 - Purging the System

To purge the system:

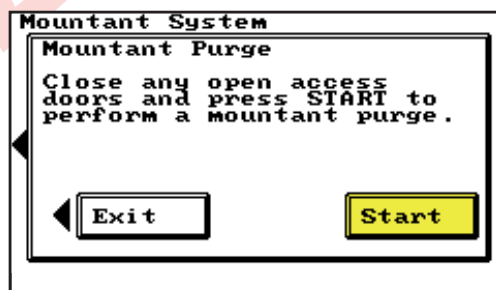
1. Ensure the **Access Door** is closed.
2. From the **Main Menu**, press the **Mountant** key on the **Touch Screen**.



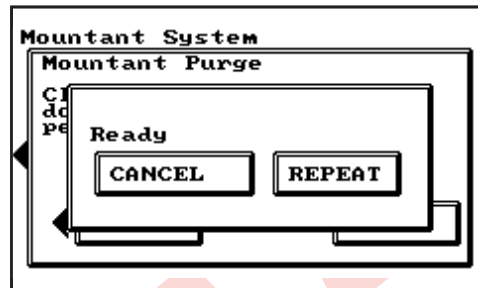
3. Press the **Purge** key on the **Touch Screen**.



4. Press the **Start** key on the **Touch Screen**.



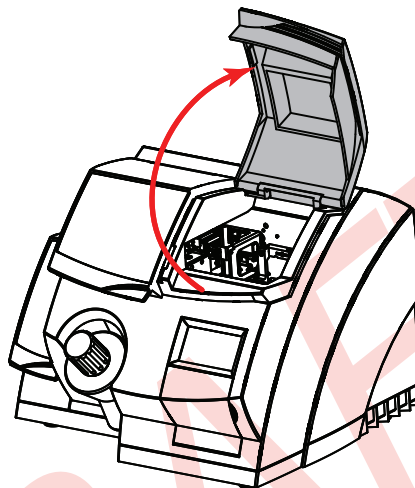
5. Wait for the activity within the Shandon ClearVue to stop, and then empty the **Purge Tray** as described in *Section 2-6*.
6. Press **Repeat** on the **Touch Screen** to restart the **Purge** process, or **Cancel** to exit.



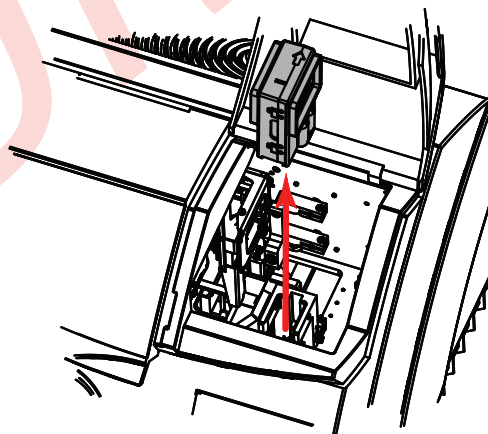
2-12 - Changing the Coverslip Hopper

To change the **Coverslip Hopper**:

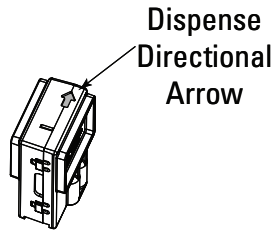
1. Open the **Access Door**.



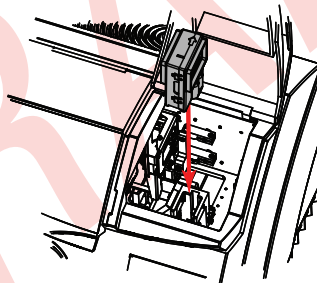
2. Remove the empty **Coverslip Hopper** by lifting it upwards.



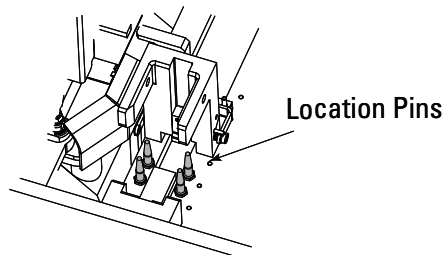
3. Unpack a new **Coverslip Hopper** and identify the **Dispense Directional Arrow** on the top.



4. Remove the **Purge Tray** from the bottom of the **Coverslip Hopper**.
5. Load the new **Coverslip Hopper** ensuring that the **Dispense Directional Arrow** is pointing towards the back of the instrument.



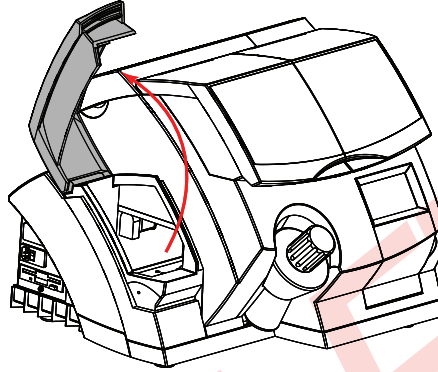
6. The **Coverslip Hopper** should sit level and fully down over the **Location Pins**.



2-13 - Loading Baskets

To load **Baskets** of slides:

1. Open the **Load Door**.

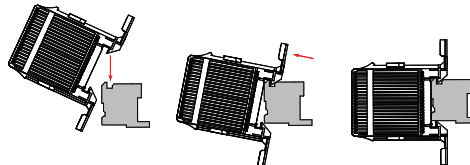
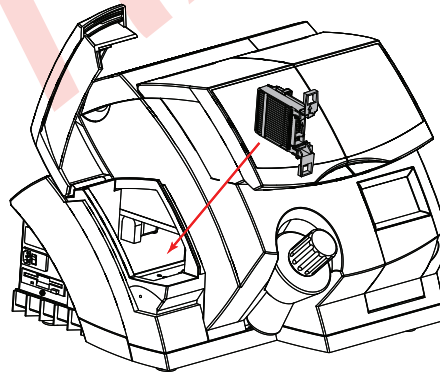


2. Place the **Basket** onto the **Load Rail** as shown.

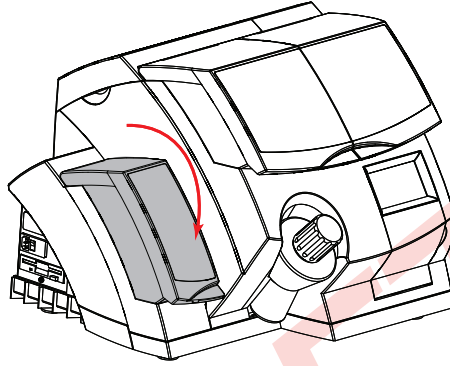
Notes:

Ensure basket slider is closed before loading basket.

Ensure directional arrow on basket is pointing upwards.



3. Close the **Load Door**.

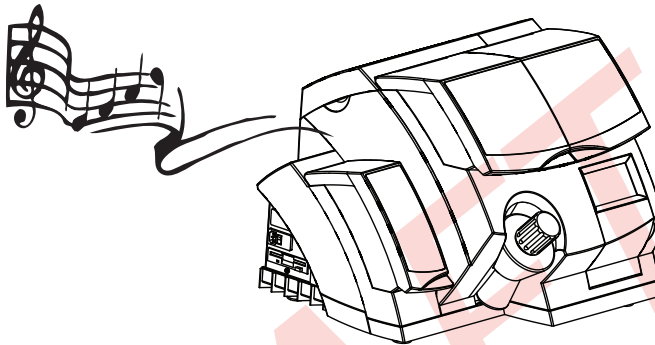


4. The Shandon ClearVue will start automatically.

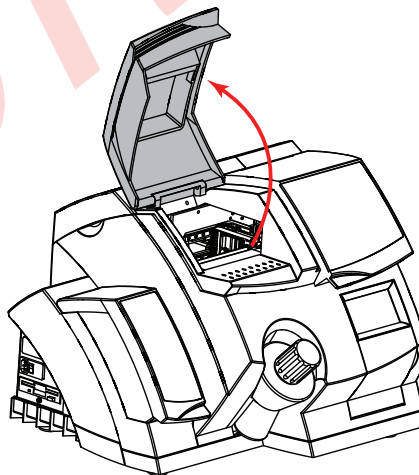
2-14 - Unloading Baskets

To unload **Baskets**:

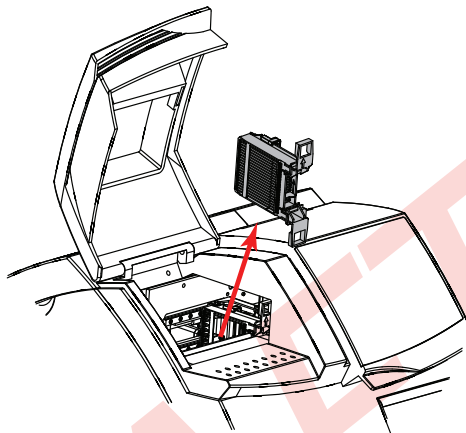
1. When a **Basket** of slides is completed, the Shandon ClearVue emits an **Audible Alert**.



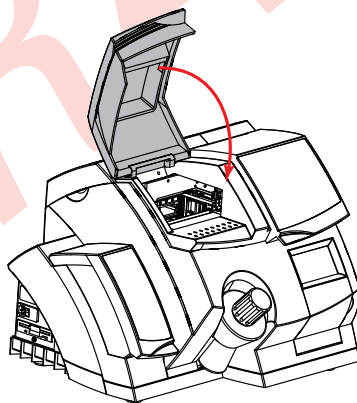
2. It is advisable to wait about 15 minutes before removing a completed **Basket**, to allow the **Mountant** to dry enough to allow the **Basket** to be handled safely.
3. Open the **Unload Door**.



4. Remove the completed **Basket** from the **Unload Rail**.



5. Close the **Unload Door**.

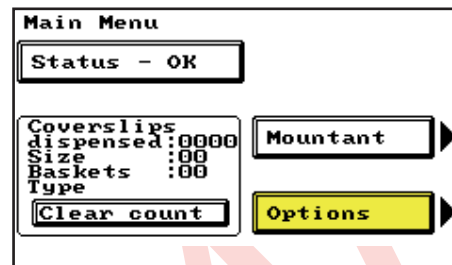


2-15 - Aborting a Basket

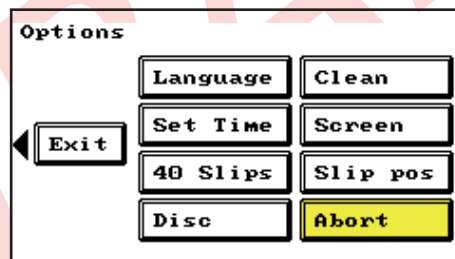
If for any reason a **Basket** being coverslipped needs to be returned to the **Unload Rail** without finishing the coverslipping process, the **Abort** command can be used.

To **Abort** a **Basket**:

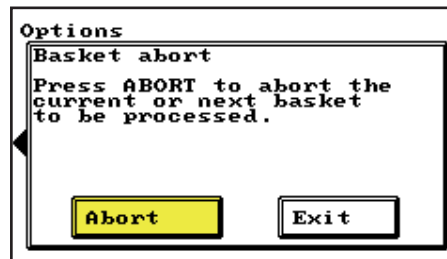
1. From the **Main Menu** press the **Options** key on the **Touch Screen**.



2. Press the **Abort** key.



3. From the **Basket Abort** screen press the **Abort** key.



2-16 - Shutdown Procedure

To shutdown the Shandon ClearVue:

- Ensure there are no **Baskets** still in the instrument.
- Ensure the **Dispense Head** is located in the **Dispense Head Cleaning Station**.
- Switch the **Mains Power Switch** to the off '0' position.

Note:

Do not switch off the Battery Isolation Switch.

3 - Settings

The following chapter explains the optional settings available with the Shandon ClearVue.

- 3-1 - Coverslip Size Options
 - 3-2 - Adjusting Coverslip Position
 - 3-3 - Altering Coverslip Transfer Head Position
 - 3-4 - Screen Options
 - 3-5 - Time and Date Settings
 - 3-6 - Disc Options
 - 3-7 - Altering the Mountant Dispense Volume
 - 3-8 - Changing Languages
-

3-1 - Coverslip Size Options

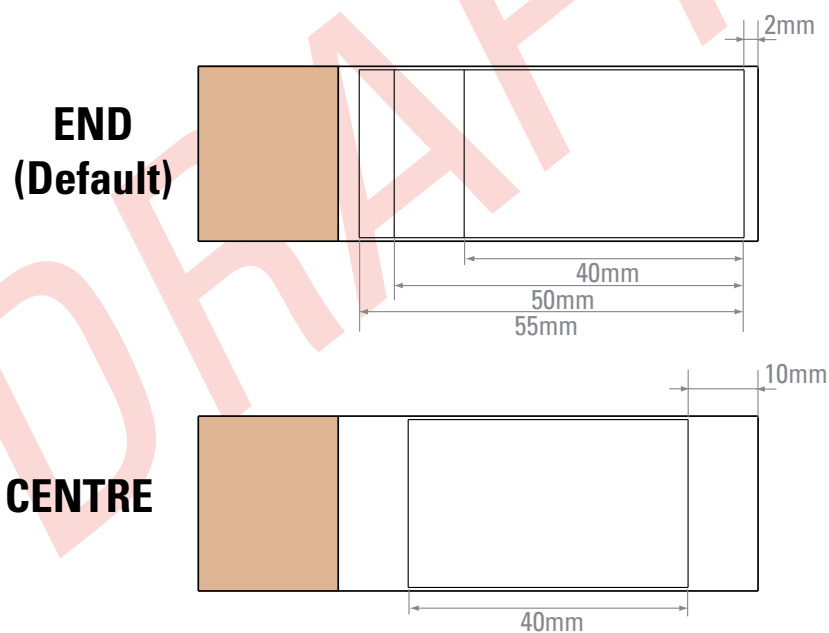
The Shandon ClearVue is capable of using 3 different lengths of **Coverslip**.

These are:

- 40 mm
- 50 mm
- 55 mm

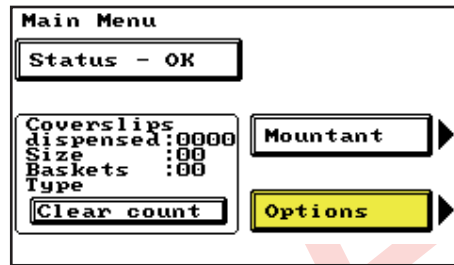
The default setting for **Coverslip Position** is with a **2mm** gap between the end of the **Slide** and the end of the **Coverslip**.

The **40 mm Coverslips** can also be positioned centrally.

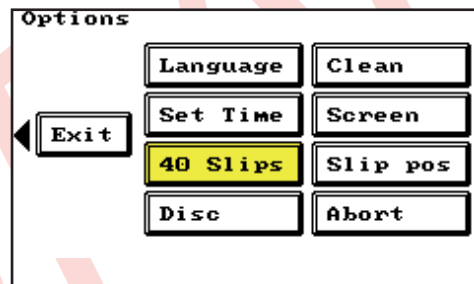


The method for selecting the position of the **40 mm Coverslip** is as follows:

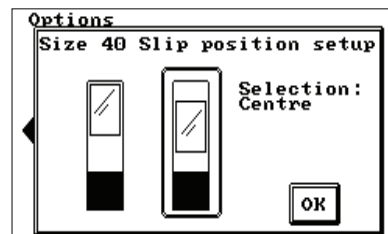
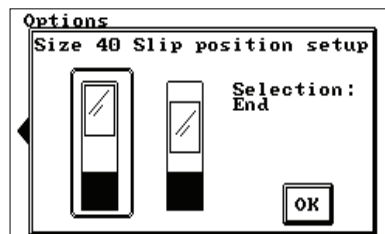
1. From the **Main Menu** press the **Options** key on the **Touch Screen**.



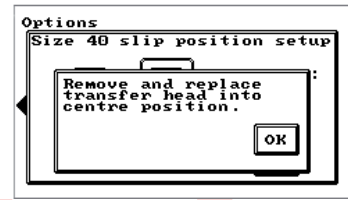
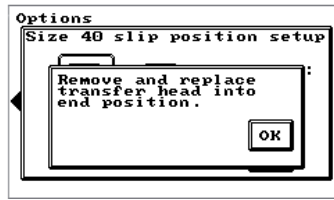
2. Press the **40 Slips** key on the **Touch Screen**.



3. Select either **End** (default setting) or **Centre**, then press **OK**.



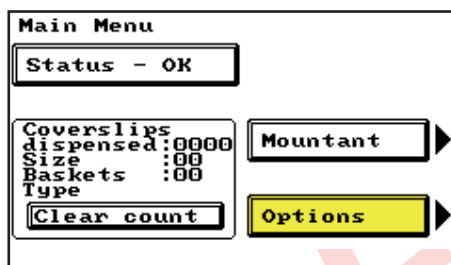
4. Using the procedure given in *Section 3-3*, move the **Coverslip Transfer Head** into the position specified on the **Touch Screen** and then press **OK**.



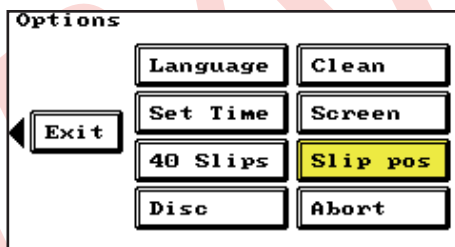
3-2 - Adjusting Coverslip Position

The Coverslip position on the Slide can be adjusted in the following manner:

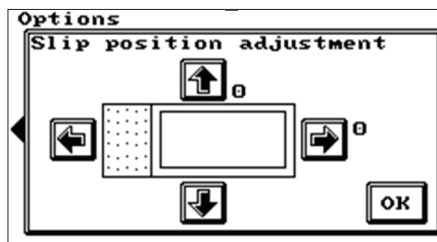
1. From the **Main Menu** press the **Options** key on the **Touch Screen**.



2. Press the **Slip Position** key.



3. Use the **Arrow Keys** to move the Coverslip to the required position.



Note:

The Coverslip position can be adjusted by up to 1mm in any one direction in 0.25mm increments.

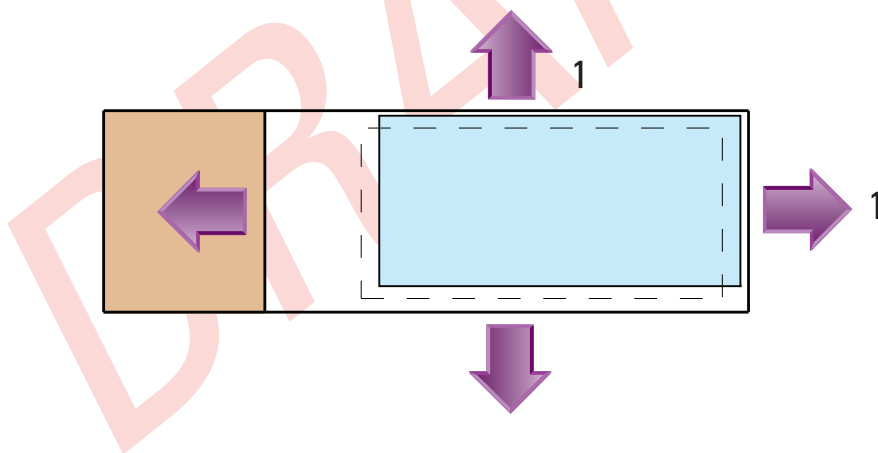
The default position has a setting of 0.

Positive numbers indicate that the Coverslip has moved in the direction of the corresponding arrow.

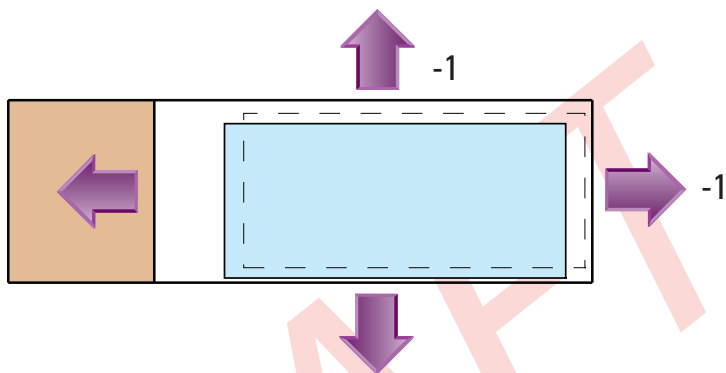
Negative numbers indicate that the Coverslip has moved in the opposite direction to the arrow.

Examples

1. The positive number values indicate a movement in the direction of the labelled arrows; hence the **Coverslip** is positioned above and to the right hand side of centre.



2. The negative number values indicate a movement in the opposite direction to the labelled arrows; hence the **Coverslip** is positioned below and to the left hand side of centre.

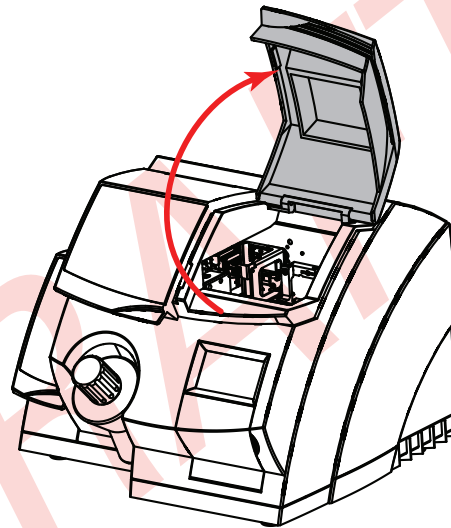


3-3 - Altering Coverslip Transfer Head Position

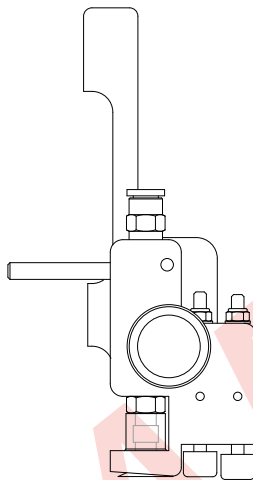
The **Coverslip Transfer Head** has 2 possible positions to allow the 40 mm coverslips to be positioned either **Centrally** or in the **End (Default)** position (*See Section 3-1*).

The method for changing the Coverslip Transfer Head position is:

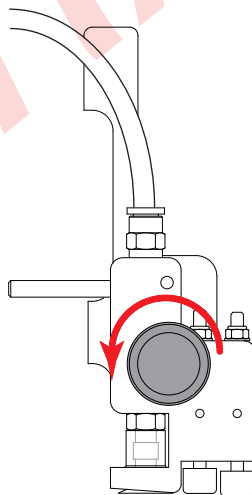
- Follow the setup method shown in *Section 3-1*.
- Open the **Access Door**.



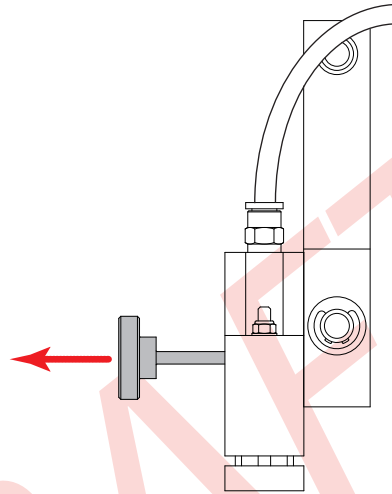
- Identify the **Coverslip Transfer Head**.



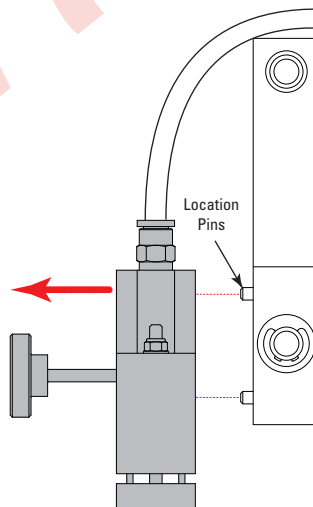
- Loosen the **Thumbscrew** by turning it anti-clockwise.



- Pull the **Thumbscrew** out as shown to release the **Coverslip Transfer Head**.



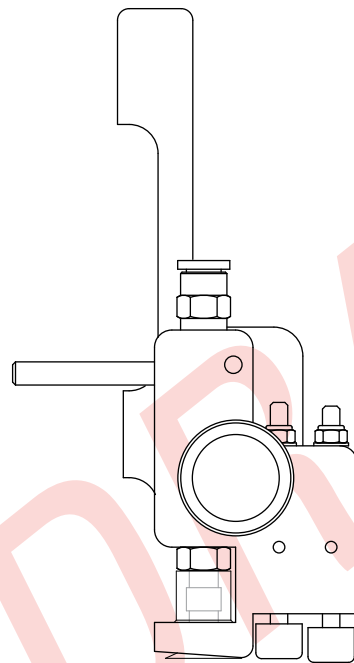
- Remove the **Coverslip Transfer Head** from the **Location Pins** as shown.



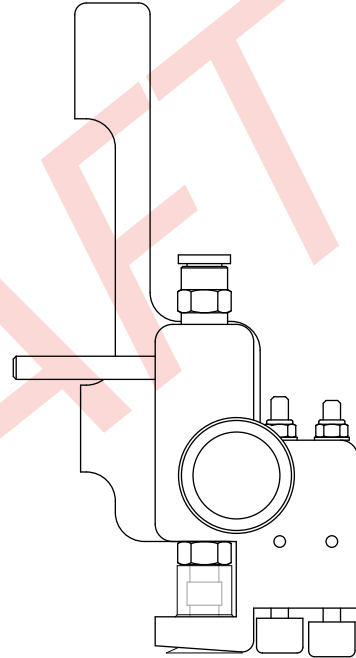
- Reposition the **Coverslip Transfer Head** as required.

Note:

Ensure the Coverslip Transfer Head sits correctly on the Location Pins before tightening the Thumbscrew.



Default Transfer Head Position



Transfer Head Position for
40 mm Central Setup

3-4 - Screen Options

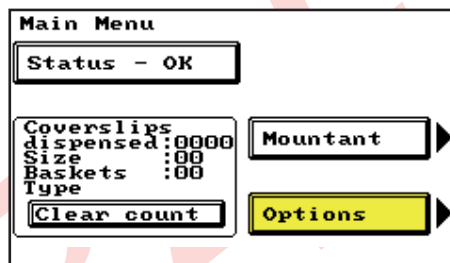
The **Touch Screen** settings can be altered to adjust both the **View Angle** and the screen **Brightness**.

The **View Angle** is the angle from which the screen is best viewed - so a tall person would want a higher **View Angle** than a shorter person.

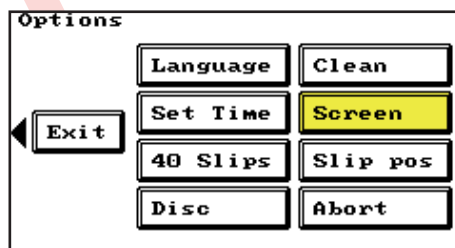
The **Brightness** sets the amount of screen back-lighting.

To access the **Screen Adjust** display:

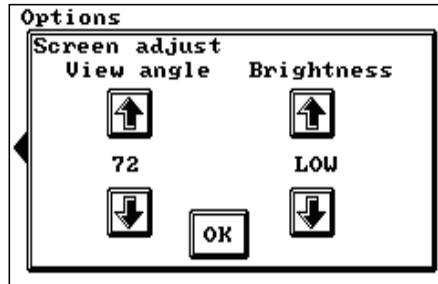
1. From the **Main Menu** press the **Options** key on the **Touch Screen**.



2. Press the **Screen** key.



3. This will open the **Screen Adjust** display.

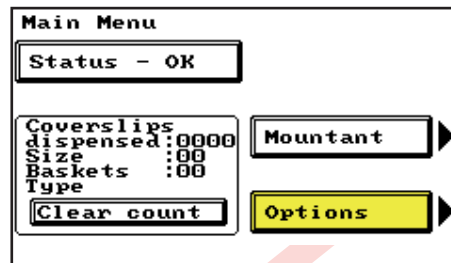


4. From this it is possible to adjust the **View Angle** and **Brightness** using the relevant **Arrow Keys**.
 5. When the **Touch Screen** is configured as required, press **OK** to return to the **Options Menu**.
-

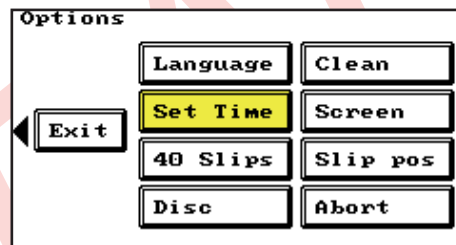
3-5 - Time and Date Settings

The Time and Date can be altered in the following way:

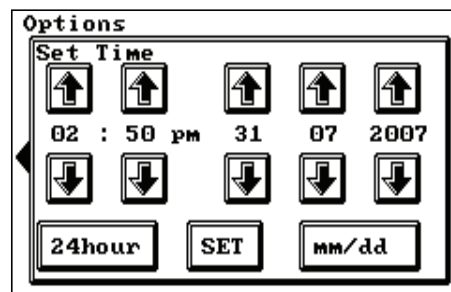
1. From the **Main Menu** press the **Options** key on the **Touch Screen**.



2. Press the **Set Time** key.



3. This will open the **Set Time** display.



4. From this it is possible to adjust the **Time** and the **Date** using the relevant **Arrow Keys**.
 5. The **Time Format** and **Date Format** can also be altered by pressing the **24 Hour / 12 Hour** and **mm/dd / dd/mm** keys as appropriate.
 6. When the settings are configured as required, press **SET** to apply the settings.
-

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3-6 - Disc Options

The **Disc Options** screen allows an **Engineers' Log** to be taken and the Shandon ClearVue software to be updated.

The **Engineers' Log** may be requested by a Service Engineer to aid troubleshooting.

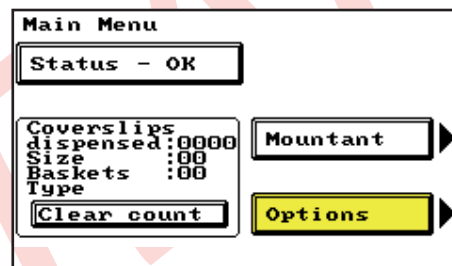
To create an **Engineers' Log**:

Note:

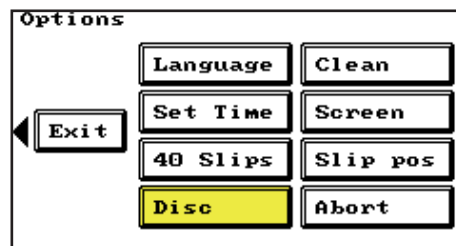
An Engineers' Log can only be written when the Shandon ClearVue is idle - that is, not processing baskets.

An audible warning will sound if an attempt is made to write an Engineers' Log during processing.

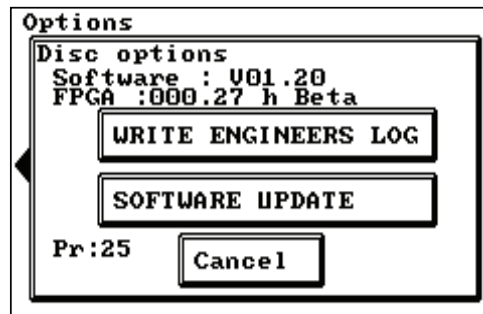
1. From the **Main Menu** press the **Options** key on the **Touch Screen**.



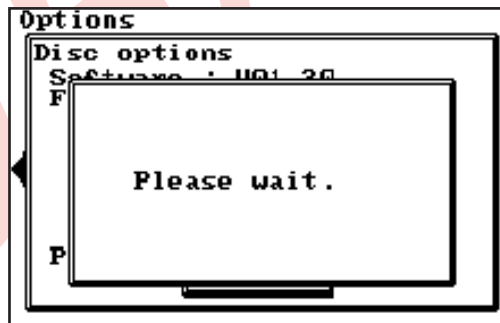
2. Press the **Disc** key.



3. This will open the **Disc Options** display.



4. Insert a blank, formatted, floppy disc into the **Disc Drive**.
5. Press the **Write Engineers' Log** key.
6. The Shandon ClearVue will then write to the floppy disc.



7. When the above screen has gone and the light on the **Disc Drive** has gone out, it is safe to remove the floppy disc from the **Disc Drive**.

A **Software Update** would normally be performed by a Service Engineer; however, it is possible for the user to perform an update if supplied with a new version on a floppy disc.

To perform a **Software Update**:

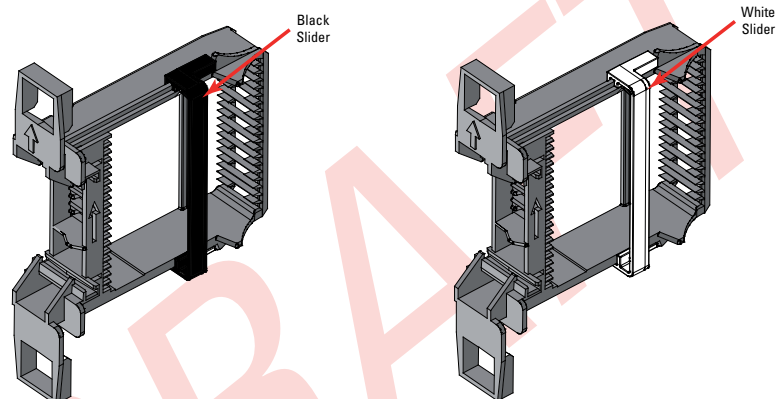
1. Insert the floppy disc, containing the updated version of the software, into the **Disc Drive**.
 2. From the **Disc Options** screen press the **Software Update** key.
 3. The Shandon ClearVue will then automatically install the updated software and reboot itself.
 4. The new software will be active when the reboot is complete.
-

3-7 - Altering the Mountant Dispense Volume

To allow for variations in the thickness of cut samples, the Shandon ClearVue has a **Basket Recognition** feature.

This allows the Shandon ClearVue to determine the colour of the **Slider** on the **Baskets**.

The **Baskets** supplied with the Shandon ClearVue have either a **Black Slider** or **White Slider**.



The **Black Slider** typically designates thicker samples; whilst the **White Slider** designates thinner samples.

The Shandon ClearVue can detect the colour of the **Slider** and automatically adjust the amount of mountant dispensed, to ensure that the coverslip adheres properly to the slide.

Note:

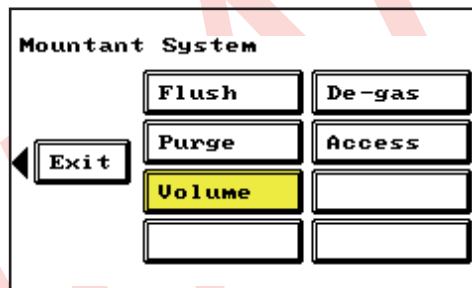
If there is very little variation in the thicknesses of samples, the volume of mountant dispensed for baskets with either a black or a white slider can be set to the same value.

To adjust the **Mountant Volume**:

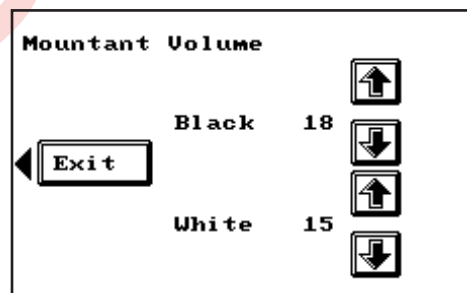
1. From the **Main Menu**, press the **Mountant** key on the **Touch Screen**.



2. Press the **Volume** key on the **Touch Screen**.



3. Use the **Arrow Keys** to adjust the dispensed volume for each **Basket** type.



Notes:

The recommended volume of mountant for general use is 15ml.

During processing, pressin the Mountant key from the Main menu will automatically open the Mountant Volume screen.

Adjusting the Volume during processing will have an IMMEDIATE effect on the amount of mountant dispensed.

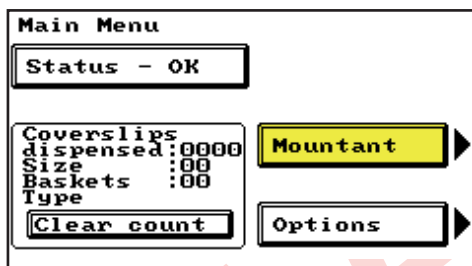
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3-8 - Changing Languages

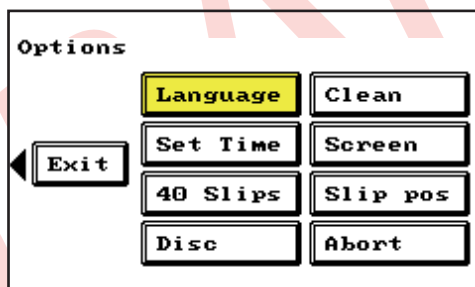
After the initial start-up procedure it is possible to change the **Language** used on the **Touch Screen** display.

The **Language** can be changed as follows:

1. From the **Main Menu**, press the **Mountant** key on the **Touch Screen**.



2. Press the **Language** key on the **Touch Screen**.



3. This will display the same **Language Select** screen as was used during the start-up procedure.



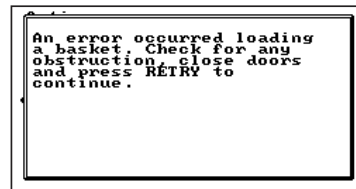
4. Use the **Arrow Keys** to highlight the required language from the list available and press **Select**.
-

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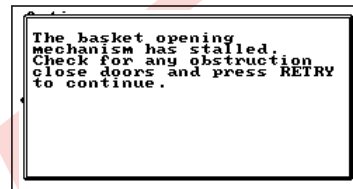
4 - Troubleshooting

This chapter describes some possible problems and their solutions.

4-1 - Error Screens



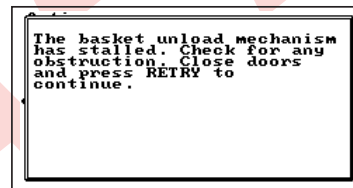
Error 1



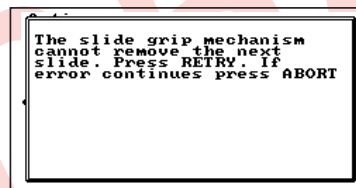
Error 2



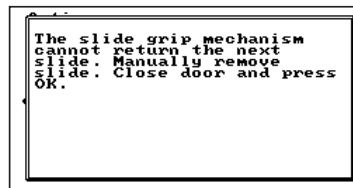
Error 3



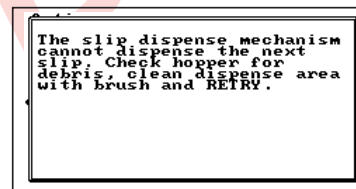
Error 4



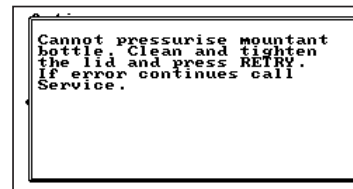
Error 5



Error 6



Error 7



Error 8

The mountant pump mechanism has stalled. Press RETRY. If error continues consult operator guide.

Error 9

Loss of vacuum to coverslip transfer head. Check tubes and suction cup. Close the door and press RETRY to continue.

Error 10

Failure to release vacuum from coverslip transfer head. Press RETRY. If error continues call Service.

Error 11

The coverslip transfer head has stalled. Press RETRY. If error continues call Service.

Error 12

The coverslip transfer head is in the wrong position. Clean the head, re-position it, close the door and press RETRY to continue.

Error 13

Cannot complete coverslip preparation. Manually remove slide. Close door and press OK to continue.

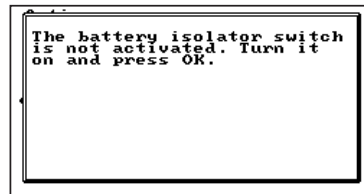
Error 14

The cleaning station has stalled. Press RETRY. If error continues call Service.

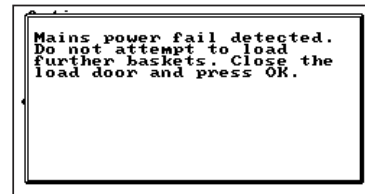
Error 15

Pneumatic filter or vacuum Error. Press OK. If error continues call Service.

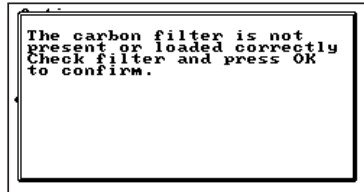
Error 16



Error 17



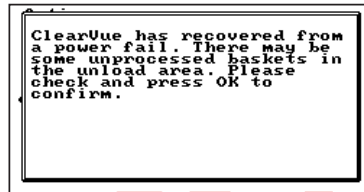
Error 18



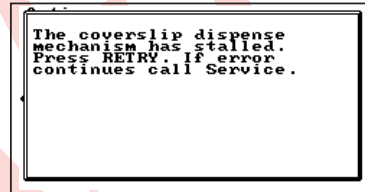
Error 19



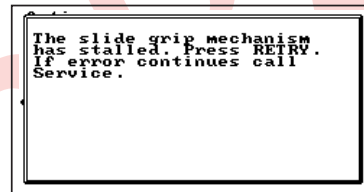
Error 20



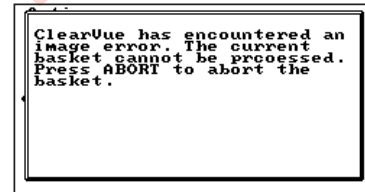
Error 21



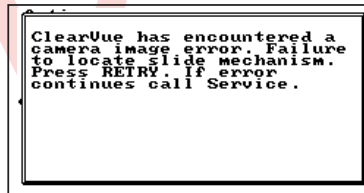
Error 22



Error 23



Error 24



Error 25

When an **Error Screen** appears there will be a one or more of the following options given to rectify the error.



The specific **Error Screens** explain the options available.

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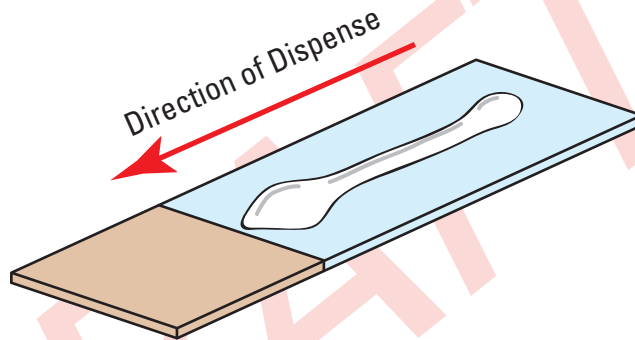
4-2 - Identifying Problems

The quality of prepared slide can be used to help troubleshooting on the Shandon ClearVue, which can then be solved either by the operator or by a Service Engineer.

The two states which can be observed are:

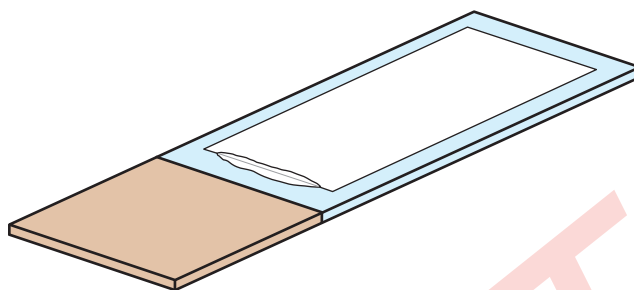
- Quality of mountant laydown.
- Quality of coverslipped slide.

The correct appearance for each of these is shown below.



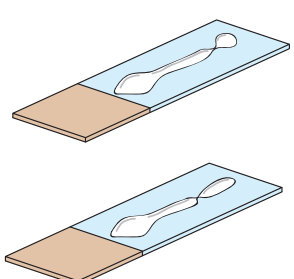
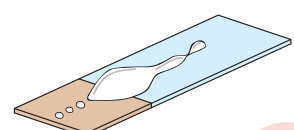
Correct mountant laydown appearance:

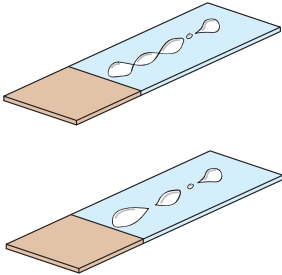
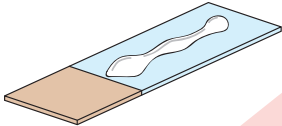
- Small initial drop.
- Uniform middle strip of mountant.
- Larger drop at end, close to, but not encroaching on the frosted area.

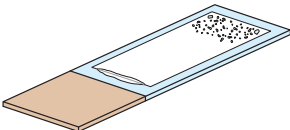
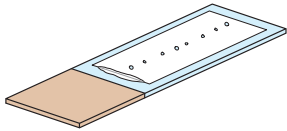
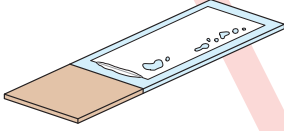


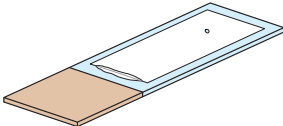
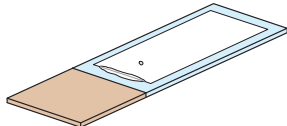
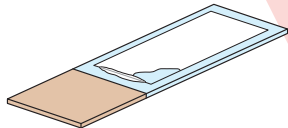
Correct appearance of coverslipped slide:

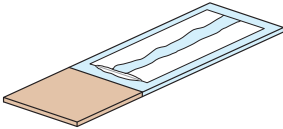
- Minimal overspill of mountant at the frosted end of slide.
- Coverslipped area free from bubbles.
- Coverslipped area totally covered in mountant.
- Minimum mountant overspill over the rest of the coverslip perimeter.
- Coverslip positioned correctly on slide.

Description	Possible Cause	Solution
Broken Laydown:  <ul style="list-style-type: none"> • Small breaks at beginning of laydown • Uniform middle strip 	Too much 'suckback'.	Contact Thermo Fisher Scientific Service Department.
	Backlash in Mountant Pump .	Contact Thermo Fisher Scientific Service Department.
	Non-approved mounting reagent used.	Use approved mounting reagent (see <i>Appendix B</i>).
'Kite-Shaped' Laydown:  <ul style="list-style-type: none"> • Laydown begins too far down the slide and encroaches onto the frosted area. • Abnormally large middle strip. • Drips continue after main laydown. 	Blocked Dispense Head .	<ul style="list-style-type: none"> • Clean Dispense Head (see <i>Section 5-2-8</i>)
	Damaged Dispense Head .	Contact Thermo Fisher Scientific Service Department.
	Excessive air in Syringe .	Flush system until all bubbles have been expelled.

Description	Possible Cause	Solution
'Stutter' Laydown:  <ul style="list-style-type: none"> Laydown made up of several larger drops. May have gaps between drops. 	Dispense Head too high.	<ul style="list-style-type: none"> Check Dispense Head is fully screwed down. Contact Thermo Fisher Scientific Service Department.
	Air in Pipes or Syringe .	Flush system until all bubbles have been expelled.
Uneven Laydown:  <ul style="list-style-type: none"> Middle strip varies in thickness. 	Dispense Head too high.	<ul style="list-style-type: none"> Check Dispense Head is fully screwed down. Contact Thermo Fisher Scientific Service Department.
	Air in Pipes or Syringe .	Purge system until all bubbles have been expelled.

Description	Possible Cause	Solution
Multiple Bubbles at End:  <ul style="list-style-type: none"> Multiple bubbles visible towards the non-frosted end of the slide. 	Suction Cup broken.	Replace Suction Cup (see <i>Section 5-2-4</i>)
Straight Line of Bubbles  <ul style="list-style-type: none"> Multiple bubbles in a line down the length of slide. 	Suction Cup contaminated with mountant.	Remove Suction Cup (see <i>Section 5-2-4</i>) and clean using a xylene-damp cloth. <i>Note: Dry Suction Cup fully before refitting.</i>
	Dispense Head too high.	Contact Thermo Fisher Scientific Service Department.
	Air in Pipes or Syringe .	Purge system until all bubbles have been expelled.
Multiple Non-Uniform Bubbles  <ul style="list-style-type: none"> Often down one side of the slide. Various sizes of bubbles. 	Contaminated reagents.	Check quality and levels of staining reagents, and replace if necessary.
	Incompatible chemicals used.	Ensure that all chemicals used are on the Approved Reagents list (see <i>Appendix B</i>). If problems persist contact your Thermo Fisher Scientific Representative for advice.
	Instrument not level.	Level instrument using the levelling feet.

Description	Possible Cause	Solution
Single Bubble at Non-Frosted End of Slide  <ul style="list-style-type: none"> Often located underneath the Suction Cup. 	Dispense Head too high.	<ul style="list-style-type: none"> Check Dispense Head is fully screwed down. Contact Thermo Fisher Scientific Service Department.
Single Bubble at Frosted End of Slide 	Dispense Head too high.	<ul style="list-style-type: none"> Check Dispense Head is fully screwed down. Contact Thermo Fisher Scientific Service Department.
	Air in Pipes or Syringe .	Purge system until all bubbles have been expelled.
	Coverslip contacting the mountant before the Transfer Head has slowed down.	Contact Thermo Fisher Scientific Service Department.
	Non-approved mountant used.	Use approved mountant (see <i>Appendix B</i>)
Distinct Area with No Mountant  <ul style="list-style-type: none"> Area of coverslip is not stuck to slide. 	Debris under the coverslip.	<ul style="list-style-type: none"> Ensure coverslips are free from debris and dust. Ensure Slip Dispense Area is free of debris and dust.
	Very low volume of mountant, AND slide is very dry.	<ul style="list-style-type: none"> Ensure an appropriate amount of mountant is being dispensed. Ensure Xylene Tray is filled. Ensure slides are appropriately coated with xylene.

Description	Possible Cause	Solution
<p>Strip of No Mountant</p>  <ul style="list-style-type: none">• A distinct line of coverslip is not stuck to slide.	Poor quality (bowed) coverslips.	Replace with better quality (non-bowed) coverslips.

4-3 - Troubleshooting Tables

Problem	Cause	Solution
The Shandon ClearVue does not respond when the mains power is switched on.	The Shandon ClearVue is still starting-up.	Wait approximately 30 seconds for the start-up sequence to finish.
	No power supply.	Connect the power lead and switch on the mains power at the socket and the instrument.
	The mains fuses have blown.	Replace the mains fuse. Replace the instrument fuses. <i>Note: Only a technically competent person should replace fuses.</i>
	Other error.	Call Thermo Fisher Service Team for support.
The Shandon ClearVue is switched ON but the screen is blank.	Instrument in Standby mode, Screensaver is on.	Touch the screen to exit Standby mode.
	Other error.	Call Thermo Fisher Service Team for support.

Problem	Cause	Solution
Mountant Dispense Needle dirty / blocked.	Low xylene level in Dispense Head Cleaning Station.	Refill the Dispense Head Cleaning Station fully (<i>see Section 2-8</i>).
	Quick drying Mountant has formed a skin on the Needle.	Contact your Thermo Fisher Product Specialist for advice.
	Dispense Head Cleaning Station not functioning correctly.	Call Thermo Fisher Service Team for support.

Problem	Cause	Solution
Slide jams.	Incorrect size of slide.	Refer to <i>Section 1-2</i> for maximum permissible slide sizes.
	Chipped or broken slide loaded into basket.	Ensure only undamaged slides are loaded into the instrument.
	Basket slider is not fully closed.	Ensure the slider is fully closed prior to loading the basket.
	Skewed slide loaded into basket.	Ensure slides are loaded correctly into the basket.
	Damaged or broken basket.	Replace basket.
	Build up of dried mountant on basket.	Clean or replace basket.
	Dirty camera lens.	Clean camera lens, (see <i>Section 5-2-6</i>).
	Other error.	Call Thermo Fisher Service Team for support.

Problem	Cause	Solution
Coverslip misdispense.	Incorrect size of coverslip.	Refer to <i>Section 1-2</i> for permissible coverslip options.
	Broken slip jamming hopper.	Clear broken slips from hopper.
	Debris on Slip Dispense Carriage.	Clean Slip Dispense Carriage (see <i>Section 5-2-7</i>).
	Mountant dried on Slip Dispense Carriage.	Clean Slip Dispense Carriage (see <i>Section 5-2-7</i>). If this is ineffective call Thermo Fisher Service Team for support.
	Loss of vacuum on Slip Dispense Carriage.	Clean Slip Dispense Carriage (see <i>Section 5-2-7</i>). If this is ineffective call Thermo Fisher Service Team for support.
	Faulty Coverslip Transfer Head Suction Cup.	Replace Coverslip Transfer Head Suction Cup (see <i>Section 5-2-4</i>).
	Mountant on Coverslip Transfer Head Suction Cup.	Clean Suction Cup (see <i>Section 5-1</i>).

Problem	Cause	Remedy
Coverslip misdispense (Cont.).	Loss of vacuum on Coverslip Transfer Head Suction Cup.	Clean suction cup (see <i>Section 5-2-4</i>). If this is ineffective call Thermo Fisher Service Team for support.
	Hopper empty.	Load new hopper (see <i>Section 2-12</i>).
	Hopper not loaded correctly.	Load hopper correctly (see <i>Section 2-12</i>).
	Hopper hard stop set incorrectly.	Call Thermo Fisher Service Team for support.
	Slip Dispense Brush worn.	Check brush and replace if necessary (see <i>Section 5-2-5</i>).
	Other error.	Call Thermo Fisher Service Team for support.

Problem	Cause	Remedy
Breaking coverslips.	Incorrect size of coverslip.	Refer to <i>Section 1-2</i> for permissible coverslip options.
	Broken slip in hopper.	Clear broken slips from hopper.
	Debris on Slip Dispense Carriage.	Clean carriage (see <i>Section 5-2-7</i>).
	Mountant dried on Slip Dispense Carriage.	Clean carriage (see <i>Section 5-2-7</i>). If this is ineffective call Thermo Fisher Service Team for support.
	Loss of vacuum on Slip Dispense Carriage.	Call Thermo Fisher Service Team for support.
	Faulty Coverslip Transfer Head Suction Cup.	Replace Suction Cup (see <i>Section 5-2-4</i>).
	Other error.	Call Thermo Fisher Service Team for support.

Problem	Cause	Remedy
Basket Jams.	Incorrect size of slide.	Refer to <i>Section 1-2</i> for maximum permissible slide sizes.
	Basket slider not fully closed.	Ensure slider is fully closed prior to loading basket.
	Damaged or broken basket.	Replace basket.
	Build-up of dried mountant on basket.	Clean or replace basket.
	Other error.	Call Thermo Fisher Service Team for support.

Problem	Cause	Remedy
Breaking Slides.	Incorrect size of slide.	Refer to <i>Section 1-2</i> for maximum permissible slide sizes.
	Chipped or broken slide loaded into basket.	Ensure only undamaged slides are loaded into instrument.
	Slide loaded into basket incorrectly.	Ensure slides are correctly loading into baskets.
	Basket slider not fully closed.	Ensure slider is fully closed prior to loading basket.
	Damaged or broken basket.	Replace basket.
	Build up of dried mountant on basket.	Clean or replace basket.
	Dirty camera lens.	Clean camera lens (<i>see Section 5-2-6</i>).
	Incorrectly fitted Transfer Head Suction Cup.	Ensure Suction Cup is fitted correctly (<i>see Section 5-2-4</i>).
	Transfer Head Pads clogged with mountant.	Clean Transfer Head (<i>see Section 5-1</i>).

Problem	Cause	Remedy
Breaking Slides (cont.).	Transfer Head damaged.	Replace Transfer Head.
	Dispense Head height set incorrectly.	Set Dispense Head height correctly (<i>see Section 5-2-8</i>).
	Other error.	Call Thermo Fisher Service Team for support.

5 - Cleaning and Maintenance

5-1 - Cleaning Schedules

For **Daily Tasks** see *Section 2-1*.

For **Weekly Tasks** see *Section 2-2*.



If the Shandon ClearVue has been used with, or has come into contact with, hazardous material, ensure that the appropriate decontamination procedures have been followed (See World Health Organization 'Laboratory Biosafety Manual').



Cleaning or decontamination methods, other than those recommended in this document, should be checked with a Thermo Fisher Scientific agent to ensure that they will not damage the instrument.



Always wear suitable protective coverings when carrying out cleaning using chemicals.



Do not use chemicals which may interact with the materials of manufacture - If in doubt contact your Thermo Fisher Scientific agent.



Do not use hypochlorites in strong solution.



Do not use abraasive compounds or metal components to clean the Shandon ClearVue or its accessories.



Always clean up spills immediately.



In the event of a major spillage on or around the Shandon ClearVue, immediately disconnect the instrument from the Mains supply, and do not reconnect until the instrument has been thoroughly dried and check by a Thermo Fisher Service Engineer.



Potentially lethal voltages in excess of 110VAC are present within the Shandon ClearVue - Do not remove any access covers.



Disconnect the Shandon ClearVue from the Mains before cleaning.



Inspect the instrument for obvious damage or wear whenever it is being cleaned.

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5-2 - User Cleaning and Maintenance

The following sections give details on how to carry out basic cleaning and maintenance procedures.

If a problem occurs which is not covered in these sections contact Thermo Fisher Scientific Service Department.

5-2-1 - Changing Seals

Rubber **O-Rings** are used to ensure air-tight or water-tight seals either for the reliable operation of the instrument, or for the safety of the user.

If these seals become encrusted with mountant their ability to create a good seal is impaired and they must be replaced.

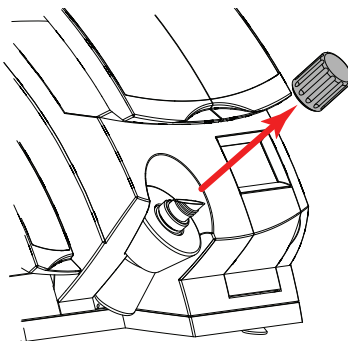
There are two user serviceable seals on the Shandon ClearVue.

These are located on:

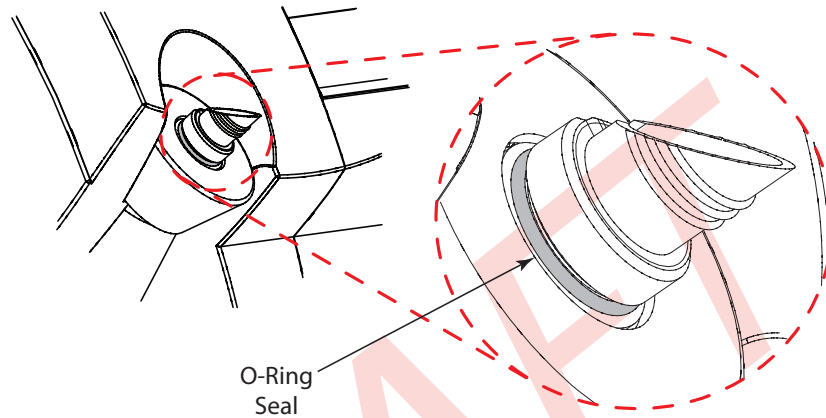
- The **Mountant Bottle** spout.
- The **Xylene Tray**.

To remove the **O-Ring Seal** on the **Mountant Bottle** spout for replacement:

1. Ensure that there are no **Baskets** currently being processed within the Shandon ClearVue.
2. Unscrew and remove the lid of the **Mountant Bottle**.



3. Identify the black **O-Ring Seal** at the base of the **Mountant Bottle** spout.



4. Use a pair of scissors or wire-cutters to carefully cut the **O-Ring Seal**, ensuring none of the surfaces of the **Mountant Bottle** are damaged in the process.

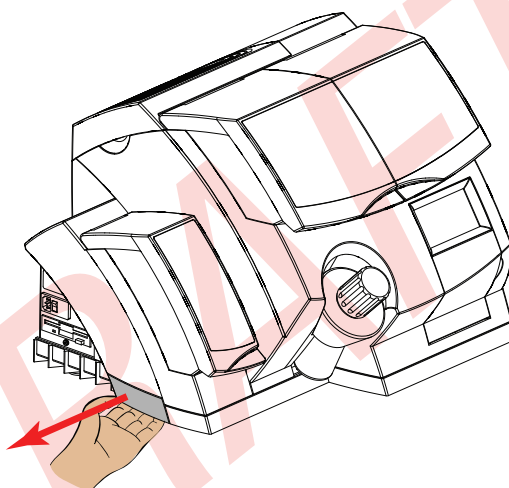
To remove the **O-Ring Seal** on the **Mountant Bottle** spout for cleaning:

1. Follow *Steps 1 to 3* above.
2. Use a flat-bladed screwdriver to carefully prise the **O-Ring Seal** from its seat, ensuring none of the surfaces of the **Mountant Bottle** are damaged in the process.
3. Manoeuvre the **O-Ring Seal** onto the larger diameter portion of the **Mountant Bottle** spout.
4. Roll the **O-Ring Seal** up the spout until it comes off.

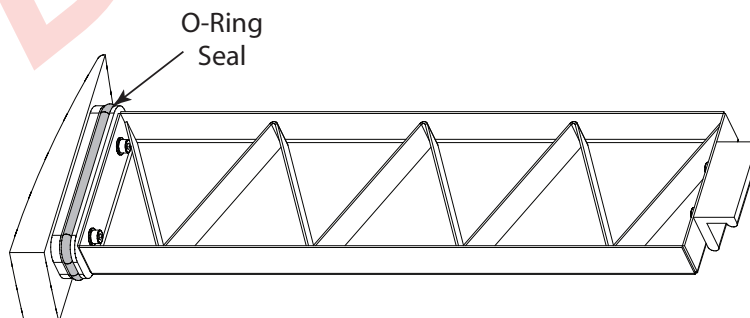


To remove the **O-Ring Seal** on the **Xylene Tray** for replacement:
Xylene is Harmful.

1. Ensure that there are no **Baskets** currently being processed within the Shandon ClearVue.
2. Taking care not to spill any remaining xylene, pull the **Xylene Tray** out and remove it from the instrument.



3. Identify the black **O-Ring Seal**.



4. Use a pair of scissors or wire-cutters to carefully cut the **O-Ring Seal**, ensuring none of the surfaces of the **Xylene Tray** are damaged in the process.

To remove the **O-Ring Seal** on the **Xylene Tray** for cleaning:

1. Follow *Steps 1 to 3* above.
2. Use a flat-bladed screwdriver to carefully prise the **O-Ring Seal** from its seat, ensuring none of the surfaces of the **Xylene Tray** are damaged in the process.
3. Manoeuvre the **O-Ring Seal** onto the larger adjacent portion of the **Xylene Tray**.
4. Roll the **O-Ring Seal** along the surface of this portion until it comes off.
5. Carefully guide the **O-Ring Seal** over the rest of the **Xylene Tray** until it is clear.

To clean the **O-Ring Seals**:

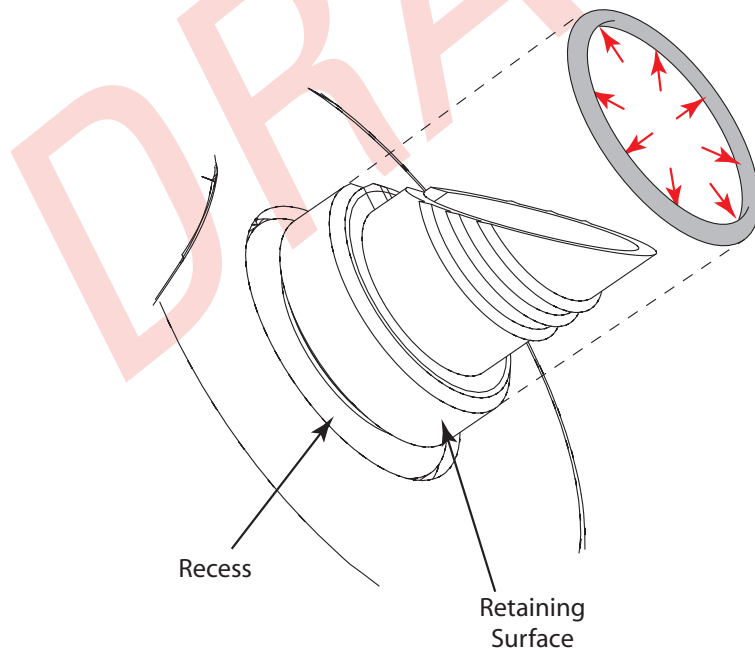
1. Remove the **O-Ring Seal** using the appropriate method described above.
2. Use a xylene-damp cloth to remove any encrusted mountant from the **O-Ring Seal**.
3. Check the seal for signs of tearing or splitting, and replace if necessary.

To replace the **O-Ring Seals**:

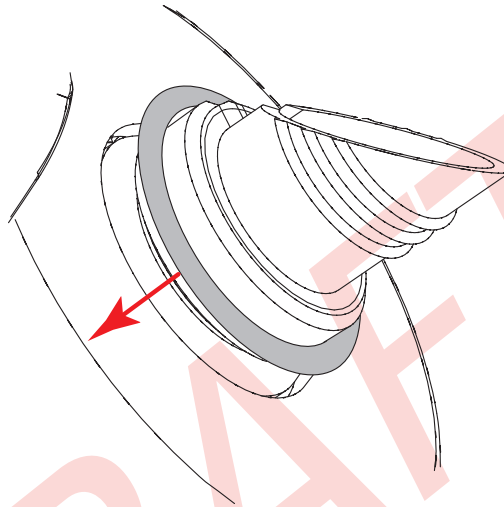
Note:

The diagrams show only the Mountant Bottle spout seal replacement, but the technique is common for both circumstances.

1. Carefully stretch the **O-Ring Seal** to allow it to fit over the **Retaining Surface**.



2. Once it is over the **Retaining Surface**, roll it towards the **Recess**.



3. Allow the **O-Ring Seal** to snap into place, then ensure it is properly seated in the **Recess**.
-

5-2-2 - Mountant Jar

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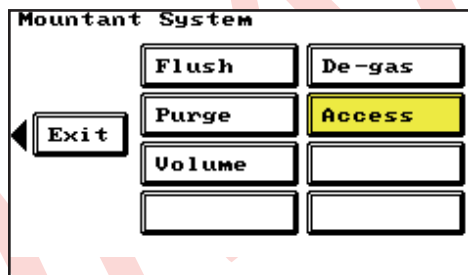
5-2-3 - Dispense Head Cleaning Station

To clean the **Dispense Head Cleaning Station**:

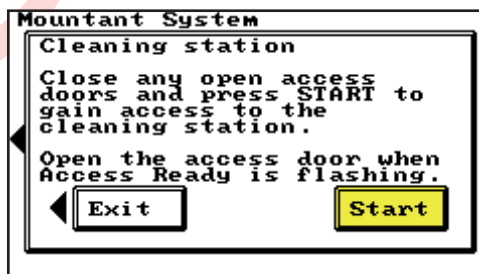
1. From the **Main Menu**, press the **Mountant** key on the **Touch Screen**.



2. Press the **Xylene** key on the **Touch Screen**.



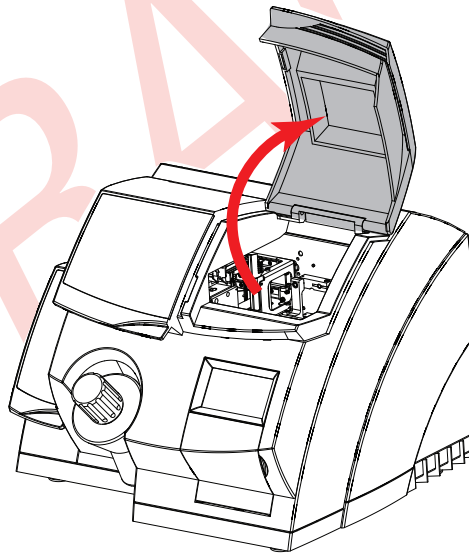
3. Press the **Start** key on the **Touch Screen**.



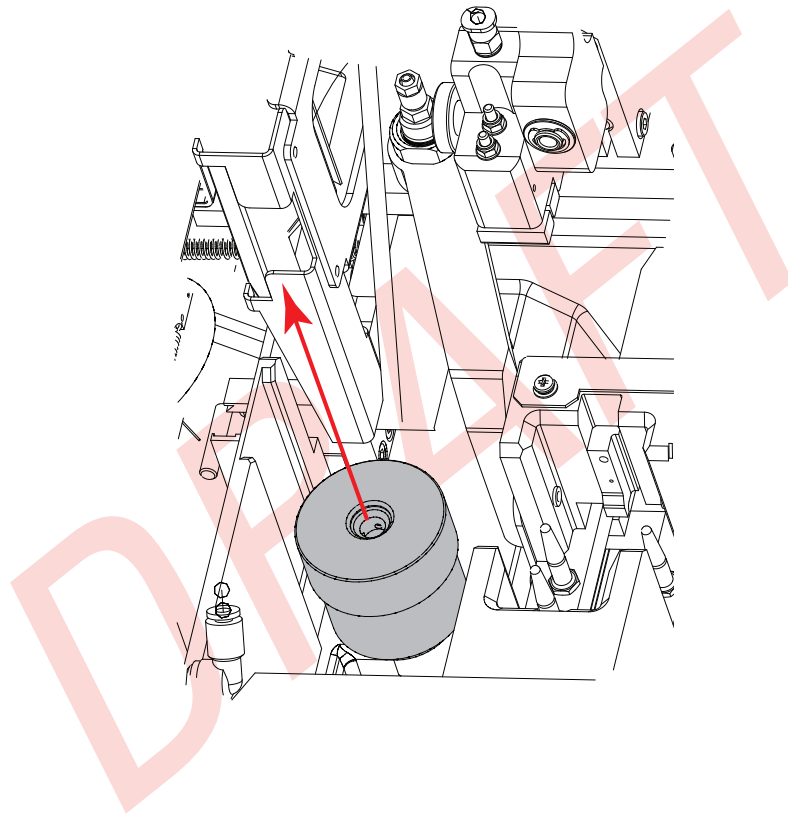
4. Wait for activity within the Shandon ClearVue to stop, and **Access Ready** to flash on the **Touch Screen**.



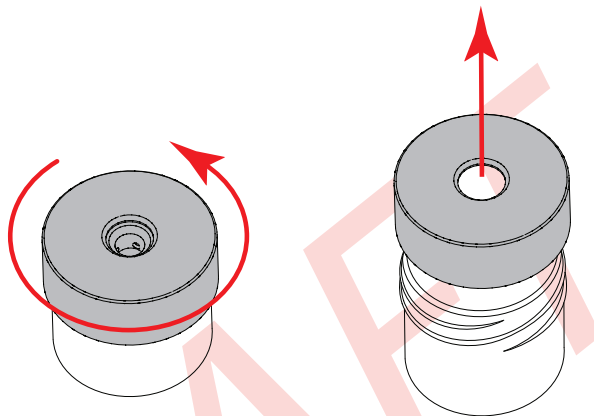
5. Open the **Access Door**.



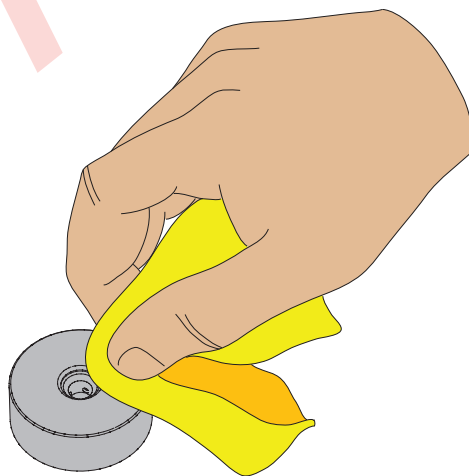
6. The **Dispense Head Cleaning Station** should now be accessible from above.
7. Pull the **Dispense Head Cleaning Station** upwards to remove it from it's fixing.



8. Remove the **Dispense Head Cleaning Station Lid** as shown and dispose of the contents according to local regulations.



9. Use a xylene damp cloth to clean all the surfaces of the **Dispense Head Cleaning Station** including the internal parts.



10. Reassemble the **Dispense Head Cleaning Station**.

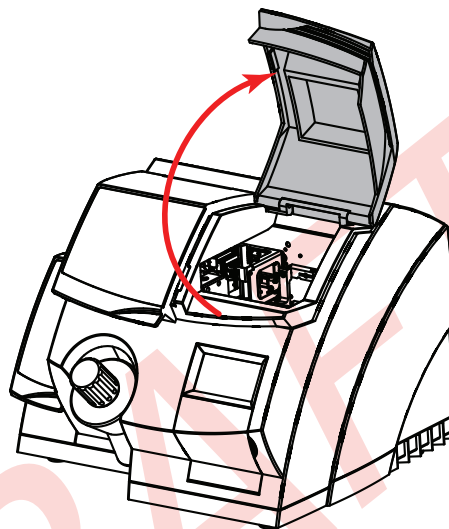
11. Refill the **Dispense Head Cleaning Station** as described in *Section 2-8*.

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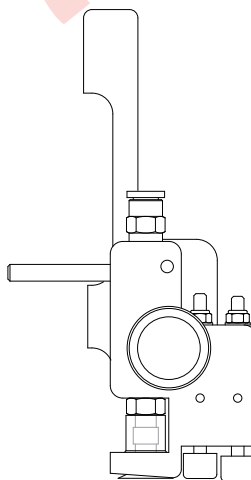
5-2-4 - Changing the Suction Cup

To change the **Suction Cup**:

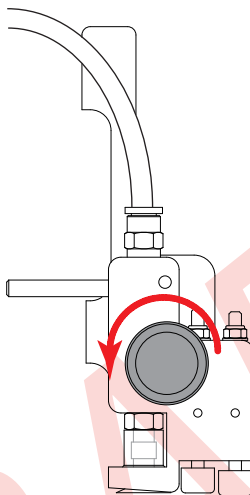
- Open the **Access Door**.



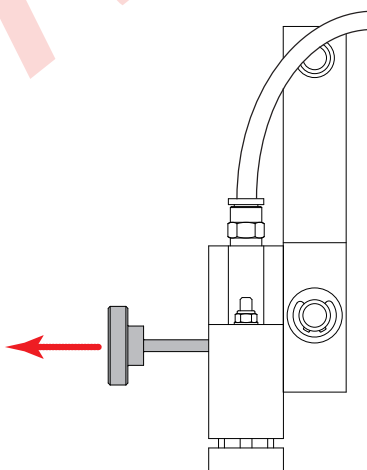
- Identify the **Coverslip Transfer Head**.



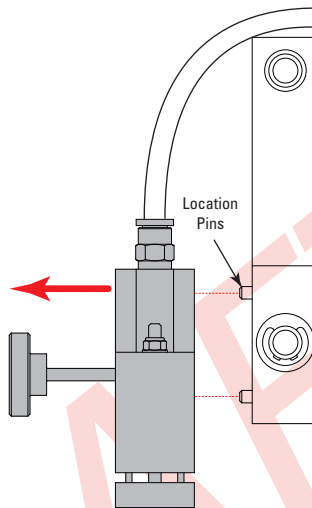
- Loosen the **Thumbscrew** by turning it anti-clockwise.



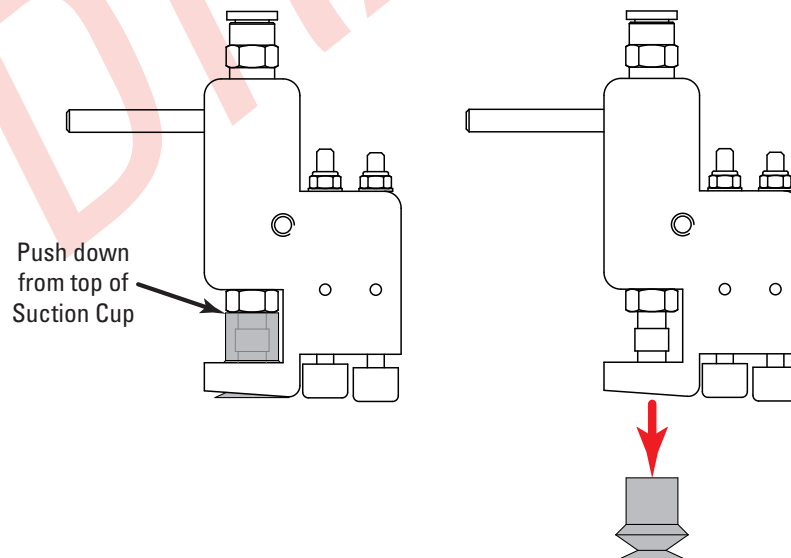
- Pull the **Thumbscrew** out as shown to release the **Coverslip Transfer Head**.



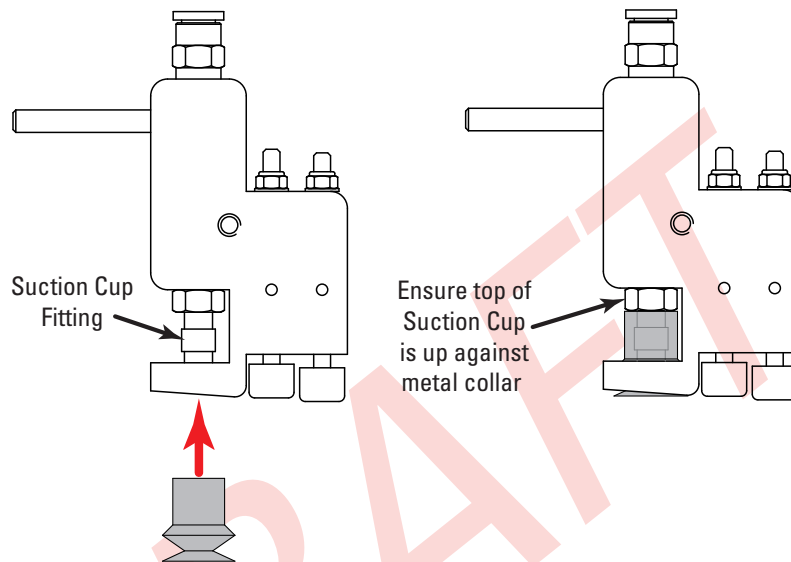
- Remove the **Coverslip Transfer Head** from the **Location Pins** as shown.



- Remove the **Suction Cup** by pushing down from the top of the rubber as shown.



- Fit the new **Suction Cup** by pushing it onto the **Suction Cup Fitting**.



- Replace the **Coverslip Transfer Head** onto the **Location Pins** and tighten the **Thumbscrew**.
-

5-2-5 - Cleaning the Slip Wiper

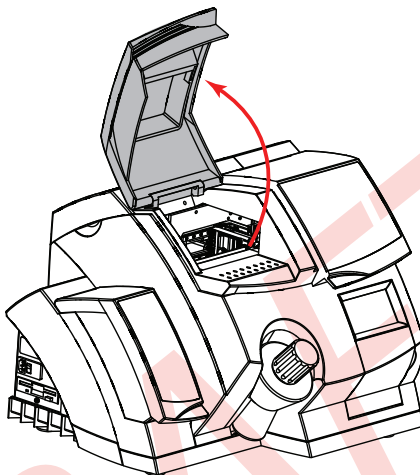
To clean the **Slip Wiper**:

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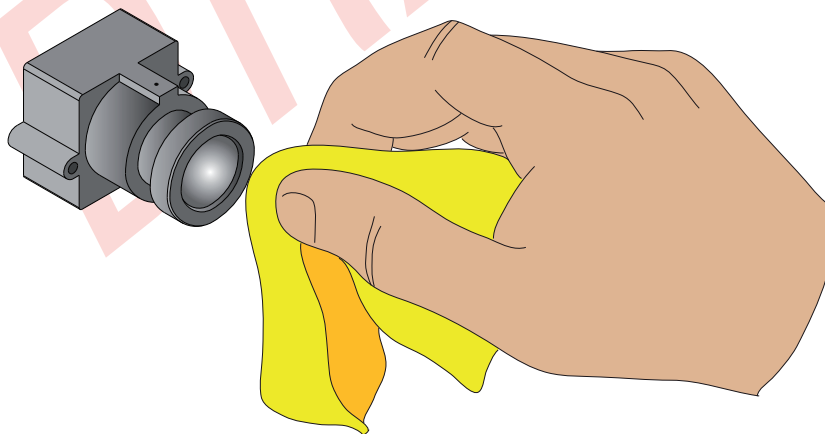
5-2-6 - Cleaning the Camera

To clean the **Camera**:

- Open the **Unload Door**.



- Carefully wipe the **Camera Lens** using a **Lint-Free Cloth**.



Never use solvents or water to clean the camera.

5-2-7 - Cleaning the Slip Dispense Carriage

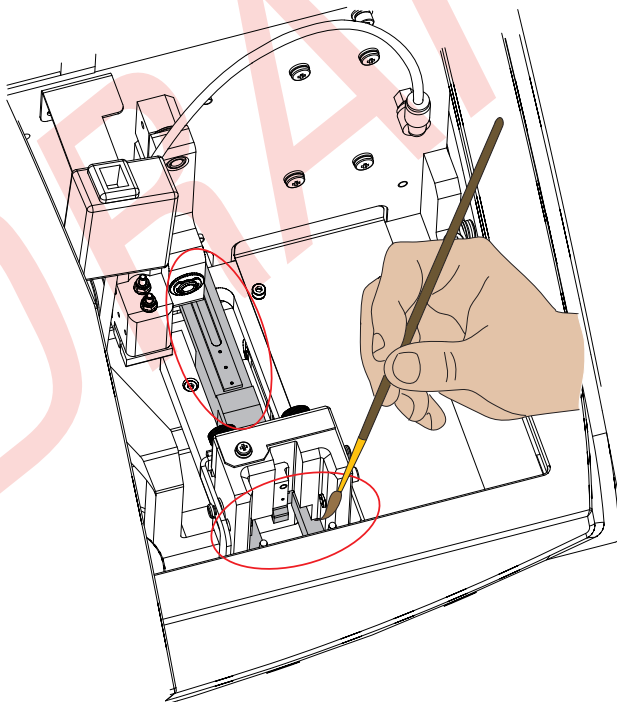
To clean the **Slip Dispense Carriage**:

- Remove the **Coverslip Hopper** as described in *Section 2-12*.
- Without turning the **Coverslip Hopper** upside down, check the bottom of the **Hopper** for any broken **Coverslips**.

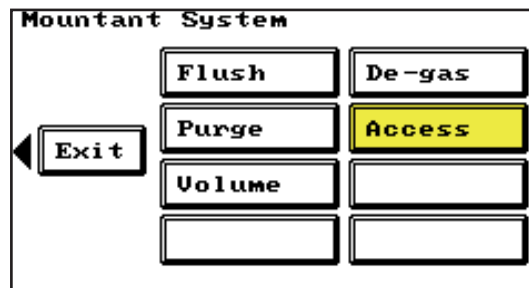


Broken glass may be present!

- If any broken **Coverslips** are present, carefully remove them.
- Using the **Brush** provided, clear the top of the **Slip Dispense Carriage** of any glass debris.



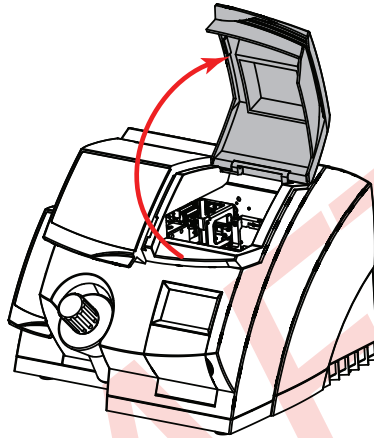
- Move the **Slip Dispense Carriage** forwards if necessary by pressing the **Access** button in the **Mountant Screen** and then following the steps given in *Section 2-8* for moving the **Support Arm**.



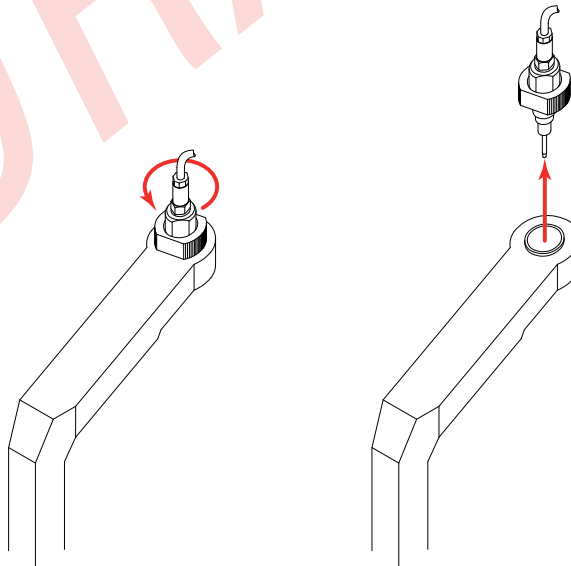
5-2-8 - Removal and Cleaning the Mountant Dispense Needle

To remove the **Mountant Dispense Needle Assembly**:

- Open the **Access Door**.



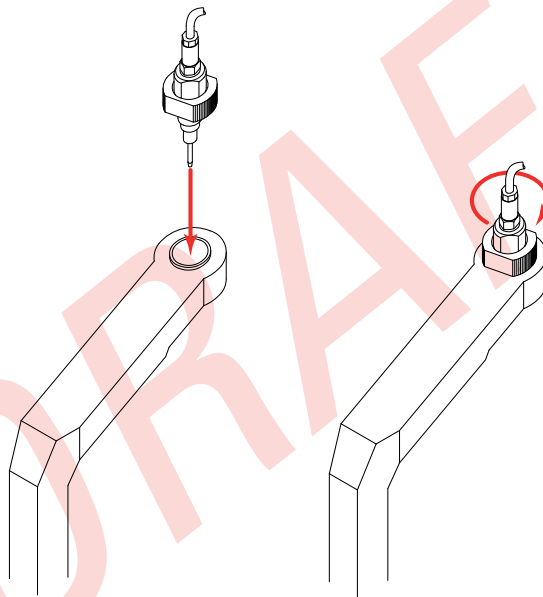
- Unscrew the **Mountant Dispense Needle Assembly** and lift out of the **Support Arm** as shown.





Do not disconnect the tubing!

- Place the **Mountant Dispense Needle Assembly** in a container of xylene and allow to soak overnight.
- When the **Needle** is clean, replace the **Mountant Dispense Needle Assembly** to the **Support Arm**.



- Screw the **Mountant Dispense Needle Assembly** back in as shown.



Take care not to screw the Mountant Dispense Needle Assembly in cross-threaded as this will damage the support arm.

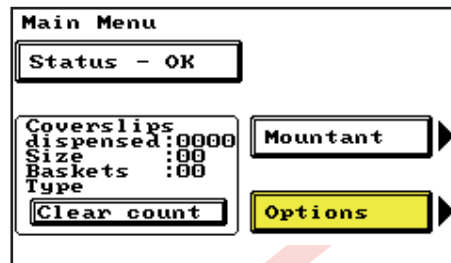


The Mountant Dispense Needle Assembly should only be tightened by hand - do not use a wrench.

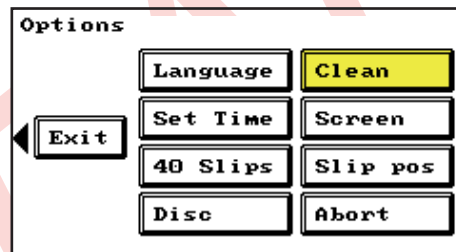
5-2-9 - Cleaning the Touch Screen

To clean the Touch Screen display:

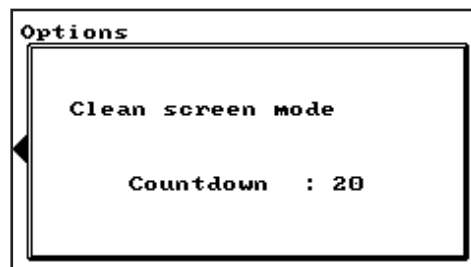
1. From the **Main Menu** press the **Options** key on the **Touch Screen**.



2. Press the **Clean** key.



3. The **Cleaning** screen will appear, in which it is possible to touch the **Touch Screen** display without any effect, enabling the cleaning of the screen.



4. The **Cleaning** screen shows a countdown timer which shows how long the cleaning screen will continue to be displayed for.

When cleaning the **Touch Screen**:

- Use a soft, damp cloth to wipe the screen.
- Thoroughly dry the screen using a lint-free cloth.



Do not use solvents to clean the Touch Screen.



Wiping the Touch Screen when the Cleaning screen is not displayed may cause unexpected results.

5-3 - Taking Out of Operation and Storage

If the Shandon ClearVue is to be taken out of operation for a long period of time, or put into storage, ensure the following procedure has been followed:

- Empty the **Mountant Bottle** and clean with xylene.
- Flush the system with xylene (see *Section 2-10*).
- Cap the **Mountant Dispense Needle**.
- Empty the **Dispense Head Cleaning Station**.
- Empty the **Xylene Tray**.
- Ensure the instrument has been thoroughly cleaned and decontaminated as necessary.



If the Shandon ClearVue has been used with, or has come into contact with, hazardous material, ensure that the appropriate decontamination procedures have been followed (See World Health Organization 'Laboratory Biosafety Manual').

- If the instrument is to be put into storage, re-pack it into its original packing (see *Appendix C*).
-

Appendix A - Spares and Accessories

Accessories

Item	Part No.
Coverslip Hopper with Coverslips	A792?????
Gemini Basket - Thick Prep	A79220001
Gemini Basket - Thin Prep	A79220002
Sakura Basket - Thick Prep	A79220003
Sakura Basket - Thin Prep	A79220004
Extraction Adaptor Kit	A792?????
V24 Kit	A792?????
Sakura Hanger	A792?????

Spares

Item	Part No.
Fuses (2 off supplied)	P07973
Carbon Filter	9990610
Suction Cup	AP15302
Dispense Head Cleaning Station	A79210027
Mountant Bottle (Complete)	A79210054
'O' Ring - Bottle Spout (External)	AP15249
'O' Ring - Bottle Spout (Internal)	AP15309

Appendix B - Reagent List

B1 - Reagents

Xylene

Toluene

Shandon Xylene Substitute

Ethanol

Industrial Methylated Spirit (IMS) - up to 5% methanol in ethanol

Isopropanol (IPA)

Water

Sodium Hypochlorite (10% in water)

B2 - Mountants

Shandon ClearVue Mount

Shandon Consul-Mount (Cytology Formulation)

Shandon Consul-Mount (Histology Formulation)

Shandon Xylene Substitute Mountant

Note:

All mountants are available from Thermo Fisher Scientific.

Appendix C - Transportation Instructions

C1 - Things to Do Before Packing



- Ensure the instructions for cleaning (see *Section 5-3*) have been followed.

Discard chemicals according to local environmental procedures.

- Remove the following:
 - **Debris Tray**
 - Remove any discarded glass
 - Clean any mountant off
 - Dry
 - **Dispense Head Cleaning Station**
 - Discard any liquid
 - Clean with xylene
 - Dry
 - **Xylene tray**
 - Discard any liquid
 - Dry
 - **Hopper**
- Remove the **Dispense Head** (see *Section 5-2-8*) and place in a suitable container to allow it to drain.
- Remove the **Mountant Bottle** and rinse with xylene, or replace with a fresh bottle.
- Pour 25ml of xylene into the clean **Mountant Bottle** and **Flush** the system (see *Section 2-10*).
- Replace the **Dispense Head**.

- When the **Flush** cycle is complete, check that the **Mountant Bottle Cap** is clear of mountant.
- Place the **Dispense Head Cap** over the **Dispense Head Needle** to prevent the xylene which remains in the system from leaking out during transit.

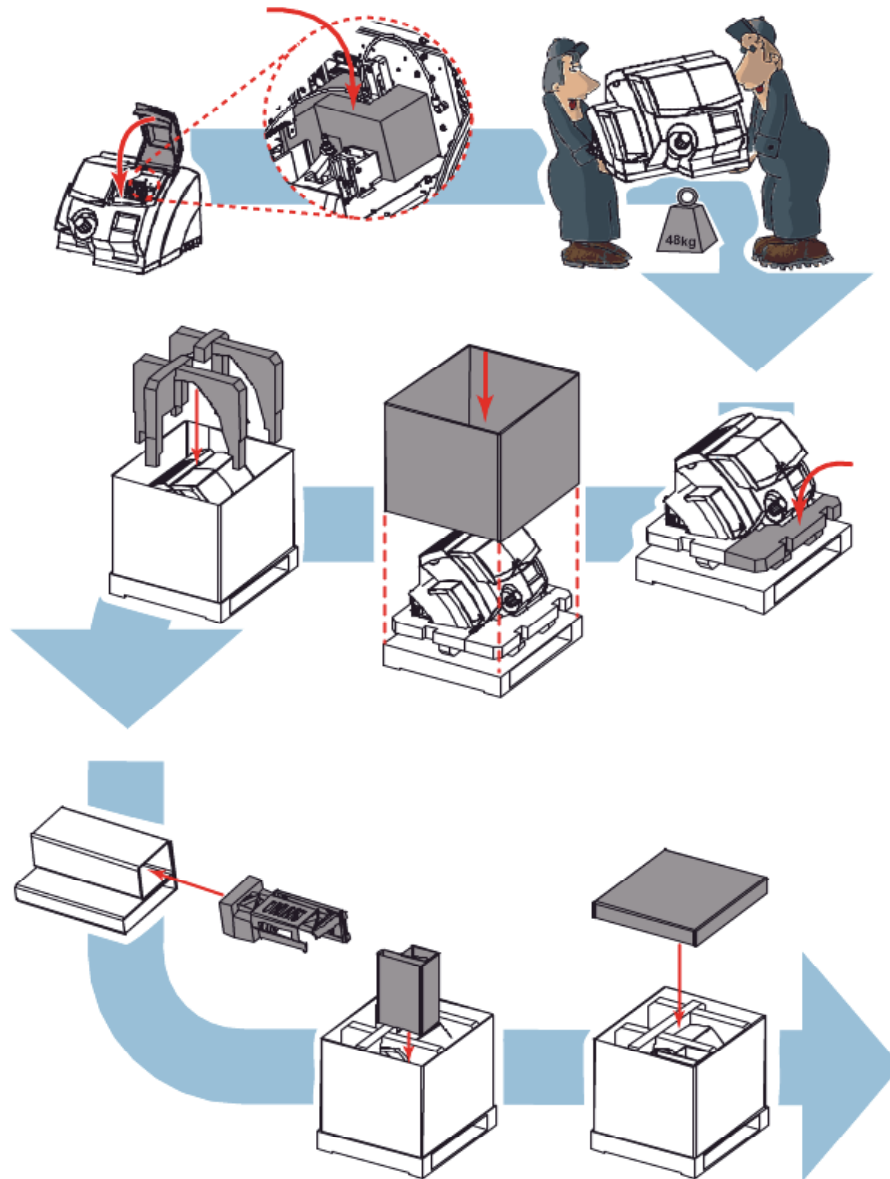


Approximately 5ml of xylene will remain in the system - follow good laboratory practice when packing and unpacking.

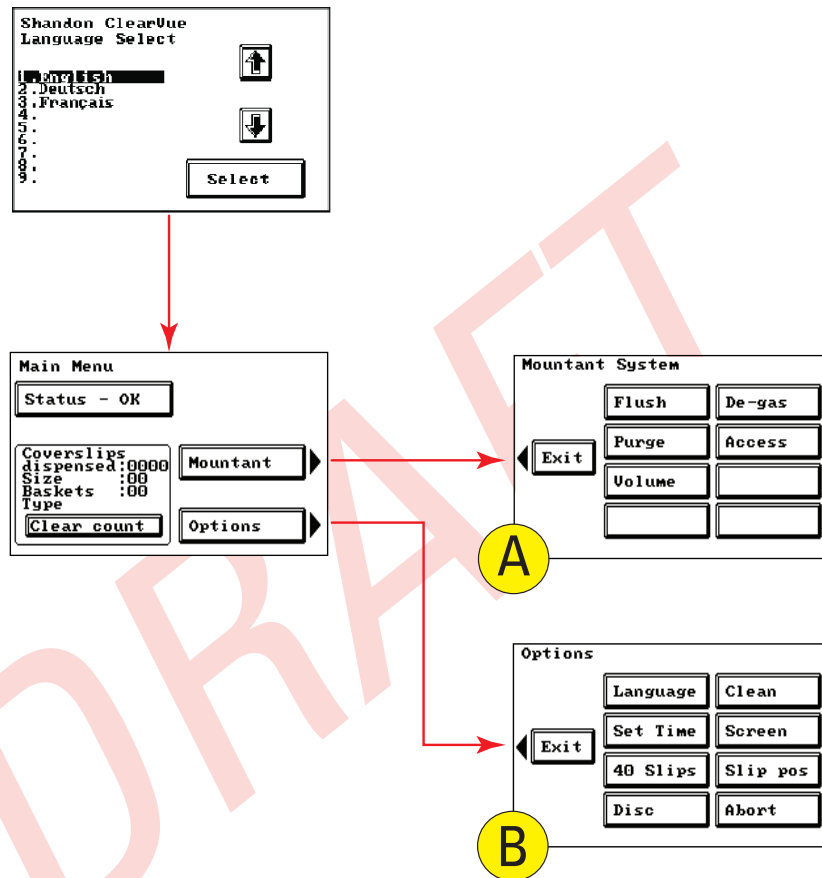
- Disconnect the **Power Lead**.
- Ensure the **Battery Switch** has been set to the off '**0**' position.
- Follow the **Packing Instructions** on the following page.

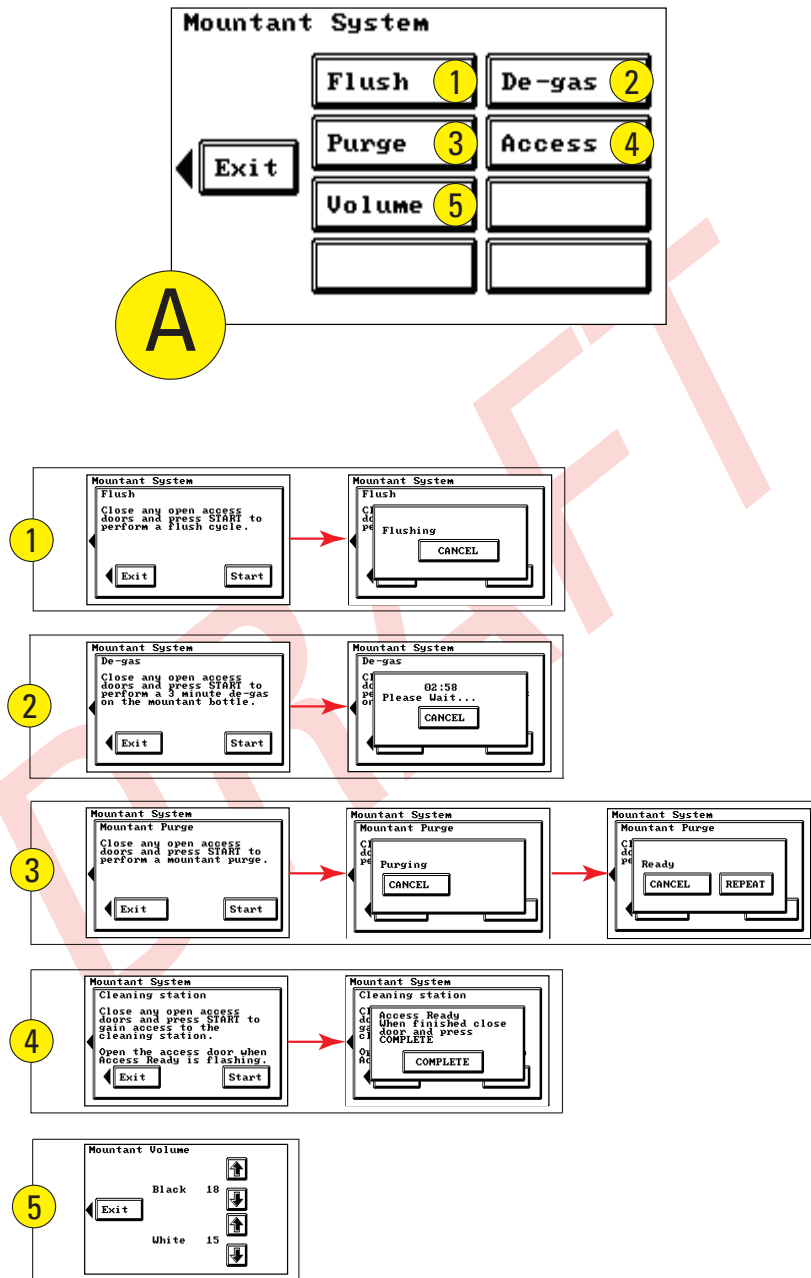
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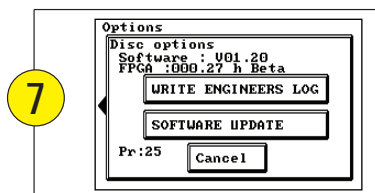
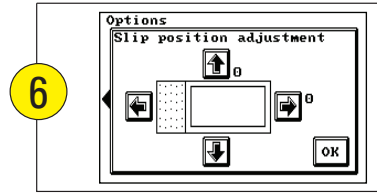
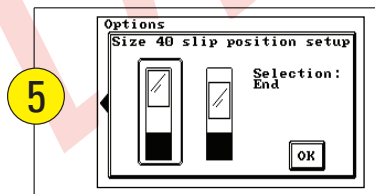
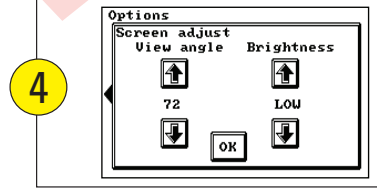
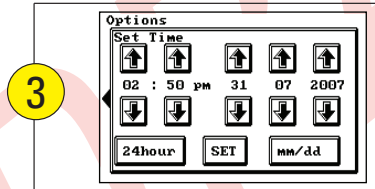
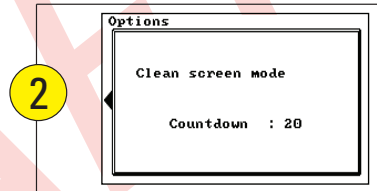
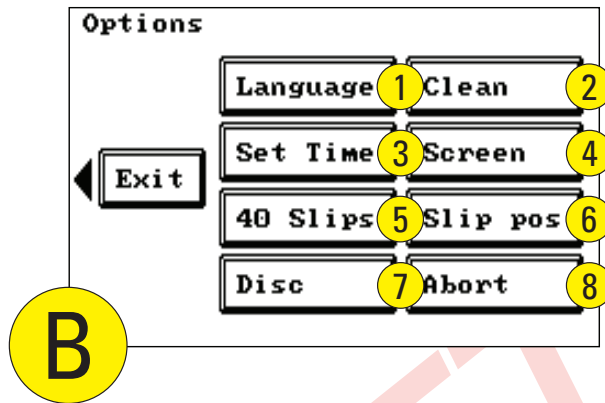
C2 - Packing Instructions



Appendix D - Screen Maps







Appendix E - Declaration of Conformity

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