Technical Bulletin #5 Calibration of Balance/Scale

Scale Calibration varies, and is solely dependant upon two factors, the Model and build state of each IDS machine. However, this Technical Bulletin is designed to prepare the Engineer prior to performing the Calibration in order that they have the right tools, combination of weights and pre-selected the correct procedure in the documentation to confidently perform a full IDS Calibration.

Questions that need to be asked by you!

Firstly it is VITALLY important to establish exactly why there is a need to re-calibrate the IDS?

- Were there any problems with the transportation and overall safe delivery of the IDS, which may be causing it to not weigh correctly after installation on site?

- Has the Engineer changed, or intending to change parts in the IDS that will affect the overall weighing performance?

- Is the Engineer performing a routine service and maintenance of the IDS, and just wants to check that the machine is still within the IDS Calibration Specifications and tolerances?

The next step:

- Clearly define with the Engineer why the machine needs to be calibrated!
- Obtain the Model Number
- Obtain the Scale Capacity (in Kg)
- Ask the Engineer what Software Program platform the machine utilizes? Either DOS "**Formulator**" or Windows "**InkManager**"

Now armed with the above information it should now be possible to determine what the Engineer now requires in order to calibrate the machine

Determine what the Engineer now requires:

- Enquire if the Engineer has Calibration weights or they are available on site?

The exact capacities and combination of weights required to perform a Calibration can be found in table 1

- Ensure that the Engineer has a hard copy or easy access to the Calibration documentation

The location of the Calibration documentation can be found internally on the Vale-Tech Server at:

Server **I:\Joe\Documents\Procedures**

File Name: **VT PR 014.doc**

This electronic document can be sent as an e-mail attachment to the Engineer, alternatively there is a hard copy contained with this Technical Bulletin # 5 which could be easily faxed to the Engineer.

Table 1

Load cell Capacity (Kg)	Overall Weight required for Internal Calibration	Maximum Weight required for Calibration	Weight Combinations required (each Kg)
10	10Kg	9Kg (-10% of total)	5,2,2,1 = 10Kg
30	30Kg	27Kg (-10% of total)	10,10,5,2,2,1 = 30Kg

<u>Determining what Calibration Software the Engineer now requires:</u>

The Engineer will generally require a Calibration Diskette
(This is normally prepared on a 3 ¼" Inch Floppy Disk)

This diskette should contain adequate software provisions in order to run
Calibration software for Either a DOS "**Formulator**" PC operating system
or Windows "**InkManager**" " PC operating system.

NOTE: To successfully prepare a Calibration diskette, the Model of the
Scale Board and PC operating system must **FIRST** be obtained

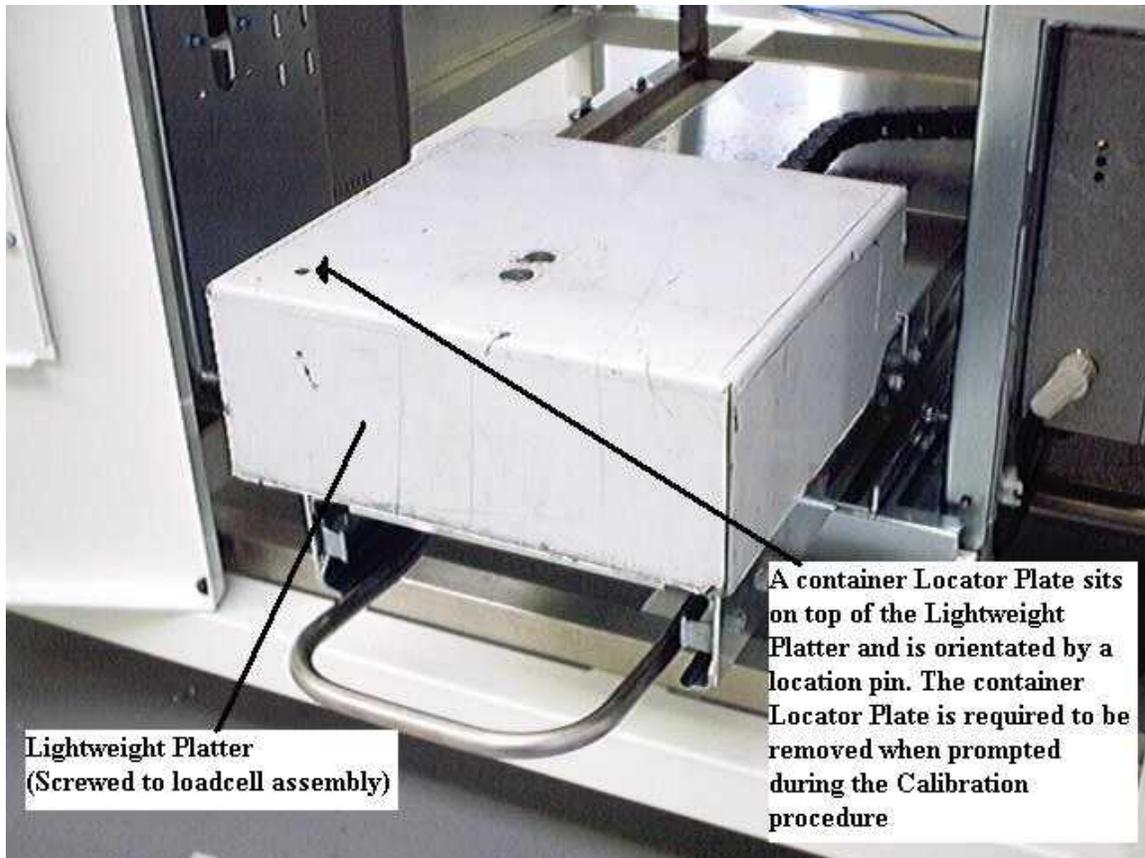**<u>Where does the Engineer have to install the Calibration Disk?</u>**

For: DOS "**Formulator**" PC operating system

Before the PC is switched on the Calibration diskette must be placed in the
3 ¼" Inch Floppy Disk Drive of the PC. This is for the boot disk to initiate
the Calibration software.

For: Windows "**InkManager**" " PC operating system

NOTE: It is possible to use the DOS Calibration software on either PC
operating systems in order to calibrate the machine.

Figure 1. Shows an IDS Lightweight Platter assembly, which is screwed to the Load cell assembly


A container Locator Plate sits on top of the Lightweight Platter and is orientated by a location pin. The container Locator Plate is required to be removed when prompted during the Calibration procedure

Lightweight Platter
(Screwed to loadcell assembly)

IT IS NOW REQUIRED THAT THE ENGINEER STRICTLY FOLLOWS THE CALIBRATION DOCUMENT AND SOFTWARE PROMPTS, IN ORDER TO SUCCESSFULLY CALIBRATE THE MACHINE.

Windows InkManager Calibration procedure for IDS10K

Note: The Procedure is the same for a 30K Balance/Scale

With Inkmanager running, select pull down menu "Options" then "Dispenser" then "Scale Calibration"
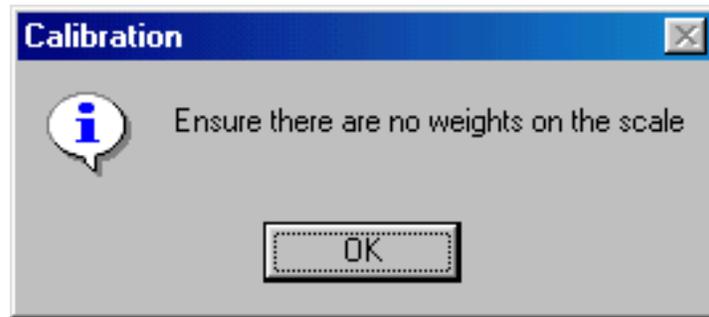
The following Window appears:
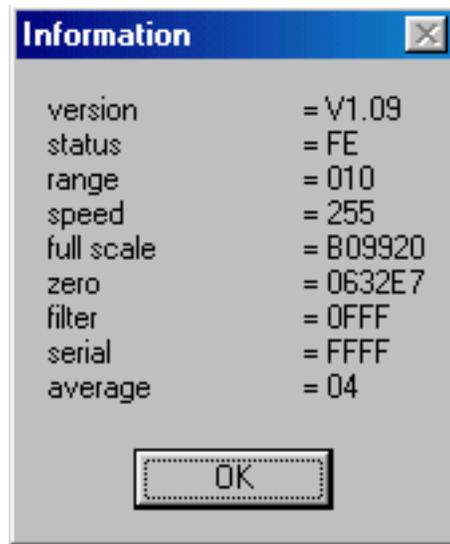
The information contained within this Window is listed below:

PIC Software Version:	Subject to change
Status:	Set to FE
Range:	010 = 10Kg (030 = 30Kg)
Speed:	Set to 255
Full Scale:	HEX
Zero:	HEX
Filter:	Set to 0FFF
Serial:	Set to FFFF
Average:	Set to 4

Select "OK" button to continue

The following Window appears:

Calibration

Ensure there are no weights on the scale

OK

Select "OK" button to continue

The following Window appears:

Calibrator

1 : Press 'Tare'
2 : Place 10Kg on the scale and note the final value
3 : Remove 10Kg weight
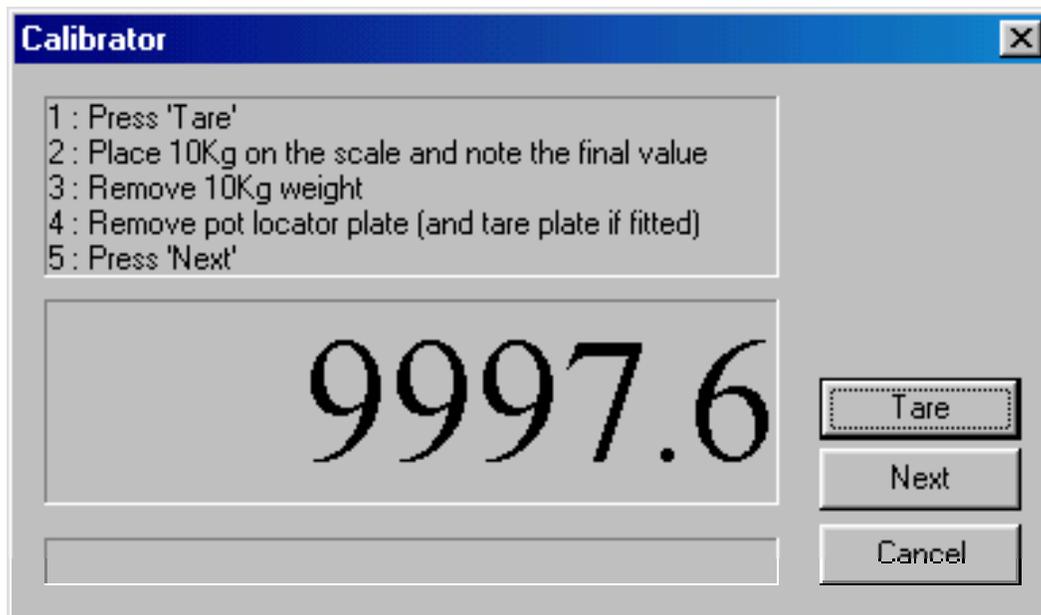4 : Remove pot locator plate (and tare plate if fitted)
5 : Press 'Next'

0.0

Tare

Next

Cancel
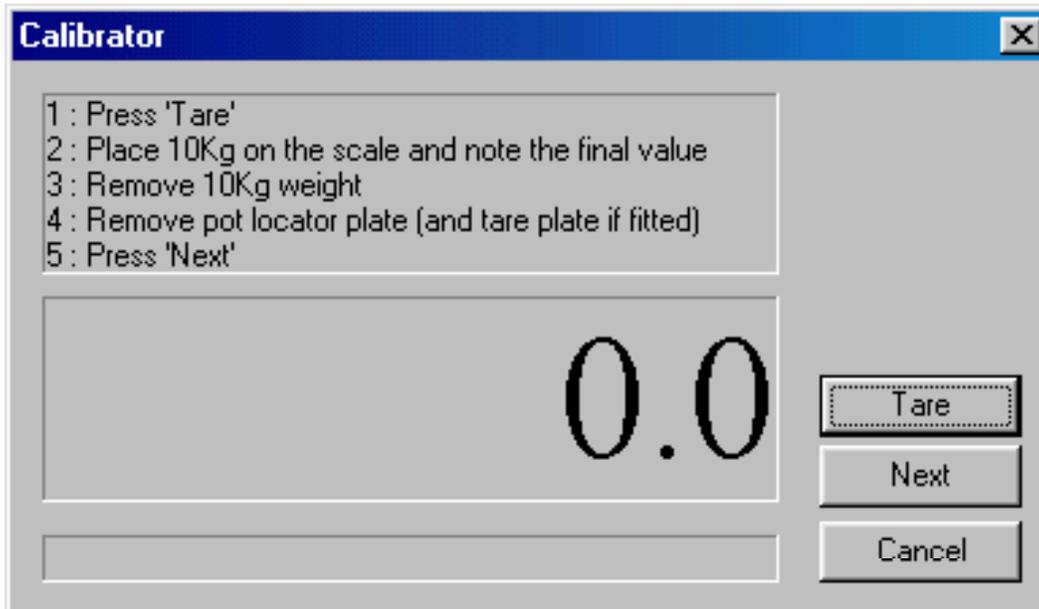
Press "Tare" Button

Place 10Kg on the Balance/Scale

The following appears:

Record the Value shown in the display
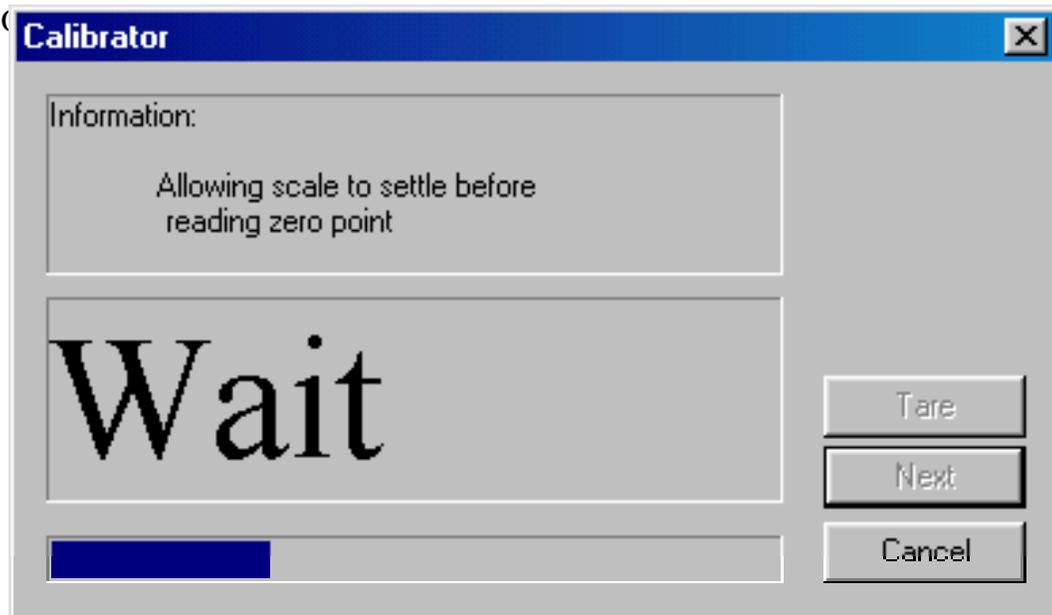
Remove the 10Kg of Weight from the Balance/Scale

Remove the Pot Locator Plate and Tare Plate (Fitted on older IDS models)
**NOTE: Please see Figure 1. for these parts**

Press "Next" Button

The following appears:

WARNING: Please DO NOT TOUCH the Balance/Scale whilst this is in progress

Calibrator ✕

Information:

Allowing scale to settle before
reading zero point

Wait

Tare

Next

Cancel

After the Balance/Scale has been settled, the following Window appears:

WARNING: Please DO NOT TOUCH the Balance/Scale whilst this is in progress!

Calibrator ✕

Information:

Zero point read!
Allowing scale to settle

Wait

Tare

Next

Cancel
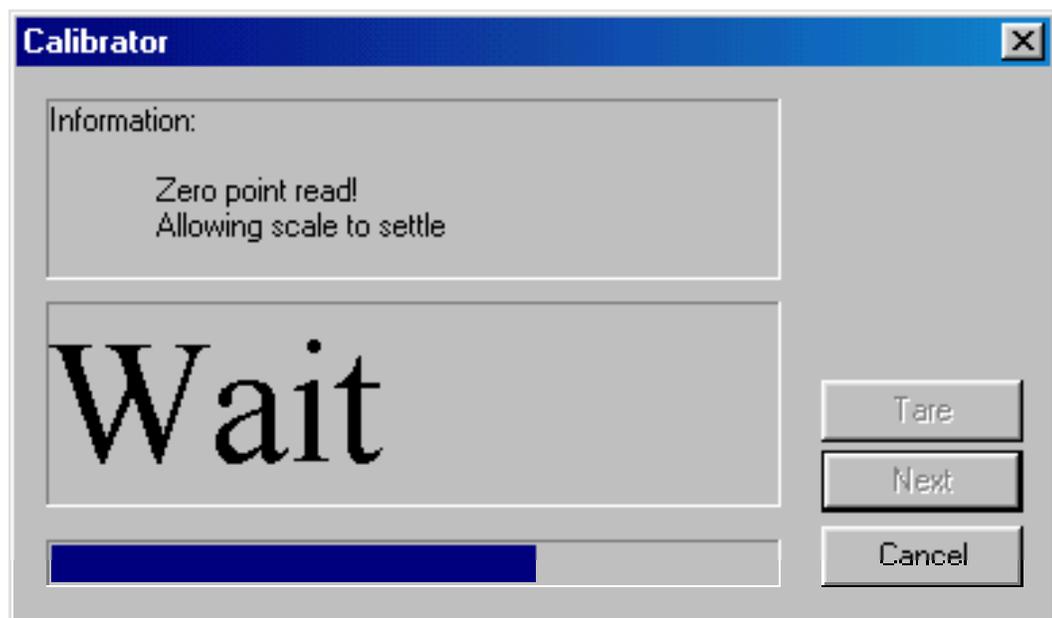
After the Zero Point has been established, the following Window appears:

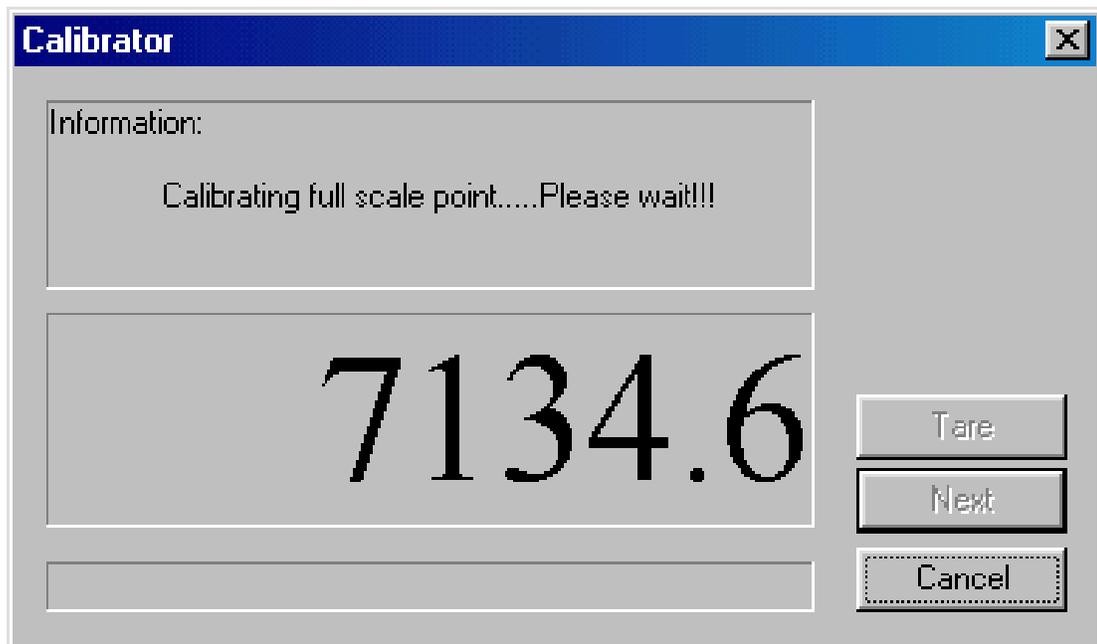Place 9Kg (5Kg,2Kg,2Kg and 1Kg) Weights onto the Balance/Scale

NOTE: Try to place the weights in a pyramid fashion on the Balance/Scale. Start by placing the 5Kg weight at the bottom, then place the 2Kg weights on top of each other, and last place the 1Kg on the very top. This ensures that the weights are stable, and close to the center of gravity. This gives better stability when Calibrating the machine.

Select "OK" button to continue
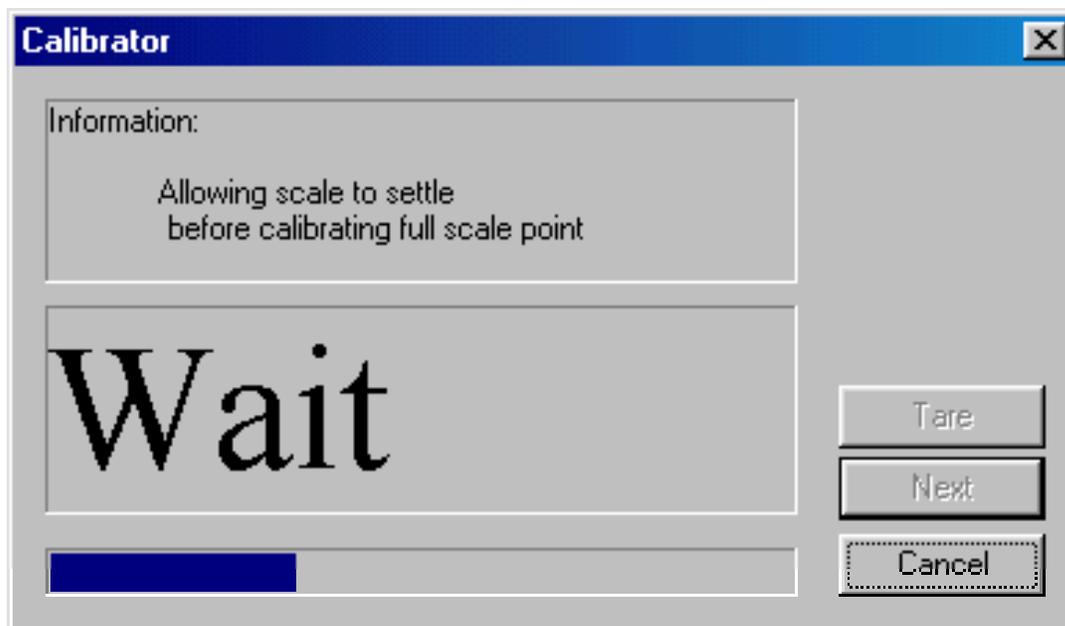
The following Window appears:

WARNING: Please DO NOT TOUCH the Balance/Scale whilst this is in progress!

Calibrator

Information:

Calibrating full scale point.....Please wait!!!

7134.6

Tare

Next

Cancel

WARNING: Please DO NOT TOUCH the Balance/Scale whilst this is in progress!

Information

Calibration complete! Replace pot locator plate (and tare plate if fitted). Test scale operation by placing weights on the scale

OK

The Calibration is now complete; please replace the Pot Locator Plate (and Tare Plate if fitted)

Select "OK" button to continue

The following Window appears, this is to allow the Operator to check the Calibration of the Balance/Scale:

Now place test weights onto the Balance/Scale and check that the display shows the correct weight. Check that the displayed weight is within the Specifications in accordance with the Calibration Certificate supplied by Vale-Tech. (The example below shows 9Kg)
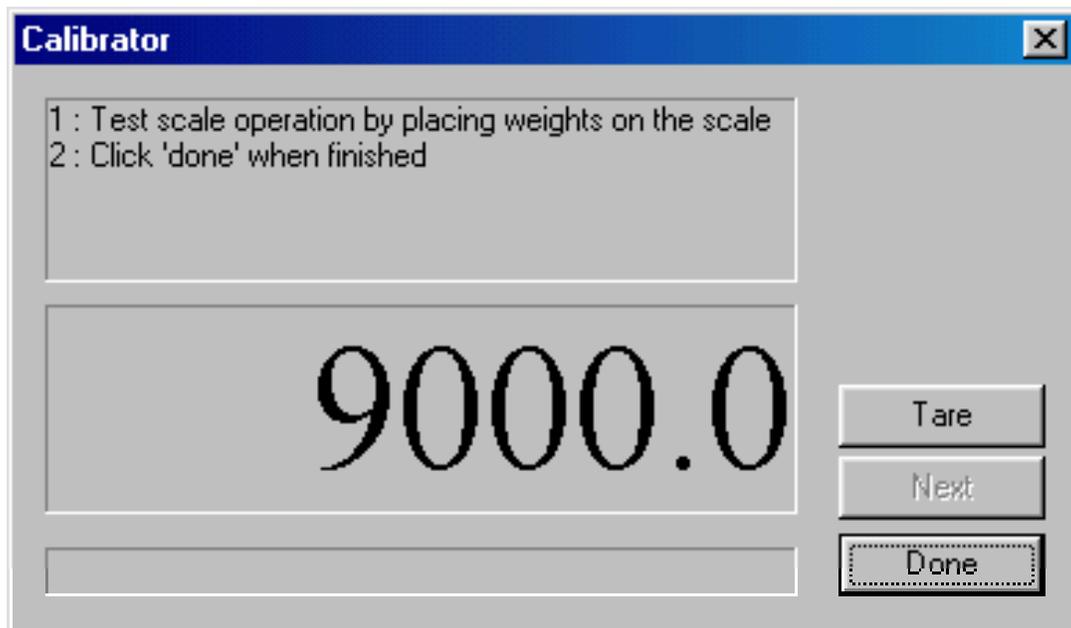
To Exit this Test Window, select the "Done" button

You will now be back in InkManager