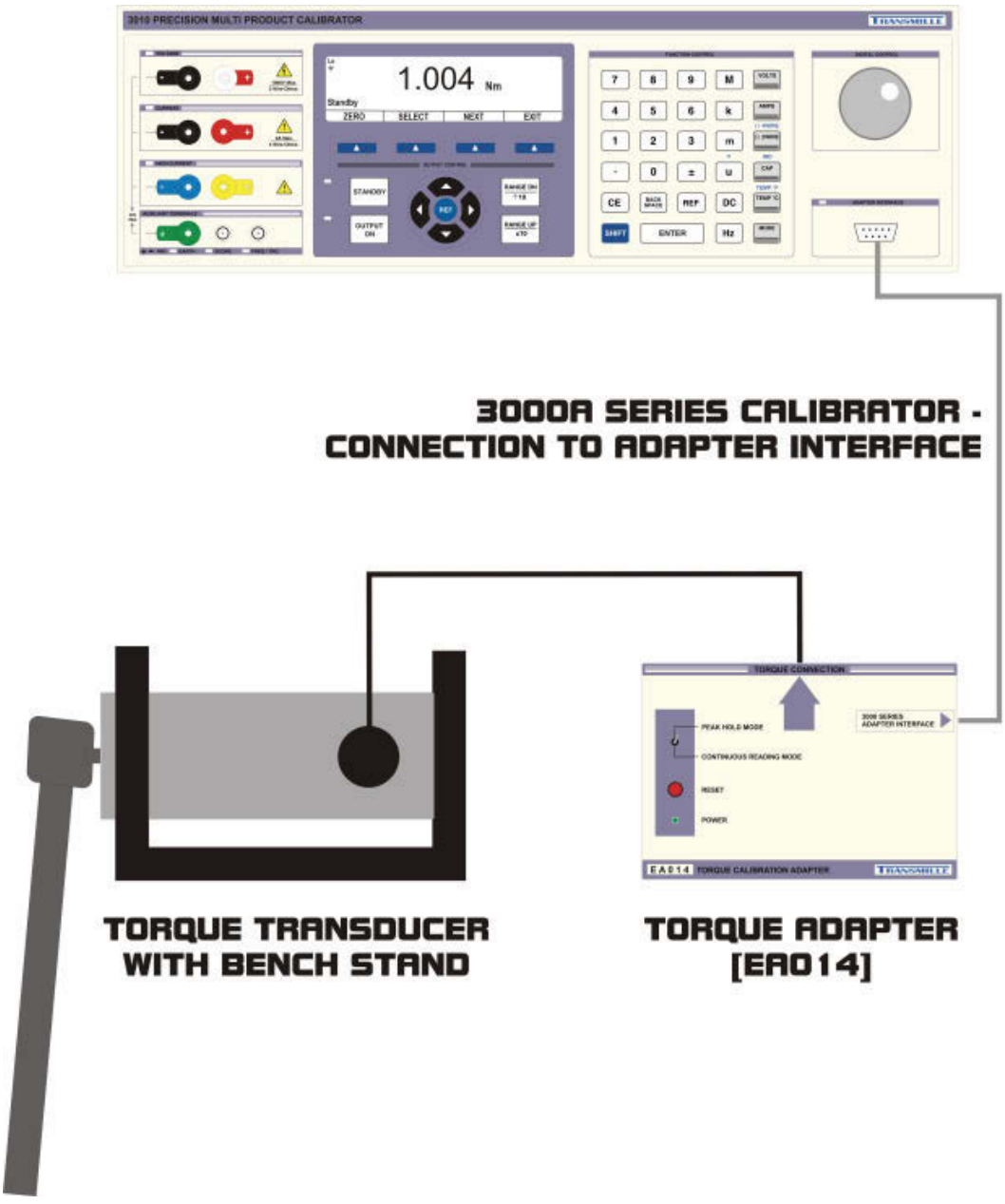
TORQUE CALIBRATION

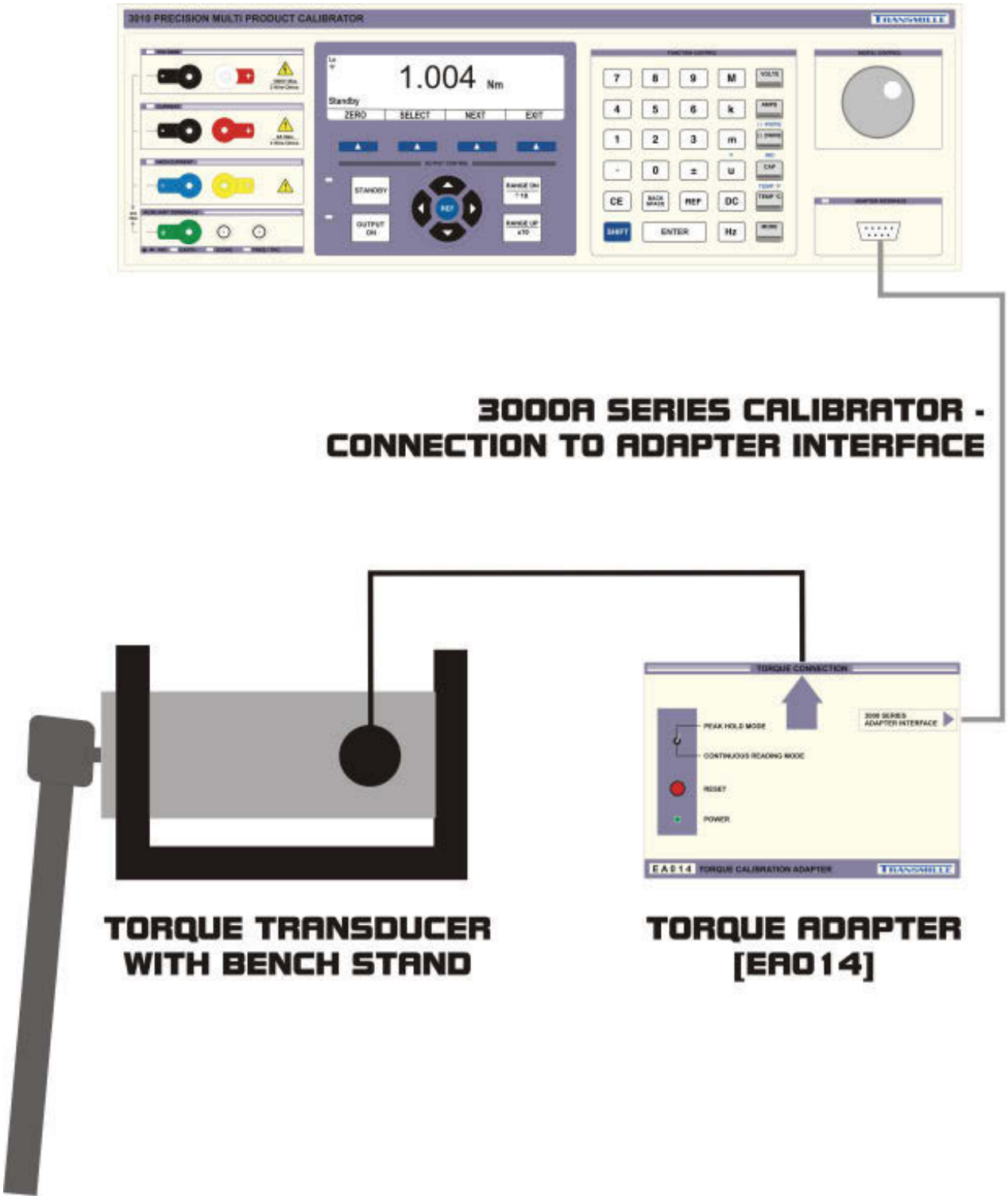
USING THE PROEDIT PROCEDURE WIZARD AND CALIBRATING USING PROCAL



Torque Calibration - Overview

The Transmille 3000A Series torque calibration option uses the EA014 Torque adapter, a transducer with bench stand and ProCal calibration software to provide torque measurement for torque screwdrivers and wrenches.

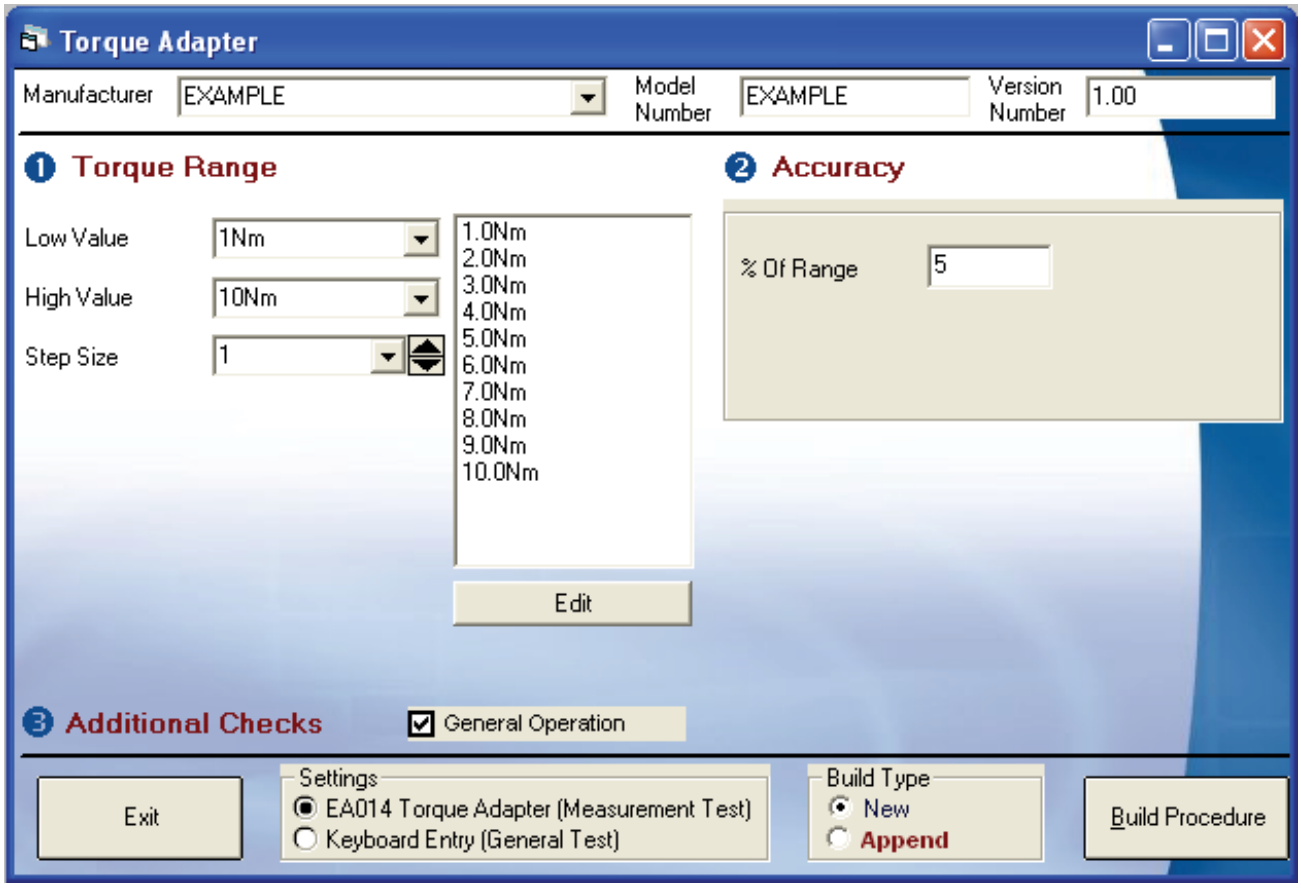
Configuration of the adapter, transducer and



ProEdit – Torque Procedure Wizard

ProEdit incorporates a built-in wizard for creating procedures for torque wrenches and screwdrivers.

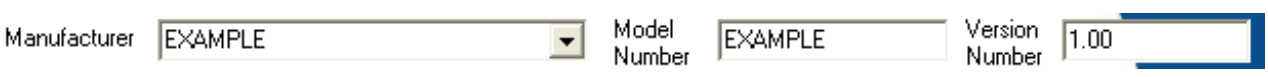
The main wizard screen is laid out as follows :



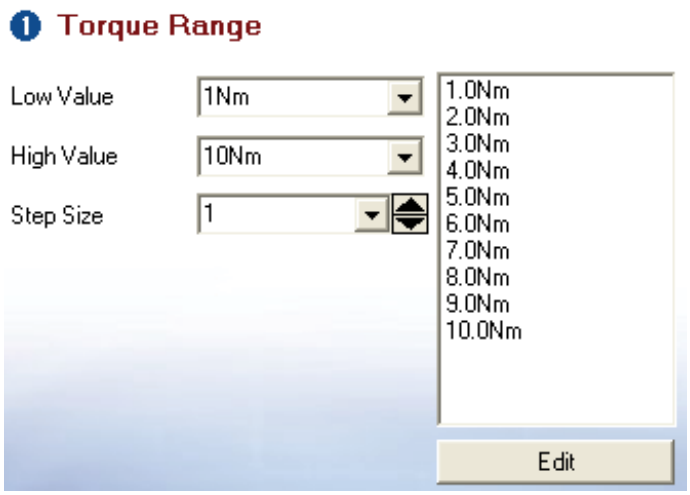
To set up a new procedure enter the following information :

1. Instrument Information

Enter the basic instrument information and a version number (default is 1.00)



2. Torque range and test values



Enter the Low and high torque values and the step size – once selected the values will be automatically displayed in the list. A single point can be edited by double clicking the value and entering a new one.

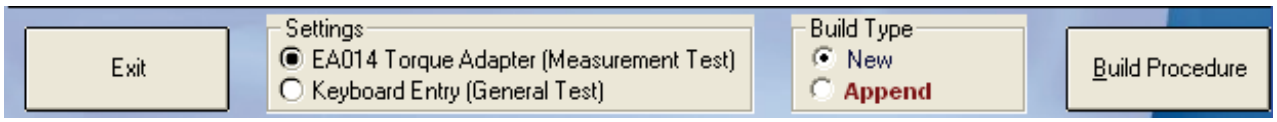
3. Accuracy

Enter the accuracy (specification of torque tool) – this is entered as % of range – the range is determined by the High torque value.

4. Additional Checks

An additional 'general operation' YES / NO type test can also be added to the procedure – this is created at the beginning of the procedure.

5. Final Settings



The procedure is set as default to use an EA014 Torque adapter for automatic Readback for torque value.

For users performing torque measurements using external equipment, a Keyboard Entry type test can be selected which allows test readings to manually typed in.

To create an entirely new procedure, select **Build Type – NEW**.
If these tests are to be appended to an existing procedure select **Built Type – APPEND**

Click **BUILD PROCEDURE** to proceed with procedure creation –
Note if any information is detected as being missing, a message will be displayed detailing what information is required before proceeding.

On completion a message will be displayed confirming the procedure details :

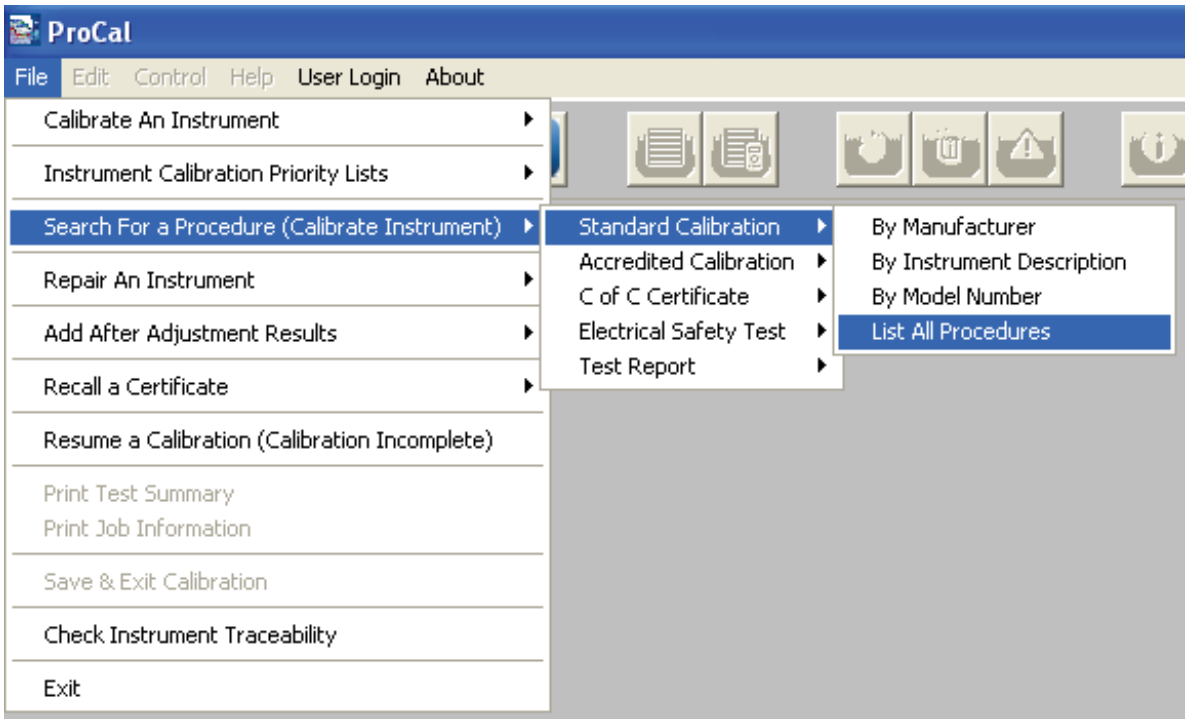
Running a Toque procedure using ProCal

Once a procedure is created using the procedure wizard, it is ready to be run using ProCal. The procedure will be set up to read back values automatically from the calibrator if using the EA014 Torque calibration adapter (with associated transducer).

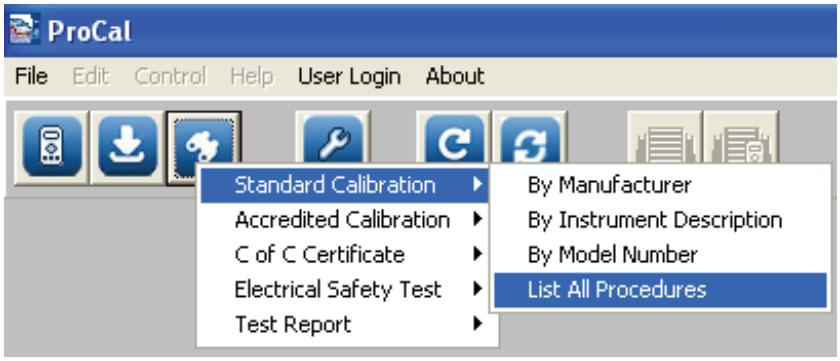
Image prompts will also have been created and linked to the procedure to aid the user in setting the calibrator to the correct mode and zeroing the calibrator between each test point

1. Start calibration

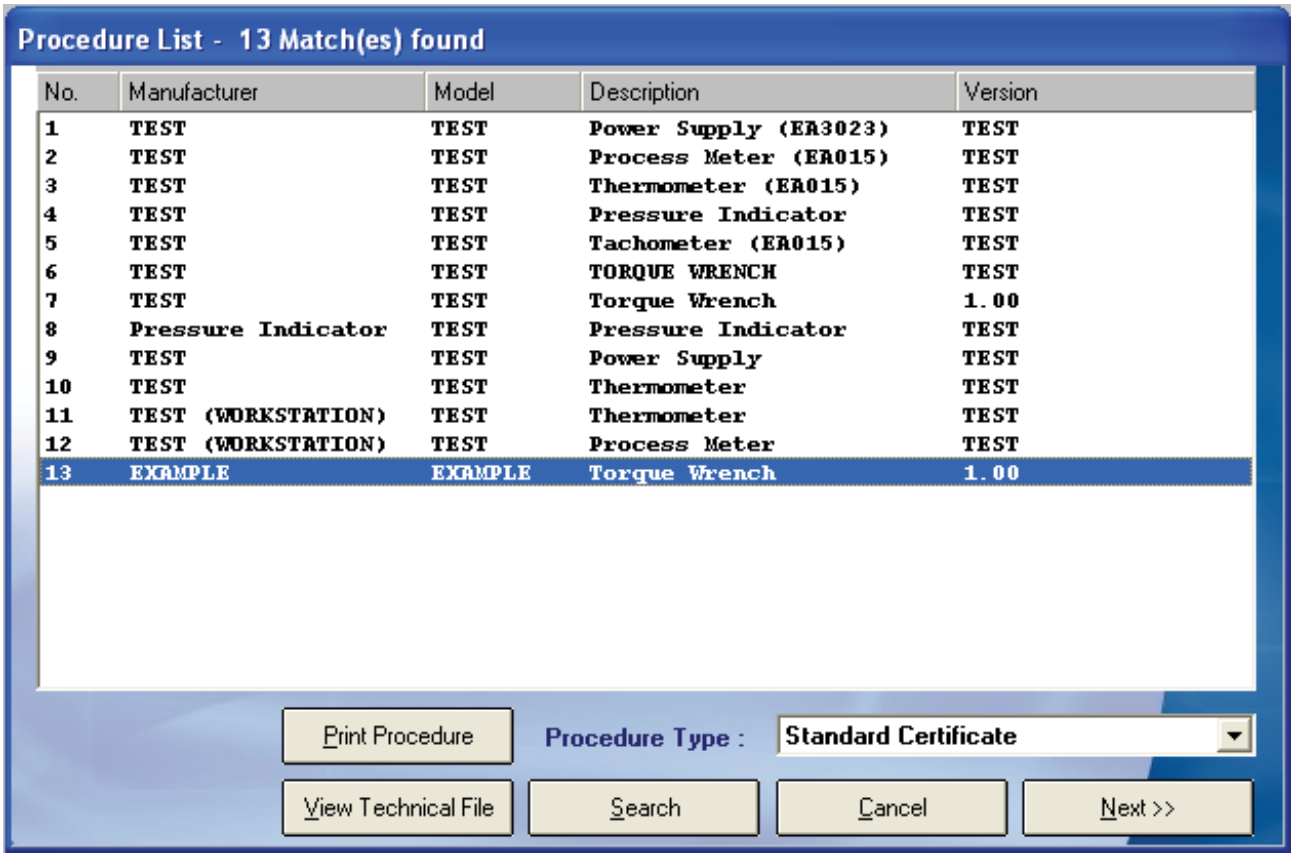
Select 'Search For a Procedure (Calibrate Instrument) from the File menu :



Or use the toolbar to select the procedure select function

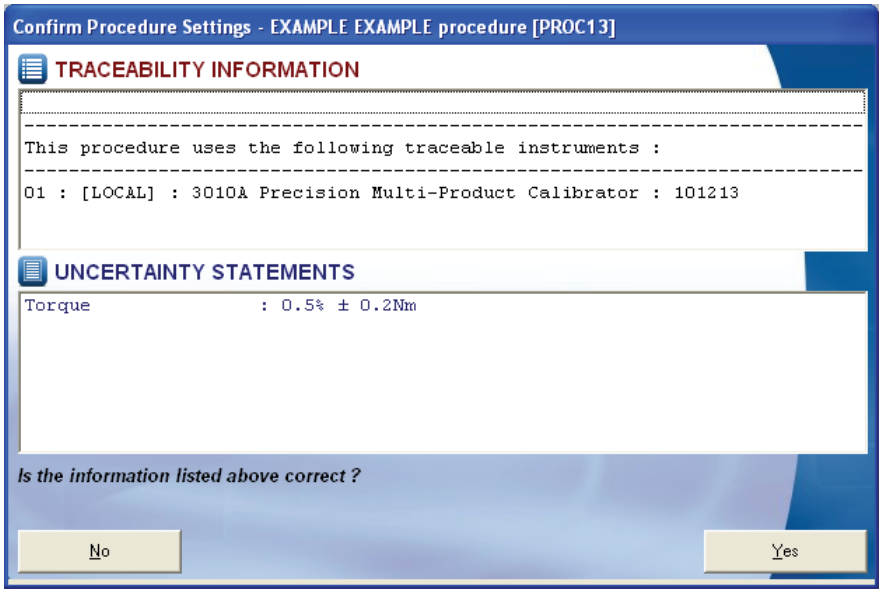


2. Select the required procedure from the list



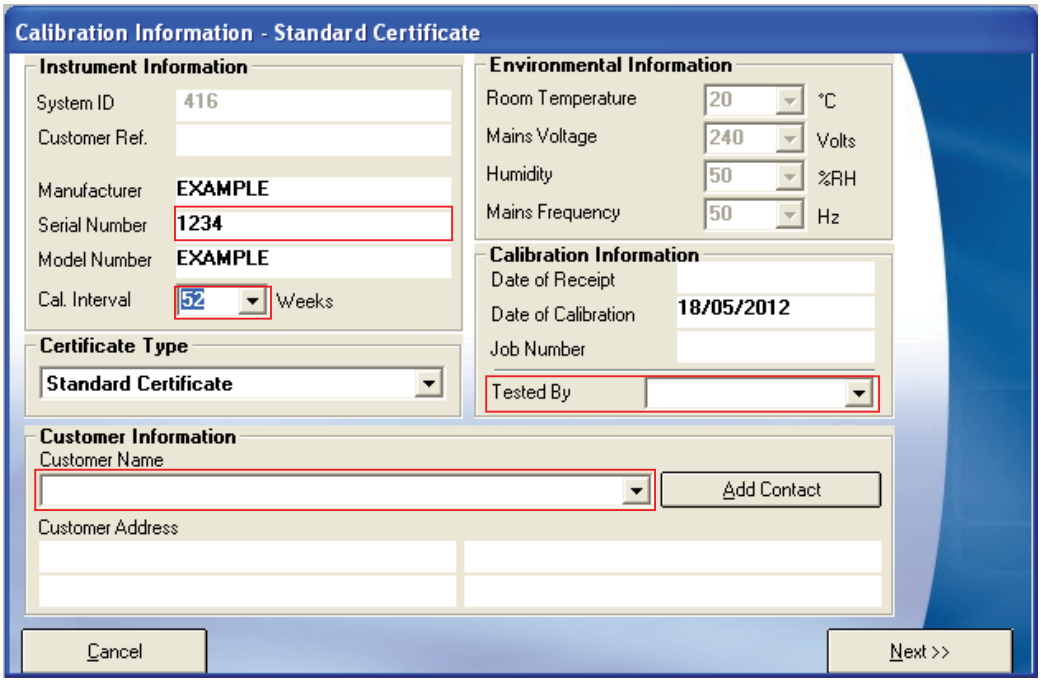
Highlight the required procedure then click **Next >>**

3. Confirm the traceability and uncertainties data is correct



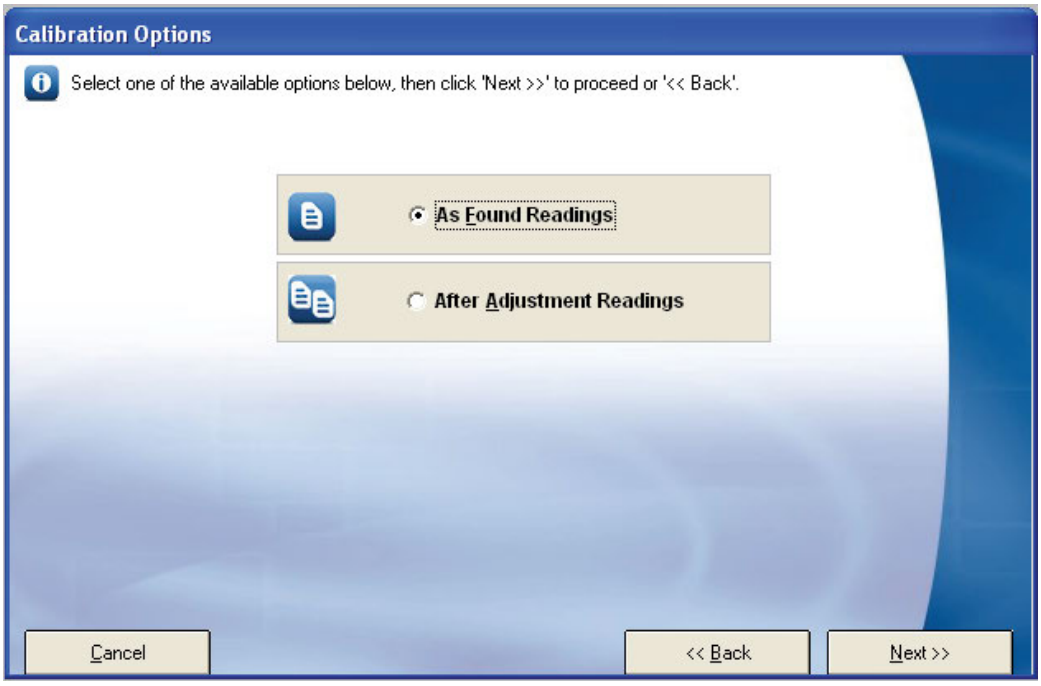
This screen shows a summary of the traceable instrument and uncertainties information set for the selected procedure – click **YES** if this is correct or **NO** if this needs to be changed in the procedure (clicking NO will abort the calibration).

4. Begin calibration



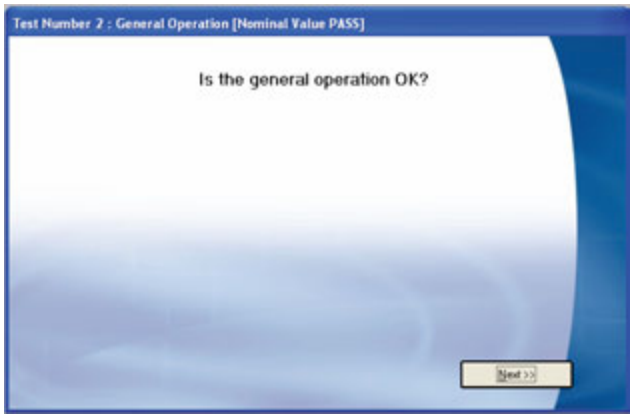
Enter serial number, cal. interval, tested by name and customer address as applicable

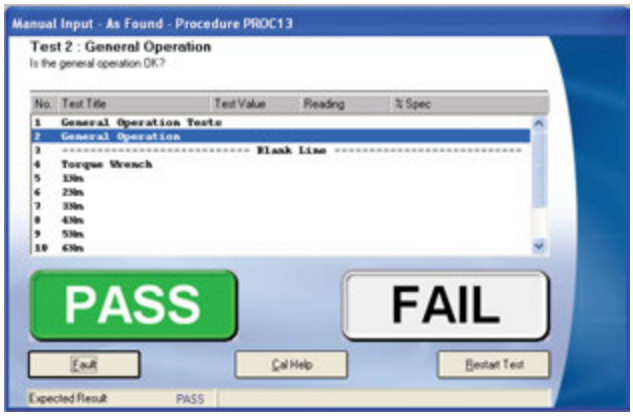
5. Select Calibration Option



Select As Found Readings or After Adjustment Readings as required.

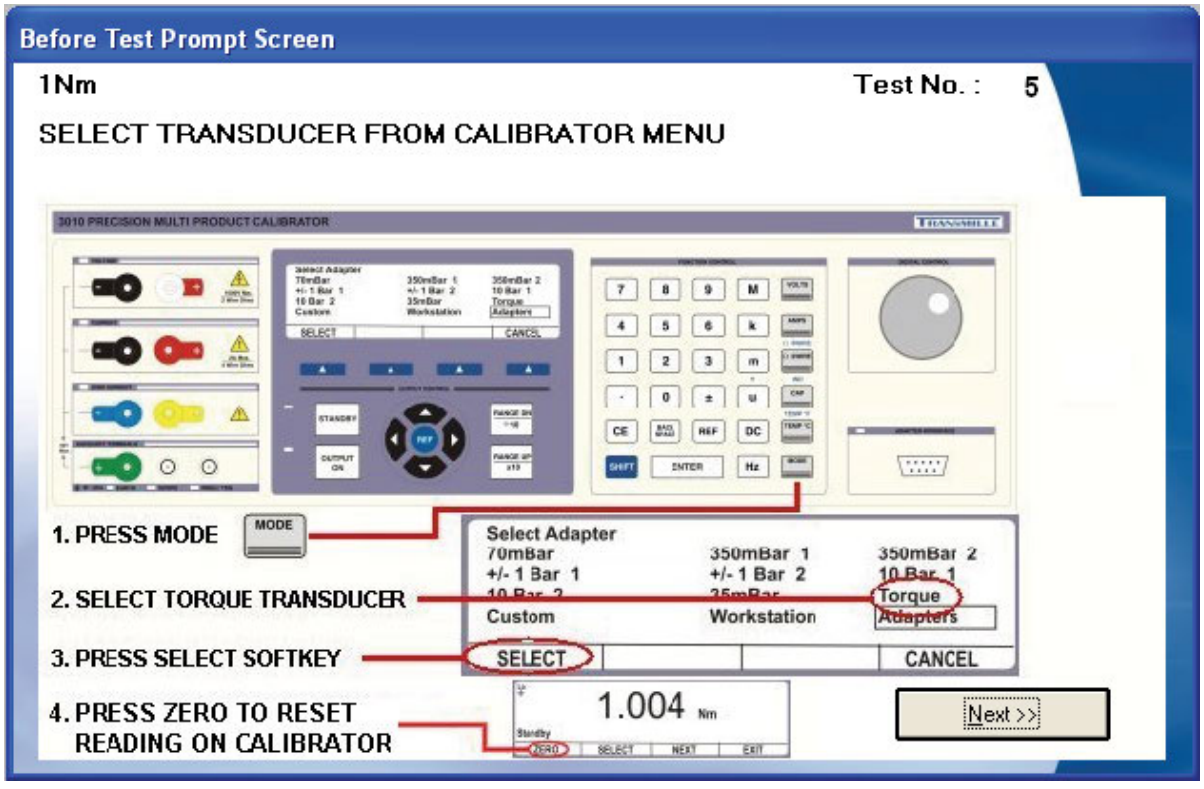
6. General operation check





A PASS / FAIL type test allows the general operation to be recorded – simply click on PASS or FAIL to record result.

7. Torque Tests – Pre-Test Prompt

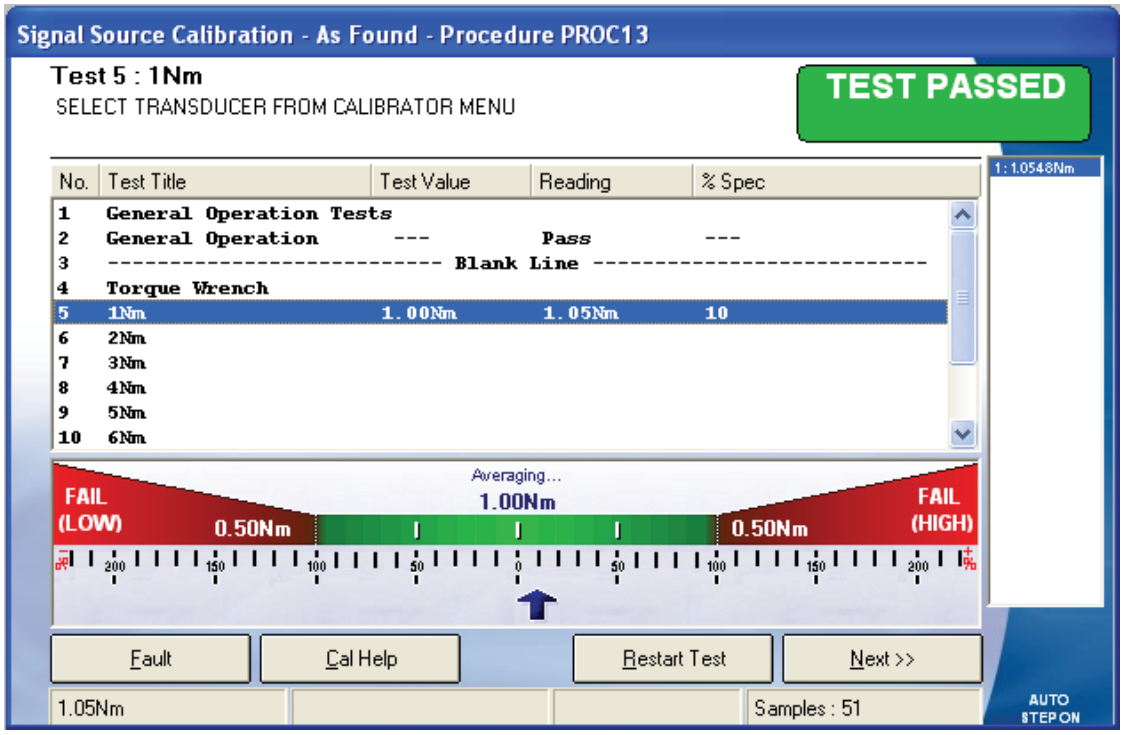


An on-screen prompt shows how to set the calibrator to the require torque mode :

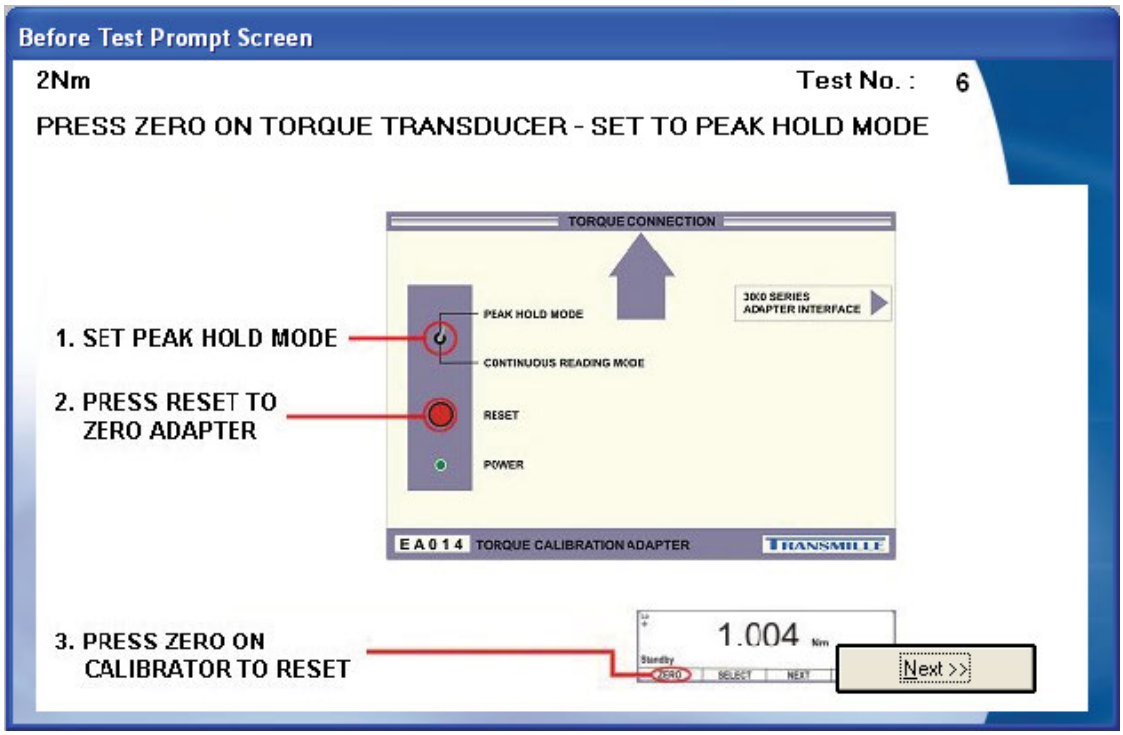
i. PRESS THE MODE BUTTON ON THE CALIBRATOR
ii. SELECT THE REQUIRED TORQUE TRANSDUCER FROM THE MENU USING THE CURSOR KEYS
iii. PRESS SELECT TO CONFIRM CHOICE
iv. PRESS THE ZERO SOFTKEY TO ZERO THE CALIBRATOR READING
(ENSURE TRANSDUCER IS CONNECTED PRIOR TO PRESSING ZERO)

Click NEXT >> to continue to measurement screen

8. Torque Tests – Calibration Screen

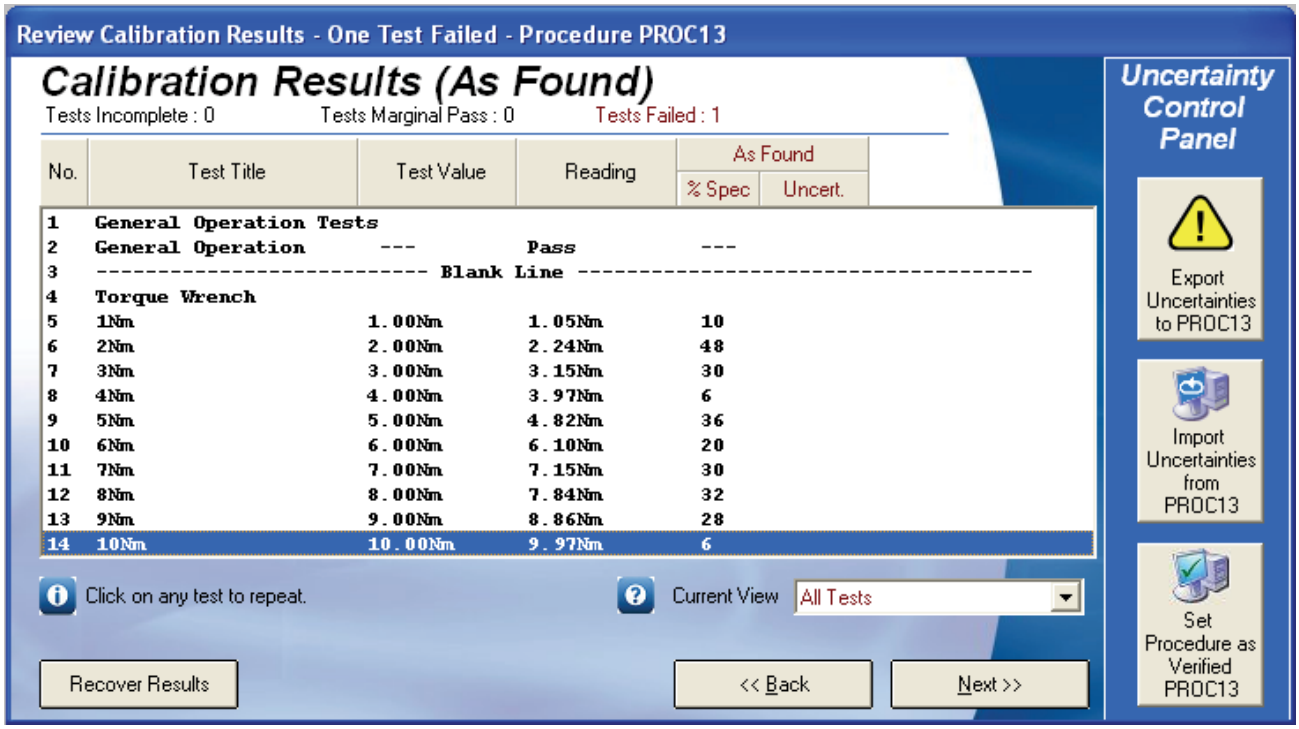


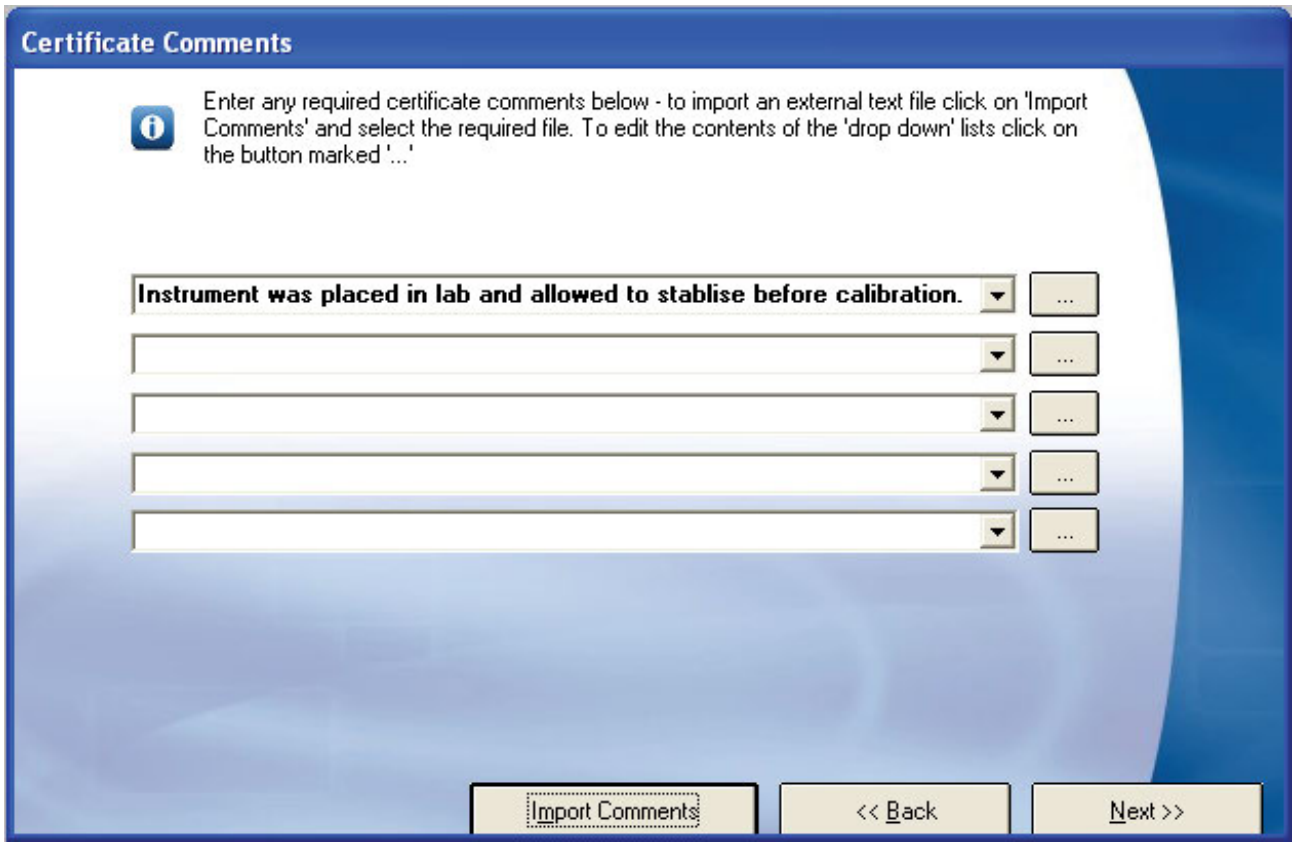
Apply torque load to transducer – the measured value will be displayed by ProCal.

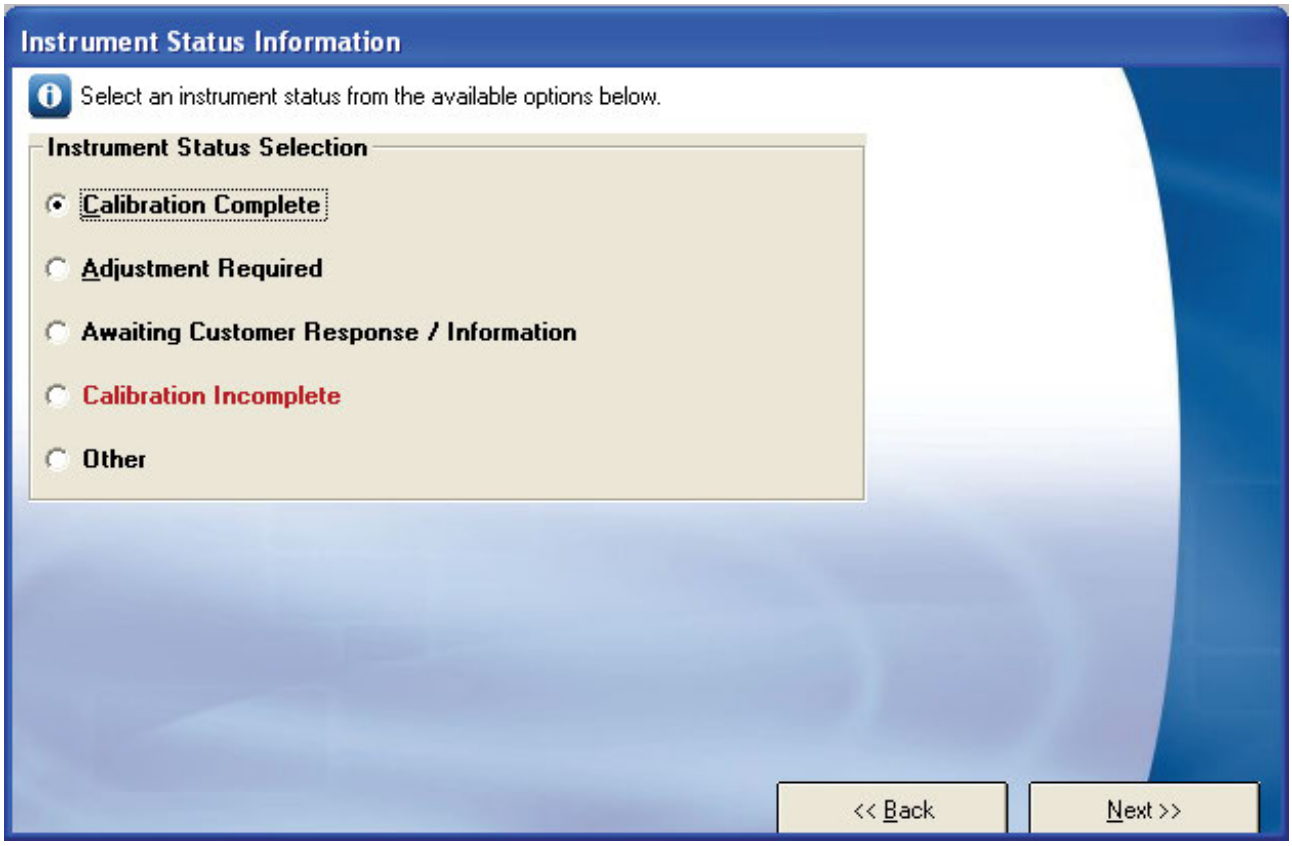


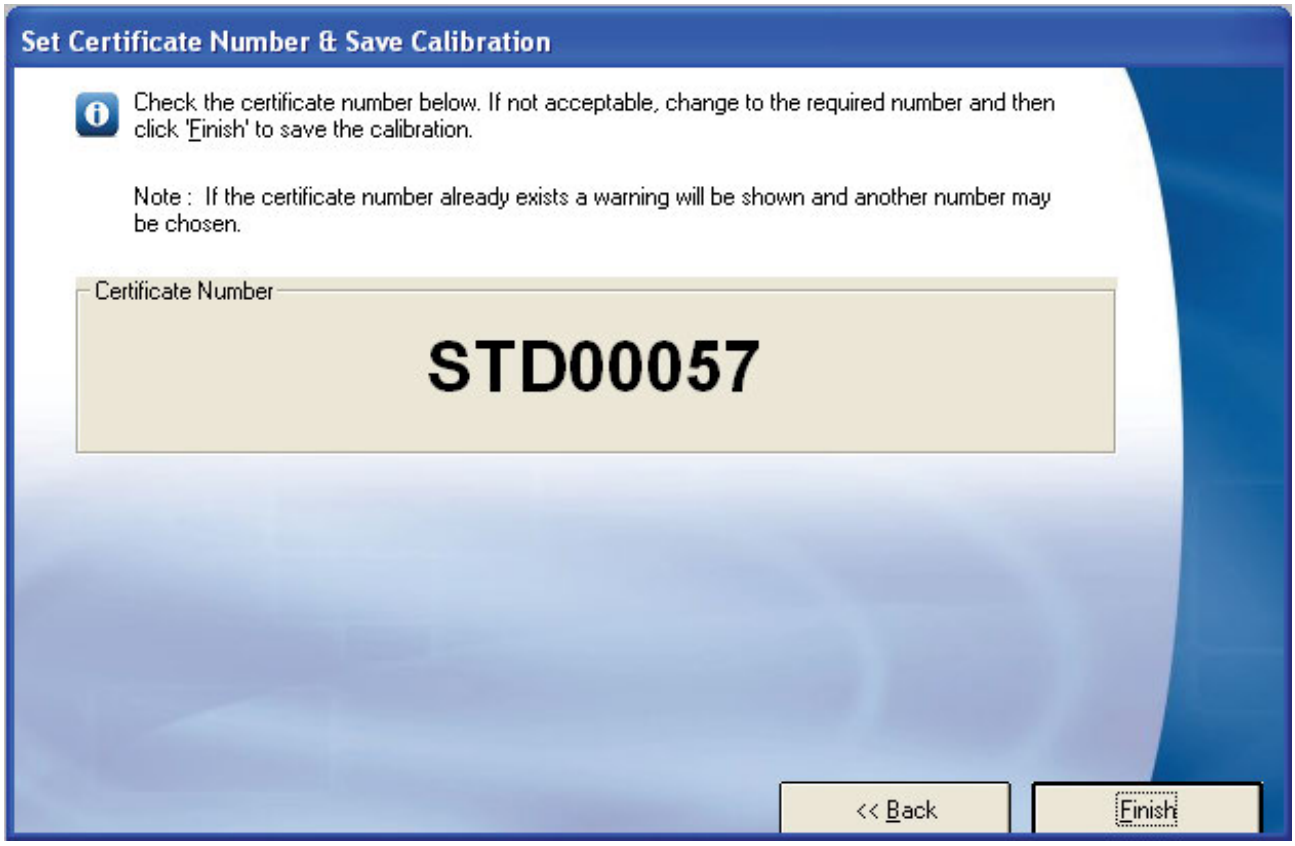
Between each measurement test the torque adapter should be reset to zero the reading – this is shown in a prompt screen before each measurement (as shown above).

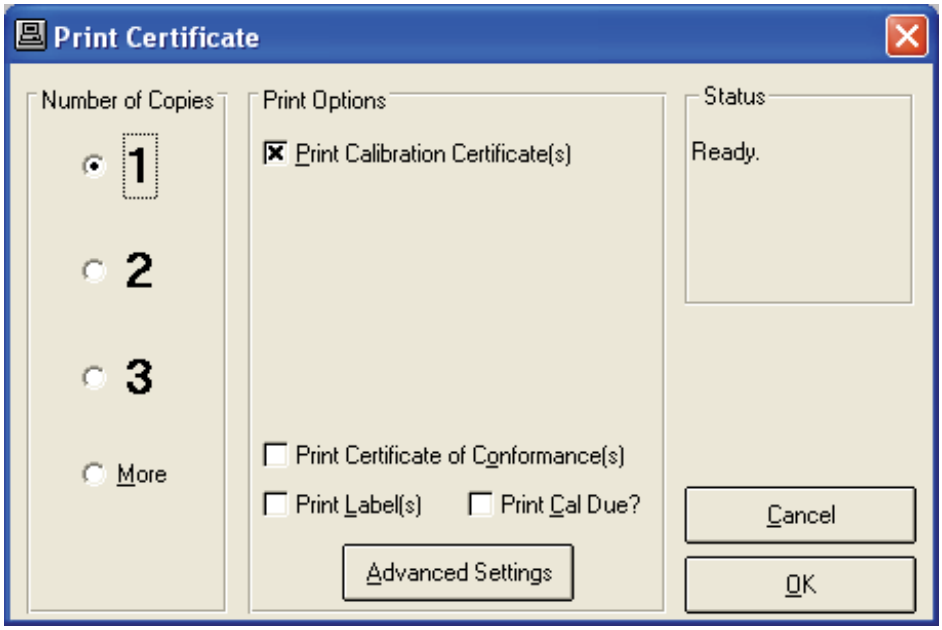
9. Finishing & Saving the calibration






Instrument Status Information
Select an instrument status from the available options below.
Instrument Status Selection
Calibration Complete
Adjustment Required
Awaiting Customer Response / Information
Calibration Incomplete
Other
<< Back
Next >>


Set Certificate Number & Save Calibration
Check the certificate number below. If not acceptable, change to the required number and then click 'Finish' to save the calibration.
Note : If the certificate number already exists a warning will be shown and another number may be chosen.
Certificate Number
STD00057
<< Back
Finish


Print Certificate
Number of Copies
1
2
3
More
Print Options
Print Calibration Certificate(s)
Print Certificate of Conformance(s)
Print Label(s)
Print Cal Due?
Advanced Settings
Status
Ready.
Cancel
OK