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DOCUMENT APPROVAL

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Your signature indicates that this document has been prepared in accordance with company standards or guidelines and adequately reflects the tasks and deliverables necessary.

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Your signature indicates that, you have reviewed this document and that it accurately and completely reflects the tasks and deliverables necessary.

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Title	Operations Manager AEUS		

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Your signature indicates that this document complies with company standards or guidelines; and that the documentation and information contained herein complies with applicable regulatory, corporate, divisional/departmental requirements, and current Good Manufacturing Practices.

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1.0 PURPOSE

1.1. The purpose of the document is to define the SOP (Standard Operating Procedures) to be followed by ADVANEX EUROPE Ltd, in order to ensure that product spring torque is measured in a controlled and consistent manner.

2.0 SCOPE

2.1. For the purpose of this SOP the Böhm TG8 and TG9 Torque Testers only are described.

2.2. All equipment and processes on the production sections have been formally qualified and validated. All personnel working on the production sections are responsible for ensuring that no changes are made to the process without full change control as defined in SOP/PH001 (Document Number AEU00226).

3.0 TERMS, DEFINITIONS & ABBREVIATIONS

3.1. None.

4.0 HEALTH, SAFETY & ENVIRONMENTAL

4.1. GMP (Good Manufacturing Practice) guidelines apply (Document Number AEU00389).

4.2. Within the factory area safety footwear is mandatory.

4.3. Within the factory area safety glasses must be worn at all times.

5.0 ASSOCIATED DOCUMENTS

5.1. Component Drawing for Component to be tested.

6.0 PROCEDURE

6.1. **The Böhm TG8 And TG9 Torque Testers Are Both Set Up Identically.**

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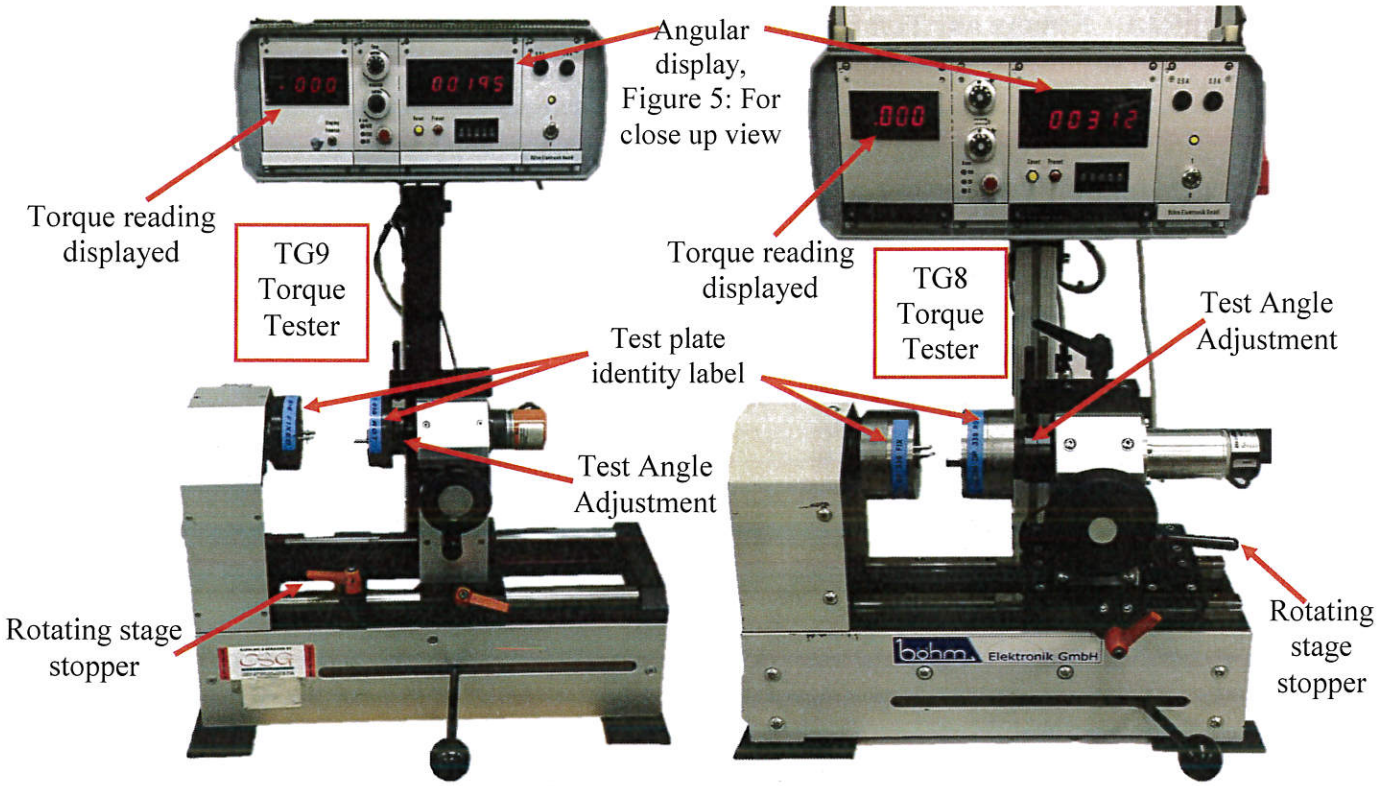

Figure 1: Böhm TG9 And TG8 Torque Testers.

6.2. **Ensure Correct Test Plates are Fitted.** With reference to the Works Order Instructions for the components to be tested, ensure that the required test plates, identified by the 'Test plate identity label' as shown in Figure 1: are fitted to the torque tester, if the correct test plates are fitted proceed to step 6.3 to ensure that the setup is correct, if the test plates require changing continue with the steps detailed below.

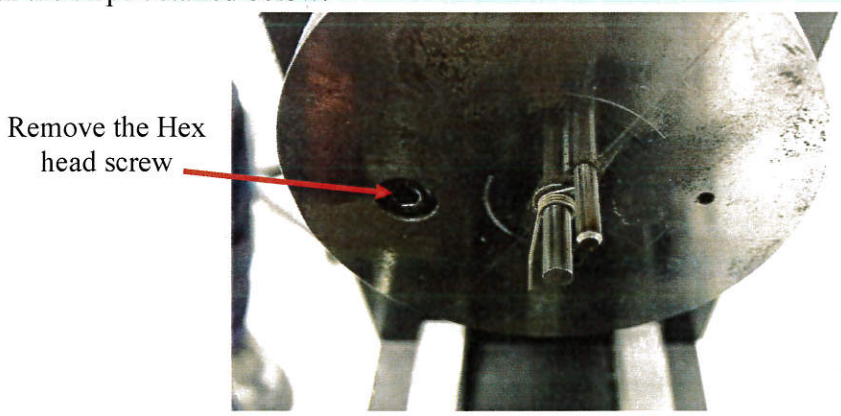

Figure 2: Remove the Hex head screw.

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6.2.1. **Remove any Test Plates Fitted.** If it was found that the test plates fitted were not the required ones identified on the Works Order Instructions, as checked in step 6.2, they are to be removed by the removal of the hex head screw as identified in Figure 2:

6.2.2. **Source Replacement Test Plates**. Source the tests plates identified on the Works Order Instruction for the components to be tested, the test plates are identified by the labels shown in Figure 1:

6.2.3. **Install Replacement Test Plates.** Fit the replacement test plates by lining up the plate on the centre pin and securing by use of the hex head screw removed in step 6.2.1.

6.3. **Set Gap Between Test Plates.**

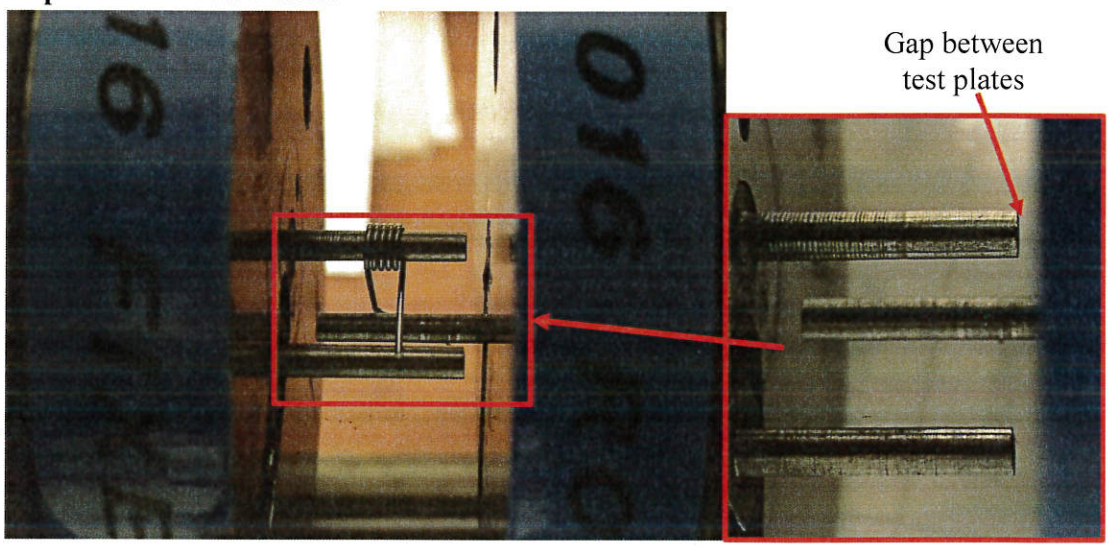

Figure 3: Example of the size of gap between the test plates. Zoomed in view.

6.3.1. **Adjusting Gap Between Test Plates.** Slide the rotating stage so that it is close to but not touching the stationary stage, as shown in the example in Figure 3: set the gap by use of the Rotating stage stoppers identified in Figure 1:

6.4. **Align the Test Plates.**

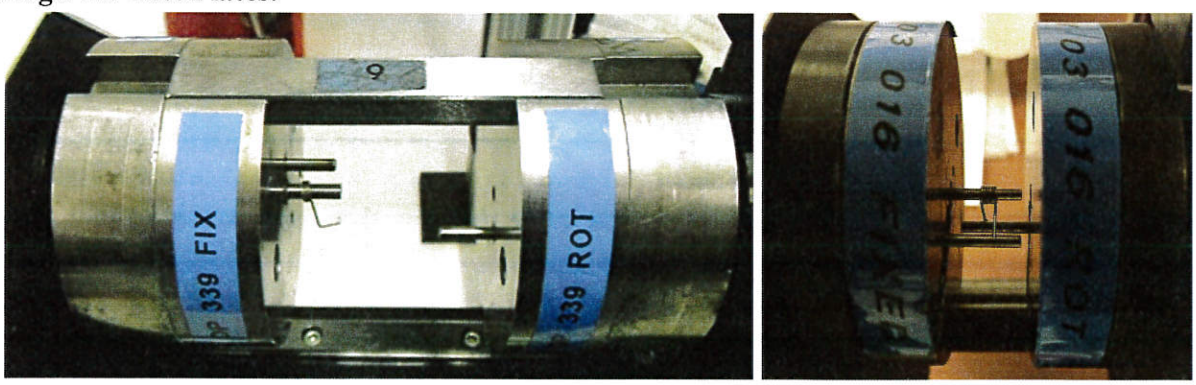

Figure 4: Align the test plates using either the setting bar, if avalable or a sample component.

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6.4.1. **Different Methods for Aligning the Test Plate.** There are two different method for aligning the test plates depending on the form of the tests plates, if the test plates will allow the setting bar to be used, the bar must be used as this is easier and will give a more repeatable outcome.

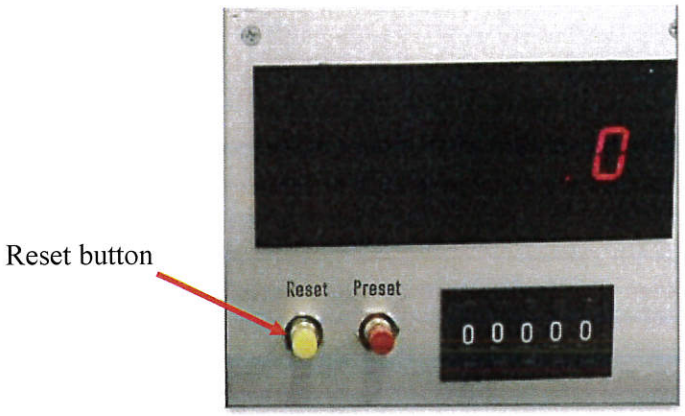

Figure 5: Close up of angular display panel, see Figure 1: for location.

6.4.2. **Align the Test Plates Using Setting Bar.** Place the setting bar on to the test plates, as shown in Figure 4: this will ensure that the test plates are correctly aligned and then press the yellow reset button identified in Figure 5: Once the display has zeroed, remove the setting bar from the test plates and store it in the dedicated storage position.

6.4.3. **Align the Test Plates Using Sample Component.** If the setting bar cannot be used due to the design of the test plates, a sample component that has already been checked to its relevant measurement procedure is to be placed on to the test plates and the rotary stage moved so as it just touches the sample component, this will be indicated by the torque reading showing the slightest reading and visually, once the component has been touched by the rotary stage then the angular display is to be zero by use of the yellow reset button.

6.5. **Set Test Angle.**

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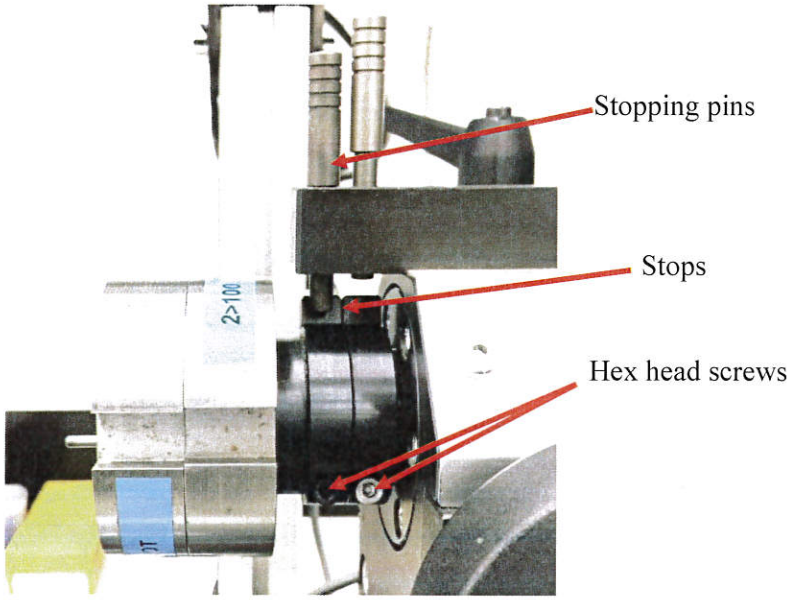

Figure 6: Setting the Test Angle.

6.5.1. **Set Test Angle.** Once the zero position has been found, the angle for the test position can be set. Adjust the rotary stage until the angular display shows the required angle, the rotational collar stops are loosened by use of the hex head screws and turned until the rotational collar stop engages with the stopping pin, once this happens the hex head screw is to be tightened down. This angle is to be checked against the angular display several times to ensure it has been correctly set.

Note: Some Components May Have Two Different Test Positions, If This Is The Case Then The Second Test Angle Can Be Set By Repeating Step 6.5.1 For The Second Stopping Pin Ensuring That The First Is Pulled Up To Allow The Rotation To Continue.

6.6. **Task Conclusion.**

6.6.1. **Measure Component.** Use the Torque Tester as described in the appropriate procedure for the component under test.