Test Procedure

1) First decide which scale is appropriate. Some of the limitations to consider are:
   • Size and depth of the indent in comparison to the feature of interest.
   • Spacing between indentations should be a minimum of 4 times the diameter of the indentation.
2) Select the proper test force with the load selector dial.
3) Verify that the correct indenter is in place. If necessary replace it with the appropriate indenter. The indenter neck surface is flat on one side, which faces the spring-lock screw.

![Indenter Replacement](image)

4) Verify that the correct indenter is selected in the Measurement Condition screen. Dia corresponds to the diamond or braille indenter. The diameter measurements are listed for the selection of the ball indenters. The selected indenter will be displayed in the top row of the Measurement Condition screen. This screen can be accessed from the test screen by selecting the Main Menu screen, followed by Utility and then Measurement Condition screens.
5) Select the correct anvil. Typically the shape of the test piece will determine which anvil to use. The most important aspect is that the test piece is secured and can not shift during the course of the test and that it is perpendicular to the indenter. The followings are several typical anvils.

![Anvil Diagram](image)

From left to right: spot anvil, small v-anvil, large v-anvil and standard flat anvil
6) Set the dwell time on the Load Time Setting screen located within the Set Up Mode screen. If a dwell time of longer than 3 seconds is required due to the material having excessive creep, the time should be recorded after the result.

The routine typically followed by the operator:

- Place the test piece and test block on the anvil.
- The preliminary test force is applied by bringing the test piece into contact with the indenter until the SET point is reached. If too much force has been applied, the OVER light will be on. Should the OVER light appear it is necessary to start the test on a new position of the test piece.
- At this point, if the tester is semi-automated, the remainder of the test force will be applied. Otherwise it will be necessary to press START. The level of automation can be selected within the Utility and then Measurement Condition screens. Either Auto or Manual will appear in the top line of the touch screen depending on your selection.
- The result is displayed by the testing machine. The larger the e-value (displacement), the smaller the HR value observed.