Standard Calibration Criteria – Torque Offerings

Decision Rules (Excluding calibrations working to BS EN ISO6789:2017)

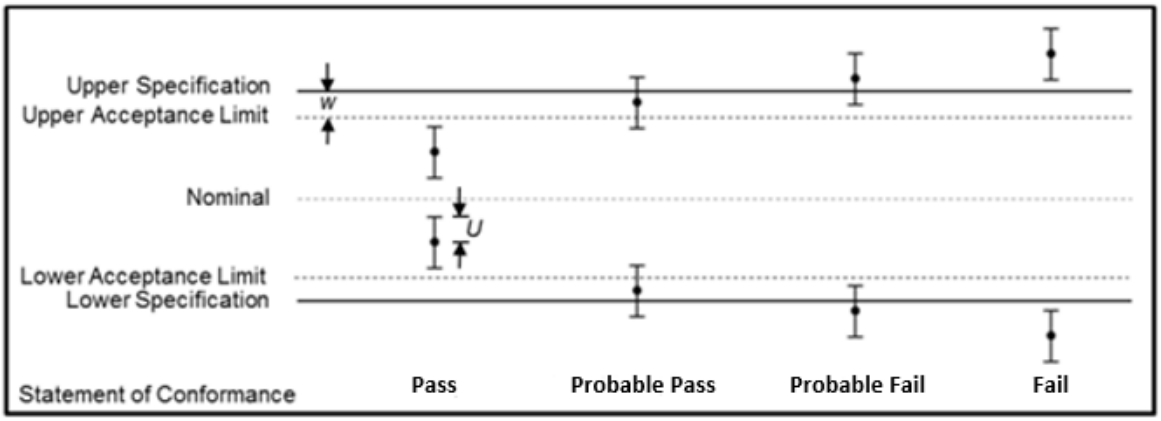
Conformity is reported using guard banding as detailed below:

Result	Symbol	Explanation
Pass[1]	None	The result is within the specified limits provided even when including the measurement uncertainty.
Probable Pass	!	The result is within the specified limits, however when including the measurement uncertainty, the result may be outside of the limits. However, compliance with the specified limits is more likely than non-compliance.
Probable Fail	^	The result is outside the specified limits, however when including the measurement uncertainty, the result may be inside of the limits. However, non-compliance with the specified limits is more likely than compliance.
Fail	F	The result is outside the specified limits provided even when including the measurement uncertainty.
No Conformity	@	The Calibration uncertainty is greater than the specified limit, therefore conformity can not be provided. Calibration will also be marked as limited calibration.

Notes

[1] = The absence of a compliance annotation can also mean that the measurement taken does not have any specified limits. In this instance, the calibration result would also be classified as a "PASS".

Example of Guard Banding:



U = 95% expanded measurement uncertainty

Standard Calibration Criteria

- ✓ All torque tools will be calibrated to BS EN ISO6789:2003 (Withdrawn) standard unless calibration to BS EN ISO6789:2017 is requested.
- ✓ All torque tools will be calibrated in a clockwise direction only.
- ✓ Instruments can be calibrated in lbf.ft, lbf.in or N.m. Where possible N.m will be used on all calibrations.
- ✓ Fixed adjustment preset torque tools will be tested at the set point defined by the instrument at the time of the calibration. This statement also applies to adjustable preset torque wrenches with a valid tamper proof seal.
- ✓ Adjustable preset torque wrenches without a tamper proof seal will not be calibrated until the customer has advised the desired test point.
- ✓ Torque screwdriver calibrations with be based on (not true to) the BS EN ISO6789:2003 (Withdrawn) standard.
- ✓ Torque Screwdrivers will **not** be within our scope of UKAS accreditation.

Calibrations working to BS EN ISO6789:2003 (Withdrawn)

- ✓ Calibrations to BS EN ISO6789:2003 (Withdrawn) standard of adjustable torque tools will be performed at the following test points:
  - Approximately 20% of full scale (if 20% is not marked on scale, the next minimum point will be taken)
  - Approximately 60% of full scale
  - 100% of full scale

Calibrations working to BS EN ISO6789:2017

- ✓ Calibrations to BS EN ISO6789:2017 standard of adjustable torque tools will be performed at the following test points:
  - Minimum test value (if the minimum value is not possible then 20% of full scale will be carried out unless advised by the customer).
  - Approximately 60% of full scale
  - 100% of full scale
- ✓ Decision rules for calibrations to BS EN ISO6789:2017 will be the following:
  - Torsion/Flexion bar tools, screwdrivers (not digital display) and other torque tools with a range less than 10 N.m.
    - Maximum Permissible Measurement Error = 6% of Reading
    - Maximum Permissible Uncertainty Interval = 9% of Reading
  - Torque Tools (not listed above) with a range greater than 10 N.m.
    - Maximum Permissible Measurement Error = 4% of Reading
    - Maximum Permissible Uncertainty Interval = 6% of Reading