

Title: Calibration of Rail Head Depth Gauge

1 Scope

Work Instruction for the calibration of a rail head depth gauge used in association with aluminothermic head repair processes. To be used in the absence of a manufacturers calibration instruction.

2 Preparation

Calibration shall be carried out using Category 'A' master instruments.

Equipment required:

- Lawton Tools rail head depth gauge calibration block
- Metric feeler gauges

The rail head depth gauge calibration block and the metric feeler gauges shall have the appropriate certificate of calibration traceable through United Kingdom Accreditation Service and shall be rechecked at intervals of no more than 5 years.

3 Method

3.1 Check that the identification number is clearly visible and the same on both parts of the gauge.

3.2 Check for visible signs of damage and that the milled lines and rail section markings are clearly visible.

3.3 Check that the slider and locking screw both operate correctly.

3.4 Check that the measurement face is square by positioning the gauge on the validation block so that the three datum points contact the block. Lower the sliding arm until the underside face contacts the top surface of the block. Check any gaps between the sliding arm and the top of the validation block. The maximum gap shall be 0.2mm.

3.5 Check the rail head depth measurement by positioning the gauge correctly on the block, locking the sliding arm in position and recording the measurement. The recorded height shall be $20\text{mm} \pm 0.5\text{mm}$.

3.6 Results shall be recorded on the calibration form (see Appendix A) and retained for audit purposes.

4 References

Appendix A. Rail Head Depth Gauge Calibration Record.

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Appendix A. Rail Head Depth Gauge Calibration Record.

Gauge Number:		Date last checked:		Next check due:	
Master Equipment Used:					
Head Depth Gauge Validation Block:		Master Feeler Gauge:			

Visual Checks (Identify Pass or Fail as appropriate)			Comments
Check ID number is clearly visible and the same on both parts	Pass	Fail	
Check for visible signs of damage	Pass	Fail	
Check that the milled lines are clearly visible.	Pass	Fail	
Check that the locking screw operates correctly	Pass	Fail	
Check that the slider operates correctly	Pass	Fail	

Dimensional Checks (Identify Pass or Fail as appropriate)			Readings / Comments	
Check that the measurement face is square <i>Maximum gap = 0.2mm</i>	Pass	Fail	Maximum Gap	
Check rail head depth measurement <i>Required range = 20mm $\pm$ 0.5mm</i>	Pass	Fail	Reading	

Examined by:	Signed:	Date:
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NOTE Failed equipment is to be labelled 'Do Not Use' and quarantined until rectified or scrapped.