

## Technical Information

### GAUGE CALIBRATION

T002

#### Guidance on creating Master to Working Gauge calibration sheets

On a regular basis, dependent on the throughput of cylinders, centre technicians must compare the **Working gauge** readings to those of the **Master gauge**.

These readings must be taken while the Master gauge is rising through the pressure readings until it reaches the maximum pressure. To enable this to be carried out a suitable block valve should be inserted at the end of the steelwork and before any flexible hoses.

The readings shown on the Working gauge are each recorded on the calibration sheet under the 'Rising' column and again under the 'Falling' column.

Once the calibration is completed the Master gauge must be isolated from the pressure system. **IT IS NEVER USED DURING A CYLINDER TEST.**

It is a calibrated instrument and continued use as a parallel 'Working gauge' could soon take it out of calibration. The Working gauge does not have to be sent away with the other gauges. Its calibration is checked at regular intervals as required.

This Calibration Sheet must be displayed adjacent to the gauge system. The Rising values of the Working gauge **ONLY** must be used during the testing of a cylinder.

Below is a sample of such a chart:

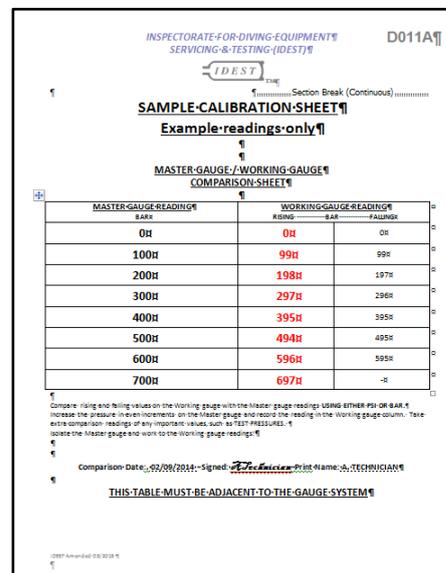
Note that the readings on the Working gauge during the 'rising' of the Master gauge will not compare exactly to those on the Master gauge. Neither will those readings during the 'falling' of the Master gauge values.

The rising and falling of the gauges must be carried out as stated in BS 837-1:1998 to ensure the gauge calibrations are correct but only the rising values are used when testing a cylinder.

Once this Calibration Sheet is produced it must be positioned next to the working gauge and the rising (**shown red**) readings used.

As each calibration sheet is produced so the previous sheet **must** be filed for future reference. The procedure for creating this calibration sheet is explained underneath the table on the calibration sheet. This sheet can be obtained from IDEST on request to the inspector.

**It is recommended that the Master Pressure gauge is sent to a UKAS Accredited Calibration laboratory, accredited to ISO/IEC 17025.**



INSPECTORATE FOR DIVING EQUIPMENT  
SERVICING & TESTING (IDEST) D011A

Section Break (Continuous)

**SAMPLE CALIBRATION SHEET**  
Example readings only

MASTER-GAUGE / WORKING-GAUGE  
COMPARISON SHEET

MASTER-GAUGE-READING BAR	WORKING-GAUGE-READING	
	RISING BAR	FALLING BAR
0H	0H	0H
100H	99H	99H
200H	198H	197H
300H	297H	296H
400H	395H	395H
500H	494H	495H
600H	596H	595H
700H	697H	-H

Compare rising and falling values on the working gauge with the master gauge readings using either psi or bar. Increase the pressure in 100 increments on the master gauge and record the reading in the working gauge column. Take extra comparison readings of any important values such as TEST PRESSURES. Record the master gauge and work on the working gauge readings.

Comparison Date: 02/08/2014 - Signed: [Signature] Name: J. TECHNIGAN

**THIS TABLE MUST BE ADJACENT TO THE GAUGE SYSTEM**