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Technical Bulletin	4
Title	Guidance on the requirements for equipment calibration for PIPA inspectors
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Guidance on the requirements for equipment calibration for PIPA inspectors

As a part of ongoing improvements to the PIPA inspection scheme it is now a requirement of all inspectors and/or IBs to have certain essential test equipment calibrated.

These calibration certificates may be asked for during audits, All IBs/inspectors may be subject to audits and a lack of proof of calibration could result in the temporary suspension of an IB.

All existing members may be expected to be able to provide suitable calibration certificates when renewing their membership.

New PIPA members must provide proof of calibration prior to commencing inspections.

A – What essential equipment must be calibrated for PIPA Inspections,

1. Portable Appliance Tester
2. Digital and mechanical manometer (not U-gauge type)
3. Anchorage load testing, load cell, scales or dynamometer
4. Digital or mechanical inclinometer or level **– this calibration requirement is paused pending review of available calibration services. Once sourced this will need to be actioned as a priority.**

The above equipment is considered safety critical to the PIPA inspection process and inspectors must have in date calibration certificates for these.

Findings may well be questioned during an internal investigation, or if an investigation by an outside body such as the HSE should take place.

A.1 – What optional equipment must be calibrated for PIPA Inspections,

5. Any digital measuring device such as vernier calliper
6. Laser measuring devices

Items five and six have non digital/mechanical options that inspectors must select to use if their digital or mechanical options are not calibrated.

B - Why calibrate?

Calibration is vital wherever measurements are important, it enables operators and inspectors to have confidence in the results that they monitor and record.

Calibration is the process of comparing a reading on one piece of equipment or system, with another piece of equipment that has been calibrated and referenced to a known set of parameters within a testing and calibration laboratory.

The equipment used as a reference should itself be directly traceable to equipment that is calibrated according to ISO/IEC 17025.

ISO/IEC 17025 is the international standard for the accreditation of testing and calibration laboratories, it includes quality management system requirements along with technical requirements.

In the UK, ISO/IEC 17025 accreditation is provided by UKAS, often calibration performed by an ISO/IEC 17025 accredited laboratory is referred to as 'UKAS Calibration'.

C - How often?

The specified inspection equipment must be calibrated before its first use and then every 12 months with certificates being stored by the IB/inspector and presented to PIPA in event of an investigation or audit.

If new equipment is purchased it may come ready calibrated, Inspectors and IBs must ensure that this calibration is to the standard required by PIPA and detailed in section D.

Inspectors or IBs may be asked to present proof of calibration on renewal and new IBs and inspectors will have to provide proof of calibration before being permitted to commence inspections under the PIPA scheme.

D - Who can calibrate?

Calibration must either be completed by either,

1. A professional calibration service that is Accredited to ISO/IEC 17025 by "UKAS" (United Kingdom Accreditation Service)
2. A professional calibration laboratory who offers a "traceable" calibration.

A "traceable" calibration is traceable by the calibrating laboratory to equipment and systems that meet the requirements of ISO 17025.

Calibration laboratories are easily located, there are independent laboratories around the country along with many specialist retail companies that provide such equipment and may offer a calibration services.

E – What happens if a piece of equipment fails a calibration

Equipment that does not have a current, positive calibration certificate or fails a calibration must not be used in connection with a PIPA inspection before it has been repaired and passed a subsequent test.

F - Other equipment

While at present PIPA only require the stated equipment to be calibrated, the industry is evolving, and new equipment and methods will undoubtedly appear.

PIPA is monitoring the situation and when it's considered necessary other items of equipment may be added to the list of items requiring calibration.

Inspectors may choose to have other items of their test equipment calibrated, but there is no requirement to pass such certificates to the PIPA office.

It is recommended that inspectors are confident in the quality of all their inspection equipment and take care to keep all equipment used for inspections in a good and accurate condition.

1 - Linear tape measures have three accuracy levels.

a. **EC Class I**: These are the most accurate tape measures on the market. They tend to be slightly more expensive than the average DIY tool but are perfect for professional work where precision is essential. The maximum error expected in class I tapes is of 1.1 mm in 10 metres – 0.001% of margin
b. **EC Class II**: Providing slightly less accurate measurements than class one, but still significantly more precise than the average commercial tape. Suitable for most uses, the maximum error expected over 10 metres total length is 2.30 millimetres – slightly more than 0.002%
c. **EC Class III**: The least accurate on the scale, therefore they might be preferred where a difference of a few millimetres does not make a difference to the overall project. The maximum margin of error on a 10-metre-long measure is 4.60 millimetres – 0.004% difference

The above is supplied for reference only and PIPA will not be asking for inspectors to supply proof as to which they use for their inspections. The differentials between these grades will not noticeably affect the outcomes.

No professional verification/calibration required.
This is essential equipment.

2 – Long spirit level

Does not require calibration, however the quality of the reading provided by these can vary greatly and some cheaper examples can be a fair way from level.

These tools also require careful handling and storage with regular checks to ensure they remain accurate.

No professional verification/calibration required.
This is essential equipment.

3 – Laser distance measure

A highly versatile and useful piece of equipment that many inspectors make use of and are particularly useful for inspections of larger equipment.

Professional verification/calibration required.
Not essential equipment.

4 – Vernier calliper and rigid linear measures

Verniers are used by many inspectors for measuring smaller items such as the stitch length, other inspectors choose to use a tool such as a steel rule and this is equally acceptable for the PIPA scheme.

The Vernier calliper is a very useful tool and is available if both digital and analogue types.

Professional verification/calibration required. (Digital)
No professional verification/calibration required. (Analogue)
Not essential equipment.

5 – Height measuring sticks

These items are very useful for accurately measuring heights of inflatables, they are widely available in hights up to 5 metres. As with other items of linear measurement equipment they do not require calibration.

No professional verification/calibration required.
Not essential equipment, however highly recommended and accurate.

6 – Weights

Only weight stamped equipment may be used and PIPA will accept the type supplied for use in fitness facilities and home gyms such as barbell weights.

Required weights must allow for the following weight packages.

25kg – 35kg – 65kg – 85kg

No professional verification/calibration required.
This is essential equipment.

7 – Probes

Probes used for the inspection of inflatables as a part of the PIPA scheme must conform to the details set out in annex D of BS/EN 14960 part 1 2019

No professional verification/calibration required.
This is essential equipment.

8 - Anemometers

While not required for the PIPA inspection process many inspectors carry such equipment, if this is used to offer advice then an inspector should consider having this calibrated.

Optional professional verification/calibration required.
Not essential equipment.