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## Volume 23, Issue No 1

Welcome to the first IDEST Torque of 2023. In this issue we cover the significance of the implementation period for ISO18119 ending; and the impact of a recent Standard change to labels, booking-in forms, certificates etc. Also, the end of leeway on calibrations. And an upcoming opportunity to meet the IDEST team.

We clarify the uncertainty around filling 'breathing air' stamped cylinders; and cover the emergence, use and complications of valves fitted with flow restrictors.

Reports from our centres include concerns regarding low quality imported cylinders and HP compressors. An example of a camera system that works well for internal visual inspection. And a new near miss with a HP hose failure.

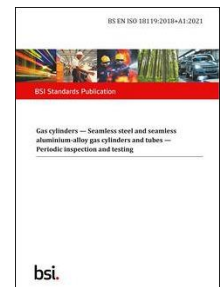
Plus, feedback from recent inspections suggests Continuing Professional Development (CPD) is a challenge for many centres, we can help!

## 18119 implementation period ends

The implementation period for centres to transition to BS EN ISO 18119 ended on 1<sup>st</sup> January 2023.

**Any centre that has not transitioned over to ISO 18119 must stop testing as your IDEST certification is suspended.**

Please contact us and we will work with you to expedite transition, if not please return your centre stamp (per the agreed terms and conditions you signed up to).



## IDEST labels

The quickest way for centres to order labels is via the IDEST website shop (rather than by emails and phone).

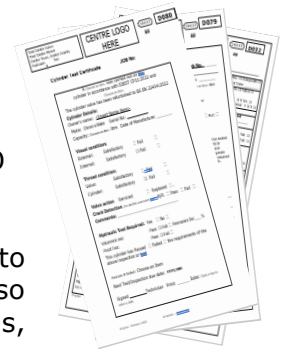


Old labels that refer to BS EN 1802 or BS EN 1968 **must not be used now** these standards are superseded by BS EN ISO 18119 and the implementation period has ended.

Centres that bought quadrants last year which reference the withdrawn BS EN ISO 22434:2011 standard rather than the current 2022 version may continue to use up stock until the end of this year.

## Booking-in Forms and Certificates

We have noticed on many of the booking-in forms, worksheets, and test certificates that centres are using that the Standards referenced are out of date, especially in relation to the recent publication of BS EN ISO 22434:2022.



IDEST have recently updated our templates to reflect this change. Please ensure that you also check and amend your booking-in forms, worksheets, and test certificates too.

## Cylinders Stamped 'Breathing Air'

In the past, some cylinders were stamped during manufacture with "Breathing Air". More recently stamping "Breathing Gas" has become more prevalent due to the move from plain old air to more exotic gases in diving. This has raised some concern regarding whether a "Breathing Air" cylinder can be filled with another gas mixture (e.g. Nitrox or Trimix).



Based upon dialog between IDEST, cylinder manufacturers and HSE we believe that as long as the cylinder is correctly labelled with identification of actual contents for carriage on roads there will be no comeback for the centre or user. So these can be filled with Nitrox or Trimix.

Please refer to BS EN ISO 18119 section 17.6 Identification of contents and the other standards therein to ensure you comply with the labelling requirements:

*"If the identification of the cylinder's contents is required, then ISO 7225 and ISO 32 may be used as examples for labelling and colour coding, respectively. Care shall be exercised in accordance with 17.1.2. (Painting & Coating)"*

<b>UN 3156</b>
<b>Compressed Gas Oxidizing N.O.S.</b>
<b>(Nitrox/Trimix/Heliox)</b>
<small>C.F.P. CYLINDER TESTING Castle Farm, Harrogate Yorkshire HG3 2BB Tel: 07889 117854</small>



<b>Mixture of:</b>	<b>M.O.D.:</b>
--- % <b>Oxygen</b>	
--- % <b>Nitrogen</b>	
--- % <b>Helium</b>	
<small>C.F.P. CYLINDER TESTING Castle Farm, Harrogate Yorkshire HG3 2BB Tel: 07889 117854</small>	

## Centre stamps with letter plus number



Just to let you know that we have nearly exhausted number plus letter combinations (e.g., 1A) for the unique registration of the test centre so you may shortly see labels and stamps with letter plus number combinations (e.g., A1).

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## Poor Quality Air Gun Cylinders



We continue to receive contacts regarding air gun cylinders and valves coming in for filling, or inspection and test, that appear to be poor quality, and potentially not complying with the regulations for conformity assessment of transportable pressure equipment (TPE).

One recent case was reported with a cylinder leaking at the neck. Under examination it was found that the no-go gauge ran in and out of the M18 thread completely freely! The owner was advised to request a refund from the supplier or contact Trading Standards.

We would remind everyone about the requirements of BS EN ISO 24431 - Inspection at time of filling. This mandatory standard requires each transportable gas cylinder to be inspected at the time of filling in order to establish that:

- it has no defects which render it unsafe for filling or continued use,
- it can be identified and complies with the relevant requirements with regard to marking (e.g., within test period, labelling, colour coding and completeness of its accessories), and its valve functions satisfactorily.

Cylinder filling inspection must be carried out exclusively by persons who have the appropriate training and competencies, to ensure that each cylinder is safe for continued use.

If the cylinder or valve markings do not comply then we recommend that you do not fill the cylinder.

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## Fallout from low-cost compressors

Perhaps it was lockdown but many of our centres are reporting an increase in problems seen during internal inspection of cylinders, especially rust and oil contamination.

It seems one of the likely contributors is the increased use of small budget compressors from the Far East. You only have to search for "300BAR Airgun Scuba Rifle PCP Inflator" to see just how ubiquitous these offerings are.



The devices have little or no filtration or moisture removal, so no wonder cylinders are showing the results of contamination. Obviously with remedial action, washing, shot blasting etc most cylinders should be recoverable. And it goes without saying the Divers should absolutely avoid these for filling cylinders they intend to breathe from!





## Composite Cylinders - Minimum storage pressure

With ownership of composite cylinders becoming more prevalent, and at least one report of a deformed liner found during inspection we feel it is important to remind everyone not to store composite cylinders empty and to keep inspection times as short as possible before refilling the cylinder.



*"Ensure that the cylinder is not completely discharged - Dräger recommend keeping a minimum pressure of 2 bar in the cylinder".*  
(Source: Dräger Safety UK Limited).

## Go Diving Show, March 2023

IDEST did not have a stand at the recent Go Diving Show but we did attend on Sunday and talk to a number of our centres. We are particularly grateful to **Cylinder Testing Station Ltd (A5)** for allocating space on their stand to promote cylinder and valve testing. This included cut-away cylinders, inspection tools, and a dismantled valve. Judging by how busy their stand appeared this drew a lot of interest from passing divers.



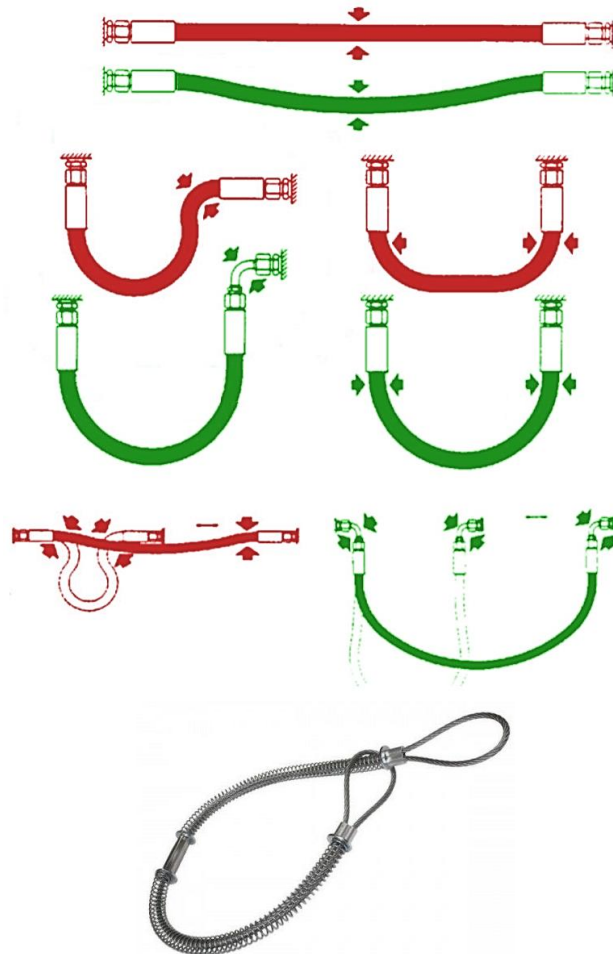
## Flying hoses!

We are grateful to a Dutch diver for allowing us to reprint his recent encounter with a HP hose burst. He issued the following on social media:

*"Gentle reminder not to use unnecessary long hoses and to make sure they are fixed to the wall... A 'quick fix' from too long ago failed: a temporary replacement hose in perfect condition just popped off its hose end connector and started draining the just filled 50L / 300bar bank while violently whipping everything in a 1m radius. I was very happy/lucky not to be near it as it happened, but it is a good wake-up call for sure".*



This is a salutary reminder to all of us to use solid HP tubing wherever practical, and to ensure all flexible hose routings follow best practice (see green in graphic), including the use of 'whip checks' on hose ends.



Take a look at your shop setup and see what you can improve.

## Formula 1 Powerboat cylinders



We recently were contacted by an IDEST Test Centre, that has been asked to inspect and test cylinders used as safety escape air supplies in F1 powerboats. The purpose of these cylinders is to provide the driver with an air supply in the event that they are trapped under the capsized boat.

The owner of the cylinder brought in, requested that an EFV be fitted! The technician was not familiar with this term or the item concerned. An EFV is an **Excess Flow Valve**, and fits inside the cylinder, where the debris tube would normally be fitted.

They are the rage in America's F1 powerboat teams and now becoming popular with the British teams. The cylinders are small cylinders, in the region of 3 litres, secured to the boat near the driver's position, with a long 5 metre hose attached to a regulator.

The Excess Flow Valves are now being considered as a 'must' for any F1 powerboat owner. If you get approached by such a powerboat owner, requesting the fitting of these valves, they are available from VTI Ventil Technik GmbH, in Germany [[Link](#)].

**They are not to be fitted to diving cylinder.**

From an inspecting and testing point of view, they should be considered as diving cylinders, as they will undoubtedly go underwater at some point and there is a risk of water ingress. Could be another string to a Test Centre's bow.

## Cylinder valves with built in flow restrictors

Following on a similar subject to EFR some centres are seeing air gun valves with built in flow restrictors coming in for periodic inspection and test. These are being sensibly promoted to stop gun owners from filling their little cylinders too fast.



A common procedure to confirm cylinders are at ambient pressure is, with the valve open and no gas coming out, to use a pump or air gun to inject air at low-pressure into the cylinder and to ensure the air flows freely in and out of the valve.

Unfortunately, the above technique does not work well with valves with built in flow restrictors as these effectively prevent low pressure air from entering.

An alternative means of checking the cylinders is at ambient pressure is required. This may mean partially filling the cylinder using the centres compressor and then monitoring the pressure gauge as it empties.

## Missing Torque?

Have you missed any edition of Torque? Don't worry, all of the past issues can be downloaded from the members section of the **IDEST website**. Take a look!



## Last Chance Saloon!

Separate to this newsletter please see our explainer and final warning about obtaining calibration certificates from laboratories that have been assessed as working to the requirements of BS EN ISO 17025. There is no more latitude, and our inspectors are now required to record non-compliance as a failure to be resolved before Centre Certification can be issued.



## Save the date!

**2<sup>nd</sup> May**  
**2023**

We are pleased to announce the opportunity for centres to meet the IDEST team, introduce new inspectors, discuss Standards, transitions and other matters. Also introduce UKAS ISO 17020 and its potential impact on cylinder testing requirements and inspections. The meeting will be at at **Stoney Cove**, Leicestershire on 2nd of May, more details to follow!

## IDEST Test Centre Update

We have had the following changes to the IDEST Test Centre listing since the last issue of Torque.

### **New centres**

*None*

### **Leaving centres**

*Gozo Aquasports [1XX], closed due to retirement.*

## A final thought...

We hope you've enjoyed reading this issue of Torque. Please let **Lizzi** have your feedback on this issue and suggestions for topics in upcoming editions. Thank you!

**E&OE**