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Volume 20, Issue No 1

Welcome to the first issue of Torque for 2020. Happy New Year to you all and best wishes for a successful 2020. Unfortunately, we were unable to issue the November issue in 2019 due to personal commitments and lack of time.

In this bumper issue, of seven pages, we are going to reiterate some of the practices that changed last year but appear to have caused some confusion.

We are introducing another colour to the quadrant labels. We will explain how to use the Blue and the new Green quadrants for Hydraulic and Visual inspections respectively.

Several new topics have come to our attention that need to be passed on to you. So, please read this issue at least twice to ensure your centre is following the current practices and is aware of the changes that have taken place.

Periodic Inspections/Pis (Visuals)

IDEST issued the following statement regarding visuals on **26th September 2019**. It was sent as **IDEST Notice No 3** to all IDEST Centres by email. The following text is from that Notice.

After due consideration and consultations between IDEST, ASSET and HSE, it has been agreed that the practice of stamping diving and breathing gas cylinders to indicate a visual inspection has been carried out, will now cease. This will apply to all cylinder Pis up to and including the 30-month inspection.

At present when a cylinder is frequently visually inspected because of how it is used - either every six months or on an annual basis - the shoulder is stamped with a 'V' and the relevant date. It is therefore quite possible that a perfectly good (probably small) cylinder will be taken out of service prematurely because there is simply no more room left on the shoulder to stamp.

The consensus of opinion is that the IDEST Blue or Green Quadrant (see next article) label should be enough to denote the cylinder has passed a visual inspection.

If you did not receive this Notice No 3, please let Alistair know by email and he will forward it to you.

Metal stamping after hydraulic tests

All cylinders will be metal stamped at each PIAT (periodic inspection and test). The Blue Quadrant label will be applied and properly punched as described below. At subsequent Pis (Visual), the old Blue Quadrant label will be scraped off, and a new GREEN label will now be punched and attached accordingly.

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Please punch out the relevant month and year - punching out the non-relevant months and years is not practical. There is now no need to punch out an 'H' on the left-hand side as the new labels do not have that [H] on them.

VISUAL INSPECTIONS

Blue labels

When a PI has been conducted, punch out the month and year and the letter 'H' on the left-hand side, leaving the 'V' to indicate a visual has been performed. Punch out the V or H on the right-hand side to indicate what the next inspection/test should be.

Using new green labels

All that needs to be done with the new green labels is to punch out the month and year of the next test as only a [V] is shown on the left-hand side. Punch out the V or H on the right-hand side to indicate what the next inspection/test should be.

HYDRAULIC INSPECTIONS

Blue labels



The letter 'V' should be punched out leaving the 'H' to indicate a hydraulic inspection has been conducted on the left-hand side. Punch out the V or H on the right-hand side to indicate what the next inspection/test should be.

Please can all IDEST centres ensure that this method is used to punch out the Quadrant label.

New quadrant labels

IDEST has completed the design of new quadrant labels. The layout and design are very similar to the existing labels. They will be printed on 'tamper-evident' material, which will break up if attempts are made to remove the label from the cylinder. The quadrants will come in two colours, blue and green. The words [LAST TEST] and [NEXT TEST] have been changed to [LAST INSP] and [NEXT INSP].

Green quadrant labels



ALL centres conducting visual inspections (PIs) will fix the new green quadrant label to the cylinder after a visual inspection has been completed. There is no stamping of the cylinder at this inspection or any visual inspection in future, as explained above.

The green quadrant only has a letter [V] to indicate the **LAST INSP**ection since that is the type of inspection that has been carried out.

The use of a green quadrant label will indicate immediately that a visual has been conducted. The month and year of the next inspection will be punched out and then either the [H] or [V]. **REMEMBER that the letter that APPLIES is left unpunched.** Thus, if the **NEXT INSP**ection is another visual then the [H] is

punched out. If the next inspection is a hydro test then the [V] is punched out. This method makes it much clearer as to what is next required.

Changes to IDEST inspection procedures

At a recent UKAS assessment it was identified that IDEST must include in its assessment the observation of a technician performing the calibration check of the working pressure gauge against the master pressure gauge. This will be included in the assessment for all centres from the 1st April 2020.

UKAS identified that since centres are only inspected every three years that this is a skill that should be checked so that there is reassurance of capability during the interim period and comparison charts are accurate.

Technicians will also be expected to demonstrate, with full required equipment, how they would deal with a blocked cylinder valve. Up until now it has simply been a check that the technician has had the training and 'knows' how to deal with this situation.

Are you working to BS EN ISO 18119?

If you have been issued with certificates that state you are working to BS EN ISO 18119:2018 and have been issued with Blue quadrant labels that state the same, please get in touch with Pat at the Admin office immediately.

UKAS Full Form Calibration or Effective Only Calibration?

IDEST has been informed by a local calibration laboratory that there are two options for having thread gauges calibrated.

The **UKAS Full Form** is the more expensive calibration test but includes a more detailed report of the test readings and includes pitch, flank angles, major and minor diameters.

The **UKAS Effective Only** is less expensive and provides test results for effective diameters only.

Our advice, therefore, is to ask for the UKAS Effective Only calibration for your thread gauges. This will keep costs down for your centre while providing sufficient information for your IDEST approval.

Checking of G5/8" threads

It has come to our attention that some centres are not checking the G5/8" threads of the cylinder valve outlet. It is part of the IDEST Code of Practice CP11:2011, that this thread is checked with the Go and Not-Go Plug gauge. If you omit this check then you are not working to the required level to be approved by IDEST.



Checking this thread is also important for your customer since if the Not-Go gauge travels all the way down the outlet thread, it suggests that the outlet structure has expanded. This could lead to the DIN fitting of the regulator coming out of the valve outlet with some force possibly when the cylinder is turned on, causing some damage.

'Calibrated' or 'uncalibrated' torque wrench



Your torque wrench is an important tool, it gives you knowledge that you have set the valve into the cylinder with the right amount of torque so that it is compressing the 'O' ring sufficiently to seal but not overstressing the threads causing damage to either the valve or the cylinder.

We define torque as a weight multiplied by the length of the lever, so a torque wrench setting is in ft/lbs (foot /pounds) in old money or in Nm (newton/metres)

The settings required for cylinder valves range from 80 Nm to about 120 Nm depending on manufacturer, so the torque wrench needs to be set up for each cylinder and **backed off** to zero after use.

Most quality torque wrenches have two means of setting the torque. The first is an adjusting screw that is used to set a pointer against a marker on the handle or in the case of more expensive ones a digital read out, this is used each time the torque wrench is set. The second is a collar that is used to preload the spring mechanism and is used for calibrating the unit, thus ensuring that the marking on the handle equates to the torque required.

So why do we need to have our torque wrenches calibrated? Well like a lot of mechanical things, over time they wear and need to be adjusted to bring them back into tolerance. This is normally done by comparing the torque setting on the tool against a calibrated torque cell. The test compares the values obtained during 4 operations of the wrench at a low setting followed by 4 at an intermediate setting and 4 at a high setting.

Providing the torque reading is within 4% of the torque cell reading it passes. If outside the tolerance level it can be adjusted using a calibration screw to be within tolerance and then it is fit for further service. If it does not adjust to within 4% then it is scrap.

So, we go out and buy a new torque wrench, which out of the box should be OK, but unless we actually ask for a certificate of calibration, we cannot guarantee that we will get torque wrench that is within tolerance. The major suppliers will always adjust and calibrate torque wrenches to comply with the ISO standard. Good wrenches may come with a manufacturer's calibration certificate. These are acceptable. Most good tool shops will have a calibration and adjustment service available, but you may have to ask. Most people use a torque wrench to ensure that nuts are tightened equally and do not need to have the accuracy of a calibrated unit, **IDEST does, as it is part of our inspection procedure and a requirement of the IDEST Code of Practice CP11:2011 scheme.**

The standard for Torque wrench checking has been revised and a later version produced. The previous standard, ISO 6789-1:2003, has been superseded and replaced by ISO 6789-2:2017. This Standard is more expensive to have the values checked to the new Standard, because it is a more intensive check. It is more intensive than IDEST requires. If you are sending your torque wrench for checking, ask for it to be done to BS EN ISO 6789:2003.

Using the correct logo?



With 2020 being with us now, I am sure some of you will be thinking about re-ordering printed worksheets, advertising leaflets, updating your website and other promotional materials.

I have spotted a few centres are still using the 'old' IDEST logo of the cylinder with the flat base. I cannot refer to the current logo as the 'new' logo since it has been in existence for at least two years.

So if some of your promotional materials are still using the 'old' logo, please take this opportunity to update your materials and website pages and start 2020 with the right image.

You can obtain a variety of logo formats from me directly. Simply send me an email with a request for whatever logo format you require. They come in both black and white to suit most uses.

10-Year VCA constraints

The VCA recently referred IDEST to the Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 and Chapter 6.2 together with packing instruction P200 of ADR.

These regulations require cylinders used for the carriage of compressed gas (including breathing air) to be inspected every 10 years by a body accredited to ISO 17020 and appointed by the competent authority for the purpose, namely UKAS.

This is the only inspection required by the carriage regulations.

At the moment we are uncertain as to whether this is for all cylinders, commercial and recreational ones, or only for commercial cylinders. Would cylinders owned by recreational societies and clubs need to comply with this requirement or only truly commercial diving companies?

We are looking into the 10-year VCA only test centre situation and are having talks with VCA and DfT. As soon as we know exactly the situation, we will contact all our test centres

Hydro or a Visual? - can't decide

When a cylinder comes in to a centre and it has passed its due date for a visual, many centres are telling their customer that it MUST have a hydro. This is not necessarily correct.

Some years ago, IDEST spoke with the incumbent Head of HSE about this situation. Unfortunately, he is no longer with us but he did give us some words of wisdom that IDEST passes on today.

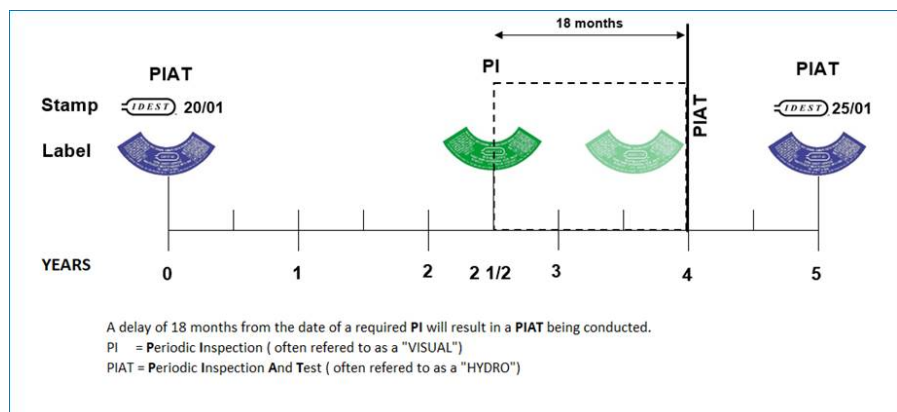
From the date of any Periodic Inspection and Test (PIAT), or 'Hydro', the Standards that we work to say a cylinder has to be re-hydro tested at the five-year anniversary of the previous one. The Standards also say that the cylinder should undergo a Periodic Inspection (PI) after two and a half years, to check it is fit to be used until the next PIAT.

If a cylinder misses a PI, or a 'Visual' as most people know it, then common sense should prevail. If the cylinder is within a year to six months of the next Hydro then bring forward the Hydro. When this situation happens, the five-year interval will commence from the date of the new Hydro rather than the original one.

If the over-run of the PI is **up to eighteen months** then a PI can quite legitimately be carried out. If the internal inspection shows potential problems then by all means a carried out a Hydro.

Please ensure your centre uses this policy.

Time Frame:



See Technical Information Sheet T014

Price increases for 2020

At the last Scheme Committee meeting it was agreed that prices should increase for 2020. We have maintained our prices for several years but now we have to increase them due to increases in costs to us.

Merchandising Price Increases - 1st January

The prices of our merchandising have gone up as of 1st January. There is a new order form on the website and the details show the new prices. This is mainly due to price increases of electrical items from China and the price of steel, that affects the Bench Clamps.

Inspection Registration Price Increases - 1st April

The price of inspections and annual registration will go up on 1st April 2020. An inspection will now cost £500 and additional technicians £100 each, an increase of £25 each. Inspection Centres inspections will go up to £300. Annual registration for Test Centres will be £150 and Inspection Centres £100.

BREXIT - will it affect us?

Well BREXIT has come and gone on 31st January this year. How is it going to affect IDEST and what we do?

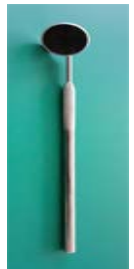
The research we have done to date suggests that it will not affect what IDEST does and what our Inspection and Test Centres do. UK Centres will continue to work to CP11:2011 and the BS Standards while overseas centres will work to their International Standards.



If we learn otherwise, we will be contacting you all with an update.

New addition to merchandising

A new item has been added to the list of tools on the merchandising page of the IDEST website. It is a 20 mm diameter dentist mirror, which is an ideal size for fitting through the neck of most cylinders. Perfect for inspecting the internal condition of the cylinder around the shoulder region. This high-quality mirror is a bargain at £8.



IDEST Test Centre Update

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

New centres

Deepsea Marine (9T) - Nottingham, Notts

Gozo Aqua Sports (1XX) - Marsalforn, Gozo (Inspection Centre only)

Phoenix Engineering & Industrial Gases Ltd, (9Q) - Emsworth, Hants

Scuba equipment Servicing Ltd (9X) - Halesowen, West Midlands

Leaving centres

Calypto Blue Diving, (7T) - Basildon, Essex.

Parwin Scuba Servicing, (4P) - Glatton, Huntingdon

EPIC International Air Services, (7K)

Core94, (6V) - Aberdeen, Scotland