DATE MARKING OF GAS ACCESSORIES

Background
All equipment, including gas pressure equipment, is subject to the Provision and Use of Work Equipment Regulations (PUWER) [SI 1998 No. 2306] which requires that work equipment should not result in health and safety risks, regardless of its age, condition or origin. The PUWER requires that the employer selects suitable equipment and carries out appropriate maintenance and inspection.

Gas equipment will age and deteriorate over time. Components, such as elastomers and seals, will deteriorate from their date of manufacture whether in gas service or not. This particularly affects accessories, such as pressure regulators, flashback arrestors, flexible hoses and blowpipes attached to mobile systems or gas control systems. For this type of accessory, manufacturers and / or suppliers will allocate a life for their accessory. Typically in the industrial gases industry this is 5 years.

Some equipment is marked to either identify the date it was manufactured or the date when it needs replacement or refurbishment. Manufacturers and suppliers use a variety of systems for date marking or for inspection / replacement stamps. This can cause confusion. This document provides information on the marking or inspection / replacement stamps used.

Where no date is specified then it is advisable to refer to the manufacturer or the equipment supplier for advice. You may also refer to your insurance requirement on the replacement frequency of primary gas regulators.

British Compressed Gases Association (BCGA) documents provide guidance on maintenance requirements, refer to:

- BCGA Code of Practice 7, The safe use of oxy-fuel gas equipment (individual portable or mobile cylinder supply);
- BCGA Guidance Note 7, The safe use of individual portable or mobile cylinder gas supply equipment;
- BCGA Technical Information Sheet 19, Refurbishment of components used with compressed gases for welding, cutting and related processes.

Marking system
The following pages show, for each BCGA member company who supplies such equipment, the marking system used.
1. Aeroflex Hose and Engineering Ltd.

For further information: www.aeroflex.co.uk

**Flexible hose assemblies**
Marking is typically customer driven and individual customers specify their marking requirements. A replacement date is not universally marked on the hose. 5 years is typical. Data is often provided on a coloured sleeve. Where possible the following data is used:

- Design pressure.
- Nominal bore.
- Nominal length.
- Test date.
- Test pressure.
- Batch number.
- When allowed the Aeroflex name or initials.
- Any relevant specification and the gas duty.

Where a part number is included this can be either an Aeroflex or a customer part number.

![Aeroflex hose identification – Sleeve](image)

**Figure 1.1**: Aeroflex hose identification – Sleeve

The colour selection unfortunately differs from customer to customer; but wherever possible yellow is used for oxygen and unlimited shelf life and blue is used for inert gases.
Figure 1.2: Aeroflex hose identification – Metal tag

Figure 1.3: Aeroflex hose identification – Hard stamped

Figure 1.2 is an example of a metal tag used where a coloured polyoflin sleeve cannot be used such as cryogenics etc. (Variable data, but always AHE (Aeroflex Hose & Engineering Ltd.), batch number and date).

Additionally, as well as coloured sleeving and metal tagging the product will be hard stamped (Figure 1.3) or roll marked or etched (Figure 1.4) with the following data: AHE, Batch No. and Month & Year.

Figure 1.4: Aeroflex hose identification – Roll marked or etched
2. Air Liquide Welding Ltd.

For further information:
http://www.airliquidewelding.com

Regulators

Figure 2.1 shows the stamping on a regulator, indicating the month and year of manufacture.

Figure 2.1: Air Liquide regulator marking

Figure 2.2 provides a close-up view of the stamping on a regulator, showing month and year of manufacture.

Figure 2.2: Air Liquide regulator marking – Close-up
Flashback arrestors

Figure 2.3: Air Liquide flashback arrestor marking

Citoguard R5 resettable flashback arrestors, showing year of manufacture marking.
3. BOC Gases

For further information: www.boconline.co.uk

Regulators

Stamp marking BOC 5000, 6000, 8500 & 9500 series
BOC UK regulators are stamped with the recommended year of replacement, which is approximately six years after the year of manufacture. BOC 5000 & 6000 series regulators will be stamped on the rear face as shown in Figure 3.1. BOC Series 8500 laboratory, are stamped around the body of the regulator.

![BOC Regulator – stamp-marking](image)

**Figure 3.1**: BOC Regulator – stamp-marking

High pressure nitrogen regulators
These are marked on the body with a five figure date code. Example 01816.

This code translates as:
- 018 = the 18th day of the year.
- 16 = the year of manufacture.

Genie regulators
Genie regulators currently manufactured are marked with a “Replace by Year”

![Genie regulators](image)

**Figure 3.2**: Genie regulators

Earlier versions, distinguishable by a chrome plated body, use a 3 letter date code to denote manufacture date on the rear of the regulator body. Refer to Table 3.1.

Digits 1 & 2 indicate the last two digits of the year
(for example, BI = 18 = 2018)
Digit 3 is the month of manufacture
A = 0  G = 6  A = January  G = July  
B = 1  H = 7  B = February  H = August  
C = 2  I = 8  C = March  I = September  
D = 3  J = 9  D = April  J = October  
E = 4  E = May  K = November  
F = 5  F = June  L = December

<table>
<thead>
<tr>
<th>Month</th>
<th>A = January</th>
<th>G = April</th>
<th>P = July</th>
<th>V = October</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B = February</td>
<td>K = May</td>
<td>S = August</td>
<td>X = November</td>
</tr>
<tr>
<td></td>
<td>E = March</td>
<td>N = June</td>
<td>T = September</td>
<td>Z = December</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year:</th>
<th>0 = 2010</th>
<th>8 = 2018</th>
<th>I = 2026</th>
<th>T = 2034</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 = 2011</td>
<td>9 = 2019</td>
<td>J = 2027</td>
<td>U = 2035</td>
</tr>
<tr>
<td></td>
<td>2 = 2012</td>
<td>A = 2020</td>
<td>K = 2028</td>
<td>V = 2036</td>
</tr>
<tr>
<td></td>
<td>3 = 2013</td>
<td>B = 2021</td>
<td>L = 2029</td>
<td>W = 2037</td>
</tr>
<tr>
<td></td>
<td>4 = 2014</td>
<td>C = 2022</td>
<td>M = 2030</td>
<td>X = 2038</td>
</tr>
<tr>
<td></td>
<td>5 = 2015</td>
<td>D = 2023</td>
<td>N = 2031</td>
<td>Z = 2039</td>
</tr>
<tr>
<td></td>
<td>6 = 2016</td>
<td>E = 2024</td>
<td>P = 2032</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7 = 2017</td>
<td>H = 2025</td>
<td>S = 2033</td>
<td></td>
</tr>
</tbody>
</table>

Table 3.1: Genie regulator marking code

Examples:
BEG = 2014 July
AJC = 2009 March

Flashback arrestors
All BOC flashback arrestors are stamped with a two letter code showing the month and year in which they were manufactured. Refer to Table 3.2.

The BOC Standard and Premier Flashback arrestors carry the two letters below the BOC label, on the main body of the unit. On the BOC Resettable, the letters are found on the smooth portion below the ridges around the main body.

As examples, a flashback arrestor marked A3 would have been manufactured in January 2013; one marked AA, manufactured in January 2020.

Table 3.2: BOC marking format for flashback arrestors

BOC Flashback Arrestors have to be replaced 5 years from first date of use. A "notched date label" on the flashback arrestor allows the end user to mark the date of first use, providing this is within 1 year of date of manufacture.
BOC Nexus range

Regulators
The Nexus range of regulators will be stamped as shown in Figure 3.3 and the making format is shown in Table 3.3.

As an example, a regulator marked FG would have been manufactured in July 2013.

Figure 3.3: Nexus Regulators

Flashback arrestors
The Nexus range of flashback arrestors are marked in accordance with Table 3.4 and as illustrated in Figure 3.4. They have a serial number above the flow direction arrow with a three digit date code below. As an example, a flashback arrestor marked E3C = 2013 March. The product label in Figure 3.4 is provided with a section for marking the last inspection date (year/month).

Figure 3.4: Nexus flashback arrestors marking scheme

Blowpipes
The Nexus range of blowpipes will be stamped as shown in Figure 3.5 and the making format is shown in Table 3.3.

Figure 3.5: Nexus Cutting Blowpipes
### Table 3.3: Nexus marking format for regulators and cutting blowpipes.

<table>
<thead>
<tr>
<th>Month:</th>
<th>A = January</th>
<th>B = February</th>
<th>C = March</th>
<th>D = April</th>
<th>E = May</th>
<th>F = June</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>G = July</td>
<td>H = August</td>
<td>J = September</td>
<td>K = October</td>
<td>L = November</td>
<td>M = December</td>
</tr>
</tbody>
</table>

|-------|----------|----------|----------|----------|----------|----------|

### Table 3.4: Nexus marking format for flashback arrestors

<table>
<thead>
<tr>
<th>Month:</th>
<th>A = January</th>
<th>B = February</th>
<th>C = March</th>
<th>D = April</th>
<th>E = May</th>
<th>F = June</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>G = July</td>
<td>H = August</td>
<td>J = September</td>
<td>K = October</td>
<td>L = November</td>
<td>M = December</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year:</th>
<th>E3 = 2013</th>
<th>E4 = 2014</th>
<th>E5 = 2015</th>
<th>E6 = 2016</th>
<th>E7 = 2017</th>
<th>E8 = 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>E9 = 2019</td>
<td>F0 = 2020</td>
<td>F1 = 2021</td>
<td>F2 = 2022</td>
<td>F3 = 2023</td>
<td>F4 = 2024</td>
</tr>
</tbody>
</table>
BOC RYVAL range

Regulators
The RYVAL range of regulators will be stamped as shown in Figure 3.6. The date shown is the year by which they are to be replaced.

Figure 3.6: RYVAL Regulators

Flashback arrestors
The RYVAL range of flashback arrestors are marked in accordance with Figure 3.7. These flashback arrestors are marked with the year of manufacture. Ryal Flashback Arrestors must be replaced 5 years from first date of use. A “notched date label” on the flashback arrestor allows the end user to mark the date of first use, providing this is within 1 year of date of manufacture.

Figure 3.7: RYVAL flashback arrestors marking scheme

Blowpipes
The RYVAL range of blowpipes will be stamped as shown in Figure 3.8. These blowpipes are marked with the year of manufacture.

On the example shown “1010” - this is week 10 of 2010.

Figure 3.8: RYVAL Cutting Blowpipes
4. ESAB

For further information: www.esab.co.uk

Regulators
ESAB regulators have two permanently marked codes on their bodies. This displays the date of manufacture in code plus an additional inspection / replacement stamp showing the year at which ESAB recommend the equipment is replaced.

![ESAB Regulator Image]

To determine the month of manufacture of an ESAB Edge, or G Series, regulator the date stamp code appears on the back, for example ‘CMV’.

Therefore a regulator marked ‘CMV’ was manufactured in December 2012 in China.

**Figure 4.1:** ESAB Regulators

<table>
<thead>
<tr>
<th>Month</th>
<th>Year</th>
<th>Lettering Style</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>A</td>
<td>2010 T</td>
</tr>
<tr>
<td>February</td>
<td>B</td>
<td>2011 U</td>
</tr>
<tr>
<td>March</td>
<td>C</td>
<td>2012 V</td>
</tr>
<tr>
<td>April</td>
<td>D</td>
<td>2013 W</td>
</tr>
<tr>
<td>May</td>
<td>E</td>
<td>2014 Y</td>
</tr>
<tr>
<td>June</td>
<td>F</td>
<td>2015 Z</td>
</tr>
<tr>
<td>July</td>
<td>G</td>
<td>2016 A</td>
</tr>
<tr>
<td>August</td>
<td>H</td>
<td>2017 B</td>
</tr>
<tr>
<td>September</td>
<td>J</td>
<td>2018 C</td>
</tr>
<tr>
<td>October</td>
<td>K</td>
<td>2019 D</td>
</tr>
<tr>
<td>November</td>
<td>L</td>
<td>2020 E</td>
</tr>
<tr>
<td>December</td>
<td>M</td>
<td>2021 F</td>
</tr>
</tbody>
</table>

**Table 4.1:** Month and year codes

<table>
<thead>
<tr>
<th>Assembly location</th>
<th>Lettering style</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>Gothic</td>
</tr>
<tr>
<td>Mexico</td>
<td><em>Italic</em></td>
</tr>
<tr>
<td>China</td>
<td>Gothic, with the letter ‘C’ before the date code</td>
</tr>
</tbody>
</table>

**Table 4.2:** Lettering format chart for assembly location
To determine the month of manufacture of ESAB and Murex regulators, the date stamp code appears on the back, for example: E3AF.

Using Table 4.3, E3AF was manufactured in January 2013 in Florence.

<table>
<thead>
<tr>
<th>Decade</th>
<th>Year</th>
<th>Month</th>
<th>Assembly location</th>
</tr>
</thead>
<tbody>
<tr>
<td>A = 1970</td>
<td>1</td>
<td>A = January</td>
<td>F = Florence</td>
</tr>
<tr>
<td>B = 1980</td>
<td>2</td>
<td>B = February</td>
<td>H = August</td>
</tr>
<tr>
<td>C = 1990</td>
<td>3</td>
<td>C = March</td>
<td>J = September</td>
</tr>
<tr>
<td>D = 2000</td>
<td>4</td>
<td>D = April</td>
<td>K = October</td>
</tr>
<tr>
<td>E = 2010</td>
<td>5</td>
<td>E = May</td>
<td>L = November</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F = June</td>
<td>M = December</td>
</tr>
</tbody>
</table>

*Table 4.3:* Date stamp code

For ESAB Elite series regulators manufactured from December 2013 the code changed such that it is permanently engraved and is translated thus:

\[
\begin{align*}
13 & \quad + \\
M & \quad + \\
16 & \quad + \\
0 & = \\
\end{align*}
\]

Therefore a regulator marked ‘13M160’ was manufactured on 16th December 2013.

**Flashback arrestors**

Flashback arrestors are marked on their labels.

*Figure 4.2:* Flashback arrestors marking scheme
Product Marking
GASARC products now typically use the Julian Day Calendar Marking System to mark the date of manufacture for a given product, this system is based on an incremental count of days within each calendar year.

The code will be 5 digits in length, digits 1 to 3 denote the day of manufacture while digits 4 and 5 denote the year of manufacture.

The inspection and replacement date can therefore be calculated by adding 5 years to the Julian Day code.

A Julian Day marking of ‘16717’ means the product was manufactured on the 16th June 2017 (the 167th day of 2017). Therefore this product example would be due for replacement by 16th June 2022.
Regulators

Single-stage & multi stage cylinder regulators (configurable design 2015 +)

Date of manufacture (Julian Day) is marked on the rear of the regulator, as shown in Figure 5.1.

![Figure 5.1: A single stage regulator (center). Single stage regulator marking (left). Multi stage regulator marking (right).](image)

The marking in Figure 5.1 (left & right images) identifies that the product was manufactured on the 26th January 2018. It would be due for replacement by 26th January 2023.

Single and multi-stage cylinder regulator (legacy design)

Inspection / replacement year is marked on the side of the regulator body, next to the inlet connection as shown in Figure 5.2.

![Figure 5.2: Single-stage regulator (left) & multi stage regulator (right)](image)

The marking in Figure 5.2 identifies that the product would be due for replacement by 31st December 2022.
Regulator types GA600, HF14 & HF35

Inspect / replace date is marked on the rear of the regulator body (GA600) or on the side of the body (HF Series), as shown in Figure 5.3 and Figure 5.4.

![Figure 5.3: GA 600 marking](image1)

![Figure 5.4: HF Series marking](image2)

The GA600 product would be due for replacement by 31st December 2022. The HF Series product would be due for replacement by 31st December 2023.

Flashback arrestors

Model GPO/LGO series flashback arrestors

GASARC GPO / LGO series flashback arrestors are marked with their inspection / replacement year as shown in Figure 5.5.

![Figure 5.5: Example - Model GPO Flashback Arrestor](image3)

This product would be due for replacement by 31st December 2023.
Model GA-D97 series flashback arrestors

These flashback arrestors are marked with the date of manufacture shown as the month and year. The example in Figure 5.6 is marked “12 17” and would have been manufactured in December 2017.

Figure 5.6: Model GA-D97 flashback arrestor

This product would be due for replacement five years from the end of the year of manufacture; that is by the 31st December 2022.

Flexible hose

GASARC high pressure flexible hoses are marked with their recommended replacement date, shown below as 2021 in Figure 5.7.

Figure 5.7: Flexible hose

This product would be due for replacement by 31st December 2021.
6. Gas Control Equipment Ltd.

For further information: www.gcegroup.com

Regulators

Marking on rear face (refer to Figure 6.3)

Figure 6.1: Series 300 Multi-Stage Regulators

Marking on rear face (refer to Figure 6.3)

Figure 6.2: Series 300 Multi-Stage Regulators

Also refer to Table 6.1

Figure 6.3: Example of marking on the rear face of a regulator
**Flashback arrestors**

*Figure 6.4*: Resettable 36ec Flashback Arrestors

*Figure 6.5*: Barrel XL5 Flashback Arrestors
Table 6.1 provides a marking format for regulators.

| Decade: | C = 1990  
|         | D = 2000  
|         | E = 2010  etc.  |
| Year:   | 0 = 0  
|         | 1 = 1  
|         | 2 = 2  
|         | 3 = 3  
|         | 4 = 4  
|         | 5 = 5  
|         | 6 = 6  
|         | 7 = 7  
|         | 8 = 8  
|         | 9 = 9  |
| Month:  | A = January  
|         | B = February  
|         | C = March  
|         | D = April  
|         | E = May  
|         | F = June  
|         | G = July  
|         | H = August  
|         | I = September  
|         | J = October  
|         | K = November  
|         | L = December  |
| Manufacturing site: | S = Skelmersdale / Stone Cross  
|         | A or F = Another |

**Table 6.1**: GCE marking format for regulators

An example of the date coding system is as follows:


Table 6.2 provides a marking format for some flash back arrestors. A single digit code represents the year of manufacture.

| Year: | C = 1999  
|       | D = 2000  
|       | E = 2001  
|       | F = 2002  
|       | G = 2003  
|       | H = 2004  
|       | I = 2005  
|       | J = 2006  
|       | K = 2007  
|       | L = 2008  
|       | M = 2009  
|       | N = 2010  
|       | O = 2011  
|       | P = 2012  
|       | Q = 2013  |

**Table 6.2**: GCE marking format for flash back arrestors
7. Spectron Gas Control Systems Ltd

For further information:  
www.spectron.de/spectron_de/en/  

Regulators

All Spectron Gas Control Systems regulators have an information label that indicates the month and year of manufacture. Refer to Figures 7.1 and 7.2.

Figure 7.1: Regulator marking scheme

Figure 7.2: Regulator marking scheme
Flashback arrestors

Spectron Gas Control Systems flashback arrestors are marked with the year of manufacture and an inspection calendar for competent personnel to complete maintenance at regular intervals. Figure 7.3 shows the flashback arrestor marking scheme.

Figure 7.3: Flashback arrestor marking scheme
8. Verigas Engineering Ltd. (previously Black Teknigas Ltd.)

Regulators

Tekniflo autochange regulator
Replacement date is marked on the top of the regulator body, next to the outlet connection, where shown in Figure 8.1.

![Figure 8.1: Tekniflo Autochange Regulator](image1)

Multi-stage regulator
Replacement date is marked on the side of the regulator body, where shown in Figure 8.2.

![Figure 8.2: Multi-stage regulator](image2)
**Single-stage regulator**
Replacement date is marked on the side of the regulator body, where shown in Figure 8.3.

![Figure 8.3: Single-Stage Regulator](image)

**Flashback arrestor**

**Model DGN MC00197 flashback arrestor**
Flashback arrestors are marked with the year of manufacture, where shown in Figure 8.4. The product would be due for replacement five years from the end of the year of manufacture.

![Figure 8.4: Model DGN MC00197 Flashback arrestor](image)