

# TECHNICAL DATA SHEET DS 043

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QCF 56 Issue 3

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ISSUE

9

DATE

6 February 2006

APPROVED

A.N.M

TITLE.

In service maintenance instructions.

Rubber unit isolators covered by Data Sheets:

- |                              |                              |
|------------------------------|------------------------------|
| DS 010 - Genflex             | DS 029 - RH                  |
| - Cushyfloat                 | DS 030 - Studflex            |
| - MP & MPBM & cone mountings | DS 040 - FCR Shock Isolator  |
| - C                          | DS 080 - PDOS & SL Isolators |
| - Neoprene Turret            |                              |
| DS 023 - Bobbins             |                              |

## 1. AFTER INSTALLATION

Immediately after the equipment weight has been transferred to the isolators check and note the loaded heights and note loaded heights and any relative information regarding machine operation and isolator performance using a simple chart as shown on our Data Sheet DS 045.

All isolators should only show a gradual variation in loaded heights from one end of the set. If different isolator positions show significant variations, then this may indicate that some bending or twisting has occurred in the equipment frame and should be investigated further. See the appropriate leaflet/drawing for isolator deflections and static dimensions.

## 2. CREEP (SETTLEMENT)

After approximately 48 hours the isolators will have settled by up to 1mm on the larger units due to primary creep of the rubber element. Thereafter, the rate of creep reduces, with further settlement of approximately 20% of initial static deflection over a period of 10 years. This settlement will vary for each installation depending on dynamic loads and temperatures.

## 3. VISUAL INSPECTION / MAINTENANCE

During service, regular three monthly checks should be made on the general condition of all isolators installed.

Unless isolators have been specially protected against the effect of adverse conditions, care should be taken to ensure that all isolators are kept clean, dry and free from oil contamination, and where possible, rubber elements protected from ultra violet light.

Special attention should be paid to any evidence of swelling, blistering or cracking of natural rubber elements. Note: some elements, such as Genflex or Cushyfloat are only visible beneath the skirt of the isolator top cover or casting.

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At the first signs of any deterioration of the rubber elements it is only necessary to log the observation such that a careful check and future record of any further deterioration can be made. A check on isolator height must also be made, measuring at two positions, one each side of the isolator and the average recorded. Any rapid deterioration of the rubber, particularly if accompanied by the rapid settlement of the isolator, should be logged and reported immediately.

A simple chart shown on our Data Sheet DS 045 indicates the type of format required to log and record isolator inspections, in order that isolator replacements can be sought or overhauled at the earliest opportunity to prevent possible failure and damage to equipment. If an isolator failure results from anything other than age of service, the source of failure must be identified and corrected prior to reinstallation of isolators. The most common cause of rubber isolator failure in service is excessive oil contamination. Our Data Sheet DS 041 provides details of the significant rubber properties for our isolators.

Important: No paint must be applied to rubber surfaces, unless specified by our engineers. If paint protection is required or found necessary for isolator housings or castings, rubber elements must be adequately masked to prevent contamination during application.

#### 4. REPLACEMENTS

Replacement of isolators should be undertaken once their maximum creep exceeds the values in the table below. The creep is the difference between the height after 48 hours of static loading and the height at the time of measurement. The height of each mounting should be the average of 2 positions diametrically opposed across the mounting.

<u>Mounting Type</u>	<u>Maximum* Creep Deflection (mm)</u>
Genflex B	2.0
Genflex HD	4.0
Cushfloat	2.0
MPM	2.0
C	2.5
Neoprene Turret	3.0
Bobbins	30% of static deflection
RH	3.0
Studflex	2.0
FCR	6.5
PDOS	8.0
SL Isolators	8.0

\*The deflections shown are typical and may be reviewed for lightly loaded applications, for which our Engineers should be contacted.

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The replacement time will also depend on age of service and condition of rubber, which can be evaluated from records kept and visual inspection.

## TYPE MPM RUBBER UNIT ISOLATORS

Due to the construction of these isolators, the natural rubber element is not visible. Therefore, the condition of the mount can only be ascertained by regular checks on isolator height, as explained in paragraphs 3. and 4.



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