

Shaffer Engineering Standards/Specifications

Supersedes:

STORAGE OF ELASTOMER PARTS

NEW

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59178 BL	Completely revised	3/28/01	B
32138	Added "This means 'first in, first out'. No exceptions!"	7/19/90	A
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STORAGE OF ELASTOMER PARTS

NEW

1.0 SCOPE

This Specification covers the storage and shelf life limitations for Shaffer custom molded elastomer parts.

2.0 STORAGE CONDITIONS

Adequate precautions must be taken to insure the elastomer parts are protected from the effects of the environment.

The following table provides guidelines of storage conditions:

	<u>UNACCEPTABLE</u>	<u>AVERAGE</u>	<u>EXCELLENT</u>
Heat	Over 100°F	Up to 100°F	Less than 70°F (Air Conditioned)
Light	Direct sunlight, bright shade (daylight)	Indirect-Indoors away from windows	Boxed and/or covered - total darkness
Ozone	Proximity to electric motors, arc welders, etc.	Away from spark- ing electrical equipment	Special protective covering
Stress	High stacks	Short stacks	Separate compartments

3.0 STORAGE LIFE

3.1 It is necessary that inventories of elastomer parts be rotated to assure that they are used within a reasonable time period following its manufacture (cure) date. The storage times listed in the table below are based on average storage conditions as defined above.

This time period is divided into two stages as follows:

3.1.1 Sell by date - This is the "Maximum Shaffer Storage Life" of the part. This time period is based on the maximum total storage life minus 24 months. Elastomer parts that are not shipped to a customer prior to the "Sell by" date will be scrapped.

Comment [CS1]:

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3.1.2 Expiration date - This date represents the “Maximum Total Storage Life” of the elastomer. This date can be calculated by adding the appropriate time period to the cure date, or by adding two (2) years to the “sell by date”. Shaffer recommends that the customer either put the elastomer in service prior to this date or scrap the part if it is in storage past this date.

The following table provides recommended storage times based on average storage conditions:

RUBBER AND ELASTOMERIC COMPONENTS		Sell by Date = Max. Shaffer storage life	Expiration Date = Max. total storage life
Type of component	Type of elastomer	Storage time after cure date	Storage time after cure date
Spherical BOP packing elements	Nitrile	4 years	6 years
Spherical BOP packing elements	Natural rubber	4 years	6 years
BOP ram block rubbers	Nitrile	4 years	6 years
BOP ram block rubbers	Hydrogenated Nitrile	5 years	7 years
BOP door seals	Nitrile	3 years	5 years
BOP door seals	Hydrogenated Nitrile	4 years	6 years
Stripper rubbers	Natural rubber	3 years	5 years
Spherical BOP seals	Nitrile	3 years	5 years
Seal kits for ram and spherical BOP	Nitrile	3 years	5 years
V-packing and molded lip seals	Nitrile	4 years	6 years
Pulsation dampeners		4 years	6 years

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