

Belt Storage and Shelf Life

Normal Shelf Life of Belts

The quality of a belt is not considered to change significantly within ten (10) years when stored properly under normal conditions. Normal conditions can be defined as a temperature below 85°F and relative humidity of 70% or less with no exposure to direct sunlight or ozone. If the storage temperature is higher than 85° F, the storage life is reduced by one half for each 15°F increase in temperature. Belts should never be stored above 115°F.

Belts will begin to degrade after 10 years even when stored properly. Beyond ten years, assuming normal storage, a decrease in service life of approximately 10% per year can be expected. For belts not stored under “normal” conditions, the actual reduction in shelf life is difficult to measure due to lack of precise data and an infinite number of variables involved. When belts are stored under abnormal conditions, conservatism is recommended in estimating shelf life.

Factory Date Code

All Timken belts have a 4-digit number printed on the belt to identify when they were manufactured. The first 2 numbers indicate the week the belt was produced and the last 2 numbers identify the year. For example, 2722 means the belt was manufactured during the 27th week of 2022.

Proper Storage of Belts

Under favorable storage conditions, quality belts retain their initial serviceability and dimensions. Conversely, unfavorable conditions can adversely affect performance and cause dimensional change. V-belts should be stored in a cool, dry environment with no direct sunlight. When stacked on shelves, the stacks should be small enough to avoid excess weight on the bottom belts which may cause distortion. When stored in containers, the container size and contents should be sufficiently limited to avoid distortion, particularly to those belts at the bottom of the container.

We recommend that belts be kept in boxes on shelves until they are needed. The boxes should not be stacked so high as to damage cartons on the bottom of the stack.

If belts must be stored on pegs, the pegs should be crescent shaped and be large enough to prevent sharp bends in the belt. Longer belts stored this way should use sufficiently large pins or crescent-shaped “saddles” to prevent their weight from causing distortion. Short lengths of PVC pipe can be cut and slid over pegs to create this crescent shape.

Long v-belts may be “coiled in loops for distortion-free storage. Coiling in loops prevents belts from taking a “compression set” caused by the weight of a hanging belt.

A belt that has a compression set will have a small hump in it where it hung across the peg and may not perform properly on a drive. Belts must not be coiled to diameters smaller than the minimum recommended sheave diameter for that cross section.

Avoid the storage of belts:

- On floors unless a suitable container is provided. Belts may be susceptible to moisture or otherwise damaged due to traffic.
- Near windows which may permit exposure to sunlight or moisture.
- Near radiators, heaters or in the air flow from heating devices. Heat from these sources will dry out the oils in a belt, reducing service life.
- In the vicinity of transformers, electric motors or other electrical devices which may generate ozone.
- Near areas where evaporating solvents or other chemicals are present in the atmosphere.

Timken Belts is a proud member of the Association for Rubber Products Manufacturers. ARPM produces various useful publications unique to the rubber industry that discuss research, statistics, and other rubber product information.

