

**10 Ways For Equipment Maintenance Organizations  
To Assure That Shelf Life Limited Service Items  
Do Not Adversely Impact Equipment Availability  
By Ron Giuntini**

One of the most frustrating events in a maintainer's life is when a maintenance event, which they thought would be routine, becomes an event "that tries a man's soul." Being confronted with an item whose shelf life has expired is one of those events.

An expired item can cause two unfavorable impacts upon equipment availability:

- Increase the frequency of a maintenance event and/or
- Increase the duration of a maintenance event

Increasing the frequency of an event is driven by items that are installed which have a short remaining life. This results in a failure/planned replacement that would have occurred at a further interval, if the item had been installed when the item's full life was available.

Increasing the duration of an event occurs when a maintainer picks an item that they believe is in stock, or received from a supplier, that is "good" and they find that the item's shelf life is expired. This requires either the search for a "good" quantity or a re-order from the supplier. Either way the duration of the maintenance event is extended from that planned.

Below are ten ways to mitigate a maintainer's risk of being "stuck" with expired items:

1. Through an Item Master record field, identify items that are shelf life limited; this will flag all supply chain records that a shelf life limited item is being transacted. This impacts the following: Purchase Order (POs), material receipts, cycle counting, Bill Of Materials (BOMs), material issues, substitution/interchangeability and others
2. Upon receipt into a fixed location storage system (always store an item in the same location), store shelf life limited items in a First-In, First-Out (FIFO) storage/issue process; put newly received quantities of an item in the back of the shelf and move the oldest quantities to the front of the shelf
3. When using a random location system (store an item where ever there is room; thus an item can be stored in multiple locations) where picking selection for an item is based upon the oldest date stored. The disadvantage is that the most recent receipt may not have the longest shelf life
4. Input expiration date into item control record, so that picking will always select the item with the oldest shelf life
5. When storing spare components that have been repaired/remanufactured/overhauled, for example pumps and valves, identify all shelf life limited items and replace them, regardless if they are good or bad; obviously a cost/benefit analysis should be done. This will save much heartache when an emergency occurs for a \$1.25 rubber seal that fails because of it being way beyond its intended life
6. Properly store shelf life limited items that will protect them from environments that may shorten planned shelf life; protect from sunlight, humidity, heat, etc.
7. If it appears that there will be more supply of a shelf life limited item than forecasted demand, items can often be returned to the supplier, when possible, in order to avoid

impairing the item quantity due to shelf life expiration

8. Reject items that are received from the supplier if more than 50% of shelf life has expired
9. Be careful between recording expiration date, the date of manufacturing, the date of receipt and warranty date. Often there is much confusion regarding these dates. Selecting the wrong date as the expiration date can cause much uncertainty for a maintainer and can result in the installation of a shelf life expired item
10. Be cautious of fraud when buying "surplus" parts whose date may be close to expiration, but the supplier has a "special deal." The maintainer's organization should buy lower value items that have a limited shelf life exclusively from the OEM/dealer or a reputable supplier. Imagine trying to explain to production that their equipment is down because \$.50 worth of a fluid's viscosity has broken due to shelf life issues because you tried to save a few pennies in buying the fluid "on the cheap."

The above ideas do not take much effort on the part of maintainers, but it can save them much angst in meeting their equipment availability metrics.