



GUIDANCE
IN-SERVICE INSPECTION PROCEDURES

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Reference: **Fork Lift Truck/Order Picker - Leaf Chain Elongation Rejection Criteria**

SITUATION:

When examining Fork Lift Truck or Order Picker leaf chains what are the SAFed criteria for rejection?

GUIDANCE:

General. The Health and Safety legislation and associated thorough examinations of lifting equipment are primarily aimed at reducing the risk of accidents and protecting persons. As such operations which lift persons or regularly lift loads over or around persons will generally be a significant factor in determining the margin of safety and rejection criteria.

Fork Lift Truck/Order Picker chains. Fork Lift Truck/Order Picker chains should be sufficiently cleaned to allow examination. They should be examined taut but not overly tensioned and where there is more than one chain they should be equally taught. The most worn sections of the chains which is generally the part that sits over the diverter pulley when the truck is travelling, should be identified and measurements made over ten pitches of the most worn section. Care should be taken when measuring with a chain gauge that elongation is not measured over more than the 10 pitches as this will give an inaccurate reading.

The criteria for rejection shall be made on the following basis:

- **Up to 2% elongation** On newly supplied or replacement chains, excessive rate of deterioration may be an indicator of manufacturing defects, harsh working conditions or hard use. Where this may be evident on chains found to have less than 2% elongation, the Competent Person using discretion, can still request chain replacement, especially if there is severe local damage and/or a combination of the factors outlined above. Elongation is ALWAYS to be considered in conjunction with other criteria which affect the continued safe use of the chain.
- **>2% but <3% elongation**. Where the Competent Person finds chains which are over 2%, but less than 3% elongation, a decision needs to be made whether the chains can continue to be used with safety up to the next examination? Account shall be taken of at least the following factors:-
 1. General condition of the chain.
 2. Nature of the loads, e.g. persons, delicate equipment, radioactive, scrap handling.
 3. The periodicity of the examination regime
 4. Significance of any local damage or wear
 5. Rate of deterioration since the last examination.
 6. Quality and frequency of maintenance.
 7. Whether the truck is frequently working at or near its maximum capacity.
 8. Condition of the travelling surfaces over which the truck normally operates.
 9. Working environment, e.g. wet, humid, dry, dusty, hot, cold, abrasive and corrosive.

If the Competent Person decides that the chain may not remain safe to use up to the next examination, then it will be necessary to request either IMMEDIATE replacement or provide a time limit for renewal up to a MAXIMUM of THREE MONTHS from the date of examination.

- **>3% elongation**. Chains found to have an elongation of 3% or greater shall be requested to be RENEWED IMMEDIATELY. The lift truck should not be used until the chains have been replaced.