

FIRE FIGHTERS GUIDANCE NOTE #1-6

ISSUE: INSPECTION OF CHAINS AND EXTRICATION TOOLS

Spreaders, cutters, ram, etc. and chains are all an integral part of extrication tools. This equipment needs to be kept clean and in good working order for the safety of emergency workers.

If a chain or extrication tool breaks during a rescue the results can be catastrophic to both the rescuer and the person being rescued.

Regular checks should be made to ensure that tools and chains are stored to ensure:

- They are free of rust and/or oxidation
- They are clean and properly lubricated

Note: Chains should be hung whenever possible.

After each use tools and chains should be cleaned and inspected for:

- Excessive wear at pressure points
- Nicks or gouges
- Elongation, distortion of or damage to links, couplings or attachments
- Twists in chains
- Spread at throat openings of hooks on chains

Note: Spread at throat openings of hooks on chains should be measured against measurements taken at time of purchase or manufacturer's specifications.

When using chains:

- Use pads around sharp edges
- Look for stretching of the chain or hook while using equipment. If detected, stop use immediately because the chain is exceeding its load limit.
- Do not expose to high heat because Chains can loose considerable strength when subjected to excessive heat. For example:
 - a) 400 degrees F reduces the working load by 10%
 - b) 600 degrees F reduces the working load by 30%

Extrication tools, including chains should be inspected by a competent person using non-destructive test methods, if the following conditions are detected by routine inspection or use:

- Signs of wear, elongation, distortion or excessive heat
- Tools or chains have been subjected to severe blows or impact loading.