

Safe Working Practices:

SWP- 41 Working on masts

Before doing any type of work you must carry out an assessment of the task to be undertaken. This will include the equipment to be worked on, the task itself, Personal Protective Equipment requirements, the work area and environment, plus the tools and equipment required to carry out the job safely. Consult your team leader if you are not satisfied the job can be carried out in a safe manner.

This SWP is sufficient only for general maintenance work on the truck (servicing, testing and lubrication work).

For repair work, e.g. dismantling lift cylinders, additional precautions (such as the use of additional props or lock chains) must be considered and implemented.

Always refer to the trucks service/repair manual for guidance on mast work.

In addition to service/repair manual guidelines, the following must always be applied:

GENERAL

1.0 When working under raised masts and fork carriages they must be safely supported before any work is carried out. It is possible to block (secure) mast sections for maintenance purposes by using suitable fabricated metal props or suspension chains. A full understanding of the sequence of movement of all moving parts of the mast is required. The task to be carried out will determine which sections to secure. Referral to the relevant service manual is a factor in deciding how to position the prop or chain. Care should be taken when positioning props, ensuring a clean grease free surface. When props are in place they should be secured using a strap or clamp to prevent movement and paired for extra stability wherever possible.

1.1 Before any mast work begins make sure the props or lock chains are suitable for the truck/mast, paying particular attention to the safe working load/Working Load Limit (SWL/WLL) and check them for good condition.

Props must be visually inspected before and after each use. Only props issued to technicians by TMHUK for this procedure should be used. On no account should softwood or pallets be used for any type of blocking. Props must be recorded on the Special Tool Examination Planner.

Chains must be visually inspected before and after each use. The chain should have a visible identification number, safe working load/Working Load Limit (SWL/WLL) and be recorded on the Special Tool Examination Planner (see below). They should be stored carefully when not in use.

1.2 Select a safe working area (refer to SWP-01 Work Area). Any mast work must be carried out on a level, even, non-slip and firm surface. Consideration for wearing a bump cap should be given if working on equipment with forks or attachments raised to a height where contact with the head can be made.

1.3 Apply the parking brake once the truck is positioned and switch off the power source once the mast sections are secured. Disconnect the battery on electric trucks or switch off the engine.

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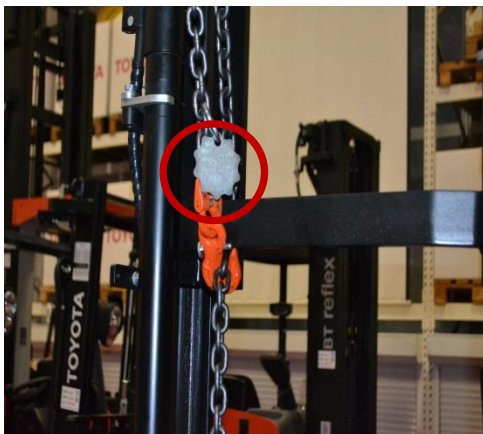
- 1.4 Never work under or put any part of the body under a raised mast/carriage without a suitable prop or lock chain in place.
- 1.5 Lower the mast and carriage fully ensuring that all parts of the mast that move are completely lowered. If this is not possible the moving part of the mast must be supported by a prop or chain.
- 1.6 Always be cautious of raised forks, ensuring that neither TMHUK team members nor any other person are able to come into contact with the forks. The forks should be removed and placed in a safe location if they present a hazard.

Procedure for lock chains (Part No GB1PAL001567)

- 2.0 Duplex mast: Raise the mast to align the bottom cross member of the inner mast with a non-moving cross member of the outer mast.

Triplex mast: Raise the mast and align the bottom cross member of the intermediate mast with a non-moving cross member of the outer mast.
- 2.1 Using the TMHUK supplied lock chain, fasten the crossmembers together to prevent the moving section from lowering. Make sure the chain link and hook are completely engaged and that the safety pin is fully home. Ensure the lock chain does not interfere with the load chains, hydraulic hoses, switches or any other part of the mast. When using these chains, do not twist the chain around its own axis. Make sure the hook point is facing upward (as pictured) and the hook is away from the mast to prevent damage.
- 2.2 Lower the mast gently until the lock chain has fully tensioned and on full free lift masts completely close the free lift cylinder.

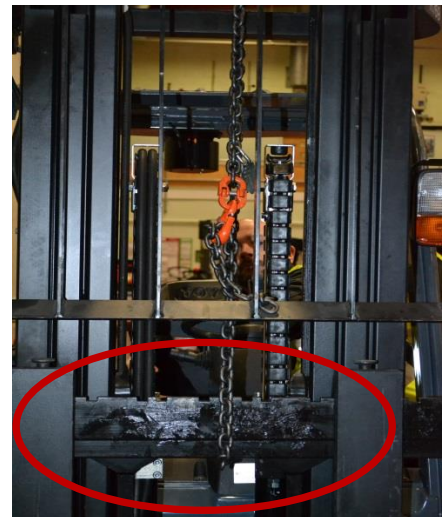
Examples of lock chain use



Hook facing upwards



Fastened cross members



Carriage Suspended

Procedure for props

- 3.0 Fabricated metal props (Part No GB1PAL001253) can be used for supporting mast sections or carriages. The sections must be propped to prevent any unwanted movement of the mast.
- 3.1 Lower the mast until the props are taking the load and on full free lift masts completely close the free lift cylinder.

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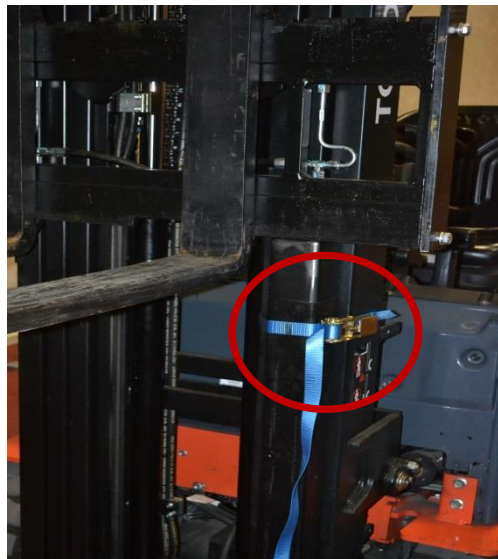
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3.2 The props must have their end caps fitted in whatever configuration they are used, see below.

Examples of fabricated metal prop use



End cap must be fitted



Ratchet strap securing prop



G-Clamp securing prop

Inspection

- 4.0 The Company requires that all props and lock chains are uniquely identified and listed on the Special Tool Examination Planner. All such equipment must be inspected by a competent person (SSM or STM) not more than 6 monthly. The Tool Planner record must be updated accordingly.
- 4.1 **Chains used to suspend mast sections are considered to be in a lifting configuration and therefore require a Thorough Examination no later than every 6 months in accordance with the Lifting Operations and Lifting Equipment Regulations (1998) LOLER. There are no exceptions to this ruling.**

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Children and Young Persons

- 5.0 See Safety & Environmental Manual procedure “Employment of Young Persons” for precise definitions on children and young persons.
- 5.1 “Children” must never be responsible for the supporting of raised masts. They may be allowed to observe such operations and work practices, but must take no active part, be kept at a safe distance and under the constant supervision of a competent person.
- 5.2 “Young Persons” may be allowed to prop/lock chain masts, providing they do so in accordance with the above and are under the constant supervision of a competent person.