

Workplace Health and Safety Queensland

Automotive service and repair industry – Vehicle hoists and frame straighteners

Vehicle hoists can cause serious injury if they are not used or maintained properly.

Although it is no longer a requirement to register vehicle hoists, it is a requirement to have vehicle hoists inspected on a regular basis, in accordance with manufacturers instructions and AS 2550.9 *Cranes - Safe Use, Part 9: Vehicle Hoists*. This requires that inspections are carried out as follows:

- pre-operational inspections - before use at the commencement of each working shift, the hoist is kept in a safe and satisfactory condition
- routine maintenance inspections - carried out no more than three months apart
- annual inspections - carried out within one year from when the hoist was first placed in service, or from the last annual inspection
- major inspections (every ten years)
- documentation must be kept of these inspections and any actions taken.

Pre-operation inspections may consist of checking:

- operating controls and emergency safety devices
- visual check of structure
- air and hydraulic leaks
- loose or missing parts
- placards, decals, warnings, control markings and operating manual
- access clearance provisions
- items specified by management or manufacturer
- guarding is correctly fitted.

Routine inspections consist of checking:

- all functions and their controls
- all emergency and safety devices
- lubrication of all moving parts, inspection of filter element/s, hydraulic oil and parts as specified by management and/or manufacturer's instructions
- all structural components including welding, fasteners, pins, shafts and locking devices
- placards, decals, warning and control markings
- suspension ropes and chains for wear, particularly at points of maximum flexing and contact with sheaves or sprockets
- screws, nuts and the thrust bearings at end of the screw which shall be replaced where the wear limits are exceeded - on screw operating hoists,
- steel wire ropes shall be inspected in accordance with Australian Standard 2759 or British Standard 6570 as appropriate
- pneumatic vessels used for operation of a hoist (examined in accordance with Australian Standard 3788)
- additional items as specified in the manufacturers instructions.

Annual inspections - should consist of:

- detailed inspection of all structural and wear components
- checking of tolerance for wear limits
- checks for corrosion
- non-destructive inspection of critical areas for evidence of cracking.

Major inspections - each hoist should be subject to a ten year service to assess the hoist for the continued safe operation.

Consideration should be given to:

- the design of the hoist
- actual past usage of the hoist
- current condition of the hoist
- anticipated future usage of the hoist
- the capacity and variability of upgrading the hoist to the requirements of the latest standard/s
- manufacturers safety upgrades.

Records

A continuous working record (e.g. logbook) of significant events concerning the safety and operation of the hoists should be kept and readily available. The records should be readily understandable, simple and to the point, and may be in any suitable format.

Frame straighteners:

As with vehicle hoists (and most major pieces of plant), frame straighteners should be serviced and maintained as recommended by the manufacturer – usually yearly. You should:

- regularly check and inspect the straightener for wear, damage and contamination on pistons, clamps etc.
- regularly check the hydraulic fluid level and any leaks from hoses and connections
- train people who will be operating the straightener or vehicle hoists in how to use it safely, and how to check and inspect it for faults or damage

- ensure clamps are tight and securely attached to metal (not rusted on trim panels)
- prevent clamps from slipping, by regularly cleaning them with a wire brush to reduce build up of contaminant - if worn, they should be replaced
- secure the vehicle to the frame straightener or on its wheels when performing pulls
- provide a barrier, so when performing pulls, workers stand behind and to the side of the chain - barriers can be made with metal mesh or safety plastics etc., so they can withstand impacts from clamps that slip off, or from other projectiles
- avoid going under the vehicle while the chains are under tension.

To prevent slips and trips around vehicle hoists and vehicle straighteners:

- keep the area around them clear of materials and other obstacles
- paint the edges in a bright colour to make them easier to see
- provide good lighting in these areas.

For further information on health and safety issues call 1300 369 915 or visit www.deir.qld.gov.au.

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