

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 manufacturer's instructions and *AS 2550.9 Cranes - Safe Use, Part 9: Vehicle Hoists*. The following inspections should be carried out:

- pre-operational inspections - before use at the commencement of each working shift, to ensure 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 10 years).

Documentation must be kept of these inspections and any actions taken.

Pre-operational 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 maintenance 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 (only on screw operating hoists) and replacing them where the wear limits are exceeded
- that the steel wire ropes are inspected in accordance with *Australian Standard 2759* or British Standard 6570 as appropriate
- that the pneumatic vessels used for operation of a hoist are inspected in accordance with *Australian Standard 3788*
- any other additional items, as specified in the manufacturer's instructions.



Annual inspections should consist of:

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

Major inspections - each hoist should be subject to a 10 year inspection and 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
- capacity and variability of upgrading the hoist to the requirements of the latest standard/s
- manufacturer's 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 easy to understand, 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. This should include:

- checking and inspecting the straightener for wear, damage and contamination on pistons, clamps etc. regularly
- checking the hydraulic fluid level and any leaks from hoses and connections regularly
- training people who will be operating the straightener in how to use it safely, and how to check and inspect it for faults or damage
- ensuring clamps are tight and securely attached to metal (not rusted on trim panels)
- preventing clamps from slipping, by regularly cleaning them with a wire brush to reduce build up of contaminant - if worn, they should be replaced
- securing the vehicle to the frame straightener, or on its wheels, when performing pulls
- providing 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
- avoiding going under the vehicle while the chains are under tension.

To prevent slips and trips around vehicle hoists and frame 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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