

SAFETY ALERT (ALT-005)

Safe Maintenance of Wheeled Loaders



BACKGROUND

During the summer of 2008, a mechanic working on the hydraulic system of a wheeled loader was crushed to death between the base axle and the bucket cylinder control arm. An investigation suggested that the bucket was fully extended to provide access and room for the mechanic to repair and maintain

hydraulic lines, whilst the bucket's cutting edge was resting on concrete. When the pressure from the hydraulic lines was released, it is thought that the bucket arm contracted inward crushing the mechanic against the axle base and the cylinder elbow.



PRACTICAL GUIDANCE

The investigation into this incident is at present on-going and it is hoped that additional advice and guidance will be produced. However, in the interim, when carrying out maintenance on a wheeled loader, the following precautions MUST be followed:

- All operators and mechanics undertaking maintenance works on a wheeled loader should be trained, competent and aware of the specific risks posed.
- Maintenance or inspection procedures should follow guidance as laid out by the Original Equipment Manufacturer (OEM) and appropriate personal protective equipment (PPE) should be worn by the mechanic.
- An appropriate safe system of work should be in place and this should address issues such as safely blocking the machine (and its attachments) and isolating stored energy (for example, gravity) that is present within all mobile machinery.
- The mechanic should fit an articulation frame lock safety device to prevent any movement in the articulation frame whilst maintenance is in progress.
- When jacking the boom and bucket of a wheeled loader to prevent any motion, the jacks must be rested upon suitable load bearing substrata and the machinery should have been fully de-energised.
- Before commencing maintenance on the wheeled loader, the machine should be switched off with parking brake engaged, the keys removed, the isolator turned off and a notification tag (advising that the machine should not be started) attached to the steering wheel or other prominent position.
- Hydraulic lines should be accessed from above the loader frame, with the bucket resting on suitable load bearing substrata, in accordance with industry best practice, unless otherwise instructed by the OEM.



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