



SAFETY ALERT

HYDRAULIC HOSE FAILURE

March 2015

ISSUES:

1. In one event, the loader operator asked the worker to help him identify which hose on the grapple was leaking. The worker was standing 3m away from the grapple when he asked the operator to work the grapple.

The hose burst drenching the worker in hydraulic oil. The worker was washed down, his eyes flushed and he changed into clean clothes. He could still taste hydraulic oil at the end of the day.

2. In another event, a small hydraulic hose was rubbing on housing under the bonnet. It caused a pin hole split in the hose and hydraulic oil to pump out over the exhaust, causing excessive smoke. (The operator discharged the extinguisher before a fire started). The machine operator suggests talking to the manufacturers about re-routing the hose and more cover for the exhaust. Also, ask for a more durable hose.

All hoses must comply with the manufacturer's specifications.

1. MAINTAINING MOBILE PLANT:

- ☐ These two incidents remind workers that they **MUST** wear PPE around hydraulics (especially if looking for leaks) – oil injection can require amputation or can be fatal.
- ☐ Also, use the correct maintenance equipment and follow good maintenance procedures. If you want to see more about machine safety, go to this link courtesy of Tigercat (Timber Harvesting, July/August 2011) www.tigercat.com/service-tips/equipment-inspections and/or this short You Tube video from CAT www.youtube.com/watch?v=mWZQLWL7XRE
- ☐ Note: Alterations to safety-critical structural, mechanical and electrical components of mobile plant outside the manufacturer's specifications shall either be approved by the manufacturer (or their agent) or a Chartered Professional Engineer (ACoP 6.5.2 MAINTAINING MOBILE PLANT).

2. FLUID PENETRATION (SAFETY.CAT.COM, MACHINE SAFETY, P.8):

- ☐ Always use a board or cardboard when checking for a leak. Escaping fluid under pressure, even a pinhole leak, can penetrate body tissue, causing serious injury, and possible death. IF FLUID IS INJECTED INTO YOUR SKIN, IT MUST BE TREATED BY A DOCTOR FAMILIAR WITH THIS TYPE OF INJURY IMMEDIATELY.
- ☐ Track adjusting grease is under high pressure. Grease coming out of the relief valve under pressure can penetrate the body causing injury or death.
- ☐ Do not watch the relief valve to see if grease is escaping. Watch the track or track adjustment cylinder to see if the track is being loosened. Loosen the relief valve one turn only.

3. HOSE BURST PROTECTION VALVES ON EXCAVATORS USED AS CRANES:

- ☐ Ernslaw One interprets this as “Any Excavator fitted out as a log loader and used to lift a trailer”.
- ☐ Hose burst protection valves must be fitted to all new and used hydraulic excavators with an operating weight of 7 tonnes or more, and used as cranes, after 1 January 2016. Our interpretation is that any log loader lifting a trailer off a log truck is being used as a crane.
- ☐ Information can be found on the new fact sheet issued by WorkSafe, titled “Using Quick Hitches Safely” at business.govt.nz/worksafe/information-guidance/all-guidance-items/using-quick-hitches-safely-fact-sheet
- ☐ The full announcement on the Exemption of Equipment Capable of Load-Lifting from MBIE can be found at gazette.govt.nz/notice/id/2013-go7996
- ☐ Costs less than \$10,000-00, depending on the machine size configuration, including new pilot lines.



EVERYONE GOES HOME SAFELY AT THE END OF THE DAY!