Did you know that controlled lowering devices/anti-drop valves are required on forklifts?

We are frequently asked if controlled lowering devices are required on powered industrial lift trucks (commonly referred to as forklifts). In our experience many users are unaware of the requirements that are set out in the relevant Australian Standards for these machines.

Powered industrial lift trucks must meet the requirements of AS2359. This includes battery, diesel, petrol or LPG powered forklifts.

AS2359.6 – 2013 Powered Industrial trucks, section 4.6.3.2 Lowering Speed Limitation specifically states the following: A device shall be incorporated in the lift circuit which, in the event of a failure of the hydraulic circuit – excluding the hydraulic lift cylinder(s) – shall restrict the rate of descent of the lifting mechanism with its rated load to 0.6 m/s maximum. The device shall be fitted directly at the lifting cylinder(s).

To assist in meeting the above requirements Plant Assessor applies the following question to all lift trucks in the detailed risk management questionnaire:

*Are the hydraulic lift cylinders fitted with fully functional safety devices which will restrict the rate of descent of the lifting mechanism to 0.6m/s in the event of a failure in the hydraulic lifting circuit? (Note: These devices must be fitted directly to the lift cylinders, they can be fitted inside the cylinder casing). If you are unsure please contact the manufacturer to determine if devices are fitted.*

How to determine if a Controlled Lowering Device is fitted to Your Forklift

Due to differences in the location and form of controlled lowering devices fitted to forklifts, it can be extremely difficult (and in some cases impossible) to determine by visual inspection whether a forklift meets the Lowering Speed Limitation requirements of AS2359.6 – 2013.

Some manufacturers fit the device inside the hydraulic cylinder, meaning it is not visible. Others use visible devices fitted to the hydraulic cylinder(s) – such as those in photos 1 & 2. Note that these do not resemble the controlled lowering (anti-burst) valve you may have seen on earthmoving equipment such as an excavator - see photo 3.

Some older machines may be retro fitted with a cylinder locking device like those used on vehicle loading cranes & excavators (see photo 3), these devices will be easily identifiable as they will be installed directly onto the hydraulic cylinder.

Given the variances in forklift design and controlled lowering device configuration, we recommend checking with the manufacturer of your forklift to determine if your forklift meets the requirements of AS2359.6 2013 section 4.6.3.2 Lowering Speed Limitation.
What will your manufacturer/distributor say?

In our experience, manufacturers are aware of the requirements set out in AS2359.6 – 2013 (which is a direct copy of ISO3691.1 – 2011) and will be able to provide confirmation of the compliance status of machines they have manufactured.

General rules about the safe use of Powered Industrial Lift Trucks in the workplace

Supervisors and operators should –

• Ensure the lift truck is suitable for the work to be done and is in a safe condition
• Check if work area is designed, established and maintained for safe operation
• Complete a pre-start safety check, and
• Follow safe operating procedures for operation, shut down and maintenance.

For further safety information or for assistance with lift truck safety please contact Plant Assessor.