

Near-Miss Incident — Axle Stand Fails Under Load

The Incident

A person using a new 6-tonne axle stand narrowly escaped injury when the stand failed.

The incident happened while the stand was being relocated under a partially-lifted load by holding and pulling the handle which was connected to the pawl. The locating pin, fitted between the pawl and its pivot rod with the handle, failed. The pawl was not able to be engaged with the ratchet because of the failure of the locating pin and, at the same time, the load came down.

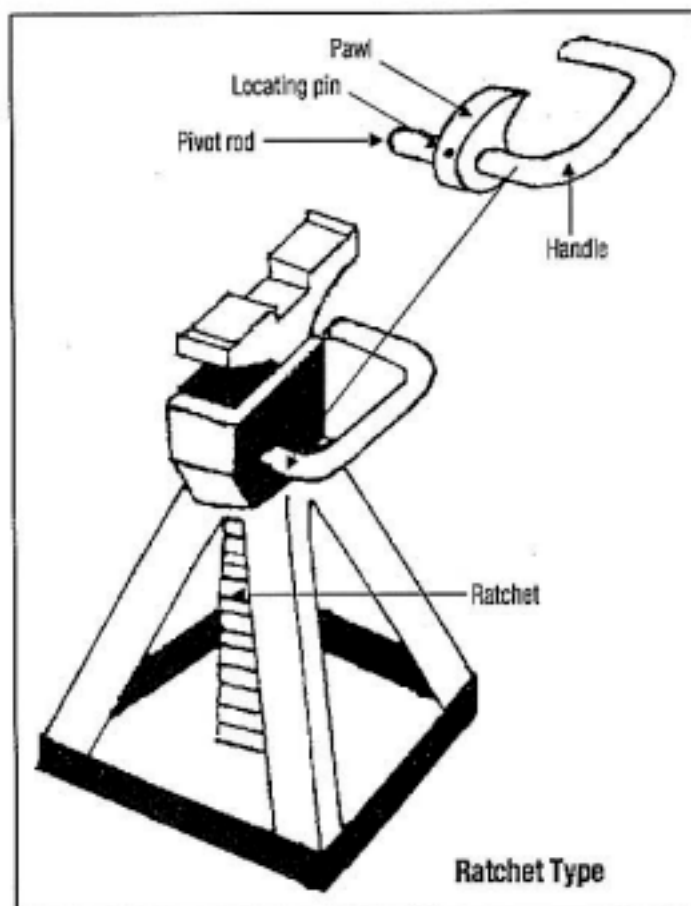
Findings by OSH Engineer

An OSH engineer examined the failed axle stand and discovered that the locating pin was hammered through a hole in the pawl and then through a hole in the pivot rod with the handle, to lock the pawl onto the rod. It appeared that the locating pin with a diameter of about 3 mm, was made of mild steel. The pin was easily broken by applying a force on the handle by hand.

The hazard is that the pawl will not engage properly if the locating pin fails, and there will be no force on the handle to pull the pawl down to engage with the ratchet.

OSH Recommendations to the New Zealand Agent

1. Advise their principal or the manufacturer of the axle stands of the incident and to replace the locating pin with a higher strength material so that it is not broken by applying a force on it with hands on the handle during usage.
2. Notify their agents of the potential danger with the failure of the pin and advise all clients who own one of these stands to replace the locating pin with a higher strength material.
3. Clause 4.1 of the New Zealand Standard NZS/AS2538: 1985 *Vehicle support stands* requires that materials used in the manufacture of the support stand shall not have been subject to stress and strains which would result in failure and shall be



free from blow holes, hard spots, shrinkage defects, cracks or other defects which would adversely affect the strength of the material.

4. Check their other models of equipment including the 3-tonne axle stands to ensure that they are safe and comply with the New Zealand standard.

Information from the New Zealand Agent

The overseas supplier has been notified, as have sales staff and distributors. Previous shipments have used a roll pin instead of the mild steel pin that caused the problem. For this shipment, the overseas manufacturer changed to a steel pin for some unknown reason.

Further Details

1. Axle Stand
 - All Trade — Load buster 6-tonne axle stand.
 - Imported from China.

- Manufactured to American National Standards Institute (ANSI) Standards.

2. New Zealand Agent

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