

## Health & Safety

### 12.1 Lifting Operations and Equipment - "LOLER" Bulletin

#### 12.1D Two-Post Vehicle Lifts: Risk of Vehicles Falling

### INTRODUCTION

Previous *Bulletin 12.1C* referred to the risk associated with vehicles falling from two-post vehicle lifting tables.

This bulletin (*12.1D*) provides additional information.

Vehicles falling from two-post vehicle lifting tables continues to result in serious injuries and fatalities.

Two-post vehicle lifting tables are of a generic design applicable to a wide range of brands. It is not possible to be specific regarding the names on the badges or the manufacturer.

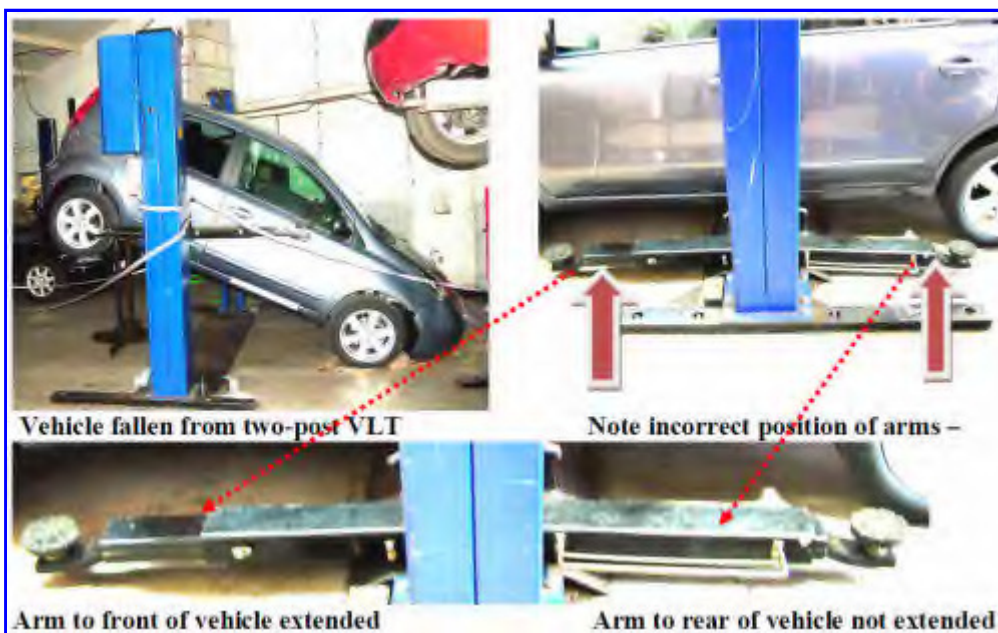
The risk of serious injury or death due to the failure of the locking arms to engage is the result of poor manufacturing quality with poor tolerances and poor material properties.

Arm locking systems work on the principle of permitting the carrying arms to rotate when they are approximately 100mm of the ground. Once they have been raised above this height, the arms are locked at whatever angle they have been set. Locking is generally mechanical using either interlocking sliding gear segments, or a sliding boss that engages on a fine-toothed spline, or a spline nut operating on threaded rods.

The causes of vehicle falling from two-post vehicle lifting tables:

- failure to position the vehicle correctly
- badly worn mounting pads
- pads contaminated with grease and / or oil
- missing mounting pads
- locking systems inoperable
- vertical columns out of the vertical
- loose fixing of the vertical columns into the floor of the workshop.

Photographic examples are given below. *Click on each image to see a larger version.*





Examples of missing / defective / worn / and contaminated rubber pads



**Note:** Sliding cup which houses the female side of the locking assembly has a central guide pin which fits into a hole in the end of the lifting arm pin. This is a drilled hole and not a fitted reamed hole. The clearance between the pin and the hole is .002" to .004" allowing the sliding cup to slightly tilt, thereby causing misalignment between the male and the female splines on the end of the hinge pin. This misalignment prevents actuation of the locking mechanism.



Examples of teeth of locking mechanism not engaging correctly



Damaged & Worn Teeth

## THOROUGH EXAMINATION OF VEHICLE LIFTS

LOLER requires a 'Competent Person' to carry out a thorough examination of all vehicle lifting tables at least once every six months.

Examinations of lifting tables with the defects referred to above has resulted in the defect being categorised as 'A' - 'DO NOT USE UNTIL REPAIRED'.

### ACTION REQUIRED

1. Inspect all two-post vehicle lifting tables to determine if they are:
  - o fitted with a locking system
  - o locking system working correctly
  - o pads in place and not worn or contaminated by oil or grease.
2. Issue instructions to Technicians to regularly check arm-locking system to ensure its effectiveness - this should be carried out at least daily.

3. Issue instructions to Technicians to check the condition of the pads daily.
4. Train and instruct technicians in the correct positioning, balancing and supporting of vehicles on the carrying arms and mounting pads.
5. Determine if additional risk assessments and training is required in the use of additional means of supporting vehicles on two-post vehicle lifting tables when components are required to be removed from vehicles.

Failure to carry out and document the

- thorough examination by a 'Competent Person' of two-post vehicle lifting tables
- training and instructions given to technicians

will result in prosecution or the service of Prohibition Notices by the Regulatory Authorities.

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