SAFed

SAFETY ASSESSMENT FEDERATION

# Guidance

## Vehicle Servicing Lifts

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## 1. INTRODUCTION

The Safety Assessment Federation (SAFed) companies examine in excess of 220,000 vehicle lifts each year and whilst in the majority of cases these lifts are of good quality and well maintained, an increasing number of vehicle lifts are giving a cause for concern.

Common problems identified include:

- Incorrect selection of type of lift.
- Deficiencies in manufacture.
- Deficiencies in installation.
- Incorrect Declarations of Conformity.
- Operation and Maintenance Manuals not translated into English.
- Markings not in English.
- Inadequate maintenance.

This document has been produced to draw the attention of vehicle lift operators (duty holders) to their legal responsibilities and to identify a common approach to the Thorough Examination of vehicle lifts by SAFed members.

## 2. LEGAL REQUIREMENTS

The responsibilities of the operators (duty holders) of a vehicle lift are as follows:

1. Undertake a suitable and sufficient risk assessment relating to the use of the vehicle lift detailing how the lift is to be used, the limitations of vehicles and/or types of work to be carried out on the vehicles (Regulation 3 The Management of Health and Safety at Work Regulations 1999).
2. Ensure the vehicle lift is suitable for its intended use(s) and not used for any other purpose(Regulation 4 The Provision and Use of Work Equipment regulations 1998).
3. Ensure that the operators have adequate training, instruction, information and supervision in operating the lift and working on the lift. This may include the provision of written safe systems of work and undertaking pre-use checks (Regulation 8 and 9 The Provision and Use of Work Equipment regulations 1998).

4. The vehicle lift should be well maintained using manufacturer's guidance as best practice (Regulation 5 The Provision and Use of Work Equipment regulations 1998).

5. It is the responsibility of the owner of any vehicle lift supplied since January 1995 to ensure a Declaration of Conformity has been provided and the lift is CE marked (Regulation 10 The Provision and Use of Work Equipment regulations 1998).

6. The vehicle lift should be installed in accordance with manufacturer's instructions and load tested prior to being placed in service (BS 7980 Vehicle lifts —Installation, maintenance, thorough examination and safe use — Code of practice).

7. The vehicle lift should also have a Thorough Examination carried out following installation or reinstallation, before being placed into service (Regulation 9 The Lifting Operations and Lifting Equipment Regulations 1998). 8.

8. The vehicle Lift should be clearly marked with its Safe Working Load (Regulation 7 The Lifting Operations and Lifting Equipment Regulations 1998).

9. The vehicle lift should have a periodic Thorough Examination (Regulation 9 The Lifting Operations and Lifting Equipment Regulations 1998). If at any time the lift is used to carry a person or persons, the frequency of this Thorough Examination is 6 months. However due to the risk to persons working under the lift all SAFed member companies carry out vehicle lift Thorough Examinations at a 6 monthly frequency as per HSE INDG 434 and HSG 261 amended.

10. The above guidance is based on UK legislation. In areas not under UK legislation this document can be considered as good practice.

Note: In the Republic of Ireland The General Applications Regs 2007 Regulation Reg.52 and part B of schedule 1 states a requirement for a 12-monthly frequency of Thorough Examination of vehicle lifting tables.

## 3. REQUIREMENTS OF THOROUGH EXAMINATION

The following sections set out a common approach to be taken by Engineer Surveyors working for SAFed member companies when carrying out Periodic Thorough Examinations of vehicle lifts.

## 4. DOCUMENTATION

The purpose of a LOLER Regulation 9 (3)(a) Periodic Thorough Examination is “to ensure that health and safety conditions are maintained and that any deterioration can be detected and remedied in good time”. It is not the primary role of the Engineer Surveyor to check that the owner has all the relevant paperwork in place for each vehicle lift. However, the Engineer Surveyor may ask for any of the following paperwork to be made available to enable the Thorough Examination to be completed:

- Risk Assessments.
- Safe Systems of Work.
- Declaration of Conformity.
- Load Test Certificate.
- LOLER Regulation 9 (2)(a) or (b) Report of Thorough Examination following installation or reinstallation.

Operation and Maintenance manual. Where any of the above information is not available and the Engineer Surveyor has any cause for concern, this will be referred to the duty holder and listed as a defect requiring action.

## 5. SPECIFIC ISSUES

### 5.1. Wire ropes.

BS 7980 "Vehicle lifts — Installation, maintenance, thorough examination and safe use — Code of practice", recommends that wire ropes should be examined, assessed and discarded against the criteria as detailed in BS ISO 4309 Cranes - Wire ropes – Care and maintenance, inspection and discard.

As a guide rope replacement or removal for more detailed examination should be considered based on average usage of a total of 9000 operating cycles. (Note: a cycle is deemed to be one complete lifting and lowering operation.) Therefore, vehicle lifts used in high volume environments such as MOT bays and car production areas may require replacement ropes at more frequent periods.

BS ISO 4309 states that “the exclusive use of synthetic sheaves or metal sheaves incorporating synthetic linings is not recommended due to the inevitability of wire breaks occurring internally in large numbers before there is any visible evidence of any wire breaks or signs of substantial wear on the periphery of the rope”. Therefore, where vehicle lifts are fitted with this type of sheave the assessment of the use of the vehicle lift against 9000 operating cycles should be applied.

The above guidance for wire rope replacement does not replace but complements the normal 6 monthly thorough examination procedures.

### 5.2. Load Nuts

The assessment of the load nut wear on screw drive vehicle lifts is an extremely important part of the Thorough Examination. There are numerous designs of this type of lift with many different methods of measuring the load nut wear.

The method to be used for each design of vehicle lift should be clearly stated in the Operation and Maintenance Manual.

Where assessment of nut wear is achieved by measuring the gap between the load nut and the safety nut, this should be compared against the 'set up when new gap' which will be recorded in the maintenance record and/or be hard stamped on the load nut or adjacent to it.

Care should be taken when using the gap measurement between load nut and safety nut to assess the nut wear due to some of the following issues:

1. The load nut threads can lose cross sectional area to the extent that the threads distort resulting in the distorted thread giving the impression that the thread has returned to its original depth.
2. II. Compacted grease on the underside of the thread can fill the worn section thus maintaining the original load nut to safety nut gap.
3. There is wear on the safety nut thus increasing the gap between the load nut and the safety nut.
4. The original nut gap setting records were incorrect.

Another method of assessing the nut wear is to measure the vertical movement of the load nut, referred to as the lever method. In the cases of 1 and 2 above this again would not produce the correct measurement. It would however confirm the nut wear listed in cases 3 and 4 above.

Care needs to be exercised when using the lever method as there is the possibility of the load nut tilting when raising the nut, thus getting an inaccurate wear reading. In any of the above cases and where there is any doubt as to the wear of the load nut the Engineer Surveyor should call for the load nuts to be accurately measured for wear. In most cases this will require the nuts to be removed for accurate measurement.

### 5.3. Arm Locks

On two post vehicle lifts the HSE have made it mandatory to fit arm locks to prevent unexpected radial movement of the arms when the lift is in the raised position.

It is important that the arm locks are in working order and where this is not the case the vehicle lift should be removed from service immediately, and the necessary remedial actions taken.

One check that needs to be taken is that with the lifting arm fully extended the available radial free play at the end of the arm should be no greater than the shortest side of rectangular type or diameter of the lifting pad. Causes of excessive movement can be due to wear in the various component parts of the locking device and the arm sections, or poor alignment of the locking device when installed. If the radial movement is excessive (i.e. equal to or greater than the shortest side of rectangular type or diameter of one full pick up pad at full arm

extension) the vehicle lift should be removed from service immediately, and the necessary remedial actions taken.

### 5.4. Carrying arm components.

It is essential that all components of the carrying arms are in good condition. Missing, worn or failed parts that are of particular concern and may require immediate rectification are:

- Sliding section end stops.
- Pick up pads.
- Pick up plates.
- Pick up plate retaining devices.

### 5.5. Information and Markings.

It is a requirement under The Supply of Machinery (Safety) Regulations that all vehicle lifts are supplied with Operating and Maintenance Instructions in English when supplied in the United Kingdom. Additionally, any markings on the lift should also be marked and fully legible in English.

Engineer Surveyors finding any vehicle lifts where this is not the case should report this as a defect which the duty holder should refer back to the supplier.