



THE GARAGE EQUIPMENT ASSOCIATION

Vehicle Lifts

Advice on buying, maintaining and using vehicle lifts.

If there's one thing we take for granted when we start work each day it's the safe operation of our Vehicle Inspection Lift. We place vehicles on and off, up and down all day long and have total trust in the equipment. This is probably because the vehicle lift is automatic; it has built-in safety devices and hopefully has been designed and built to meet European standards.

However, sadly the UK motor trade suffers from numerous accidents each year, accidents that are often caused by incorrect operation of the lift, poor loading of the vehicle, poor installation or neglected lift maintenance.

Here we identify the important areas and hopefully provide some useful information for any potential purchaser or owner/operator of a vehicle-lift.

Purchasing a vehicle lift:



CE Mark

All machinery sold within the European Community must meet Directive 98/37/EC, otherwise known as the "Machinery Directive".

Most products and some equipment, such as engine hoists and jacks can be self certified that they meet the directive by the manufacturer, agent or supplier. But this is not the case with vehicle lifts, which as well as meeting the machinery directive, must also conform to BS EN 1493:1999, this is the so called "Harmonised Standard" for vehicle lifts. The reason why lifts get special treatment is primarily because they must be safe to work under without the use of secondary equipment such as axle stands. Lifts automatically engage safety back-up systems as well as including numerous safety switches and systems, so therefore extra standards are needed. In order to obtain a CE mark a vehicle lift must conform to both the Machinery Directive and to BS EN 1493.

To certify that a vehicle lift complies with both the directive and the standard, there are a number of standards organisations across Europe who have become official Notified Bodies. It's their responsibility to certify that the lift manufacturer has designed and built the lift to the necessary requirements.

Top Tip:

Always ask to see proof that the lift you are thinking of purchasing has been CE marked and is certified by one of the so called “Notified Bodies”, doing so will ensure that the CE mark is genuine and the lift has been manufactured to European standards. All certificates will contain both the name of the notified body and a certification number. Note that all genuine notified bodies must be based in Europe.

Installation:

When it comes to vehicle lifts, the installation work is as important as the manufacturing process. However, this work is often conducted by an installation and maintenance company and may be out of the direct control of the lift manufacturer. All lifts, apart from mobile column lifts, rely on correct installation; therefore the British Standards Institute (BSI) have produced a standard for vehicle lift installation known as BS 7980:2003, which has become the lift engineer’s bible.

Top Tip:

Always have your lift installed by a GEA Accredited Lift Engineer who understands all the regulations, standards and follows the correct guidance and procedures from the lift manufacturer.



After Installation:

So, you have purchased a CE marked lift and have had it installed correctly ... however, because the lift is to be used in the workplace, the garage proprietor will also be required to meet two UK regulations, these are known as the Lifting Operations and Lifting Equipment Regulation (LOLER) and the Provision and Use of Work Equipment Regulations (PUWER). LOLER calls for a thorough examination of work equipment and PUWER mandates regular maintenance of that equipment.

So before using the vehicle lift for the first time, it's the garage owner/employer's responsibility to make sure that the vehicle lift has undergone a thorough examination by a competent person. This checks that the installation of the lift is OK and is safe to use ... it's similar to having a gas fitter checkout your cooker before using it.

Once in use LOLER also states that the lift must be thoroughly examined every 6-months and PUWER states that it should also be maintained properly. Detailed guidance on maintenance is provided in BS 7980:2003, however, below we have provided a simple guide:

Maintenance:

Daily Inspection (Advisory BS 7980):

Daily the lift operator should inspect any chains and wire ropes for damage and lack of adjustment. Hydraulic equipment and hoses for leaks, support pads for wear and arm locking systems for correct operation.

Monthly Inspection (Advisory BS 7980):

Monthly the operator or agent should check that all ropes, chains, rollers and carriage pins are lubricated, all floor anchor bolts are checked for tightness and screw and nut lubrication systems are topped up with the correct lubricant.

Six Monthly

A full-service inspection of the vehicle lift is compulsory under PUWER Reg.6 and a thorough examination of the lift by a competent person is compulsory under LOLER reg.9.

Advice on safe everyday use:

Positioning of the vehicle on lifts with lifting arms:

Correctly positioning the vehicle onto the lifting pads/arms is most important when dealing with chassis supporting lifts. The first action before lifting is to identify the vehicle's "centre of gravity", for most rear wheel drive cars this lies in the region of the front seats, however, for front wheel drive vehicles it's slightly further forward. Knowing this will help you to position the vehicle so that its weight is balanced on the lift. To achieve this, you will need to extend or shorten the lifting arms. Always check that when extending the arms, you have not exceeded the lift's capacity and always use the vehicle manufacturer's recommended lifting points.

Most accidents with chassis supporting lifts are caused by the poor location of the lifting pads or uneven weight distribution. The vehicle's weight must be as equally portioned as possible across all 4 lifting pads. Should one of the lifting pads have less weight than the other 3 it may become possible to inadvertently move the arm/pad from beneath the vehicle.

To help prevent this, all chassis supporting lifts that incorporate moving arms have automatic arm locks. These allow the arms to be freely positioned when they are low, but once higher than 300mm above the ground automatically lock to prevent movement of the arm. Correct operation of the automatic locking system and well-maintained lifting pads is crucial for safe operation of moving arm chassis supporting vehicle lifts.

Once the vehicle is elevated it's also critical that the balance point is maintained, this seems obvious to most technicians, but a good number of vehicles continue to fall off lifts simply because a major component has been removed from the vehicle. Removing the transmission from a front wheel drive vehicle is the most common cause, with some units weighing over 70 kg, it can cause a large shift to the vehicle's centre of gravity, thus making the vehicle unsteady on the lift.

Platform lifts:

Platform lifts sold in the UK are normally 4-post or scissor type. Positioning a vehicle on a platform lift is relatively easy; however, care should be taken to position the vehicle centrally so that it's near-side and off-side wheels are evenly positioned in the centre and not overhanging the edge of the platform.

One of the biggest hazards with platform lifts may be vehicles rolling off of them. The lifting platform should have anti-roll end-stops at the front and rear of the platform; the ones at the rear, or drive on end, are automatically put in position when the lift is raised. However, these can fail, so always check that the so called "auto chocks" have engaged properly and if not, lower the vehicle immediately. The front stops are fixed and should not be removed from the platform under any circumstances.

Mobile column lifts:



Mobile column lifts are not installed; they are fully mobile, so care must be taken when positioning them. Use a level, hard surface - concrete is best not tarmac. They normally engage with the vehicle's wheels using forks, so take care that the fork is the correct size for the tyre diameter, it's also worth checking that the tyre pressure is correct.

Mobile column lifts are normally used in groups depending on the number of road wheels of the vehicle. They are therefore synchronised with each other and should all be kept level during the lift. Keep a watchful eye during operation; they should be going up and down together - if not stop operation and contact the manufacturer immediately.

When is a lift not a lift?

When it's a jack - There are a number of jacking devices on the market that raise the vehicle by engaging with the vehicle's wheel. They look like small mobile column lifts, but they are not a lift at all, they are a jack. This means that they are not manufactured to the same standards as a lift, so when using these devices, axle stands should always be positioned under the vehicle before starting to work on, or more importantly under it.

If you need help in finding an accredited installation and service engineer, please contact the GEA on 01327 312616.