



Technicians can't afford to be complacent about the proper use of any vehicle lifts.

Don't Be an Accident Statistic: Lift It Right

By Rick Heath

TAKE SAFETY PRECAUTIONS BEFORE LIFTING ANY VEHICLE

If you believe you haven't seen a vehicle you don't know how to lift or that spotting is just common sense, you're destined for an accident. Don't assume that lifting is the same from vehicle to vehicle or from lift to lift.

Have you ever seen a vehicle slide off of a lift? They can and do fall off of all kinds of lifts. It's not a pretty sight, especially if the service technician is under the falling vehicle. Don't be an accident statistic. Learn how to properly spot vehicles on the lifts in your shop. Take time to examine each vehicle and the lift you're going to go under before starting a job. Exercise your own discretion and judgment.

Here are a few questions you should ask yourself before lifting any vehicle on any lift:

- **Where is the center of gravity for this specific vehicle?**
- **What are the contents of the vehicle and how does this impact balance?** For example, what's in the truck box? What's in the pickup with the camper cover? What's in the trunk? Is the bus engine in front of the front axle? Are the water tanks on the fire engine empty?
- **Does the work you're going to perform have the potential to shift the**

weight of the vehicle? Will you be removing heavy components from the vehicle? Should you use vehicle support stands to stabilize the lifted load?

- **What type of lift are you going to use?**
- **Does the lift have a fall prevention system or a fall arrest system?** Is the load prevented from falling because it is structurally supported or is the load suspended and then arrested after it begins to fall? If the lift uses a fall arrest system, you should inspect the suspension chains or wire rope(s) prior to lifting.

Drive-On Lifts

Drive-on lifts seem so straightforward that it may appear that there's nothing to worry about when using them.

Wait a minute:

- Do the runways slope when they are loaded?
- How about when the load is placed at one end of the runway?
- Does the lift have a dedicated set of chocks for the vehicle wheels?
- Does the lift have front and rear runway stops in case the chocks get overdriven?
- Have you ever left the engine running on a raised vehicle? Do you think the vehicle could drop into gear if it gets bumped?

DON'T assume that lifting is the same from vehicle to vehicle or lift to lift.

Wheel-Engaging Mobile Lifts

- Are the tire forks making full contact with the tires?
- Are the forks wet or oily?
- Should you use high-reach fixed stands to totally support the load?
- Do you really know exactly where to place the stand adapters? Lifting information for heavy duty vehicles is sparse at best.
- Do you know the weight distribution? Is the column capacity adequate for each lifting point?
- Do you really need the lifting columns somewhere else right now? If not, then do not transfer the load to stands.
- What if the stands are not "certified" to ASME PALD? How can you be sure of the rated capacity?

- Are the column connecting cables a tripping hazard?
- Is the lift's wireless control signal getting interference from other systems?

Frame-Engaging Lifts

It's easy to get complacent and think that all you have to do when using a frame-engaging lift is find a hard spot like the frame or the jack points on a unibody

car. This is a risky assumption and one likely to lead to an accident.

The first step in making a proper lift is to find the vehicle manufacturer recommended lifting points for that vehicle. Here are a few common sources of reliable lift point information:

- If you work in an automobile dealership, you can go to the internal vehicle manufacturer website to find lift-



MOHAWK LIFTS

THE LIFT YOU'LL NEVER WEAR OUT



Mohawk uses direct drive or high strength leaf chain, compared to competitive lifting cables (which fray).



TWO POST LIFTS
7,000 through 30,000 lb. capacities.
Inquiry #10



MOBILE COLUMN LIFTS
MP-Series electric-hydraulic mobile lifts available in 2, 4, 6, or 8 post configurations.
Inquiry #12



SCISSOR LIFTS
6,000 lb. capacity full rise and portable with all position safety locks.
Inquiry #11



FOUR POST RUNWAY LIFTS
19,000 through 120,000 lb. capacity models give complete under vehicle access for trucks & buses.
Inquiry #13

www.mohawklifts.com
Phone: 518-842-1431 • Fax: 518-842-1289
1-800-833-2006



Enter 4 at "e-inquiry" on vehicleservicepros.com

VehicleServicePros.com • Vehicle Lift Inspection Guide | 11

ing and jacking information. You can also consult the vehicle service manuals.

- **If you work in an independent shop, franchise store or fleet maintenance operation**, you may or may not have the service manuals for the vehicle. If your employer subscribes to one of the independent vehicle information services, you may be able to access lifting information there.
- **The Automotive Lift Institute publishes an annual *Quick Reference Guide to Vehicle Lifting Points for Frame-Engaging Lifts*** that is provided by ALI member companies with every new, frame-engaging lift they sell. The Lifting Point Guide is developed from information obtained directly from the vehicle manufacturers. It is also sold on the ALI website, www.autolift.org, for \$10 per copy.

Since frame-engaging lifts are the most popular style in light duty shops, here are some additional tips regarding their use:

- **Never assume the lift swing arm restraints will keep the arms from coming out from under the vehicle.** If the adapters aren't placed on a flat, level surface, the horizontal force developed on the adapter pad can be greater than the vertical force applied to it. Swing arm restraints are only designed to resist 150 pounds of horizontal force.
- **Take the adapter design into consideration.** Does your lift have



flip-up adapters, screw-type adapters or stacking adapters? Are the adapter surfaces steel or rubber? Are there features

on the adapters that would inhibit lateral movement? Do you need to use extenders to prevent swing arm contact with sills, rocker panels, pipes, dams, steps or running boards?

- **What about lifting on the spring hangers?** Some vehicle manufacturers approve this in some cases. If you place the adapter on the spring hanger, does the spring rest on part of the adapter pad? If the leaf spring is on the adapter, the vehicle can walk right off of the adapter if it is rocked up and down. Due to the upsweep of the frame forward of the rear suspension on some long wheelbase vehicles, the front-most rear spring hanger may be your only practical choice, even though it is not ideal. If you select the spring hanger as the lift point, be sure the adapter is not supporting the vehicle on the spring itself and always use vehicle support stands.
- **Never use blocks (wood or other materials) between the adapters and the vehicle lift points**, even if the vehicle manufacturer recommends them. The use of blocks can only lead to instability.
- **Never lift one end of a vehicle using only two swing arms of a swing arm style lift.**
- **If the adapter pads on the lift won't reach the recommended vehicle lift points, use a different lift.**

Axle-Engaging Lifts

Let's talk a little bit about vehicles lifted on the two-post, fore-and-aft, movable piston, wheel- and axle-engaging lifts. Some strange things are attempted on these lifts.

For example, a technician may lift only the rear of the vehicle to provide greater access to the front engine compartment. The concern here is that if the front wheels are free to roll on the floor, the horizontal forces applied to the rear jack are equal and opposite to the breakaway friction and rolling friction of the front wheels – which means the rear jack will be damaged. Chocking the front wheels only makes the situation worse. As the rear axle



KAR LIFT SOLUTIONS
by OMER®



OMER®

THE LEADER IN HD PLATFORM LIFTS FOR OVER 30 YEARS

KAR LIFT PANTOGRAPH HD LIFT
LIFT MORE, LIFT HIGHER, LIFT FASTER

148 MODELS TO CHOOSE FROM

- 6 MODELS FROM 44,000 LB. TO 99,000 LB. CAPACITY
- 6 RUNWAYS LENGTHS
- ELECTRONIC OR VOLUMETRIC CONTROL SYSTEM
- POWDER COATED OR GALVANIZED



CALL NOW FOR DETAILS
877-799-5438
WWW.KARLIFTSOLUTIONS.COM



SCAN THIS QR CODE WITH ANY SMART PHONE READER APP
FOR KARLIFTSOLUTIONS WEB SITE

K450-10-M



Enter 5 at "e-inquiry" on vehicleservicepros.com



With the exception of screw drive lifts, it is recommended that all lifts, including axle-engaging models like the one shown, be lowered onto the load-holding devices (locks or latches) before the technician goes under the vehicle.

is lifted with axle adapters or, as the rear wheels are lifted with wheel adapters, vehicle stability becomes solely dependent upon the security of the engagement between the vehicle rear lift

points and the rear lift adapters.

Another concern is when the front jack and the rear jack are set at different levels while supporting the lifted vehicle. This

condition is potentially damaging to both the front jack and the rear jack. The out-of-level condition should be limited on any two-post, fore-and-aft, movable-jack, axle- or wheel-engaging lift to 3 degrees front to rear or, rear to front. In any case, the lifted vehicle should always be lowered onto the lift locks before the technician goes under the vehicle. As always, additional confidence may be gained by placement of vehicle support stands to enhance stability.

Your Safety Is Riding On It

If you think about what you're doing and think several steps ahead, you'll be your own best safety advocate. A little time spent thinking about the lift and the vehicle to be lifted can save your life.

ALI offers a number of lift safety materials. Member companies provide many of these materials with every new lift sold. They can also be purchased at the ALI Store at www.autolift.org. One popular resource is the *Lifting It Right* safety kit that includes a DVD hosted by Richard and Kyle Petty, the *Lifting It Right* safety manual and a safety tips card to be posted on or near a lift. ■



Rick Heath is an industry safety consultant specializing in automotive service facilities. He may be contacted through his web site at www.heathandassociates.com or by e-mail at fgheath@bellsouth.net.

CHANGE THE WAY YOU APPROACH LIFTING

MAHA USA's wireless mobile column lifts are the result of a winning combination of German engineering, the latest technological advancements and quality American craftsmanship.

Maschinenbau Haldenwang MAHA

Premium Workshop Equipment

We give our customers the power to maximize daily service operations with one of the largest selections of workshop equipment in North America.

866-624-2872 www.maha-usa.com
Visit us online to view our entire product catalog.

Enter 6 at "e-inquiry" on vehicleservicepros.com

CL Challenger Lifts

up in **27 sec.**

Powered by: **QC QuickCycle**
Express Service Solution

Increasing revenue potential just got **FASTER!**

EV1020-QC
10,000 lb. cap.

CL10V3-QC
10,000 lb. cap.

down in **17 sec.**

Challenger Lifts
1-800-648-5438

www.challengerlifts.com
sales@challengerlifts.com

Louisville, KY
[Facebook](https://www.facebook.com/challengerlifts) [Twitter](https://www.twitter.com/challengerlifts) [YouTube](https://www.youtube.com/challengerlifts)

Enter 7 at "e-inquiry" on vehicleservicepros.com