

CHOOSING THE RIGHT LIFT

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With all the lift choices available to today's shop owners, if we wrote about every type, size and style available, it would require an entire issue of Auto International.. The choice of two post, four post, parallelogram, scissors, in-ground and mobile lifts, can leave lift buyers wondering which is best. AI decided to write about the two post, above ground lift in the 7,000 to 16,000 lb capacity for many: reasons #1 They're the most popular lift amongst AI readers. #2 This type lift represents over 2/3rds, of the lifts being sold, #3 While some shops still use in-ground lifts there has been a significant trend toward replacing these in-grounds with surface mounted lifts. #4 Finally, we chose the two post lift because, they take up less shop space, leave the wheels hanging free and give shops the most undercar access.

This story will explain the details and differences of different two post lifts – The most popular lifts in the world.

SAFETY SYSTEMS

#1 Mechanical Locks

Lifts have different safety systems, but the most basic is a mechanical lock. When researching lifts ask how high before the safety locks start engaging? Is it a multiple position lock? Or do the locks start only after the lift is half way up? What might seem like a simple question is the same reason that you'd never use a floor jack without a pyramid stand. Not all lifts have all position

mechanical locks and they're certainly necessary when raising a car just a few inches if using an on-the-car balancer, or just a few inches up when rotating tires.

#2 Hydraulic Safeties

A hydraulic safety must be built into the lift in the event of failure. The safeties will slow the descent of a lift in the event the mechanical locks aren't operational. A; Not all lifts use this hydraulic safety. B; Some use a hydraulic safety that only slows the descent. C; Some lifts have a hydraulic safety system that totally locks up preventing the lift from moving. When buying a lift ask which of these systems the lift you're considering uses.

#3 Column Construction

Column design and construction has as much to do with the lifts safety as do the mechanical locks. Research of lifts shows columns in many shapes, thicknesses, widths and sizes. Some columns are made of steel while some only use 3/16" (.5cm). Some lifts have a 30" (76.2cm) base across the floor, while some have a 12" (30.5cm) wide base. Finally some lifts columns are 24" (61cm) wide, while some may only be 8 (20.3cm)". There are two good rules when comparing lifts.

#1 A heavier built lift, with a wider column, and larger contact across the floor makes for a more stable lift and vehicle in the air (simple physics) especially when loaded near capacity or beating out a balljoint.

#2 Use your eyes! Look at the lift brands you're considering buying (would you buy a car without a test drive?) instead of just

listening to the sales rep, looking at brochure photos or surfing the net. Are you impressed with the quality. What's the lift weigh? A better made lift will weigh more, (it certainly cost more to manufacture if it has more steel). When comparing lifts weights, are you looking at shipping weight or operational weight? Operational weight is all that matters. Ask the weight of the overhead cable cover. The weight of the cable cover adds no structural integrity to the lift so don't count it in your equation.

#4 Carriage Construction and Design

Carriages hold the swing arms in the columns and move up and down with the lift. Like the columns, some are built heavier than others, and different manufacturers have their design ideas. Some carriages are built short, stubby and solid riding up and down of steel roller bearings. Others carriages are long claiming to spread the vehicles weight across the column length. These carriages don't ride on roller bearings, but slide on polyurethane slide blocks. A second big difference in the slider vs. bearing issue is greasing the sliders as opposed to the bearings which are sealed and self lubricating. Finally the way in which the carriage secures the arm is important as certain designs deliver less arm flex and more rigidity depending on design.

#5 Swing Arms

High or low? Check the minimum height as cars are getting lower (aerodynamics). Sports cars are low riding, and some cars ride lower because of sagging springs. If the arm is too high, you'll have to use a floor jack to raise the car before you can position the arm under the frame... Spend a little time researching before you buy a lift rather than continually spending the extra time required with some cars by not doing your research in advance.

Swing arms come with three different ends to them. One style, similar to in-ground lifts has a three or four position flip up pad on the end to contact the vehicle frame. When some additional height is needed, flip the pad, and gain 3" (7.6cm) of lift to clear running boards. Quick and easy, but the drawback is this style of pad always requires optional adaptors for trucks and SUV's with their high frames. The second drawback to the relatively small (4" (10.2cm) long but only about 1/2" (1.3cm) wide) contact area of the arm to the vehicle.

The second style is a screw adjustment pad. Again, the advantage here is the pad is self contained, and minor differences in shop floors (slopes) can be accommodated for by adjusting the pads up or down with a few spins of the screw pad. This type of pad also gives a large contact area to the frame being lifted. The disadvantage of a screw pad is the shaft makes these type of arms on higher (approx 5 - 5 1/2") (12.7- 14.0cm) when in the lowest position, and the time required to spin the pads up and/or down when changing from an SUV to a passenger car on the lift. Finally this style still requires extenders (usually optional) for reaching the frame of trucks and SUV's.

The last choice in above ground lift arms is the flat contact pad. This pad is the lowest pad (for imports/low riders) choice for lifts, it offers a large contact area and the stacking adaptors needed for trucks and SUV's are usually a standard item from most lift companies. Disadvantages are while not a self contained unit like the two described above (screw pads or 3 position flip adaptor) the stacking pads are faster than adjusting screw pads and provide more frame contact area than do flip up pads.

#6 Clear floor lifts

These are the most common types of two post lifts. The clear floor is achieved by routing synchronizer cables overhead. Alternately, several brands of lift offer a clear floor area yet don't have overhead cables, but overhead hydraulic lines or hoses. The advantage of this style is the ability to spread or narrow the columns, fit the lift in a low ceiling shop (still with a clear floor area) or raise the height of the hydraulic hoses tall enough to allow tall trucks and utility vans to be fully raised and not bump into the fixed position overhead cable cover.

#7 Cylinders and drive systems

Most lifts (98%) in the North America are electric/hydraulic vs. electric mechanical in operation. Only a few foreign manufacturers still offer electro/mechanical lifts. As hydraulics



are the dominant drive system, your choice in lifts is of two; single cylinder or twin cylinder. Twin cylinder is the more common lift based on reliability. Of the drive mechanisms offered, the size of the of the cylinder(s) is important as larger cylinders work under less pressure, making the seals last longer and hydraulic pump work easier. On the downside, a larger cylinder is slower to fill with fluid, yet most lifts still raise in about 45 seconds.

#8 What's the warranty?

Different lifts have different warranties. What's covered? What's not? Who performs the warranty? Is there a local service rep, or will you need to do warranty work yourself? Mail order lift companies typically only perform mail order service (minimal to none) and research shows that's why ALI and its' member companies sell 90% of all lifts in the U.S. as the sales, installation and service are usually performed on a local basis, by the same equipment sales company that sold you the lift in the first place. Check and ask all these questions to be sure before you spend your hard earned dollars.

Choosing the right lift for your shop is easy given some research, using your eyes to make your decision, talking to owners of the brands you're considering, speaking to lift sales reps and mostly, making your own decision after reviewing all the facts. We found lift manufacturers responsive and willing to send detailed information to help our research. While there are lots of places in the shop to save money, a quality made lift protects you, your employees, the shops reputation and your customers car.

You can't be too careful about this decision. Lift away!