This training is for anyone who wants to use the Four Post Automotive lift.

Only member's vehicles and immediate family members vehicles are allowed on the lift.

Remove all used fluids and parts from the Space when you are done. Used oil can be dropped off at any auto parts store. Take coolant and brake fluid, and any other fluids, home with you. Dispose of all used parts either in the Dumpster, or take them home. Do NOT leave used parts on the Donation (Free Stuff) shelf.

Clean up the space, and return ALL tools to their proper place before leaving the Space. Remember; there are cameras on the area at all time, recording video. Do not make us have to watch hours of video to determine who left a mess!!

Please note: In the event of a problem with the lift there is the possibility that the vehicle will have to remain on the lift until the lift can be repaired. This may take several days. This eventuality must be taken into account when using the lift. The Dallas Makerspace cannot be responsible for your inconvenience should your car become stuck on the lift.

I. Lift Components

A. Lift Deck
   1. Drive-on Ramps – Removable, aluminum
   2. Front and Rear Wheel Chocks

B. Lift Mechanism
   1. Posts & Rails
   2. Cables
   3. Safety Latches & Release Lever

C. Hydraulic System
   1. Pump
   2. Hoses & cylinders
   3. Pressure release (“Down” Lever).

D. Electrical System
   1. Disconnect (Plug and Outlet)
   2. Pump Run Button (“Up” Button)
   3. RFID Reader

II. Potential hazards. Dangers include**:**

A. Foot injuries, from lowering the lift. Keep your feet out from under the lift.
B. Hand injuries, from machinery or the vehicle moving.
C. Head injuries, from striking the machinery or vehicle, falling components or tools.
D. Eye injuries, from sharp objects, chips, dirt, and fluids under the car.
E. Crushing injuries from falling vehicle or collapsing lift.

III. Automotive Lift Safety

A. Start every lift with a lift inspection. If something does not look right, stop and call.

B. Never lift an occupied vehicle overhead. Someone inside the vehicle may forget they are up in the air, and exit the vehicle, with unpleasant results.

C. Do not exceed the lift's rated capacity (10,000 Lbs.).

D. Keep other people away when raising or lowering the lift. Watch under the vehicle while lowering.

E. Clear tools and bystanders before lowering a lift. Do not leave things leaning against the posts; they can become trapped under the lift as it is lowered, and become a projectile, or damage the lift.

F. Confirm that the lift ramps are fully lowered and the aluminum ramps installed before backing off the lift. Vehicle must roll down the aluminum ramps to back out. Do NOT back off the lift without setting the ramps in place.

G. Some blocking at the ends of the ramps may be required to raise very low cars to make it up the ramps.

H. Never tie or block latches or levers. Controls are designed to be “dead-man” type, and to return to a safe position, stopping the lift.

I. Wear eye protection when working under the vehicle. A bump cap may be desirable also.

J. Be aware of where your hands and feet are at all times that the lift is moving.

K. Avoid excessive rocking of the vehicle when it is on the lift.

L. To reduce the risk of personal injury, keep hair, loose clothing, fingers, and all body parts away from moving parts of the car and the lift.

M. To reduce the risk of electric shock, do not use the lift when it is wet.

N. To reduce the risk of fire, do not operate equipment in the vicinity of open containers of flammable liquids (gasoline). Spilled fluids must be cleaned up immediately. Absorbent material is available in the white can.

O. Be aware that some processes will change the center of gravity and the stability of the vehicle. Removing the engine, transmission, rear axle, or other major components require special planning. Use the tall jack stands. Raise the jack stand under the vehicle using the threaded screw; DO NOT lower the car onto the jack stand.

P. Unusual vehicles, such as limousines, RV’s, narrow track, and long wheelbase vehicles, may not be suitable for lifting on this equipment. If necessary, consult with the lift manual, or the manufacturer, when in doubt.

Q. Make sure the wheels are properly chocked. Only use approved wheel chocks.

R. Never use the lift as a jack or for any other unauthorized purposes.

IV. Raising the lift

A. The car must be correctly spotted on the lift. When driving a vehicle onto a wheel contact lift, be sure that the front tires are centered, at equal distances from the edges of the ramps.

B. The lift does not have stops for roll-off protection; you MUST place wheel chocks near the end of the lift, and be careful not to drive off the end of the lift.. After spotting the vehicle, always use manual wheel chocks to prevent the car from rolling in either direction.

C. Remove and safely store the aluminum ramps. Do not lift the car with these ramps in place.

D. The weight of the vehicle must be distributed evenly. For this 9,000-lb. capacity 4-post lift, each end of the lift is rated for 4,500-lbs. Do not overload one end of the lift.

E. All of the car’s doors should be closed.

F. Align the car so that its center of gravity is centered on the length of the ramps under the vehicle. Consider the weight distribution in the vehicle including load, things in the trunk and back seat and truck bed, front wheel drive vs rear wheel drive, etc.

G. Vehicle should be square with the lift, and centered on the ramp width.

H. While watching the overhead clearance, use the “UP” button to raise the vehicle to the desired height. You will hear the safety locks click as it raises. Be aware of antennas, luggage racks,

and other protrusions from the top of the vehicle. No part of the vehicle should ever be allowed to touch the cross bar at the top of the uprights at either end of the lift.

J. Install wheel chocks behind and in front of at least two wheels. Ensure that the wheel chocks are in their correct position. Wheel chocks are especially important at the front and back of the vehicle wheels (1) if there is no hand brake set, (2) if the vehicle is not in Park (automatic transmission), or in gear (manual transmission), (3) if the jacks are to be used, or (4) if the driveshaft is disconnected.

K. When the vehicle is at the desired height, use the hydraulic lowering lever to lower the vehicle so that it rests on the last safety stop. It is now safe to work under the lift.

V. Wheel-Free Roller Jacks

A. On a wheel contact lift, the car is supported by its wheels, unless a wheel-free roller jack is used. These jacks, which are air powered, are used to raise either the front or rear, or both, of the car for wheels-free work.

B. Move the roller jack into position under the frame of the car. If both jacks are to be used, position and raise one at a time. Use care when selecting lift points. Consider strength, stability, and rust when evaluating lift points.

C. Use only the spool pieces provided with the jack. Use the spool pieces to minimize the space between the jack pad and the vehicle. DO NOT insert blocks between the jack pads and the vehicle. If ANY of the spool piece storage holes is empty, report this on Talk immediately.

D. Be sure to extend each of the lift arms of the rolling jack an equal amount, to avoid uneven loading.

E. Connect the compressed air line to one jack. Ensure that no one else is under the lift. Be sure that all hands, fingers, and other valuable body parts are not even close to the jack. Press the “UP” lever, and raise the car off its wheels to the desired elevation. After the vehicle is raised to the minimum usable height, press the “Down” lever on the jack to lower it onto a mechanical safety latch.

F. Repeat for the other rolling jack, if needed.

G. When using one of these jacks, keep hands clear. Never let your hands get between the jack and the car structure, or between the arms of the jack. Never allow someone else to operate the jack for you while you are under the car.

H. Lowering the jack is the opposite of raising. Raise the jack until the safety lever (red ball) can be released and locked back. Press the “Down” lever and lower the jack all the way. Push the jack arms all the way into the jack.

J. You MUST remove and store the spool pieces before moving the car. Failing to do this can result in severe damage to the vehicle and to the jack and lift. Double check this before lowering the vehicle to the floor.

K. Move the rolling jacks to the front end of the lift when not in use.

L. Be sure that the rolling jack is lowered all of the way before driving onto or off of the lift.

IV. Lowering the Lift

A. Ensure that all tools, jack stands, oil pans, jacks, and any other items are removed from under the vehicle footprint. Move everything well away from the vehicle. Leave nothing leaning on the lift posts. Confirm that the spool pieces have been removed and stored, and that the rolling jacks are lowered all of the way, and moved to the front of the lift.

B. Ensure that your feet and hands are well clear of the vehicle, the lift pads and frames, and all moving parts of the lift.

C. Raise the vehicle slightly, using the “Up” button, so that the safety latch can be released.

D. While holding the safety latch down, push the lowering control in and let the vehicle down slowly. Note that the safety latch will drop with the lift.

E. Confirm that your feet are not under the vehicle, lift pads, or lift frame. Lower the vehicle to the floor, and continue lowering until the ramps are fully flat to the floor.

F. Install the aluminum ramps on the ends of the lift tracks. DO NOT drive off the lift without these ramps in place.

F. Ensure that the front wheels are centered, and not turned to the side. You do not want to roll off the lift ramp sides. Check the brakes and steering before backing slowly off the lift.

V. Critical Safety Items:

A. NEVER LIFT JUST ONE END OF A VEHICLE. THIS WILL LOAD THE LIFT OFF CENTER AND CAN CAUSE IT TO LOCK.

B. IF THE LIFT STOPS, LOCKS UP, FAILS TO RAISE, OR FAILS TO LOWER YOU MUST **STOP**. DO NOT ATTEMPT TO REMEDY THE PROBLEM. YOU MUST REPORT THE PROBLEM ON “TALK” IMMEDIATELY.

C. DO NOT DISASSEMBLE OR WORK ON THE LIFT MECHANISM, ATTEMPT TO REMOVE JAMS, REPAIR THE MECHANISM, OR MAKE ANY MODIFICATIONS TO THE LIFT.

D. IF THE CIRCUIT BREAKER TRIPS YOU MUST REPORT THE PROBLEM ON “TALK” IMMEDIATELY. DO NOT RE-ENERGIZE THE BREAKER. DO NOT ATTEMPT TO MOVE THE LIFT.

E. DO NOT ATTEMPT TO RELEASE THE SAFETY LATCHES WITHOUT RAISING THE LIFT FIRST. THIS CAN CAUSE A CATASTROPHIC COLLAPSE OR DROP THE VEHICLE. IF THE LIFT WILL NOT RAISE AND RELEASE THE SAFETY LATCHES, **STOP**, AND REPORT THE PROBLEM ON “TALK” IMMEDIATELY.

F. IF ANY MECHANICAL, HYDRAULIC OR ELECTRICAL PROBLEMS ARE OBSERVED WITH THE LIFT, DO NOT OPERATE THE LIFT. YOU MUST REPORT THE PROBLEM ON “TALK” IMMEDIATELY. HYDRAULIC LEAKS ESPECIALLY MUST BE REPORTED. IF THE SYSTEM IS LEAKING ANY FLUID WHATSOEVER, YOU **MUST STOP** UNTIL IT THE LEAK IS REPAIRED.