

This training is for anyone who wants to use the 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.

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 Pads
- B. Lift Mechanism
  - 1. Posts & Rails
  - 2. Cables
  - 3. Safety Latches & Release Lever
- C. Hydraulic System
  - 1. Pump
  - 2. Hoses & cylinders
  - 3. Pressure release (Lowering Handle).
- D. Electrical System
  - 1. Disconnect
  - 2. Overhead Safety Switch
  - 3. Pump Run Button (Up Button)

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

- A. Foot injuries, from lowering the lift.
- B. Hand injuries, from machinery or the vehicle rocking on the pads.
- 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. People moving around can upset the balance of the vehicle. Someone inside the vehicle may forget they are up in the air, and exit the vehicle, with unpleasant results.
- C. Don't exceed the lift's rated capacity (6000 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 pads are fully lowered before backing off the lift. Vehicle must clear the pad to back out. Some blocking at the ends of the ramps may be required.

G. Never tie or block latches or levers. Controls are designed to be “deadman” type, and to return to a safe position.

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

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

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

K. 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.

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

M. 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.

P. 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. You can easily tip the car off the lift.

Q. Unusual vehicles, such as limousines, RV's, 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.

#### **IV. Raising the lift**

A. Align the car so that its center of gravity is centered on the lift pads 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.

B. Look under the car to confirm that the structure of the car is over the lift pads. Ensure that steps, exhaust, side-mounted aerodynamic and trim elements, rocker panels, side pipes, etc. will not be crushed when the lift is raised. Vehicle should be square with the lift, and centered.

C. Raise the lift until the lift pads just start to lift the vehicle. Stop and check for any items that will interfere with the lift, and that the lift pads are contacting the vehicle at the anticipated points.

D. Raise the vehicle until all wheels are off the ground. Push down on the front of the car. Do the same at the rear. If the vehicle moves or rocks significantly (vehicle tries to lift off the pads at the front or rear), lower the lift and adjust the position of the vehicle relative to the lift pads.

E. While watching the overhead clearance, 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 which might impact the ceiling. Stop raising the vehicle if anything is going to touch the ceiling or the safety bar.

F. 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. Hold the lift lock lever down, and lower the lift to the next lower safety stop.

G. If any part of the vehicle touches the safety bar at the top of the lift, the lift will stop. Do not attempt to raise the lift any further. If the lift will not go up or down after contacting the safety bar you must post a request for help on Talk. Do not touch the safety bar yourself.

#### 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.

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. While watching the overhead clearance, raise the vehicle slightly 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 vehicle might shift slightly when the wheels touch the floor. Stop at that point and walk around to ensure that there are no items interfering with the vehicle.

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 lift pads are fully flat to the floor.

F. Check the brakes and steering before backing slowly off the lift. Note that the lift is not aligned with the door, so some back-and-forth may be required.

#### 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, OR FALL OVER.

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 CALL THE PERSON LISTED 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 CONTACT THE PERSON LISTED 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 CALL THE CONTACT PERSON.

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

G. IF THE VEHICLE TOUCHES THE UPPER SAFETY BAR THE LIFT WILL STOP. IF THE BAR IS DISLODGED, STOP. CALL SOMEONE TO RESET IT. THERE IS THE POSSIBILITY OF AN ELECTRICAL SHOCK WHEN RESETTING THE SAFETY BAR.