

## Safe Lifting Tips

### Off-Road Vehicles on Two Post Hoists

#### What Makes Off-Road Vehicles different?



- Off-road Vehicles generally can be overall much heavier and a much harder to define centre of gravity than normal vehicles for the following reasons;
  - Four Wheel Drive
  - Heavy duty components
  - Heavier, larger wheels and tyres
  - Heavy accessories such as bull bars, tow bar, extra fuel tank, extra spare wheel, roof racks, car fridge, winch, etc.
- Off-road vehicles can be harder to pick up correctly due to;
  - Pick-up points can be hard to determine. Jack points on off-road vehicles are not necessarily the same as the lifting points for hoists.
  - Pick-up points may be covered in mud or not strong enough due to excess corrosion.
  - Usually the pick-up points or on the chassis which can be further in to reach.
  - Side steps are a common accessory on off-road vehicles but can be hit the hoist arms before the pads touch the pick-up points. Must have the right pad extension accessories to lift these vehicles.
  - Picking up on suspension points can be dangerous on some suspension setups (i.e. when the vehicle lifts, the weight of the wheel pulls the suspension down, this leads to a change in angle of the suspension and can force the vehicle off the pick up pad.)



## Safe Lifting Tips

### Off-Road Vehicles on Two Post Hoists

#### What should you look for before you buy a Two Post Hoist for Lifting Off-Road Vehicles?

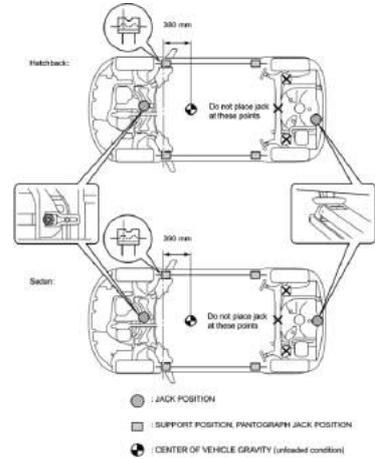
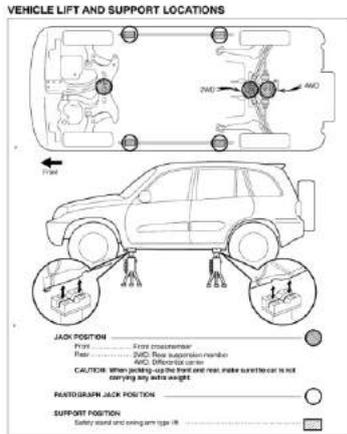


- What vehicle(s) are you working on and what type of work do you want to do?
- Look at the workshop floor:
  - Concrete thickness, strength and general condition? I.e. is it badly cracked?
  - The floor level. Is it nice and flat or is badly sloping?
  - If the floor is not to specifications, you may need to pour a new slab.
- Look at your workshop space;
  - Get your hoist measurements from either the brochure or get a copy of the manual. You should find the specifications on the web.
  - Check your ceiling height
  - Measure and mark you where the hoist will go. You will need 600mm safe clearance zone both around where the vehicle will be as well as the moving components of the hoist.
- What power have you got in your workshop? Single Phase or 3 Phase?
- When you are thinking hoists, think about who is going to install it and long term who is going to support the product for advice, service and parts?
- What adaptors will you need? Pad extensions are necessary to lift many Off-road Vehicles

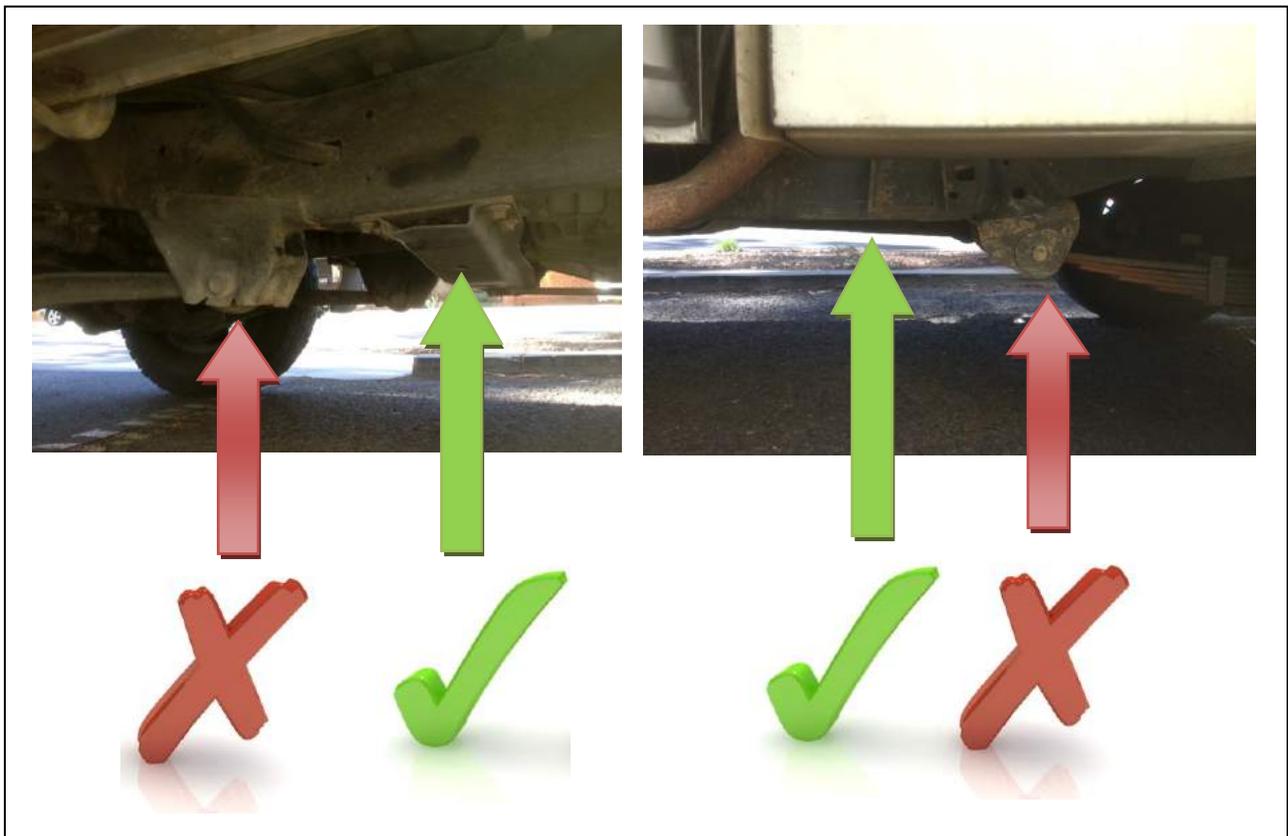
# Safe Lifting Tips

## Off-Road Vehicles on Two Post Hoists

### What do you need to do before operating a Two Post Hoist?



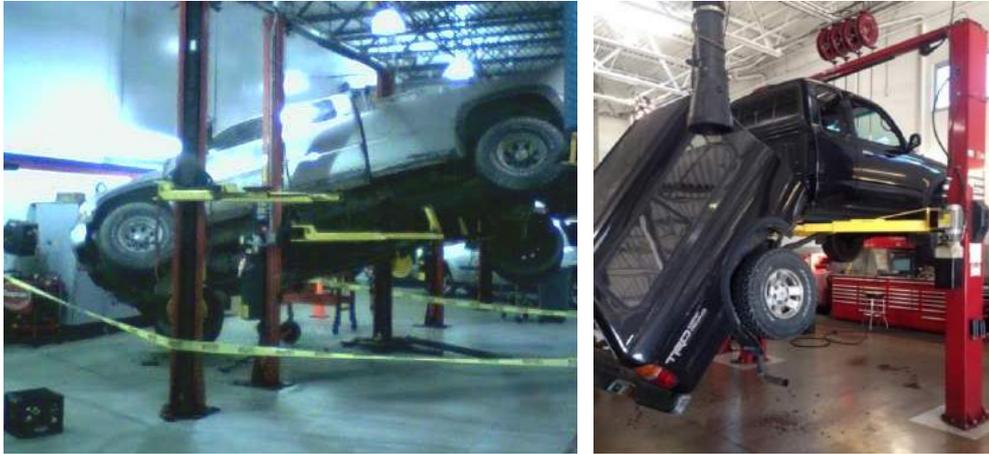
- Read the manual and get familiar with operating instructions as well as you pre-operational checks and maintenance; is everything in good working order?
- Before you lift a car on a Two Post Hoist, you need to identify the correct pick up points. Due to their construction, this can be a lot harder on Off-Road Vehicles. Check the owner’s manual, online or contact the manufacturer. If you lift on the wrong spot, you could damage yourself or your vehicle. The jack or jack stand points don’t always translate into being the right pickup point for lifting on a hoist.



## Safe Lifting Tips

### Off-Road Vehicles on Two Post Hoists

#### What are the Major Safety Points to look at when using a Two Post Hoist with Off-Road Vehicles?



- When lifting Off-Road Vehicles on Two Post Hoists, you need to be especially careful of your pick up points and your weight distribution. Many workshops will use a 4 Post Hoist for lifting Off-Road Vehicles that are over the 60/40 front to rear weight distribution.
- Only use appropriate lifting adaptors and make sure they're clean and in good condition.
- Check your lifting points;
  - If they're muddy or greasy you want to clean the area.
  - If there are signs of rust, you need to make sure that the area will structurally be strong enough to support the weight of the vehicle.
- Know your weights;
  - How much does the vehicle weigh?
  - How much do the load and accessories weigh?
  - Where is the centre of gravity?
  - If you are removing components, how much do they weigh? And,
  - How will that affect the centre of gravity when they are removed?

## Safe Lifting Tips

### Off-Road Vehicles on Two Post Hoists

#### Safe Lifting Tips for Off-Road Vehicles on Two Post Hoists



- When you've got your arms and pick-up pads in position, raise the hoist until the pads just start to take the weight and double check that everything is where it should be; the weight should be supported by all 4 pads, i.e. you must see all 4 pads contacting the vehicle.
- To make sure your vehicle is balanced, raise it up until the tyres are 150mm off the ground and put the hoist on the locks. Stand to the side and put your foot on the bumper so you can put your weight on it and give the vehicle a decent rock to see if it is sitting nice and balanced on the pads. If not, bring the car down and reposition it.
- If you are going to be removing any heavy components or are concerned about the balance of the vehicle, it is really recommended to secure the vehicle by either supporting the vehicle with axle stands or by locking down the lifting point to the pick-up pad. A simple way to do it would be to use heavy duty ratchet straps at each point, hooking them underneath the vehicle to pull it down onto the pick-up pad. When you do this, it doesn't mean you can forget about the balance of the vehicle, as you add and remove components from the vehicle, the centre of gravity is going to move around.
- Always remember that before you ever go under a hoist, make sure it's locked.
- When you're done working, before you bring the vehicle down, make sure the area is completely clear. While you are lowering the vehicle, you need to always keep your eyes on the area under the hoist.  
NOTE: This is especially important in a home workshop as you may have children or pets running around.
- If you have used straps to secure your vehicle, lower the vehicle until the tyres just touch the ground then remove your securing straps.