

# To tip or not to tip

## *A contemporary way to work on the bottom of a forklift*

Access to the underside of forklift trucks is necessary to complete some repairs and to conduct some preventive maintenance procedures. The issue is one of finding safe and efficient access to the underside.

The conventional approach to gaining this access has been with maintenance lifts similar to the hydraulic hoists used in the automotive field. Although they work well, these lifts have specific height and space requirements. They also need ramp access space to permit lifting forklift units. There is no guarantee that the automotive-type hydraulic lifts will provide easy access to the underside components. Once installed, hydraulic lifts can be moved only at substantial expense and with great effort.

Another method of raising forklift trucks for repair and maintenance is more unconventional. This method uses either two chain hoists or one chain hoist and a second forklift to "tip" the forklift unit onto its mast. When this unconventional method is performed properly, the forklift underside is made accessible in an er-

gonomically efficient manner. The tipped forklift is now "in front of" the maintenance worker and not "on top of" the worker.

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On the other hand, if this unconventional method is not performed properly, there is a certainty of significant property

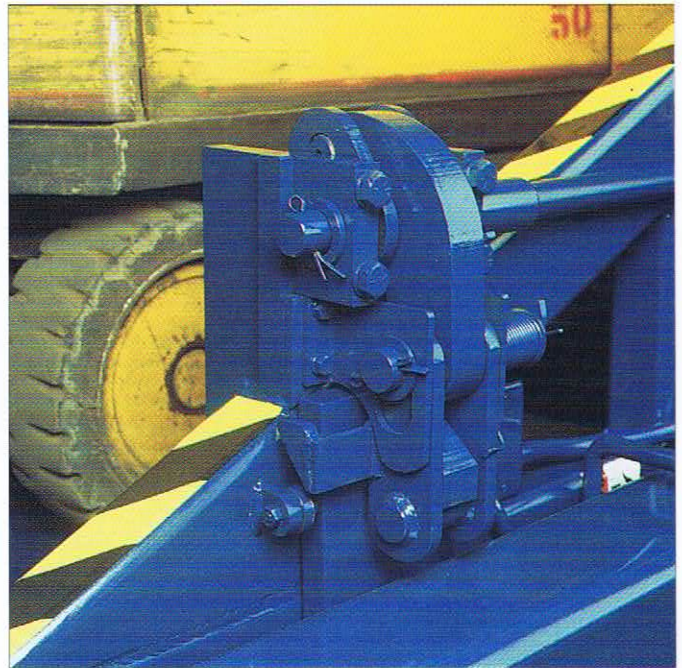
damage and an unreasonable risk of harm to plant personnel.

### **The need exists**

Since most maintenance personnel prefer to work on lift trucks that are standing on their masts, there is a need to find a way to tip them safely. Any device for lifting or tipping forklift trucks must provide a safe and positive locking mechanism during and after the lift. Features should include anything that will make the lift mechanism a "user-friendly" mechanical lift. This includes visual and audible warning devices to inform personnel of the lifting and lowering cycles. The device should be adjustable to accommodate any short-wheelbase industrial vehicle. Of course, the device should be in compliance with applicable ANSI and OSHA requirements.

Tipping the forklift truck allows the normally difficult to reach hydraulic lines to be repaired in minutes rather than hours. Debris and liquids no longer fall on workers to annoy and endanger them. Repairs are no longer performed in an "over the head and under the lift" format. Repairs now take place in an ergonomically efficient manner.

Other advantages of a mechanical tilting mechanism for forklift trucks include:



A standard safety feature should be a safe locking mechanism to hold the lift plates during the lift cycle.

- the ability to test drive motor and drive axle functions while the truck is tilted on end
- no clearance requirement for an approach ramp
- no additional manpower and equipment required for raising and lowering the truck
- easily relocating the device within the plant.

Such a mechanical lifting device for forklift trucks is a simple and economical solution to the industrial vehicle maintenance problem.

®

# Tilt-A-Lift®

## Makes Routine Maintenance as Easy as 1-2-3 !



Now it's easy to save money all while doing a better job servicing your electric pallet trucks. With a Tilt-A-Lift® service lift, you can do the job yourself, in your own plant or warehouse, eliminating expensive service calls.

Keeping your equipment in tip-top condition saves you money. Now you can take care of problems *before* they become major headaches. Tilt-A-Lift® makes it easy to reach vital underbody parts for lubrication, repair and part replace-

The Tilt-A-Lift® service lift is simple to use. Just drive the truck onto the lift forwards or backwards (depending on the area to be serviced). The ramps and runways are easily adjusted to accommodate forklifts, electric pallet trucks and many other industrial vehicles.

Then flip the switch and watch the service lift do the rest. Your vehicle is raised as much as 60 degrees from horizontal.

Replacing those wheels just got a lot easier. All the components are within reach. You can see everything. No more feeling around for that hidden nut or bolt. With your work in front of you, there is less risk of back injury.



**TILT** OR  
**LIFT**  
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# WARNING!!!

**PLEASE DO NOT COMPROMISE SAFETY IN YOUR PLANT OR WAREHOUSE.**

Did you know that a Forklift Truck is NOT DESIGNED to be lifted from under its COUNTERWEIGHT? Forklift Truck Manufacturers recommend that their vehicles be picked up ONLY by the wheels or a SECURE part of the Frame. THE TRUCK'S COUNTERWEIGHT IS NOT CONSIDERED A SECURE PART OF THE VEHICLE FRAME FOR LIFTING by Jacks, Pick-up Bars, Cables, Hoists, Chains, Timbers or Blocks. In addition, many Forklift Truck Counterweights are beveled at the bottom and do not provide a flat/square lifting surface. This can cause the truck to slip off the lifting bar or jack.

**PLEASE NOTE:** O.S.H.A. REQUIRES the use of stands placed under the vehicle FRAME prior to servicing a Forklift Truck that has been lifted by the Counterweight.



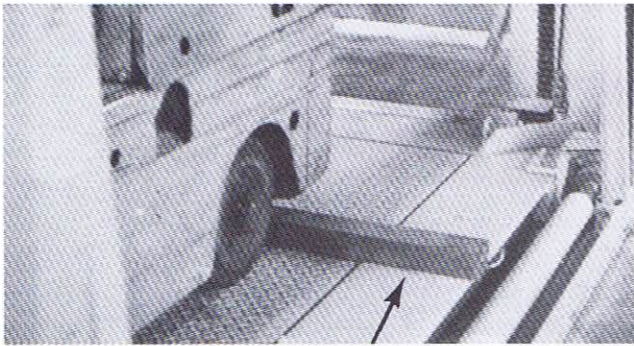
A Counterweight is ADDED to the back of a truck

**WOULD YOU WORK UNDER A FORKLIFT TRUCK THAT WAS LIFTED UP BY THE COUNTERWEIGHT???** . . .

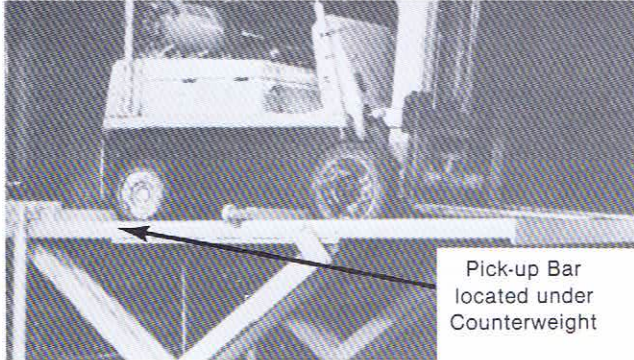
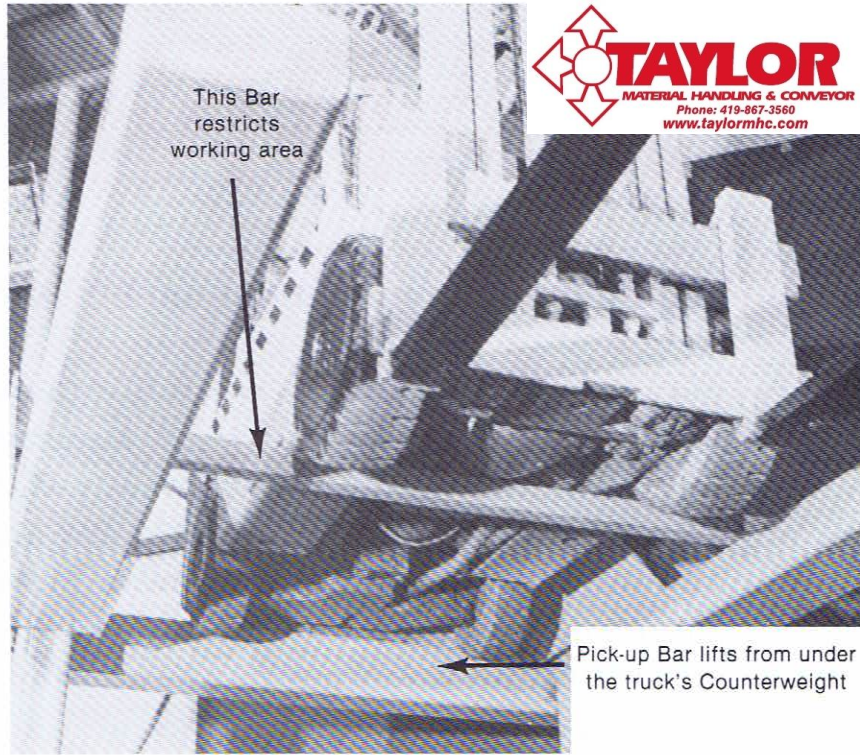
WHY take a chance? WHY use a jack or blocks or a hoist that raises the vehicle up by the counterweight lifting method? WHY use a Fork Truck Service Lift that picks up the truck by placing "Pick-up" lifting bars under the counterweight of the truck?

*(Please turn this page over)*

Some examples of Counterweight Lifting where a "Pick-up Bar" is placed under the truck:

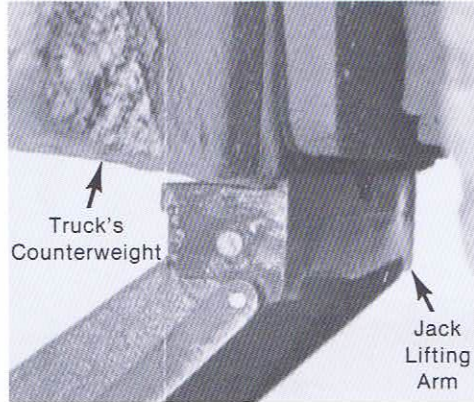


Rear Lifting Bar in place directly under the Counterweight.



Pick-up Bar located under Counterweight

One example of a Jack using a Forklift's Counterweight as a support point for lifting:



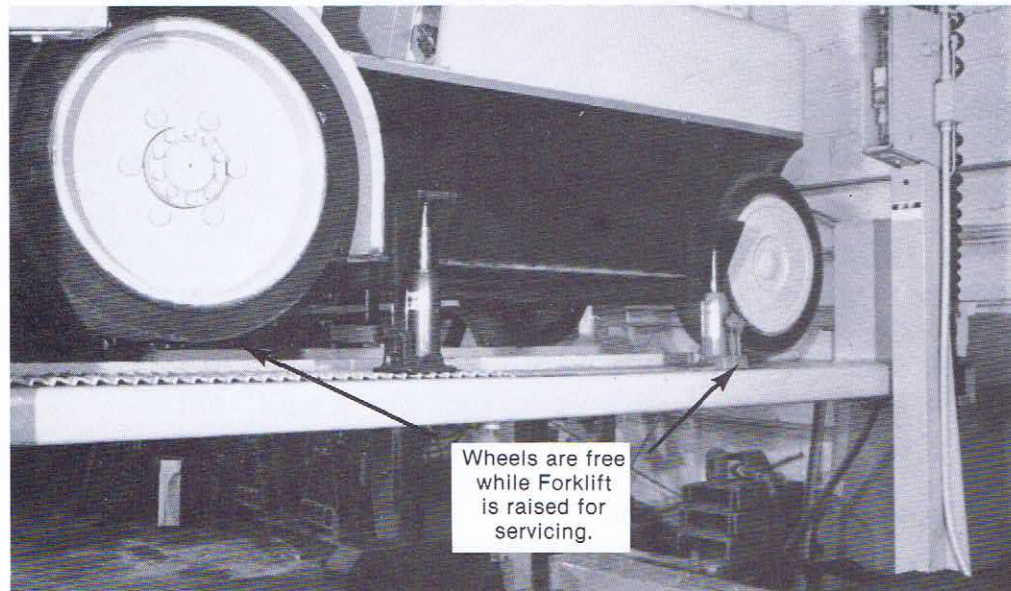
Truck's Counterweight

Jack Lifting Arm

Example of O.S.H.A. **REQUIRED** Jack Stands in use. →



Example of a Fork Truck Service Lift that raises the vehicle by the wheels:



Wheels are free while Forklift is raised for servicing.

This Service Lift lets you "GET TO" all underside areas without taking the risk of lifting under the counterweight. In addition, you can still have the wheels free by using the Accessory. **Counterweight Lifting or Wheels Lifting??**

**IS THERE REALLY ANY CHOICE FOR THE SAFETY AND PROTECTION OF YOUR MEN??**

# HOW MOST FORKLIFT TRUCKS ARE BEING SERVICED TODAY...



This is a classic example of how most industrial vehicles are being serviced today: UNSAFE & INEFFICIENT!

Note that the truck is barely above the serviceman. There is almost no work space available to perform the necessary service required on this truck.

His personal safety is at risk. This heavy lift truck is being supported only by the jack located under the vehicle's counterweight. The jack could slip and the forklift would crush the mechanic. Every year, mechanics are killed when this tragedy occurs.



A forklift's counterweight is never considered a safe point from which to lift a forklift truck. A counterweight is added to the back of a forklift and is not a secure part of the vehicle's frame.

This mechanic is working in an unproductive and uncomfortable position. It is hard to get to vital underside parts.

Now you can save money and do a better job servicing your forklifts. A Tilt-Or-Lift forklift maintenance lift would provide instant, complete access to all primary forklift components.



# WHY TAKE CHANCES?



Pits are dangerous and are outlawed in many states. Pits cannot be relocated when maintenance shops are moved.

Another reason to consider purchasing a Tilt-Or-Lift forklift maintenance lift: Pits are dangerous, expensive to build, outlawed in many states and cannot be moved when the maintenance shop is relocated. Pits can trap a mechanic below ground when explosive fumes ignite. Anyone or anything can fall into a pit. It is hard to lift heavy objects from the pit (transmissions, motors etc). Due to varying widths of forklifts, not all vehicles can be serviced using the pit.



An actual plant forklift repair situation. How much more dangerous can servicing a forklift truck be than this. The employee is risking life and limb. What is to prevent the forks of the large truck from dropping? What is to prevent the smaller truck from slipping off the forks of the larger truck?

The risk to the employee is so great...an accident could result in costly liability lawsuits against the company and its managers. This is not to mention the loss of expensive plant equipment in the event of an accident.

Save time and money and do a better job servicing your industrial vehicle fleet. A Tilt-Or-Lift forklift maintenance lift is the safe, easy solution to this prob-

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