



SCISSOR LIFT TRUCK



INTRODUCTION

The Scissor Lift was first patented in 1963 by Charles Larson of the USA and the original designs are still to this day the foundation for the development of the modern scissor lifts and lift tables which, however, encompass an extensive array of new design details and functionalities. It is a type of platform that can usually only move vertically.

MAIN COMPONENTS

- Hydraulic system
- Platform
- Scissor arms

CONSTRUCTIONAL DETAILS

A **scissor lift** is a type of platform that can usually only move vertically. The mechanism to achieve this is the use of linked, folding supports in a criss-cross "X" pattern, known as a pantograph or scissor mechanism. The upward motion is achieved by the application of pressure to the outside of the lowest set of supports, elongating the crossing pattern, and propelling the work platform vertically. The platform may also have an extending deck to allow closer access to the work area, because of the inherent limits of vertical-only movement.

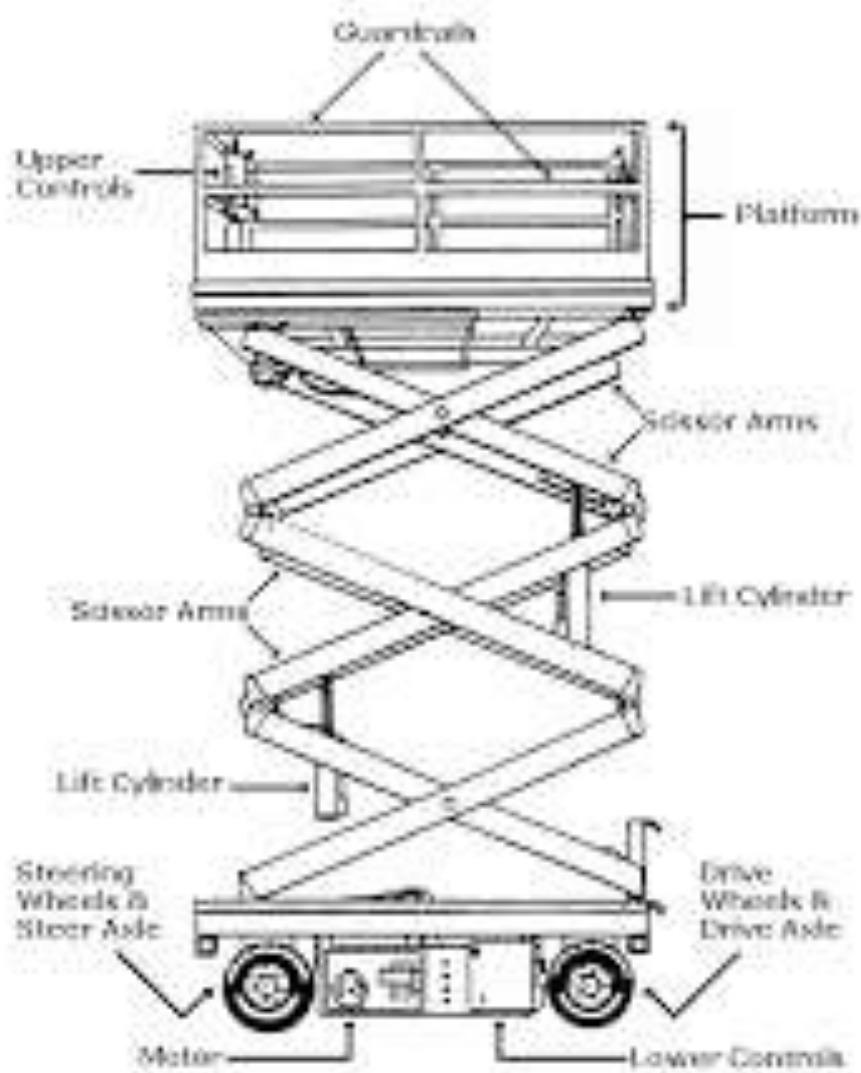
The contraction of the scissor action can be hydraulic, pneumatic or mechanical (via a lead screw or rack and pinion system). Depending on the power system employed on the lift, it may require no power to enter "descent" mode, but rather a simple release of hydraulic or pneumatic pressure. This is the main reason that these methods of powering the lifts are preferred, as it allows a fail-safe option of returning the platform to the ground by release of a manual valve.

Apart from the height and width variables, there are a few considerations required when choosing a scissor lift. **Electric Scissor Lifts** have smaller tyres and can be charged by a standard power point. These machines usually suit level ground surfaces and have zero or minimal fuel emissions. **Diesel Scissor Lifts** have larger rough terrain tyres with high ground clearance for uneven outdoor surface conditions. Many machines contain outriggers that can be deployed to stabilise the machine for operation. A new scissor lift named the Athena bi-levelling scissor lift is an outdoor scissor lift with tracks (instead of tyres) that extends and



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contracts and self-levels the machines while in operation, allowing the machine to operate on steep slopes. Other model variables may also include petrol powered and bi-energy models.



APPLICATION

- Used to lift the man power to the required height for construction and maintenance work
- Used to lift the objects from ground floor to the required top floor
- Used in emergency situations like fire accidents.