



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

COIMBATORE-35.



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Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai.

DEPARTMENT OF AUTOMOBILE ENGINEERING

COURSE NAME : 19AUE308 - SPECIAL VEHICLES

III YEAR /VI SEMESTER

Unit 4- Cranes and Special Utility Vehicle

Topic 5 : Scissors Lift Truck



CONTENT



- Introduction
- Need for Scissors Lift Truck
- Components
- Construction & Working
- Advantages & Disadvantages
- Applications
- Manufacturing Companies



INTRODUCTION



- A motorized vehicle with a railed platform that can be raised straight up is known as a scissor lift.
- The truck carrying that railed platform is known as Scissors Lift Truck.
- Scissors lifts allow workers to work at areas high above ground level without any concern for balance.





NEED FOR SCISSORS LIFT TRUCK



- Usually, the ladder is used to work on the place which is high above the ground level.
- But the ladder can be used to work only upto certain height.
- After that particular height, it is not safe to used ladder.
- So for that purpose we are using scissor lift truck.

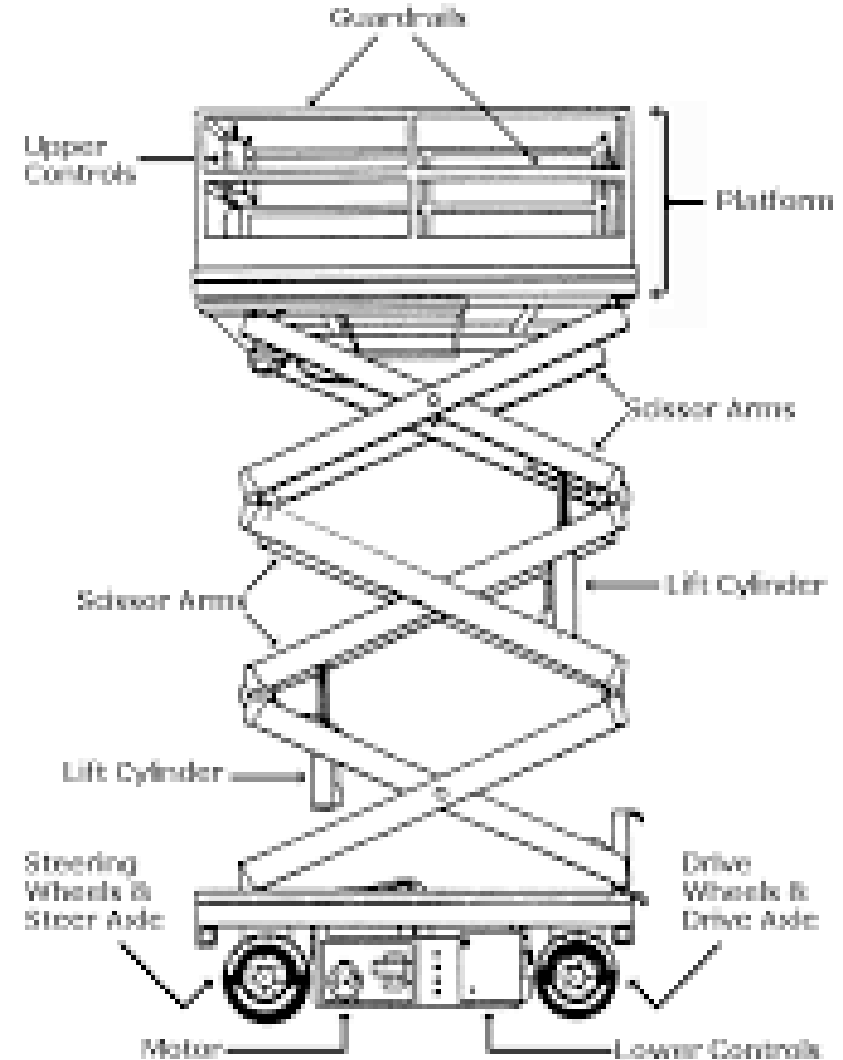




COMPONENTS



- Hydraulic system
- Platform
- Scissor arms





CONSTRUCTION



- A **scissor lift** is a type of platform that can usually only move vertically.
- The use of linked, folding supports in a criss-cross "X" pattern, known as a pantograph or scissor mechanism.





CONSTRUCTION



- The hydraulic cylinder is attached to the scissor arms for stretching the arms.
- The engine power is used for hydraulic cylinder working.
- The whole setup is placed behind the truck.





WORKING PRINCIPLE





ADVANTAGES



- Reduces human risk.
- Extended platform helps to easily access the working area.
- Increase working efficiency.





DISADVANTAGES



- Stability decreases as height increases.
- Does not deal with side loads.
- More maintenance required.





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.

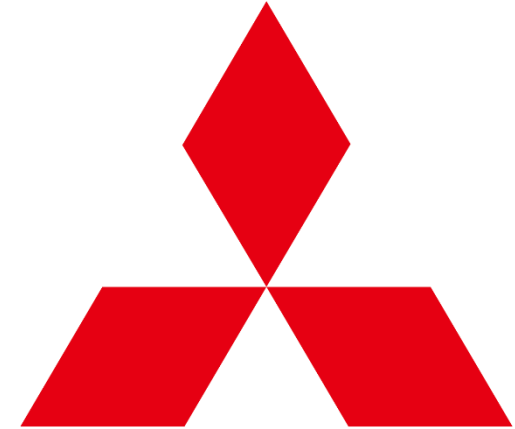




MANUFACTURING COMPANIES



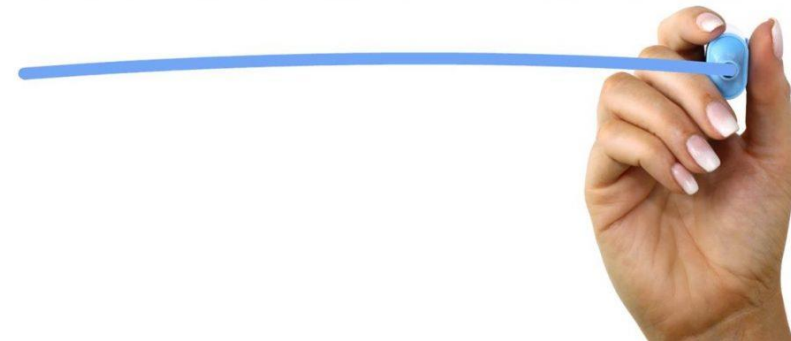
- Snorkel
- JBC
- Jost
- Mitsubishi





1. How scissor arm is raised and lowered?
2. Mention the use of extended platform.
3. What is the cost of Scissors Lift Truck?

ASSESSMENT





REFERENCE



- ❖ <https://raymondhandling.com/dictionary/scissor-lift/#:~:text=A%20motorized%20vehicle%20with%20a,known%20as%20a%20scissor%20lift.&text=Scissors%20lifts%20allow%20workers%20to,the%20were%20using%20a%20ladder.>
- ❖ https://www.youtube.com/watch?v=7kh7Fdf_iNo



THANK YOU !!!