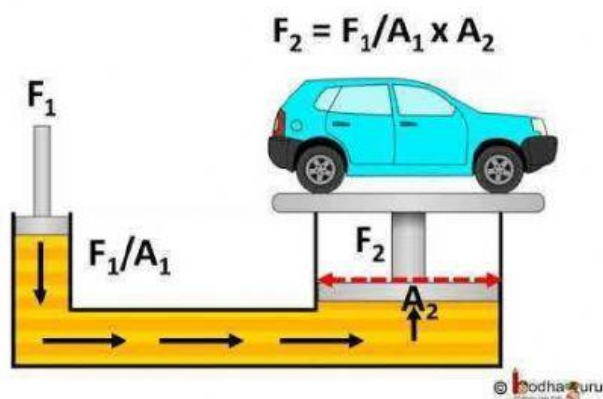


Pascal's principle



A hydraulic lift is used to lift a heavy machine that is pushing down on a 2.8 m^2 platform with a force of $3,700 \text{ N}$. what force must be exerted on a 0.072 m^2 piston to lift the heavy machine?

List the Knowns:

List the unknowns:

$A_1 =$

$A_2 =$

$F_1 =$

$F_2 : ?$

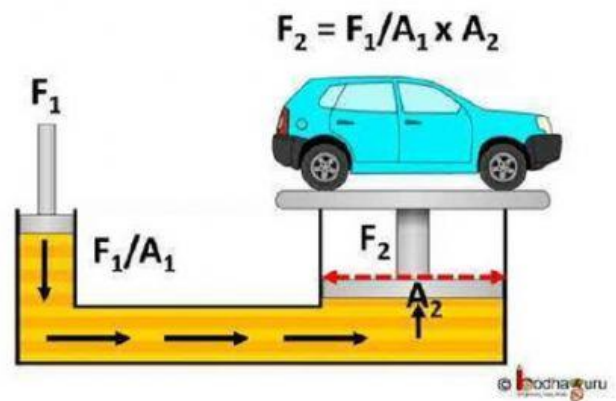
Pascal's principle

$$\frac{F_1}{A_1} = \frac{F_2}{A_2}$$

$$\frac{F_1}{A_2} = \frac{F_2}{A_1}$$

Answer:

A car weighing 15,000 N is on a hydraulic lift platform measuring 10 m². What is the area of the smaller piston if a force of 1,100 N is used to lift the car?



List the Knowns:

F1 =

A2 =

F2 =

List the unknowns:

A1 ?

Pascal's principle

$$\frac{F1}{A1} = \frac{F2}{A2}$$

$$\frac{F1}{A2} = \frac{F2}{A1}$$

Answer: