

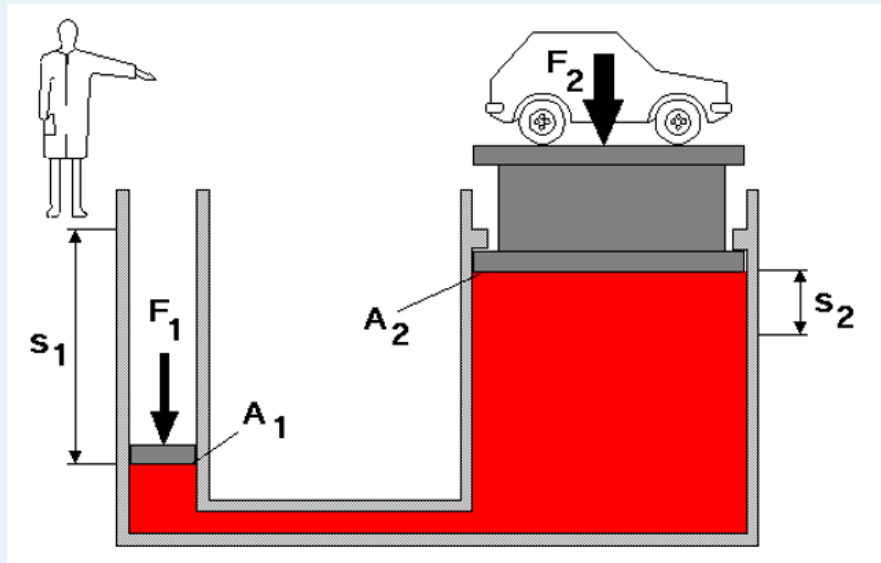
Question 1

Not yet answered

Marked out of 7.00

Flag question

A worker is supposed to lift a car using the configuration below. The fluid is completely isolated from the external. The car mass is 620.  $A_1$  and  $A_2$  are both circular shape. the gravity constant  $g=10 \text{ m/s}^2$ . Round all the answers to 2 decimals Example 6.3423 becomes 6.34.



1. Assuming that the worker can exert a force  $F=1110\text{N}$  and the diameter of the circular area  $A_2$ ,  $d_2=820\text{mm}$ , what is the diameter of the circular area  $A_1$ ?  mm
2. The car should be lifted to a distance  $S_2=900$ , how deep should the operator push the piston  mm

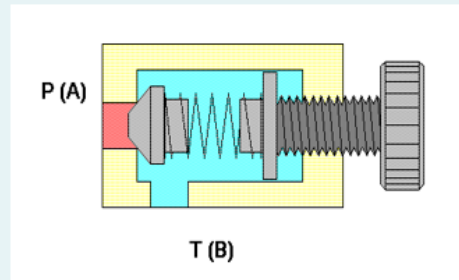
Question 2

Not yet answered

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Flag question

A hydraulic circuit use a compressor that provide a pressure 21.5bar. The hydraulic components can support a pressure up to 3.5bar. It is necessary to use a pressure relieve valve to secure the hydraulic circuit.



The spring inside the pressure relieve valve has a stiffness  $K_s=91\text{N/m}$  and the length of the internal space is equal to 86mm.

You are supposed to choose this pressure relieve, Choose a threshold pressure for this relieve valve.

bar

Question 3

Not yet answered

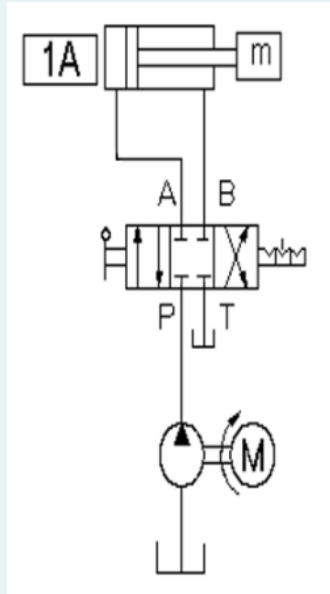
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Flag question

Does the following circuit require Pressure relieve valve and non return valve, answer the question by writing the number of PRV and NR required, if it does not require, write 0 as answer:

1. Pressure Relieve valve

2. Non Return Valve



Question 4

Not yet answered

Marked out of 5.00

Flag question

1. By definition of Fluid power, it is possible to build a hydraulic circuit using any available Fluid
2. Externally toothed gear pump is optimal for application that require high pressure
3. The pressure line filter configuration has an optimal cost for most of the applications
4. Using cooler and heater in hydraulic circuit is efficient and necessary in hydraulic circuits
5. There is no need for a pressure relieve valve if we use a good compressor