

Answer on Question 68080, Physics, Other

Question:

A bicycle tire pump has a piston with area 0.40 in^2 . If a person exerts a force of 23 lb on the piston while inflating a tire, what pressure does this produce on the air in the pump?

Solution:

By the definition of the pressure, we get:

$$P = \frac{F}{A} = \frac{23 \text{ lb}}{0.40 \text{ in}^2} = 57.5 \text{ Psi.}$$

Answer:

$$P = 57.5 \text{ Psi.}$$

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