

Answer on question #53707, Physics / Other —

Question A tire pump has piston whose cross-section area is 0.001 m². If a force of 150 N is applied to the pump, find the pressure on air in the pump.
 $P = F/A$

Solution Pressure p and force F are related as

$$p = \frac{F}{A}$$

where A is cross-section area. Hence

$$p = \frac{150N}{0.001} = 150000 Pa$$