

Fluids – Chapter 15 - Summary

$$\rho = \frac{m}{V} \quad p = \frac{F}{A}$$

$$p = p_0 + \rho g h$$

$$F_b = m_f g = \rho_f V_f g \quad (\text{Archimedes' Principle})$$

$$F_b = F_g \quad (\text{floating})$$

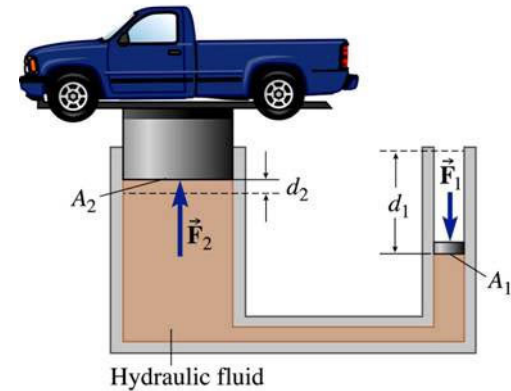
$$m = m_f \Rightarrow \rho V = \rho_f V_f \quad (\text{floating})$$

$$\text{weight}_{\text{app}} = \text{weight} - F_b$$

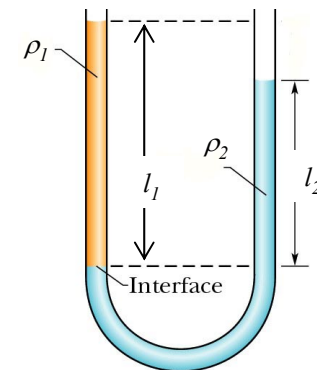
$$R_v = Av = \text{constant}$$

$$A_1 v_1 = A_2 v_2$$

$$p_1 + \frac{1}{2} \rho v_1^2 + \rho g y_1 = p_2 + \frac{1}{2} \rho v_2^2 + \rho g y_2$$



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



$$l_1 \rho_1 = l_2 \rho_2$$