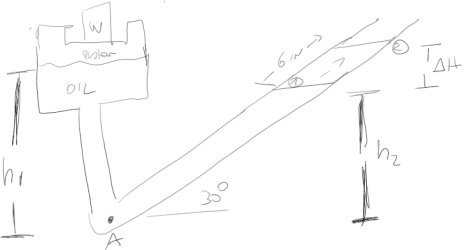

Para $t = t_0$

$$P_A = P_p + h_1 \gamma_{OIL} = h_2 \gamma_{OIL}$$

$$P_A = W_p/A_p + h_1 \gamma_{OIL} = h_2 \gamma_{OIL}$$

$$\frac{W_p}{A_p} + h_1 \gamma_{OIL} - h_2 \gamma_{OIL} = 0$$

Para $t = t_2$

$$P_A = \frac{W_p}{A_p} + h_1 \gamma_{OIL} + \frac{W}{A_p} = \gamma_{OIL}(h_2 + \Delta H)$$

$$\left(\frac{W_p}{A_p} + h_1 \gamma_{oil} - \gamma_{OIL} h_2\right) - \gamma_{OIL} \Delta H + \frac{W}{A_p} = 0$$

$$-\gamma_{oil} \Delta H + \frac{W}{A_p} = 0$$

$$W = \frac{\gamma_{oil} \Delta H}{A_p}$$

$$W = \frac{58.2 \frac{lbf}{ft^2} \cdot (\sin 30° \cdot 6 ft)}{\frac{\pi (6 in)^2}{4}}$$