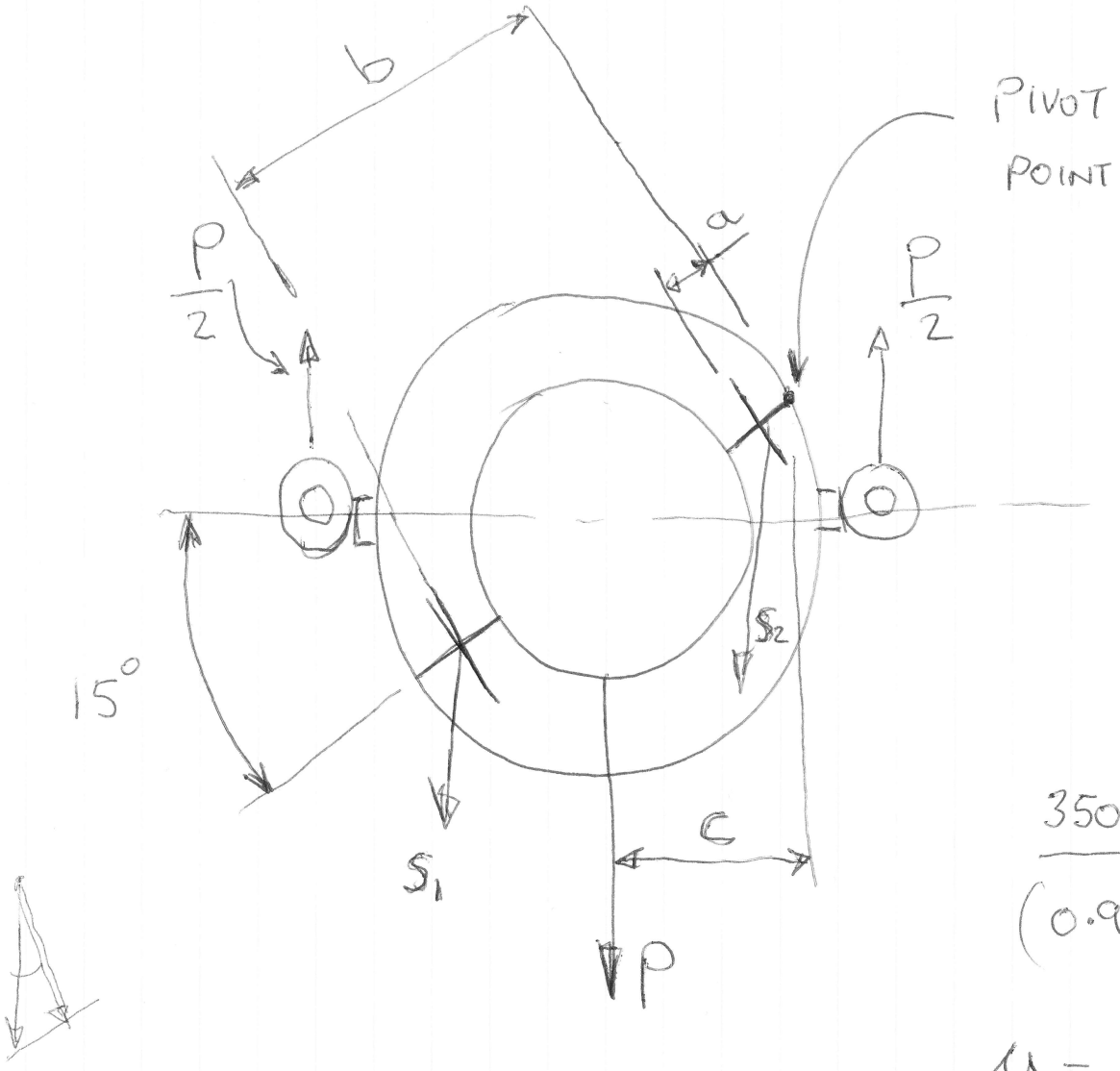


$$a = \left(\frac{8.75" - 5"}{4}\right) = \frac{3.75}{4} = 0.9375"$$

$$b = 7.3125"$$

$$c = \frac{8.75}{2} \times \cos 15^\circ = 4.226"$$

$$P \times c = \mu \times a^2 + \mu \times b^2$$

$$\frac{3500 \times 4.226}{(0.9375^2 + 7.3125^2)} = \mu$$

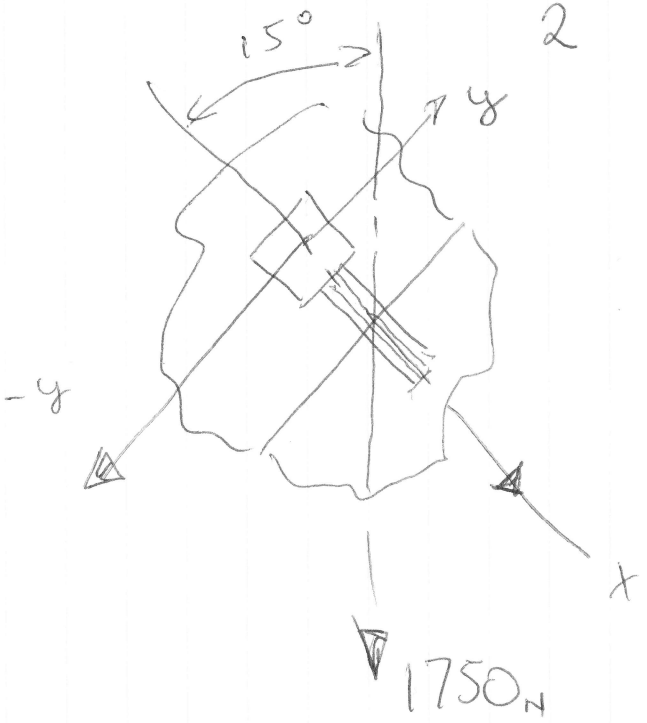
~~bolt load / bolt distance~~

μ = LOAD / DISTANCE

$$\mu = 272.1356907$$

MAX BOLT LOAD AT (b) = $272.1356907 \times 7.3125 = \underline{1990 \text{ lbf}}$

$S_1 = S_2 = \frac{3500}{2} = 1750 lbf$



RESOLVE TO x & y COMPONENTS

$F_x = 1750 \times \cos 15^\circ = 1690.37 lbf$

$F_y = 1750 \times \sin 15^\circ = 452.933 lbf$

NOW F_x IS ADDITIONAL TENSION WHICH CAN BE ADDED TO THE TENSION DUE TO THE OFFSET ON SHEET 1

∴ $1690.37 + 1990 = 3680.37 lbf$,

THE 452.9 lbf IS THE SHEAR FORCE AT 90° TO BOLT AXIS.