

10/18/12

$$\sigma' = \sqrt{\sigma_x^2 + \sigma_y^2 - \sigma_x \sigma_y + 3 \tau_{xy}^2}$$

$$= \sqrt{(17,980)^2 + (36,910)^2 - (17,980)(36,910) + 3(6,585)^2}$$

SW = 32, 218 psi

S_{12} 12,580

$$\sigma' = \sqrt{(23,680)^2 + (48,620)^2 - (23,680)(48,620) + 3(8,674)^2}$$

SW = 42,458 - psi

$$SW)_{\Delta \text{Axial}} = 0.2048 \text{ in}$$

$$SW)_{\Delta y} = .00531$$