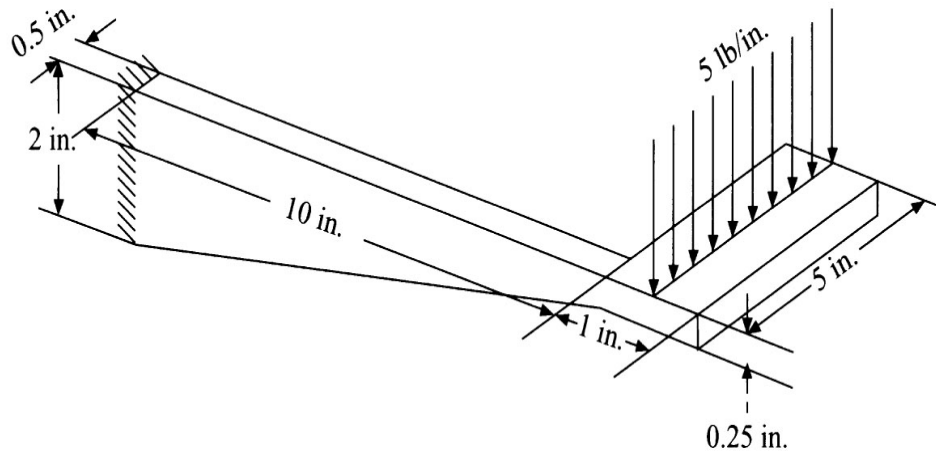


HW 8
EML4536/5537
Due on 11/19/04

- Analyse the structural steel pedal of a vehicle and indicate the maximum stress and deflection. If the load intensity is increased to 20 lb/in, indicate the critical stresses and check for the material yielding.

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- A device is to be hydraulically loaded to resist an upward force $P = 6000$ lb as shown in the Figure below. Determine the thickness of the device such that the maximum deflection is 0.1 in. vertically and the maximum stress is less than the yield strength using a factor of safety of 2. The device must fit in a space of 7 in. high, 3 in. wide, and 2.3 in. deep. The top flange is bent vertically as shown, and device is clamped to the floor. Use steel for the material.

