



$$OTM = Vh$$

$$RM = \frac{Dl}{2}$$

$$T = \frac{\frac{2}{Vh} - \frac{Dl}{2}}{l} = \frac{Vh}{l} - \frac{D}{2} = vh - \frac{D}{2}$$

$v = V/l$

$$c = \frac{Vh + Dl/2}{l} = vh + \frac{D}{2}$$

$$\frac{T+D}{h} = v + \frac{D}{2h}$$

$$c/h = v + \frac{D}{2h}$$

Take moment  
about this  
point.



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Right-hand rule:

$$\underbrace{(v + \frac{D}{2}h)}_{\text{magnitude}} \underbrace{(\frac{l}{2})}_{\text{arm}} = \underbrace{(v \frac{l}{2})}_{\text{mag}} \underbrace{(h)}_{\text{arm}}$$

$$\frac{vhl}{2} + \frac{Dl}{4} = \frac{vhl}{2}$$

$$\frac{Dl}{4} \neq 0 \quad \text{Not in equilibrium.}$$

Also note that if  $v = v_{tab}$ , the vertical shear on panels is beyond design capacity as it is  $v + \frac{D}{2}h$ . In other words, even if it were in equilibrium, it would be overloaded.