$$\left(\dot{\vec{K}}_O\right)_{tel} \equiv \vec{0}$$

$$\vec{\Omega} \times \vec{K}_O = \begin{vmatrix} \vec{e}_1 & \vec{e}_2 & \vec{e}_3 \\ 0 & 0 & \Omega_3 \\ 0 & K_{O2} & K_{O3} \end{vmatrix} = \left[-\Omega_3 K_{O2}, 0, 0\right] =$$

$$= \left[-\frac{V_B}{h}\cdot\left(-I_2 \frac{V_A}{r}\right), 0, 0\right] = \left[\frac{1}{2} m r^2 \frac{V_B}{h}\cdot\frac{V_A}{r}, 0, 0\right]$$

$$\left(\dot{\vec{K}}_O\right)_{tel} + \vec{\Omega} \times \vec{K}_O = \vec{M}_O(\vec{Q}) + \vec{M}_O(\vec{N})$$

$$\frac{1}{2} m r^2 \frac{V_B}{h} \frac{V_A}{r} = -mg(h+a) + N(h+a)$$

$$N = mg + \frac{1}{2} m V_B^2 \frac{r}{h^2}$$