COM info

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ELEMENT 4: $\overline{BC}$

$$\vec{r}_{cm,4} = \begin{cases} r_{cm4,x} : \overline{A_0A}\cos\theta_2 + \frac{\overline{BC}}{2}\cos\theta_4 \\ r_{cm4,y} : \overline{A_0A}\sin\theta_2 + \frac{\overline{BC}}{2}\sin\theta_4 \end{cases}$$

$$\vec{V}_{cm,4} = \begin{cases} V_{cm4,x} : -\overline{A_0A}\,\omega_2\sin\theta_2 - \frac{\overline{BC}}{2}\sin\theta_4\,\omega_4 \\ V_{cm4,y} : \overline{A_0A}\,\omega_2\cos\theta_2 + \frac{\overline{BC}}{2}\cos\theta_4\,\omega_4 \end{cases}$$

$$\vec{a}_{cm,4} = \begin{cases} a_{cm4,x} : -\overline{A_0A}\,\omega_2^2\cos\theta_2 - \frac{\overline{BC}}{2}\left[\alpha_4\cos\theta_4 + \omega_4^2\cos\theta_4\right] \\ a_{cm4,y} : \overline{A_0A}(-\omega_2^2)\sin\theta_2 + \frac{\overline{BC}}{2}\left[\alpha_4\sin\theta_4 - \omega_4^2\sin\theta_4\right] \end{cases}$$

ELEMENT 5: $\overline{B_0B}$

$$\vec{r}_{B_0B} = \begin{cases} r_{B_0Bx} : \frac{\overline{B_0B}}{2}\cos\theta_5 \\ r_{B_0By} : \frac{\overline{B_0B}}{2}\sin\theta_5 \end{cases}$$

$$\vec{V}_{B_0B} = \begin{cases} V_{B_0Bx} : \frac{\overline{B_0B}}{2}\sin\theta_5(-\omega_5) \\ V_{B_0By} : \frac{\overline{B_0B}}{2}\cos\theta_5(\omega_5) \end{cases}$$

$$\vec{a}_{B_0B} = \begin{cases} a_{B_0Bx} : \frac{\overline{B_0B}}{2}\left[-\alpha_5\sin\theta_5 - \omega_5^2\cos\theta_5\right] \\ a_{B_0By} : \frac{\overline{B_0B}}{2}\left[\alpha_5\cos\theta_5 - \omega_5^2\sin\theta_5\right] \end{cases}$$

ELEMENT 6: Point C

$$\vec{r}_C = Rx \qquad \vec{V}_C = Rx' \qquad \vec{a}_C = Rx''$$

ELEMENT 3: Point A

$$\vec{r}_A = \begin{cases} r_{Ax} : \overline{A_0A}\cos\theta_2 \\ r_{Ay} : \overline{A_0A}\sin\theta_2 \end{cases}$$

$$\vec{V}_A = \begin{cases} V_{Ax} : -\overline{A_0A}\,\omega_2\sin\theta_2 \\ V_{Ay} : \overline{A_0A}\,\omega_2\cos\theta_2 \end{cases}$$

$$\vec{a}_A = \begin{cases} a_{Ax} : -\overline{A_0A}\,\omega_2^2\cos\theta_2 \\ a_{Ay} : \overline{A_0A}(-\omega_2^2)\sin\theta_2 \end{cases}$$