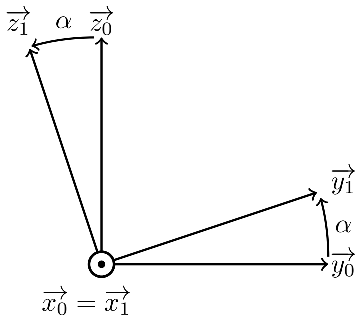
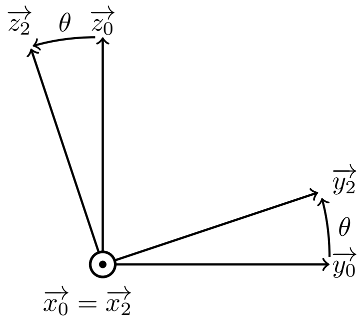




$$\begin{bmatrix} A_1 & 0 & 0 \\ 0 & B_1 & 0 \\ 0 & 0 & B_1 \end{bmatrix}$$

$$\begin{bmatrix} A_2 & 0 & -E_2 \\ 0 & B_2 & 0 \\ -E_2 & 0 & C_2 \end{bmatrix}$$

$$\begin{bmatrix} A_3 & 0 & 0 \\ 0 & B_3 & 0 \\ 0 & 0 & B_3 \end{bmatrix}$$

$\lambda \times \dot\theta \cdot \overrightarrow{y_2}$

$(-E_2 \times \dot\theta \cdot \overrightarrow{x_2} + 0 \cdot \overrightarrow{y_2} + C_2 \times \dot\theta \cdot \overrightarrow{z_2} - ((a \cdot \overrightarrow{z_0} + \lambda \cdot \overrightarrow{x_2}) \wedge M_2 \cdot ((a \cdot \overrightarrow{z_0} + \lambda \cdot \overrightarrow{x_2}) \wedge \dot\theta \cdot \overrightarrow{z_2})))$

$(-E_2 \times \dot\theta \cdot \overrightarrow{x_2} + C_2 \times \dot\theta \cdot \overrightarrow{z_2} - a \times M_2 \times \lambda \times \dot\theta \cdot \overrightarrow{x_2} + \lambda \times M_2 \times \lambda \times \dot\theta \cdot \overrightarrow{z_2})$

$$-\left.\frac{d((a \cdot \overrightarrow{z_0} + \lambda \cdot \overrightarrow{x_2}) \wedge \dot\theta \cdot \overrightarrow{z_2})}{dt}\right|_{R_0}$$

$(-E_2 \times \ddot\theta \cdot \overrightarrow{x_2} + -E_2 \times \dot\theta \cdot (\dot\theta \cdot \overrightarrow{z_2} \wedge \overrightarrow{x_2}) + 0 \cdot \overrightarrow{y_2} + 0 \cdot (\dot\theta \cdot \overrightarrow{z_2} \wedge \overrightarrow{y_2}) + C_2 \times \ddot\theta \cdot \overrightarrow{z_2} + C_2 \times \dot\theta \cdot (\dot\theta \cdot \overrightarrow{z_2} \wedge \overrightarrow{z_2}) - ((a \cdot \overrightarrow{z_0} + \lambda \cdot \overrightarrow{x_2}) \wedge M_2 \cdot \left.\frac{d((a \cdot \overrightarrow{z_0} + \lambda \cdot \overrightarrow{x_2}) \wedge \dot\theta \cdot \overrightarrow{z_2})}{dt}\right|_{R_0}))$

$(-E_2 \times \ddot\theta \cdot \overrightarrow{x_2} - E_2 \times \dot\theta \times \dot\theta \cdot \overrightarrow{y_2} + C_2 \times \ddot\theta \cdot \overrightarrow{z_2} - a \times M_2 \cdot ((\overrightarrow{z_0} \wedge \lambda \times \dot\theta \times \dot\theta \cdot \overrightarrow{x_2}) + (\overrightarrow{z_0} \wedge (a \cdot 0 + \lambda \cdot -\ddot\theta \cdot \overrightarrow{y_2}))) - \lambda \times M_2 \cdot ((\overrightarrow{x_2} \wedge \lambda \times \dot\theta \times \dot\theta \cdot \overrightarrow{x_2}) + (\overrightarrow{x_2} \wedge (a \cdot 0 + \lambda \cdot -\ddot\theta \cdot \overrightarrow{y_2}))))$

$(-E_2 \times \ddot\theta \cdot \overrightarrow{x_2} - E_2 \times \dot\theta \times \dot\theta \cdot \overrightarrow{y_2} + C_2 \times \ddot\theta \cdot \overrightarrow{z_2} - a \times M_2 \cdot (\lambda \times \dot\theta \times \dot\theta \cdot \overrightarrow{y_2} + \lambda \times \ddot\theta \cdot \overrightarrow{x_2}) - \lambda \times M_2 \cdot -\lambda \times \ddot\theta \cdot \overrightarrow{z_2})$

$(-E_2 \times \ddot\theta \cdot \overrightarrow{x_2} - E_2 \times \dot\theta \times \dot\theta \cdot \overrightarrow{y_2} + C_2 \times \ddot\theta \cdot \overrightarrow{z_2} - a \times M_2 \cdot (\lambda \times \dot\theta \times \dot\theta \cdot \overrightarrow{y_2} + \lambda \times \ddot\theta \cdot \overrightarrow{x_2}) + \lambda \times M_2 \times \lambda \times \ddot\theta \cdot \overrightarrow{z_2})$

$(-E_2 \times \ddot\theta \cdot \overrightarrow{x_2} - E_2 \times \dot\theta \times \dot\theta \cdot \overrightarrow{y_2} + C_2 \times \ddot\theta \cdot \overrightarrow{z_2} - a \times M_2 \cdot (\lambda \times \dot\theta \times \dot\theta \cdot \overrightarrow{y_2} + \lambda \times \ddot\theta \cdot \overrightarrow{x_2}) + \lambda \times M_2 \times \lambda \times \ddot\theta \cdot \overrightarrow{z_2})$

$(-(E_2 \times \ddot\theta \cdot \overrightarrow{x_2} + E_2 \times \dot\theta \cdot (\dot\theta \cdot \overrightarrow{z_2} \wedge \overrightarrow{x_2})) + (C_2 \times \ddot\theta \cdot \overrightarrow{z_2} + C_2 \times \dot\theta \cdot (\dot\theta \cdot \overrightarrow{z_2} \wedge \overrightarrow{z_2})) - ((a \cdot \overrightarrow{z_0} + \lambda \cdot \overrightarrow{x_2}) \wedge M_2 \cdot \left.\frac{d((a \cdot \overrightarrow{z_0} + \lambda \cdot \overrightarrow{x_2}) \wedge \dot\theta \cdot \overrightarrow{z_2})}{dt}\right|_{R_0}))$

$(-(E_2 \times \ddot\theta \cdot \overrightarrow{x_2} + E_2 \times \dot\theta \times \dot\theta \cdot \overrightarrow{y_2}) + (C_2 \times \ddot\theta \cdot \overrightarrow{z_2} + \vec{0}) - (a \times M_2 \cdot ((\overrightarrow{z_0} \wedge \lambda \times \dot\theta \times \dot\theta \cdot \overrightarrow{x_2}) + (\overrightarrow{z_0} \wedge (a \cdot (\vec{0} + \dot\theta \cdot (\overrightarrow{z_0} \wedge \vec{0})) + \lambda \cdot (-\ddot\theta \cdot \overrightarrow{y_2} + \dot\theta \cdot (\overrightarrow{x_2} \wedge \vec{0}))))) + \lambda \times M_2 \cdot ((\overrightarrow{x_2} \wedge \lambda \times \dot\theta \times \dot\theta \cdot \overrightarrow{x_2}) + (\overrightarrow{x_2} \wedge (a \cdot (\vec{0} + \dot\theta \cdot (\overrightarrow{z_0} \wedge \vec{0})) + \lambda \cdot (-\ddot\theta \cdot \overrightarrow{y_2} + \dot\theta \cdot (\overrightarrow{x_2} \wedge \vec{0})))))))$

$(-(E_2 \times \ddot\theta \cdot \overrightarrow{x_2} + E_2 \times \dot\theta \times \dot\theta \cdot \overrightarrow{y_2}) + (C_2 \times \ddot\theta \cdot \overrightarrow{z_2} + \vec{0}) - (a \times M_2 \cdot (\lambda \times \dot\theta \times \dot\theta \cdot \overrightarrow{y_2} + (\vec{0} + \lambda \times \ddot\theta \cdot \overrightarrow{x_2})) + \lambda \times M_2 \cdot (\vec{0} + (\vec{0} - \lambda \times \ddot\theta \cdot \overrightarrow{z_2}))))$

$(-(E_2 \times \ddot\theta \cdot \overrightarrow{x_2} + E_2 \times \dot\theta \times \dot\theta \cdot \overrightarrow{y_2}) + (C_2 \times \ddot\theta \cdot \overrightarrow{z_2} + \vec{0}) - (a \times M_2 \cdot (\lambda \times \dot\theta \times \dot\theta \cdot \overrightarrow{y_2} + (\vec{0} + \lambda \times \ddot\theta \cdot \overrightarrow{x_2})) + \lambda \times M_2 \cdot (\vec{0} + (\vec{0} - \lambda \times \ddot\theta \cdot \overrightarrow{z_2}))))$

$(-(E_2 \times \ddot\theta \cdot \overrightarrow{x_2} + E_2 \times \dot\theta \times \dot\theta \cdot \overrightarrow{y_2}) + (C_2 \times \ddot\theta \cdot \overrightarrow{z_2} + \vec{0}) - (a \times M_2 \cdot (\lambda \times \dot\theta \times \dot\theta \cdot \overrightarrow{y_2} + (\vec{0} + \lambda \times \ddot\theta \cdot \overrightarrow{x_2})) + \lambda \times M_2 \cdot (\vec{0} + (\vec{0} - \lambda \times \ddot\theta \cdot \overrightarrow{z_2}))))$

$(-E_2 \times \ddot\theta \cdot \overrightarrow{x_2} - E_2 \times \dot\theta \cdot (\dot\theta \cdot \overrightarrow{z_2} \wedge \overrightarrow{x_2}) + C_2 \times \ddot\theta \cdot \overrightarrow{z_2} + C_2 \times \dot\theta \cdot (\dot\theta \cdot \overrightarrow{z_2} \wedge \overrightarrow{z_2}) - ((a \cdot \overrightarrow{z_0} + \lambda \cdot \overrightarrow{x_2}) \wedge M_2 \cdot \left.\frac{d((a \cdot \overrightarrow{z_0} + \lambda \cdot \overrightarrow{x_2}) \wedge \dot\theta \cdot \overrightarrow{z_2})}{dt}\right|_{R_0}))$

$(-E_2 \times \ddot\theta \cdot \overrightarrow{x_2} - E_2 \times \dot\theta \times \dot\theta \cdot \overrightarrow{y_2} + C_2 \times \ddot\theta \cdot \overrightarrow{z_2} + \vec{0} - (a \times M_2 \cdot ((\overrightarrow{z_0} \wedge \lambda \times \dot\theta \times \dot\theta \cdot \overrightarrow{x_2}) + (\overrightarrow{z_0} \wedge (a \cdot (\vec{0} + \dot\theta \cdot (\overrightarrow{z_0} \wedge \vec{0})) + \lambda \cdot (-\ddot\theta \cdot \overrightarrow{y_2} + \dot\theta \cdot (\overrightarrow{x_2} \wedge \vec{0}))))) + \lambda \times M_2 \cdot ((\overrightarrow{x_2} \wedge \lambda \times \dot\theta \times \dot\theta \cdot \overrightarrow{x_2}) + (\overrightarrow{x_2} \wedge (a \cdot (\vec{0} + \dot\theta \cdot (\overrightarrow{z_0} \wedge \vec{0})) + \lambda \cdot (-\ddot\theta \cdot \overrightarrow{y_2} + \dot\theta \cdot (\overrightarrow{x_2} \wedge \vec{0})))))))$

$(-E_2 \times \ddot\theta \cdot \overrightarrow{x_2} - E_2 \times \dot\theta \times \dot\theta \cdot \overrightarrow{y_2} + C_2 \times \ddot\theta \cdot \overrightarrow{z_2} + \vec{0} - (a \times M_2 \cdot (\lambda \times \dot\theta \times \dot\theta \cdot \overrightarrow{y_2} + (\vec{0} + \lambda \times \ddot\theta \cdot \overrightarrow{x_2})) + \lambda \times M_2 \cdot (\vec{0} + (\vec{0} - \lambda \times \ddot\theta \cdot \overrightarrow{z_2}))))$

$(-E_2 \times \ddot\theta \cdot \overrightarrow{x_2} - E_2 \times \dot\theta \times \dot\theta \cdot \overrightarrow{y_2} + C_2 \times \ddot\theta \cdot \overrightarrow{z_2} + \vec{0} - (a \times M_2 \cdot (\lambda \times \dot\theta \times \dot\theta \cdot \overrightarrow{y_2} + (\vec{0} + \lambda \times \ddot\theta \cdot \overrightarrow{x_2})) + \lambda \times M_2 \cdot (\vec{0} + (\vec{0} - \lambda \times \ddot\theta \cdot \overrightarrow{z_2}))))$

$(-E_2 \times \ddot\theta \cdot \overrightarrow{x_2} - E_2 \times \dot\theta \times \dot\theta \cdot \overrightarrow{y_2} + C_2 \times \ddot\theta \cdot \overrightarrow{z_2} + \vec{0} - (a \times M_2 \cdot (\lambda \times \dot\theta \times \dot\theta \cdot \overrightarrow{y_2} + (\vec{0} + \lambda \times \ddot\theta \cdot \overrightarrow{x_2})) + \lambda \times M_2 \cdot (\vec{0} + (\vec{0} - \lambda \times \ddot\theta \cdot \overrightarrow{z_2}))))$

$$(-E_2 \times \ddot{\theta} \cdot \overrightarrow{x_2} - E_2 \times \dot{\theta} \cdot (\dot{\theta} \cdot \overrightarrow{z_2} \wedge \overrightarrow{x_2}) + C_2 \times \ddot{\theta} \cdot \overrightarrow{z_2} + C_2 \times \dot{\theta} \cdot (\dot{\theta} \cdot \overrightarrow{z_2} \wedge \overrightarrow{z_2}) - ((a \cdot \overrightarrow{z_0} + \lambda \cdot \overrightarrow{x_2}) \wedge M_2 \cdot \left. \frac{d((a \cdot \overrightarrow{z_0} + \lambda \cdot \overrightarrow{x_2}) \wedge \dot{\theta} \cdot \overrightarrow{z_2})}{dt} \right|_{R_0}))$$

$$(-E_2 \times \ddot{\theta} \cdot \overrightarrow{x_2} - E_2 \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{y_2} + C_2 \times \ddot{\theta} \cdot \overrightarrow{z_2} + \vec{0} - (a \times M_2 \cdot ((\overrightarrow{z_0} \wedge \lambda \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{x_2}) + (\overrightarrow{z_0} \wedge (a \cdot (\vec{0} + \dot{\theta} \cdot (\overrightarrow{z_0} \wedge \vec{0})) + \lambda \cdot (-\ddot{\theta} \cdot \overrightarrow{y_2} + \dot{\theta} \cdot (\overrightarrow{x_2} \wedge \vec{0}))))) + \lambda \times M_2 \cdot ((\overrightarrow{x_2} \wedge \lambda \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{x_2}) + (\overrightarrow{x_2} \wedge (a \cdot (\vec{0} + \dot{\theta} \cdot (\overrightarrow{z_0} \wedge \vec{0})) + \lambda \cdot (-\ddot{\theta} \cdot \overrightarrow{y_2} + \dot{\theta} \cdot (\overrightarrow{x_2} \wedge \vec{0})))))))$$

$$(-E_2 \times \ddot{\theta} \cdot \overrightarrow{x_2} - E_2 \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{y_2} + C_2 \times \ddot{\theta} \cdot \overrightarrow{z_2} + \vec{0} - (a \times M_2 \cdot (\lambda \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{y_2} + (\vec{0} + \lambda \times \ddot{\theta} \cdot \overrightarrow{x_2})) + \lambda \times M_2 \cdot (\vec{0} + (\vec{0} - \lambda \times \ddot{\theta} \cdot \overrightarrow{z_2}))))$$

$$(-E_2 \times \ddot{\theta} \cdot \overrightarrow{x_2} - E_2 \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{y_2} + C_2 \times \ddot{\theta} \cdot \overrightarrow{z_2} + \vec{0} - (a \times M_2 \cdot (\lambda \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{y_2} + (\vec{0} + \lambda \times \ddot{\theta} \cdot \overrightarrow{x_2})) + \lambda \times M_2 \cdot (\vec{0} + (\vec{0} - \lambda \times \ddot{\theta} \cdot \overrightarrow{z_2}))))$$

$$(-E_2 \times \ddot{\theta} \cdot \overrightarrow{x_2} - E_2 \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{y_2} + C_2 \times \ddot{\theta} \cdot \overrightarrow{z_2} + \vec{0} - (a \times M_2 \cdot (\lambda \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{y_2} + (\vec{0} + \lambda \times \ddot{\theta} \cdot \overrightarrow{x_2})) + \lambda \times M_2 \cdot (\vec{0} + (\vec{0} - \lambda \times \ddot{\theta} \cdot \overrightarrow{z_2}))))$$

$$(-E_2 \times \ddot{\theta} \cdot \overrightarrow{x_2} - E_2 \times \dot{\theta} \cdot (\dot{\theta} \cdot \overrightarrow{z_2} \wedge \overrightarrow{x_2}) + C_2 \times \ddot{\theta} \cdot \overrightarrow{z_2} + C_2 \times \dot{\theta} \cdot (\dot{\theta} \cdot \overrightarrow{z_2} \wedge \overrightarrow{z_2}) - ((a \cdot \overrightarrow{z_0} + \lambda \cdot \overrightarrow{x_2}) \wedge M_2 \cdot \left. \frac{d((a \cdot \overrightarrow{z_0} + \lambda \cdot \overrightarrow{x_2}) \wedge \dot{\theta} \cdot \overrightarrow{z_2})}{dt} \right|_{R_0}))$$

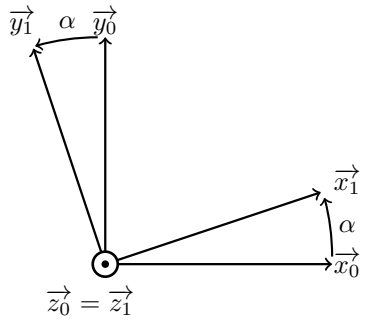
$$(-E_2 \times \ddot{\theta} \cdot \overrightarrow{x_2} - E_2 \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{y_2} + C_2 \times \ddot{\theta} \cdot \overrightarrow{z_2} - a \times M_2 \cdot ((\overrightarrow{z_0} \wedge \lambda \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{x_2}) - (\overrightarrow{z_0} \wedge \lambda \times \ddot{\theta} \cdot \overrightarrow{y_2})) - \lambda \times M_2 \cdot ((\overrightarrow{x_2} \wedge \lambda \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{x_2}) - (\overrightarrow{x_2} \wedge \lambda \times \ddot{\theta} \cdot \overrightarrow{y_2})))$$

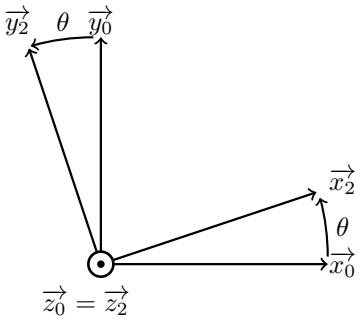
$$(-E_2 \times \ddot{\theta} \cdot \overrightarrow{x_2} - E_2 \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{y_2} + C_2 \times \ddot{\theta} \cdot \overrightarrow{z_2} - a \times M_2 \cdot (\lambda \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{y_2} + \lambda \times \ddot{\theta} \cdot \overrightarrow{x_2}) + \lambda \times M_2 \times \lambda \times \ddot{\theta} \cdot \overrightarrow{z_2})$$

$$(-E_2 \times \ddot{\theta} \cdot \overrightarrow{x_2} - E_2 \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{y_2} + C_2 \times \ddot{\theta} \cdot \overrightarrow{z_2} - a \times M_2 \cdot (\lambda \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{y_2} + \lambda \times \ddot{\theta} \cdot \overrightarrow{x_2}) + \lambda \times M_2 \times \lambda \times \ddot{\theta} \cdot \overrightarrow{z_2})$$

$$(-E_2 \times \ddot{\theta} \cdot \overrightarrow{x_2} - E_2 \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{y_2} + C_2 \times \ddot{\theta} \cdot \overrightarrow{z_2} - a \times M_2 \cdot (\lambda \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{y_2} + \lambda \times \ddot{\theta} \cdot \overrightarrow{x_2}) + \lambda \times M_2 \times \lambda \times \ddot{\theta} \cdot \overrightarrow{z_2})$$

$$\begin{aligned}
\overrightarrow{\delta_{O\in 2/0}} &= (-E_2 \times \ddot{\theta} \cdot \overrightarrow{x_2} - E_2 \times \dot{\theta} \cdot (\dot{\theta} \cdot \overrightarrow{z_2} \wedge \overrightarrow{x_2}) + C_2 \times \ddot{\theta} \cdot \overrightarrow{z_2} + C_2 \times \dot{\theta} \cdot (\dot{\theta} \cdot \overrightarrow{z_2} \wedge \overrightarrow{z_2}) - ((a \cdot \overrightarrow{z_0} + \lambda \cdot \overrightarrow{x_2}) \wedge M_2 \cdot \left. \frac{d((a \cdot \overrightarrow{z_0} + \lambda \cdot \overrightarrow{x_2}) \wedge \dot{\theta} \cdot \overrightarrow{z_2})}{dt} \right| \\
&= (-E_2 \times \ddot{\theta} \cdot \overrightarrow{x_2} - E_2 \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{y_2} + C_2 \times \ddot{\theta} \cdot \overrightarrow{z_2} - a \times M_2 \cdot ((\overrightarrow{z_0} \wedge \lambda \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{x_2}) - (\overrightarrow{z_0} \wedge \lambda \times \ddot{\theta} \cdot \overrightarrow{y_2})) - \lambda \times M_2 \cdot ((\overrightarrow{x_2} \wedge \lambda \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{x} \\
&= (-E_2 \times \ddot{\theta} \cdot \overrightarrow{x_2} - E_2 \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{y_2} + C_2 \times \ddot{\theta} \cdot \overrightarrow{z_2} - a \times M_2 \cdot (\lambda \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{y_2} + \lambda \times \ddot{\theta} \cdot \overrightarrow{x_2}) + \lambda \times M_2 \times \lambda \times \ddot{\theta} \cdot \overrightarrow{z_2})
\end{aligned}$$





$$\begin{bmatrix} A_1 & 0 & 0 \\ 0 & B_1 & 0 \\ 0 & 0 & B_1 \end{bmatrix} \quad \begin{bmatrix} A_2 & 0 & -E_2 \\ 0 & B_2 & 0 \\ -E_2 & 0 & C_2 \end{bmatrix} \quad \begin{bmatrix} A_3 & 0 & 0 \\ 0 & B_3 & 0 \\ 0 & 0 & B_3 \end{bmatrix}$$

$$\begin{aligned} \overrightarrow{V_{G_2 \in 2/0}} &= -((a \cdot \overrightarrow{z_0} + \lambda \cdot \overrightarrow{x_2}) \wedge \dot{\theta} \cdot \overrightarrow{z_2}) \\ &= \lambda \times \dot{\theta} \cdot \overrightarrow{y_2} \end{aligned}$$

$$\begin{aligned} \overrightarrow{\Gamma_{G_2 \in 2/0}} &= \left. \frac{d\lambda \times \dot{\theta} \cdot \overrightarrow{y_2}}{dt} \right|_{R_0} \\ &= (\lambda \times \ddot{\theta} \cdot \overrightarrow{y_2} + \lambda \times \dot{\theta} \cdot (\dot{\theta} \cdot \overrightarrow{z_2} \wedge \overrightarrow{y_2})) \\ &= (\lambda \times \ddot{\theta} \cdot \overrightarrow{y_2} - \lambda \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{x_2}) \end{aligned}$$

$$\begin{aligned} \overrightarrow{\sigma_{O \in 2/0}} &= (-E_2 \times \dot{\theta} \cdot \overrightarrow{x_2} + C_2 \times \dot{\theta} \cdot \overrightarrow{z_2} - ((a \cdot \overrightarrow{z_0} + \lambda \cdot \overrightarrow{x_2}) \wedge M_2 \cdot ((a \cdot \overrightarrow{z_0} + \lambda \cdot \overrightarrow{x_2}) \wedge \dot{\theta} \cdot \overrightarrow{z_2}))) \\ &= (-E_2 \times \dot{\theta} \cdot \overrightarrow{x_2} + C_2 \times \dot{\theta} \cdot \overrightarrow{z_2} - a \times M_2 \times \lambda \times \dot{\theta} \cdot \overrightarrow{x_2} + \lambda \times M_2 \times \lambda \times \dot{\theta} \cdot \overrightarrow{z_2}) \end{aligned}$$

$$\overrightarrow{\sigma_{G_2 \in 2/0}} = (-E_2 \times \dot{\theta} \cdot \overrightarrow{x_2} + C_2 \times \dot{\theta} \cdot \overrightarrow{z_2})$$

$$\begin{aligned} \overrightarrow{\delta_{O \in 2/0}} &= (\left. \frac{d(-E_2 \times \dot{\theta} \cdot \overrightarrow{x_2} + C_2 \times \dot{\theta} \cdot \overrightarrow{z_2})}{dt} \right|_{R_0} + ((a \cdot \overrightarrow{z_0} + \lambda \cdot \overrightarrow{x_2}) \wedge M_2 \cdot (\lambda \times \ddot{\theta} \cdot \overrightarrow{y_2} - \lambda \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{x_2}))) \\ &= (-E_2 \times \ddot{\theta} \cdot \overrightarrow{x_2} - E_2 \times \dot{\theta} \cdot (\dot{\theta} \cdot \overrightarrow{z_2} \wedge \overrightarrow{x_2}) + C_2 \times \ddot{\theta} \cdot \overrightarrow{z_2} + C_2 \times \dot{\theta} \cdot (\dot{\theta} \cdot \overrightarrow{z_2} \wedge \overrightarrow{z_2}) + a \times M_2 \cdot (-\lambda \times \ddot{\theta} \cdot \overrightarrow{x_2} - \lambda \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{y_2}) + \lambda \times M_2 \times \\ &= (-E_2 \times \ddot{\theta} \cdot \overrightarrow{x_2} - E_2 \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{y_2} + C_2 \times \ddot{\theta} \cdot \overrightarrow{z_2} + a \times M_2 \cdot (-\lambda \times \ddot{\theta} \cdot \overrightarrow{x_2} - \lambda \times \dot{\theta} \times \dot{\theta} \cdot \overrightarrow{y_2}) + \lambda \times M_2 \times \lambda \times \ddot{\theta} \cdot \overrightarrow{z_2}) \end{aligned}$$