

$$p_{x2} = -\frac{\rho_0}{\rho_b}(\sin \psi_2 + \sin(\omega + \psi_1)) \\ + p_{z1} \sin \omega + p_{x1} \cos \omega - \frac{x_1}{\rho_b \sin \omega},$$

$$p_{z2} = \sqrt{p_{x1}^2 + p_{z1}^2 - p_{x2}^2},$$

$$x_2 = x_1 \cos \omega + \rho_b(p_{z2} - p_{z1} \cos \omega + p_{x1} \sin \omega) \\ + \rho_0(\cos(\omega + \psi_1) - \cos \psi_2),$$

$$y_2 = y_1 + s \frac{p_{y1}}{\sqrt{p_1^2 - p_{y1}^2}},$$

$$z_2 = z_1 - s \frac{p_1}{\sqrt{p_1^2 - p_{y1}^2}} + \frac{v_1}{v_0} L',$$

$$\text{where } \rho_0 \equiv \frac{L'}{\text{ANGLE}},$$

$$\omega \equiv \text{ANGLE} - \psi_1 - \psi_2,$$

$$s \equiv \text{ANGLE} \times \rho_b$$

$$\times \left( \sin^{-1} \frac{p_{x1}}{\sqrt{p_1^2 - p_{y1}^2}} - \sin^{-1} \frac{p_{x2}}{\sqrt{p_2^2 - p_{y2}^2}} + \omega \right).$$