Chapter 6

6-1 The Linear Momentum Equation

$$\sum \vec{F} = \sum_{\text{out}} \beta \dot{m} \vec{V} - \sum_{\text{in}} \beta \dot{m} \vec{V}$$

in the scalar form

$$\begin{cases} \sum F_x = \dot{m}(\beta_2 \cdot V_{2,x} - \beta_1 \cdot V_{1,x}) \\ \sum F_z = \dot{m}(\beta_2 \cdot V_{2,z} - \beta_1 \cdot V_{1,z}) \end{cases}$$

where F_x and F_z is the net force of the **reaction**, **pressure** and **body** force