ERRATA: Airplane Design Part VI

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page 200, Figure 6.38
Vertical axis units should be in 1,000 lb

page 205, Line 9
Should read

\[
\begin{align*}
SHP_{av} & \quad 285 \quad 248 \quad 206 \quad 172 \quad 140 \\
(SHP_{av}\eta_{inl/inc} - P_{extr}) & \quad 275 \quad 239 \quad 198 \quad 165 \quad 133 \\
P_{av} & \quad 242 \quad 210 \quad 174 \quad 145 \quad 117
\end{align*}
\]

page 212, Figure 7.5
Vertical axis units should be in 1,000 lb

page 229, Equation (8.7)
Should read:

\[
\Delta c_l = \eta \left(\frac{c_l\delta_{f_1}}{c}\right)\left(\delta_{f_1}\right)\left(\frac{c + c_1}{c}\right) + \eta_2 \left(\frac{c_l\delta_{f_2}}{c}\right)\left(\delta_{f_1} + \delta_{f_2}\right)\left(\frac{c'}{c}\right)
\]

page 236 Figure 8.26
Vertical axis values should be negative

page 239, Equation (8.19)
Should read: \[ \Delta c_{l,\text{max}} = \left(\frac{c_l\delta_{\text{max}}}{c}\right)\eta_{\text{max}}\delta_f\eta_\delta\left(\frac{c'}{c}\right) \]

page 259, Line 9
Should read ‘… leading edge flaps at \(\alpha = 0\) may be estimated from:

page 269, Equation (8.37)
Should read:

\[
\eta_h = 1 - \left\{\cos^2\left(\frac{\pi z_{h,\text{wake}}}{2\Delta z_{\text{wake}}}ight)\left\{2.42\sqrt{C_{D_{o,w}}} \right\}\frac{x_{h,\text{wake}}}{c} + 0.30\right\}
\]

page 269, Line 23
Should read

\[
\begin{align*}
\text{where: } z_{h,\text{wake}} &= a \sin\left(\gamma_h - \alpha - i_w + \varepsilon_h\right) \quad (8.38a) \\
x_{h,\text{wake}} &= a \cos\left(\gamma_h - \alpha - i_w + \varepsilon_h\right) \quad (8.38b)
\end{align*}
\]
with \( \alpha, \gamma_h, \varepsilon_h, i_w \) and \( \alpha \) shown in Fig. 8.63.

**Page 269, Equation (8.39)**

Should read: 
\[
\varepsilon_h = \varepsilon_{h,0} + \left( \frac{d\varepsilon_h}{d\alpha} \right)_{p, \text{off}} \alpha
\]

**Page 269, Equation (8.40)**

\[
\Delta z_{\text{wake}} = 0.68c \sqrt{C_{D\omega} \left( \frac{x_{h\text{wake}}}{c} + 0.15 \right)}
\]

**Page 270, Figure 8.63**

Should be

**Page 273, Figure 8.65c**

‘\( K_H \)’ should be ‘\( K_h \)’

**Page 273, Figure 8.65c**

‘\( \frac{2h_H}{b} \)’ should be ‘\( \frac{2h_h}{b} \)’

**Page 273, Figure 8.65c**

‘\( \frac{2l_H}{b} \)’ should be ‘\( \frac{2l_h}{b} \)’

**Page 273, Figure 8.65c**

‘\( K_H = 1 - \frac{h_H}{b} \sqrt{\frac{2l_H}{b}} \)’ should be ‘\( K_h = 1 - \frac{h_h}{b} \sqrt{\frac{2l_h}{b}} \)’

**Page 390, Figure 10.16**

‘\( z_h = \) vertical distance…’ should be ‘\( z_h = \) vertical distance’
between the horizontal tail aerodynamic center to the fuselage center line’

page 398, Equation (10.44)  
Should read:

\[ C_{\eta T_\beta} = -\sum_{i=1}^{i=n} \left[ \left( \frac{dC_N}{d\alpha} \right)_{p_i} \left( \frac{\pi}{4} \right) \left( D_{p_i} \right)^2 \left( l_{p_i} \right) \right] \]

page 401, Line 19  
Should read ‘where: \( \sigma_{\beta\alpha} \) is the sidewash contribution due to angle of attack, in \( \text{deg}^{-1} \). It is found from Figures 10.30.’

page 401, Line 21  
Should read ‘\( \alpha_f \) is the angle of attack of the fuselage, in \( \text{deg} \).’

page 401, Line 22  
Should read ‘\( \sigma_{\beta\Gamma} \) is the sidewash contribution due to wing dihedral, in \( \text{deg}^{-1} \). It is found from Figures 10.31.’

page 401, Line 24  
Should read ‘\( \Gamma \) is the wing dihedral angle, in \( \text{deg} \), as defined in Figure 10.7.’

page 401, Line 26  
Should read ‘\( \sigma_{\beta\varepsilon_l} \) is the sidewash contribution due to wing twist, in \( \text{deg}^{-1} \), as obtained from Figures 10.32.’

page 401, Line 28  
Should read ‘\( \varepsilon_l \) is the wing twist angle, in \( \text{deg} \), as shown in Figure 10.26.’

page 435, Equation (10.89)  
Should read: \( C_{D_{ih}} = \frac{2C_{L_{a}}}{\pi A e} C_{L_{a}h} \eta_l \frac{S_h}{S} \)

page 435, Line 36  
Should read ‘where: \( C_{L_{a}} \) is the airplane zero-angle-of-attack lift coefficient follows from Eqn. (10.90).’

page 436, Equation (10.90)  
Should read:
\[
C_{L_o} = C_{L_{\text{wf}}} + C_{L_{\alpha h}} \eta_h \left( \frac{S_h}{S} \right) \left( -\alpha_{Lh} - \epsilon_{oh} \right) + \\
+ C_{L_{\alpha c}} \eta_c \left( \frac{S_c}{S} \right) \left( -\alpha_{LC} - \epsilon_{oc} \right)
\]

**page 436, Line 3-7**
Remove Line 3-7

**page 439, Equation (10.97)**
Should read: 
\[
C_{D_{ic}} = \frac{2C_{L_o}}{\pi A e} C_{L_{\alpha c}} \eta_c \frac{S_c}{S}
\]

**page 439, Line 5**
Should read ‘where: \( C_{L_o} \) is the airplane zero-angle-of-attack lift coefficient follows from Eqn. (10.98).’

**page 439, Equation (10.98)**
Should read:
\[
C_{L_o} = C_{L_{\text{wf}}} + C_{L_{\alpha h}} \eta_h \left( \frac{S_h}{S} \right) \left( -\alpha_{Lh} - \epsilon_{oh} \right) + \\
+ C_{L_{\alpha c}} \eta_c \left( \frac{S_c}{S} \right) \left( -\alpha_{LC} - \epsilon_{oc} \right)
\]

**page 439, Line 8-12**
Remove Line 8-12