ERRATA: Airplane Design Part VI

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Please check the website www.darcorp.com for updated errata

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

page 205, Line 9
Should read

\[ \text{'SHP}_{av} \]
\[
\left( \text{SHP}_{av} \eta_{int/inc} - P_{extr} \right)
\]
\[
P_{av}
\]
285 248 206 172 140
275 239 198 165 133
242 210 174 145 117

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

page 269, Equation (8.37)
Should read:

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

page 269, Line 23
Should read

‘where:
\[
\begin{align*}
\frac{x_{h,\text{wake}}}{c} &= a \sin(\gamma_h - \alpha - i_w + \epsilon_h) \\
\gamma_h &= \gamma_h - \alpha - i_w + \epsilon_h
\end{align*}
\]

(8.38a)

(8.38b)

with \(a, \gamma_h, \epsilon_h, i_w\) and \(\alpha\) shown in Fig. 8.63.’

page 269, Equation (8.39)
Should read:

\[
\epsilon_h = \epsilon_{h_0} + \left( \frac{d \epsilon_h}{d \alpha} \right)_{p\text{-off}} \alpha
\]

page 269, Equation (8.40)
\[
\Delta z_{\text{wake}} = 0.68 \sqrt{C_{D_{\text{ow}}}} \left( \frac{x_{h,\text{wake}}}{c} + 0.15 \right)
\]
page 273, Figure 8.65c

\[
K_H = 1 - \frac{h_h}{b} - \frac{2l_h}{b}
\]

should be

\[
K_h = 1 - \frac{h_h}{b}
\]

page 398, Equation (10.44)

Should read:

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

page 435, Equation (10.89)

Should read:

\[
C_{D_{i\alpha}} = \frac{2C_{L_{o\alpha}}}{\pi Ae} C_{L_{\alpha h}} \eta_h \frac{S_h}{S}
\]

page 435, Line 36

Should read ‘where: \( C_{L_{o\alpha}} \) is the airplane zero-angle-of-attack lift coefficient follows from Eqn. (10.90).’

page 436, Equation (10.90)

Should read:

\[
C_{L_{o\alpha}} = C_{L_{o\alpha}} \eta_h \left( S_h/S \right) \left( -C_{L_{o\alpha}} - \epsilon_{o\alpha} \right)
\]

\[
+ C_{L_{\alpha c}} \eta_c \left( S_c/S \right) \left( -C_{L_{\alpha c}} - \epsilon_{o\alpha} \right)
\]

page 436, Line 3-7

Remove Line 3-7

page 439, Equation (10.97)

Should read:

\[
C_{D_{c\alpha}} = \frac{2C_{L_{o\alpha}}}{\pi Ae} C_{L_{\alpha c}} \eta_c \frac{S_c}{S}
\]

page 439, Line 5

Should read ‘where: \( C_{L_{o\alpha}} \) is the airplane zero-angle-of-attack lift coefficient follows from Eqn. (10.98).’

page 439, Equation (10.98)

Should read:

\[
C_{L_{o\alpha}} = C_{L_{o\alpha}} \eta_h \left( S_h/S \right) \left( -C_{L_{o\alpha}} - \epsilon_{o\alpha} \right)
\]

\[
+ C_{L_{\alpha c}} \eta_c \left( S_c/S \right) \left( -C_{L_{\alpha c}} - \epsilon_{o\alpha} \right)
\]

page 439, Line 8-12

Remove Line 8-12