

ERRATA: Airplane Aerodynamics and Performance

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Reprinted February, 2000

(Errata Revised March 07, 2011)

- cover & title page* Dr. Lan is now a J.L. Constant Distinguished Professor instead of a Warren S. Bellows Distinguished Professor
- page 7, Eqn (1.14)* Should read: $\frac{\rho}{\rho_1} = \left(\frac{P}{P_1}\right)\left(\frac{T_1}{T}\right) = \left(\frac{T}{T_1}\right)^{\left(-\frac{1}{\gamma}-1\right)}$.
- page 7, Eqn (1.15)* Should read: $\frac{T}{T_0} = 1 + \frac{ah}{T_0} = 1 - 6.875 \times 10^{-6} h$.
- page 62, Eqn 3.25b* $c_x = \frac{X}{qc} = \int_0^1 \left(c_{p_{\text{lower}}} - c_{p_{\text{upper}}} \right) d\left(\frac{z}{c}\right)$ should be
 $c_x = \frac{X}{qc} = \int_0^1 \left(c_{p_{\text{upper}}} \frac{dz_{\text{upper}}}{dx} - c_{p_{\text{lower}}} \frac{dz_{\text{lower}}}{dx} \right) dx$
- page 105, Fig 4.9* $e = \frac{1}{\pi Ae}$ is replaced with $\frac{1}{\pi Ae}$ in both the Figure and the caption.
- page 111, Fig 4.13* Symbols for $\lambda=0.5$ and $\lambda=0.2$ should be reversed.
- page 129* 8th line of Section 4.7.3 should read: ‘A detailed discussion of these trim effects on conventional, pure canard and three-surface airplanes can be found in Ref. 4.10,’
- page 144, Figure 5.6b* S = 27.0 ft, replace “S” with “b”. b = 27.0 ft
- page 187,
line 5 from bottom* Change (5.11) to (5.13).
- page 195, Problem 5.3* the term $\frac{2C_{L_{\text{min drag}}}^2}{\pi Ae}$ replaces $\frac{2C_{L_{\text{min drag}}}}{\pi Ae}$
- page 316,
2nd line from top* Change (7.18) to (7.26)
- page 318, 1st line* Change “near field” with “far field”
- page 319, last line* Change “110.5” with “100.5”
- page 361, Fig 8.20* 3-view drawing of F-106 missing.
- page 375, Eqn (9.5)* $\cos \gamma \approx 1$ replaces $\cos \gamma \approx 0$

- page 399, line 4 $C_L^{3/2}/C_D$ replaces $C_D/C_L^{3/2}$
- page 404, Equation 9.68 integral limits should be t_1 to t_2 instead of h_1 to h_2
- page 409, line 7 should read: "...the time-to-climb can be evaluated..."
- page 421, Eqn (9.84) The factor of '0.567' is good for British units only.
- page 423, Eqn (9.87) The factor of '-0.133' is good for British units only.
- page 447, 3rd line 2nd paragraph "wing" should be "wind"
- page 450 Example 10.1 $A = 2.02$ and $h/\bar{c} = 0.329$
- page 467,
2nd line of equation 10.48
- left side of equation:
$$\frac{1}{2a_{g_{ave}} \text{ at } V=V_{LOF}/\sqrt{2}} \left[V_{LOF}^2 \pm 2V_w V_{LOF} - V_w^2 + 2V_w^2 \right] =$$
- right side of equation:
$$\frac{1}{2a_{g_{ave}} \text{ at } V=V_{LOF}/\sqrt{2}} (V_{LOF} \pm V_w)^2 =$$
- page 467, Eqn (10.48) replace the terms: $\frac{1}{2} a_{g_{ave}} \text{ at } V=V_{LOF}/\sqrt{2}$ with
- $$\frac{1}{2a_{g_{ave}} \text{ at } V=V_{LOF}/\sqrt{2}}$$
- page 477, Fig 10.27 For the Take-off Weight vs Balanced Field Length plot, the top curve is for Sea Level and the bottom curve is for an altitude of 8,000 ft.
- Line before 10.6.1.3 V_A should be V_{SL} .
- page 509,
1st line of Section 11.1 'looses' should be 'loses'.
- page 517, lines 1-2 Should read: "...maximum endurance occurs when flying..."
- page 569,
8th line from bottom Delete the repeated 'is'.
- page 590, Fig 12.8 The label "W=100,000 lbs" should be referenced to the middle curve.
- page 690 y-axis label should be: " ΔPNL " not "PNL"
- page 691 y-axis label should be: " ΔPNL " not "PNL"

page 692

y-axis label should be: “ Δ PNL” not “PNL”

page 693

y-axis label should be: “ Δ PNL” not “PNL”

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