Design, Analysis and Research Corporation (DARcorporation)

ERRATA: Airplane Design Part II

Year of Print, 1985, 1989
(Errata Revised November 17, 2014)

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page 102, Step 3.1, 2nd line ...falls into one of the eight catagories...

page 158, Step 6.10 *Eqn. (6.1) should be Eqn. (6.2)*

page 168, Eqn (7.3) $C_{l_{max_r}} + C_{l_{max_t}}$ should be $c_{l_{max_r}} + c_{l_{max_t}}$

page 170, Eqn (7.8) and (7.11-18) C_l should be c_l

page 171, Eqn (7.11) $\Delta C_l = (1/K)\Delta C_{l_{max}}$ should be $\Delta c_l = (1/K)\Delta c_{l_{max}}$

page 171, Eqn (7.12) $\Delta C_l = C_{l_{\delta_f}} \delta_f K'$ should be $\Delta c_l = c_{l_{\delta_f}} \delta_f K'$

page 171, Eqn (7.13) $\Delta C_l = k_f (C_l)_{c_f/c=0.2}$ should be $\Delta c_l = k_f (c_l)_{c_f/c=0.2}$

page 171, Eqn (7.13) Equation number should be in-line with the equation.

page 171, Line 24 $(\Delta C_l)_{c_f/c=0.2}$ should be $(\Delta c_l)_{c_f/c=0.2}$

page 171, Eqn (7.14) $\Delta C_l = C_{l_{\alpha_f}} \alpha_{\delta_f} \delta_f$ should be $\Delta c_l = c_{l_{\alpha_f}} \alpha_{\delta_f} \delta_f$

page 171, Last line Last line is moved to Page 175.

page 175, Eqn (7.15) $C_{l_{\alpha_f}} = C_{l_\alpha} (c'/c)$ should be $c_{l_{\alpha_f}} = c_{l_\alpha} (c'/c)$

page 175, Eqn (7.17) $C_{l_{\alpha_f}} = C_{l_\alpha} (1 + c_f/c)$ should be $\Delta c_l = c_{l_{\alpha_f}} \alpha_{\delta_f} \delta_f$

page 175, Eqn (7.18) $C_{l_{max_{with\ l.e.\ flap}}} = C_{l_{max_{no\ l.e.\ flap}}} (c''/c)$ should be

$c_{l_{max_{with\ l.e.\ flap}}} = c_{l_{max_{no\ l.e.\ flap}}} (c''/c)$

pages 176 to 185

The example problems of Section 7.2 are incorrect. The K_Λ factor was multiplied instead of divided to yield the $C_{l_{max}}$ values for Step 7.4 of 7.2.1, 7.2.2, and 7.2.3. Each example will be addressed below.

Section 7.2.1 Twin Engine Propeller Driven Airplane

The results of step 7.4 should be:

	Take-off flaps		Landing flaps	
$\frac{S_{wf}}{S}$	0.3	0.6	0.3	0.6
$\Delta C_{l_{max}}$	0.58	0.29	2.32	1.16

Z_{fh} should be $\frac{Z_{fh}}{c}$.

For Step 7.5, the referenced equations and figures are wrong:

Eqn. (7.15) should be Eqn. (7.16).
Eqn. (7.14) should be Eqn. (7.15).
Eqn. (7.13) should be Eqn. (7.14).
Figure 7.7 should be Figure 7.8.
Figure 7.3b should be Figure 7.4.
Eqn. (7.10) should be Eqn. (7.11).

Section 7.2.2 Jet Transport

The results of step 7.4 should be:

	Take-off flaps		Landing flaps	
$\frac{S_{wf}}{S}$	0.6	0.8	0.6	0.8
$\Delta C_{l_{max}}$	3.00	2.24	3.84	2.88

For Step 7.5, the referenced equations and figures are wrong:
Eqn. (7.10) should be Eqn. (7.11)
Figure 7.3b should be Figure 7.4

Section 7.2.3 Fighter

The results of Step 7.4 should be:

	Take-off flaps		
$\frac{S_{wf}}{S}$	0.4	0.8	1.0
$\Delta C_{l_{max}}$	4.00	2.000	1.60

These corrections will affect the results of each sample problem. It is left to the reader to complete the sample problems using the correct results of Step 7.4. The summary and referenced drawings of Step 7.6 may change due to these corrections.

pages 178, 181, and 184 Under Step 7.4, K_{Δ} should be K_{Λ}

page 218, 3rd line from bottom "forward of aft c.g." should be "forward of forward c.g"

page 218, last line "main gear and aft c.g." should be "main gear and forward c.g"

page 267
Eqn (11.13) $N_D = 0.75 N_{t_{crit}}$ should be $N_D = 0.25 N_{t_{crit}}$

Eqn (11.14) $N_D = 0.25 N_{t_{crit}}$ should be $N_D = 0.10 N_{t_{crit}}$

page 276, line 19 61 deg should be -76 deg.

page 303, line 21. Roskam Aviation and Engineering Corporation, Rt4, Box 274, Ottawa, Kansas, 66067, Tel. 913-2421624 should be replaced by Design, Analysis and Research Corporation, 1440, Wakarusa Drive, Suite 500, Lawrence, Kansas 66049-3879, Tel. 785-832-0434.

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