

**ERRATA: Airplane Design Part II**

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(Errata Revised May 16, 2018)

Please check the website [www.darcorp.com](http://www.darcorp.com) for updated errata

- page 102, Line 10*                      ‘twelve’ should be ‘eight’
- page 158, Line 23*                      ‘Eqn. (6.1)’ should be ‘Eqn. (6.2)’
- page 159, Line 23*                      ‘Selene’ should be ‘Ourania’
- page 168, Equation (7.3)*              Should read:  $C_{L_{\max_w}} = k_\lambda \frac{(c_{l_{\max_r}} + c_{l_{\max_t}})}{2}$
- page 170, Equation (7.8)*              Should read:  $\Delta c_{l_{\max}} = (\Delta C_{L_{\max}}) \frac{\left(\frac{S}{S_{wf}}\right)}{(K_\Lambda)}$
- page 171, Line 2*                      ‘ $\Delta C_l$ ’ should be ‘ $\Delta c_l$ ’
- page 171, Line 6*                      ‘ $\Delta C_l$ ’ should be ‘ $\Delta c_l$ ’
- page 171, Line 6*                      ‘ $\Delta C_{l_{\max}}$ ’ should be ‘ $\Delta c_{l_{\max}}$ ’
- page 171, Equation (7.11)*              Should read:  $\Delta c_l = \left(\frac{1}{K}\right) \Delta c_{l_{\max}}$
- page 171, Equation (7.12)*              Should read:  $\Delta c_l = c_{l_{\delta_f}} \delta_f K'$
- page 171, Line 20*                      ‘ $C_{l_{\delta_f}}$ ’ should be ‘ $c_{l_{\delta_f}}$ ’
- page 171, Equation (7.13)*              Should read:  $\Delta c_l = k_f (\Delta c_l)_{c_f/c=0.2}$
- page 171, Line 23*                      ‘(7.13)’ should be on Line 22

<i>page 171, Line 24</i>	‘ $(\Delta C_l)_{c_f/c=0.2}$ ’ should be ‘ $(\Delta c_l)_{c_f/c=0.2}$ ’
<i>page 171, Equation (7.14)</i>	Should read: $\Delta c_l = c_{l\alpha_f} \alpha_{\delta_f} \delta_f$
<i>page 171, Line 26</i>	Should read ‘... may be found from Figure 7.8.’
<i>page 175, Line 1</i>	Should read ‘The flapped section lift curve slope can be obtained from:’
<i>page 175, Equation (7.15)</i>	Should read: $c_{l\alpha_f} = c_{l\alpha} \left( \frac{c'}{c} \right)$
<i>page 175, Line 6</i>	‘ $C_{l\alpha}$ ’ should be ‘ $c_{l\alpha}$ ’
<i>page 175, Equation (7.17)</i>	Should read: $c_{l\alpha_f} = c_{l\alpha} \alpha_{\delta_f} \delta_f$
<i>page 175, Equation (7.18)</i>	Should read: $c_{l_{\max_{with\ l.e.\ flap}}} = c_{l_{\max_{no\ l.e.\ flap}}} \left( \frac{c''}{c} \right)$
<i>page 176, Line 31</i>	‘ $\Delta_{c/4} = 0 \text{ deg}$ ’ should be ‘ $\Lambda_{c/4} = 0 \text{ deg}$ ’
<i>page 177, Line 4</i>	‘ $(C_{l_{\max_r}} + C_{l_{\max_t}})$ ’ should be ‘ $(c_{l_{\max_r}} + c_{l_{\max_t}})$ ’
<i>page 177, Line 17</i>	‘ $C_{l_{\max_r}} + C_{l_{\max_t}}$ ’ should be ‘ $c_{l_{\max_r}} + c_{l_{\max_t}}$ ’
<i>page 178, Line 5</i>	‘ $K_\Delta$ ’ should be ‘ $K_\Lambda$ ’
<i>page 178, Line 9</i>	Should read ‘ $\Delta c_{l_{\max}} = 2.32 \quad 1.16 \quad 0.58 \quad 0.29$ ’
<i>page 178, Line 15</i>	‘Eqn. (7.15)’ should be ‘Eqn. (7.16)’
<i>page 178, Line 16</i>	‘Eqn. (7.14)’ should be ‘Eqn. (7.15)’
<i>page 178, Line 16</i>	‘ $C_{l\alpha_f}$ ’ should be ‘ $c_{l\alpha_f}$ ’
<i>page 178, Line 17</i>	‘Eqn. (7.13)’ should be ‘Eqn. (7.14)’
<i>page 178, Line 17</i>	‘Figure 7.7’ should be ‘Figure 7.8’

<i>page 178, Line 18</i>	Should read ' $\Delta c_l = 6.28 \times (15 / 57.3) \times 0.5 = 0.82$ '
<i>page 178, Line 19</i>	'Figure 7.3b' should be 'Figure 7.4'
<i>page 178, Line 20</i>	'Eqn. (7.10)' should be 'Eqn. (7.11)'
<i>page 178, Line 20</i>	' $\Delta C_l = (0.93) \times 0.84 = 0.78$ ' should be ' $\Delta c_l = (0.93) \times 0.82 = 0.76$ '
<i>page 178, Line 24</i>	'Eqn. (7.15)' should be 'Eqn. (7.16)'
<i>page 178, Line 25</i>	'Eqn. (7.14)' should be 'Eqn. (7.15)'
<i>page 178, Line 25</i>	' $C_{l_{\alpha_f}}$ ' should be ' $c_{l_{\alpha_f}}$ '
<i>page 178, Line 26</i>	'Eqn. (7.13)' should be 'Eqn. (7.14)'
<i>page 178, Line 26</i>	'Figure 7.7' should be 'Figure 7.8'
<i>page 178, Line 27</i>	' $\Delta C_l = 6.66 \times (40 / 57.3) \times 0.43 = 2.0$ ' should be ' $\Delta c_l = 6.28 \times (48 / 57.3) \times 0.43 = 2.26$ '
<i>page 178, Line 28</i>	'Eqn. (7.10)' should be 'Eqn. (7.11)'
<i>page 178, Line 28</i>	' $\Delta C_{l_{\max}} = (0.93) \times 2.0 = 1.86$ ' should be ' $\Delta c_{l_{\max}} = (0.93) \times 2.6 = 2.10$ '
<i>page 179, Line 25</i>	'Step 6.7:' should be 'Step 7.7:'
<i>page 180, Line 4</i>	' $\Delta_{c/4} = 35 \text{ deg}$ ' should be ' $\Lambda_{c/4} = 35 \text{ deg}$ '
<i>page 181, Line 12</i>	' $K_\Delta$ ' should be ' $K_\Lambda$ '
<i>page 181, Line 16</i>	Should read ' $\Delta c_{l_{\max}} = 3.00 \quad 2.24 \quad 3.84 \quad 2.88$ '
<i>page 181, Line 20</i>	' $\delta_{f_{TO}} = 20 \text{ deg}$ ' should be ' $\delta_{f_{TO}} = 35 \text{ deg}$ '
<i>page 181, Line 21</i>	' $\Delta C_l$ ' should be ' $\Delta c_l$ '
<i>page 181, Line 22</i>	'Eqn. (7.10)' should be 'Eqn. (7.11)'

<i>page 181, Line 22</i>	‘Figure 7.3b’ should be ‘Figure 7.4’
<i>page 181, Line 25</i>	Should read ‘ $\Delta c_{l_{\max}} = 3.19 \quad 2.38 \quad 4.09 \quad 3.06$ ’
<i>page 181, Line 26</i>	‘Eqn. (7.16)’ should be ‘Eqn. (7.15)’
<i>page 181, Line 26</i>	‘ $C_{l_{\alpha_f}}$ ’ should be ‘ $c_{l_{\alpha_f}}$ ’
<i>page 181, Line 27</i>	‘Eqn. (7.13)’ should be ‘Eqn. (7.14)’
<i>page 181, Line 27</i>	‘Figure 7.7’ should be ‘Figure 7.8’
<i>page 181, Line 28</i>	Should read ‘ $\Delta c_l = 6.28 \times 0.53 \times (35 / 57.3) = 2.03$ ’
<i>page 182, Line 6</i>	Remove ‘Extrapolating the values of available $\Delta C_l$ versus $S_{wf} / S$ , it is found that $\Delta C_l = 1.1$ is needed. Since a value of 1.51 is available, full span flaps will be more than adequate.’
<i>page 182, Line 20</i>	‘ $\frac{S_{wf}}{S} = 0.86$ ’ should be ‘ $\frac{S_{wf}}{S} = 0.84$ ’
<i>page 182, Line 21</i>	‘ $\delta_f = 10 \text{ deg}$ ’ should be ‘ $\delta_f = 35 \text{ deg}$ ’
<i>page 182, Line 22</i>	‘10 deg’ should be ‘35 deg’
<i>page 182, Line 34</i>	‘Step 6.7:’ should be ‘Step 7.7:’
<i>page 183, Line 4</i>	‘ $\Delta_{c/4} = 0 \text{ deg}$ ’ should be ‘ $\Lambda_{c/4} = 0 \text{ deg}$ ’
<i>page 184, Line 11</i>	‘ $K_\Delta$ ’ should be ‘ $K_\Lambda$ ’
<i>page 184, Line 15</i>	Should read ‘ $\Delta c_{l_{\max}} = 4.00 \quad 2.00 \quad 1.60$ ’
<i>page 184, Line 19</i>	‘ $\delta_{fTO} = 20 \text{ deg}$ ’ should be ‘ $\delta_{fTO} = 25 \text{ deg}$ ’
<i>page 184, Line 20</i>	‘ $\Delta C_l$ ’ should be ‘ $\Delta c_l$ ’
<i>page 184, Line 24</i>	Should read ‘ $\Delta c_l = 4.25 \quad 2.12 \quad 1.70$ ’

- page 184, Line 25*                      ‘ $C_{l\alpha_f}$ ’ should be ‘ $c_{l\alpha_f}$ ’
- page 184, Line 27*                      Should read ‘ $\Delta c_l = 6.28 \times 0.53 \times (25 / 57.3) = 1.45$ ’
- page 185, Line 7*                        ‘ $\delta_f = 20$  deg’ should be ‘ $\delta_f = 25$  deg’
- page 185, Line 18*                      ‘Step 6.7:’ should be ‘Step 7.7:’
- page 218, Line 35*                      ‘forward of aft c.g.’ should be ‘forward of forward c.g.’
- page 218, Line 37*                      “main gear and aft c.g.” should be “main gear and forward c.g.”
- page 267, Equation (11.13)*            Should read:  $N_D = 0.25N_{t_{crit}}$
- page 267, Equation (11.14)*            Should read:  $N_D = 0.10N_{t_{crit}}$
- page 276, Line 19*                      ‘61 deg’ should be ‘-76 deg’
- page 303, Line 21*                      Should read ‘Note: These books are all published by:  
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Wakarusa Drive, Suite 500, Lawrence, KS, 66049. Tel.  
(785) 832-0434’