ERRATA: Airplane Design Part II

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(Errata Revised May 16, 2018)

Please check the website 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: 
\[ C_{l_{\text{max},w}} = k\lambda \left( \frac{c_{l_{\text{max},r}} + c_{l_{\text{max},t}}}{2} \right) \]

page 170, Equation (7.8)  Should read: 
\[ \Delta c_{l_{\text{max}}} = \left( \Delta C_{l_{\text{max}}} \right) \frac{\left( \frac{S}{S_{\text{wf}}} \right)}{K_A} \]

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_{\text{max}}}’ should be ‘\Delta c_{l_{\text{max}}}’

page 171, Equation (7.11)  Should read: 
\[ \Delta c_l = \left( \frac{1}{K} \right) \Delta c_{l_{\text{max}}} \]

page 171, Equation (7.12)  Should read: 
\[ \Delta c_l = c_{l_{\text{f}} \delta_f} \delta_f K' \]

page 171, Line 20  ‘\(c_{l_{\text{f}} \delta_f}\)’ should be ‘\(c_{l_{\text{f}} \delta_f}\)’

page 171, Equation (7.13)  Should read: 
\[ \Delta c_l = k_f \left( \Delta c_l \right)_{c_f/c=0.2} \]

page 171, Line 23  ‘(7.13)’ should be on Line 22
page 171, Line 24 \[ (\Delta C_l)_{cf/c=0.2} \] should be \[ (\Delta C_l)_{cf/c=0.2} \]

page 171, Equation (7.14) Should read: \[ \Delta C_l = c_{l\alpha f} \alpha_f \delta_f \]

page 171, Line 26 Should read ‘… may be found from Figure 7.8.’

page 175, Line 1 Should read ‘The flapped section lift curve slope can be obtained from:’

page 175, Equation (7.15) Should read: \[ c_{l\alpha f} = c_{l\alpha} \left( \frac{c'}{c} \right) \]

page 175, Line 6 ‘\( C_{l\alpha} \)’ should be ‘\( c_{l\alpha} \)’

page 175, Equation (7.17) Should read: \[ c_{l\alpha f} = c_{l\alpha} \alpha_f \delta_f \]

page 175, Equation (7.18) Should read: \[ c_{l_{\text{max, with l.e. flap}}} = c_{l_{\text{max, no l.e. flap}}} \left( \frac{c^n}{c} \right) \]

page 176, Line 31 ‘\( \Delta_c/4 = 0 \deg \)’ should be ‘\( \Delta_c/4 = 0 \deg \)’

page 177, Line 4 ‘\( \left( c_{l_{\text{max, r}}} + c_{l_{\text{max, t}}} \right) \)’ should be ‘\( c_{l_{\text{max, r}}} + c_{l_{\text{max, t}}} \)’

page 177, Line 17 ‘\( C_{l_{\text{max, r}}} + C_{l_{\text{max, t}}} \)’ should be ‘\( c_{l_{\text{max, r}}} + c_{l_{\text{max, t}}} \)’

page 178, Line 5 ‘\( K_{\Delta} \)’ should be ‘\( K_{\Lambda} \)’

page 178, Line 9 Should read ‘\( \Delta c_{l_{\text{max}}} = 2.32 \quad 1.16 \quad 0.58 \quad 0.29 \)’

page 178, Line 15 ‘Eqn. (7.15)’ should be ‘Eqn. (7.16)’

page 178, Line 16 ‘Eqn. (7.14)’ should be ‘Eqn. (7.15)’

page 178, Line 16 ‘\( c_{l\alpha f} \)’ should be ‘\( c_{l\alpha f} \)’

page 178, Line 17 ‘Eqn. (7.13)’ should be ‘Eqn. (7.14)’

page 178, Line 17 ‘Figure 7.7’ should be ‘Figure 7.8’
page 178, Line 18
Should read ‘$\Delta c_l = 6.28 \times (15/57.3) \times 0.5 = 0.82$ ’

page 178, Line 19
‘Figure 7.3b’ should be ‘Figure 7.4’

page 178, Line 20
‘Eqn. (7.10)’ should be ‘Eqn. (7.11)’

page 178, Line 20
‘$\Delta C_l = (0.93) \times 0.84 = 0.78$ ’ should be ‘
$\Delta c_l = (0.93) \times 0.82 = 0.76$ ’

page 178, Line 24
‘Eqn. (7.15)’ should be ‘Eqn. (7.16)’

page 178, Line 25
‘Eqn. (7.14)’ should be ‘Eqn. (7.15)’

page 178, Line 25
‘$c_{l\alpha_f}$ ‘ should be ‘$c_{l\alpha_f}$ ‘

page 178, Line 26
‘Eqn. (7.13)’ should be ‘Eqn. (7.14)’

page 178, Line 26
‘Figure 7.7’ should be ‘Figure 7.8’

page 178, Line 27
‘$\Delta C_l = 6.66 \times (40/57.3) \times 0.43 = 2.0$ ’ should be ‘
$\Delta c_l = 6.28 \times (48/57.3) \times 0.43 = 2.26$ ’

page 178, Line 28
‘Eqn. (7.10)’ should be ‘Eqn. (7.11)’

page 178, Line 28
‘$\Delta C_{l_{max}} = (0.93) \times 2.0 = 1.86$ ’ should be ‘
$\Delta c_{l_{max}} = (0.93) \times 2.6 = 2.10$ ’

page 179, Line 25
‘Step 6.7:’ should be ‘Step 7.7:’

page 180, Line 4
‘$\Delta c/4 = 35$ deg’ should be ‘$\Delta c/4 = 35$ deg’

page 181, Line 12
‘$K_{\Delta}$ ’ should be ‘$K_{\Lambda}$ ’

page 181, Line 16
Should read ‘$\Delta c_{l_{max}} = 3.00 \quad 2.24 \quad 3.84 \quad 2.88$ ’

page 181, Line 20
‘$\delta_{fTO} = 20$ deg’ should be ‘$\delta_{fTO} = 35$ deg’

page 181, Line 21
‘$\Delta C_f$ ‘ should be ‘$\Delta c_f$ ‘

page 181, Line 22
‘Eqn. (7.10)’ should be ‘Eqn. (7.11)’
page 181, Line 22  
‘Figure 7.3b’ should be ‘Figure 7.4’

page 181, Line 25  
Should read ‘Δc_l,max = 3.19  2.38  4.09  3.06’

page 181, Line 26  
‘Eqn. (7.16)’ should be ‘Eqn. (7.15)’

page 181, Line 26  
‘C_lαf’ should be ‘c_lαf’

page 181, Line 27  
‘Eqn. (7.13)’ should be ‘Eqn. (7.14)’

page 181, Line 27  
‘Figure 7.7’ should be ‘Figure 7.8’

page 181, Line 28  
Should read ‘Δc_l = 6.28×0.53×(35/57.3) = 2.03’

page 182, Line 6  
Remove ‘Extrapolating the values of available ΔC_l versus S_wf/S, it is found that ΔC_l=1.1 is needed. Since a value of 1.51 is available, full span flaps will be more than adequate.’

page 182, Line 20  
$\frac{S_{wf}}{S} = 0.86$ should be ‘$\frac{S_{wf}}{S} = 0.84$’

page 182, Line 21  
‘δ_f = 10 deg’ should be ‘δ_f = 35 deg’

page 182, Line 22  
‘10 deg’ should be ‘35 deg’

page 182, Line 34  
‘Step 6.7:’ should be ‘Step 7.7:’

page 183, Line 4  
‘Δc/4 = 0 deg’ should be ‘Δc/4 = 0 deg’

page 184, Line 11  
‘K_Δ’ should be ‘K_Δ’

page 184, Line 15  
Should read ‘Δc_l,max = 4.00  2.00  1.60’

page 184, Line 19  
‘δ_{fTO} = 20 deg’ should be ‘δ_{fTO} = 25 deg’

page 184, Line 20  
‘ΔC_l’ should be ‘Δc_l’

page 184, Line 24  
Should read ‘Δc_l = 4.25  2.12  1.70’
page 184, Line 25  
‘\( C_{\alpha_f} \)’ should be ‘\( c_{\alpha_f} \)’

page 184, Line 27  
Should read ‘\( \Delta c_l = 6.28 \times 0.53 \times \left( \frac{25}{57.3} \right) = 1.45 \)’

page 185, Line 7  
‘\( \delta_f = 20 \text{ deg} \)’ should be ‘\( \delta_f = 25 \text{ deg} \)’

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: \( N_D = 0.25 N_{crit} \)

page 267, Equation (11.14)  
Should read: \( N_D = 0.10 N_{crit} \)

page 276, Line 19  
‘61 deg’ should be ‘-76 deg’

page 303, Line 21  
Should read ‘Note: These books are all published by: Design, Analysis and Research Corporation, 1440 Wakarusa Drive, Suite 500, Lawrence, KS, 66049. Tel. (785) 832-0434’