

**Errata to *Electric Machines: Analysis and Design Applying MATLAB*,
Jimmie J. Cathey, First Edition, First Printing.**

- p. 5, Eq. [2.1], " $\sqrt{2}\cos (wt + g)$ " becomes " $\sqrt{2}V_2\cos (wt + g)$ "
- p. 10, Figure 2.4b, angle between phasors \bar{V} and \bar{I}_2 should be exactly 90°
- p. 16, line 2 of equations following "delta-connected load of Fig. 2.5d if", " $\bar{I}_a = I_f \angle b$ " becomes " $\bar{I}_a = I_L \angle b$ "
- p. 23, line following Eq. [2.42], " $Z = Z_a + Z_b + Z_c$ " becomes " $Z = Z_a = Z_b = Z_c$ "
- p. 32, Figure 2.12a, b, and c, "**S**" becomes "S"
- p. 32, Figure 2.12c, label " $Q = 3138.56$ VARs" becomes " $Q = -3138.56$ VARs"
- p. 37, Example 2.20, eq. 2, " $\left(\frac{V_L}{Z}\right)^2$ " becomes " $\left(\frac{V_L}{Z_L}\right)^2$ "
- p. 37, Example 2.20, eq. 3, " $C = \frac{L}{Z^2} = \frac{X_L \mathbf{w}}{R^2 + X_L^2}$ " becomes " $C = \frac{L}{Z_L^2} = \frac{X_L \mathbf{w}}{R_L^2 + X_L^2}$ "
- p. 41, line beginning "Zca=", "angZbc)" becomes "angZca)"
- p. 45, Problem 2.8, line 2, part (a), add space after " \bar{V} "
- p. 50, Example 3.1, line 2, "Wb" becomes "T"
- p. 53, Eq. [3.9], " $B\ell v$ " becomes " $B\ell x$ "
- p. 59, Figure 3.9a, right circuit, "R " becomes "R" in three locations
- p. 59, line following Table 3.1, "R " becomes "R"
- p. 61, Figure 3.11b, " R_3' " becomes " R_4' " in two locations on bottom
- p. 61, Example 3.3, line 4, "0.95–the per unit" becomes "0.95 - the per unit"
- p. 68, Example 3.6 should have MATLAB icon
- p. 71, Figure 3.18a, add dots at intersecting points of center vertical dashed line with upper and lower horizontal dashed lines; label " $f_{\ell 2}$ " becomes " $f_{\ell 1}$ " and label " $f_{\ell 1}$ " becomes " $f_{\ell 2}$ "
- p. 71, Figure 3.18b, add label " F_c " between \pm polarity marks by center vertical leg; and add label " R_1 " to right side of reluctance symbol in the left hand leg
- p. 73, Figure 3.20, horizontal axis value "3194" becomes "3194.5"
- p. 77, Eq. [3.20], " $\frac{\partial I}{\partial i} = \frac{di}{dt}$ " becomes " $\frac{\partial I}{\partial i} \frac{di}{dt}$ "
- p. 78, Figure 3.24, f_2 leader line should extend to dashed line oval
- p. 103, Section "3.91" becomes "3.9.1"

- p. 121, $\langle \text{sinex.m} \rangle$ computer code, 5 lines from bottom, "sinsuiodal" becomes "sinusoidal"
- p. 127, Problem 3.2, "Fig. 3.2" becomes "Example 3.2"
- p. 140, second line before Eq. [4.15], " Z_2 " becomes " \mathbf{Z}_2 ", and Eq. [4.15], "Z" becomes " \mathbf{Z} " in two locations
- p. 141, Eq. [4.17], " $= \frac{1}{a} Mpi_2$ " becomes " $-\frac{1}{a} Mpi_2$ "
- p. 141, Figure 4.10a, inner solid oval, right side should not have arrowhead; label " $R_1 = 0$ " at lower left is deleted
- p. 155, Figure 4.22, " $j\bar{I}_2 = X_2$ " becomes " $j\bar{I}_2 X_2'$ "
- p. 155, Example 4.5, S_B equation, "5000 W" becomes "5000 VA"
- p. 158, Eq. [4.35], " $R_c \|jX_m\| + a^2 (R_2 + jX_2)$ " becomes " $R_c \|jX_m\| a^2 (R_2 + jX_2)$ "
- p. 162, line 2 and line 3 of equations following "The turns ratio is", " $\angle -36.89^\circ$ " becomes " $\angle -36.87^\circ$ "
- p. 163, Figure 4.25, " I_m " becomes " \bar{I}_m "
- p. 164, Equation following "By KCL,", " $\bar{I}_2 \frac{\bar{V}_1}{R_c}$ " becomes " $\bar{I}_2 + \frac{\bar{V}_1}{R_c}$ "
- p. 165, Example 4.9, line 2 equation, " $a^2 Z_L$ " becomes " $a^2 \mathbf{Z}_L$ ", and Example 4.9, last equation, " $\angle 1.04^\circ$ " becomes " $\angle -1.04^\circ$ "
- p. 166, line following Eq. [4.47], "Figs. 4.18 and 4.22" becomes "Figs. 4.21 and 4.25"
- p. 167, Example 4.11 solution part (b) "Losses" equation, " $\left[\frac{12,500}{2500} \right]^{1/2}$ " becomes " $\left[\frac{12,500}{25,000} \right]^{1/2}$ "
- p. 168, List number 3, second to last line, " PF^2 " becomes " PF_2 "
- p. 174, first text line, "Assume \bar{V}_1 " becomes "Assume \bar{V}_{11} "
- p. 175, second text line, " \bar{V}_1 " becomes " \bar{V}_{11} ", and " \bar{I}_1 " becomes " \bar{I}_2 "
- p. 175, equation following "Since \bar{V}_{11} is on the reference", " \bar{I}_{21R} " becomes " \bar{I}_{22R} "
- p. 175, line 1 of equations following "By the Pythagorean theorem", " I_{21R}^2 " becomes " I_{22R}^2 "
- p. 180, Figure 4.33a, " $V_{L1}/3$ " becomes " $V_{L1}/\sqrt{3}$ ", and top right " aI_{L1} " becomes " $I_{L2} = aI_{L1}$ "
- p. 180, Figure 4.33d, " $I_{L1}/3$ " becomes " $I_{L1}/\sqrt{3}$ ", and " V_{L2}/a " becomes " V_{L1}/a "

- p. 197, Section 4.12.4 should have MATLAB icon
- p. 203, `\hyst.m` computer code, line 3, "hysteresis" becomes "Hysteresis"
- p. 232, Figure 5.5, interchange labels for "Shunt field" and "Series field" leaders
- p. 240, Figure 5.12a, reverse T_s arrow for generator
- p. 243, Figure 5.15, reverse arrow direction for Φ_p
- p. 252, second line from bottom, " $V_f I_f$ " becomes " $V_f I_f$ " and field losses moves to left of P_d
- p. 254, Example 5.5, line 3, "1500 rpm with no load" becomes "1500 rpm with no load and $I_f = 1.0$ A"
- p. 255, Example 5.6, line 3, "160 Ω " becomes "160 Ω "
- p. 256, Section 5.6.3 should have MATLAB icon
- p. 267, second line before Eq. [5.18], "[2]" becomes "[1]"
- p. 269, Figure 5.39a, add horizontal axes label "Developed torque, N-m"
- p. 326, Example 6.2, last equation, "= 56.42 turns" becomes "= 56.71 turns"
- p. 326, Example 6.2, last line, "56.42 turns" becomes "56.71 turns"
- p. 327, Eq. [6.12], add units label of "rpm"
- p. 341, fourth line following "6.7.2 Developed Torque Determination", "[6.45]" becomes "[6.46]"
- p. 350, Example 6.13, first equation, denominator term " $2w_s[R_{Th+}$ " becomes " $2w_s[R_{Th} +$ "
- p. 417, Problem 6.1, "1746 rpm" becomes "1751 rpm"
- p. 430, Eq. [7.3], " f_{fm} " becomes " f_{fma} "
- p. 430, Eq. [7.4], " f_{fm} " becomes " f_{fma} "
- p. 431, Figure 7.12, lower label "a" becomes "a'"
- p. 431, Eq. [7.5], " $\frac{df_{fm}}{dt}$ " becomes " $\frac{df_{fma}}{dt}$ "
- p. 431, second line following Eq. [7.6], " f_b " becomes " f_{fmb} " and " f_c " becomes " f_{fmc} "
- p. 431, Eq. [7.7], " $E_{bb'}$ " becomes " $\bar{E}_{bb'}$ "
- p. 431, Eq. [7.8], " $E_{cc'}$ " becomes " $\bar{E}_{cc'}$ "
- p. 432, line following Eq. [7.12], " $i_b + i_c = i_a$ " becomes " $-(i_b + i_c) = i_a$ "
- p. 444, Example 7.5, first equation, numerator term "3(14,576.6)" becomes "3(14,573.6)"

- p. 446, seventh line of text in subheading "Efficiency Calculation", "efficiencyless exciter" becomes "efficiency less exciter"
- p. 449, equation line preceding "A little thought leads to", " $\bar{V}_{an} = \bar{V}_{Th1} = 0$ " becomes " $\bar{V}_{an} - \bar{V}_{Th1} = 0$ "
- p. 450, Figure 7.26, add line from V_3 to lower asterisk; and some line types are not correct
- p. 458, Figure 7.35, arrowheads become diamond-shaped arrowheads for \hat{f}_f , F_f , F_A , F_r , \hat{f}_r , and \hat{f}_A
- p. 459, Figure 7.36a, all arrowheads become diamond-shaped arrowheads
- p. 459, Figure 7.36b, arrowheads become diamond-shaped arrowheads for F_f , F_q , F_d , F_r , and F_A ; add simple arrowhead on \bar{I}_q
- p. 459, Figure 7.36c, arrowheads become diamond-shaped arrowheads for \hat{f}_f , \hat{f}_q , \hat{f}_d , \hat{f}_A , and \hat{f}_r
- p. 459, second to last line, "armature" becomes "armature reaction"
- p. 461, equation following "For the generator under consideration", " $\frac{S}{\sqrt{3}V_L}$ " becomes " $\frac{S_T}{\sqrt{3}V_L}$ "
- p. 462, Figure 7.39(a), right side label " $j\bar{I}_a(X_d - X_q)$ " becomes " $j\bar{I}_d(X_d - X_q)$ "
- p. 463, Figure 7.40, straight arrow becomes CCW rotation arrow for w_s
- p. 468, Figure 7.46, " $ze_m i_m / w_m$ " becomes " $2e_m i_m / w_m$ "
- p. 479, Table 7.2, column *Pole (p)*, "24" becomes "2"
- p. 494, Figure 7.63, "1.190" is coil width dimension and "1.250" is slot width
- p. 499, `\rdrotmmf.m` computer code, title box, line 2, "mmf wave" becomes "wave"
- p. 512, Problem 7.10, line 3, " $d = 25^\circ$ " becomes " $\mathbf{d} = 25^\circ$ "