

Vehicle Accident Analysis and Reconstruction Methods
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page	Eq/Line	Correction (should be)	Comment
11	line 23	x should be \bar{X}	
	line 25	x should be \bar{X}	
12	lines 1,3,5	x should be \bar{X}	
29	line 33	... α , when $\alpha = \pi/2$ for any s .	
	line 35	... $\beta = \alpha$, $F_x = F\cos \alpha$, $F_y = -F\sin \alpha$	
35	Eq 2.20	$F_x(\alpha, s) = \frac{F_x(s)F_y(\alpha)s}{\sqrt{s^2F_y^2(\alpha) + F_x^2(s)\tan^2\alpha}} \frac{\sqrt{s^2C_\alpha^2 + (1- s)^2\cos^2\alpha}F_x^2(s)}{sC_\alpha}$	
35	Eq 2.21	$F_y(\alpha, s) = \frac{F_x(s)F_y(\alpha)\tan\alpha}{\sqrt{s^2F_y^2(\alpha) + F_x^2(s)\tan^2\alpha}} \frac{\sqrt{(1- s)^2\cos^2\alpha}F_y^2(\alpha) + \sin^2\alpha C_s^2}{C_s\sin\alpha}$	
40	line 17	... the values in Fig. 2.21 should be ...	“the above table” should be replaced by “Fig. 2.21”
46	Sec. 2.6.4	Ref. 2.48 should be 2.46 Ref. 2.49 should be 2.47	References in this section are incorrectly listed.
46	Table 2.1	Column 5, <i>Sources</i> , should be (top to bottom) ...	2.25, 2.36, 2.13, 2.13, NHTSA FMVSS, blank, USDOT FM CER 2.37, 2.37, 2.37, 2.37, 2.39, 2.40, 2.41
52	Eq 3.6a	$d = -\frac{v_0^2}{2a} = \frac{v_0^2}{2fg}$	missing minus sign
53	line 1	$\tau = \frac{-11.11}{-7.37} = 1.51 \text{ s}$	incorrect denominator
53	last line	The vehicle skids to a stop in 1.51 s ...	
59	line 3		F_r should be torque, T , divided by the rolling radius R_w
59	line 4	... equal to or higher than about 0.41 will allow	
63	line 9	$f_r = \frac{F_{tr}}{F_{zr}} = \frac{T/R_w}{F_{zr}} = \frac{1935/0.34}{13947} = 0.408 \sigma_\tau = \sigma_{PDR} = 0.083$	incorrect decimal point
63	line 12	... and a standard deviation of 0.083 s.	incorrect decimal point
66	Eq. 3.44	$\dot{y} = \dot{\theta}[b + (h_c - R)\theta]$	current/wrong equation is a repeat of Eq. 3.2
66	Eq. 3.50	$y(\tau) = c_1(e^{\eta\tau} - 1) + c_2(e^{-\eta\tau} - 1) + c_3(e^{2\eta\tau} - 1) + c_4(e^{-2\eta\tau} - 1)$	current/wrong equation is a repeat of Eq. 3.3
73	Eq. 4.1	$(x_i - a)^2 + (y_i - b)^2 = R^2, \quad i = 1, 2, 3$	current/wrong equation is a repeat of Eq. 4.4
189	Eg. 7.9	$W_1 = 2400 \text{ lb (10.7 kN)}$ and $W_2 = 3350 \text{ lb (14.9 kN)}$	The vehicle weights should be switched in the problem statement

227	line 3	Value for d_0 of 31.58 should be 46.31	
228	Eq. 9.4	$K_2 = L[C_1 + 2(C_2 + C_3 + C_4 + C_5) + C_6]/10$	current/wrong equation is from Example 9.1
236	Eq. 9.15	$C_{avg} = [C_1 + 2(C_2 + C_3 + C_4 + C_5) + C_6]/10$	current/wrong equation is a repeat of Eq. 9.12
327	Table 13.1	10000 lb/rad (44.48 kN/rad) => units should be lb (kN)	Units are force/unit slip but the denominator is generally left off
387 - 389		Reference numbers should begin at top of page 387 as 2.21 and continue consecutively through 2.49 on page 389	