



2007 Stackpole Engineering Services Inc. Tire Data Fitting Program
***** Pacejka Coefficients Summary File *****



Tire Dataset Created for:	Coordinate System:	ISO Metric	
Hoosier FSAE 20.5x7.0-13 43129 @ 12 psi, 7 inch rim	Created By:	G. Gott	Date: 9/12/2007
	Model Format:	1996 Pacejka Formulation (Reference 2)	

Pure Slip Condition

Physical Characteristics			Lateral Force			Aligning Torque		
F _{z0}	Nominal wheel load -N-	663.947280	p _{Cy1}	Shape factor C _y for lateral forces	1.377528	q _{Bz1}	Trail slope factor for trail B _{pt} at F _{z0}	6.999989
R ₀	Unloaded tire radius -m-	0.260000	p _{Dy1}	Lateral friction	2.486064	q _{Bz2}	Variation of slope B _{pt} with load	0.000006
Longitudinal Force			p _{Dy2}	Variation of lateral friction with load	-0.150167	q _{Bz3}	Variation of slope B _{pt} with load squared	-0.000006
p _{Cx1}	Shape factor C _x for longitudinal force	1.350000	p _{Dy3}	Variation of lateral friction with camber squared	-1.888950	q _{Bz4}	Variation of slope B _{pt} with camber	1.953678
p _{Dx1}	Longitudinal friction at F _{z0}	2.550700	p _{Ey1}	Lateral curvature E _y at F _{z0}	-0.000043	q _{Bz5}	Variation of slope B _{pt} with absolute camber	-1.953612
p _{Dx2}	Variation of friction with load	-0.234080	p _{Ey2}	Variation of curvature E _y with load	0.000007	q _{Bz9}	Slope factor B _r of residual torque M _{tr}	0.000000
p _{Ex1}	Longitudinal curvature E _x at F _{z0}	0.403270	p _{Ey3}	Zero order camber dependency of curvature E _y	-3683.9043	q _{Bz10}	Slope factor B _r of residual torque M _{tr}	0.000000
p _{Ex2}	Variation of curvature E _x with load	1.164900	p _{Ey4}	Variation of curvature E _y with camber	-15729.780	q _{Cz1}	Shape factor C _{pt} for pneumatic trail	1.336858
p _{Ex3}	Variation of curvature E _x with load squared	-1.085800	p _{Ky1}	Maximum value of stiffness K _y	-114.087070	q _{Dz1}	Peak trail D _{pt} " = D _{pt} "*(F _z /F _{z0} *R ₀)	0.069955
p _{Ex4}	Factor in curvature E _x while driving	0.853630	p _{Ky2}	Load at which K _y reaches maximum value	-3.621914	q _{Dz2}	Variation of peak D _{pt} " with load	-0.008551
p _{Kx1}	Longitudinal lisp stiffness K _x at F _{z0}	64.347300	p _{Ky3}	Variation of K _y with camber	2.518860	q _{Dz3}	Variation of peak D _{pt} " with camber	-0.081052
p _{Kx2}	Variation of slip stiffness K _x with load	0.000013	p _{Hy1}	Horizontal shift S _{Hy} at F _{z0}	0.002182	q _{Dz4}	Variation of peak D _{pt} " with camber squared	-0.008025
p _{Kx3}	Exponent in slip stiffness K _x with load	0.048640	p _{Hy2}	Variation of shift S _{Hy} with load	-0.001398	q _{Dz6}	Peak residual torque D _{Mr} " = D _{Mr} "/(F _z *R ₀)	-0.017415
p _{Hx1}	Horizontal shift S _{Hx} at F _{z0}	0.005465	p _{Hy3}	Variation of shift S _{Hy} with camber	-0.119546	q _{Dz7}	Variation of peak factor D _{Mr} " with load	0.010490
p _{Hx2}	Variation of shift S _{Hx} with load	-0.003318	p _{Vy1}	Vertical shift in S _{Vy} at F _{z0}	0.026184	q _{Dz8}	Variation of peak factor D _{Mr} " with camber	-0.884572
p _{Vx1}	Vertical shift S _{Vx} at F _{z0}	-0.150120	p _{Vy2}	Variation of shift S _{Vy} with load	-0.029205	q _{Dz9}	Variation of peak factor D _{Mr} " with camber and load	-0.486215
p _{Vx2}	Variation of shift S _{Vx} with load	0.090500	p _{Vy3}	Variation of shift S _{Vy} with camber	0.034106	q _{Ez1}	Trail curvature E _{pt} at F _{z0}	-4.918159
Longitudinal Force--Combined Slip			p _{Vy4}	Variation of shift S _{Vy} with load and camber	0.424675	q _{Ez2}	Variation of curvature E _{pt} with load	0.051190
f _{Bx1}	Slope multiplier	23.880780	Lateral Force--Combined Slip			q _{Ez3}	Variation of curvature E _{pt} with load squared	0.044727
f _{Bx2}	Slope change vs. slip ratio	-24.289412	f _{By1}	Slope multiplier	16.610029	q _{Ez4}	Variation of curvature E _{pt} with sign of slip angle	0.300067
f _{Cx1}	Shape factor for combined longitudinal	1.118541	f _{By2}	Slope change vs. slip angle	25.105729	q _{Ez5}	Variation of curvature E _{pt} with camber and sign slip angle	3.296241
f _{Hx1}	Horizontal shift factor	0.000000	f _{By3}	Slip angle offset for slope	0.044141	q _{Hx1}	Trail horizontal shift S _{Hx} at F _{z0}	0.003864
			f _{Cy1}	Shape factor for combined lateral	0.992126	q _{Hx2}	Variation of shift S _{Hx} with load	0.000410
			f _{Hy1}	Horizontal shift factor	-0.002106	q _{Hx3}	Variation of shift S _{Hx} with camber	0.268876
			f _{Vy1}	Vertical shift multiplier vs. load	-0.053669	q _{Hx4}	Variation of shift S _{Hx} with camber and load	0.130015
			f _{Vy2}	Vertical shift multiplier vs. load and delta load	0.037279			
			f _{Vy3}	Vertical shift multiplier vs. camber	0.511559			
			f _{Vy4}	Vertical shift multiplier vs. slip angle	2.000000			
			f _{Vy5}	Vertical shift multiplier	6.000000			
			f _{Vy6}	Vertical shift multiplier vs. slip ratio	-2.000000			