



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

R ₀ Unloaded tire radius -m	Physical Characteristics			Lateral Force		Aligning Torque			
Dect Shape factor C, for longitudinal Force 1,350000 Pip2 Variation of lateral friction with load -0,150167 Qiaz Variation of slope B _e , with load squared -0,000000 Pip2 Variation of lateral friction with camber squared -1,888950 Qias Variation of slope B _e , with camber -1,95367 Pip2 Variation of friction with load -0,234080 Pip2 Variation of curvature E, etc. No. 1,000043 Qiaz Variation of slope B _e , with aboutle camber -1,95367 Qiaz Variation of slope B _e , with camber -1,95367 Qiaz Variation of slope B _e , with camber -1,95367 Qiaz Variation of slope B _e , with camber -1,95367 Qiaz Variation of slope B _e , with camber -1,95367 Qiaz Variation of slope B _e , with camber -1,95367 Qiaz Variation of slope B _e , with camber -1,95367 Qiaz Variation of slope B _e , with camber -1,95367 Qiaz Variation of clurature E _e , with load -0,000037 Qiaz Variation of slope B _e , with camber -1,085800 Pip3 Variation of clurature E _e , with camber -1,085800 Pip3 Variation of clurature E _e , with camber -1,085800 Pip3 Variation of slope B _e , with camber -1,085800 Pip3 Variation of slope B _e , with camber -1,085800 Pip3 Variation of slope B _e , with camber -1,085800 Pip3 Variation of slope B _e , with camber -1,085800 Pip3 Variation of slope B _e , with camber -1,085800 Pip3 Variation of slope B _e , with camber -1,085800 Pip3 Variation of slope B _e , with camber -1,085800 Pip3 Variation of slope B _e , with camber -1,085800 Pip3 Variation of slope B _e , with camber -1,085800 Pip3 Variation of slope B _e , with camber -1,085800 Pip3 Variation of slope B _e , with camber -1,085800 Pip3 Variation of slope B _e , with camber -1,085800 Pip3 Variation of slope B _e , with camber -1,085800 Pip3	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
Picxt Shape factor C, for Incorptularian force 1.350000 Picxt Variation of lateral friction with camber squared -1.888950 Qisst Variation of slope B _x with absolute camber -1.95367.	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
Digital Conglutional friction at F _{cs}		Longitudinal Force			Variation of lateral friction with load	-0.150167	q _{Bz3}	Variation of slope B _{pt} with load squared	-0.000006
Policy Variation of friction with load -0.234080 Pig/2 Variation of curvature E, with load 0.000007 Qig/3 Slope factor B, of residual torque M ₂ 0.00000	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
Pext Longitudinal curvature E, at F ₂₀	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 _{E/2} Variation of curvature E, with load 1.164900 P _{E/3} Variation of curvature E, with cand squared 1.085800 P _{C/1} Maximum value of stiffness K, 1.14.087070 Q _{C/1} Peak trail D _{ir} " □ P _c " (F _F ", π', ∇ _i) 0.06995	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 _{zr}	0.000000
Pick Variation of curvature E, with load squared -1,055800 Pick Factor in curvature E, with load -0,083630 Pick -0,0836300 Pick -0,0836	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 _{zr}	0.000000
PEXA Factor in curvature E _x while driving 0.853630 PKy2 Load at which K _y reaches maximum value -3.621914 Q _{D22} Variation of peak D _{yt} * with load -0.00855	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
Pixt Longitudinal Isip stiffness K, with load 0.000013 Pixty Variation of K, with camber 2.518860 Q _{0.24} Variation of peak D _{pt} " with camber squared -0.08105	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
Procedure Proc	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
Picca Exponent in slip stiffness K _x with load D,048640 D _{Hy2} Variation of shift S _{Hy} with load D,001398 Q _{Dz6} Peak residual torque D _{Mr} = D _{Mr} (F _x *R ₀) -0.01741	p _{Kx1}	Longitudinal Isip 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
Phat Horizontal shift S _{Hs} at F ₂₀ 0.005465 Phy3 Variation of shift S _{Hy} with camber -0.119546 Q _{D27} Variation of peak factor D _M ** with load 0.01049	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
PH22 Variation of shift S _{Hz} with load -0.003318 Py ₁ Vertical shift in S _{Vy} at F ₂₀ -0.150120 Py _{1/2} Variation of shift S _{Vz} at F ₂₀ -0.150120 Py _{1/2} Variation of shift S _{Vz} with load -0.029205 Q _{D29} Variation of peak factor D _{Ms} with camber and load -0.48621 -0.48621 -0.150120 Py _{1/2} Variation of shift S _{Vz} with load -0.093000 Py ₃ Variation of shift S _{Vz} with load -0.094005 Q _{Ezt} Trail curvature E _{pt} at F ₂₀ -4.91815 -4.9181	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 _{Vx1} Vertical shift S _{vx} at F _{x0}	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
Power Variation of shift S _{VV} with load 0.090500 Power Powe	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
Longitudinal ForceCombined Slip F _{Bx1} Slope multiplier 23.880780 Lateral ForceCombined Slip Variation of shift S _{Vy} with load and camber 0.424675 QE ₂₂ Variation of curvature E _{pt} with load 0.05119	p _{Vx1}	::: -:	-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
Figure 1 Slope multiplier 23.880780	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
Figure 1 Slope change vs. slip ratio -24.289412 Figure 1 Figure 2 Figure 2 Figure 3 Fig	Longitudinal ForceCombined 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 _{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 3.29624 q _{Hz2} Variation of curvature E _{pt} with camber and sign slip angle 3.29624 q _{Hz2} Variation of curvature E _{pt} with camber and sign slip angle 3.29624 q _{Hz2} Variation of shift S _{Ht} at F ₂₀ 0.00386 q _{Hz2} Variation of shift S _{Ht} with load 0.00041 q _{Hz3} Variation of shift S _{Ht} with camber 0.268876 q _{Hz2} Variation of shift S _{Ht} with camber 0.268876 q _{Hz2} Variation of shift S _{Ht} with camber 0.268876 q _{Hz2} Variation of shift S _{Ht} with camber and load 0.130018 q _{Hz3} variation of shift S _{Ht} with camber and load 0.130018 q _{Hz3} variation of shift S _{Ht} with camber and load 0.130018 q _{Hz3} variation of shift S _{Ht} with camber and load 0.130018 q _{Hz3} variation of shift S _{Ht} with camber and load 0.130018 q _{Hz3} variation of shift S _{Ht} with camber and load 0.130018 q _{Hz3} variation of shift S _{Ht} with camber and load 0.130018 q _{Hz3} variation of shift S _{Ht} with camber and load 0.130018 q _{Hz3} variation of shift S _{Ht} with camber and load 0.130018 q _{Hz3} variation of shift S _{Ht} with camber and load 0.130018 q _{Hz3} variation of shift S _{Ht} with camber and load 0.130018 q _{Hz3} q _{Hz3} variation of shift S _{Ht} with camber and load 0.130018 q _{Hz3} q _{Hz3} q _{Hz3} variation of shift S _{Ht} with camber and load 0.130018 q _{Hz3} q _H	r _{Bx1}	r _{Bx1} Slope multiplier 23.880780			Lateral ForceCombined Slip		q _{Ez3}	Variation of curvature E _{pt} with load squared	0.044727
FHx1 Horizontal shift factor 0.000000 FBy3 Slip angle offset for slope 0.044141 QHz1 Trail horizontal shift SHz at Fz0 0.00386 FQy1 Shape factor for combined lateral 0.992126 QHz2 Variation of shift SHz with load 0.000416 FHy1 Horizontal shift factor -0.002106 QHz3 Variation of shift SHz with camber 0.268876 FVy1 Vertical shift multiplier vs. load -0.053669 QHz4 Variation of shift SHz with camber and load 0.130018 FVy2 Vertical shift multiplier vs. load and delta load 0.037279 0.511559 0.511559 FVy4 Vertical shift multiplier vs. slip angle 2.000000 2.000000 0.00000	r _{Bx2}	Slope change vs. slip ratio	-24.289412	r _{By1}	Slope multiplier	16.610029	q_{Ez4}	Variation of curvature E _{pt} with sign of slip angle	0.300067
C _{Cy1} Shape factor for combined lateral 0.992126 Q _{Hz2} Variation of shift S _{Ht} with load 0.000416	r _{Cx1}	Shape factor for combined longitudinal	1.118541	r _{By2}	Slope change vs. slip angle	25.105729	q _{Ez5}	Variation of curvature E _{pt} with camber and sign slip angle	3.296241
F _{Hy1} Horizontal shift factor -0.002106 q _{Hz3} Variation of shift S _{Ht} with camber 0.268870 F _{Vy1} Vertical shift multiplier vs. load -0.053669 q _{Hz4} Variation of shift S _{Ht} with camber and load 0.130019 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	r _{Hx1}	Horizontal shift factor	0.000000	r _{By3}	Slip angle offset for slope	0.044141	q _{Hz1}	Trail horizontal shift S _{Ht} at F _{z0}	0.003864
Toyal Vertical shift multiplier vs. load -0.053669 QHz4 Variation of shift Sht with camber and load 0.13001: Toyal Vertical shift multiplier vs. load and delta load 0.037279 Toyal Vertical shift multiplier vs. camber 0.511559 Toyal Vertical shift multiplier vs. slip angle 2.000000 Toys Vertical shift multiplier 6.000000				r _{Cy1}	Shape factor for combined lateral	0.992126	q _{Hz2}	Variation of shift S _{Ht} with load	0.000410
Γ _{V/2} Vertical shift multiplier vs. load and delta load 0.037279 Γ _{V/3} Vertical shift multiplier vs. camber 0.511559 Γ _{V/4} Vertical shift multiplier vs. slip angle 2.000000 Γ _{V/5} Vertical shift multiplier 6.000000				r _{Hy1}	Horizontal shift factor	-0.002106	q _{Hz3}	Variation of shift S _{Ht} with camber	0.268876
r _{Vy3} Vertical shift multiplier vs. camber 0.511559 r _{Vy4} Vertical shift multiplier vs. slip angle 2.000000 r _{Vy5} Vertical shift multiplier 6.000000				r_{Vy1}	Vertical shift multiplier vs. load	-0.053669	q _{Hz4}	Variation of shift S _{Ht} with camber and load	0.130015
Γ_{Vy4} Vertical shift multiplier vs. slip angle 2.000000 Γ_{Vy5} Vertical shift multiplier 6.000000				r _{Vy2}	Vertical shift multiplier vs. load and delta load	0.037279			
r _{Vy5} Vertical shift multiplier 6.000000				r_{Vy3}	Vertical shift multiplier vs. camber	0.511559			
- 17- · · · · · · · · · · · · · · · · · · ·				r _{Vy4}	Vertical shift multiplier vs. slip angle	2.000000			
Γ _{Vv6} Vertical shift multiplier vs. slip ratio −2.000000				r _{Vy5}	Vertical shift multiplier	6.000000			
e				r _{Vy6}	Vertical shift multiplier vs. slip ratio	-2.000000			