FOURLINK - Version 4.0

Racing Systems Analysis - www.QUARTERjr.com

File: test.4LB
Note: Test Case for new version Oct 25,2016

General Data	
Estimated 60 ft Time - sec	1.01
Maximum Acceleration - g's	2.75
Tire Rollout - inches	102.0

Static Weight Data - lbs		%
Front Weight	1200	51.0
Rear Weight	1155	49.0
Total Weight	2355	100.0

Rear Suspension Data	
Shock Mount Location - inches	-5.00
Rear Spring Rate - lbs/inch	85
Shock Units:	lbs per in/sec
Compression (Bump) Rate	66
Extension (Rebound) Rate	209
Wheelie Bar Length - inches	68.0

Center of Gravity Data	
Wheelbase - inches	105.0
Horizontal CG - inches	53.6
Vertical CG - inches	17.0
Front Strut Lift - inches	2.0
Front Tire Lift - inches	1.0
Weight of Rear Axle Assembly	350

Four Link Geometry Data - Hole Code 1123

Link Bar	Axle End x-in	Axle End y-in	Chassis End x-in	Chassis End y-in	Length inches	Angle degrees	Forces and Components lbs	Horiz	Vertical
Upper	1.000	19.000	20.100	14.250	19.68	-14.0	-6391	-6244	1365
Lower	0.500	8.000	20.500	7.000	20.02	-2.9	11760	11757	-244
							Totals	5514	1121

Dynamic Weight Transfer	
Front Weight - lbs	0
Rear Weight - lbs	2312
Wheelie Bar Force - lbs	43
Shock Separation - inches	-0.6
Shock Damping Ratio	2.22

Instant Center Parameters	
Horizontal IC - inches	56.5
Vertical IC - inches	5.2
Percent Anti-Squat - %	91
Initial Rear Tire Hit - lbs	683

Dynamic Chassis Analysis - Hole Code 1123

Time sec	Separation in	Separation in/sec	Forces - lbs Spring	Forces - lbs Shock	Forces - lbs Mass	Rear Tires	Front Tires	Wheelie Bars
0.00	0.00	0.0	740	0	0	1155	1200	0
0.05	0.05	1.5	730	-636	42	1740	657	0
0.10	0.15	2.2	714	-933	39	2292	102	0
0.15	0.25	1.8	696	-755	-37	2234	84	0
0.20	0.33	1.2	684	-505	-44	2251	60	0
0.25	0.37	0.6	676	-255	-53	2273	29	0
0.30	0.39	0.0	674	-17	-39	2304	0	11
0.35	0.37	-0.5	677	61	0	2311	0	43
0.40	0.35	-0.5	681	61	0	2311	0	43
0.45	0.32	-0.5	685	61	0	2312	0	43
0.50	0.30	-0.5	689	62	0	2312	0	43
0.55	0.28	-0.5	693	62	-1	2311	0	43
0.60	0.25	-0.5	697	62	0	2312	0	43
0.65	0.22	-0.9	702	121	-92	2260	0	3
0.70	0.18	-0.9	710	118	9	2313	51	0
0.75	0.13	-0.8	717	101	9	2261	103	0
0.80	0.10	-0.7	723	93	10	2210	155	0

Average Rear Tire Force - lbs 2290 Rear Tire Force Variation - % 3.4

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Four Link Bar Geometry Data

	Upper Link Bar				Lower Link Bar			
	Axle End		Chassis End		Axle End		Chassis End	
Hole	x-in	y-in	x-in	y-in	x-in	y-in	x-in	y-in
1	1.000	19.000	20.100	14.250	0.500	9.000	20.500	9.000
2	1.000	18.000	20.100	13.250	0.500	8.000	20.500	8.000
3	1.000	17.000	20.100	12.250	0.500	7.000	20.500	7.000
4	0.000	0.000	20.100	11.250	0.500	6.000	20.500	6.000
5	0.000	0.000	20.100	10.250	0.000	0.000	0.000	0.000

Adjust Geometry: Axle Height - in 0.000 Chassis Height - in 0.000
Pinion Angle - deg 0.00

Calculated Four Link Bar Details - Display Limits

Shock Separation - in		Instant Center Locations - in			
min	-3.0	x-min	10.0	y-min	1.0
max	3.0	x-max	60.0	y-max	20.0

Percent Anti-Squat - %		Lower Link Bar Angle - degs	
min	60	min	-5.0
max	110	max	2.0

Calculated Four Link Bar Details

Hole Code	Instant Center x-in	Instant Center y-in	Shock Sep.	%Anti-Squat	Tire Hit
1112	51.5	6.5	0.6	109	899
2244	49.3	6.0	0.6	109	877
2334	44.9	4.8	0.4	105	782
2133	57.0	7.0	0.3	104	881
1144	53.3	6.0	0.2	102	817
2223	51.5	5.5	0.0	100	775

Display Limits: On

Hole Code	Instant Center x-in	Instant Center y-in	Shock Sep.	%Anti-Squat	Tire Hit
3212	55.8	6.2	0.0	100	809
3244	57.0	6.0	-0.2	97	767
1234	48.9	4.6	-0.2	97	698
3334	51.5	4.5	-0.5	92	650
1123	56.5	5.2	-0.6	91	683
2234	56.5	4.2	-1.1	84	568