# FOURLINK - Version 4.0

**Racing Systems Analysis - www.QUARTERjr.com**

File: exp_050523.4LB
Note:

| General Data | |
|---|---|
| Estimated 60 ft Time - sec | 1.10 |
| Maximum Acceleration - g's | 2.34 |
| Tire Rollout - inches | 104.0 |

| Static Weight Data - lbs | | % |
|---|---|---|
| Front Weight | 979 | 45.0 |
| Rear Weight | 1196 | 55.0 |
| Total Weight | 2175 | 100.0 |

| Rear Suspension Data | |
|---|---|
| Shock Mount Location - inches | -5.00 |
| Rear Spring Rate - lbs/inch | 100 |
| Shock Units: | lbs per in/sec |
| Compression (Bump) Rate | 200 |
| Extension (Rebound) Rate | 400 |
| Wheelie Bar Length - inches | 65.0 |

| Center of Gravity Data | |
|---|---|
| Wheelbase - inches | 102.0 |
| Horizontal CG - inches | 45.9 |
| Vertical CG - inches | 17.0 |
| Front Strut Lift - inches | 2.5 |
| Front Tire Lift - inches | 3.0 |
| Weight of Rear Axle Assembly | 250 |

**Four Link Geometry Data - Hole Code 1132**

| 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 | 0.068 | 19.790 | 17.500 | 13.125 | 18.66 | -20.9 | -4810 | -4570 | 1500 |
| Lower | -0.892 | 8.498 | 17.500 | 6.875 | 18.46 | -5.0 | 9081 | 9075 | -335 |
| | | | | | | | Totals | 4505 | 1165 |

| Dynamic Weight Transfer | |
|---|---|
| Front Weight - lbs | 0 |
| Rear Weight - lbs | 2076 |
| Wheelie Bar Force - lbs | 99 |
| Shock Separation - inches | 0.9 |
| Shock Damping Ratio | 6.33 |

| Instant Center Parameters | |
|---|---|
| Horizontal IC - inches | 38.8 |
| Vertical IC - inches | 5.0 |
| Percent Anti-Squat - % | 120 |
| Initial Rear Tire Hit - lbs | 733 |

**Dynamic Chassis Analysis - Hole Code 1132**

| Time sec | Separation in | Separation in/sec | Forces - lbs Spring | Shock | Mass | Rear Tires | Front Tires | Wheelie Bars |
|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.0 | 838 | 0 | 0 | 1196 | 979 | 0 |
| 0.05 | 0.02 | 0.6 | 835 | -505 | 28 | 1672 | 531 | 0 |
| 0.10 | 0.06 | 1.0 | 826 | -839 | 27 | 2129 | 72 | 0 |
| 0.15 | 0.11 | 0.8 | 817 | -637 | -21 | 2103 | 51 | 0 |
| 0.20 | 0.14 | 0.5 | 810 | -392 | -25 | 2132 | 18 | 0 |
| 0.25 | 0.16 | 0.3 | 807 | -203 | -17 | 2117 | 0 | 41 |
| 0.30 | 0.17 | 0.1 | 805 | -111 | 0 | 2076 | 0 | 99 |
| 0.35 | 0.17 | 0.1 | 804 | -108 | 0 | 2076 | 0 | 99 |
| 0.40 | 0.18 | 0.1 | 803 | -108 | 0 | 2076 | 0 | 99 |
| 0.45 | 0.19 | 0.1 | 801 | -107 | 0 | 2076 | 0 | 99 |
| 0.50 | 0.19 | 0.1 | 800 | -107 | 0 | 2076 | 0 | 99 |
| 0.55 | 0.20 | 0.1 | 798 | -107 | 0 | 2076 | 0 | 99 |
| 0.60 | 0.21 | 0.1 | 797 | -71 | -14 | 2085 | 0 | 75 |
| 0.65 | 0.21 | -0.1 | 797 | 39 | -27 | 2145 | 0 | 3 |
| 0.70 | 0.20 | -0.1 | 798 | 39 | 0 | 2131 | 44 | 0 |
| 0.75 | 0.20 | -0.1 | 799 | 40 | 0 | 2085 | 90 | 0 |
| 0.80 | 0.19 | -0.1 | 800 | 42 | 0 | 2041 | 135 | 0 |

Average Rear Tire Force - lbs 2100  Rear Tire Force Variation - % 3.3

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File: exp_050523.4LB
Note:

**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 | 0.068 | 19.790 | 17.500 | 13.125 | -0.648 | 10.499 | 17.500 | 8.125 |
| 2 | 0.000 | 0.000 | 17.500 | 11.875 | -0.770 | 9.499 | 17.500 | 6.875 |
| 3 | 0.000 | 0.000 | 17.500 | 10.625 | -0.892 | 8.498 | 17.500 | 5.625 |
| 4 | 0.000 | 0.000 | 17.500 | 9.375 | 0.000 | 0.000 | 0.000 | 0.000 |
| 5 | 0.000 | 0.000 | 0.000 | 0.000 | 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 | 36.0 | y-min | 1.0 |
| max | 3.0 | x-max | 56.0 | y-max | 16.0 |

| Percent Anti-Squat - % | | Lower Link Bar Angle - degs | |
|---|---|---|---|
| min | 65 | min | -7.0 |
| max | 95 | max | -2.0 |

**Calculated Four Link Bar Details** **Display Limits: On**

| Hole Code | Instant Center x-in | Instant Center y-in | Shock Sep. | %Anti-Squat | Tire Hit | Hole Code | Instant Center x-in | Instant Center y-in | Shock Sep. | %Anti-Squat | Tire Hit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| No Hole Code Within Display Limits! | | | | | | | | | | | |