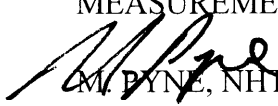


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SUBJ: NHTSA NCAP ROLLOVER
MEASUREMENT DATA

FROM:  M. BYNE, NHTSA NPS-23

TO: D.O.T.

DATE: 19 JAN 2001

The attached data sheets report initial Static Stability Factor (SSF) and related measurement data from NHTSA's NCAP Rollover Rating program for model year 2001. Included are 26 data sheets covering 26 test vehicle make/models (one data sheet per test vehicle) which NHTSA has measured and rated to date for the Rollover Rating program. Additional data sheets will be made available as other vehicle make/models are measured and star ratings issued.

The NHTSA test procedures for vehicle SSF measurement are as follows:

- o Test vehicles are configured with a 161 lb. surrogate occupant (dummy) in the driver's seating position and with full fuel tank. No additional occupants or cargo are used.
- o Center of gravity height is measured using a Vehicle Inertia Measurement Facility (VIMF) as described in "The Design of a Vehicle Inertia Measurement Facility," Heydinger, G. J., et al; SAE paper 950309, February, 1995.
- o Track width is measured with steering wheels aligned longitudinally and with the test vehicle at its nominal ride height. The value of "Average Track" is determined by averaging eight track width measurements, four at each axle, as follows:
 - Front axle:
 - A. Inside of left tire to outside of right tire, measured at front surface of tires;
 - B. Inside of left tire to outside of right tire, measured at rear surface of tires;
 - C. Outside of left tire to inside of right tire, measured at front surface of tires;
 - D. Outside of left tire to inside of right tire, measured at rear surface of tires.
 - Rear axle: measurements 'E' through 'H' are the same as 'A' through 'D', respectively, but at the rear axle.

The following abbreviations are used in the data sheets:

- "FWD" means front wheel drive;
- "AWD" means all wheel drive;
- "RWD" means rear wheel drive;
- "4x4" means four wheel drive;
- "4x2" means two wheel drive.

Chevrolet Cavalier - Driver

YEAR: 2001
 MAKE: Chevrolet
 MODEL: Cavalier
 VIN: 1G1JC52431722####

DATE TESTED: 11/21/00
 VIMF TEST NO.: 867

BODY STYLE AND TRIM:

LOAD: Driver

ENGINE SIZE AND TYPE: 2.2L I4

TRANSMISSION TYPE: Automatic

DRIVE: FWD

DOORS: 4 Door

FUEL: Full

OPTIONAL EQUIPMENT:

TIRE TYPE: Goodyear Conquest 90S

TIRE SIZE: P195/70R14

TIRE PRESSURE FRONT: 30 psi
 TIRE PRESSURE REAR: 30 psi

TRACK FRONT: 57.7 inches
 TRACK REAR: 56.8 inches
 AVERAGE TRACK: **57.3** inches
 WHEELBASE: 104.1 inches
 ROOF HEIGHT: 55.6 inches

Track Width Measurements

Front A	57.70	inches
B	57.70	inches
C	57.70	inches
D	57.70	inches
Rear E	56.70	inches
F	56.90	inches
G	56.80	inches
H	56.80	inches

GVWR 3614 lb
 FRONT GAWR 1979 lb
 REAR GAWR 1635 lb

Wheelbase Measurements

Left Side	104.00	inches
Right Side	104.20	inches

LEFT FRONT WEIGHT 916.1 lb
 RIGHT FRONT WEIGHT 905.6 lb
 LEFT REAR WEIGHT 552.2 lb
 RIGHT REAR WEIGHT 476.7 lb
 TOTAL WEIGHT 2850.6 lb

C.G. LONGITUDINAL 37.57 inches (From Front Axle)
 C.G. LATERAL -0.86 inches (Negative Towards Driver's Side)

VIMF C.G. HEIGHT MEASUREMENT RESULTS

	Applied Weight (lb)	Platform Angle (deg)	Relative Motion (inches)	C.G. Height (inches)
Run #1	0.000	0.22	0.000	0.00
Run #2	50.341	4.17	-0.033	21.13
Run #3	94.649	7.52	-0.081	21.14
Run #4	50.341	-3.71	0.034	21.11
Run #5	94.649	-7.07	0.078	21.17

AVERAGE C.G. HEIGHT **21.14**

STATIC STABILITY FACTOR (SSF)

SSF = T/(2 x H) = AVERAGE TRACK/(2 x AVERAGE C.G. HEIGHT)

SSF **1.354**