

SAFETY TEST
VEHICLE CRASH TEST LETTER

PAGE 01

VC05493 30 MPH REAR BARRIER, ZJJ74, 5.2L MPI ITEM ZJ8501
1996 MVSS VALIDATION - 301.
TEST DATE 05/26/95

TEST PURPOSE PRIMARY, 1996 USA 301 VALIDATION.
OBSERVE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED; 30.1 MPH
DAMAGE LOCATION; REAR
BARRIER TYPE; REAR TYPE IV
BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; ZJ
CAR LINE; J
BODY; 74
ENGINE; 5.2 LITRE
ENGINE NOTE; ELECTRONIC FUEL INJECTION
TRANSMISSION; 4 SPEED AUTO 4x4
TRANS. NOTE;
VIN AS TESTED; 1J4EX58S3TCI00059 MOD.
VIN AS BUILT; 1J4EX58S3TCI00059 MOD.

TEST SPEED 30.5 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS) 4797 TOTAL, 2708 FRONT, 2089 REAR

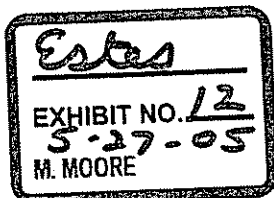
OCCUPANTS LEFT FRONT, HYB II, BALLAST. AD-60
RESTRAINT-BELTS ONLY.
RIGHT FRONT, HYB II, BALLAST. AD-63
RESTRAINT-BELTS ONLY.

BUILD CONDITION 1996 C1 PILOT BUILT VEHICLE PRODUCTION INTENT.
POWER STEERING, A/C, ABS BRAKES, ROOF RACK
AKA (P6ZJ8501).
1996 REAR LIFT GATE WITH 'FLIPPER' GLASS.

TARGET WEIGHT (LBS), 4163 TOTAL, 2311 FRONT, 1852 REAR REP MAX OPT. WT.
NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

FUEL AND BALLAST 21.8 GALLONS OF STODDARD SOLVENT.
300 LBS OF LUGGAGE BALLAST SECURED IN CARGO AREA.
120 LBS SECURED TO FRONT FLOORPAN.
70 LBS SECURED TO FLOORPAN IN REAR SEAT AREA.

POST TEST REMARKS THERE WAS NO FUEL LEAKAGE DURING IMPACT, NOR DUR-
ING THE SUBSEQUENT THIRTY MINUTES. THERE WAS NO
FUEL LEAKAGE DURING THE STATIC ROLLOVER.



DC 03937

SAFETY TEST
VEHICLE CRASH TEST LETTER

PAGE 02

VC05493 30 MPH REAR BARRIER, ZJJ74, 5.2L MPI ITEM ZJ8501
1996 MVSS VALIDATION - 301.
TEST DATE 05/26/95

REPORT CODES

A = TRANSDUCER DATA	B = ALL FILM DATA
C = HIGH SPEED FILM	D = ENGINEER'S REPORT
E = DUMMY KINEMATICS	F = STEERING COLUMN
G = UNDERBODY	H = A-POST
I = DYNAMIC CRUSH	J = ENGINE COMPARTMENT
K = DOOR CRUSH	L = FORCE/CRUSH/ENERGY
M = SPECIAL	N = CATALOG EDP DATA
* = REPORT REQUESTOR	

DISTRIBUTION

D.J. MCKENZIE	422-05-01 (AB)
J.B. ESTES	514-15-58 (AB)

DATE 06/01/95

TIME 08.00.06.

DC 03938

CHRYSLER MOTORS
-SAFETY TEST
VEHICLE CRASH TEST REQUEST

SUPPLEMENT NO. 01

ITEM ZJ8501 CHARGE NO. DISCOVER ISSUE DATE 5/15/95

VC 5493 30 MPH REAR BARRIER, ZJJ74, 5.2L MPI.
1996 MVSS VALIDATION - 301.

TEST DATE

5,26,95

ENGINEER

MANNEY.SPEED 30.5 MPH

SOURCE

TRAP

TEST PURPOSE

PRIMARY, 1996 USA 301 VALIDATION.
OBSERVE FUEL SYSTEM INTEGRITY.

IMPACT TYPE

TARGET SPEED; 30.1 MPH
DAMAGE LOCATION; REAR
BARRIER TYPE; REAR TYPE IV
BARRIER SURFACE; PLYWOOD

VEHICLE

BODY CLASS; ZJ
CAR LINE; J
BODY; 74
ENGINE; 5.2 LITRE
ENGINE NOTE; ELECTRONIC FUEL INJECTION
TRANSMISSION; 4 SPEED AUTO 4x4
TRANS. NOTE;
VIN AS TESTED; 1J4EX58S3TCI00059 MOD.
VIN AS BUILT; 1J4EX58S3TCI00059 MOD.

BUILD CONDITION

1996 C1 PILOT BUILT VEHICLE PRODUCTION INTENT.
POWER STEERING, A/C, ABS BRAKES, ROOF RACK
AKA (P6ZJ8501).
1996 REAR LIFT GATE WITH 'FLIPPER' GLASS.

TARGET WEIGHT (LBS) 4163 TOTAL, 2311 FRONT, 1852 REAR REP MAX OPT. WT.
NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

TEST WEIGHT (LBS)

4797 TOTAL, 2708 FRONT, 2089 REAR

FUEL BALLAST

21.8 GALLONS OF STODDARD SOLVENT.

LUGGAGE BALLAST

300 LBS OF LUGGAGE BALLAST SECURED IN CARGO AREA.

OTHER BALLAST

10.0 - FRONT FLOOR PAN
70 - REAR SEAT AREA.

TEST REMARKS

CHRYSLER MOTORS
SAFETY TEST
VEHICLE CRASH TEST REQUEST

SUPPLEMENT NO. 01

OCCUPANTS

LEFT FRONT, HYB II, BALLAST.
RESTRAINT-BELTS ONLY.
RIGHT FRONT, HYB II, BALLAST.
RESTRAINT-BELTS ONLY.

AD NO 60AD NO 63

MECHANICAL REQ

PLACE SEAT IN MID TRACK POSITION.
FUEL PUMP TO BE RUNNING DURING TEST.
RUN FUEL PUMP PRE TEST TO CHECK CONNECTIONS.
PRESSURE CHECK PRE AND POST TEST.
STATIC ROLL POST TEST.
PAINT REAR DIFFERENTIAL AND GAS TANK FOR VIEWING.
PAINT FILLER NECK AREA FOR VISIBILITY.

INSTRUMENTATION REQ SEE 3RD SHEET NO. 107 FOR ACCELEROMETER REQUIREMENTS AND LOCATIONS (THE 4 SILL ACCELEROMETERS ARE TO BE BI-AXIAL).
TRI-AXIAL TO BE PLACED ON REAR 'FLIPPER' GLASS LATCH AS PER DRAWING PROVIDED TO T.P. MAULE.

PHOTOGRAPHIC REQ

1-LEFT SIDE OVERALL CAMERA TO VIEW ENTIRE VEHICLE.
1-RIGHT SIDE OVERALL CAMERA TO VIEW ENTIRE VEHICLE
1-CATWALK CAMERA TO VIEW ENTIRE VEHICLE.
1-PIT CAMERA TO VIEW UNDERBODY, AXLE TO BUMPER.
1-PIT CAMERA CLOSE-UP OF FILLER NECK.

FILM ANALYSIS

VEHICLE VELOCITY, ONLY IF REQUESTED.
DYNAMIC CRUSH.

REMARKS

MAKE 1 FILM COPY AND 1 VHS COPY, SEND TO:
J.B. ESTES 514-15-58
PLEASE RETURN VEHICLE POST TEST TO JTE.

T. E. REPORT

301 FUEL SYSTEMS REPORT REQUIRED.

REPORT CODES

A = TRANSDUCER DATA	B = ALL FILM DATA
C = HIGH SPEED FILM	D = ENGINEER'S REPORT
E = DUMMY KINEMATICS	F = STEERING COLUMN
G = UNDERBODY	H = A-POST
I = DYNAMIC CRUSH	J = ENGINE COMPARTMENT
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CHRYSLER MOTORS
SAFETY TEST
VEHICLE CRASH TEST REQUEST

SUPPLEMENT NO. 01

*****CHANGED 05/16/95 AT 17.44.57.

SUPPLEMENT NO. 01

VEHICLE

MODIFY	VIN AS TESTED;	CCC	MOD.
TO READ	VIN AS TESTED;	1J4EX58S3TCI00059	MOD.
MODIFY	VIN AS BUILT;	XXX	MOD.
TO READ	VIN AS BUILT;	1J4EX58S3TCI00059	MOD.

DATE 06/01/95
TIME 10.54.36.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC05493 ITEM ZJ8501
VC05493 30 MPH REAR BARRIER, ZJJ74, 5.2L MPI ITEM ZJ8501
1996 MVSS VALIDATION - 301.
TEST DATE 05/26/95

RECEIVED

TEST PURPOSE PRIMARY, 1996 USA 301 VALIDATION.
OBSERVE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED; 30.1 MPH
DAMAGE LOCATION; REAR
BARRIER TYPE; REAR TYPE IV
BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; ZJ
CAR LINE; J
BODY; 74
ENGINE; 5.2 LITRE
ENGINE NOTE; ELECTRONIC FUEL INJECTION
TRANSMISSION; 4 SPEED AUTO 4x4
TRANS. NOTE;
VIN AS TESTED; 1J4EX58S3TC100059 MOD.
VIN AS BUILT; 1J4EX58S3TC100059 MOD.

TEST SPEED 30.5 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS) 4797 TOTAL, 2708 FRONT, 2089 REAR

OCCUPANTS LEFT FRONT, HYB II, BALLAST. AD-60
RESTRAINT-BELTS ONLY.
RIGHT FRONT, HYB II, BALLAST. AD-63
RESTRAINT-BELTS ONLY.

BUILD CONDITION 1996 C1 PILOT BUILT VEHICLE PRODUCTION INTENT.
POWER STEERING, A/C, ABS BRAKES, ROOF RACK
AKA (P6ZJ8501).
1996 REAR LIFT GATE WITH 'FLIPPER' GLASS.

TARGET WEIGHT (LBS) 4163 TOTAL, 2311 FRONT, 1852 REAR REP MAX OPT. WT.
NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

FUEL AND BALLAST 21.8 GALLONS OF STODDARD SOLVENT.
300 LBS OF LUGGAGE BALLAST SECURED IN CARGO AREA.
120 LBS SECURED TO FRONT FLOORPAN.
70 LBS SECURED TO FLOORPAN IN REAR SEAT AREA.

POST TEST REMARKS THERE WAS NO FUEL LEAKAGE DURING IMPACT, NOR DURING
THE SUBSEQUENT THIRTY MINUTES. THERE WAS NO
FUEL LEAKAGE DURING THE STATIC ROLLOVER.

DC 03947

DATE 06/01/95
TIME 10.54.36.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC05493 ITEM ZJS501
VC05493 30 MPH REAR BARRIER. ZJJ74. 5.2L MPI ITEM ZJS501
1996 MVSS VALIDATION - 301.
TEST DATE 05/26/95

EDP TECHNICIAN S. MARCHENIA

No. of Pages 32
CC

J. B. ESTES 514-15-58
D. J. MCKENZIE 422-05-01

DC 03948

TITLE: Page Index of EDP plots Pages 001 - 032
***** VC05493A ***** Page I-01
TITLE: Transducer Summary Reports Pages 001 - 003
PAGE: 001 TSR Channels 001 - 008
PAGE: 002 TSR Channels 009 - 016
PAGE: 003 TSR Channels 017 - 017

***** VC05493B *****
TITLE: Vehicle Channels Pages 004 - 028
PAGE: 004 Average of Sill Chls 1, 3, 5, & 7
PAGE: 005 Average of Frt Sill Chls 1 & 3
PAGE: 006 LEFT FRONT SILL X, Chl 1
PAGE: 007 LEFT FRONT SILL X, Chl 1, VD
PAGE: 008 LEFT FRONT SILL Z, Chl 2
PAGE: 009 RIGHT FRONT SILL X, Chl 3
PAGE: 010 RIGHT FRONT SILL X, Chl 3, VD
PAGE: 011 RIGHT FRONT SILL Z, Chl 4
PAGE: 012 LEFT REAR SILL X, Chl 5
PAGE: 013 LEFT REAR SILL X, Chl 5, VD
PAGE: 014 LEFT REAR SILL Z, Chl 6
PAGE: 015 RIGHT REAR SILL X, Chl 7
PAGE: 016 RIGHT REAR SILL X, Chl 7, VD
PAGE: 017 RIGHT REAR SILL Z, Chl 8
PAGE: 018 LT RAIL TRAIL ARM PIV X, Chl 9
PAGE: 019 LT RAIL TRAIL ARM PIV X, Chl 9, VD
PAGE: 020 RT RAIL TRAIL ARM PIV X, Chl 10
PAGE: 021 RT RAIL TRAIL ARM PIV X, Chl 10, VD
PAGE: 022 RT REAR RAIL MID TANK X, Chl 11
PAGE: 023 RT REAR RAIL MID TANK X, Chl 11, VD
PAGE: 024 RT REAR RAIL MID TANK Z, Chl 12
PAGE: 025 RR FLIPPER GLASS LATCHX, Chl 15
PAGE: 026 RR FLIPPER GLASS LATCHX, Chl 15, VD
PAGE: 027 RR FLIPPER GLASS LATCHY, Chl 16
PAGE: 028 RR FLIPPER GLASS LATCHZ, Chl 17

***** VC05493C *****
TITLE: Moving barrier Channels Pages 029 - 032
PAGE: 029 LT RAIL MBAR MID X Chl 13
PAGE: 030 LT RAIL MBAR MID X, Chl 13, VD
PAGE: 031 RT RAIL MBAR MID X Chl 14
PAGE: 032 RT RAIL MBAR MID X, Chl 14, VD

INTER COMPANY CORRESPONDENCE

DATE 06/12/95

TO
DISTRIBUTION

FROM
L. C. BYERS

DEPARTMENT
5320

PLANT/OFFICE
CTC

CIMS NUMBER
481-02-18

SUBJECT:
REAR DYNAMIC CRUSH ANALYSIS
VC05493 30 MPH REAR BARRIER. ZJJ74. 5.2L MPI ITEM ZJ8501
1996 MVSS VALIDATION - 301.
TEST DATE 05/26/95

TEST PURPOSE PRIMARY. 1996 USA 301 VALIDATION.
OBSERVE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED: 30.1 MPH
DAMAGE LOCATION: REAR
BARRIER TYPE: REAR TYPE IV
BARRIER SURFACE: PLYWOOD

VEHICLE BODY CLASS: ZJ
CAR LINE: J
BODY: 74
ENGINE: 5.2 LITRE
ENGINE NOTE: ELECTRONIC FUEL INJECTION
TRANSMISSION: 4 SPEED AUTO 4x4
TRANS. NOTE:
VIN AS TESTED: 1J4EX58S3TC100059 MOD.
VIN AS BUILT: 1J4EX58S3TC100059 MOD.

TEST SPEED 30.5 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS) 4797 TOTAL. 2708 FRONT. 2089 REAR

OCCUPANTS LEFT FRONT. HYB II, BALLAST. AD-60
RESTRAINT-BELTS ONLY.
RIGHT FRONT. HYB II, BALLAST. AD-63
RESTRAINT-BELTS ONLY.

BUILD CONDITION 1996 C1 PILOT BUILT VEHICLE PRODUCTION INTENT.
POWER STEERING. A/C. ABS BRAKES. ROOF RACK
AKA (P6ZJ8501).
1996 REAR LIFT GATE WITH 'FLIPPER' GLASS.

TARGET WEIGHT (LBS) 4163 TOTAL. 2311 FRONT. 1852 REAR REP MAX OPT. WT.
NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

FUEL AND BALLAST 21.8 GALLONS OF STODDARD SOLVENT.
300 LBS OF LUGGAGE BALLAST SECURED IN CARCO AREA.
120 LBS SECURED TO FRONT FLOORPAN.
70 LBS SECURED TO FLOORPAN IN REAR SEAT AREA.

POST TEST REMARKS THERE WAS NO FUEL LEAKAGE DURING IMPACT. NOR DUR-

TEST VC05493 06/12/95 13.08 PAGE 1 OF 2

ING THE SUBSEQUENT THIRTY MINUTES. THERE WAS NO
FUEL LEAKAGE DURING THE STATIC ROLLOVER.

DYNAMIC CRUSH, PITCH, AND REAR WHEEL MOTION RELATIVE TO THE FRONT
SILL HAVE BEEN DETERMINED BY FILM ANALYSIS. TIME WAS BASED ON
CAMERA TIMING DATA.

DYNAMIC CRUSH 20.0 +0R- 1 INCH AT 79. +0R- 5 MSEC.

S.A. Helquist

S. A. HELQUIST

L.C. Byers

L. C. BYERS

GRAPHS - 4

G L O S S A R Y O F T E R M S

U S E D I N S T A N D A R D R E P O R T S

AD	ANTHROPOMORPHIC DEVICE
ADT	ANTHROPOMORPHIC TEST DEVICE
BASE COORD	BASE COORDINATE SYSTEM
C/L	CENTERLINE
CAR COORD	CAR COORDINATE SYSTEM
CCW	COUNTER CLOCKWISE
CORR-IN	SEPARATION IN INCHES (MINUS INITIAL LENGTH)
CORR-MM	SEPARATION IN MM (MINUS INITIAL LENGTH)
CORR-P	CORRECTED (ZEROED) PITCH
CORR-R	CORRECTED (ZEROED) ROLL
CORR-Y	CORRECTED (ZEROED) YAW
CW	CLOCKWISE
EFI	ELECTRONIC FUEL INJECTOR
ENG	ENGINE
ENGPY	ENGINE PITCH AND YAW
FESM	FRONT END SHEET METAL
FIDUCIAL	REFERENCE POINT OR TARGET
FS	FRONT SILL TARGET
FWD	FORWARD
IP	INSTRUMENT PANEL TARGET
LBS	POUNDS
LCP.LQP	LEFT C-POST & QUARTER PANEL TARGETS
LFS.LMS.LRS	LEFT FRONT SILL, MID SILL, & REAR SILL TARGETS
LT	LEFT
MS	MID SILL TARGET
NORMALIZE	PUT ON A COMMON BASIS
NOSE-DOWN	LEADING END BELOW TRAILING
NOSE-UP	LEADING END ABOVE TRAILING
PERF	PERFORMANCE
REF	REFERENCE
REL	RELATIVE TO (ONE-DIMENSIONAL)
RCP.RQP	RIGHT C-POST & QUARTER PANEL TARGETS
RFS.RMS.RRS	RIGHT FRONT, MID, & REAR SILL TARGETS
ROLL-LEFT	LEFT SIDE LOWER THAN RIGHT
ROLL-RIGHT	RIGHT SIDE LOWER THAN LEFT
RS	REAR SILL TARGET
RT	RIGHT
SEP	SEPARATION OF (THREE-DIMENSIONAL)
SYS	SYSTEM
TBI	THROTTLE BODY INJECTOR
TIME.MS	TIME IN MILLISECONDS
U/B	UNDERBODY
VS	VERSUS
X	LONGITUDINAL AXIS (INCREASING TOWARD TRAILING EDGE)
XF	X-FILTERED
Y	LATERAL AXIS (INCREASING TO THE RIGHT)
YAW-LEFT	LEADING EDGE TO LEFT
YAW-RIGHT	LEADING EDGE TO RIGHT
Z	VERTICAL AXIS (INCREASING UPWARD)
ZEROED	SHIFTED TO START AT ZERO
ZERO-IN	ZEROED INCHES
ZERO-MM	ZEROED MILLIMETERS

IMPACT ANALYSIS
DEPARTMENT 5320
06/12/95 13.08
TEST VC05493

DC 03984