

SAFETY TEST
VEHICLE CRASH TEST LETTER

PAGE 01

VC05967 30 MPH REAR BARRIER ZJJ74 5.2L MPI ITEM ZJ8271
1997 FMVSS COMPLIANCE - 301
TEST DATE 06/06/96

TEST PURPOSE PRIMARY, 1997 COMPLIANCE
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 1J4GZ78Y3VC500001 MOD
VIN AS BUILT 1J4GZ78Y3VC500001 MOD

TEST SPEED 30.1 MPH BY ELECTRONIC TRAP TIMEP

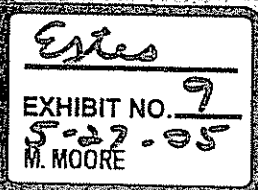
TEST WEIGHT (LBS) 4819 TOTAL, 2759 FRONT, 2050 REAR

OCCUPANTS LEFT FRONT HYB II BALLAST AD-52
RESTRAINT BELTS ONLY
RIGHT FRONT HYB II BALLAST AD-75
RESTRAINT BELTS ONLY

BUILD CONDITION 1997 P0 PRODUCTION PILOT VEHICLE
5.2 LITRE (V8) ENGINE 4 SPEED AUTO TRANS 4X4
POWER STEERING, ABS BRAKES, AIR CONDITIONING,
FULL CENTER CONSOLE AND OVERHEAD CONSOLE
SUNROOF AND FULL ROOF RACK
P225/70 R16 TIRES ON ALUMINUM RIMS & FULL SIZE
SPARE
1997 FUEL SENDING UNIT AND 1997 FUEL TANK DESIGN
TRAILER HITCH BRACKET ADDED AFTER P0 BUILD
VEHICLE BUILD CONFIGURATION REPRESENTS 1997 V1

TARGET WEIGHT (LBS) 4193 TOTAL, 2339 FRONT, 1854 REAR, REP MAX OPT WT
NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST

FUEL AND BALLAST 21.5 GALLONS OF STODDARD SOLVENT
100 LBS OF LUGGAGE BALLAST SECURED IN CARGO AREA



DC 00147

SAFETY TEST
VEHICLE-CRASH TEST LETTER

PAGE 02

VCD5967 30 MPH REAR BARRIER, ZJJ74, 5.2L MPI ITEM ZJ8271
1997 FMVSS COMPLIANCE - 301
TEST DATE 06/06/96

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.

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

| | |
|-----------------|----------------|
| M.T. STEBELETON | 422-05-01 (AB) |
| J.B. ESTES | 514-15-58 (AB) |

DATE 06/07/96 TIME 13:32:42

DC 00148

CHRYSLER MOTORS
SAFETY TEST
VEHICLE CRASH TEST REQUEST

SUPPLEMENT NO. 01

ITEM ZJ8271 CHARGE NO. DISCOVER ISSUE DATE 05/28/96

VC 5967 30 MPH REAR BARRIER, ZJJ74, 5.2L MPI.
1997 FMVSS COMPLIANCE - 301

TEST DATE 6/6/96 ENGINEER MANNEY
SPEED 30.1 MPH. SOURCE TRAF

TEST PURPOSE PRIMARY, 1997 COMPLIANCE.
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: 2J
CAR LINE: J
BODY: 74
ENGINE: 5.2 LITRE
ENGINE NOTE: ELECTRONIC FUEL INJECTION
TRANSMISSION: 4 SPEED AUTO 4x4
TRANS. NOTE:
VIN AS TESTED: 1J4GZ78Y3VC500001 MOD
VIN AS BUILT: 1J4GZ78Y3VC500001 MOD

BUILD CONDITION 1997 PQ PRODUCTION PILOT VEHICLE.
5.2 LITRE (V8) ENGINE, 4 SPEED AUTO TRANS, 4X4,
POWER STEERING, ABS BRAKES, AIR CONDITIONING,
FULL CENTER CONSOLE AND OVERHEAD CONSOLE,
SUNROOF AND FULL ROOF RACK.
P225/70 R16 TIRES ON ALUMINUM RIMS & FULL SIZE
SPARE.
1997 FUEL SENDING UNIT AND 1997 FUEL TANK DESIGN.
TRAILER HITCH BRACKET ADDED AFTER PQ BUILD.
VEHICLE BUILD CONFIGURATION REPRESENTS 1997 V1.

TARGET WEIGHT (LBS) 4193 TOTAL, 2339 FRONT, 1854 REAR, REP MAX OPT WT
NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

TEST WEIGHT (LBS) 4819 TOTAL, 2769 FRONT, 2050 REAR

FUEL BALLAST 21.5 GALLONS OF STODDARD SOLVENT

LUGGAGE BALLAST 300 LBS OF LUGGAGE BALLAST SECURED IN CARGO AREA

TEST TEST REMARKS _____

CHRYSLER MOTORS
SAFEL TEST
VEHICLE CRASH TEST REQUEST

SUPPLEMENT NO. 01

REMARKS MAKE 1 FILM COPY AND 1 VHS COPY. SEND TO:
J.B. ESTES 514-15-58
PLEASE RETURN VEHICLE POST TEST TO JTE
ATTENTION PAM MORTON @ 733-8737

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 |
| | K = DOOR CRUSH | L = FORCE/CRUSH/ENERGY |
| | M = SPECIAL | N = CATALOG EDP DATA |
| | * = REPORT REQUESTOR | |

| | | |
|--------------|-----------------|----------------|
| DISTRIBUTION | M.T. STEBELETON | 422-05-01 (AB) |
| | J.B. ESTES | 514-15-58 (AB) |

CHRYSLER MOTORS
SAFETY TEST
VEHICLE CRASH TEST REQUEST

SUPPLEMENT NO. 01

*****CHANGED 06/05/96 AT 09:40.04: SUPPLEMENT NO. 01

TARGET WEIGHT (LBS)

MODIFY 4185 TOTAL, 2335 FRONT, 1849 REAR, REP MAX OPT WT.
TO READ 4193 TOTAL, 2339 FRONT, 1854 REAR, REP MAX OPT WT.

INSTRUMENTATION REQ

MODIFY MONITOR AECM SQUIB, SAFING AND INT ACCELEROMETER.
TO READ MONITOR AECM SQUIB AND SAFING

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC5967, ITEM NUMBER ZJ9271, TEST ENGINEER MANNEY
 V.I.N. 1J4GZ78Y3VC500001, TEST DATE 6/5/76, ROLL DATE 4/2/86
 TEST TYPE: 30 MPH TYPE IV MOVING BARRIER REAR IMPACT
 FUEL: TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 21.5 GALLONS
 TEST SPEED 30.1 MPH, TEST WEIGHT 7011 POUNDS.
 POST TEST FUEL SYSTEM OBSERVATIONS OK

POST IMPACT LEAKAGE (OZ): AT IMPACT 0
 1ST 5 MIN. 0
 NEXT 25 MIN. 0

POST TEST PRESSURE CHECK N/A

ELECTRIC FUEL PUMP RUN N/A

STATIC ROLL LEAKAGE WITH VEHICLE LEFT SIDE-DOWN FIRST

| | | FUEL LEAKAGE LOCATIONS DURING STATIC ROLL | | | | TOTAL |
|----------------|------------|---|--|--|--|-------|
| ROLL TIME | | | | | | |
| 0-90 | 1ST 5 MIN | | | | | 0 |
| <u>0-90</u> | POST 5 MIN | | | | | 0 |
| 90-180 | 1ST 5 MIN | | | | | 0 |
| <u>90-180</u> | POST 5 MIN | | | | | 0 |
| 180-270 | 1ST 5 MIN | | | | | 0 |
| <u>180-270</u> | POST 5 MIN | | | | | 0 |
| 270-360 | 1ST 5 MIN | | | | | 0 |
| <u>270-360</u> | POST 5 MIN | | | | | 0 |

* OUNCES IN 5-MINUTES, ** OUNCES PER MINUTE

LAST FORM MODIFICATION 5/27/93 - GAS

DATE: 06/10/96
TIME: 14:17:20

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5920

VC05967 ITEM ZJ8271
VC05967 30 MPH REAR BARRIER, 23374, 5.2L MPI ITEM ZJ8271
1997 FMVSS COMPLIANCE # 301
TEST DATE 06/06/96

TEST PURPOSE: PRIMARY, 1997 COMPLIANCE,
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 4M4
TRANS. NOTE:
VIN AS TESTED: N1AGT83BVC5G0001 MOD.
VIN AS BUILT: 1G4GZ78Y3VC5G0001 MGB

TEST SPEED: 30.1 MPH BY ELECTRONIC TRAP TIMER

TEST WEIGHT (LBS): 4819 TOTAL, 2769 FRONT, 2050 REAR

OCCUPANTS: LEFT FRONT, HYB II, BALLAST AB-52
RESTRAINT-BELTS ONLY
RIGHT FRONT, HYB I, BALLAST AB-76
RESTRAINT-BELTS II

BUILD CONDITION: 1997 90 PRODUCTION PILOT VEHICLE
5.2 LITRE (V6) ENGINE, 4 SPEED AUTO TRANS. 4M4,
POWER STEERING, ABS BRAKES, A/C CONDITIONING,
FULL CENTER CONSOLE AND OVERHEAD CONSOLE,
SUNROOF AND FULL ROOF RACK,
P225/70 R16 TIRES ON ALUMINUM RIMS & FULL SIZE
SPARE
1997 FUEL SENDING UNIT AND 1997 FUEL TANK DESIGN
TRAILER HITCH BRACKET ADDED AFTER 90 BUILD.
VEHICLE BUILD CONFIGURATION REPRESENTS 1997 V1.

TARGET WEIGHT (LBS): 4193 TOTAL, 2339 FRONT, 1854 REAR, REP MAX OPT WT.

FUEL AND BALLAST: 21.5 GALLONS OF STODDARD SOLVENT
300 LBS OF LUGGAGE BALLAST SECURED IN CARGO 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 00157

DATE 05/10/96
TIME 14:17:10

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC05967 ITEM ZJ8271
VC05967 30 MPH REAR BARRIER ZJ074 5.2L MPI ITEM ZJ8271
1997 FMVSS COMPLIANCE 301
TEST DATE 05/06/96

EDP TECHNICIAN S. MARCHENIA

No. of Pages 60
CC

J. S. ESTES 514-15-58
M. T. STEBELETON 422-05-01

DC 00158

TITLE: Page Index of EDP plots Pages 001 - 050
***** VC059672 ***** Page 1-01
TITLE: Transducer Summary Reports Pages 001 - 005
PAGE: 001 TSR Channels 001 - 008
PAGE: 002 TSR Channels 009 - 016
PAGE: 003 TSR Channels 017 - 024
PAGE: 004 TSR Channels 025 - 032
PAGE: 005 TSR Channels 033 - 038

TITLE: Vehicle Channels
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 PAGE: 007 Average of Ftr Sill Chls 1 & 3
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 PAGE: 009 LEFT FRONT SILL Y, Chl 1, VD
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 PAGE: 012 RIGHT FRONT SILL Y, Chl 3, VD
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 PAGE: 022 RT RAIL TRAIL ARM PIV X, Chl 10
 PAGE: 023 RT RAIL TRAIL ARM PIV Y, Chl 10, VD
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 PAGE: 025 RT REAR RAIL MID TANK Y, Chl 11, VD
 PAGE: 026 RT REAR RAIL MID TANK Z, Chl 11
 PAGE: 027 AECM SQUIS, Chl 13, Event
 PAGE: 028 AECM SAFING SEN, Chl 14, Event
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 PAGE: 046 LT B-POST RET RR LWR Z, Chl 26
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PAGE: 059 RT RAIL MBAR MID X Chl 38
PAGE: 060 RT RAIL MBAR MID X Chl 38 VD

FILED JUN 21 1996

INTER-COMPANY CORRESPONDENCE

DATE 06/12/96

TO
DISTRIBUTION

FROM
B. D. CARLISLE

DEPARTMENT
5320

PLANT/OFFICE
CTC

CIMS NUMBER
481-00-27

SUBJECT:
REAR DYNAMIC CRUSH ANALYSIS
VC05967 30 MPH REAR BARRIER, ZJJ74, 5-2L MPI ITEM ZJ6271
1997 FMVSS COMPLIANCE - 301
TEST DATE 06/06/96

TEST PURPOSE PRIMARY, 1997 COMPLIANCE
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: 1J4GZ78Y3VC500001 MDD
VIN AS BUILT: 1J4GZ78Y3VC500001 MDD

TEST SPEED 30.1 MPH BY ELECTRONIC TRAP TIMER

TEST WEIGHT (LBS) 4819 TOTAL, 2759 FRONT, 2050 REAR

OCCUPANTS LEFT FRONT, HYB II, BALLAST, AD-52
RESTRAINT-BELTS ONLY
RIGHT FRONT, HYB II, BALLAST, AD-75
RESTRAINT-BELTS ONLY

BUILD CONDITION 1997 PD PRODUCTION PILOT VEHICLE
5.2 LITRE (V8) ENGINE, 4 SPEED AUTO TRANS, 4X4,
POWER STEERING, ABS, BRAKES, AIR CONDITIONING,
FULL CENTER CONSOLE AND OVERHEAD CONSOLE,
SUNROOF AND FULL ROOF RACK,
P225/70 R16 TIRES ON ALUMINUM RIMS & FULL SIZE
SPARE,
1997 FUEL SENDING UNIT AND 1997 FUEL TANK DESIGN,
TRAILER HITCH BRACKET ADDED AFTER PD BUILD,
VEHICLE BUILD CONFIGURATION REPRESENTS 1997 V1.

TARGET WEIGHT (LBS) 4193 TOTAL, 2333 FRONT, 1854 REAR, REP MAX OPT WT,
NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST,
FUEL AND BALLAST 21.5 GALLONS OF STODDARD SOLVENT.

TEST VC05967 06/12/96 12.16 PAGE 1 OF 2

DC 00222

300 LBS OF LUGGAGE BALLAST SECURED IN CARDB 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.

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 19.9 +OR- 1 INCH AT 78. +OR- 5 MSEC.

S.A. Helquist
S. A. HELOQUIST

Bryan D. Carlisle
B. D. CARLISLE

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 (ZERDED) PITCH |
| CORR-R | CORRECTED (ZERDED) ROLL |
| CORR-Y | CORRECTED (ZERDED) YAW |
| CH | CLOCKWISE |
| EFI | ELECTRONIC FUEL INJECTOR |
| ENG | ENGINE |
| ENOPY | ENGINE PITCH AND YAW |
| FESH | 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 |
| RES, RMS, RRS | RIGHT FRONT, MID, & REAR SILL TARGETS |
| RDLL-LEFT | LEFT SIDE LOWER THAN RIGHT |
| ROLL-RIGHT | RIGHT SIDE LOWER THAN LEFT |
| RS | REAR SILL TARGET |
| RT | RIGHT |
| SET | 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) |
| ZERDED | SHIFTED TO START AT ZERO |
| ZERO-IN | ZERDED INCHES |
| ZERO-MM | ZERDED MILLIMETERS |

IMPACT ANALYSIS
DEPARTMENT 5320
06/12/96 12:16
TEST: VC05967

RECEIVED SEP 23 1997

INTER COMPANY CORRESPONDENCE

DATE 09/22/97

TO DISTRIBUTION

FROM B. D. CARLISLE

DEPARTMENT 5320 PLANT/OFFICE CTC

CMS NUMBER 481-00-27

SUBJECT: REAR UNDERBODY MOTION ANALYSIS
VC05967 30 MPH REAR BARRIER, ZJJ74, 5.2L MPI ITEM ZU8271
1997 FMVSS COMPLIANCE - 301
TEST DATE 06/06/96

TEST PURPOSE: PRIMARY, 1997 COMPLIANCE
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: 1J4GZ78Y3VC500001 MGD
VIN AS BUILT: 1J4DZ78Y3VC500001 MGD

TEST SPEED: 30.1 MPH BY ELECTRONIC TRAP TIMER

TEST WEIGHT (LBS): 4819 TOTAL, 2759 FRONT, 2050 REAR

OCCUPANTS: LEFT FRONT, HYB II, BALLAST, AD-52
RESTRAINT-BELTS ONLY
RIGHT FRONT, HYB II, BALLAST, AD-75
RESTRAINT-BELTS ONLY

BUILD CONDITION: 1997 PO PRODUCTION PILOT VEHICLE
5.2 LITRE 1V81 ENGINE, 4 SPEED AUTO TRANS., 4X4,
POWER STEERING, ABS BRAKES, AIR CONDITIONING,
FULL CENTER CONSOLE AND OVERHEAD CONSOLE,
SUNROOF AND FULL ROOF RACK,
P225/70 R15 TIRES ON ALUMINUM RIMS & FULL SIZE
SPARE
1997 FUEL SENDING UNIT AND 1997 FUEL TANK DESIGN,
TRAILER HITCH BRACKET ADDED AFTER PO BUILD
VEHICLE BUILD CONFIGURATION REPRESENTS 1997 V1

TARGET WEIGHT (LBS): 4193 TOTAL, 2339 FRONT, 1854 REAR, REP MAX OPT WT,
NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST,
FUEL AND BALLAST: 21.5 GALLONS OF STANDARD SOLVENT.

300 LBS OF LUGGAGE BALLAST SECURED IN CARGO 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.

THE RELATIVE MOTIONS OF SELECTED REAR UNDERBODY TARGETS HAVE BEEN DETERMINED BY FILM ANALYSIS. TIME WAS BASED ON CAMERA TIMING DATA.

S.A. Helquist

S. A. HELQUIST

B. O. Carlisle

B. O. CARLISLE

GRAPHS - 23

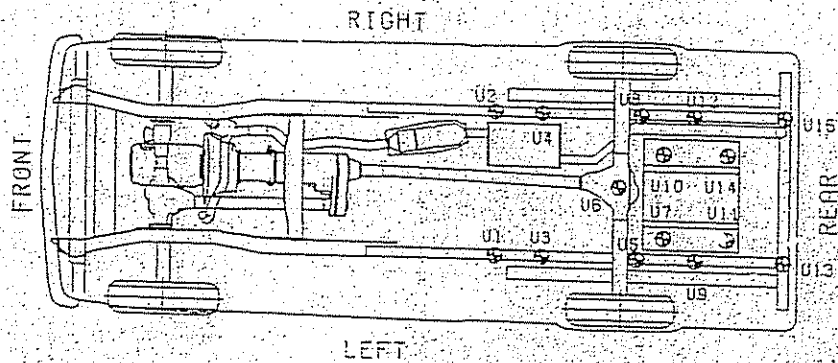
G L O S S A R Y O F T E R M S
U S E D I N S T A N D A R D R E P O R T S

| | |
|---------------|---|
| AD | ANTHROPOMORPHIC DEVICE |
| ATD | 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 |
| CH | CLOCKWISE |
| EFI | ELECTRONIC FUEL INJECTOR |
| ENG | ENGINE |
| ENGPY | ENGINE PITCH AND YAW |
| FESH | FRONT END SHEET METAL |
| FIDUCIAL | REFERENCE POINT OR TARGET |
| FS | FRONT SILL TARGET |
| FWD | FORWARD |
| IP | INSTRUMENT PANEL TARGET |
| LBS | POUNDS |
| LCP, LOP | 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, ROP | 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) |
| ZERGED | SHIFTED TO START AT ZERO |
| ZERD-IN | ZERGED INCHES |
| ZERD-MM | ZERGED MILLIMETERS |

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VC05967 30 MPH REAR BARRIER. ZJJ74. 5-ZL MPI ITEM ZJ8271
 1997 FMVSS COMPLIANCE - 301.

PLAN VIEW



LEGEND OF STANDARD ZJ-BODY REAR U/B TARGETS

| TARGET DESIGNATION | TARGET DESCRIPTION |
|--------------------|------------------------------|
| U1 | LEFT FORE RAIL TARGET |
| U2 | RIGHT FORE RAIL TARGET |
| U3 | LEFT MID RAIL TARGET |
| U4 | RIGHT MID RAIL TARGET |
| U5 | LEFT KICKUP TARGET |
| U6 | REAR DIFFERENTIAL TARGET |
| U7 | LEFT FORE TANK COVER TARGET |
| U8 | RIGHT KICKUP TARGET |
| U9 | LEFT MID REAR RAIL TARGET |
| U10 | RIGHT FORE TANK COVER TARGET |
| U11 | LEFT AFT TANK COVER TARGET |
| U12 | RIGHT MID REAR RAIL TARGET |
| U13 | LEFT REAR RAIL TARGET |
| U14 | RIGHT AFT TANK COVER TARGET |
| U15 | RIGHT REAR RAIL TARGET |

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