

J72 # 419
(3 of 3)



Chrysler Corporation

COMPLIANCE REPORT

SUBJECT: FUEL SYSTEM INTEGRITY - 1996 'ZJ' BODY, JEEP "GRAND CHEROKEE" SPORT UTILITY

STANDARD IDENTIFICATION: FMVSS 301 - Sections S3., S5., S6. and S7.

STANDARD TITLE: Fuel System Integrity

APPROVALS:

<u>NAME</u>	<u>Title</u>	<u>Signature</u>	<u>Date</u>
E.A. Zylik, Department Manager		<u>E.A. Zylik</u>	<u>7-20-95</u>
D.F. BUSER, Executive Engineer		<u>D.F. Buser</u>	<u>7/13/95</u>

Date Received by Safety Programs: JUL 19 1995

File No: 96ZJ-301

Ester
 EXHIBIT NO. 3
5-26-05
 M. MOORE

EXHIBIT
 CHRYSLER 3
5-26-05
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Safety Documentation Compliance Report

INTRODUCTION

Subject: Fuel System Integrity - 1996 'ZJ' Body, Jeep "Grand Cherokee" Sport Utility

Object: Verification of design compliance with the requirements of Federal Motor Vehicle Safety Standard No. 301.

Procedure: CP-194, CP-232, CP-233, CP-234, CP-245 and CP-246.

Conclusions: The Chrysler Corporation 1996 'ZJ' Body Jeep "Grand Cherokee" Sport Utility with U.V.W. of 10,000 lbs. and under, as design released, comply with the requirements of FMVSS 301 - Sections S3., S5., S6. and S7.

SAFETY DOCUMENTATION COMPLIANCE REPORT (Page 1 of 8)

Prepared by: J. B. Estes 7-12-95
J. B. Estes, Product Engineer, Dept. 1060 Date

Approved by: E.A. Zylik
E.A. Zylik, Manager Department 1060 Date

Issued by: Jeep, Vehicle Impact Development

Safety Documentation Compliance Report

FUEL SYSTEM INTEGRITY
1996 'ZJ' BODY JEEP "GRAND CHEROKEE" SPORT UTILITY

Federal Motor Vehicle Safety Standard No. 301 - Sections S3., S5., S6. and S7.

DISCUSSION

The Chrysler Corporation 1996 "ZJ-74" Body, Jeep "Grand Cherokee," Sport Utility vehicle is essentially carryover from the 1995 model year.

The "ZJ" is of unibody construction offered in 106 inch wheelbase.

The powertrain is comprised of a longitudinally mounted 4.0 litre (I6) and 5.2 litre (V8) multi-point injection (MPI) engines, 4-speed automatic or 5-speed manual transmission and 2 or 4-wheel drive configuration.

This vehicle is offered with four wheel Anti-Lock Brake System (ABS), as standard equipment.

Vehicle capacity including seating for five passengers, 23 gallon plastic fuel tank and 300 lbs. of luggage.

The fuel system consists of a 23 gallon plastic fuel tank with an in-tank electric fuel pump. The fuel tank is mounted aft of the rear axle. The filler neck is located on the left side of the vehicle.

The front bumper system consists of thermo plastic olefin (TPO) fascia with energy absorbing polypropylene foam supported by body integrated crossmember.

The rear bumper system consists of thermoplastic olefin (TPO) molded fascia supported by steel reinforcement beam and expanded polypropylene foam with energy absorbers in the guards area include a (TPO) step pad.

Engineering judgement was made, based on development impact test results, that the elimination of the fuel return line, in 1995 M.Y. will not adversely effect its ability to satisfy the requirement relative to FMVSS 301.

Fourteen vehicles were tested to demonstrate compliance of the "ZJ-74" to the requirements of FMVSS 301, Fuel System Integrity. Summaries I, II, III IV and V of these vehicles and test results are attached.

VC's 4421, 4432, 4574 and 4680 were prepared and tested in accordance with the following Chrysler Corporation Compliance Procedure:

DISCUSSION (continued)

CP-194 "Fixed Collision Barrier 30 MPH Frontal Impact Test", Change 'K'.

VC's 4419, 4426, 4459, 4570, 4576 and 4724 were prepared and tested in accordance with the following Chrysler Corporation Compliance Procedure:

CP-232 "Fixed Collision Barrier, 30 mph Angled Frontal Impact Test," Change 'F'.

VC's 4449 and 4452 were prepared and tested in accordance with the following Chrysler Corporation Compliance Procedure:

CP-233 "Moving Barrier 20 mph Lateral Impact Test," Change 'H'.

VC's 4472 and 4561 were prepared and tested in accordance with the following Chrysler Corporation Compliance Procedure:

CP-234 "Moving Barrier 30 mph Rear Impact Test," Change 'H'.

The above test vehicles, did not experience fluid losses that exceeds the fuel spillage criteria specified in Chrysler Corporation Compliance Procedure:

CP-246 "Fuel System Integrity," Change 'G'.

Following barrier impact vehicles were further tested in accordance with the following Chrysler Corporation Compliance Procedure:

CP-245 "Fuel System Integrity - Static Rollover Test," Change 'F'.

Fluid leakage during and following impact and during static rollover in these tests were within the limit specified in FMVSS 301 - Sections S5.5 and S5.6.

Based on the above, the 1995 "ZJ-74" Body, Jeep "Grand Cherokee" Sport Utility vehicle, as design released, comply with the requirements of FMVSS 301 - Sections S3., S5., S6. and S7.

Prepared by:


J.B. Estes

Date:

7-12-95

SUMMARY I
FUEL SYSTEM INTEGRITY
1995 'ZJ' BODY JEEP "GRAND CHEROKEE" SPORT UTILITY

Test No. (Date)	Impact Mode	Vehicle Model & Description	Vehicle Identification No.	Leakage Summary (oz)			
				At Impact	Following 30 Mins.	Rollover (Oz.)	Max in Any Position (Oz./Min)
VC4421* (10/25/91)	Flat Front	Jeep "Grand Cherokee" Sport Utility, 4-Wheel Drive, 23 Gallon Fuel Tank, Tilt Steering Column, Auto. Transmission and 4.0 Litre (I6) MPI Engine.	1J1G77R9RNN	-0-	-0-	-0-	-0-
VC4432* (11/07/91)	Flat Front	Jeep "Grand Cherokee" Sport Utility, 4-Wheel Drive, Non-tilt Steering Column, 23 Gallon Fuel Tank, Manual Trans. and 4.0 Litre (I6) MPI Engine.	1J4GZ78S3NA 996134	-0-	-0-	-0-	-0-
VC4419* (10/24/91)	30° Lt. Angle	Jeep "Grand Cherokee" Sport Utility, 4-Wheel Drive, Non-tilt Steering Column, Man. Transmission and 4.0 Litre (I6) MPI Engine.	1J4GZ78S3NA 996129	-0-	-0-	-0-	-0-

* Tests are carryover from 1994 Compliance Report, Reference File No. ZJ-SUPL-301.

Allowable Leakage by Weight

1. One (oz) at impact.
2. Not more than one (oz) per minute following 30 minutes.
3. Five (oz) for first 5 minutes after each 90° rotation and not more than one (oz) per minute thereafter.

Prepared by:

J.B. Estes
J.B. Estes

Date:

7-12-95

File No: 96-ZJ-301

SUMMARY II
FUEL SYSTEM INTEGRITY
1995 'ZJ' BODY JEEP "GRAND CHEROKEE" SPORT UTILITY

Test No. (Date)	Impact Mode	Vehicle Model & Description	Vehicle Identification No.	Leakage Summary (oz)		
				At Impact	Following 30 Mins.	Max in Any Rollover Position (Oz./Min)
VC4426* (11/01/91)	30° Rt. Angle	Jeep "Grand Cherokee" Sport Utility, 4-Wheel Drive, 23 Gallon Fuel Tank, Tilt Steering Column, Auto. Transmission and 4.0 Litre (16) MPI Engine.	1J4GZ68SXNA 996132	-0-	-0-	-0-
VC4459* (11/20/91)	30° Lt. Angle	Jeep "Grand Cherokee" Sport Utility, 4-Wheel Drive, Tilt Steering Column, 23 Gallon Fuel Tank, Manual Transmission and 4.0 Litre (16) MPI Engine.	1J4GZ88V3PC 100028	-0-	-0-	-0-
VC4449* (11/21/91)	20 MPH Lateral Left	Jeep "Grand Cherokee" Sport Utility, 4-Wheel Drive, 23 Gallon Fuel Tank, Tilt Steering Column, Auto Transmission and 4.0 Litre (16) MPI Engine.	1J4GZ88V2PC 100008	-0-	-0-	-0-

* Tests are carryover from 1994 Compliance Report, Reference File No. ZJ-SUPL-301.

Allowable Leakage by Weight

1. One (oz) at impact.
2. Not more than one (oz) per minute following 30 minutes.
3. Five (oz) for first 5 minutes after each 90° rotation and not more than one (oz) per minute thereafter.

Prepared by:

J.B. Estes
J.B. Estes

Date:

J.B. Estes
7-12-95

File No: 96-ZJ-301

SUMMARY III
 PUBL SYSTEM INTEGRITY
 1995 'ZJ' BODY JEEP "GRAND CHEROKEE" SPORT UTILITY

Test No. (Date)	Impact Mode	Vehicle Model & Description	Vehicle Identification No.	Leakage Summary (oz)		
				At Impact	Following 30 Mins.	Max in Any Position (Oz./Min)
VC4452* (11/22/91)	20 MPH Lateral Right	Jeep "Grand Cherokee" Sport Utility, 4-Wheel Drive, 23 Gallon Fuel Tank, Tilt Steering Column, Auto. Transmission and 4.0 Litre (16) MPI Engine.	1J4GZ88V2PC 100008	-0-	-0-	-0-
VC4472* (12/10/91)	Rear	Jeep "Grand Cherokee" Sport Utility, 4-Wheel Drive, 23 Gallon Fuel Tank, Auto. Transmission and 4.0 Litre MPI Engine.	1J4GZ88S6PC 100101	-0-	-0-	-0-
VC4561* (05/04/92)	Rear	Jeep "Grand Cherokee" Sport Utility, 4-Wheel Drive, 23 Gallon Fuel Tank, Tilt Steering Column, Auto. Transmission and 5.2 Litre (V8) MPI Engine.	1J4GZ88Y0PC 500025	-0-	-0-	-0-

* Tests are carryover from 1994 Compliance Report, Reference File No. ZJ-SUPL-301.

Allowable Leakage by Weight

1. One (oz) at impact.
2. Not more than one (oz) per minute following 30 minutes.
3. Five (oz) for first 5 minutes after each 90° rotation and not more than one (oz) per minute thereafter.

Prepared by: J.B. Estes
 Date: 7-19-95
 File No: 96-ZJ-301

SUMMARY IV
FUEL SYSTEM INTEGRITY
1995 'ZJ' BODY JEEP "GRAND CHEROKEE" SPORT UTILITY

Test No. (Date)	Impact Mode	Vehicle Model & Description	Vehicle Identification No.	Leakage Summary (oz)		
				At Impact	Following 30 Mins.	Max in Any Rollover Position (oz./Min)
VC4570* (05/13/92)	30° Lt. Angle	Jeep "Grand Cherokee" Sport Utility, 4-Wheel Drive, 23 Gallon Fuel Tank, Tilt Steering Column, Auto. Transmission and 5.2 Litre (V8) MPI Engine.	1J4GZ88Y0PC 500014	-0-	-0-	-0-
VC4574* (05/18/92)	Flat Front	Jeep "Grand Cherokee" Sport Utility, 4-Wheel Drive, 23 Gallon Fuel Tank, Tilt Steering Column, Auto. Transmission and 5.2 Litre (V8) MPI Engine.	1J4GZ88Y3PC 500007	-0-	-0-	-0-
VC4576* (05/20/92)	30° Rt. Angle	Jeep "Grand Cherokee" Sport Utility, 4-Wheel Drive, 23 Gallon Fuel Tank, Tilt Steering Column, Auto. Transmission and 5.2 Litre (V8) MPI Engine.	1J4GZ88Y7PC 500012	-0-	-0-	-0-

* Tests are carryover from 1994 Compliance Report, Reference File No. ZJ-SUPL-301.

Allowable Leakage by Weight

1. One (oz) at impact
2. Not more than one (oz) per minute following 30 minutes
3. Five (oz) for first 5 minutes after each 90° rotation and not more than one per minute thereafter.

Prepared by:

[Signature]
J.B. Estes

Date:

[Signature]
7-12-95

File No: 96-ZJ-301

SUMMARY V
FUEL SYSTEM INTEGRITY
1995 'ZJ' BODY JEEP "GRAND CHEROKEE" SPORT UTILITY

Test No. (Date)	Impact Mode	Vehicle Model & Description	Vehicle Identification No.	Leakage Summary (oz)		
				At Impact	Following 30 Mins.	Max in Any Rollover Position (oz./Min)
VC4680 (10/20/92)	Flat Front	Jeep "Grand Cherokee" Sport Utility, 2-wheel Drive, 23 gallon Fuel Tank, Tilt-steering Column, Auto-Transmission and 4.0 Litre (I6) MPI Engine.	1J4GX6857PC 518533	-0-	-0-	-0-
VC4724 (12/11/92)	30° Lt. Angle	Jeep Grand "Cherokee" Sport Utility, 2-wheel Drive, 23 gallon Fuel Tank, Non-Tilt-Steering Column, Automatic Transmission and 4.0 Litre (I6) MPI Engine.	1J4GX6855PC 518532	-0-	-0-	-0-

NOTES: ** Tests are carryover from 1994 Compliance Report, Reference File No. ZJ-SUPL-101.
(14) Test letters included as Attachment "A".
(14) Fuel System and Static Rollover Summary as Attachment "B".

- Allowable Leakage by Weight**
1. One (oz) at impact
 2. Not more than one (oz) per minute following 30 minutes
 3. Five (oz) for first 5 minutes after each 90° rotation and not more than one per minute thereafter.

Prepared by: J. B. Estes
Date: 2-12-95

File No: 96-ZJ-301

VC04680 30 MPH FRONTAL BARR. IMPACT, ZJT74, 4.0L ITEM 3Z421
1993.5 COMPLIANCE - MVSS 208, MVSS 301.
TEST DATE 10/20/92

TEST PURPOSE PRIMARY, 93.5 MVSS 301 VALIDATION.
OBSERVE FUEL SYSTEM INTEGRITY.

PRIMARY, 93.5 MVSS 208 VALIDATION.
OBSERVE AND DETERMINE OCCUPANT INJURY CRITERIA.

IMPACT TYPE TARGET SPEED; 30.2 MPH
DAMAGE LOCATION; FRONT
IMPACT TYPE; BARRIER
BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; ZJ
CAR LINE; T
BODY; 74
ENGINE; 4.0 LITRE
ENGINE NOTE; MPI
TRANSMISSION; 4 SPEED AUTO ELECTRONIC
TRANS. NOTE; 42RE
VIN AS TESTED; 1J4GX68S7PC518533 MOD.
VIN AS BUILT; 1J4GX68S7PC518533 MOD.

TEST SPEED 30.3 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS) 4371 TOTAL, 2213 FRONT, 2158 REAR

OCCUPANTS LEFT FRONT - HYB. III, CERTIFIED. AD-88
RESTRAINT- AIRBAG ONLY.
RIGHT FRONT - HYB. III, CERTIFIED. AD-93
RESTRAINT- 3-PT. BELT SYSTEM.

BUILD CONDITION 1993.5 ZJ CI PILOT. (P3ZJ-84...)
4.0 L ENGINE, 4 SPD. AUTO., P/S, A/C, ABS.
TILT CORPORATE COLUMN.
ROOF RACK
BUCKET SEATS (CLOTH) WITH MAN... TRACKS, FULL
CONSOLE.
P225/75R15 TIRES ON STEEL WHEELS, FULL SIZE SPARE
MOUNTED INSIDE LEFT REAR SIDE.

TARGET WEIGHT (LBS) 3710 TOTAL, 1997 FRONT, 1713 REAR REP MAX OPT WT
NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.
FUEL AND BALLAST 22 GALLONS STODDARD.
300 LBS OF LUGGAGE BALLAST SECURED IN CARGO AREA.
200 LBS SECURED TO RACK OVER REAR SEAT FLOORPAN.

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.

THE DRIVER CONTACTED THE DEPLOYED AIR BAG WITH
HIS FACE, AND THE STEERING COLUMN COVER WITH HIS
KNEES. THE PASSENGER CONTACTED THE LOWER INSTRU-
MENT PANEL WITH HIS KNEES. THE PASSENGER SIDE BELT
PAYOUT WAS 3.3" AT THE TURNING LOOP.

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	

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SAFETY TEST
VEHICLE CRASH TEST LETTER

PAGE 01

VC04724 30 MPH L/ANGLE BARR. IMPACT, ZJT74, 4.0L. ITEM 3Z422
1993 1/2 MVSS 208, MVSS 301 COMPLIANCE.
TEST DATE 12/11/92

TEST PURPOSE PRIMARY, 93.5 MVSS 208 COMPLIANCE.
OBSERVE AND DETERMINE OCCUPANT INJURY CRITERIA.

PRIMARY, 93.5 MVSS 301 COMPLIANCE.
OBSERVE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED; 30.2 MPH
DAMAGE LOCATION; LEFT FRONT
IMPACT TYPE; BARRIER
BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; ZJ
CAR LINE; T
BODY; 74
ENGINE; 4.0 LITRE
ENGINE NOTE; MPI
TRANSMISSION; 4 SPEED AUTO ELECTRONIC
TRANS. NOTE; 42RE
VIN AS TESTED; 1J4GX68S5PC518532 MOD.
VIN AS BUILT; 1J4GX68S5PC518532 MOD.

TEST SPEED 30.3 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS) 4341 TOTAL, 2166 FRONT, 2175 REAR

OCCUPANTS LEFT FRONT - HYB. III, INSTRUMENTED. AD-88
RESTRAINT-AIRBAG ONLY.
RIGHT FRONT - HYB III, INSTRUMENTED. AD-91
RESTRAINT-3-PT. BELT SYSTEM.

BUILD CONDITION 1993 1/2 ZJ C1 PILOT (P3ZJ-8422).
4.0L ENG., 42RE 4-SPD. AUTO., 4X2, P/S, A/C, ABS.
CORPORATE STEERING COLUMN (NON-TILT).
SUN ROOF, ROOF RACK, TRAILER HITCH.
BUCKET SEATS (CLOTH) WITH MANUAL TRACKS AND FULL
CONSOLE.
P225/75R15 TIRES ON STEEL WHEELS, FULL SIZE SPARE
MOUNTED INSIDE LEFT REAR SIDE.

TARGET WEIGHT (LBS) 3710 TOTAL, 1997 FRONT, 1713 REAR REP MAX OPT WT
NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

SAFETY TEST
VEHICLE CRASH TEST LETTER.

PAGE 02

VC04724 30 MPH L/ANGLE BARR. IMPACT, ZJT74, 4.0L. ITEM 32422
1993 1/2 MVSS 208, MVSS 301 COMPLIANCE.
TEST DATE 12/11/92

FUEL AND BALLAST 22 GALLONS STODDARD.
300 LBS. LUGGAGE SECURED IN CARGO AREA.
200 LBS SECURED TO RACK OVER REAR FLOORPAN.

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

THE DRIVER CONTACTED THE DEPLOYED AIR BAG WITH HIS
FACE, AND THE STEERING COLUMN COVER WITH HIS
KNEES. THE PASSENGER CONTACTED THE LOWER EDGE OF
THE GLOVE BOX DOOR WITH BOTH KNEES, AND THE LOWER
INSTRUMENT PANEL WITH HIS RIGHT KNEE. PASSENGER
BELT PAYOUT WAS 2.5" AT THE TURNING LOOP.

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	

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FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC4724 ITEM NUMBER 32422 TEST ENGINEER WEIGEL

V.I.N. 1J4GX68S5PC518532 TEST DATE 12/11/92 ROLL DATE 12/11/92

TEST TYPE AND PURPOSE 30 MPH 30DEG. LT. ANGULAR IMPACT MVSS 208 & 301

FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 22 GALLONS

TEST SPEED 30.3 MPH, TEST WEIGHT 434 POUNDS.

FUEL SYSTEM DATA	POST TEST CONDITION
TANK - _____	_____
FILLER TUBE - _____	_____
CAP - _____	_____
FUEL FILTER - _____	_____
GROMMET - _____	_____
FUEL PUMP - _____	_____
STRAPS - _____	_____
LINES - _____	_____
AIR CLEANER - _____	_____
- _____	_____

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

POST TEST PRESSURE CHECK VIA

ELECTRIC FUEL PUMP RUN VIA

STATIC ROLL LEAKAGE WITH VEHICLE LEFT SIDE DOWN FIRST

ROLL TIME	CARB / TBI	FUEL PUMP	AIR CLEAN	FUEL TANK	FUEL FILT	GRO-MET	FILL-CAP	OTHER ***	TOTAL
0-90 !1ST 5 MIN !	!	!	!	!	!	!	!	!	0 *
<u>0:26</u> !POST 5 MIN!	!	!	!	!	!	!	!	!	0 *
90-180 !1ST 5 MIN !	!	!	!	!	!	!	!	!	0 *
<u>0:23</u> !POST 5 MIN!	!	!	!	!	!	!	!	!	0 *
180-270 !1ST 5 MIN !	!	!	!	!	!	!	!	!	0 *
<u>2:07</u> !POST 5 MIN!	!	!	!	!	!	!	!	!	0 *
270-360 !1ST 5 MIN !	!	!	!	!	!	!	!	!	0 *
<u>0:15</u> !POST 5 MIN!	!	!	!	!	!	!	!	!	0 *

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

*** OTHER - _____

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC4574, ITEM NUMBER 22137, TEST ENGINEER BUSS
 V.I.N. 1J4GZ88Y3PC500007, TEST DATE 5/18/92 ROLL DATE 5/19/92
 TEST TYPE; 30 MPH FRONT FLAT FIXED BARRIER IMPACT
 FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 22.0 GALLONS
 TEST SPEED 30.6 MPH, TEST WEIGHT 4827 POUNDS.

FUEL SYSTEM DATA	POST TEST CONDITION
TANK -	
FILLER TUBE -	
CAP -	
FUEL FILTER -	
GROMMET -	
FUEL PUMP -	
STRAPS -	
LINES -	
AIR CLEANER -	
CARBURETOR -	

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

POST TEST PRESSURE CHECK _____

ELECTRIC FUEL PUMP RUN _____

STATIC ROLL LEAKAGE WITH VEHICLE LEFT SIDE DOWN FIRST

ROLL TIME	CARB/TBI	FUEL PUMP	AIR CLEAN	FUEL TANK	FUEL FILT	GRO-MET	FILL-CAP	OTHER ***	TOTAL
0-90 !1ST 5 MIN									0 *
<u>2:21</u> !POST 5 MIN!									0 **
90-180 !1ST 5 MIN									0 *
<u>2:22</u> !POST 5 MIN!									0 **
180-270 !1ST 5 MIN									0 *
<u>2:06</u> !POST 5 MIN!									0 **
270-360 !1ST 5 MIN									0 *
<u>2:07</u> !POST 5 MIN!									0 **

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

*** OTHER - _____

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC4680, ITEM NUMBER 32421, TEST ENGINEER MANNEY
 V.I.N. 1J4GX68S7PC518533, TEST DATE 12/22/92, ROLL DATE 10/21/92
 TEST TYPE; 30 MPH FRONT FLAT FIXED BARRIER IMPACT
 FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 22.0 GALLONS
 TEST SPEED 30.3 MPH, TEST WEIGHT 471 POUNDS.

FUEL SYSTEM DATA	POST TEST CONDITION
TANK -	
FILLER TUBE -	
CAP -	
FUEL FILTER -	
GROMMET -	
FUEL PUMP -	
STRAPS -	
LINES -	
AIR CLEANER -	
CARBURETOR -	
-	

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

POST TEST PRESSURE CHECK OK

ELECTRIC FUEL PUMP RUN OK

STATIC ROLL LEAKAGE WITH VEHICLE SIDE DOWN FIRST

ROLL TIME	CARB/TBI	FUEL PUMP	AIR CLEAN	FUEL TANK	FUEL FILT	GRO-MET	FILL-CAP	OTHER ***	TOTAL
0-90 !1ST 5 MIN !	!	!	!	!	!	!	!	!	0 *
2'20 !POST 5 MIN!	!	!	!	!	!	!	!	!	0 **
90-180!1ST 5 MIN !	!	!	!	!	!	!	!	!	0 *
2'17 !POST 5 MIN!	!	!	!	!	!	!	!	!	0 **
180-270!1ST 5 MIN !	!	!	!	!	!	!	!	!	0 *
2'07 !POST 5 MIN!	!	!	!	!	!	!	!	!	0 **
1270-360!1ST 5 MIN !	!	!	!	!	!	!	!	!	0 *
2'07 !POST 5 MIN!	!	!	!	!	!	!	!	!	0 **

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

*** OTHER -

WRA

SAFETY TEST
VEHICLE CRASH TEST LETTER

PAGE 02

VC04576 30 MPH R/ANGLE BARRIER IMPACT, ZJ74,5.2L. ITEM 3Z133
1993 MVSS 208, MVSS 301 COMPLIANCE.
TEST DATE 05/20/92

FUEL AND BALLAST 22 GALLONS STODDARD.
 300 LBS OF LUGGAGE BALLAST SECURED IN CARGO AREA.
 200 LBS SECURED TO FLOOR PAN UNDER REAR SEAT.
 100 LBS SECURED IN REAR FOOTWELL.

POST TEST REMARKS THERE WAS NO FUEL LEAKAGE DURING IMPACT,
 SUBSEQUENT 30 MINUTES, NOR DURING POST
 TEST STATIC ROLL.

DRIVER CONTACTED AIR BAG WITH FACE, AND HIS KNEES
CONTACTED THE LOWER SURFACE OF UPPER I/P,
KNEEBLOCKER, AND STEERING COLUMN HOUSING.

PASSENGER CONTACTED KNEEBLOCKER WITH KNEES.
PASSENGER BELT PAYOUT AT TURNING LOOP WAS 1.8".

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

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SAFETY TEST
VEHICLE CRASH TEST LETTER

PAGE 02

VC04574 30 MPH FRONTAL BARRIER IMPACT, ZJ74, 5.2L ITEM 3Z137
1993 COMPLIANCE - MVSS 208, MVSS 212, MVSS 219, MVSS 301.
TEST DATE 05/18/92

BUILD CONDITION 1993 ZJ C1 PILOT. (P3ZJ-8137)
5.2L ENGINE, 4 SPD. AUTO., 4X4, P/S, A/C, ABS.
TILT CORPORATE COLUMN.
TRAILER HITCH, ROOF RACK, FRT. TOW HOOPS,
REAR SKID PLATE.
BUCKET SEATS (CLOTH) WITH MANUAL TRACKS, FULL
CONSOLE.
P235/75R15 TIRES ON STEEL WHEELS, FULL SIZE SPARE
MOUNTED INSIDE LEFT REAR SIDE.
TRW GAS DAMPED SENSOR S/N 052038.

TARGET WEIGHT (LBS) 4196 TOTAL, 2353 FRONT, 1843 REAR REP MAX OPT WT
NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.
FUEL AND BALLAST 22 GALLONS STODDARD.
300 LBS OF LUGGAGE BALLAST INCLUDED IN THE
INSTRUMENTATION WEIGHT.
115 POUNDS IN REAR SEAT FOOTWELLS

POST TEST REMARKS THERE WAS NO FUEL LEAKAGE AT IMPACT, IMMEDIATELY
POST IMPACT OR DURING THE POST TEST STATIC ROLL.
DRIVER ATD - THE FACE CONTACTED THE CENTER OF THE
STEERING WHEEL MOUNTED AIR BAG. THE LEFT KNEE
CONTACTED THE BASE INSTRUMENT PANEL RIGHT OF THE
STEERING COLUMN COVER. THE RIGHT KNEE CONTACTED
THE STEERING COLUMN COVER RIGHT OF THE STEERING
COLUMN.
RIGHT FRONT PASSENGER ATD - NO HEAD TO VEHICLE
CONTACT. THE ATD'S CHIN CONTACTED THE CHEST.
BOTH KNEES CONTACTED THE LOWER INSTRUMENT PANEL.
THE WINDSHIELD RETENTION WAS 100 PERCENT.
THERE WAS NO WINDSHIELD ZONE INTRUSION.

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-S
I = DYNAMIC CRUSH J = ENGINE COMPARTMENT
K = DOOR CRUSH L = FCF CRUSH/ENERGY
M = SPECIAL N = CALL LOG EDP DATA
* = REPORT REQUESTOR

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SAFETY TEST
VEHICLE CRASH TEST LETTER

PAGE 01

VC04570 30 MPH L/ANGLE BARRIER IMPACT, ZJ74, 5.2L ITEM 3Z135
1993 MVS 208. MVSS301 COMPLIANCE.
TEST DATE 05/13/92

TEST PURPOSE PRIMARY, 1993 MVSS 301 COMPLIANCE.
 OBSERVE FUEL SYSTEM INTEGRITY.

 PRIMARY, 1993 MVSS 208 COMPLIANCE.
 OBSERVE AND DETERMINE OCCUPANT INJURY CRITERIA.

IMPACT TYPE TARGET SPEED; 30.2 MPH
 DAMAGE LOCATION; LEFT FRONT
 IMPACT TYPE; BARRIER
 BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; ZJ
 CAR LINE; J
 BODY; 74
 ENGINE; 5.2 LITRE
 ENGINE NOTE; MPI
 TRANSMISSION; 4 SPEED AUTO 4X4
 TRANS. NOTE; A518
 VIN AS TESTED; LJ4GZ88Y0PC500014 MOD.
 VIN AS BUILT; LJ4GZ88Y0PC500014 MOD.

TEST SPEED 30.5 MPH - ELECTRONIC TRAP TIMER

TEST WEIGHT (LBS) 4830 TOTAL, 2494 FRONT, 2336 REAR

OCCUPANTS LEFT FRONT - HYB. III, INSTRUMENTED. AD-90
 RESTRAINT- AIR BAG ONLY.
 RIGHT FRONT - HYB. III, INSTRUMENTED. AD-95
 RESTRAINT- 3-PT. BELT SYSTEM.

BUILD CONDITION 1993 ZJ C1 PILOT. (3PZJ-8135)
 5.2L ENGINE, 4 SPD. AUTO., 4X4, P/S, A/C, ABS.
 TILT CORPORATE COLUMN.
 TRAILER HITCH, ROOF RACK, FRONT SKID PLATE.
 BUCKET SEATS (CLOTH) WITH MANUAL TRACKS, FULL
 CONSOLE.
 P225/75R15 TIRES ON STEEL WHEELS, FULL SIZE SPARE
 MOUNTED INSIDE LEFT REAR SIDE.
 TRW GAS DAMPED SENSOR S/N 052018.
 LEFT DOOR GLASS IN FULL-UP POSITION FOR TEST.

TARGET WEIGHT (LBS) 4196 TOTAL, 2353 FRONT, 1843 REAR REP MAX OPT WT
NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

SAFETY TEST
VEHICLE CRASH TEST LETTER

PAGE 02

VC04570 30 MPH L/ANGLE BARRIER IMPACT, ZJ74, 5.2L ITEM 3Z135
1993 MVS 208. MVSS301 COMPLIANCE.
TEST DATE 05/13/92

FUEL AND BALLAST 22 GALLONS STODDARD.
300 LBS OF LUGGAGE BALLAST SECURED IN CARGO AREA.
110 LBS SECURED TO REAR FOOTWELL.

POST TEST REMARKS DRIVER CONTACTED DEPLOYED AIR BAG WITH FACE,
A-POS AND SIDE WINDOW WITH FOREHEAD, UNDERSIDE
OF UPPER I/P WITH LEFT KNEE, AND STEERING COLUMN
COVER WITH RIGHT KNEE.

PASSENGER CONTACTED GLOVE BOX DOOR WITH KNEES.

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

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	

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SAFETY TEST
VEHICLE CRASH TEST LETTER

PAGE 01

VC04561 30 MPH REAR BARRIER IMPACT, 5.2L. ITEM 3Z136
1993 MVSS 301 FUEL SYSTEM INTEGRITY COMPLIANCE.
TEST DATE 05/04/92

TEST PURPOSE PRIMARY, 1993 MVSS 301 COMPLIANCE.
 DETERMINE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED; 30.2 MPH
 DAMAGE LOCATION; REAR
 IMPACT TYPE; BARRIER
 BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; ZJ
 CAR LINE; J
 BODY; 74
 ENGINE; 5.2 LITRE
 ENGINE NOTE; MPI
 TRANSMISSION; 4 SPEED AUTO 4X4
 TRANS. NOTE; A518
 VIN AS TESTED; 1J4GZ88Y0PC500025 MOD.
 VIN AS BUILT; 1J4GZ88Y0PC500025 MOD.

TEST SPEED 30.3 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS) 4834 TOTAL, 2726 FRONT, 2108 REAR

OCCUPANTS LEFT FRONT, HYB II, UNINSTRUMENTED. AD-63
 RESTRAINT-3-PT. UNIBELT, A/B AND KNEE BLOCKER.
 RIGHT FRONT, HYB II, UNINSTRUMENTED. AD-67
 RESTRAINT-3 POINT UNIBELT.

BUILD CONDITION 1993 C-1 PILOT, 5.2L 4X4, (P3ZJ-8136).
 CORPORATE COLUMN - TILT.
 CORPORATE STEERING WHEEL WITH AIRBAG.
 BUCKET SEATS (CLOTH) WITH MANUAL TRACKS.
 5.2L ENGINE, AUTO. TRANS., P/S, ABS & A/C.
 P235/75R15 TIRES ON 5-SPOKE STEEL WHEELS. FULL
 SIZE SPARE TIRE MOUNTED INSIDE LEFT REAR.
 SPARE TIRE CUP RETAINER P/N 52057921 - PROPOSED
 POLYPROPYLENE MATERIAL.
 NON-PRODUCTION REAR PROP SHAFT, 1 INCH SHORT.
 249 TRANSFER CASE.
 FULL FLOOR CONSOLE.
 ROOF RACK.

TARGET WEIGHT (LBS) 4196 TOTAL, 2353 FRONT, 1843 REAR REP MAX OPT WT.
 NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

SAFETY TEST
VEHICLE CRASH TEST LETTER

PAGE 02

VC04561 30 MPH REAR BARRIER IMPACT, '5.2L. ITEM 32136
1993 MVSS 301 FUEL SYSTEM INTEGRITY COMPLIANCE.
TEST DATE 05/04/92

FUEL AND BALLAST 21.7 GAL. STODDARD.
 300 LBS. OF LUGGAGE BALLAST SECURED IN CARGO 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.

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

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VEHICLE TO IMPACT. LATERAL IMPACT. 2000. 2.01 MPH. 2000. 2000.
1998. 2.01 MPH. 2000. 2000. 2000. 2000. 2000. 2000.
TEST DATE 11/22/98

POST TEST COMMENTS: THERE WAS NO FUEL LEAKAGE DURING, IMMEDIATELY POST
IMPACT OF COURSE. THE FRONT LEFT SEAT IS BULGED.

REPORT CODES

A - TRANSDUCER DATA	H - ALL FILM DATA
B - SLOW SPEED FILM	I - ENGINEER'S REPORT
C - DUMMY KINEMATICS	J - STEERING COLUMN
D - INSTRUMENT	K - AIRFOOT
E - DYNAMIC CRUSH	L - ENGINE COMPARTMENT
F - DOOR CRUSH	M - FUEL/CRASH ENERGY
G - SPECIAL	N - CRASH/IMPACT DATA
O - SECONDARY INSTRUMENT	

HYDROGRAPH

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W.A. HERRAUCH	422-04-01	(11)
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J.D. HAYES	410-12-01	(11)
J.P. HAYES	410-12-08	(12)

INTER COMPANY CORRESPONDENCE

FILE DCRI21091

DATE 12/20/91

TO
DISTRIBUTION

FROM
J. W. HANIKA

DEPARTMENT
5320

PLANT/OFFICE
CHRYSLER CENTER

CIMS NUMBER
418-42-27

SUBJECT:

DYNAMIC CRUSH ANALYSIS
VC04472 30 MPH REAR IMPACT, ZJ74, 4.0L, 1992.5 ITEM 2Z295
MVSS 301 FUEL SYSTEM INTEGRITY, COMPLIANCE.
TEST DATE 12/10/91

TEST PURPOSE PRIMARY, 1992 MVSS 301 COMPLIANCE.
 DETERMINE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED: 30.2 MPH
 DAMAGE LOCATION: REAR
 IMPACT TYPE: BARRIER
 BARRIER SURFACE: PLYWOOD

VEHICLE BODY CLASS: ZJ
 CAR LINE: J
 BODY: 74
 ENGINE: 4.0 LITRE
 ENGINE NOTE: MPI
 TRANSMISSION: 4 SPEED AUTO 4X4
 TRANS. NOTE:
 VIN AS TESTED: 1J4GZ88S6PC100101 MOD.
 VIN AS BUILT: 1J4GZ88S6PC100101 MOD.

TEST SPEED 30.3 MPH - TRAP TIMER

TEST WEIGHT (LBS) 4668 TOTAL, 2456 FRONT, 2212 REAR

OCCUPANTS LEFT FRONT, HYB II, UNINSTRUMENTED. AD-53
 ~~RESTRAINT-3-PT. UNIBELT, A/B AND KNEE BLOCKER.~~
 RIGHT FRONT, HYB II, UNINSTRUMENTED. AD-50
 ~~RESTRAINT-3 POINT UNIBELT.~~

BUILD CONDITION 1992 ZJ PVP VEHICLE, 4-DR., 4X4, 106" WB.
 (P2ZJ-8285).
 TRAILER TOWING PACKAGE (AHT).
 TILT CORPORATE COLUMN & KNEE BLOCKER.
 BUCKET SEATS (CLOTH) WITH MANUAL TRACKS.
 4.0L ENGINE, AUTO. TRANS., P/S, ABS, A/C.
 P215/75R15 TIRES ON STEEL WHEELS. FULL SIZE SPARE
 MOUNTED INSIDE LEFT REAR.
 SPARE TIRE CUP RETAINER P/N 52057921 - ZYTEL ST801
 IMPACT MODIFIED, NYLON 66. (LOT 1329).
 231 TRANSFER CASE.
 FULL FLOOR CONSOLE.
 REAR AXLE WITH TRACK BAR BRACKET SHIELD.
 FUEL FILLER HOSE PROTECTION SLEEVE.

11/20/91
TIME 13.25.08.

TEST VALUES
EDP LETTER

SAFETY TEST
DEPT 5320

VCC4426 ITEM 2Z118
VC04426 30 MPH R/ANGLE BARRIER IMPACT, ZJ74, 4.0L ITEM 2Z118
1992.5 MVSS 208 AND 301 COMPLINCE.
TEST DATE 11/01/91

TEST PURPOSE PRIMARY, 1992 MVSS 208 COMPLIANCE.
OBSERVE AND DETERMINE INJURY CRITERIA.

PRIMARY, 1992 MVSS 301 COMPLIANCE.
OBSERVE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED; 30.2 MPH
DAMAGE LOCATION; RIGHT FRONT
IMPACT TYPE; BARRIER
BARRIER SURFACE; PLYWOOD
DIRECTION; 0 DEGREES

VEHICLE BODY CLASS; ZJ
CAR LINE; J
BODY; 74
ENGINE; 4.0 LITRE
ENGINE NOTE; MPI
TRANSMISSION; 4 SPEED AUTO 4X4
TRANS. NOTE;
VIN AS TESTED; 1J4GZ68SXNA996132 MOD.
VIN AS BUILT; 1J4GZ78SXNA996132 MOD.

TEST SPEED 30.2 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS) 4650 TOTAL, 2290 FRONT, 2360 REAR

OCCUPANTS LEFT FRONT, CERT HYB III, INSTRUMENTED. AD-90
RESTRAINT-AIR BAG AND KNEE BLOCKER.
RIGHT FRONT, CERT HYB III, INSTRUMENTED. AD-95
RESTRAINT-3 PT. BELT SYSTEM.

BUILD CONDITION 1992.5 ZJ C-1 PILOT, 4-DR., 4X4, 106" WB. (ZJ-8118)
DOUBLE ROW OF URETHANE BOND ON BOTTOM OF
WINDSHIELD (11" FROM EACH A-PILLER).
ZJ TILT COLUMN.
KNEE BLOCKER, DRIVER'S SIDE.
CORPORATE STEERING WHEEL AND AIR BAG WITH REVERSE
FOLD (26-UT-BM-107).
BUCKET SEATS (CLOTH) WITH MANUAL TRACKS.
4.0L ENGINE, 4 SPD. AUTO TRANS., P/S, ABS, A/C.
P215/75R15 TIRES ON STEEL WHEELS, WITH FULL SIZE
SPARE.
GAS DAMPED SENSOR ON KNEE BLOCKER BRACE.
P/N 86015D003, S/N 261005
TWO ROLAMITE SENSORS, TRW TECHNAR P/N 56006868.
AIR BAG DIAGNOSTIC MODULE P/N 65006872.
TRAILER HITCH.
ROOF RACK.

11/20/91
TIME 13.25.08.

TEST VALUES
EDP LETTER

SAFETY TEST
DEPT 5320

CO4426 ITEM 2Z118
CO4426 30 MPH R/ANGLE BARRIER IMPACT, ZJ74, 4.0L ITEM 2Z118
992.5 MVSS 208 AND 301 COMPLINCE.
EST DATE 11/01/91

TARGET WEIGHT (LBS) 4020 TOTAL, 2198 FRONT, 1822 REAR REP MAX OPT. WT.
NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

FUEL AND BALLAST 22 GAL. STODDARD SOLVENT.
300 LBS OF LUGGAGE BALLAST SECURED IN CARGO AREA.
225 LBS SECURED TO RACK OVER REAR FLOORPAN.

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.

THE DRIVER CONTACTED THE DEPLOYED AIR BAG WITH HIS
FACE, AND THE STEERING COLUMN COVER WITH HIS
KNEES. THE PASSENGER CONTACTED THE LOWER INSTRU-
MENT PANEL WITH HIS KNEES. THE PASSENGER'S UNIBELT
PAYOUT WAS 2.5" AT THE TURNING LOOP, AND 1.8" AT
THE RETRACTOR.

IC

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NOV 22 1991 12:19 FROM CHELSEA IMPACT LAB

PAGE 032

SAFETY TEST
VEHICLE CRASH TEST LETTER

PAGE 01

CO4459 TO MPH L/ANGLE BARRIER IMPACT, 3374, 4.0L FROM 28165
1992.5 NHTSA 301 COMPLIANCE.
TEST DATE 11/10/91

TEST PURPOSE PRIMARY, 1992 NHTSA 301 COMPLIANCE.
OBSERVE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED: 30.0 MPH
DAMAGE LOCATION: LEFT FRONT
IMPACT TYPE: BARRIER
BARRIER SURFACE: PLYWOOD

VEHICLE BODY CLASS: 2J
CAR LINE: J
BODY: TA
ENGINE: 4.0 LITERE
ENGINE NOTE: MPI
TRANSMISSION: 5 SPEED MANUAL 124
TRANS. NOTE:
VIN AS TESTED: 1J4G288V82P0100028 MOD.
VIN AS BUILT: 1J4G288V82P0100028 MOD.

TEST SPEED 30.0 MPH - TRAP TIMER

TEST WEIGHT (LBS) 4666 TOTAL, 2350 FRONT, 2316 REAR

OCCUPANTS LEFT FRONT, HYB. II, UNINSTRUMENTED. AD-52
RESTRAINT-A/B AND KNEE BLOCER W 3-PT BELT SYSTEM.
RIGHT FRONT, HYB. II, UNINSTRUMENTED. AD-52
RESTRAINT-3-PT BELT SYSTEM.

VEHICLE CONDITION 1992.5 2J CI PILOT, 4 DR., 4X4, 100' WB (20-2100).
TILT CORPORATE COLUMN.
STANDARD BUMPER WITH BUMPER GUARDS.
BUCKET SEATS (CLOTH) WITH MANUAL TRACKS, FULL
CONSOLE.
4.0L ENGINE, 5 SP. MAN. TRANS., P/S, ABS, A/C.
P215/75R15 TIRES ON STEEL WHEELS, FULL SIZE SPARE.
BASE/STANDARD WHEELS.
TWO ROLAMITE SENSORS, TRW WECHMAR P/N 86006868.
ONE GAS DAMPED SENSOR, TRW WECHMAR P/N 86015008,
LOCATED ON KNEE BLOCER BRACE.
FUEL LINES TO RAIL HAVE RUBBER HOSES OVER NYLON
LINES.

TARGET WEIGHT (LBS) 4020 TOTAL, 1998 FRONT, 1822 REAR REF MAX OHT WT,
NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

FUEL AND BALLAST 22 GALLONS STODDARD.
50 POUNDS LEFT REAR WHEELWELL
70 POUNDS RIGHT REAR WHEELWELL
70 POUNDS RIGHT REAR FOOTWELL

SAFETY TEST
VEHICLE CRASH TEST LETTER

VC84489 30 MPH 1/ANGLE BARRIER IMPACT, 2074, 4.00 ITEM 22160
1992.5 NHTSA 301 COMPLIANCE.
TEST DATE 11/30/91

POST TEST COMMENTS NO FUEL LEAKAGE DURING OR IMMEDIATELY POST IMPACT,
OR DURING THE POST TEST STABIL ROLL.

REPORT CODES	A = TRANSDUCER DATA	S = ALL FILM DATA
	C = HIGH SPEED FILM	D = ENGINEER'S REPORT
	E = DUMMY AIRBAGS	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 SOP DATA
	P = REPORT REQUESTOR	

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SAFETY TEST
VEHICLE CRASH TEST LETTER

PAGE 01

VC04432 30 MPH FRONT BARRIER IMPACT, ZJ74, 4.0L. ITEM 2Z122
1992.5 MVSS 208, 212, 219, & 301 COMPLIANCE.
TEST DATE 11/07/91

TEST PURPOSE: PRIMARY, 1992 MVSS 208 COMPLIANCE.
DETERMINE COMPLIANCE TO MVSS 208 OCCUPANT CRASH
PROTECTION, DRIVER DUMMY WITH BELTS.

PRIMARY, 1992 MVSS 212 COMPLIANCE.
DETERMINE COMPLIANCE TO MVSS 212 WINDSHIELD
RETENTION.

PRIMARY, 1992 MVSS 219 COMPLIANCE.
DETERMINE COMPLIANCE TO MVSS 219 WINDSHIELD BONE
INTRUSION.

PRIMARY, 1992 MVSS 301 COMPLIANCE.
DETERMINE COMPLIANCE TO MVSS 301 FUEL SYSTEM
INTEGRITY.

IMPACT TYPE: TARGET SPEED; 30.2 MPH
DAMAGE LOCATION; FRONT
IMPACT TYPE; BARRIER
BARRIER SURFACE; PLYWOOD
DIRECTION; 0 DEGREES

VEHICLE: BODY CLASS; ZJ
CAR LINE; J
BODY; 74
ENGINE; 4.0 LITRE
ENGINE NOTE; MPI
TRANSMISSION; 5 SPEED MANUAL 4X4
TRANS. NOTE;
VIN AS TESTED; 1J4GZ78S3NA996134 MOD.
VIN AS BUILT; 1J4GZ78S3NA996134 MOD.

TEST SPEED: 30.2 MPH - TRAP TIMER

TEST WEIGHT (LBS) 4686 TOTAL. 2300 FRONT, 2386 REAR

OCCUPANTS: LEFT FRONT, HYB III CERT, STD INST AD-89
RESTRAINT-AIR BAG, KNEE BLOCKER AND 3 FT. UNIBELT.
RIGHT FRONT, HYB III CERT, STD INST AD-91
RESTRAINT-3 FT. BELT SYSTEM

SAFETY TEST
VEHICLE CRASH TEST LETTER

PAGE 02

VCC4432 30 MPH FRONT BARRIER IMPACT, ZJ74, 4.0L. ITEM 22122
1992.5 MVSS 208, 212, 219, & 301 COMPLIANCE.
TEST DATE 11/27/91

BUILD CONTINUATION 1992.5 ZJ C-1 PILOT, 4-DR, 4X4, 106" WB. (ZJ-8122)
DOUBLE ROW OF URETHANE BOND ON BOTTOM OF
WINDSHIELD (11" FROM EACH A-FILLAR).
ZJ CORPORATE NON-TILT STEERING COLUMN, DRIVER'S
AIR BAG (E-FOLD) 26-UT-BM-109.
BUCKET SEATS (CLOTH) WITH MANUAL TRACKS.
4.0L ENGINE, 5 SP. MANUAL TRANS., P/S, ABS, A/C.
P215/75R15 TIRES ON STEEL WHEELS, WITH MINI SIZE
SPARE MOUNTED INSIDE REAR LEFT.
GAS DAMPED SENSOR P/N S6015D003, S/N 261008.

WEIGHT (LBS) 4020 TOTAL, 2198 FRONT, 1822 REAR REP MAX OPT. WT.
NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

AND BALLAST 22 CAL. STODDARD.
300 LBS. OF LUGGAGE BALLAST.
350 POUNDS IN REAR SEAT AREA

POST TEST REMARKS DRIVER ATD - FACE TO CENTER OF WHEEL MOUNTED AIR
BAG. KNEES CONTACTED THE LOWER INSTRUMENT PANEL
AND STEERING COLUMN COVER. BELT PAYOUT; FROM
RETRACTOR 2.0 INCHES, AT TURNING LOOP 2.4 INCHES
RIGHT FRONT PASSENGER ATD - NO HEAD TO VEHICLE
CONTACT. KNEES TO LOWER INSTRUMENT PANEL. BELT
PAYOUT; FROM RETERACTOR 2.0 INCHES, AT TURNING
LOOP 2.2 INCHES.
WINDSHIELD RETENTION - TOTAL 71.4%, LEFT 66.9%,
RIGHT 75.9%. RETENTION MATERIAL PULLED GLASS
FROM WINDSHIELD ALONG FENCE.
NO WINDSHIELD ZONE INTRUSION
NO FUEL LEAKAGE DURING IMPACT, IMMEDIATELY POST
IMPACT, OR DURING THE POST TEST STAB. ROLL.
STRUCTURE - FRONT RAILS 2" BUCKLE AT FRONT KICK-
UP. SLIGHT RAIL BUCKLE AT TRANSMISSION
CROSSMEMBER. LEFT REAR RAIL BUCKLE DEWARD OF
UPPER SHOCK ATTACHMENT.

REPORT CODES

A = DRIVER DATA	B = ALL FILM DATA
C = HIGH SPEED FILM	D = ENGINEER REPORT
E = DUMMY KINEMATICS	F = STEERING COLUMN
G = UNDERBODY	H = A-POST
I = DYNAMIC CRUSH	J = ENGINE DEPARTMENT
K = DOOR CRUSH	L = FORCE/CENT./ENERGY
M = SPECIAL	

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A. WHEELER	428-68-00	(ABCEIL)

SAFETY TEST
VEHICLE CRASH TEST LETTER

PAGE 01

7C04421 30 MPH FRONT BARRIER IMPACT,ZJ74,4.0L. ITEM 22116
1992.5 MVSS 208, 212, 219, & 301 COMPLIANCE.
TEST DATE 10/25/91

TEST PURPOSE PRIMARY, 1992 MVSS 208 COMPLIANCE.
DETERMINE COMPLIANCE TO MVSS 208 OCCUPANT CRASH
PROTECTION.

PRIMARY, 1992 MVSS 212 COMPLIANCE.
DETERMINE COMPLIANCE TO MVSS 212 WINDSHIELD
RETENTION.

PRIMARY, 1992 MVSS 219 COMPLIANCE.
DETERMINE COMPLIANCE TO MVSS219 WINDSHIELD ZONE
INTRUSION.

PRIMARY, 1992 MVSS 301 COMPLIANCE.
DETERMINE COMPLIANCE TO MVSS 301 FUEL SYSTEM
INTEGRITY.

IMPACT TYPE TARGET SPEED; 30.2 MPH
DAMAGE LOCATION; FRONT
IMPACT TYPE; BARRIER
BARRIER SURFACE; PLYWOOD
DIRECTION; 0 DEGREES

VEHICLE BODY CLASS; ZJ
CAR LINE; J
BODY; 74
ENGINE; 4.0 LITRE
ENGINE NOTE; MPI
TRANSMISSION; 4 SPEED AUTO 4X4
TRANS. NOTE;
VIN AS TESTED; 1J4GZ78S8NA996128 MOD.
VIN AS BUILT; 1J4GZ78S8NA996128 MOD.

TEST SPEED 30.2 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS) 4650 TOTAL, 2306 FRONT, 2344 REAR

OCCUPANTS LEFT FRONT, HYB III CERT, STD INST AD-90
RESTRAINT-AIR BAG AND KNEE BLOCKER.
RIGHT FRONT, HYB III CERT, STD INST AD-95
RESTRAINT-3 PT. BELT SYSTEM

SAFETY TEST
VEHICLE CRASH TEST LETTER

PAGE 02

VC04421 30 MPH FRONT BARRIER IMPACT, ZJ74, 4.0L. ITEM 2Z116
1992.5 MVSS 208, 212, 219, & 301 COMPLIANCE.
TEST DATE 10/25/91

BUILD CONDITION 1992.5 ZJ C-1 PILOT, 4-DR, 4X4, 106" WB. (ZJ-8116)
DOUBLE ROW OF URETHANE BOND ON BOTTOM OF
WINDSHIELD (11" FROM EACH A-PILLAR).
ZJ CORPORATE TILT COLUMN.
BUCKET SEATS (CLOTH) WITH MANUAL TRACKS.
4.0L ENGINE, 4 SP. AUTO TRANS., P/S, ABS, A/C.
P215/75R15 TIRES ON STEEL WHEELS, WITH FULL SIZE
SPARE.
TRAILER HITCH.
ROOF RACK.
FULL CONSOLE.

TARGET WEIGHT (LBS) 4020 TOTAL, 2198 FRONT, 1822 REAR REP MAX OPT. WT.
NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

FUEL AND BALLAST 22 GAL. STODDARD.
300 LBS. OF LUGGAGE BALLAST.
160 LBS SECURED TO FLOORPAN UNDER REAR SEAT.
100 LBS SECURED TO REAR FOOTWELL.

POST TEST REMARKS THERE WAS NO FUEL LEAKAGE DURING IMPACT, NOR DUR-
ING THE SUBSEQUENT THIRTY MINUTES. AT THE BEGIN-
NING OF THE STATIC ROLLOVER, A HOLE IN THE TOP
REAR PORTION OF THE FUEL TANK WAS DISCOVERED. THIS
HOLE WAS CAUSED BY A TEST DUMMY GROUNDING SCREW.
SINCE THIS DAMAGE WAS NOT RELATED TO THE PRODUCT,
THE HOLE WAS REPAIRED BEFORE PROCEEDING WITH THE
ROLLOVER. THERE WAS NO FUEL LEAKAGE DURING THE
STATIC ROLLOVER.

THERE WAS NO LOSS OF WINDSHIELD RETENTION.

THERE WAS NO INTRUSION INTO EITHER WINDSHIELD IN-
TRUSION ZONE.

THE DRIVER CONTACTED THE DEPLOYED AIR BAG WITH HIS
FACE, AND THE STEERING COLUMN COVER WITH HIS
KNEES. THE PASSENGER CONTACTED THE LOWER INSTRU-
MENT PANEL WITH HIS KNEES. THE PASSENGER BELT PAY-
OUT WAS 4.6" AT THE TURNING LOOP, AND 3.0" AT THE
RETRACTOR.

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	

SAFETY TEST
VEHICLE CRASH TEST LETTER

PAGE 03

VC04421 30 MPH FRONT BARRIER IMPACT, ZJ74, 4.0L. ITEM 2Z116
1992.5 MVSS 208, 212, 219, & 301 COMPLIANCE.
TEST DATE 10/25/91

DISTRIBUTION

W.A. BREITMOSER, JR.	422-05-01	(AB)
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W.R. HARBAUGH	422-05-01	(AB)
M.A. HUBER	428-00-00	(ABCEIL)

DATE 10/28/91
TIME 12.59.34.

TEST VALUES
EDP LETTER

SAFETY TEST
DEPT 5320

/CO4419 ITEM 2Z117
/CO4419 30 MPH L/ANGLE BARRIER IMPACT, ZJ74, 4.0L ITEM 2Z117
1992.5 MVSS 208 AND 301 COMPLINCE.
TEST DATE 10/24/91

TEST PURPOSE PRIMARY, 1992 MVSS 208 COMPLIANCE.
OBSERVE AND DETERMINE INJURY CRITERIA.

PRIMARY, 1992 MVSS 301 COMPLIANCE.
OBSERVE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED; 30.2 MPH
DAMAGE LOCATION; LEFT FRONT
IMPACT TYPE; BARRIER
BARRIER SURFACE; PLYWOOD
DIRECTION; 0 DEGREES

VEHICLE BODY CLASS; ZJ
CAR LINE; J
BODY; 74
ENGINE; 4.0 LITRE
ENGINE NOTE; MPI
TRANSMISSION; 5 SPEED MANUAL 4X4
TRANS. NOTE;
VIN AS TESTED; 1J4GZ78SXNA996129 MOD.
VIN AS BUILT; 1J4GZ78SXNA996129 MOD.

TEST SPEED 30.2 MPH - ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS) 4662 TOTAL, 2300 FRONT, 2362 REAR

OCCUPANTS LEFT FRONT, CERT HYB III, INSTRUMENTED. AD-89
RESTRAINT-AIR BAG AND KNEE BLOCKER.
RIGHT FRONT, CERT HYB III, INSTRUMENTED. AD-93
RESTRAINT-3 PT. BELT SYSTEM.

BUILD CONDITION 1992.5 ZJ C-1 PILOT, 4-DR., 4X4, 106" WB.(ZJ-8117)
DOUBLE ROW OF URETHANE BOND ON BOTTOM OF
WINDSHIELD (11" FROM EACH A-PILLER).
ZJ NON-TILT COLUMN.
KNEE BLOCKER, DRIVER'S SIDE.
CORPORATE STEERING WHEEL AND AIR BAG.
BUCKET SEATS (CLOTH) WITH MANUAL TRACKS.
4.0L ENGINE, 5 SPD. MANUAL TRANS., P/S, ABS, A/C.
P215/75R15 TIRES ON STEEL WHEELS, WITH MINI SPARE.
GAS DAMPED SENSOR ON KNEE BLOCKER BRACE.
TWO ROLAMITE SENSORS, TRW TECHNAR P/N 56006868.
AIR BAG DIAGNOSTIC MODULE P/N 65006872.
MINI CONSOLE.

TARGET WEIGHT (LBS) 4020 TOTAL, 2198 FRONT, 1822 REAR REP MAX OPT. WT.
NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

ATE 10/28/91
IME 12.59.34.

TEST VALUES
EDP LETTER

SAFETY TEST
DEPT 5320

C04419 ITEM 2Z117
C04419 30 MPH L/ANGLE BARRIER IMPACT, ZJ74, 4.0L ITEM 2Z117
992.5 MVSS 208 AND 301 COMPLINCE.
EST DATE 10/24/91

UEL AND BALLAST 22 GAL. STODDARD
300 LBS OF LUGGAGE BALLAST SECURED IN CARGO AREA.
300 LBS SECURED TO RACK OVER REAR FLOORPAN.
100 LBS SECURED TO REAR FOOTWELLS.

OST TEST REMARKS THERE WAS NO FUEL LEAKAGE DURING IMPACT, NOR DUR-
ING THE SUBSEQUENT THIRTY MINUTES. A STATIC ROLL-
OVER WAS CONDUCTED WITHOUT FUEL LEAKAGE.

THE DRIVER CONTACTED THE DEPLOYED AIR BAG WITH HIS
FACE, THE A-PILLAR WITH HIS FOREHEAD, AND THE
STEERING COLUMN COVER WITH HIS KNEES. THE PASSEN-
GER CONTACTED THE LOWER INSTRUMENT PANEL WITH HIS
KNEES. THE PASSENGER BELT PAYOUT WAS 2.9" AT THE
TURNING LOOP AND 2.4" AT THE RETRACTOR.

IC

1. A. BREITMOSER, JR	422-05-01
1. W. HANIKA	418-42-27
1. R. HARBAUGH	422-05-01
1. A. HUBER	428-00-00
1. P. MAULE	422-05-01
1. A. ZYLIK	514-17-31

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC4419, ITEM NUMBER 22117, TEST ENGINEER MANNEY
 V.I.N. 1J4GZ78SXNA996129, TEST DATE 10/24/91, ROLL DATE 10/25/91
 TEST TYPE; 30 MPH FRONT 30 DEGREE LEFT ANULAR IMPACT
 FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 22.0 GALLONS
 TEST SPEED 30.2 MPH, TEST WEIGHT 1663 POUNDS.

FUEL SYSTEM DATA	POST TEST CONDITION
TANK -	
FILLER TUBE -	
CAP -	
FUEL FILTER -	
GROMMET -	
FUEL PUMP -	
STRAPS -	
LINES -	
AIR CLEANER -	
CARBURETOR -	

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

POST TEST PRESSURE CHECK _____

ELECTRIC FUEL PUMP RUN _____

STATIC ROLL LEAKAGE WITH VEHICLE LEFT SIDE DOWN FIRST

ROLL TIME	CARB/TBI	FUEL PUMP	AIR CLEAN	FUEL TANK	FUEL FILT	GRO-MET	FILL-CAP	OTHER ***	TOTAL
0-90 ! 1ST 5 MIN									0 *
<u>2.16</u> ! POST 5 MIN									0 **
90-180 ! 1ST 5 MIN									0 *
<u>2.1*</u> ! POST 5 MIN									0 **
180-270 ! 1ST 5 MIN									0 *
<u>2.0*</u> ! POST 5 MIN									0 **
270-360 ! 1ST 5 MIN									0 *
<u>2.06</u> ! POST 5 MIN									0 **

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

*** OTHER - _____

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC4432, ITEM NUMBER 22122. TEST ENGINEER BUSS
 V.I.N. 1J4G278S8NA996134, TEST DATE 11/7/91, ROLL DATE 11/9/91
 TEST TYPE; 30 MPH FRONT FLAT FIXED BARRIER IMPACT
 FUEL: TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, GALLONS
 TEST SPEED _____ MPH, TEST WEIGHT _____ POUNDS.

FUEL SYSTEM DATA	POST TEST CONDITION
TANK -	
FILLER TUBE -	
CAP -	
FUEL FILTER -	
GROMMET -	
FUEL PUMP -	
STRAPS -	
LINES -	
AIR CLEANER -	
CARBURETOR -	
FUEL RAIL -	

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

POST TEST PRESSURE CHECK _____

ELECTRIC FUEL PUMP RUN _____

STATIC ROLL LEAKAGE WITH VEHICLE LEFT SIDE DOWN FIRST

ROLL TIME	CARB/	FUEL/	AIR	FUEL	FUEL	GRO-	FILL	OTHER	TOTAL
	/TBI	PUMP	CLEAN	TANK	FILT	MET	CAP	***	
0-90 1ST 5 MIN									0 *
2:10 POST 5 MIN									0 **
90-180 1ST 5 MIN									0 *
2:11 POST 5 MIN									0 **
180-270 1ST 5 MIN									0 *
2:00 POST 5 MIN									0 **
270-360 1ST 5 MIN									0 *
2:00 POST 5 MIN									0 **

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

*** OTHER -

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

EST NUMBER 004452, ITEM NUMBER 27166, TEST ENGINEER BUSS
 I.I.N. 1J4GZ86V8PC100028, TEST DATE 11/23/71, ROLL DATE 11/22/71
 EST TYPE; 30 MPH FRONT 30 DEGREE LEFT ANGULAR IMPACT
 FUEL TYPE AND QUANTITY - .767 S.G. STODARD SOLVENT, 32.0 GALLONS
 EST SPEED 10.5 MPH, TEST WEIGHT 4300 POUNDS.

FUEL SYSTEM DATA	POST TEST CONDITION
TANK -	OK
FILLER TUBE -	OK
CAP -	OK
FUEL FILTER -	OK
CROMMET -	NE
FUEL PUMP -	OK
STRAPS -	OK
LINES -	POST TEST LEAKS BY CONNECTIONS AND LINES
AIR CLEANER -	OK
CARBURETOR -	OK
VALVES -	OK

POST IMPACT LEAKAGE(OZ); AT IMPACT 0, 1ST 5 MIN. 0, NEXT 15 MIN. 0

DOT TEST PRESSURE CHECK N/A

ELECTRIC FUEL PUMP RUN N/A

STATIC ROLL LEAKAGE WITH VEHICLE 10.5 SIDE DOWN FIRST

ROLL TIME	CARB	FUEL	AIR	FUEL	FUEL	GRO	FILL	OTHER	TOTAL
	/TBI	PUMP	CLEAN	TANK	FILE	MET	CRP	***	
1ST 5 MIN									0
2ND 5 MIN									0
3RD 5 MIN									0
4TH 5 MIN									0
5TH 5 MIN									0
6TH 5 MIN									0
7TH 5 MIN									0
8TH 5 MIN									0

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

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC4449, ITEM NUMBER 2ZJ123, TEST ENGINEER BUSS
 V.I.N. 1J4GZ78S*NA996250, TEST DATE 11/21/91, ROLL DATE 11/21/91
 FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 22.0 GALLONS
 TEST SPEED 20.0 MPH, TEST WEIGHT 4652 POUNDS.

FUEL SYSTEM DATA	POST TEST CONDITION
TANK -	
FILLER TUBE -	
CAP -	
FUEL FILTER -	
GROMMET -	
FUEL PUMP -	
STRAPS -	
LINES -	
AIR CLEANER -	
VALVES -	

ALL 1992.9 Release
ALL OK

FUEL LEAKAGE DURING IMPACT _____, POST IMPACT _____

STATIC ROLL LEAKAGE WITH VEHICLE LEFT SIDE DOWN FIRST

0-90 !1ST 5 MIN !									0 !*
2:12 !POST 5 MIN!									0 !**
90-180 !1ST 5 MIN !									0 !*
2:11 !POST 5 MIN!									0 !**
180-270 !1ST 5 MIN !									0 !*
2:00 !POST 5 MIN!									0 !**
270-360 !1ST 5 MIN !									0 !*
2:00 !POST 5 MIN!									0 !**

OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

** OTHER - _____

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC4472, ITEM NUMBER 22285, TEST ENGINEER BUSS
 V.I.N. 1J4GZ88S6PC100101, TEST DATE 12/10/91, ROLL DATE 12/10/91
 FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 22 GALLONS
 TEST SPEED 30.3 MPH, TEST WEIGHT 4669 POUNDS.

FUEL SYSTEM DATA	POST TEST CONDITION
TANK -	CONTACTED BY TRAC FOR BRACKET. LEFT FRONT CORNER. CONTACTED BY DIFFERENTIAL HOUSING ON REAR
FILLER TUBE -	OK
CAP -	OK
FUEL FILTER -	OK
GROMMET -	NA
FUEL PUMP -	OK
STRAPS -	OK
LINES -	OK
AIR CLEANER -	NA
VALVES -	NA

IMPACT LEAKAGE(OZ); AT IMPACT 0, 1ST 5 MIN. 0, NEXT 25 MIN. 0

POST TEST PRESSURE CHECK _____

STATIC ROLL LEAKAGE WITH VEHICLE LEFT SIDE DOWN FIRST

0-90	1ST 5 MIN								0	*
2:16	POST 5 MIN								0	**
90-180	1ST 5 MIN								0	*
2:17	POST 5 MIN								0	**
180-270	1ST 5 MIN								0	*
2:06	POST 5 MIN								0	**
270-360	1ST 5 MIN								0	*
2:10	POST 5 MIN								0	**

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

*** OTHER - _____

FUEL SYSTEM AND BRAKE ROLLOVER SUMMARY

TEST NUMBER VC452, TEST NUMBER 20128R, TEST ENGINEER BUSS
 V.I.N. LJ60785*NA910280, TEST DATE 1/25/71, HOLD DATE 1/25/71
 FUEL: TYPE AND QUANTITY - 167 S.G. STODDARD SOLVENT, 22.0 GALLONS
 TEST SPEED 20.0 MPH, TEST WEIGHT 4140 POUNDS.

FUEL SYSTEM DATA	POST TEST CONDITION
FILTER	
FILLER TUBE	
CAP	
FUEL FILTER	
WATER	
FUEL PUMP	
SEALING	
LEAKS	
AIR CLEANER	
VALVES	

FUEL LEAKAGE DURING IMPACT 12 POST IMPACT 27

STABLE HOLD LEAKAGE WITH VEHICLE LEFT SIDE DOWN TURN

TIME	LEAKAGE (GALLONS)	MINUTES
00-150	1.50	15
15-30	1.50	15
30-45	1.50	15
45-60	1.50	15
60-75	1.50	15
75-90	1.50	15
90-105	1.50	15
105-120	1.50	15
120-135	1.50	15
135-150	1.50	15
150-165	1.50	15
165-180	1.50	15
180-195	1.50	15
195-210	1.50	15
210-225	1.50	15
225-240	1.50	15
240-255	1.50	15
255-270	1.50	15
270-285	1.50	15
285-300	1.50	15
300-315	1.50	15
315-330	1.50	15
330-345	1.50	15
345-360	1.50	15
360-375	1.50	15
375-390	1.50	15
390-405	1.50	15
405-420	1.50	15
420-435	1.50	15
435-450	1.50	15
450-465	1.50	15
465-480	1.50	15
480-495	1.50	15
495-510	1.50	15
510-525	1.50	15
525-540	1.50	15
540-555	1.50	15
555-570	1.50	15
570-585	1.50	15
585-600	1.50	15
600-615	1.50	15
615-630	1.50	15
630-645	1.50	15
645-660	1.50	15
660-675	1.50	15
675-690	1.50	15
690-705	1.50	15
705-720	1.50	15
720-735	1.50	15
735-750	1.50	15
750-765	1.50	15
765-780	1.50	15
780-795	1.50	15
795-810	1.50	15
810-825	1.50	15
825-840	1.50	15
840-855	1.50	15
855-870	1.50	15
870-885	1.50	15
885-900	1.50	15
900-915	1.50	15
915-930	1.50	15
930-945	1.50	15
945-960	1.50	15
960-975	1.50	15
975-990	1.50	15
990-1005	1.50	15

MINUTES PER MINUTE, OTHER PER MINUTE

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC4561, ITEM NUMBER 3Z136, TEST ENGINEER MANNEY
 V.I.N. 1J4GZ88Y0PC500025, TEST DATE 5/4/92 ROLL DATE 5/6/92
 FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 21.7 GALLONS
 TEST SPEED 50.3 MPH, TEST WEIGHT 4839 POUNDS.

FUEL SYSTEM DATA	POST TEST CONDITION
TANK -	CONTACTS: BUMPER, TRK BAR, TRK BAR BRKT, TAIL PIPE, AXLE
FILLER TUBE -	
CAP -	
FUEL FILTER -	
GROMMET -	
FUEL PUMP -	
STRAPS -	LEFT J-HOOK SLIPPED OUT OF SLOT
LINES -	
AIR CLEANER -	
VALVES -	

POST IMPACT LEAKAGE(OZ); AT IMPACT 0, 1ST 5 MIN. 0, NEXT 25 MIN. 0
 POST TEST PRESSURE CHECK

STATIC ROLL LEAKAGE WITH VEHICLE LEFT SIDE DOWN FIRST

ROLL TIME	CARB	FUEL PUMP	AIR CLEAN	FUEL TANK	FUEL FILT	GRO-MET	FILL-CAP	OTHER ***	TOTAL
0-90 !1ST 5 MIN									0 *
2:18 !POST 5 MIN!									0 **
90-180!1ST 5 MIN									0 *
2:15 !POST 5 MIN!									0 **
180-270!1ST 5 MIN									0 *
2:06 !POST 5 MIN!									0 **
270-360!1ST 5 MIN									0 *
2:06 !POST 5 MIN!									0 **

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

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC4570, ITEM NUMBER 32135, TEST ENGINEER MANNEY
 V.I.N. 1J4GZ88Y0PC500014, TEST DATE 5/13/92, ROLL DATE 5/15/92
 TEST TYPE; 30 MPH FRONT 30 DEGREE LEFT ANULAR IMPACT
 FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 22.0 GALLONS
 TEST SPEED 30.7 MPH, TEST WEIGHT 4830 POUNDS.

FUEL SYSTEM DATA	POST TEST CONDITION
TANK -	
FILLER TUBE -	
CAP -	
FUEL FILTER -	<u>OK</u>
GROMMET -	
FUEL PUMP -	
STRAPS -	
LINES -	
AIR CLEANER -	<u>NA</u>
CARBURETOR -	<u>NA</u>

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

POST TEST PRESSURE CHECK ✓

ELECTRIC FUEL PUMP RUN ✓

STATIC ROLL LEAKAGE WITH VEHICLE LEFT SIDE DOWN FIRST

ROLL TIME	CARB /TBI	FUEL PUMP	AIR CLEAN	FUEL TANK	FUEL FILT	GRO MET	FILL CAP	OTHER ***	TOTAL
0-90 1ST 5 MIN									0 *
<u>2:21</u> POST 5 MIN									0 **
90-180 1ST 5 MIN									0 *
<u>2:19</u> POST 5 MIN									0 **
180-270 1ST 5 MIN									0 *
<u>2:08</u> POST 5 MIN									0 **
270-360 1ST 5 MIN									0 *
<u>2:10</u> POST 5 MIN									0 **

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

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC4574, ITEM NUMBER 2Z137, TEST ENGINEER BUSS
 V.I.N. 1J4GZ88Y3PC500007, TEST DATE 5/18/92 ROLL DATE 5/19/92
 TEST TYPE; 30 MPH FRONT FLAT FIXED BARRIER IMPACT
 FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 22.0 GALLONS
 TEST SPEED 30.6 MPH, TEST WEIGHT 4827 POUNDS.

FUEL SYSTEM DATA	POST TEST CONDITION
TANK -	
FILLER TUBE -	
CAP -	
FUEL FILTER -	
GROMMET -	
FUEL PUMP -	
STRAPS -	
LINES -	
AIR CLEANER -	
CARBURETOR -	
-	

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

POST TEST PRESSURE CHECK _____

ELECTRIC FUEL PUMP RUN _____

STATIC ROLL LEAKAGE WITH VEHICLE LEFT SIDE DOWN FIRST

ROLL TIME	CARB/TBI	FUEL PUMP	AIR CLEAN	FUEL TANK	FUEL FILT	GRO-MET	FILL CAP	OTHER ***	TOTAL
0-90 !1ST 5 MIN !									0 *
2:21 !POST 5 MIN!									0 **
90-180 !1ST 5 MIN !									0 *
2:22 !POST 5 MIN!									0 **
180-270 !1ST 5 MIN !									0 *
2:06 !POST 5 MIN!									0 **
270-360 !1ST 5 MIN !									0 *
2:07 !POST 5 MIN!									0 **

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

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC4576, ITEM NUMBER 3Z133, TEST ENGINEER WEIGEL
 V.I.N. 1J4GZ88Y7PC500012, TEST DATE 5/20/92 ROLL DATE 5/22/92
 TEST TYPE; 30 MPH FRONT FLAT FIXED BARRIER IMPACT
 FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 22 GALLONS

TEST SPEED 30.5 MPH, TEST WEIGHT 4830 POUNDS.

FUEL SYSTEM DATA	POST TEST CONDITION
TANK -	
FILLER TUBE -	
CAP -	
FUEL FILTER -	
GROMMET -	
FUEL PUMP -	
STRAPS -	
LINES -	
AIR CLEANER -	
CARBURETOR -	

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

ROLL TIME	CARB	FUEL	AIR	FUEL	FUEL	GRO	FILL	OTHER	TOTAL
	/TBI	PUMP	CLEAN	TANK	FILT	MET	CAP	***	
0-90 !1ST 5 MIN									0 *
<u>2:19</u> !POST 5 MIN									0 **
90-180 !1ST 5 MIN									0 *
<u>2:21</u> !POST 5 MIN									0 **
180-270 !1ST 5 MIN									0 *
<u>2:07</u> !POST 5 MIN									0 **
270-360 !1ST 5 MIN									0 *
<u>2:08</u> !POST 5 MIN									0 **

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

*** OTHER -