

Information

INFORMATION Redacted PURSUANT TO THE FREEDOM OF INFORMATION ACT (FOIA), 5 U.S.C. 552(B)(6)

DAIMLERCHRYSLER

Report #:

Compliance Report

Subject: Fuel Loss Limitations and Static Rollover Test Procedures (For CMVSR or FMVSS 301)

Model Year: 2000

Procedure: CP-246G CP-245F CP-234I CP-233H CP-232F CP-194K

Standard: MVSS 301



Standard Title: Fuel System integrity

Requirements: Fluid Loss Limitation and Static Rollover Test Procedures to Determine Vehicle Fuel System Integrity

Vehicle Type: MPV

Family Codes: WJ

Approvals

Edward A Zylík Department Manager		06/03/99 03:23:10 PM Approval Date
John H Broomall Executive Engineer		06/03/99 04:48:47 PM Approval Date

Summary

DAIMLERCHRYSLER

- Subject:** Fuel Loss Limitations and Static Rollover Test Procedures (For CMVSR or FMVSS 301)
- Objective:** Verification of design Compliance with the Requirements of Federal Motor Vehicle Safety Standard FMVSS 301 and Canada Motor Vehicle Safety Regulation CMVSR 301
- Conclusion:** The DaimlerChrysler 2000 model year 'WJ' Body Jeep "Grand Cherokee" Sport Utility Vehicle, as design released and released, complies with the performance requirements of FMVSS 301 - Sections S3., S5., S6. and S7.

Safety Documentation Compliance Report

Prepared By: Richard A Terry **Date:** 06/02/1999

Approved By: Edward A Zylik **Date:** 06/03/1999

Issued By: 1060 - Vehicle Impact & Safety Development
(Jeep)

Discussion

DAIMLERCHRYSLER

The 2000 model year 'WJ' is essentially a carryover vehicle from the 1999 model year.

The following design features are carried over from the 1999 model year vehicle;

Vehicle/Body:

- Left hand drive model.
- 4-door body style.
- 106 inch wheelbase and unibody construction.
- The front bumper system consists of a steel bumper crossmember faced with an energy absorbent foam and covered with a molded fascia.

Capacity:

- Five (5) person seating capacity - front bucket seats.
 - 300 lbs. of luggage capacity.
 - 20 gallon rear mounted plastic fuel tank with a filler neck located on the left side of the vehicle.
- A fuel tank stone shield is standard while a skid plate is optional.

Drivetrain:

- 4.0L (I6) or 4.7L (V8) multi-point injection (MPI) engines are offered.
- 4 wheel drive and 2 wheel drive systems are available.
- 4-speed automatic transmission.

Occupant Restraint/Interior Systems:

- A 3-point active seat belt with adjustable upper anchorage and a constant force retractor (CFR) is a primary restraint for the driver.
- A supplementary driver restraint airbag is contained in the four spoke steering wheel.
- A 3-point active seat belt with adjustable upper anchorage and a constant force retractor (CFR) is a primary restraint for the passenger.
- An airbag is provided as a supplementary restraint for the passenger.
- An electronic sensor is used to control the supplemental restraint airbag system.

The following design feature is new for the 2000 model year vehicle;

Drivetrain:

- 4.7 (V8) multi-point injection (MPI) engine is now offered with a 2 wheel drive system.

All tests were conducted with two restrained dummies at driver and right front passenger location and with 300 lbs. of luggage ballast.

A total of 7 (seven) vehicles were tested to demonstrate compliance of the 'WJ' to the requirements of FMVSS 301, Fuel System Integrity. These vehicles and test results are shown on the attached summary. The test reports are located in the attached file.

CONCLUSION:

Based on the testing conducted, the 2000 model year 'WJ' Body Jeep "Grand Cherokee" Sport Utility Vehicle, as design released and released, complies with the performance requirements of FMVSS 301 - Sections S3., S5., S6. and S7.

Appendix



**SUMMARY
FUEL SYSTEM INTEGRITY
2000 MODEL YEAR 'WJ' BODY JEEP "GRAND CHEROKEE"**

Test Mode Vehicle Crash Number and date tested Description of Vehicle Vehicle Identification Number	At Impact	Leakage in the following 30 minutes	Leakage in the rollover fixture	Total Leakage
Flat Frontal VC7022 tested 6/19/98 4.0 Litre, 4x4, auto, C1 1J4GZ68NXXC [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Flat Frontal VC7023 tested 6/19/98 4.7 Litre, 4x4, auto, C1 1J4GZ58S2XC [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Flat Frontal VC7572 tested 6/26/99 4.7 Litre, 4x2, auto, C1 1J4G248XYC [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Left Lateral VC7049 tested 7/01/98 4.0 Litre, 4x4, auto, STO 1J4GW58S4XC [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Right Angular VC7050 tested 7/03/98 4.0 Litre, 4x4, auto, STO 1J4GW58S6XC [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Left Angular VC7044 tested 6/29/98 4.7 Litre, 4x4, auto, C1 1J4GZ58N8XC [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Rear VC7029 tested 6/22/99 4.7 Litre, 4x4, auto, C1 1J4GZ68N4XC [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.

Allowable Leakage by Weight:

1. One Oz. at impact.
2. Not more than one Oz. per minute in the following thirty minutes.
3. Five Oz. for the first five minutes after each 90 degree rotation and not more than one Oz. per minute thereafter.



fmvss_301.pdf

Information

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- An airbag is provided as a supplementary restraint for the passenger.
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CONCLUSION:

Based on the testing conducted, the 2000 model year 'WJ' Body Jeep "Grand Cherokee" Sport Utility Vehicle, as design released and released, complies with the performance requirements of FMVSS 301 - Sections S3., S5., S6. and S7.

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Flat Frontal VC7023 tested 6/19/98 4.7 Litre, 4x4, auto, C1 1J4GZ58S2XC [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Flat Frontal VC7572 tested 6/26/99 4.7 Litre, 4x2, auto, C1 1J4G248XYC [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Left Lateral VC7049 tested 7/01/98 4.0 Litre, 4x4, auto, STO 1J4GW58S4XC [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Right Angular VC7050 tested 7/03/98 4.0 Litre, 4x4, auto, STO 1J4GW58S6XC [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Left Angular VC7044 tested 6/29/98 4.7 Litre, 4x4, auto, C1 1J4GZ58N8XC [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Rear VC7029 tested 6/22/99 4.7 Litre, 4x4, auto, C1 1J4GZ68N4XC [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.

Allowable Leakage by Weight:

1. One Oz. at impact.
2. Not more than one Oz. per minute in the following thirty minutes.
3. Five Oz. for the first five minutes after each 90 degree rotation and not more than one Oz. per minute thereafter.



fmvss_301.pdf

DATE 06/19/98
TIME 16.35.17.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC07022 ITEM WJ9360
VC07022 30 MPH FLAT FRONTAL, WJ-J-74 ITEM WJ9360
1999 COMPLIANCE 208, 301, 212, 219.
TEST DATE 06/19/98

TEST PURPOSE PRIMARY, 1999 USA 208 COMPLIANCE.
DETERMINE INJURY CRITERIA.

PRIMARY, 1999 USA 301 COMPLIANCE.
DETERMINE FUEL SYSTEM INTEGRITY

PRIMARY, 1999 USA 212 COMPLIANCE.
WINDSHIELD RETENTION.

PRIMARY, 1999 USA 219 COMPLIANCE.
DETERMINE WINDSHIELD ZONE INTRUSION.

IMPACT TYPE TARGET SPEED; 30.1 MPH
DAMAGE LOCATION; FRONT
BARRIER TYPE; FLAT FIXED
BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; WJ
CAR LINE; J
BODY; 74
ENGINE; 4.7 LITRE
ENGINE NOTE; ELECTRONIC FUEL INJECTION
TRANSMISSION; automatic
TRANS. NOTE;
VIN AS TESTED; 1J4GZ68NXXC [REDACTED] MOD.
VIN AS BUILT; 1J4GZ68NXXC [REDACTED] MOD.

TEST SPEED 30.3 MPH BY ELECTRONIC TRAP.

TEST WEIGHT (LBS) 4853 TOTAL, 2444 FRONT, 2409 REAR

OCCUPANTS RIGHT FRONT, HYBRID III W/ROM FEMUR&ANKLE AD-89
RESTRAINT-AIRBAG AND BELTS.
LEFT FRONT, HYBRID III W/ROM FEMUR&ANKLE AD-93
RESTRAINT-AIRBAG AND BELTS.

DATE 06/19/98
TIME 16.35.17.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC07022 ITEM WJ9360
VC07022 30 MPH FLAT FRONTAL, WJ-J-74 ITEM WJ9360
1999 COMPLIANCE 208, 301, 212, 219.
TEST DATE 06/19/98

BUILD CONDITION 1999 MY C1 LEVEL PROTOTYPE.
MODIFIED AS FOLLOWS :
VEHICLE MODIFIED W/ STRUCTURAL AND INTERIOR PARTS:
STEEL BRACKET REINF. ON A-POST TO MAG. BRACKET.
SEAT BELTS ARE 3 KN CFR LEFT AND RIGHT
COMPLETE FRONT RAIL REINF PACKAGE OF PHASE 2.
STEEL LOWER MAG BRACKET SUPPORT.
WITH A 30 MM SLOT FOR 'J' CLIP RELEASE.
AND A 3RD VERTICAL SLOT FOR COLLAPSE.
STEERING COLUMN REPLACED WITH A NEW ONE
WITH A 10 LB SPRING ON THE TILT MECHANISM.
INSTRUMENT PANEL GAUGE CLUSTER BEZEL CUT OUT HAS
BEEN ENLARGED TO PRODUCTION REPRESENTATIVE.
KEVLAR STRAP WITH BRACKET UNDER THE SHIFTER REINF
AND A RIV STUD UPPER MOUNTING. M6 & M8 STUDS LOW.
INSTRUMENT PANEL RIGHT SIDE LOWER MOUNT HAS SLOT
CLOSED OFF TO A OVAL HOLE.
PASSENGER SIDE FRONT SEAT BELT BUCKLE IS MOUNTED
TO THE TUNNEL.

TARGET WEIGHT (LBS) 4225 TOTAL, 2302 FRONT, 1923 REAR, REP MAX OPT WT.
DOES NOT INCLUDE LUGGAGE OR OCCUPANTS.

FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT.
300 LBS OF LUGGAGE BALLAST.
300 LBS OF BALLAST SECURED IN CARGO AREA.

EDP TECHNICIAN S. A. HELQUIST

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CC

B. C. BOS 514-18-60
J. B. ESTES 514-17-41
M. T. STEBLETON 422-05-01

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC7022, ITEM NUMBER WJ9360, TEST ENGINEER COLLINGS

V.I.N. 1J4GZ68NXXC [REDACTED] TEST DATE 06/19/98 ROLL DATE 06/22/98

TEST TYPE; 30 MPH FRONT FLAT FIXED BARRIER

FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 30.3 MPH, TEST WEIGHT 4853 POUNDS.

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

[] NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE Left SIDE DOWN FIRST

FUEL LEAKAGE LOCATIONS DURING STATIC ROLL

ROLL TIME					TOTAL
0-90	1ST 5 MIN				0 *
1:28	POST 5 MIN				0 **
90-180	1ST 5 MIN				0 *
1:26	POST 5 MIN				0 **
180-270	1ST 5 MIN				0 *
1:25	POST 5 MIN				0 **
270-360	1ST 5 MIN				0 *
1:26	POST 5 MIN				0 **

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS No fuel leaks at impact.

No fuel leaks during static roll.

Fuel System Integrity was maintained.

LAST FORM MODIFICATION 08/22/96 - GAB (TESTOBS896,DOCVCFORMS)

DATE 06/19/98
TIME 15.54.48.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC07023 ITEM WJ9356
VC07023 30 MPH FLAT FRONTAL, WJ-J-74 ITEM WJ9356
1999 COMPLIANCE 208, 301, 212, 219.
TEST DATE 06/19/98

TEST PURPOSE PRIMARY, 1999 USA 208 COMPLIANCE.
DETERMINE INJURY CRITERIA.

PRIMARY, 1999 USA 301 COMPLIANCE.
DETERMINE FUEL SYSTEM INTEGRITY

PRIMARY, 1999 USA 212 COMPLIANCE.

PRIMARY, 1999 USA 219 COMPLIANCE.
DETERMINE WINDSHIELD ZONE INTRUSION.

IMPACT TYPE TARGET SPEED; 30.1 MPH
DAMAGE LOCATION; FRONT
BARRIER TYPE; FLAT FIXED
BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; WJ
CAR LINE; J
BODY; 74
ENGINE; 4.0 LITRE
ENGINE NOTE; ELECTRONIC FUEL INJECTION
TRANSMISSION; automatic
TRANS. NOTE;
VIN AS TESTED; 1J4GZ58S2XC [REDACTED] MOD.
VIN AS BUILT; 1J4GZ58S2XC [REDACTED] MOD.

TEST SPEED 30.2 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS) 4549 TOTAL, 2281 FRONT, 2268 REAR

OCCUPANTS RIGHT FRONT, HYBRID III W/ROM FEMUR&ANKLE AD-103
RESTRAINT-AIRBAG AND BELTS.
LEFT FRONT, HYBRID III W/ROM FEMUR&ANKLE AD-105
RESTRAINT-AIRBAG AND BELTS.

DATE 06/19/98
TIME 15.54.48.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC07023 ITEM WJ9356
VC07023 30 MPH FLAT FRONTAL, WJ-J-74 ITEM WJ9356
1999 COMPLIANCE 208, 301, 212, 219.
TEST DATE 06/19/98

BUILD CONDITION 1999 MY C1 LEVEL PROTOTYPE.
MODIFIED AS FOLLOWS :
VEHICLE MODIFIED W/ STRUCTURAL AND INTERIOR PARTS:
STEEL BRACKET REINF. ON A-POST TO MAG. BRACKET.
SEAT BELTS ARE 3 KN CFR LEFT AND RIGHT
COMPLETE FRONT RAIL REINF PACKAGE OF PHASE 2.
STEEL LOWER MAG BRACKET SUPPORT.
WITH A 30 MM SLOT FOR 'J' CLIP RELEASE.
AND A 3RD VERTICAL SLOT FOR COLLAPSE.
STEERING COLUMN REPLACED WITH A NEW ONE
WITH A 10 LB SPRING ON THE TILT MECHANISM.
INSTRUMENT PANEL GAUGE CLUSTER BEZEL CUT OUT HAS
BEEN ENLARGED TO PRODUCTION REPRESENTATIVE.
KEVLAR STRAP WITH BRACKET UNDER THE SHIFTER REINF
AND A RIV STUD UPPER MOUNTING. M6 & M8 STUDS LOW.
INSTRUMENT PANEL RIGHT SIDE LOWER MOUNT HAS SLOT
CLOSED OFF TO A OVAL HOLE.
PASSENGER SIDE FRONT SEAT BELT BUCKLE IS MOUNTED
TO THE TUNNEL.

TARGET WEIGHT (LBS) 3914 TOTAL, 2163 FRONT, 1751 REAR, REP NO OPT WT.
DOES NOT INCLUDE LUGGAGE OR OCCUPANTS.
FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT.
300 LBS
175 LBS IN SPARE TIRE WELL.

EDP TECHNICIAN S. A. HELQUIST

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CC

B. C. BOS 514-18-60
J. B. ESTES 514-17-41
M. T. STEBLETON 422-05-01

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC7023, ITEM NUMBER WJ9356, TEST ENGINEER MANNEY

V.I.N. 1J4GZ58S2XC [REDACTED], TEST DATE 6/19/98 ROLL DATE 6/22/98

TEST TYPE: 30 MPH FRONT FLAT FIXED BARRIER

FUEL: TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 30-3 MPH, TEST WEIGHT 4549 POUNDS.

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

NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE Left SIDE DOWN FIRST

FUEL LEAKAGE LOCATIONS DURING STATIC ROLL

ROLL TIME					TOTAL
0-90	1ST 5 MIN				0 *
<u>1:27</u>	POST 5 MIN				0 **
90-180	1ST 5 MIN				0 *
<u>1:28</u>	POST 5 MIN				0 **
180-270	1ST 5 MIN				0 *
<u>1:26</u>	POST 5 MIN				0 **
270-360	1ST 5 MIN				0 *
<u>1:25</u>	POST 5 MIN				0 **

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS No fuel leaks

DATE 05/26/99
TIME 17:10:29.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC07572 ITEM WJ6366
VC07572 30-MPH FLAT FRONTAL, WJ-T-74 ITEM WJ6366
2000 M.Y. FMVSS 208 & 301 COMPLIANCE.
TEST DATE 05/26/99

TEST PURPOSE PRIMARY, 2000 USA 208 COMPLIANCE.
ASSESS INJURY CRITERIA.

PRIMARY, 2000 USA 301 COMPLIANCE.
DETERMINE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED; 30.1 MPH
DAMAGE LOCATION; FRONT
BARRIER TYPE; FLAT FIXED
BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; WJ
CAR LINE; T
BODY; 74
ENGINE; 4.7 LITRE
ENGINE NOTE; ELECTRONIC FUEL INJECTION
TRANSMISSION; AUTOMATIC
TRANS. NOTE; 2-WHEEL DRIVE
VIN AS TESTED; 1J4G248NXYC [REDACTED] MOD.
VIN AS BUILT; 1J4G248NXYC [REDACTED] MOD.

TEST SPEED 30.4 MPH BY ELECTRONIC TRAP.

TEST WEIGHT (LBS) 4274 TOTAL, 2263 FRONT, 2011 REAR

OCCUPANTS LEFT FRONT-CERTIFIED 9-CHANNEL ATD. AD-89
RESTRAINT-AIRBAG AND BELTS.
RIGHT FRONT-CERTIFIED 9-CHANNEL ATD. AD-103
RESTRAINT-AIRBAG AND BELTS.

BUILD CONDITION 2000 M.Y. C-1 4 X 2 V-8, TESTED AS FOLLOWS:

- * 2000 M.Y. DRIVER-SIDE AUTOLIV NON-AZIDE
"APH" TYPE INFLATOR
TUNNEL MOUNTED BUCKLES (CARRYOVER '99 M.Y.)
BREED 4KN DRIVER, 3KN PASSENGER NON-PRETORQUED
CONSTANT FORCE RETRACTORS. (CARRYOVER FROM '99)
- * AUTOLIV PASSENGER INFLATOR CARRYOVER FROM
1999 M.Y. ("MPH" TYPE INFLATOR)
- * PASSENGER-SIDE AIRBAG HAS PARADIGM DOT SIDE
PANNELS - CARRYOVER FROM 1999 M.Y.
- * 2000 M.Y. LOWER STEEL MAG INTERMEDIATE BRACKET
HAS RECEIVED 2000 WJ VERTICAL VANE HVAC VENTS
IMMEDIATELY RIGHT AND LEFT OF PAB.

DATE 05/26/99
TIME 17:10:29.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC07572 ITEM WJ6366
VC07572 30-MPH FLAT FRONTAL, WJ-T-74 ITEM WJ6366
2000 M.Y. FMVSS 208 & 301 COMPLIANCE.
TEST DATE 05/26/99

TARGET WEIGHT (LBS) 3583 TOTAL, 1749 FRONT, 1834 REAR.
REPRESENTS 2000 M.Y. V-8 4 X 2 BASE WEIGHT.
DOES NOT INLCUDE BALLAST OR OCCUPANT WEIGHT.

FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT.
300 LBS OF LUGGAGE BALLAST.
NO ADDED BALLAST.

EDP TECHNICIAN S. MARCHENIA

No. of Pages 135
CC

B. C. BOS 514-18-60
M. T. STEBLETON 422-05-01
R. A. TERRY 514-17-41

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC7572, ITEM NUMBER WJ6366, TEST ENGINEER COLLINGS

V.I.N. 1J4G248NXYC [REDACTED] TEST DATE 05/26/99, ROLL DATE 05/27/99

TEST TYPE; 30 MPH FRONT FLAT FIXED BARRIER

FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 30.4 MPH, TEST WEIGHT 4274 POUNDS.

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

NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE LFT SIDE DOWN FIRST

FUEL LEAKAGE LOCATIONS DURING STATIC ROLL

ROLL TIME					TOTAL	
0-90	1ST 5 MIN				0	*
<u>1:36</u>	POST 5 MIN				0	**
90-180	1ST 5 MIN				0	*
<u>1:32</u>	POST 5 MIN				0	**
180-270	1ST 5 MIN				0	*
<u>1:29</u>	POST 5 MIN				0	**
270-360	1ST 5 MIN				0	*
<u>1:26</u>	POST 5 MIN				0	**

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS No fuel leaks at impact.
No fuel leaks during static roll.

Fuel System Integrity was maintained

LAST FORM MODIFICATION 08/22/96 - GAB (TESTOBS896,DOCVCFORMS)

SAFETY TEST
VEHICLE CRASH TEST LETTER

PAGE 01

VCC07049 30 MPH LATERAL, WJ-J-74 ITEM WJ0097
1999 FMVSS 301 COMPLIANCE LATERAL 20 MPH IMPACT, LEFT SIDE.
TEST DATE 07/01/98

TEST PURPOSE PRIMARY, 1999 USA 301 COMPLIANCE.
DETERMINE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED; 20.1 MPH
DAMAGE LOCATION; LEFT CENTER
BARRIER TYPE; REAR TYPE IV
BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; WJ
CAR LINE; J
BODY; 74
ENGINE; 4.0 LITRE
ENGINE NOTE; ELECTRONIC FUEL INJECTION
TRANSMISSION; 4 SPEED AUTO 4x4
TRANS. NOTE; four wheel drive.
VIN AS TESTED; 1J4GW58S4XC [REDACTED] MOD.
VIN AS BUILT; 1J4GW58S4XC [REDACTED] MOD.

TEST SPEED 20.3 MPH - TRAP

TEST WEIGHT (LBS) 4866 TOTAL, 2392 FRONT, 2474 REAR

OCCUPANTS LEFT FRONT, HYBRID II BALLAST AD-64
RESTRAINT-BELTS ONLY.
RIGHT FRONT, HYBRID II BALLAST AD-56
RESTRAINT-BELTS ONLY.

BUILD CONDITION 1999 C1 LEVEL PROTOTYPE.
REAR TIRE TUB MODIFIED WITH 'SAUSAGE' SHAPED
E-COAT DRAIN HOLE FILLED WITH A STRUCTURAL PLUG
BONDED WITH ADHESIVE TO FLOOR PAN.
16 INCH REAR SPARE TIRE.
1.5 MM THICK BRUSH GUARD
NO TRAILER HITCH.
FUEL TANK C1 LEVEL
BARTHOLEMW STYLE HOSE CONNECTIONS.
'TROMBONE' FUEL LINES FROM SENDING UNIT TO FILTER
REGULATOR. C1 LEVEL.

TARGET WEIGHT (LBS) 4225 TOTAL, 2302 FRONT, 1923 REAR, REP MAX OPT WT.
DOES NOT INCLUDE LUGGAGE OR OCCUPANTS.

SAFETY TEST
VEHICLE CRASH TEST LETTER

PAGE 02

VC07049 30 MPH LATERAL, WJ-J-74 ITEM WJ0097
1999 FMVSS 301 COMPLIANCE LATERAL 20 MPH IMPACT, LEFT SIDE.
TEST DATE 07/01/98

FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT.
300 LBS
2 HYBIII 50TH ATDS IN SECOND ROW SEAT (330 LBS)
75 LBS IN REAR CARGO AREA

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 J. B. ESTES 514-17-41 (AB)
M. T. STEBLETON 422-05-01 (AB)

DATE 07/01/98 TIME 15.41.35.

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC7049, ITEM NUMBER WJ0097, TEST ENGINEER KOBYLARZ

V.I.N. 1J4GZ58S4XC [REDACTED] TEST DATE 7/1/98, ROLL DATE 7/2/98

TEST TYPE; 20 MPH LEFT LATERAL WITH TYPE IV BARRIER

FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 20.3 MPH, TEST WEIGHT 4511 POUNDS.

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

NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE Left SIDE DOWN FIRST

FUEL LEAKAGE LOCATIONS DURING STATIC ROLL

ROLL TIME					TOTAL	
0-90	1ST 5 MIN					*
1:31	POST 5 MIN					**
90-180	1ST 5 MIN					*
1:27	POST 5 MIN					**
180-270	1ST 5 MIN					*
1:25	POST 5 MIN					**
270-360	1ST 5 MIN					*
1:26	POST 5 MIN					**

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS NO FUEL LEAKS

DATE 07/03/98
TIME 11.29.13.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC07050 ITEM WJ0098
VC07050 30 MPH RIGHT ANGULAR, WJ-J-74 ITEM WJ0098
1999 COMPLIANCE 208, 301.
TEST DATE 07/03/98

TEST PURPOSE PRIMARY, 1999 USA 208 COMPLIANCE.
DETERMINE INJURY CRITERIA.

PRIMARY, 1999 USA 301 COMPLIANCE.
DETERMINE FUEL SYSTEM INTEGRITY

IMPACT TYPE TARGET SPEED; 30.1 MPH
DAMAGE LOCATION; RIGHT FRONT
BARRIER TYPE; RIGHT 30 DEG
BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; WJ
CAR LINE; J
BODY; 74
ENGINE; 4.0 LITRE
ENGINE NOTE; ELECTRONIC FUEL INJECTION
TRANSMISSION; automatic
TRANS. NOTE; 4 wheel drive.
VIN AS TESTED; 1J4GW58S6XC [REDACTED] MOD.
VIN AS BUILT; 1J4GW58S6XC [REDACTED] MOD.

TEST SPEED 30.3 MPH - TRAP TIMER

TEST WEIGHT (LBS) 4850 TOTAL, 2360 FRONT, 2490 REAR

OCCUPANTS RIGHT FRONT, HYBRID III W/ROM FEMUR&ANKLE AD-90
RESTRAINT-AIRBAG AND BELTS.
LEFT FRONT, HYBRID III W/ROM FEMUR&ANKLE AD-92
RESTRAINT-AIRBAG AND BELTS.

DATE 07/03/98
TIME 11.29.13.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC07050 ITEM WJ0098
VC07050 30 MPH RIGHT ANGULAR, WJ-J-74 ITEM WJ0098
1999 COMPLIANCE 208, 301.
TEST DATE 07/03/98

BUILD CONDITION 1999 MY C1 LEVEL PROTOTYPE.
MODIFIED AS FOLLOWS :
VEHICLE MODIFIED W/ STRUCTURAL AND INTERIOR PARTS:
STEEL BRACKET REINF. ON A-POST TO MAG. BRACKET.
SEAT BELTS ARE 3 KN CFR LEFT AND RIGHT
SEAT BELT BUCKLE IS ATTACHED TO THE TUNNEL ON BOTH
THE LEFT AND RIGHT SIDE. ** NON TIB **
DRIVERS AIRBAG IS UPLOADED INFLATOR TO 350 KPA.
INSTRUMENT CLUSTER BEZEL HAS A CUTOUT FOR A RUBBER
FLAP WITH A SLIT. FLAP IS MISSING.
COMPLETE FRONT RAIL REINF PACKAGE OF PHASE 2.
STEEL LOWER MAG BRACKET SUPPORT.
WITH A 30 MM SLOT FOR 'J' CLIP RELEASE.
AND A 3RD VERTICAL SLOT FOR COLLAPSE.
STEERING COLUMN REPLACED WITH A NEW ONE
WITH A 10 LB SPRING ON THE TILT MECHANISM.
KEVLAR STRAP WITH BRACKET UNDER THE SHIFTER REINF
AND A RIV STUD UPPER MOUNTING. M6 & M8 STUDS LOW.
INSTRUMENT PANEL RIGHT SIDE LOWER MOUNT HAS SLOT
CLOSED OFF TO A OVAL HOLE.
PASSENGER SIDE FRONT SEAT BELT BUCKLE IS MOUNTED
TO THE TUNNEL.

TARGET WEIGHT (LBS) 4178 TOTAL, 2248 FRONT, 1930 REAR, REP MAX OPT WT.
DOES NOT INCLUDE LUGGAGE OR OCCUPANTS.
FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT.
200 LBS BALLAST WEIGHT ADDED

EDP TECHNICIAN S. A. HELQUIST

No. of Pages 85
CC

J. B. ESTES 514-17-41
M. T. STEBLETON 422-05-01

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC7050, ITEM NUMBER WJ0098, TEST ENGINEER MARTIN

V.I.N. 1J4GW58S6XC [REDACTED], TEST DATE 7/3/98, ROLL DATE 7/6/98

TEST TYPE; 30 MPH 30 DEGREE RIGHT ANGULAR

FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 30.3 MPH, TEST WEIGHT 4850 POUNDS.

POST IMPACT LEAKAGE(OZ); AT IMPACT Ø

1ST 5 MIN. Ø

NEXT 25 MIN. Ø

POST TEST PRESSURE CHECK NA

ELECTRIC FUEL PUMP RUN NA

NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE DRIVER SIDE DOWN FIRST

FUEL LEAKAGE LOCATIONS DURING STATIC ROLL

ROLL TIME						TOTAL
0-90	1ST 5 MIN					0 *
<u>1:32</u>	POST 5 MIN					0 **
90-180	1ST 5 MIN					0 *
<u>1:24</u>	POST 5 MIN					0 **
180-270	1ST 5 MIN					0 *
<u>1:26</u>	POST 5 MIN					0 **
270-360	1ST 5 MIN					0 *
<u>1:26</u>	POST 5 MIN					0 **

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS _____

LAST FORM MODIFICATION 08/22/96 - GAB (TESTOBS896, DOCVCFORMS)

DATE 06/30/98
TIME 12.47.30.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC07044 ITEM WJ9353
VC07044 30 MPH LEFT ANGULAR, WJ-J-74 ITEM WJ9353
1999 COMPLIANCE 208, 301.
TEST DATE 06/29/98

TEST PURPOSE PRIMARY, 1999 USA 208 COMPLIANCE.
DETERMINE INJURY CRITERIA.

PRIMARY, 1999 USA 301 COMPLIANCE.
DETERMINE FUEL SYSTEM INTEGRITY

IMPACT TYPE TARGET SPEED; 30.1 MPH
DAMAGE LOCATION; LEFT FRONT
BARRIER TYPE; LEFT 30 DEG
BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; WJ
CAR LINE; J
BODY; 74
ENGINE; 4.7 LITRE
ENGINE NOTE; ELECTRONIC FUEL INJECTION
TRANSMISSION; automatic
TRANS. NOTE; 4 wheel drive.
VIN AS TESTED; 1J4GZ58N8XC [REDACTED] MOD.
VIN AS BUILT; 1J4GZ58N8XC [REDACTED] MOD.

TEST SPEED 30.2 MPH BY ELECTRONIC TRAP.

TEST WEIGHT (LBS) 4900 TOTAL, 2462 FRONT, 2438 REAR

OCCUPANTS RIGHT FRONT, HYBRID III W/ROM FEMUR&ANKLE AD-91
RESTRAINT-AIRBAG AND BELTS.
LEFT FRONT, HYBRID III W/ROM FEMUR&ANKLE AD-104
RESTRAINT-AIRBAG AND BELTS.

DATE 06/30/98
TIME 12.47.30.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC07044 ITEM WJ9353
VC07044 30 MPH LEFT ANGULAR, WJ-J-74 ITEM WJ9353
1999 COMPLIANCE 208, 301.
TEST DATE 06/29/98

BUILD CONDITION

1999 MY C1 LEVEL PROTOTYPE.
MODIFIED AS FOLLOWS :
VEHICLE MODIFIED W/ STRUCTURAL AND INTERIOR PARTS:
STEEL BRACKET REINF. ON A-POST TO MAG. BRACKET.
SEAT BELTS ARE 3 KN CFR LEFT AND RIGHT
SEAT BELT BUCKLE IS ATTACHED TO THE TUNNEL ON BOTH
THE LEFT AND RIGHT SIDE. ** NON TIB **
DRIVERS AIRBAG IS UPLOADED INFLATOR TO 350 KPA.
INSTRUMENT CLUSTER BEZEL HAS A CUTOUT FOR A RUBBER
FLAP WITH A SLIT. FLAP IS MISSING.
COMPLETE FRONT RAIL REINF PACKAGE OF PHASE 2.
STEEL LOWER MAG BRACKET SUPPORT.
WITH A 30 MM SLOT FOR 'J' CLIP RELEASE.
AND A 3RD VERTICAL SLOT FOR COLLAPSE.
STEERING COLUMN REPLACED WITH A NEW ONE
WITH A 10 LB SPRING ON THE TILT MECHANISM.
KEVLAR STRAP WITH BRACKET UNDER THE SHIFTER REINF
AND A RIV STUD UPPER MOUNTING. M6 & M8 STUDS LOW.
INSTRUMENT PANEL RIGHT SIDE LOWER MOUNT HAS SLOT
CLOSED OFF TO A OVAL HOLE.
PASSENGER SIDE FRONT SEAT BELT BUCKLE IS MOUNTED
TO THE TUNNEL.

TARGET WEIGHT (LBS) 4225 TOTAL, 2302 FRONT, 1923 REAR, REP MAX OPT WT.
DOES NOT INCLUDE LUGGAGE OR OCCUPANTS.

FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT.
300 LBS OF LUGGAGE BALLAST.
300 LBS OF BALLAST SECURED IN REAR SEAT AREA.

EDP TECHNICIAN S. A. HELQUIST

No. of Pages 86
CC

J. B. ESTES 514-17-41
M. T. STEBLETON 422-05-01

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC7044, ITEM NUMBER WJ9353, TEST ENGINEER COLLINGS

V.I.N. 1J4GZ68N8XC [REDACTED] TEST DATE 06/29/98, ROLL DATE 6/30/98

TEST TYPE; 30 MPH 30 DEGREE LEFT ANGULAR

FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 30.2 MPH, TEST WEIGHT 4900 POUNDS.

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 NA

NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE Left SIDE DOWN FIRST

FUEL LEAKAGE LOCATIONS DURING STATIC ROLL

ROLL TIME					TOTAL	
0-90	1ST 5 MIN				0	*
<u>1:27</u>	POST 5 MIN				0	**
90-180	1ST 5 MIN				0	*
<u>1:29</u>	POST 5 MIN				0	**
180-270	1ST 5 MIN				0	*
<u>1:26</u>	POST 5 MIN				0	**
270-360	1ST 5 MIN				0	*
<u>1:27</u>	POST 5 MIN				0	**

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS No fuel leaks.

DATE 06/22/98
 TIME 16.31.55.

ELECTRONIC DATA PROCESSING
 EDP TEST LETTER

VEHICLE CRASH ENGINEERING
 DEPT 5320

VC07029 ITEM WJ9355
 VC07029 30 MPH REAR BARRIER, WJ-J-74 ITEM WJ9355
 1999 FMVSS 301 REAR COMPLIANCE.
 TEST DATE 06/22/98

TEST PURPOSE PRIMARY, 1999 USA 301 COMPLIANCE.
 DETERMINE FUEL SYSTEM INTEGRITY.

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

VEHICLE BODY CLASS; WJ
 CAR LINE; J
 BODY; 74
 ENGINE; 4.7 LITRE
 ENGINE NOTE; ELECTRONIC FUEL INJECTION
 TRANSMISSION; 4 SPEED AUTO 4x4
 TRANS. NOTE;
 VIN AS TESTED; 1J4GZ68N4XC [REDACTED] MOD.
 VIN AS BUILT; 1J4GZ68N4XC [REDACTED] MOD.

TEST SPEED 30.3 MPH - TRAP

TEST WEIGHT (LBS) 4858 TOTAL, 2857 FRONT, 2001 REAR

OCCUPANTS LEFT FRONT, HYBRID II BALLAST AD-75
 RESTRAINT-BELTS ONLY.
 RIGHT FRONT, HYBRID II BALLAST AD-47
 RESTRAINT-BELTS ONLY.

BUILD CONDITION 1999 C1 LEVEL PROTOTYPE.
 REAR TIRE TUB MODIFIED WITH 'SAUSAGE' SHAPED
 E-COAT DRAIN HOLE FILLED WITH A STRUCTURAL PLUG
 BONDED WITH ADHESIVE TO FLOOR PAN.
 16 INCH REAR SPARE TIRE.
 1.5 MM THICK BRUSH GUARD
 NO TRAILER HITCH.
 FUEL TANK C1 LEVEL
 BARTHOLEMEW STYLE HOSE CONNECTIONS.
 'TROMBONE' FUEL LINES FROM SENDING UNIT TO FILTER
 REGULATOR. C1 LEVEL.

TARGET WEIGHT (LBS) 4225 TOTAL, 2302 FRONT, 1923 REAR, REP MAX OPT WT.
 DOES NOT INCLUDE LUGGAGE OR OCCUPANTS.

FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT.
 300 LBS
 200 LBS IN REAR SEAT AREA
 75 LBS ON PASSENGER SIDE FLOOR PAN

DATE 06/22/98
TIME 16.31.55.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC07029 ITEM WJ9355
VC07029 30 MPH REAR BARRIER, WJ-J-74 ITEM WJ9355
1999 FMVSS 301 REAR COMPLIANCE.
TEST DATE 06/22/98

EDP TECHNICIAN S. A. HELQUIST

No. of Pages 71
CC

J. B. ESTES 514-17-41
M. T. STEBLETON 422-05-01

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC7029, ITEM NUMBER WJ9355, TEST ENGINEER KOBYLARZ

V.I.N. 1J4GZ68N4XC [REDACTED] TEST DATE 6/22/98 ROLL DATE 6/24/98

TEST TYPE; 30 MPH REAR TYPE IV MOVING BARRIER IMPACT

FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 30-3 MPH, TEST WEIGHT 4858 POUNDS.

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 OK During test

[] NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE Left SIDE DOWN FIRST

ROLL TIME		FUEL LEAKAGE LOCATIONS DURING STATIC ROLL				TOTAL
0-90	1ST 5 MIN					0 *
1:28	POST 5 MIN					0 **
90-180	1ST 5 MIN					0 *
1:29	POST 5 MIN					0 **
180-270	1ST 5 MIN					0 *
1:25	POST 5 MIN					0 **
270-360	1ST 5 MIN					0 *
1:26	POST 5 MIN					0 **

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS No fuel leaks

Information

DAIMLERCHRYSLER

Report #:

Compliance Report

Subject: Fuel Loss Limitations and Static Rollover Test Procedures (For CMVSR or FMVSS 301)

Model Year: 2001

Procedure: CP-246G CP-245F CP-234I CP-233H CP-232F CP-194K

Standard: MVSS 301

Standard Title: Fuel System integrity

Requirements: Fluid Loss Limitation and Static Rollover Test Procedures to Determine Vehicle Fuel System Integrity

Vehicle Type: MPV

Family Codes: WJ

Approvals

Edward A Zylik
Department Manager



05/25/2000 03:44:16 PM
Approval Date

John H Broomall
Executive Engineer



05/25/2000 05:30:23 PM
Approval Date

Summary

DAIMLERCHRYSLER

Subject: Fuel Loss Limitations and Static Rollover Test Procedures (For CMVSR or FMVSS 301)

Objective: Verification of design Compliance with the Requirements of Federal Motor Vehicle Safety Standard MVSS 301, and Canada Motor Vehicle Safety Regulation CMVSR 301

Conclusion: Based on the testing conducted, the 2001 model year 'WJ' Body Jeep "Grand Cherokee" Sport Utility Vehicle, as design released and released, complies with the performance requirements of FMVSS 301 - Sections S3., S5., S6. and S7.

Safety Documentation Compliance Report

Prepared By: Richard A Terry

Date: 05/25/2000

Approved By: Edward A Zylk

Date: 05/25/2000

Issued By: 1060 - Impact Development (Jeep)

Discussion

DAIMLERCHRYSLER

The 2001 model year 'WJ' is essentially a carryover vehicle from the 2000 model year.

The following design features are incorporated for the 2001 model year:

Vehicle/Body:

- Left hand drive model.
- 4-door body style.
- 106 inch wheelbase and unibody construction.
- The front bumper system consists of a steel bumper crossmember faced with an energy absorbent foam and covered with a molded fascia.

Capacity:

- Five (5) person seating capacity - front bucket seats.
- 300 lbs. of luggage capacity.
- 20 gallon rear mounted plastic fuel tank with a filler neck located on the left side of the vehicle.
- A fuel tank stone shield is standard while a skid plate is optional.

Drivetrain:

- 4.0L (I6) or 4.7L (V8) multi-point injection (MPI) engines are offered.
- 4 wheel drive and 2 wheel drive systems are available.
- 4-speed automatic transmission.

Occupant Restraint/Interior Systems:

- A 3-point active seat belt with adjustable upper anchorage and a constant force retractor (CFR) is a primary restraint for the driver.
- A supplementary driver restraint airbag is contained in the four spoke steering wheel.
- A 3-point active seat belt with adjustable upper anchorage and a constant force retractor (CFR) is a primary restraint for the passenger.
- An airbag is provided as a supplementary restraint for the passenger.
- An electronic sensor is used to control the supplemental restraint airbag system.

All tests were conducted with two restrained dummies at driver and right front passenger location and with 300 lbs. of luggage ballast.

Twelve (12) vehicles were tested to demonstrate compliance of the 'WJ' to the requirements of FMVSS 301, Fuel System Integrity. These vehicles and test results are shown on the attached summary. The test reports are located in the attached file.

CONCLUSION:

Based on the testing conducted, the 2001 model year 'WJ' Body Jeep "Grand Cherokee" Sport Utility Vehicle, as design released and released, complies with the performance requirements of FMVSS 301 - Sections S3., S5., S6. and S7.

Appendix

DAIMLERCHRYSLER

**SUMMARY
FUEL SYSTEM INTEGRITY
2001 MODEL YEAR 'WJ' BODY JEEP "GRAND CHEROKEE"**

Test Mode Vehicle Crash Number and date tested Description of Vehicle Vehicle Identification Number	At Impact	Leakage in the following 30 minutes	Leakage in the rollover fixture	Total Leakage
Flat Frontal VC7022 tested 6/19/98 4.0 Litre, 4x4, auto, C1 1J4GZ68NXXC [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Flat Frontal VC7023 tested 6/19/98 4.7 Litre, 4x4, auto, C1 1J4GZ58S2XC [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Flat Frontal VC7572 tested 6/26/99 4.7 Litre, 4x2, auto, C1 1J4G248XYC [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Right Angular VC7050 tested 7/03/98 4.0 Litre, 4x4, auto, STO 1J4GW58S6XC [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Left Angular VC7044 tested 6/29/98 4.7 Litre, 4x4, auto, C1 1J4GZ58N8XC [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Rear VC8324 tested 3/29/2000 4.0 Litre, 4x4, auto 1J4GW48S1** [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Rear VC8327 tested 3/20/2000 4.7 Litre, 4x4, auto 1J4G258S6** [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Rear VC8393 tested 4/7/2000 4.0 Litre, 4x4, auto 1J4GW48S1** [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Right Lateral VC8325 tested 3/29/2000 4.0 Litre, 4x4, auto 1J4GW48N4** [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Right Lateral VC8326 tested 3/30/2000 4.0 Litre, 4x4, auto 1J4GW48S2** [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Right Lateral VC8338 tested 4/4/2000 4.0 Litre, 4x4, auto 1J4GW48N4** [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Left Lateral VC8339 tested 4/11/2000 4.0 Litre, 4x4, auto 1J4GW48N4** [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.

VC8326 tested 3/30/2000 4.0 Litre, 4x4, auto 1J4GW48S2** [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz. Page 6
Right Lateral VC8338 tested 4/4/2000 4.0 Litre, 4x4, auto 1J4GW48N4** [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Left Lateral VC8339 tested 4/01/2000 4.0 Litre, 4x2, auto 1J4GW48S2** [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.

Allowable Leakage by Weight:

1. One Oz. at impact.
2. Not more than one Oz. per minute in the following thirty minutes.
3. Five Oz. for the first five minutes after each 90 degree rotation and not more than one Oz. per minute thereafter.

Information

DAIMLERCHRYSLER

Report #:

Compliance Report

Subject: Fuel Loss Limitations and Static Rollover Test Procedures (For CMVSR or FMVSS 301)

Model Year: 2002

Procedure: CP-246G CP-245F CP-234I CP-233H CP-232F CP-194K

Standard: MVSS 301

Standard Title: Fuel System integrity

Requirements: Fluid Loss Limitation and Static Rollover Test Procedures to Determine Vehicle Fuel System Integrity

Vehicle Type: MPV

Family Codes: WJ

Approvals

Edward A Zylik
Responsible Executive



(
A)

John H Broomall
Approving Executive



(
A)

Summary

DAIMLERCHRYSLER

Subject: Fuel Loss Limitations and Static Rollover Test Procedures (For CMVSR or FMVSS 301)

Objective: Verification of design Compliance with the Requirements of Federal Motor Vehicle Safety Standard MVSS 301, and Canada Motor Vehicle Safety Regulation CMVSR 301

Conclusion: The 2002 model year 'WJ' body, Jeep "Grand Cherokee" Sport Utility Vehicle, as design released, complies with the requirements of FMVSS 301 S3, S5, S6, and S7

Safety Documentation Compliance Report

Prepared By: Richard A Terry

Date: 06/20/2001

Approved By: Edward A Zylk

Date: 06/20/2001

Issued By: 1060 - Impact Development (Jeep)

Discussion

DAIMLERCHRYSLER

The 2002 model year 'WJ' is essentially a carryover vehicle from the 2001 model year in terms of fuel system integrity.

The following design features are incorporated for the 2002 model year:

Vehicle/Body:

- Left hand drive model.
- 4-door body style.
- 2691.0 mm (105.9 in) wheel base and unibody construction
- The front bumper system consists of a steel bumper crossmember faced with an energy absorbent foam and covered with a molded fascia.
- Trailer tow hitch is available.

Capacity:

- Five (5) person seating capacity - front bucket seats.
- 113.4 kg (250 lb) of luggage capacity.
- 75.7 L (20 gal.) rear mounted fuel tank with a filler neck is located on the left side of the vehicle.

Drivetrain:

- 4.0L (I6) or 4.7L (V8) multi-point injection (MPI) engines are offered.
- 4 wheel drive and 2 wheel drive systems are available.
- Automatic transmission is standard.

Fuel System:

- A fuel tank brush guard is standard (1.0 mm sheetmetal thickness).
- A fuel tank skid plate is available (3.0 mm sheetmetal thickness).
- The fuel tank system contains "On Board Refueling Vapour Recovery"
- The fuel tank assembly is mounted on the sides with bolts to the body and in the front and rear with a transverse strap at each location.

Occupant Restraint/Interior Systems:

- A 3-point active seat belt with adjustable upper anchorage and a constant force retractor (CFR) is the primary for the driver.
- A 3-point active seat belt with adjustable upper anchorage and a constant force retractor (CFR) is the primary for the right front passenger.
- A "Next-generation, Multistage Airbag" is provided as a supplementary restraint for the driver.
- A "Next-generation, Multistage Airbag" is provided as a supplementary restraint for the right front passenger.
- A dual chamber side airbag inflatable curtain is offered.

Seven (7) vehicles were tested to confirm compliance of the "WJ" to the performance requirements of FMVSS 301 S3, S5, S6, and S7. Summaries of the vehicles and the test results are attached.

The vehicle used for the rear impact test (VC09183) had the fuel tank skid plate installed and did not have a trailer hitch. The trailer hitch, fuel tank skid plate, and fuel tank stone shield do not affect fuel system integrity requirements in the frontal, angular, lateral, impact test modes. Trailer hitch, fuel tank skid plate, and fuel tank stone shield perform similarly in the rear impact test mode.

Conclusion:

Based on the testing conducted, the 2002 model year 'WJ' body, Jeep "Grand Cherokee" Sport Utility Vehicle, as design released, complies with the requirements of FMVSS 301 S3, S5, S6, and S7 as demonstrated in the attached summary.

Appendix

DAIMLERCHRYSLER

Summary
FMVSS 301 " Fuel System Integrity
2002 Model Year 'WJ' Body Jeep "Grand Cherokee"

Test Mode Test Number, Test Date Description of vehicle VIN	Leakage At Impact (Oz)	Leakage In The Follow ing 30 Minutes (Oz)	Leakage In The Rollover Fixture (Oz)	Total Leakage (Oz)
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Frontal VC09185 06/08/2001 4.0L, 4x2, Automatic, S1 1J4GX48S42C [REDACTED]	Zero	Zero	Zero	Zero
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Frontal VC09192, 06/11/2001 4.7, 4x4, Automatic, S1 1J4GW58SX2C [REDACTED]	Zero	Zero	Zero	Zero
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Right 30 degree VC09193, 06/12/2001 4.7L, 4x2, Automatic, S1 1J8GW48N52C [REDACTED]	Zero	Zero	Zero	Zero
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Left 30 degree VC09226, 06/13/2001 4.0L, 4x4, Automatic, S1 1J8GW48S02C [REDACTED]	Zero	Zero	Zero	Zero
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Right Lateral VC09194, 05/18/2001 4.7, 4x4, Automatic, S1 1J4GW58S62C [REDACTED]	Zero	Zero	Zero	Zero
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Left Lateral VC09186, 05/16/2001 4.0L, 4x4, Automatic, S1 1J8GW48S52C [REDACTED]	Zero	Zero	Zero	Zero
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Rear VC09183, 05/16/2001 4.7L, 4x4, Automatic, S1 1J8GW58N12C [REDACTED]	Zero	Zero	Zero	Zero
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Attached are electronic copies of the test reports.



301.pdf

DATE 06/11/01 ELECTRONIC DATA PROCESSING VEHICLE CRASH ENGINEERING
TIME 12:52:19. EDP TEST LETTER DEPT 5320

VC09185 ITEM WJ7388
VC09185 30 MPH FRONT FLAT FIXED, 2002 WJ ITEM WJ7388
2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLAINEE.
TEST DATE 06/08/01
TEST SITE CPG

TEST PURPOSE PRIMARY, 2002 USA 208 COMPLIANCE.
DETERMINE OCCUPANT CRASH PROTECTION.

SECONDARY, 2002 USA 212 COMPLIANCE.
DETERMINE WINDSHIELD MOUNTING.

SECONDARY, 2002 USA 219 COMPLIANCE.
DETERMINE WINDSHIELD ZONE INTRUSION.

SECONDARY, 2002 USA 301 COMPLIANCE.
DETERMINE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED; 30.1 MPH
DAMAGE LOCATION; FRONT (FULL)
BARRIER TYPE; FLAT FIXED
BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; WJ
CAR LINE; T
BODY; 74
ENGINE; 4.0 LITRE
ENGINE NOTE; ELECTRONIC FUEL INJECTION
TRANSMISSION; 4 SPEED AUTO
TRANS. NOTE;
VIN AS TESTED; 1J4GX48S42C [REDACTED] MOD.
VIN AS BUILT; 1J4GX48S42C [REDACTED] MOD.

TEST SPEED 30.3 MPH - TRAP TIMER

TEST WEIGHT (LBS) 4411 TOTAL, 2226 FRONT, 2185 REAR

OCCUPANTS LEFT FRONT, 50% HYBRID III, 9 CH CERT. AD-93
RESTRAINT-SEAT BELT AND AIR BAG
RIGHT FRONT, 50% HYBRID III, 9 CH CERT. AD-105
RESTRAINT-SEAT BELT AND AIR BAG

DATE 06/11/01
TIME 12:52:19.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC09185 ITEM WJ7388
VC09185 30 MPH FRONT FLAT FIXED, 2002 WJ ITEM WJ7388
2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLAINEE.
TEST DATE 06/08/01
TEST SITE CPG

BUILD CONDITION 2002 WJ S1 BUILD
TRIM CODE = WJTH74
FLEET NUMBER = C2WJT7388
THIS VEHICLE WAS TESTED WITH THE FOLLOWING:
- DESIGN INTENT DRIVER AIR BAG.
- DESIGN INTENT PASSENGER AIR BAG.
- STEERING COLUMN WITH UPDATED TILT RELEASE SPRINGS.
- DRIVER SEAT BELT = 5 KN CFR WITH BREED BUCKLE
- PASS SEAT BELT = 5 KN CFR WITH BREED BUCKLE
- OCCUPANT RESTRAINT CONTROLER (ORC)
- RIGHT AND LEFT FRONT CRUSH ZONE SENSORS.
- RIGHT AND LEFT SIDE IMPACT SENSORS.
- 02 DESIGN INTENT FUEL SYSTEM.
- HYDRAULIC COOLING MODULE REMOVED FOR TEST.
REPLACED WITH 2000 VISCOUS AND ELECTRIC FANS.
SIMILAR TO 2002 DESIGN INTENT.

TARGET WEIGHT (LBS) 3826 TOTAL, 2082 FRONT, 1744 REAR. REPRESENTS
33% OPTIONS WEIGHT FOR 2002 WJ 4.0 L WJT74.
DOES NOT INCLUDE LUGGAGE OR OCCUPANT WEIGHT.
TEST WEIGHT = 4406 LBS (4406 = 3826 + 250 + 330)

FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT
250 LBS
150 LBS ON BALLAST RACK

EDP TECHNICIAN S. MARCHENIA

No. of Pages 149
CC

M. T. STEBLETON 422-05-01
R. A. TERRY 514-17-39

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC9185, ITEM NUMBER WJ7388, TEST ENGINEER MANNEY

V.I.N. 1J4GX48A42C [REDACTED] TEST DATE 6/8/01, ROLL DATE 6/14/01

TEST TYPE; 30 MPH FRONT FLAT FIXED BARRIER IMPACT

FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 30.7 MPH, TEST WEIGHT 4411 POUNDS.

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

NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE LEFT SIDE DOWN FIRST

FUEL LEAKAGE LOCATIONS DURING STATIC ROLL

ROLL TIME						TOTAL
0-90	1ST 5 MIN					0 *
<u>1:55</u>	POST 5 MIN					0 **
90-180	1ST 5 MIN					0 *
<u>1:57</u>	POST 5 MIN					0 **
180-270	1ST 5 MIN					0 *
<u>2:00</u>	POST 5 MIN					0 **
270-360	1ST 5 MIN					0 *
<u>1:59</u>	POST 5 MIN					0 **

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS _____

DATE 06/11/01
TIME 15:18:37.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC09192 ITEM WJ7385
VC09192 30 MPH FRONT FLAT FIXED, 2002 WJ ITEM WJ7385
2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLAINEE.
TEST DATE 06/11/01
TEST SITE CPG

TEST PURPOSE PRIMARY, 2002 USA 208 COMPLIANCE.
DETERMINE OCCUPANT CRASH PROTECTION.

SECONDARY, 2002 USA 212 COMPLIANCE.
DETERMINE WINDSHIELD MOUNTING

SECONDARY, 2002 USA 219 COMPLIANCE.
DETERMINE WINDSHIELD ZONE INTRUSION

SECONDARY, 2002 USA 301 COMPLIANCE.
DETERMINE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED; 30.1 MPH
DAMAGE LOCATION; FRONT (FULL)
BARRIER TYPE; FLAT FIXED
BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; WJ
CAR LINE; J
BODY; 74
ENGINE; 4.7 LITRE
ENGINE NOTE; ELECTRONIC FUEL INJECTION
TRANSMISSION; 4 SPEED AUTO
TRANS. NOTE;
VIN AS TESTED; 1J4GW58SX2C [REDACTED] MOD.
VIN AS BUILT; 1J4GW58SX2C [REDACTED] MOD.

TEST SPEED 30.2 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS) 4833 TOTAL, 2500 FRONT, 2333 REAR

OCCUPANTS LEFT FRONT, 50% HYBRID III, 9 CH CERT. AD-90
RESTRAINT-SEAT BELT AND AIR BAG
RIGHT FRONT, 50% HYBRID III, 9 CH CERT. AD-95
RESTRAINT-SEAT BELT AND AIR BAG

DATE 06/11/01
TIME 15:18:37.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC09192 ITEM WJ7385
VC09192 30 MPH FRONT FLAT FIXED, 2002 WJ ITEM WJ7385
2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLAINEE.
TEST DATE 06/11/01
TEST SITE CPG
BUILD CONDITION

2002 WJ S1 BUILD
TRIM CODE = WJJP74
FLEET NUMBER = C2WJJ7385
THIS VEHICLE WAS TESTED WITH THE FOLLOWING:
- DESIGN INTENT DRIVER AIR BAG.
- DESIGN INTENT PASSENGER AIR BAG.
- DRIVER SEAT BELT = 5 KN CFR WITH BREED BUCKLE
- PASS SEAT BELT = 5 KN CFR WITH BREED BUCKLE
- OCCUPANT RESTRAINT CONTROLER (ORC)
- RIGHT AND LEFT FRONT CRUSH ZONE SENSORS.
- RIGHT AND LEFT SIDE IMPACT SENSORS.
- 02 DESIGN INTENT FUEL SYSTEM.

TARGET WEIGHT (LBS) 4252 TOTAL, 2342 FRONT, 1910 REAR. REPRESENTS
33% OPTIONS WEIGHT FOR 2002 WJ 4.7L WJJP74
DOES NOT INCLUDE LUGGAGE OR OCCUPANT WEIGHT.
TEST WEIGHT = 4832 LBS (4832 = 4252 + 250 + 330)

FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT
250 LBS
300 LBS SECURED TO RACK IN SECOND SEAT AREA.

EDP TECHNICIAN S. MARCHENIA

No. of Pages 139
CC

M. T. STEBLETON 422-05-01
R. A. TERRY 514-17-39

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC9192, ITEM NUMBER WJ7385 TEST ENGINEER MANNEY

V.I.N. 1J4GW58SX2C [REDACTED], TEST DATE 6/11/01, ROLL DATE 6/14/01

TEST TYPE; 30 MPH FRONT FLAT FIXED BARRIER

FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 30.8 MPH, TEST WEIGHT 4833 POUNDS.

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

NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE LEFT SIDE DOWN FIRST

FUEL LEAKAGE LOCATIONS DURING STATIC ROLL

ROLL TIME					TOTAL	
0-90	1ST 5 MIN				0	*
<u>1:53</u>	POST 5 MIN				0	**
90-180	1ST 5 MIN				0	*
<u>1:46</u>	POST 5 MIN				0	**
180-270	1ST 5 MIN				0	*
<u>1:46</u>	POST 5 MIN				0	**
270-360	1ST 5 MIN				0	*
<u>1:47</u>	POST 5 MIN				0	**

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS _____

DATE 06/12/01 ELECTRONIC DATA PROCESSING VEHICLE CRASH ENGINEERING
 TIME 16:15:15. EDP TEST LETTER DEPT 5320

VC09193 ITEM WJ7316
 VC09193 30 MPH 30 DEGREE RIGHT ANGULAR, 2002 WJ ITEM WJ7316
 2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLAINEE.
 TEST DATE 06/12/01
 TEST SITE CPG

TEST PURPOSE PRIMARY, 2002 USA 208 COMPLIANCE.
 DETERMINE OCCUPANT CRASH PROTECTION.

SECONDARY, 2002 USA 301 COMPLIANCE.
 DETERMINE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED; 30.1 MPH
 DAMAGE LOCATION; FRONT RIGHT
 BARRIER TYPE; FLAT FIXED
 BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; WJ
 CAR LINE; J
 BODY; 74
 ENGINE; 4.7 LITRE
 ENGINE NOTE; ELECTRONIC FUEL INJECTION
 TRANSMISSION; 4 SPEED AUTO
 TRANS. NOTE;
 VIN AS TESTED; 1J8GW48N52C [REDACTED] MOD.
 VIN AS BUILT; 1J8GW48N52C [REDACTED] MOD.

TEST SPEED 30.4 MPH -TRAP TIMER

TEST WEIGHT (LBS) 4834 TOTAL, 2545 FRONT, 2289 REAR

OCCUPANTS LEFT FRONT, 50% HYBRID III, 9 CH CERT. AD-92
 RESTRAINT-SEAT BELT AND AIR BAG
 RIGHT FRONT, 50% HYBRID III, 9 CH CERT. AD-140
 RESTRAINT-SEAT BELT AND AIR BAG

BUILD CONDITION 2002 WJ S1 BUILD
 TRIM CODE = WJJH74
 BODY MODEL = C2WJJ7316
 THIS VEHICLE WAS TESTED WITH THE FOLLOWING:
 - DESIGN INTENT DRIVER AIR BAG.
 - DESIGN INTENT PASSENGER AIR BAG.
 - DRIVER SEAT BELT = 5 KN CFR WITH BREED BUCKLE
 - PASS SEAT BELT = 5 KN CFR WITH BREED BUCKLE
 - OCCUPANT RESTRAINT CONTROLER (ORC)
 - RIGHT AND LEFT FRONT CRUSH ZONE SENSORS.
 - RIGHT AND LEFT SIDE IMPACT SENSORS.
 - 02 DESIGN INTENT FUEL SYSTEM.

DATE 06/12/01
TIME 16:15:15.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC09193 ITEM WJ7316

VC09193 30 MPH 30 DEGREE RIGHT ANGULAR, 2002 WJ ITEM WJ7316

2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLAINT.

TEST DATE 06/12/01

TEST SITE CPG

TARGET WEIGHT (LBS) 4247 TOTAL, 2337 FRONT, 1910 REAR. REPRESENTS
33% OPTIONS WEIGHT FOR 2002 WJ 4.7L WJH74.
DOES NOT INCLUDE LUGGAGE OR OCCUPANT WEIGHT.
TEST WEIGHT = 4827 LBS (4827 = 4247 + 330 + 250)

FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT
250 LBS
200 LBS ON BALLAST RACK

EDP TECHNICIAN S. MARCHENIA

No. of Pages 85
CC

M. T. STEBLETON 422-05-01
R. A. TERRY 514-17-39

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC9193, ITEM NUMBER WJ7316, TEST ENGINEER SMITH

V.I.N. 1J8GW48N52C [REDACTED] TEST DATE 6/21/01, ROLL DATE / /

TEST TYPE; 30 MPH FRONT RIGHT 30 DEGREE BARRIER IMPACT

FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 30.4 MPH, TEST WEIGHT 4834 POUNDS.

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

NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE _____ SIDE DOWN FIRST

FUEL LEAKAGE LOCATIONS DURING STATIC ROLL

ROLL TIME					TOTAL
0-90	1ST 5 MIN				0 *
2:00	POST 5 MIN				0 **
90-180	1ST 5 MIN				0 *
1:54	POST 5 MIN				0 **
180-270	1ST 5 MIN				0 *
1:48	POST 5 MIN				0 **
270-360	1ST 5 MIN				0 *
1:47	POST 5 MIN				0 **

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS _____

LAST FORM MODIFICATION 08/22/96 - GAB (TESTOBS896,DOCVCFORMS)

DATE 06/14/01 ELECTRONIC DATA PROCESSING VEHICLE CRASH ENGINEERING
TIME 10:43:56. EDP TEST LETTER DEPT 5320

VC09226 ITEM WJ7593
VC09226 30 MPH LEFT 30 DEGREE ANGULAR, 2002 WJ ITEM WJ7593
2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLIANCE.
TEST DATE 06/13/01
TEST SITE CPG

TEST PURPOSE PRIMARY, 2002 USA 208 COMPLIANCE.
DETERMINE OCCUPANT CRASH PROTECTION.

SECONDARY, 2002 USA 301 COMPLIANCE.
DETERMINE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED; 30.1 MPH
DAMAGE LOCATION; FRONT LEFT
BARRIER TYPE; LEFT 30 DEG
BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; WJ
CAR LINE; J
BODY; 74
ENGINE; 4.0 LITRE
ENGINE NOTE; ELECTRONIC FUEL INJECTION
TRANSMISSION; 4 SPEED AUTO
TRANS. NOTE;
VIN AS TESTED; 1J8GW48S02C [REDACTED] MOD.
VIN AS BUILT; 1J8GW48S02C [REDACTED] MOD.

TEST SPEED 30.2 MPH SOURCE TRAP TIMER

TEST WEIGHT (LBS) 4708 TOTAL, 2449 FRONT, 2259 REAR

OCCUPANTS LEFT FRONT, 50% HYBRID III, 9 CH CERT. AD-104
RESTRAINT-SEAT BELT AND AIR BAG
RIGHT FRONT, 50% HYBRID III, 9 CH CERT. AD-139
RESTRAINT-SEAT BELT AND AIR BAG

DATE 06/14/01
TIME 10:43:56.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC09226 ITEM WJ7593
VC09226 30 MPH LEFT 30 DEGREE ANGULAR, 2002 WJ ITEM WJ7593
2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLIANCE.
TEST DATE 06/13/01
TEST SITE CPG
BUILD CONDITION 2002 WJ S1 BUILD

BODY CODE = WJJP74
FLEET NUMBER = C2WJJ7593
THIS VEHICLE WAS TESTED WITH THE FOLLOWING:
- DESIGN INTENT DRIVER AIR BAG.
- DESIGN INTENT PASSENGER AIR BAG.
- '00 PRODUCTION STEERING COLUMN WITH 14 DEG
RACK AND PAWL TILT MECHANISM.
- DRIVER SEAT BELT = 5 KN CFR WITH BREED BUCKLE
- PASS SEAT BELT = 5 KN CFR WITH BREED BUCKLE
- OCCUPANT RESTRAINT CONTROLER (ORC)
- RIGHT AND LEFT FRONT CRUSH ZONE SENSORS.
- RIGHT AND LEFT SIDE IMPACT SENSORS.
- 02 DESIGN INTENT FUEL SYSTEM.
- HYDRAULIC COOLING MODULE REMOVED FOR TEST.
REPLACED WITH 2000 VISCOUS AND ELECTRIC FANS.
SIMILAR TO 2002 DESIGN INTENT.

TARGET WEIGHT (LBS) 4128 TOTAL, 2272 FRONT, 1856 REAR. REPRESENTS
33% OPTIONS WEIGHT FOR 2002 WJ 4.0 L WJJP74
DOES NOT INCLUDE LUGGAGE OR OCCUPANT WEIGHT.
TEST WEIGHT = 4708 LBS (4708 = 4128 + 250 + 330)

FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT
100 LBS. SECURED IN REAR SEAT AREA

EDP TECHNICIAN S. MARCHENIA

No. of Pages 97
CC

M. T. STEBLETON 422-05-01
R. A. TERRY 514-17-39

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC9226, ITEM NUMBER WJ7593, TEST ENGINEER MANNEY

V.I.N. 1J8GW48S02C [REDACTED], TEST DATE 6/13/01, ROLL DATE 6/14/01

TEST TYPE; 30 MPH 30 DEGREE LEFT ANGULAR IMPACT

FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 30.2 MPH, TEST WEIGHT 4708 POUNDS.

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

NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE LEFT SIDE DOWN FIRST

FUEL LEAKAGE LOCATIONS DURING STATIC ROLL

ROLL TIME					TOTAL
0-90	1ST 5 MIN				<u>0</u> *
<u>1:47</u>	POST 5 MIN				<u>0</u> **
90-180	1ST 5 MIN				<u>0</u> *
<u>1:49</u>	POST 5 MIN				<u>0</u> **
180-270	1ST 5 MIN				<u>0</u> *
<u>1:47</u>	POST 5 MIN				<u>0</u> **
270-360	1ST 5 MIN				<u>0</u> *
<u>1:44</u>	POST 5 MIN				<u>0</u> **

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS _____

DATE 05/18/01 ELECTRONIC DATA PROCESSING VEHICLE CRASH ENGINEERING
 TIME 12:22:10. EDP TEST LETTER DEPT 5320

VC09194 ITEM WJ7323
 VC09194 20 MPH RIGHT LATERAL FMVSS 301, 2002 WJ ITEM WJ7323
 2002 FUEL SYSTEMS INTEGRITY COMPLIANCE.
 TEST DATE 05/18/01
 TEST SITE CPG

TEST PURPOSE PRIMARY, 2002 USA 301 COMPLIANCE.
 DETERMINE FUEL SYSTEM INTEGRITY

IMPACT TYPE TARGET SPEED; 20.1 MPH
 DAMAGE LOCATION; RIGHT SIDE (FULL)
 BARRIER TYPE; RIGHT TYPE IV
 BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; WJ
 CAR LINE; J
 BODY; 74
 ENGINE; 4.7 LITRE
 ENGINE NOTE; ELECTRONIC FUEL INJECTION
 TRANSMISSION; 4 SPEED AUTO 4x4
 TRANS. NOTE;
 VIN AS TESTED; 1J8GW58S62C [REDACTED] MOD.
 VIN AS BUILT; 1J8GW58S62C [REDACTED] MOD.

TEST SPEED 20.2 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS) 4841 TOTAL, 2683 FRONT, 2158 REAR

OCCUPANTS LEFT FRONT - 50% HYBRID II, BALLAST AD-59
 RESTRAINT-SEAT BELT ONLY.
 RIGHT FRONT - 50 % HYBRID II, BALLAST AD-50
 RESTRAINT-SEAT BELT ONLY.

BUILD CONDITION 2002 S1 BUILD
 FLEET NUMBER = C2WJJ7323
 BODY CODE = WJJP74
 THE VEHICLE IS TESTED WITH THE FOLLOWING:
 - 2002 FUEL SYSTEM
 - 2002 ORC

TARGET WEIGHT (LBS) 4252 TOTAL, 2342 FRONT, 1910 REAR. REPRESENTS
 33% OPTION WEIGHT FOR 2002 WJ 4.7L WJJP74.
 DOES NOT INCLUDE LUGGAGE OR OCCUPANT WEIGHT.
 TEST WEIGHT = 4832 LBS (4832 = 4252 + 250 + 330)

FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT
 250 LBS
 150 LBS ON LF FLOOR.
 150 LBS ON RF FLOOR.

DATE 05/18/01
TIME 12:22:10.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC09194 ITEM WJ7323
VC09194 20 MPH RIGHT LATERAL FMVSS 301, 2002 WJ ITEM WJ7323
2002 FUEL SYSTEMS INTEGRITY COMPLIANCE.
TEST DATE 05/18/01
TEST SITE CPG
EDP TECHNICIAN S. MARCHENIA

No. of Pages 25
CC

M. T. STEBLETON 422-05-01
R. A. TERRY 514-17-41

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC9194, ITEM NUMBER WJ7323, TEST ENGINEER KOBYLARZ

V.I.N. 1J8GW58S62C [REDACTED], TEST DATE 5/18/11, ROLL DATE 6/5/21/01

TEST TYPE; 20 MPH RT LATERAL BARRIER IMPACT

FUEL; TYPE AND QUANTITY - 767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 20.2 MPH, TEST WEIGHT 4811 POUNDS.

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

[] NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE left SIDE DOWN FIRST

FUEL LEAKAGE LOCATIONS DURING STATIC ROLL

ROLL TIME					TOTAL	
0-90	1ST 5 MIN				0	*
2:02	POST 5 MIN				0	**
90-180	1ST 5 MIN				0	*
1:59	POST 5 MIN				0	**
180-270	1ST 5 MIN				0	*
2:00	POST 5 MIN				0	**
270-360	1ST 5 MIN				0	*
2:03	POST 5 MIN				0	**

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS No fuel leaks

LAST FORM MODIFICATION 08/22/96 - GAB (TESTOBS896, DOCVCFORMS)

DATE 05/16/01 ELECTRONIC DATA PROCESSING VEHICLE CRASH ENGINEERING
 TIME 13:57:13. EDP TEST LETTER DEPT 5320

VC09186 ITEM WJ7383
 VC09186 20 MPH LEFT LATERAL FMVSS 301, 2002 WJ ITEM WJ7383
 2002 FUEL SYSTEMS INTEGRITY COMPLIANCE.
 TEST DATE 05/16/01
 TEST SITE CPG

TEST PURPOSE PRIMARY, 2002 USA 301 COMPLIANCE.
 DETERMINE FUEL SYSTEM INTEGRITY

IMPACT TYPE TARGET SPEED; 20.1 MPH
 DAMAGE LOCATION; LEFT SIDE (FULL)
 BARRIER TYPE; LEFT TYPE IV
 BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; WJ
 CAR LINE; J
 BODY; 74
 ENGINE; 4.0 LITRE
 ENGINE NOTE; ELECTRONIC FUEL INJECTION
 TRANSMISSION; 4 SPEED AUTO 4x4
 TRANS. NOTE;
 VIN AS TESTED; 1J8GW48S52C [REDACTED] MOD.
 VIN AS BUILT; 1J8GW48S52C [REDACTED] MOD.

TEST SPEED 20.1 MPH BY TRAP TIMER

TEST WEIGHT (LBS) 4627 TOTAL, 2457 FRONT, 2170 REAR

OCCUPANTS LEFT FRONT - 50% HYBRID II, BALLAST AD-59
 RESTRAINT-SEAT BELT ONLY.
 RIGHT FRONT - 50 % HYBRID II, BALLAST AD-50
 RESTRAINT-SEAT BELT ONLY.

BUILD CONDITION 2002 S1 BUILD
 FLEET NUMBER = C2WJJ7383
 BODY CODE = WJJH74
 THE VEHICLE IS TESTED WITH THE FOLLOWING:
 - 2002 FUEL SYSTEM
 - 2002 ORC

TARGET WEIGHT (LBS) 4049 TOTAL, 2240 FRONT, 1809 REAR. REPRESENTS
 33% OPTION WEIGHT FOR 2002 WJ 4.0L WJJH74.
 DOES NOT INCLUDE LUGGAGE OR OCCUPANT WEIGHT.
 TEST WEIGHT = 4629 LBS (4629 = 4049 + 250 + 330)

FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT
 250 LBS
 200 LBS SECURED IN LF & RF FLOORPAN

DATE 05/16/01
TIME 13:57:13.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC09186 ITEM WJ7383
VC09186 20 MPH LEFT LATERAL FMVSS 301, 2002 WJ ITEM WJ7383
2002 FUEL SYSTEMS INTEGRITY COMPLIANCE.
TEST DATE 05/16/01
TEST SITE CPG
EDP TECHNICIAN S. MARCHENIA

No. of Pages 25
CC

M. T. STEBLETON 422-05-01
R. A. TERRY 514-17-41

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC9186, ITEM NUMBER WJ7383, TEST ENGINEER SMITH

V.I.N. 1J8GW48S52C [REDACTED] TEST DATE 5/16/01, ROLL DATE 5/16/01

TEST TYPE; 20 MPH LT LATERAL BARRIER IMPACT

FUEL; TYPE AND QUANTITY - 767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 20.1 MPH, TEST WEIGHT 4627 POUNDS.

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

NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE _____ SIDE DOWN FIRST

FUEL LEAKAGE LOCATIONS DURING STATIC ROLL

ROLL TIME					TOTAL	
0-90	1ST 5 MIN					*
<u>1:51</u>	POST 5 MIN					**
90-180	1ST 5 MIN					*
<u>1:55</u>	POST 5 MIN					**
180-270	1ST 5 MIN					*
<u>2:00</u>	POST 5 MIN					**
270-360	1ST 5 MIN					*
<u>1:59</u>	POST 5 MIN					**

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS _____

LAST FORM MODIF _____

Post-it* Fax Note	7671	Date	<u>5-17-01</u>	# of pages	<u>1</u>
To	<u>Rich Terry</u>	From	<u>J Smith</u>		
Co./Dept.	<u>JTE</u>	Co.			
Phone #		Phone #	<u>836 5156</u>		
Fax #		Fax #			

VCFORMS)

DATE 05/17/01 ELECTRONIC DATA PROCESSING VEHICLE CRASH ENGINEERING
 TIME 10:53:43. EDP TEST LETTER DEPT 5320

VC09183 ITEM WJ7279
 VC09183 30 MPH REAR IMPACT, 2002 WJ COMPLIANCE ITEM WJ7279
 2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLIANCE.
 TEST DATE 05/16/01
 TEST SITE CPG

TEST PURPOSE PRIMARY, 2002 USA 301 COMPLIANCE.
 DETERMINE FUEL SYSTEM INTEGRITY

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

VEHICLE BODY CLASS; WJ
 CAR LINE; J
 BODY; 74
 ENGINE; 4.7 LITRE
 ENGINE NOTE; ELECTRONIC FUEL INJECTION
 TRANSMISSION; 4 SPEED AUTO
 TRANS. NOTE;
 VIN AS TESTED; 1J8GW58N12C [REDACTED] MOD.
 VIN AS BUILT; 1J8GW58N12C [REDACTED] MOD.

TEST SPEED 30.3 MPH BY TRAP TIMER

TEST WEIGHT (LBS) 4833 TOTAL, 2719 FRONT, 2114 REAR

OCCUPANTS LEFT FRONT, 50% HYBRID II BALLAST AD-60
 RESTRAINT-SEAT BELT.
 RIGHT FRONT, 50% HYBRID II BALLAST AD-47
 RESTRAINT-SEAT BELT

BUILD CONDITION 2002 WJ S1 BUILD
 BODY MODEL = WJJP74
 FLEET NUMBER = C2WJJ7279
 THIS VEHICLE WAS TESTED WITH THE FOLLOWING:
 - OCCUPANT RESTRAINT CONTROLLER (ORC)
 - 02 DESIGN INTENT FUEL SYSTEM.

TARGET WEIGHT (LBS) 4252 TOTAL, 2348 FRONT, 1904 REAR. REPRESENTS
 33% OPTIONS WEIGHT FOR 2002 WJ 4.7L WJJP74.
 DOES NOT INCLUDE LUGGAGE OR OCCUPANT BALLAST.
 APPROX TEST WEIGHT = 4832 LBS (4832=2452+250+330)

FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT
 250 LBS
 100 LBS RF
 75 LBS LF

DATE 05/17/01
TIME 10:53:43.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC09183 ITEM WJ7279
VC09183 30 MPH REAR IMPACT, 2002 WJ COMPLIANCE ITEM WJ7279
2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLAINCE.
TEST DATE 05/16/01
TEST SITE CPG
EDP TECHNICIAN S. MARCHENIA

No. of Pages 29
CC

M. T. STEBLETON 422-05-01
R. A. TERRY 514-17-39

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC9183, ITEM NUMBER WJ7279, TEST ENGINEER SMITH

V.I.N. 1J8GW58N12C [REDACTED] TEST DATE 5/16/01 ROLL DATE 5/17/01

TEST TYPE; 30 MPH TYPE IV MOVING BARRIER REAR IMPACT

FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 30.3 MPH, TEST WEIGHT 4833 POUNDS.

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

NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE _____ SIDE DOWN FIRST

		FUEL LEAKAGE LOCATIONS DURING STATIC ROLL				TOTAL
ROLL TIME						
0-90	1ST 5 MIN					0 *
<u>1:45</u>	POST 5 MIN					0 **
90-180	1ST 5 MIN					0 *
<u>1:46</u>	POST 5 MIN					0 **
180-270	1ST 5 MIN					0 *
<u>1:48</u>	POST 5 MIN					0 **
270-360	1ST 5 MIN					0 *
<u>1:49</u>	POST 5 MIN					0 **

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS _____

Post-it* Fax Note	7671	Date	5-17-01	# of pages	1
To	Rich Terry	From	J Smith		
Co./Dept	JTE	Co.			
Phone #		Phone #	836 5256		
Fax #		Fax #			

LAST FORM MODIFICATION

;))

Information

DAIMLERCHRYSLER

Report #:

Compliance Report

Subject: Fuel Loss Limitations and Static Rollover Test Procedures (For CMVSR or FMVSS 301)

Model Year: 2003

Procedure: CP-246G CP-245F CP-234I CP-233H CP-232F CP-194K

Standard: MVSS 301

Standard Title: Fuel System integrity

Requirements: Fluid Loss Limitation and Static Rollover Test Procedures to Determine Vehicle Fuel System Integrity

Vehicle Type: MPV

Family Codes: WJ

Approvals

Christopher J Nowak
Responsible Executive



05/06/2003
 02:57:51 F
Approval D

John H Broomall
Approving Executive



05/07/2003
 08:43:40 A
Approval D

Summary

DAIMLERCHRYSLER

Subject: Fuel Loss Limitations and Static Rollover Test Procedures (For CMVSR or FMVSS 301)

Objective: Verification of design Compliance with the Requirements of Federal Motor Vehicle Safety Standard MVSS 301, and Canada Motor Vehicle Safety Regulation CMVSR 301

Conclusion: The 2003 model year 'WJ' body, Jeep "Grand Cherokee" Sport Utility Vehicle, as design released, complies with the requirements of FMVSS 301 S3, S5, S6, and S7

Safety Documentation Compliance Report

Prepared By: Richard A Terry

Date: 05/01/2002

Approved By: Christopher J Nowak

Date: 05/06/2002

Issued By: 1060 - Energy
Management/NVH/Aero-Thermal (Jeep)

Discussion

DAIMLERCHRYSLER

The following design features are carried over from the 2002 model year:

Vehicle/Body:

- Left hand drive model.
- 4-door body style.
- 2691.0 mm (105.9 in) wheel base and unibody construction
- The front bumper system consists of a steel bumper crossmember faced with an energy absorbent foam and covered with a molded fascia.
- A fuel tank skid plate is standard.

Capacity:

- Five (5) person seating capacity - front bucket seats.
- 113.4 kg (250 lb) of luggage capacity.
- 75.7 L (20 gal.) rear mounted fuel tank with a filler neck is located on the left side of the vehicle.

Drivetrain:

- 4.0L (I6) or 4.7L (V8) multi-point injection (MPI) engines are offered.
- 4 wheel drive and 2 wheel drive systems are available.
- Automatic transmission is standard.

Occupant Restraint/Interior Systems:

- A 3-point active seat belt with adjustable upper anchorage and a constant force retractor (CFR) is provided as the primary restraint for the driver.
- A 3-point active seat belt with adjustable upper anchorage and a constant force retractor (CFR) is provided as the primary restraint for the right front passenger.
- A "Next- generation, Multistage Airbag" is provided as a supplementary restraint for the driver.
- A "Next- generation, Multistage Airbag" is provided as a supplementary restraint for the right front passenger.
- A dual chamber side airbag inflatable curtain is offered.

Seven (7) vehicles were tested to confirm compliance of the "WJ" to the performance requirements of FMVSS 301 S3, S5, S6, and S7. Summaries of the vehicles and the test results are attached.

Conclusion:

Based on the testing conducted, the 2003 model year 'WJ' body, Jeep "Grand Cherokee" Sport Utility Vehicle, as design released, complies with the requirements of FMVSS 301 S3, S5, S6, and S7 as demonstrated in the attached summary.

Appendix

DAIMLERCHRYSLER

Summary
FMVSS 301 "Fuel System Integrity"
2003 Model Year 'WJ' Body Jeep "Grand Cherokee"

Test Mode Test Number, Test Date Description of vehicle VIN	Leakage At Impact (oz)	Leakage In The Follow ing 30 Minutes (oz)	Leakage In The Rollover Fixture (oz)	Total Leakage (oz)
Frontal VC09185 06/08/2001 4.0L, 4x2 Automatic, S1 1J4GX48S42C [REDACTED]	Zero	Zero	Zero	Zero
Frontal VC09192, 06/11/2001 4.7L, 4x4 Automatic, S1 1J4GW58SX2C [REDACTED]	Zero	Zero	Zero	Zero
Right 30 Degree VC09193, 06/12/2001 4.7L, 4x2, Automatic, S1 1J8GW48N52C [REDACTED]	Zero	Zero	Zero	Zero
Left 30 Degree VC09226, 06/13/2001 4.0L, 4x4, Automatic, S1 1J8GW48S02C [REDACTED]	Zero	Zero	Zero	Zero
Right Lateral VC09194, 05/18/2001 4.7L, 4x4, Automatic, S1 1J8GW58N62C [REDACTED]	Zero	Zero	Zero	Zero
Left Lateral VC09186, 05/16/2001 4.0L, 4x4, Automatic, S1 1J8GW48S52C [REDACTED]	Zero	Zero	Zero	Zero
Rear Impact VC09183, 05/16/2001 4.7L, 4x4, Automatic, S1 1J8GW58N12C [REDACTED]	Zero	Zero	Zero	Zero

Attached are electronic copies of the test reports.



301.pdf

INFORMATION Redacted PURSUANT TO THE FREEDOM OF INFORMATION ACT (FOIA), 5 U.S.C. 552(B)(6)

DATE 06/11/01 ELECTRONIC DATA PROCESSING VEHICLE CRASH ENGINEERING
TIME 12:52:19. EDP TEST LETTER DEPT 5320

VC09185 ITEM WJ7388
VC09185 30 MPH FRONT FLAT FIXED, 2002 WJ ITEM WJ7388
2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLAINEE.
TEST DATE 06/08/01
TEST SITE CPG

TEST PURPOSE PRIMARY, 2002 USA 208 COMPLIANCE.
DETERMINE OCCUPANT CRASH PROTECTION.

SECONDARY, 2002 USA 212 COMPLIANCE.
DETERMINE WINDSHIELD MOUNTING.

SECONDARY, 2002 USA 219 COMPLIANCE.
DETERMINE WINDSHIELD ZONE INTRUSION.

SECONDARY, 2002 USA 301 COMPLIANCE.
DETERMINE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED; 30.1 MPH
DAMAGE LOCATION; FRONT (FULL)
BARRIER TYPE; FLAT FIXED
BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; WJ
CAR LINE; T
BODY; 74
ENGINE; 4.0 LITRE
ENGINE NOTE; ELECTRONIC FUEL INJECTION
TRANSMISSION; 4 SPEED AUTO
TRANS. NOTE;
VIN AS TESTED; 1J4GX48S42C [REDACTED] MOD.
VIN AS BUILT; 1J4GX48S42C [REDACTED] MOD.

TEST SPEED 30.3 MPH - TRAP TIMER

TEST WEIGHT (LBS) 4411 TOTAL, 2226 FRONT, 2185 REAR

OCCUPANTS LEFT FRONT, 50% HYBRID III, 9 CH CERT. AD-93
RESTRAINT-SEAT BELT AND AIR BAG
RIGHT FRONT, 50% HYBRID III, 9 CH CERT. AD-105
RESTRAINT-SEAT BELT AND AIR BAG

DATE 06/11/01
TIME 12:52:19.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC09185 ITEM WJ7388
VC09185 30 MPH FRONT FLAT FIXED, 2002 WJ ITEM WJ7388
2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLAINEE.
TEST DATE 06/08/01
TEST SITE CPG
BUILD CONDITION

2002 WJ S1 BUILD
TRIM CODE = WJTH74
FLEET NUMBER = C2WJT7388
THIS VEHICLE WAS TESTED WITH THE FOLLOWING:
- DESIGN INTENT DRIVER AIR BAG.
- DESIGN INTENT PASSENGER AIR BAG.
- STEERING COLUMN WITH UPDATED TILT RELEASE SPRINGS.
- DRIVER SEAT BELT = 5 KN CFR WITH BREED BUCKLE
- PASS SEAT BELT = 5 KN CFR WITH BREED BUCKLE
- OCCUPANT RESTRAINT CONTROLER (ORC)
- RIGHT AND LEFT FRONT CRUSH ZONE SENSORS.
- RIGHT AND LEFT SIDE IMPACT SENSORS.
- 02 DESIGN INTENT FUEL SYSTEM.
- HYDRAULIC COOLING MODULE REMOVED FOR TEST.
REPLACED WITH 2000 VISCOUS AND ELECTRIC FANS.
SIMILAR TO 2002 DESIGN INTENT.

TARGET WEIGHT (LBS) 3826 TOTAL, 2082 FRONT, 1744 REAR. REPRESENTS
33% OPTIONS WEIGHT FOR 2002 WJ 4.0 L WJT74.
DOES NOT INCLUDE LUGGAGE OR OCCUPANT WEIGHT.
TEST WEIGHT = 4406 LBS (4406 = 3826 + 250 + 330)

FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT
250 LBS
150 LBS ON BALLAST RACK

EDP TECHNICIAN S. MARCHENIA

No. of Pages 149
CC

M. T. STEBLETON 422-05-01
R. A. TERRY 514-17-39

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC9185, ITEM NUMBER WJ7388, TEST ENGINEER MANNEY

V.I.N. 1J4GX48A42C [REDACTED], TEST DATE 6/8/01, ROLL DATE 6/14/01

TEST TYPE; 30 MPH FRONT FLAT FIXED BARRIER IMPACT

FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 30.7 MPH, TEST WEIGHT 4411 POUNDS.

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

NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE LEFT SIDE DOWN FIRST

FUEL LEAKAGE LOCATIONS DURING STATIC ROLL

ROLL TIME					TOTAL	
0-90	1ST 5 MIN					*
<u>1:55</u>	POST 5 MIN					**
90-180	1ST 5 MIN					*
<u>1:57</u>	POST 5 MIN					**
180-270	1ST 5 MIN					*
<u>2:00</u>	POST 5 MIN					**
270-360	1ST 5 MIN					*
<u>1:59</u>	POST 5 MIN					**

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS _____

DATE 06/11/01 ELECTRONIC DATA PROCESSING VEHICLE CRASH ENGINEERING
TIME 15:18:37. EDP TEST LETTER DEPT 5320

VC09192 ITEM WJ7385
VC09192 30 MPH FRONT FLAT FIXED, 2002 WJ ITEM WJ7385
2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLAINEE.
TEST DATE 06/11/01
TEST SITE CPG

TEST PURPOSE PRIMARY, 2002 USA 208 COMPLIANCE.
DETERMINE OCCUPANT CRASH PROTECTION.

SECONDARY, 2002 USA 212 COMPLIANCE.
DETERMINE WINDSHIELD MOUNTING

SECONDARY, 2002 USA 219 COMPLIANCE.
DETERMINE WINDSHIELD ZONE INTRUSION
SECONDARY, 2002 USA 301 COMPLIANCE.
DETERMINE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED; 30.1 MPH
DAMAGE LOCATION; FRONT (FULL)
BARRIER TYPE; FLAT FIXED
BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; WJ
CAR LINE; J
BODY; 74
ENGINE; 4.7 LITRE
ENGINE NOTE; ELECTRONIC FUEL INJECTION
TRANSMISSION; 4 SPEED AUTO
TRANS. NOTE;
VIN AS TESTED; 1J4GW58SX2C [REDACTED] MOD.
VIN AS BUILT; 1J4GW58SX2C [REDACTED] MOD.

TEST SPEED 30.2 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS) 4833 TOTAL, 2500 FRONT, 2333 REAR

OCCUPANTS LEFT FRONT, 50% HYBRID III, 9 CH CERT. AD-90
RESTRAINT-SEAT BELT AND AIR BAG
RIGHT FRONT, 50% HYBRID III, 9 CH CERT. AD-95
RESTRAINT-SEAT BELT AND AIR BAG

DATE 06/11/01
TIME 15:18:37.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC09192 ITEM WJ7385
VC09192 30 MPH FRONT FLAT FIXED, 2002 WJ ITEM WJ7385
2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLAINEE.
TEST DATE 06/11/01
TEST SITE CPG
BUILD CONDITION

2002 WJ S1 BUILD
TRIM CODE = WJJP74
FLEET NUMBER = C2WJJ7385
THIS VEHICLE WAS TESTED WITH THE FOLLOWING:
- DESIGN INTENT DRIVER AIR BAG.
- DESIGN INTENT PASSENGER AIR BAG.
- DRIVER SEAT BELT = 5 KN CFR WITH BREED BUCKLE
- PASS SEAT BELT = 5 KN CFR WITH BREED BUCKLE
- OCCUPANT RESTRAINT CONTROLER (ORC)
- RIGHT AND LEFT FRONT CRUSH ZONE SENSORS.
- RIGHT AND LEFT SIDE IMPACT SENSORS.
- 02 DESIGN INTENT FUEL SYSTEM.

TARGET WEIGHT (LBS) 4252 TOTAL, 2342 FRONT, 1910 REAR. REPRESENTS
33% OPTIONS WEIGHT FOR 2002 WJ 4.7L WJJP74
DOES NOT INCLUDE LUGGAGE OR OCCUPANT WEIGHT.
TEST WEIGHT = 4832 LBS (4832 = 4252 + 250 + 330)

FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT
250 LBS
300 LBS SECURED TO RACK IN SECOND SEAT AREA.

EDP TECHNICIAN S. MARCHENIA

No. of Pages 139
CC

M. T. STEBLETON 422-05-01
R. A. TERRY 514-17-39

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC9192, ITEM NUMBER WJ7385 TEST ENGINEER MANNEY

V.I.N. 1J4GW58SX2C [REDACTED] TEST DATE 6/11/01, ROLL DATE 6/14/01

TEST TYPE; 30 MPH FRONT FLAT FIXED BARRIER

FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 30.8 MPH, TEST WEIGHT 4833 POUNDS.

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

NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE LEFT SIDE DOWN FIRST

FUEL LEAKAGE LOCATIONS DURING STATIC ROLL

ROLL TIME					TOTAL	
0-90	1ST 5 MIN				0	*
<u>1:53</u>	POST 5 MIN				0	**
90-180	1ST 5 MIN				0	*
<u>1:46</u>	POST 5 MIN				0	**
180-270	1ST 5 MIN				0	*
<u>1:46</u>	POST 5 MIN				0	**
270-360	1ST 5 MIN				0	*
<u>1:47</u>	POST 5 MIN				0	**

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS _____

DATE 06/12/01
TIME 16:15:15.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC09193 ITEM WJ7316
VC09193 30 MPH 30 DEGREE RIGHT ANGULAR, 2002 WJ ITEM WJ7316
2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLAINEE.
TEST DATE 06/12/01
TEST SITE CPG

TEST PURPOSE PRIMARY, 2002 USA 208 COMPLIANCE.
DETERMINE OCCUPANT CRASH PROTECTION.

SECONDARY, 2002 USA 301 COMPLIANCE.
DETERMINE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED; 30.1 MPH
DAMAGE LOCATION; FRONT RIGHT
BARRIER TYPE; FLAT FIXED
BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; WJ
CAR LINE; J
BODY; 74
ENGINE; 4.7 LITRE
ENGINE NOTE; ELECTRONIC FUEL INJECTION
TRANSMISSION; 4 SPEED AUTO
TRANS. NOTE;
VIN AS TESTED; 1J8GW48N52C [REDACTED] MOD.
VIN AS BUILT; 1J8GW48N52C [REDACTED] MOD.

TEST SPEED 30.4 MPH -TRAP TIMER

TEST WEIGHT (LBS) 4834 TOTAL, 2545 FRONT, 2289 REAR

OCCUPANTS LEFT FRONT, 50% HYBRID III, 9 CH CERT. AD-92
RESTRAINT-SEAT BELT AND AIR BAG
RIGHT FRONT, 50% HYBRID III, 9 CH CERT. AD-140
RESTRAINT-SEAT BELT AND AIR BAG

BUILD CONDITION 2002 WJ S1 BUILD
TRIM CODE = WJJH74
BODY MODEL = C2WJJ7316
THIS VEHICLE WAS TESTED WITH THE FOLLOWING:
- DESIGN INTENT DRIVER AIR BAG.
- DESIGN INTENT PASSENGER AIR BAG.
- DRIVER SEAT BELT = 5 KN CFR WITH BREED BUCKLE
- PASS SEAT BELT = 5 KN CFR WITH BREED BUCKLE
- OCCUPANT RESTRAINT CONTROLER (ORC)
- RIGHT AND LEFT FRONT CRUSH ZONE SENSORS.
- RIGHT AND LEFT SIDE IMPACT SENSORS.
- 02 DESIGN INTENT FUEL SYSTEM.

DATE 06/12/01
TIME 16:15:15.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC09193 ITEM WJ7316

VC09193 30 MPH 30 DEGREE RIGHT ANGULAR, 2002 WJ ITEM WJ7316

2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLAINT.

TEST DATE 06/12/01

TEST SITE CPG

TARGET WEIGHT (LBS) 4247 TOTAL, 2337 FRONT, 1910 REAR. REPRESENTS
33% OPTIONS WEIGHT FOR 2002 WJ 4.7L WJH74.
DOES NOT INCLUDE LUGGAGE OR OCCUPANT WEIGHT.
TEST WEIGHT = 4827 LBS (4827 = 4247 + 330 + 250)

FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT
250 LBS
200 LBS ON BALLAST RACK

EDP TECHNICIAN S. MARCHENIA

No. of Pages 85
CC

M. T. STEBLETON 422-05-01
R. A. TERRY 514-17-39

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC9193, ITEM NUMBER WJ7316, TEST ENGINEER SMITH

V.I.N. 1J8GW48N52C [REDACTED], TEST DATE 6/21/01, ROLL DATE / /

TEST TYPE; 30 MPH FRONT RIGHT 30 DEGREE BARRIER IMPACT

FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 30.4 MPH, TEST WEIGHT 4834 POUNDS.

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

NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE _____ SIDE DOWN FIRST

FUEL LEAKAGE LOCATIONS DURING STATIC ROLL

ROLL TIME					TOTAL
0-90	1ST 5 MIN				0 *
2:00	POST 5 MIN				0 **
90-180	1ST 5 MIN				0 *
1:54	POST 5 MIN				0 **
180-270	1ST 5 MIN				0 *
1:48	POST 5 MIN				0 **
270-360	1ST 5 MIN				0 *
1:47	POST 5 MIN				0 **

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS _____

LAST FORM MODIFICATION 08/22/96 - GAB (TESTOBS896,DOCVCFORMS)

DATE 06/14/01 ELECTRONIC DATA PROCESSING VEHICLE CRASH ENGINEERING
TIME 10:43:56. EDP TEST LETTER DEPT 5320

VC09226 ITEM WJ7593
VC09226 30 MPH LEFT 30 DEGREE ANGULAR, 2002 WJ ITEM WJ7593
2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLIANCE.
TEST DATE 06/13/01
TEST SITE CPG

TEST PURPOSE PRIMARY, 2002 USA 208 COMPLIANCE.
DETERMINE OCCUPANT CRASH PROTECTION.

SECONDARY, 2002 USA 301 COMPLIANCE.
DETERMINE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED; 30.1 MPH
DAMAGE LOCATION; FRONT LEFT
BARRIER TYPE; LEFT 30 DEG
BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; WJ
CAR LINE; J
BODY; 74
ENGINE; 4.0 LITRE
ENGINE NOTE; ELECTRONIC FUEL INJECTION
TRANSMISSION; 4 SPEED AUTO
TRANS. NOTE;
VIN AS TESTED; 1J8GW48S02C [REDACTED] MOD.
VIN AS BUILT; 1J8GW48S02C [REDACTED] MOD.

TEST SPEED 30.2 MPH SOURCE TRAP TIMER

TEST WEIGHT (LBS) 4708 TOTAL, 2449 FRONT, 2259 REAR

OCCUPANTS LEFT FRONT, 50% HYBRID III, 9 CH CERT. AD-104
RESTRAINT-SEAT BELT AND AIR BAG
RIGHT FRONT, 50% HYBRID III, 9 CH CERT. AD-139
RESTRAINT-SEAT BELT AND AIR BAG

DATE 06/14/01
TIME 10:43:56.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC09226 ITEM WJ7593
VC09226 30 MPH LEFT 30 DEGREE ANGULAR, 2002 WJ ITEM WJ7593
2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLIANCE.

TEST DATE 06/13/01
TEST SITE CPG

BUILD CONDITION 2002 WJ S1 BUILD
BODY CODE = WJJP74
FLEET NUMBER = C2WJJ7593
THIS VEHICLE WAS TESTED WITH THE FOLLOWING:
- DESIGN INTENT DRIVER AIR BAG.
- DESIGN INTENT PASSENGER AIR BAG.
- '00 PRODUCTION STEERING COLUMN WITH 14 DEG
RACK AND PAWL TILT MECHANISM.
- DRIVER SEAT BELT = 5 KN CFR WITH BREED BUCKLE
- PASS SEAT BELT = 5 KN CFR WITH BREED BUCKLE
- OCCUPANT RESTRAINT CONTROLER (ORC)
- RIGHT AND LEFT FRONT CRUSH ZONE SENSORS.
- RIGHT AND LEFT SIDE IMPACT SENSORS.
- 02 DESIGN INTENT FUEL SYSTEM.
- HYDRAULIC COOLING MODULE REMOVED FOR TEST.
REPLACED WITH 2000 VISCOUS AND ELECTRIC FANS.
SIMILAR TO 2002 DESIGN INTENT.

TARGET WEIGHT (LBS) 4128 TOTAL, 2272 FRONT, 1856 REAR. REPRESENTS
33% OPTIONS WEIGHT FOR 2002 WJ 4.0 L WJJP74
DOES NOT INCLUDE LUGGAGE OR OCCUPANT WEIGHT.
TEST WEIGHT = 4708 LBS (4708 = 4128 + 250 + 330)

FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT
100 LBS. SECURED IN REAR SEAT AREA

EDP TECHNICIAN S. MARCHENIA

No. of Pages 97
CC

M. T. STEBLETON 422-05-01
R. A. TERRY 514-17-39

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC9226, ITEM NUMBER WJ7593, TEST ENGINEER MANNEY

V.I.N. 1J8GW48S02C [REDACTED], TEST DATE 6/13/01, ROLL DATE 6/14/01

TEST TYPE; 30 MPH 30 DEGREE LEFT ANGULAR IMPACT

FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 30.2 MPH, TEST WEIGHT 4708 POUNDS.

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

NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE LEFT SIDE DOWN FIRST

		FUEL LEAKAGE LOCATIONS DURING STATIC ROLL				TOTAL
ROLL TIME						
0-90	1ST 5 MIN					<u>0</u> *
<u>1:47</u>	POST 5 MIN					<u>0</u> **
90-180	1ST 5 MIN					<u>0</u> *
<u>1:49</u>	POST 5 MIN					<u>0</u> **
180-270	1ST 5 MIN					<u>0</u> *
<u>1:47</u>	POST 5 MIN					<u>0</u> **
270-360	1ST 5 MIN					<u>0</u> *
<u>1:44</u>	POST 5 MIN					<u>0</u> **

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS _____

DATE 05/18/01 ELECTRONIC DATA PROCESSING VEHICLE CRASH ENGINEERING
 TIME 12:22:10. EDP TEST LETTER DEPT 5320

VC09194 ITEM WJ7323
 VC09194 20 MPH RIGHT LATERAL FMVSS 301, 2002 WJ ITEM WJ7323
 2002 FUEL SYSTEMS INTEGRITY COMPLIANCE.
 TEST DATE 05/18/01
 TEST SITE CPG

TEST PURPOSE PRIMARY, 2002 USA 301 COMPLIANCE.
 DETERMINE FUEL SYSTEM INTEGRITY

IMPACT TYPE TARGET SPEED; 20.1 MPH
 DAMAGE LOCATION; RIGHT SIDE (FULL)
 BARRIER TYPE; RIGHT TYPE IV
 BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; WJ
 CAR LINE; J
 BODY; 74
 ENGINE; 4.7 LITRE
 ENGINE NOTE; ELECTRONIC FUEL INJECTION
 TRANSMISSION; 4 SPEED AUTO 4x4
 TRANS. NOTE;
 VIN AS TESTED; 1J8GW58S62C [REDACTED] MOD.
 VIN AS BUILT; 1J8GW58S62C [REDACTED] MOD.

TEST SPEED 20.2 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS) 4841 TOTAL, 2683 FRONT, 2158 REAR

OCCUPANTS LEFT FRONT - 50% HYBRID II, BALLAST AD-59
 RESTRAINT-SEAT BELT ONLY.
 RIGHT FRONT - 50 % HYBRID II, BALLAST AD-50
 RESTRAINT-SEAT BELT ONLY.

BUILD CONDITION 2002 S1 BUILD
 FLEET NUMBER = C2WJJ7323
 BODY CODE = WJJP74
 THE VEHICLE IS TESTED WITH THE FOLLOWING:
 - 2002 FUEL SYSTEM
 - 2002 ORC

TARGET WEIGHT (LBS) 4252 TOTAL, 2342 FRONT, 1910 REAR. REPRESENTS
 33% OPTION WEIGHT FOR 2002 WJ 4.7L WJJP74.
 DOES NOT INCLUDE LUGGAGE OR OCCUPANT WEIGHT.
 TEST WEIGHT = 4832 LBS (4832 = 4252 + 250 + 330)

FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT
 250 LBS
 150 LBS ON LF FLOOR.
 150 LBS ON RF FLOOR.

DATE 05/18/01
TIME 12:22:10.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC09194 ITEM WJ7323
VC09194 20 MPH RIGHT LATERAL FMVSS 301, 2002 WJ ITEM WJ7323
2002 FUEL SYSTEMS INTEGRITY COMPLIANCE.
TEST DATE 05/18/01
TEST SITE CPG
EDP TECHNICIAN S. MARCHENIA

No. of Pages 25
CC

M. T. STEBLETON 422-05-01
R. A. TERRY 514-17-41

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC9194, ITEM NUMBER WJ7323, TEST ENGINEER KOBYLARZ

V.I.N. 1J8GW58S62C [REDACTED], TEST DATE 5/18/11, ROLL DATE 6/5/21/01

TEST TYPE; 20 MPH RT LATERAL BARRIER IMPACT

FUEL; TYPE AND QUANTITY - 767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 20.2 MPH, TEST WEIGHT 4811 POUNDS.

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

[] NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE left SIDE DOWN FIRST

FUEL LEAKAGE LOCATIONS DURING STATIC ROLL

ROLL TIME					TOTAL	
0-90	1ST 5 MIN				0	*
2:02	POST 5 MIN				0	**
90-180	1ST 5 MIN				0	*
1:59	POST 5 MIN				0	**
180-270	1ST 5 MIN				0	*
2:00	POST 5 MIN				0	**
270-360	1ST 5 MIN				0	*
2:03	POST 5 MIN				0	**

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS No fuel leaks

LAST FORM MODIFICATION 08/22/96 - GAB (TESTOBS896, DOCVCFORMS)

DATE 05/16/01 ELECTRONIC DATA PROCESSING VEHICLE CRASH ENGINEERING
 TIME 13:57:13. EDP TEST LETTER DEPT 5320

VC09186 ITEM WJ7383
 VC09186 20 MPH LEFT LATERAL FMVSS 301, 2002 WJ ITEM WJ7383
 2002 FUEL SYSTEMS INTEGRITY COMPLIANCE.
 TEST DATE 05/16/01
 TEST SITE CPG

TEST PURPOSE PRIMARY, 2002 USA 301 COMPLIANCE.
 DETERMINE FUEL SYSTEM INTEGRITY

IMPACT TYPE TARGET SPEED; 20.1 MPH
 DAMAGE LOCATION; LEFT SIDE (FULL)
 BARRIER TYPE; LEFT TYPE IV
 BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; WJ
 CAR LINE; J
 BODY; 74
 ENGINE; 4.0 LITRE
 ENGINE NOTE; ELECTRONIC FUEL INJECTION
 TRANSMISSION; 4 SPEED AUTO 4x4
 TRANS. NOTE;
 VIN AS TESTED; 1J8GW48S52C [REDACTED] MOD.
 VIN AS BUILT; 1J8GW48S52C [REDACTED] MOD.

TEST SPEED 20.1 MPH BY TRAP TIMER

TEST WEIGHT (LBS) 4627 TOTAL, 2457 FRONT, 2170 REAR

OCCUPANTS LEFT FRONT - 50% HYBRID II, BALLAST AD-59
 RESTRAINT-SEAT BELT ONLY.
 RIGHT FRONT - 50 % HYBRID II, BALLAST AD-50
 RESTRAINT-SEAT BELT ONLY.

BUILD CONDITION 2002 S1 BUILD
 FLEET NUMBER = C2WJJ7383
 BODY CODE = WJJH74
 THE VEHICLE IS TESTED WITH THE FOLLOWING:
 - 2002 FUEL SYSTEM
 - 2002 ORC

TARGET WEIGHT (LBS) 4049 TOTAL, 2240 FRONT, 1809 REAR. REPRESENTS
 33% OPTION WEIGHT FOR 2002 WJ 4.0L WJJH74.
 DOES NOT INCLUDE LUGGAGE OR OCCUPANT WEIGHT.
 TEST WEIGHT = 4629 LBS (4629 = 4049 + 250 + 330)

FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT
 250 LBS
 200 LBS SECURED IN LF & RF FLOORPAN

DATE 05/16/01
TIME 13:57:13.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC09186 ITEM WJ7383
VC09186 20 MPH LEFT LATERAL FMVSS 301, 2002 WJ ITEM WJ7383
2002 FUEL SYSTEMS INTEGRITY COMPLIANCE.
TEST DATE 05/16/01
TEST SITE CPG
EDP TECHNICIAN S. MARCHENIA

No. of Pages 25
CC

M. T. STEBLETON 422-05-01
R. A. TERRY 514-17-41

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC9186, ITEM NUMBER WJ7383, TEST ENGINEER SMITH

V.I.N. 1J8GW48S52C [REDACTED], TEST DATE 5/16/01, ROLL DATE 5/16/01

TEST TYPE; 20 MPH LT LATERAL BARRIER IMPACT

FUEL; TYPE AND QUANTITY - 767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 20.1 MPH, TEST WEIGHT 4627 POUNDS.

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

NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE _____ SIDE DOWN FIRST

		FUEL LEAKAGE LOCATIONS DURING STATIC ROLL				TOTAL	
ROLL TIME							
0-90	1ST 5 MIN					<u>0</u>	*
<u>1:51</u>	POST 5 MIN					<u>0</u>	**
90-180	1ST 5 MIN					<u>0</u>	*
<u>1:55</u>	POST 5 MIN					<u>0</u>	**
180-270	1ST 5 MIN					<u>0</u>	*
<u>2:00</u>	POST 5 MIN					<u>0</u>	**
270-360	1ST 5 MIN					<u>0</u>	*
<u>1:59</u>	POST 5 MIN					<u>0</u>	**

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS _____

Post-it* Fax Note 7671		Date <u>5-17-01</u>	# of pages <u>1</u>
To <u>Rich Terry</u>		From <u>J Smith</u>	
Co./Dept. <u>JTE</u>		Co.	
Phone #		Phone # <u>836 5156</u>	
Fax #		Fax #	

LAST FORM MODIF

VCFORMS)

DATE 05/17/01 ELECTRONIC DATA PROCESSING VEHICLE CRASH ENGINEERING
 TIME 10:53:43. EDP TEST LETTER DEPT 5320

VC09183 ITEM WJ7279
 VC09183 30 MPH REAR IMPACT, 2002 WJ COMPLIANCE ITEM WJ7279
 2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLIANCE.
 TEST DATE 05/16/01
 TEST SITE CPG

TEST PURPOSE PRIMARY, 2002 USA 301 COMPLIANCE.
 DETERMINE FUEL SYSTEM INTEGRITY

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

VEHICLE BODY CLASS; WJ
 CAR LINE; J
 BODY; 74
 ENGINE; 4.7 LITRE
 ENGINE NOTE; ELECTRONIC FUEL INJECTION
 TRANSMISSION; 4 SPEED AUTO
 TRANS. NOTE;
 VIN AS TESTED; 1J8GW58N12C [REDACTED] MOD.
 VIN AS BUILT; 1J8GW58N12C [REDACTED] MOD.

TEST SPEED 30.3 MPH BY TRAP TIMER

TEST WEIGHT (LBS) 4833 TOTAL, 2719 FRONT, 2114 REAR

OCCUPANTS LEFT FRONT, 50% HYBRID II BALLAST AD-60
 RESTRAINT-SEAT BELT.
 RIGHT FRONT, 50% HYBRID II BALLAST AD-47
 RESTRAINT-SEAT BELT

BUILD CONDITION 2002 WJ S1 BUILD
 BODY MODEL = WJJP74
 FLEET NUMBER = C2WJJ7279
 THIS VEHICLE WAS TESTED WITH THE FOLLOWING:
 - OCCUPANT RESTRAINT CONTROLLER (ORC)
 - 02 DESIGN INTENT FUEL SYSTEM.

TARGET WEIGHT (LBS) 4252 TOTAL, 2348 FRONT, 1904 REAR. REPRESENTS
 33% OPTIONS WEIGHT FOR 2002 WJ 4.7L WJJP74.
 DOES NOT INCLUDE LUGGAGE OR OCCUPANT BALLAST.
 APPROX TEST WEIGHT = 4832 LBS (4832=2452+250+330)

FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT
 250 LBS
 100 LBS RF
 75 LBS LF

DATE 05/17/01
TIME 10:53:43.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC09183 ITEM WJ7279
VC09183 30 MPH REAR IMPACT, 2002 WJ COMPLIANCE ITEM WJ7279
2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLAINCE.
TEST DATE 05/16/01
TEST SITE CPG
EDP TECHNICIAN S. MARCHENIA

No. of Pages 29
CC

M. T. STEBLETON 422-05-01
R. A. TERRY 514-17-39

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC9183, ITEM NUMBER WJ7279, TEST ENGINEER SMITH

V.I.N. 1J8GW58N12C [REDACTED], TEST DATE 5/16/01, ROLL DATE 5/17/01

TEST TYPE; 30 MPH TYPE IV MOVING BARRIER REAR IMPACT

FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 30.3 MPH, TEST WEIGHT 4833 POUNDS.

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

NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE _____ SIDE DOWN FIRST

		FUEL LEAKAGE LOCATIONS DURING STATIC ROLL				TOTAL
ROLL TIME						
0-90	1ST 5 MIN					0 *
<u>1:45</u>	POST 5 MIN					0 **
90-180	1ST 5 MIN					0 *
<u>1:46</u>	POST 5 MIN					0 **
180-270	1ST 5 MIN					0 *
<u>1:48</u>	POST 5 MIN					0 **
270-360	1ST 5 MIN					0 *
<u>1:49</u>	POST 5 MIN					0 **

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS _____

Post-it* Fax Note	7671	Date	5-17-01	# of pages	1
To	Rich Terry	From	J Smith		
Co./Dept	JTE	Co.			
Phone #		Phone #	836 5256		
Fax #		Fax #			

LAST FORM MODIFICATION

;))

Information

DAIMLERCHRYSLER

Report #:

Compliance Report

Subject: Fuel Loss Limitations and Static Rollover Test Procedures (For CMVSR or FMVSS 301)

Model Year: 2004

Procedure: CP-246G CP-245F CP-234I CP-233H CP-232F CP-194K

Federal, Canadian, & Other Standard Information

Standard: MVSS 301

Standard Title: Fuel System integrity

Requirements: Fluid Loss Limitation and Static Rollover Test Procedures to Determine Vehicle Fuel System Integrity

Vehicle Type: MPV

Family Codes: WJ

Approvals

Approvals

Christopher J Nowak
Responsible Executive

Approved by Christopher J Nowak
10/21/2002 02:15:46 PM
Approval Date

John H Broomall
Approving Executive

Approved by John H Broomall
10/21/2002 04:54:46 PM
Approval Date

Summary

DAIMLERCHRYSLER

Subject: Fuel Loss Limitations and Static Rollover Test Procedures (For CMVSR or FMVSS 301)

Objective: Verification of design Compliance with the Requirements of Federal Motor Vehicle Safety Standard MVSS 301, and Canada Motor Vehicle Safety Regulation CMVSR 301

Conclusion: The 2004 model year 'WJ' body, Jeep "Grand Cherokee" Sport Utility Vehicle, as design released, complies with the requirements of FMVSS 301 S3, S5, S6, and S7.

Safety Documentation Compliance Report

Prepared By: Richard A Terry

Date: 10/21/2002

Approved By: Christopher J Nowak

Date: 10/21/2002

Issued By: 1060 - Energy
Management/NVH/Aero-Thermal (Jeep)

Discussion

DAIMLERCHRYSLER

The 2004 model year 'WJ' is essentially a carryover vehicle from the 2003 model year in terms of fuel system integrity.

The following design features are carried over from the 2003 model year:

Vehicle/Body:

- Left hand drive model.
- 4-door body style.
- 2691.0 mm (105.9 in) wheel base and unibody construction
- The front bumper system consists of a steel bumper crossmember faced with an energy absorbent foam and covered with a molded fascia.

Capacity:

- Five (5) person seating capacity - front bucket seats.
- 113.4 kg (250 lb) of luggage capacity.
- 75.7 L (20 gal.) rear mounted fuel tank with a filler neck is located on the left side of the vehicle.

Drivetrain:

- 4.0L (I6) or 4.7L (V8) multi-point injection (MPI) engines are offered.
- 4 wheel drive and 2 wheel drive systems are available.
- Automatic transmission is standard.

Occupant Restraint/Interior Systems:

- A 3-point active seat belt with adjustable upper anchorage and a constant force retractor (CFR) is provided as the primary restraint for the driver.
- A 3-point active seat belt with adjustable upper anchorage and a constant force retractor (CFR) is provided as the primary restraint for the right front passenger.
- A "Next- generation, Multistage Airbag" is provided as a supplementary restraint for the driver.
- A "Next- generation, Multistage Airbag" is provided as a supplementary restraint for the right front passenger.
- A dual chamber side airbag inflatable curtain is offered.

Eight (8) vehicles were tested to confirm compliance of the "WJ" to the performance requirements of FMVSS 301 S3, S5, S6, and S7. Summaries of the vehicles and the test results are attached.

Conclusion:

Based on the testing conducted, the 2004 model year 'WJ' body, Jeep "Grand Cherokee" Sport Utility Vehicle, as design released, complies with the requirements of FMVSS 301 S3, S5, S6, and S7 as demonstrated in the attached summary.

Appendix

DAIMLERCHRYSLER

**Summary
FMVSS 301 "Fuel System Integrity"
2004 Model Year 'WJ' Body Jeep "Grand Cherokee"**

Test Mode Test Number, Test Date Description of vehicle VIN	Leakage At Impact (oz)	Leakage In The Follow ing 30 Minutes (oz)	Leakage In The Rollover Fixture (oz)	Total Leakage (oz)
Frontal VC09185 06/08/2001 4.0L, 4x2 Automatic, S1 1J4GX48S42C [REDACTED]	Zero	Zero	Zero	Zero
Frontal VC09192, 06/11/2001 4.7L, 4x4 Automatic, S1 1J4GW58SX2C [REDACTED]	Zero	Zero	Zero	Zero
Right 30 Degree VC09193, 06/12/2001 4.7L, 4x2, Automatic, S1 1J8GW48N52C [REDACTED]	Zero	Zero	Zero	Zero
Left 30 Degree VC09226, 06/13/2001 4.0L, 4x4, Automatic, S1 1J8GW48S02C [REDACTED]	Zero	Zero	Zero	Zero
Right Lateral VC09194, 05/18/2001 4.7L, 4x4, Automatic, S1 1J8GW58N62C [REDACTED]	Zero	Zero	Zero	Zero
Left Lateral VC09186, 05/16/2001 4.0L, 4x4, Automatic, S1 1J8GW48S52C [REDACTED]	Zero	Zero	Zero	Zero
Rear Impact VC09183, 05/16/2001 4.7L, 4x4, Automatic, S1 1J8GW58N12C [REDACTED]	Zero	Zero	Zero	Zero
Rear Impact VC10141, 08/30/2002 4.7L, 4x4, Automatic 1J4GW48N73C [REDACTED]	Zero	Zero	Zero	Zero

Attached are electronic copies of the test reports.



2004 WJ 301.pdf

INFORMATION Redacted PURSUANT TO THE FREEDOM OF INFORMATION ACT (FOIA), 5 U.S.C. 552(B)(6)

DATE 06/11/01 ELECTRONIC DATA PROCESSING VEHICLE CRASH ENGINEERING
TIME 12:52:19. EDP TEST LETTER DEPT 5320

VC09185 ITEM WJ7388
VC09185 30 MPH FRONT FLAT FIXED, 2002 WJ ITEM WJ7388
2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLAINEE.
TEST DATE 06/08/01
TEST SITE CPG

TEST PURPOSE PRIMARY, 2002 USA 208 COMPLIANCE.
DETERMINE OCCUPANT CRASH PROTECTION.

SECONDARY, 2002 USA 212 COMPLIANCE.
DETERMINE WINDSHIELD MOUNTING.

SECONDARY, 2002 USA 219 COMPLIANCE.
DETERMINE WINDSHIELD ZONE INTRUSION.

SECONDARY, 2002 USA 301 COMPLIANCE.
DETERMINE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED; 30.1 MPH
DAMAGE LOCATION; FRONT (FULL)
BARRIER TYPE; FLAT FIXED
BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; WJ
CAR LINE; T
BODY; 74
ENGINE; 4.0 LITRE
ENGINE NOTE; ELECTRONIC FUEL INJECTION
TRANSMISSION; 4 SPEED AUTO
TRANS. NOTE;
VIN AS TESTED; 1J4GX48S42C [REDACTED] MOD.
VIN AS BUILT; 1J4GX48S42C [REDACTED] MOD.

TEST SPEED 30.3 MPH - TRAP TIMER

TEST WEIGHT (LBS) 4411 TOTAL, 2226 FRONT, 2185 REAR

OCCUPANTS LEFT FRONT, 50% HYBRID III, 9 CH CERT. AD-93
RESTRAINT-SEAT BELT AND AIR BAG
RIGHT FRONT, 50% HYBRID III, 9 CH CERT. AD-105
RESTRAINT-SEAT BELT AND AIR BAG

DATE 06/11/01
TIME 12:52:19.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC09185 ITEM WJ7388
VC09185 30 MPH FRONT FLAT FIXED, 2002 WJ ITEM WJ7388
2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLAINEE.
TEST DATE 06/08/01
TEST SITE CPG
BUILD CONDITION

2002 WJ S1 BUILD
TRIM CODE = WJTH74
FLEET NUMBER = C2WJT7388
THIS VEHICLE WAS TESTED WITH THE FOLLOWING:
- DESIGN INTENT DRIVER AIR BAG.
- DESIGN INTENT PASSENGER AIR BAG.
- STEERING COLUMN WITH UPDATED TILT RELEASE SPRINGS.
- DRIVER SEAT BELT = 5 KN CFR WITH BREED BUCKLE
- PASS SEAT BELT = 5 KN CFR WITH BREED BUCKLE
- OCCUPANT RESTRAINT CONTROLER (ORC)
- RIGHT AND LEFT FRONT CRUSH ZONE SENSORS.
- RIGHT AND LEFT SIDE IMPACT SENSORS.
- 02 DESIGN INTENT FUEL SYSTEM.
- HYDRAULIC COOLING MODULE REMOVED FOR TEST.
REPLACED WITH 2000 VISCOUS AND ELECTRIC FANS.
SIMILAR TO 2002 DESIGN INTENT.

TARGET WEIGHT (LBS) 3826 TOTAL, 2082 FRONT, 1744 REAR. REPRESENTS
33% OPTIONS WEIGHT FOR 2002 WJ 4.0 L WJT74.
DOES NOT INCLUDE LUGGAGE OR OCCUPANT WEIGHT.
TEST WEIGHT = 4406 LBS (4406 = 3826 + 250 + 330)

FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT
250 LBS
150 LBS ON BALLAST RACK

EDP TECHNICIAN S. MARCHENIA

No. of Pages 149
CC

M. T. STEBLETON 422-05-01
R. A. TERRY 514-17-39

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC9185, ITEM NUMBER WJ7388, TEST ENGINEER MANNEY

V.I.N. 1J4GX48A42C [REDACTED], TEST DATE 6/8/01, ROLL DATE 6/14/01

TEST TYPE; 30 MPH FRONT FLAT FIXED BARRIER IMPACT

FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 30.7 MPH, TEST WEIGHT 4411 POUNDS.

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

NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE LEFT SIDE DOWN FIRST

FUEL LEAKAGE LOCATIONS DURING STATIC ROLL

ROLL TIME					TOTAL	
0-90	1ST 5 MIN					*
<u>1:55</u>	POST 5 MIN					**
90-180	1ST 5 MIN					*
<u>1:57</u>	POST 5 MIN					**
180-270	1ST 5 MIN					*
<u>2:00</u>	POST 5 MIN					**
270-360	1ST 5 MIN					*
<u>1:59</u>	POST 5 MIN					**

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS _____

DATE 06/11/01
TIME 15:18:37.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC09192 ITEM WJ7385
VC09192 30 MPH FRONT FLAT FIXED, 2002 WJ ITEM WJ7385
2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLAINEE.
TEST DATE 06/11/01
TEST SITE CPG

TEST PURPOSE PRIMARY, 2002 USA 208 COMPLIANCE.
DETERMINE OCCUPANT CRASH PROTECTION.

SECONDARY, 2002 USA 212 COMPLIANCE.
DETERMINE WINDSHIELD MOUNTING

SECONDARY, 2002 USA 219 COMPLIANCE.
DETERMINE WINDSHIELD ZONE INTRUSION

SECONDARY, 2002 USA 301 COMPLIANCE.
DETERMINE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED; 30.1 MPH
DAMAGE LOCATION; FRONT (FULL)
BARRIER TYPE; FLAT FIXED
BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; WJ
CAR LINE; J
BODY; 74
ENGINE; 4.7 LITRE
ENGINE NOTE; ELECTRONIC FUEL INJECTION
TRANSMISSION; 4 SPEED AUTO
TRANS. NOTE;
VIN AS TESTED; 1J4GW58SX2C [REDACTED] MOD.
VIN AS BUILT; 1J4GW58SX2C [REDACTED] MOD.

TEST SPEED 30.2 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS) 4833 TOTAL, 2500 FRONT, 2333 REAR

OCCUPANTS LEFT FRONT, 50% HYBRID III, 9 CH CERT. AD-90
RESTRAINT-SEAT BELT AND AIR BAG
RIGHT FRONT, 50% HYBRID III, 9 CH CERT. AD-95
RESTRAINT-SEAT BELT AND AIR BAG

DATE 06/11/01
TIME 15:18:37.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC09192 ITEM WJ7385
VC09192 30 MPH FRONT FLAT FIXED, 2002 WJ ITEM WJ7385
2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLAINEE.
TEST DATE 06/11/01
TEST SITE CPG
BUILD CONDITION

2002 WJ S1 BUILD
TRIM CODE = WJJP74
FLEET NUMBER = C2WJJ7385
THIS VEHICLE WAS TESTED WITH THE FOLLOWING:
- DESIGN INTENT DRIVER AIR BAG.
- DESIGN INTENT PASSENGER AIR BAG.
- DRIVER SEAT BELT = 5 KN CFR WITH BREED BUCKLE
- PASS SEAT BELT = 5 KN CFR WITH BREED BUCKLE
- OCCUPANT RESTRAINT CONTROLER (ORC)
- RIGHT AND LEFT FRONT CRUSH ZONE SENSORS.
- RIGHT AND LEFT SIDE IMPACT SENSORS.
- 02 DESIGN INTENT FUEL SYSTEM.

TARGET WEIGHT (LBS) 4252 TOTAL, 2342 FRONT, 1910 REAR. REPRESENTS
33% OPTIONS WEIGHT FOR 2002 WJ 4.7L WJJP74
DOES NOT INCLUDE LUGGAGE OR OCCUPANT WEIGHT.
TEST WEIGHT = 4832 LBS (4832 = 4252 + 250 + 330)
FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT
250 LBS
300 LBS SECURED TO RACK IN SECOND SEAT AREA.

EDP TECHNICIAN S. MARCHENIA

No. of Pages 139
CC

M. T. STEBLETON 422-05-01
R. A. TERRY 514-17-39

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC9192, ITEM NUMBER WJ7385 TEST ENGINEER MANNEY

V.I.N. 1J4GW58SX2C [REDACTED], TEST DATE 6/11/01, ROLL DATE 6/14/01

TEST TYPE; 30 MPH FRONT FLAT FIXED BARRIER

FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 30.8 MPH, TEST WEIGHT 4833 POUNDS.

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

NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE LEFT SIDE DOWN FIRST

FUEL LEAKAGE LOCATIONS DURING STATIC ROLL

ROLL TIME						TOTAL	
0-90	1ST 5 MIN					0	*
<u>1:53</u>	POST 5 MIN					0	**
90-180	1ST 5 MIN					0	*
<u>1:46</u>	POST 5 MIN					0	**
180-270	1ST 5 MIN					0	*
<u>1:46</u>	POST 5 MIN					0	**
270-360	1ST 5 MIN					0	*
<u>1:47</u>	POST 5 MIN					0	**

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS _____

DATE 06/12/01 ELECTRONIC DATA PROCESSING VEHICLE CRASH ENGINEERING
 TIME 16:15:15. EDP TEST LETTER DEPT 5320

VC09193 ITEM WJ7316
 VC09193 30 MPH 30 DEGREE RIGHT ANGULAR, 2002 WJ ITEM WJ7316
 2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLAINEE.
 TEST DATE 06/12/01
 TEST SITE CPG

TEST PURPOSE PRIMARY, 2002 USA 208 COMPLIANCE.
 DETERMINE OCCUPANT CRASH PROTECTION.

SECONDARY, 2002 USA 301 COMPLIANCE.
 DETERMINE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED; 30.1 MPH
 DAMAGE LOCATION; FRONT RIGHT
 BARRIER TYPE; FLAT FIXED
 BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; WJ
 CAR LINE; J
 BODY; 74
 ENGINE; 4.7 LITRE
 ENGINE NOTE; ELECTRONIC FUEL INJECTION
 TRANSMISSION; 4 SPEED AUTO
 TRANS. NOTE;
 VIN AS TESTED; 1J8GW48N52C [REDACTED] MOD.
 VIN AS BUILT; 1J8GW48N52C [REDACTED] MOD.

TEST SPEED 30.4 MPH -TRAP TIMER

TEST WEIGHT (LBS) 4834 TOTAL, 2545 FRONT, 2289 REAR

OCCUPANTS LEFT FRONT, 50% HYBRID III, 9 CH CERT. AD-92
 RESTRAINT-SEAT BELT AND AIR BAG
 RIGHT FRONT, 50% HYBRID III, 9 CH CERT. AD-140
 RESTRAINT-SEAT BELT AND AIR BAG

BUILD CONDITION 2002 WJ S1 BUILD
 TRIM CODE = WJJH74
 BODY MODEL = C2WJJ7316
 THIS VEHICLE WAS TESTED WITH THE FOLLOWING:
 - DESIGN INTENT DRIVER AIR BAG.
 - DESIGN INTENT PASSENGER AIR BAG.
 - DRIVER SEAT BELT = 5 KN CFR WITH BREED BUCKLE
 - PASS SEAT BELT = 5 KN CFR WITH BREED BUCKLE
 - OCCUPANT RESTRAINT CONTROLER (ORC)
 - RIGHT AND LEFT FRONT CRUSH ZONE SENSORS.
 - RIGHT AND LEFT SIDE IMPACT SENSORS.
 - 02 DESIGN INTENT FUEL SYSTEM.

DATE 06/12/01
TIME 16:15:15.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC09193 ITEM WJ7316

VC09193 30 MPH 30 DEGREE RIGHT ANGULAR, 2002 WJ ITEM WJ7316

2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLAINT.

TEST DATE 06/12/01

TEST SITE CPG

TARGET WEIGHT (LBS) 4247 TOTAL, 2337 FRONT, 1910 REAR. REPRESENTS
33% OPTIONS WEIGHT FOR 2002 WJ 4.7L WJH74.
DOES NOT INCLUDE LUGGAGE OR OCCUPANT WEIGHT.
TEST WEIGHT = 4827 LBS (4827 = 4247 + 330 + 250)

FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT
250 LBS
200 LBS ON BALLAST RACK

EDP TECHNICIAN S. MARCHENIA

No. of Pages 85
CC

M. T. STEBLETON 422-05-01
R. A. TERRY 514-17-39

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC9193, ITEM NUMBER WJ7316, TEST ENGINEER SMITH

V.I.N. 1J8GW48N52C [REDACTED] TEST DATE 6/21/01, ROLL DATE / /

TEST TYPE; 30 MPH FRONT RIGHT 30 DEGREE BARRIER IMPACT

FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 30.4 MPH, TEST WEIGHT 4834 POUNDS.

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

NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE _____ SIDE DOWN FIRST

FUEL LEAKAGE LOCATIONS DURING STATIC ROLL

ROLL TIME					TOTAL
0-90	1ST 5 MIN				0 *
2:00	POST 5 MIN				0 **
90-180	1ST 5 MIN				0 *
1:54	POST 5 MIN				0 **
180-270	1ST 5 MIN				0 *
1:48	POST 5 MIN				0 **
270-360	1ST 5 MIN				0 *
1:47	POST 5 MIN				0 **

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS _____

LAST FORM MODIFICATION 08/22/96 - GAB (TESTOBS896,DOCVCFORMS)

DATE 06/14/01 ELECTRONIC DATA PROCESSING VEHICLE CRASH ENGINEERING
 TIME 10:43:56. EDP TEST LETTER DEPT 5320

VC09226 ITEM WJ7593
 VC09226 30 MPH LEFT 30 DEGREE ANGULAR, 2002 WJ ITEM WJ7593
 2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLIANCE.
 TEST DATE 06/13/01
 TEST SITE CPG

TEST PURPOSE PRIMARY, 2002 USA 208 COMPLIANCE.
 DETERMINE OCCUPANT CRASH PROTECTION.

SECONDARY, 2002 USA 301 COMPLIANCE.
 DETERMINE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED; 30.1 MPH
 DAMAGE LOCATION; FRONT LEFT
 BARRIER TYPE; LEFT 30 DEG
 BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; WJ
 CAR LINE; J
 BODY; 74
 ENGINE; 4.0 LITRE
 ENGINE NOTE; ELECTRONIC FUEL INJECTION
 TRANSMISSION; 4 SPEED AUTO
 TRANS. NOTE;
 VIN AS TESTED; 1J8GW48S02C [REDACTED] MOD.
 VIN AS BUILT; 1J8GW48S02C [REDACTED] MOD.

TEST SPEED 30.2 MPH SOURCE TRAP TIMER

TEST WEIGHT (LBS) 4708 TOTAL, 2449 FRONT, 2259 REAR

OCCUPANTS LEFT FRONT, 50% HYBRID III, 9 CH CERT. AD-104
 RESTRAINT-SEAT BELT AND AIR BAG
 RIGHT FRONT, 50% HYBRID III, 9 CH CERT. AD-139
 RESTRAINT-SEAT BELT AND AIR BAG

DATE 06/14/01
TIME 10:43:56.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC09226 ITEM WJ7593
VC09226 30 MPH LEFT 30 DEGREE ANGULAR, 2002 WJ ITEM WJ7593
2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLIANCE.

TEST DATE 06/13/01
TEST SITE CPG

BUILD CONDITION 2002 WJ S1 BUILD
BODY CODE = WJJP74
FLEET NUMBER = C2WJJ7593
THIS VEHICLE WAS TESTED WITH THE FOLLOWING:
- DESIGN INTENT DRIVER AIR BAG.
- DESIGN INTENT PASSENGER AIR BAG.
- '00 PRODUCTION STEERING COLUMN WITH 14 DEG
RACK AND PAWL TILT MECHANISM.
- DRIVER SEAT BELT = 5 KN CFR WITH BREED BUCKLE
- PASS SEAT BELT = 5 KN CFR WITH BREED BUCKLE
- OCCUPANT RESTRAINT CONTROLER (ORC)
- RIGHT AND LEFT FRONT CRUSH ZONE SENSORS.
- RIGHT AND LEFT SIDE IMPACT SENSORS.
- 02 DESIGN INTENT FUEL SYSTEM.
- HYDRAULIC COOLING MODULE REMOVED FOR TEST.
REPLACED WITH 2000 VISCOUS AND ELECTRIC FANS.
SIMILAR TO 2002 DESIGN INTENT.

TARGET WEIGHT (LBS) 4128 TOTAL, 2272 FRONT, 1856 REAR. REPRESENTS
33% OPTIONS WEIGHT FOR 2002 WJ 4.0 L WJJP74
DOES NOT INCLUDE LUGGAGE OR OCCUPANT WEIGHT.
TEST WEIGHT = 4708 LBS (4708 = 4128 + 250 + 330)

FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT
100 LBS. SECURED IN REAR SEAT AREA

EDP TECHNICIAN S. MARCHENIA

No. of Pages 97
CC

M. T. STEBLETON 422-05-01
R. A. TERRY 514-17-39

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC9226, ITEM NUMBER WJ7593, TEST ENGINEER MANNEY

V.I.N. 1J8GW48S02C [REDACTED], TEST DATE 6/13/01, ROLL DATE 6/14/01

TEST TYPE; 30 MPH 30 DEGREE LEFT ANGULAR IMPACT

FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 30.2 MPH, TEST WEIGHT 4708 POUNDS.

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

NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE LEFT SIDE DOWN FIRST

		FUEL LEAKAGE LOCATIONS DURING STATIC ROLL				TOTAL
ROLL TIME						
0-90	1ST 5 MIN					<u>0</u> *
<u>1:47</u>	POST 5 MIN					<u>0</u> **
90-180	1ST 5 MIN					<u>0</u> *
<u>1:49</u>	POST 5 MIN					<u>0</u> **
180-270	1ST 5 MIN					<u>0</u> *
<u>1:47</u>	POST 5 MIN					<u>0</u> **
270-360	1ST 5 MIN					<u>0</u> *
<u>1:44</u>	POST 5 MIN					<u>0</u> **

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS _____

DATE 05/18/01 ELECTRONIC DATA PROCESSING VEHICLE CRASH ENGINEERING
 TIME 12:22:10. EDP TEST LETTER DEPT 5320

VC09194 ITEM WJ7323
 VC09194 20 MPH RIGHT LATERAL FMVSS 301, 2002 WJ ITEM WJ7323
 2002 FUEL SYSTEMS INTEGRITY COMPLIANCE.
 TEST DATE 05/18/01
 TEST SITE CPG

TEST PURPOSE PRIMARY, 2002 USA 301 COMPLIANCE.
 DETERMINE FUEL SYSTEM INTEGRITY

IMPACT TYPE TARGET SPEED; 20.1 MPH
 DAMAGE LOCATION; RIGHT SIDE (FULL)
 BARRIER TYPE; RIGHT TYPE IV
 BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; WJ
 CAR LINE; J
 BODY; 74
 ENGINE; 4.7 LITRE
 ENGINE NOTE; ELECTRONIC FUEL INJECTION
 TRANSMISSION; 4 SPEED AUTO 4x4
 TRANS. NOTE;
 VIN AS TESTED; 1J8GW58S62C [REDACTED] MOD.
 VIN AS BUILT; 1J8GW58S62C [REDACTED] MOD.

TEST SPEED 20.2 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS) 4841 TOTAL, 2683 FRONT, 2158 REAR

OCCUPANTS LEFT FRONT - 50% HYBRID II, BALLAST AD-59
 RESTRAINT-SEAT BELT ONLY.
 RIGHT FRONT - 50 % HYBRID II, BALLAST AD-50
 RESTRAINT-SEAT BELT ONLY.

BUILD CONDITION 2002 S1 BUILD
 FLEET NUMBER = C2WJJ7323
 BODY CODE = WJJP74
 THE VEHICLE IS TESTED WITH THE FOLLOWING:
 - 2002 FUEL SYSTEM
 - 2002 ORC

TARGET WEIGHT (LBS) 4252 TOTAL, 2342 FRONT, 1910 REAR. REPRESENTS
 33% OPTION WEIGHT FOR 2002 WJ 4.7L WJJP74.
 DOES NOT INCLUDE LUGGAGE OR OCCUPANT WEIGHT.
 TEST WEIGHT = 4832 LBS (4832 = 4252 + 250 + 330)

FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT
 250 LBS
 150 LBS ON LF FLOOR.
 150 LBS ON RF FLOOR.

DATE 05/18/01
TIME 12:22:10.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC09194 ITEM WJ7323
VC09194 20 MPH RIGHT LATERAL FMVSS 301, 2002 WJ ITEM WJ7323
2002 FUEL SYSTEMS INTEGRITY COMPLIANCE.
TEST DATE 05/18/01
TEST SITE CPG
EDP TECHNICIAN S. MARCHENIA

No. of Pages 25
CC

M. T. STEBLETON 422-05-01
R. A. TERRY 514-17-41

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC9194, ITEM NUMBER WJ7323, TEST ENGINEER KOBYLARZ

V.I.N. 1J8GW58S62C [REDACTED], TEST DATE 5/18/11, ROLL DATE 6/5/21/01

TEST TYPE; 20 MPH RT LATERAL BARRIER IMPACT

FUEL; TYPE AND QUANTITY - 767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 20.2 MPH, TEST WEIGHT 4811 POUNDS.

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

[] NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE Left SIDE DOWN FIRST

FUEL LEAKAGE LOCATIONS DURING STATIC ROLL

ROLL TIME					TOTAL	
0-90	1ST 5 MIN				0	*
2:02	POST 5 MIN				0	**
90-180	1ST 5 MIN				0	*
1:59	POST 5 MIN				0	**
180-270	1ST 5 MIN				0	*
2:00	POST 5 MIN				0	**
270-360	1ST 5 MIN				0	*
2:03	POST 5 MIN				0	**

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS No fuel leaks

LAST FORM MODIFICATION 08/22/96 - GAB (TESTOBS896, DOCVCFORMS)

DATE 05/16/01 ELECTRONIC DATA PROCESSING VEHICLE CRASH ENGINEERING
 TIME 13:57:13. EDP TEST LETTER DEPT 5320

VC09186 ITEM WJ7383
 VC09186 20 MPH LEFT LATERAL FMVSS 301, 2002 WJ ITEM WJ7383
 2002 FUEL SYSTEMS INTEGRITY COMPLIANCE.
 TEST DATE 05/16/01
 TEST SITE CPG

TEST PURPOSE PRIMARY, 2002 USA 301 COMPLIANCE.
 DETERMINE FUEL SYSTEM INTEGRITY

IMPACT TYPE TARGET SPEED; 20.1 MPH
 DAMAGE LOCATION; LEFT SIDE (FULL)
 BARRIER TYPE; LEFT TYPE IV
 BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; WJ
 CAR LINE; J
 BODY; 74
 ENGINE; 4.0 LITRE
 ENGINE NOTE; ELECTRONIC FUEL INJECTION
 TRANSMISSION; 4 SPEED AUTO 4x4
 TRANS. NOTE;
 VIN AS TESTED; 1J8GW48S52C [REDACTED] MOD.
 VIN AS BUILT; 1J8GW48S52C [REDACTED] MOD.

TEST SPEED 20.1 MPH BY TRAP TIMER

TEST WEIGHT (LBS) 4627 TOTAL, 2457 FRONT, 2170 REAR

OCCUPANTS LEFT FRONT - 50% HYBRID II, BALLAST AD-59
 RESTRAINT-SEAT BELT ONLY.
 RIGHT FRONT - 50 % HYBRID II, BALLAST AD-50
 RESTRAINT-SEAT BELT ONLY.

BUILD CONDITION 2002 S1 BUILD
 FLEET NUMBER = C2WJJ7383
 BODY CODE = WJJH74
 THE VEHICLE IS TESTED WITH THE FOLLOWING:
 - 2002 FUEL SYSTEM
 - 2002 ORC

TARGET WEIGHT (LBS) 4049 TOTAL, 2240 FRONT, 1809 REAR. REPRESENTS
 33% OPTION WEIGHT FOR 2002 WJ 4.0L WJJH74.
 DOES NOT INCLUDE LUGGAGE OR OCCUPANT WEIGHT.
 TEST WEIGHT = 4629 LBS (4629 = 4049 + 250 + 330)

FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT
 250 LBS
 200 LBS SECURED IN LF & RF FLOORPAN

DATE 05/16/01
TIME 13:57:13.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC09186 ITEM WJ7383
VC09186 20 MPH LEFT LATERAL FMVSS 301, 2002 WJ ITEM WJ7383
2002 FUEL SYSTEMS INTEGRITY COMPLIANCE.
TEST DATE 05/16/01
TEST SITE CPG
EDP TECHNICIAN S. MARCHENIA

No. of Pages 25
CC

M. T. STEBLETON 422-05-01
R. A. TERRY 514-17-41

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC9186, ITEM NUMBER WJ7383, TEST ENGINEER SMITH

V.I.N. 1J8GW48S52C [REDACTED] TEST DATE 5/16/01, ROLL DATE 5/16/01

TEST TYPE; 20 MPH LT LATERAL BARRIER IMPACT

FUEL; TYPE AND QUANTITY - 767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 20.1 MPH, TEST WEIGHT 4627 POUNDS.

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

NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE _____ SIDE DOWN FIRST

FUEL LEAKAGE LOCATIONS DURING STATIC ROLL

ROLL TIME					TOTAL	
0-90	1ST 5 MIN					*
<u>1:51</u>	POST 5 MIN					**
90-180	1ST 5 MIN					*
<u>1:55</u>	POST 5 MIN					**
180-270	1ST 5 MIN					*
<u>2:00</u>	POST 5 MIN					**
270-360	1ST 5 MIN					*
<u>1:59</u>	POST 5 MIN					**

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS _____

Post-it* Fax Note	7671	Date	<u>5-17-01</u>	# of pages	<u>1</u>
To	<u>Rich Terry</u>	From	<u>J Smith</u>		
Co./Dept.	<u>JTE</u>	Co.			
Phone #		Phone #	<u>836 5156</u>		
Fax #		Fax #			

LAST FORM MODIF

VCFORMS)

DATE 05/17/01 ELECTRONIC DATA PROCESSING VEHICLE CRASH ENGINEERING
 TIME 10:53:43. EDP TEST LETTER DEPT 5320

VC09183 ITEM WJ7279
 VC09183 30 MPH REAR IMPACT, 2002 WJ COMPLIANCE ITEM WJ7279
 2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLIANCE.
 TEST DATE 05/16/01
 TEST SITE CPG

TEST PURPOSE PRIMARY, 2002 USA 301 COMPLIANCE.
 DETERMINE FUEL SYSTEM INTEGRITY

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

VEHICLE BODY CLASS; WJ
 CAR LINE; J
 BODY; 74
 ENGINE; 4.7 LITRE
 ENGINE NOTE; ELECTRONIC FUEL INJECTION
 TRANSMISSION; 4 SPEED AUTO
 TRANS. NOTE;
 VIN AS TESTED; 1J8GW58N12C [REDACTED] MOD.
 VIN AS BUILT; 1J8GW58N12C [REDACTED] MOD.

TEST SPEED 30.3 MPH BY TRAP TIMER

TEST WEIGHT (LBS) 4833 TOTAL, 2719 FRONT, 2114 REAR

OCCUPANTS LEFT FRONT, 50% HYBRID II BALLAST AD-60
 RESTRAINT-SEAT BELT.
 RIGHT FRONT, 50% HYBRID II BALLAST AD-47
 RESTRAINT-SEAT BELT

BUILD CONDITION 2002 WJ S1 BUILD
 BODY MODEL = WJJP74
 FLEET NUMBER = C2WJJ7279
 THIS VEHICLE WAS TESTED WITH THE FOLLOWING:
 - OCCUPANT RESTRAINT CONTROLLER (ORC)
 - 02 DESIGN INTENT FUEL SYSTEM.

TARGET WEIGHT (LBS) 4252 TOTAL, 2348 FRONT, 1904 REAR. REPRESENTS
 33% OPTIONS WEIGHT FOR 2002 WJ 4.7L WJJP74.
 DOES NOT INCLUDE LUGGAGE OR OCCUPANT BALLAST.
 APPROX TEST WEIGHT = 4832 LBS (4832=2452+250+330)

FUEL AND BALLAST 19.0 GALLONS OF STODDARD SOLVENT
 250 LBS
 100 LBS RF
 75 LBS LF

DATE 05/17/01
TIME 10:53:43.

ELECTRONIC DATA PROCESSING
EDP TEST LETTER

VEHICLE CRASH ENGINEERING
DEPT 5320

VC09183 ITEM WJ7279
VC09183 30 MPH REAR IMPACT, 2002 WJ COMPLIANCE ITEM WJ7279
2002 MODEL YEAR "WJ" JEEP GRAND CHEROKEE COMPLAINCE.
TEST DATE 05/16/01
TEST SITE CPG
EDP TECHNICIAN S. MARCHENIA

No. of Pages 29
CC

M. T. STEBLETON 422-05-01
R. A. TERRY 514-17-39

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC9183, ITEM NUMBER WJ7279, TEST ENGINEER SMITH

V.I.N. 1J8GW58N12C [REDACTED] TEST DATE 5/16/01, ROLL DATE 5/17/01

TEST TYPE; 30 MPH TYPE IV MOVING BARRIER REAR IMPACT

FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 30.3 MPH, TEST WEIGHT 4833 POUNDS.

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

[] NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE [] SIDE DOWN FIRST

		FUEL LEAKAGE LOCATIONS DURING STATIC ROLL				TOTAL
ROLL TIME						
0-90	1ST 5 MIN					0 *
1:45	POST 5 MIN					0 **
90-180	1ST 5 MIN					0 *
1:46	POST 5 MIN					0 **
180-270	1ST 5 MIN					0 *
1:48	POST 5 MIN					0 **
270-360	1ST 5 MIN					0 *
1:49	POST 5 MIN					0 **

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS

[]
[]
[]

Post-it* Fax Note	7671	Date	5-17-01	# of pages	1
To	Rich Terry	From	J Smith		
Co./Dept	JTE	Co.			
Phone #		Phone #	836 5256		
Fax #		Fax #			

LAST FORM MODIFICATION

;))

VEHICLE CRASH ENGINEERING
 VEHICLE CRASH TEST LETTER

PAGE 01

VC10141 48.3 KPH REAR (FULL) TYPE IV ITEM 3C535666
 03 WJ, USA 301-REAR COMPLIANCE TEST
 TEST DATE 08/30/02
 TEST SITE CPG

TEST PURPOSE PRIMARY, 2003 USA 301-REAR COMPLIANCE

IMPACT TYPE TARGET SPEED; 48.3 KPH
 DAMAGE LOCATION; REAR (FULL)
 BARRIER TYPE; REAR TYPE IV
 BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; WJ
 CAR LINE; 2003
 BODY; WJ
 ENGINE; 4.7 LITER
 ENGINE NOTE; V8
 TRANSMISSION; 5 SPEED AUTO
 TRANS. NOTE;
 VIN AS TESTED; 1J4GW48N73C [REDACTED] MOD.
 VIN AS BUILT; 1J4GW48N73C [REDACTED] MOD.

TEST SPEED 48.95 KPH BY TRAP AVERAGE

TEST WEIGHT (KG) 2239 TOTAL, 1155 FRONT, 1084 REAR

OCCUPANTS 1L - 50TH MALE, 0 - CH AD-75
 RESTRAINT- 3-PT UNIBELT ONLY
 1R - 50TH MALE, 0 - CH AD-99
 RESTRAINT- 3-PT UNIBELT ONLY

BUILD CONDITION ORIGINAL BUILD: 2003 V1 BUILD
 MODIFICATIONS: - CURRENT PRODUCTION TRAILER HITCH
 INSTALLED FOR TEST.
 - BRUSH GUARD FUEL TANK ASSY WITH REINFORCEMENT.
 - CONTROL VALVE WITH REINFORCED COLLAR.

TARGET WEIGHT (KG) 2239 TOTAL
 INCLUDING BALLAST AND OCCUPANTS

FUEL AND BALLAST 71.9 LITERS STODDARD SOLVENT
 0 KG BALLAST WEIGHT SECURED IN CARGO AREA
 226.8 KG ADDITIONAL BALLAST WEIGHT ADDED
 SECURED BY RACK IN SECOND ROW.

REPORT CODES A = TRANSDUCER DATA B = ALL FILM DATA

VEHICLE CRASH ENGINEERING

PAGE 02

VEHICLE CRASH TEST LETTER

VC10141 48.3 KPH REAR (FULL) TYPE IV ITEM 3C535666

03 WJ, USA 301-REAR COMPLIANCE TEST

TEST DATE 08/30/02

TEST SITE CPG

DISTRIBUTION

M. STEBELTON

422-05-01 (AB)

R. TERRY

514-17-39 (AB)

DATE 09/04/02

TIME 14:59:06.

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC10141, ITEM NUMBER 3C535666, TEST ENGINEER MANNEY

V.I.N. 1J4GW48N73C [REDACTED] TEST DATE 8/30/02 ROLL DATE 8/30/02

TEST TYPE; 30 MPH REAR TYPE IV MOVING BARRIER IMPACT

FUEL; TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 19.0 GALLONS

TEST SPEED 30.4 MPH, TEST WEIGHT 4935 POUNDS.

POST IMPACT LEAKAGE (OZ); AT IMPACT 0

1ST 5 MIN. 0

NEXT 25 MIN. 0

POST TEST PRESSURE CHECK MA

ELECTRIC FUEL PUMP RUN N/A

NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE LEFT SIDE DOWN FIRST

FUEL LEAKAGE LOCATIONS DURING STATIC ROLL

ROLL TIME						TOTAL	
0-90	1ST 5 MIN					0	*
<u>2:26</u>	POST 5 MIN					0	**
90-180	1ST 5 MIN					0	*
<u>2:18</u>	POST 5 MIN					0	**
180-270	1ST 5 MIN					0	*
<u>2:05</u>	POST 5 MIN					0	**
270-360	1ST 5 MIN					0	*
	POST 5 MIN					0	**

* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS _____

LAST FORM MODIFICATION 08/22/96 - GAB (TESTOBS896,DOCVCFORMS)

Information



Report #:

Compliance Report

Subject: Fuel Loss Limitations and Static Rollover Test Procedures (For CMVSR or FMVSS 301)

Model Year: 1999

Procedure: CP-246G CP-245F CP-234I CP-233H CP-232F CP-194K

Standard: MVSS 301

Standard Title: Fuel System integrity

Requirements: Fluid Loss Limitation and Static Rollover Test Procedures to Determine Vehicle Fuel System Integrity

Vehicle Type: MPV

Family Codes: WJ

Approvals

Edward A Zylk
Department Manager

07/10/98 11:26:35 AM
Approval Date

Donald F Buser
Executive Engineer

07/10/98 11:37:55 AM
Approval Date

Summary



- Subject:** Fuel Loss Limitations and Static Rollover Test Procedures (For CMVSR or FMVSS 301)
- Objective:** Verification of design Compliance with the Requirements of federal Motor Vehicle Safety Standard FMVSS 301, and Motor Vehicle Safety Regulation CMVSR 301.
- Conclusion:** All Chrysler Corporation 1999 `WJ' Sport Utility Vehicles with G.V.W.R. of 10,000 lbs and under, as design released, comply with the performance requirements of FMVSS 301 - Sections S3., S5., S6. and S7.

Safety Documentation Compliance Report

Prepared By: Judson B Estes

Date: 07/10/1998

Approved By: Edward A Zylak

Date: 07/10/1998

Issued By: 1060 - Vehicle Impact & Safety
Development (Jeep)

Discussion



w.J301.1.doc

Appendix



Safety Documentation Compliance Report

**FUEL SYSTEM INTEGRITY
1999 'WJ' BODY, JEEP "GRAND CHEROKEE" SPORT UTILITY**

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

DISCUSSION

The 1999 MY 'WJ' is an all new vehicle from the 1998 model year.

The following design features are incorporated in the 1999 M.Y. vehicle;

Vehicle/Body:

- Left hand drive model.
- 4-door body style.
- 106 inch wheelbase and unibody construction.
- The front bumper system consists of a steel bumper crossmember faced with an energy absorbent foam and covered with a molded fascia.

Capacity:

- Five (5) person seating capacity - front bucket seats.
- 300 lbs. of luggage capacity.
- 20 gallon rear mounted plastic fuel tank with a filler neck located on the left side of the vehicle. A fuel tank stone shield is standard while a skid plate is optional.

Drivetrain:

- 4.0L (I6) or 4.7L (V8) multi-point injection (MPI) engines are offered.
- Rear or 4 wheel drive.
- 4-speed automatic transmission.

Occupant Restraint/Interior Systems:

- Corporate energy absorbing steering column incorporating a tilt-wheel with a floor console shifter.
- A 3-point active seat belt with adjustable upper anchorage and a constant force retractor (CFR) is a primary restraint for the driver.
- A supplementary driver restraint airbag is contained in the four spoke luxury steering wheel.
- A 3-point active seat belt with adjustable upper anchorage and a constant force retractor (CFR) is a primary restraint for the passenger.
- An airbag is provided as a supplementary restraint for the passenger.
- A single point electronic sensor mounted under the center console is used to control the supplemental restraint airbag system.

All tests were conducted with two restrained dummies at driver and right front passenger location and with 300 lbs. of luggage ballast.

A total of 6 (SIX) vehicles were tested to demonstrate compliance of the 'WJ' to the requirements of FMVSS 301, Fuel System Integrity. These vehicles and test results are shown on the attached summary.

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Safety Documentation Compliance Report

DISCUSSION (cont'd)

Test were conducted according to the following test procedure:

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

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

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

The test vehicles met the performance requirements of FMVSS 301 and did not experience fluid losses that exceed 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'.

Based on the above, the 1999 'WJ' Body, Jeep "Grand Cherokee" Sport Utility vehicles, as design released, DOES MEET the performance requirements of FMVSS 301 - Sections S3., S5., S6. and S7.

SUMMARY I
 FUEL SYSTEM INTEGRITY
 1999 'WJ'-BODY, JEEP "GRAND CHEROKEE" SPORT UTILITY

Test Mode Vehicle Crash Number and date tested Description of Vehicle Vehicle Identification Number	Leakage Summary				
	At Impact	In The Following 30 Minutes	In The Rollover Fixture	Leakage Total	Passed

Flat Frontal VC 7022 06/19/98 4.0 litre, 4x4, auto., C1 1J4GZ68NXXC [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.	Yes
Flat Frontal VC 7023 on 06/19/98 4.7 litre, 4x4, auto., C1 1J4GZ58S2XC [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.	Yes
Left Lateral VC 7049 on 07/01/98 4.0 litre, 4x4, auto., STO 1J4GW58S4XC [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.	Yes
Right Angular VC 7050 on 07/03/98 4.0 litre, 4x4, auto., STO 1J4GW58S6XC [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.	Yes
Left Angular VC 7044 on 06/29/98 4.7 litre, 4x4, auto., C1 1J4GZ58N8XC [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.	Yes
Rear VC 7029 on 06/22/98 4.78 litre, 4x4, auto., C1 1J4GZ68N4XC [REDACTED]	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.	Yes

Allowable Leakage by Weight

Safety Documentation Compliance Report

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.

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