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EA12-005

CHRYSLER

12-13-2012

Enclosure 6D

301 Compliance Documents

KJ 2002 - 2007 Compliance Documentation

Information

DAIMLER CHRYSLER

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-234l 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: KJ

Approvals

Approvals

Christopher J Now ak Responsible Executive

John H Broomall

Approving Executive

Approved by Christopher J Nowak 06/03/2003 10:44:22 AM Approval Date

Approved by John H Broomall 06/03/2003 11:52:56 AM Approval Date

Summary

DAIMLER CHRYSLER

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 DaimlerChrysler 2004 model year "KJ" Body, Jeep "Liberty" Sport Utility vehicle,

complies with the performance requirements of FMVSS 301, Sections S5.1, S5.2, S5.5, and

S5.6.

Safety Documentation Compliance Report

Prepared By:Suzanne M MarshDate:05/30/2003Approved By:Christopher J NowakDate:06/03/2003

Issued By: 1060 - Energy

Management/NVH/Aero-Thermal (Jeep)

Discussion

DAIMLERCHRYSLER

The 2004 model year "KJ" series Jeep Liberty design features include:

Vehicle/Body:

- ? Four (4) door vehicle only
- ? Rear outside mounted spare tire on swing gate with rear flipper glass
- ? Trailer hitch (optional)

Capacity:

- ? Five (5) person seating capacity
- ? 400 pounds of luggage capacity
- ? Fuel tank capacity of 19.5 gallons

Drivetrain:

- ? 3.7L (6-cyl) engine with manual and automatic transmission or 2.4L (4-cyl) engine with manual transmission only are offered
- ? 4 w heel drive and 2 w heel drive are offered w ith either engine configuration

Occupant Restraint/Interior Systems:

- ? A 3-point active seat belt with adjustable upper anchorage, a 9.5mm diameter torsion bar (3.3kN) constant force retractor, and a pretensioner is the primary restraint for the driver.
- ? A 3-point active seat belt with adjustable upper anchorage, a 9.5mm diameter torsion bar (3.3kN) constant force retractor, and a pretensioner is the primary restraint for the passenger.
- ? Next generation airbags are controlled through a center module with front remote sensors (standard)
- ? A supplementary driver restraint airbag is contained in the four (4) spoke steering wheel. Configuration: 28" dia, 230kPA inflator, 10" tether, 2X27.5mm venting
- ? A supplementary passenger restraint airbag is contained in the instrument panel. Configuration: 160L, PPl32S 50/50 LS2 inflator, 2X50mm venting
- ? Side inflatable curtains (left and right sides) are controlled through a center module with left and right remote sensors mounted at the b-pillar (optional)

Twelve (12) vehicles were tested to demonstrate compliance of the "KJ" to the requirements of FMVSS 301, Fuel System Integrity. A summary of these vehicles and test results are attached.

CONCLUSION:

Based on the testing and analysis conducted, the DaimlerChrysler 2004 model year "KJ" Body, Jeep "Liberty" Sport Utility vehicle, complies with the performance requirements of FMVSS 301, Sections S5.1, S5.2, S5.5, S5.6.

EA12-005- Chrysler -006418

Compliance Report: 2004 CP-246G CP-245F CP-234I CP-233H CP-232F CP-194k

Appendix

DAIMLERCHRYSLER

Test Mode Vehicle Crash Number and Date Tested Description of Vehicle Vehicle Identification Data (VIN)	At Impact	Leakage in the follow ing 30 minutes	Leakage in the rollover fixture	Total Leakage
30mph Rear VC10546 on 3/10/03 3.7L 4x4, Manual, S1 Build 1J8GL38K74W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
30mph Angular / Left VC10560 on 3/11/03 3.7L 4X4, Manual, S1 Build 1J8GL48K14W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
25mph Angular / Right VC10580 on 5/23/03 3.7L 4X4, Auto, S1 Build 1J8GL48K14W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
25mph Angular / Left VC10559 on 5/23/03 3.7L 4X4, Auto, S1 Build 1J8GL48K84W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
20mph Flat Frontal VC10644 on 5/24/03 2.4L 4X2, Manual, S1 Build 1J8FK48164W1	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
30mph Flat Frontal VC10589 on 5/25/03 2.4L 4X2, Manual, S1 Build 1J8FK48184W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
25mph Flat Frontal VC10532 on 5/24/03 3.7L 4X4, Auto, S1 Build 1J4GL58K44W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
25mph Flat Frontal VC10588 on 5/26/03 2.4L 4X2, Manual, S1 Build 1JFK48104W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
30mph Flat Frontal VC10579 on 5/26/03 2.4L 4X2, Manual, S1 Build 1JFK48174W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
20mph Flat Frontal VC10800 on 5/26/03 2.4L 4X2, Manual, S1 Build 1J8FK48164W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Left Lateral VC09071 tested 2/28/01 3.7L 4x4, Auto, S1 Build 1J8GL48K72W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Right Lateral VC09106 tested 3/17/01 3.7L 4x4, Auto, S2 Build 1J4GL48K32W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.

1J8GL48K Subjective Orde	r - Hamptoր vs. Daimlei	Chrysler Cor	poration	HAM220002
Right Lateral VC09106 tested 3/17/01 3.7L 4x4, Auto, S2 Build 1J4GL48K32W	Zero Oz.	Zero Oz.	Zero Oz.	Page 6 Zero Oz.

Information

DAIMLERCHRYSLER

Report #:

Compliance Report

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

Model Year: 2005

Procedure: CP-246G CP-245F CP-234l 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: KJ

<u>Approvals</u>

Approvals

Christopher J Nowak
Responsible Executive

John H Broomall

Approving Executive

Approved by Christopher J Nowak 06/01/2004 04:25:30 PM Approval Date

Approved by John H Broomall 06/01/2004 04:31:00 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 Daimlerchrysler 2005 model year "KJ" Body, Jeep "Liberty" Sport Utility vehicle,

complies with the performance requirements of FMVSS 301, Sections S5.1, S5.5, and S5.6.

Safety Documentation Compliance Report

Prepared By: Suzanne M Marsh

Approved By: Christopher J Nowak

Date: 05/28/2004

Date: 06/01/2004

Issued By: Energy Management/NVH (Jeep)

Discussion

DAIMLERCHRYSLER

The 2005 model year "KJ" series Jeep Liberty design features include:

Vehicle/Body:

- ? Four (4) door vehicle only
- ? Rear outside mounted spare tire on swing gate with rear flipper glass
- ? Trailer hitch (optional)

Capacity:

- ? Five (5) person seating capacity
- ? 400 pounds of luggage capacity
- ? Fuel tank capacity of 20.5 gallons

Drivetrain:

- ? 3.7L (6-cyl) engine with manual and automatic transmission, 2.4L (4-cyl) engine with manual transmission, or 2.8L Diesel (4-cyl) with automatic transmission are offered
- ? 4 wheel drive and 2 wheel drive are offered with the 3.7L and the 2.4L engine configurations. 4 wheel drive only is offered for the 2.8L engine configuration

Occupant Restraint/Interior Systems:

- ? A 3-point active seat belt with adjustable upper anchorage, a 9.5mm diameter torsion bar (3.3kN) constant force retractor, and a pretensioner is the primary restraint for the driver.
- ? A 3-point active seat belt with adjustable upper anchorage, a 9.5mm diameter torsion bar (3.3kN) constant force retractor, and a pretensioner is the primary restraint for the passenger.
- ? Next generation airbags are controlled through a center module with front remote sensors (standard)
- ? A supplementary driver restraint airbag is contained in the four (4) spoke steering wheel. Configuration: 28" dia, 230kPA inflator, 9" tethers, 2X27.5mm venting
- ? A supplementary passenger restraint airbag is contained in the instrument panel. Configuration:
- 160L, PPI32S 50/50 V508 inflator, 2X50mm venting
- ? Side inflatable curtains (left and right sides) are controlled through a center module with left and right remote sensors mounted at the b-pillar (optional)

Ten (10) vehicles have been tested to demonstrate compliance of the "KJ" to the requirements of FMVSS 301, Fuel System Integrity. A summary of these vehicles and test results are attached.

CONCLUSION:

Based on the testing and analysis conducted, the DaimlerChrysler 2005 model year "KJ" Body, Jeep "Liberty" Sport Utility vehicle, complies with the performance requirements of FMVSS 301, Sections S5.1, S5.5, and S5.6.

EA12-005- Chrysler -006425

Appendix

DAIMLERCHRYSLER

Test Mode Vehicle Crash Number and Date Tested Description of Vehicle Vehicle Identification Data (VIN)	At Impact	Leakage in the following 30 minutes	Leakage in the rollover fixture	Total Leakage
30mph Rear VC11711 on 5/13/04 3.7L 4x4, Manual, S1 Build 1J8GL38K65W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
30mph Angular / Left VC 11715 on 5/17/04 3.7L 4X4, Auto, S1 Build 1J8GL48K05W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
33.5mph Lateral / Left VC 11713 on 5/15/04 3.7L 4X4, Manual, S1 Build 1J8GL48K25W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
30mph Flat Frontal Female VC 11762 on 5/24/04 2.4L 4X2, Manual, S0PhC Build 1J8FK481X5W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
25mph Flat Frontal Female VC11763 on 5/24/04 3.7L 4X4, Auto, S0PhC Build 1J8GL58K65W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
25mph Flat Frontal Male VC11766 on 5/26/04 2.4L 4X4, Manual, S1 Build 1J8G6C8155W5	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
25mph Angular / Right VC 10580 on 5/23/03 3.7L 4X4, Auto, S1 Build 1J8GL48K14W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
25mph Angular / Left VC 10559 on 5/23/03 3.7L 4X4, Auto, S1 Build 1J8GL48K84W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
20mph Flat Frontal VC 10644 on 5/24/03 2.4L 4X2, Manual, S1 Build 1J8FK48164W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
20mph Flat Frontal VC 10800 on 5/26/03 2.4L 4X2, Manual, S1 Build 1J8FK48164W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.

EA12-005- Chrysler -006426



Compliance Report

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

Model Year:

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: Family Codes:

Approvals

Edward A Zylik

Department Manager 03/21/2001 08:45:57 AM Approval Date

C.C. Jylk John Haroull John H Broomall Executive Engineer 03/21/2001 09:20:45 AM Approval Date

EA12-005- Chrysler -006408

Summary

DAIMLERCHRYSLER

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

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

Conclusion: The DaimlerChrysler 2002 model year 3.7 Litre 'KJ' Body Jeep "Liberty" Sport Utility Vehicle, as designed and released, complies with the performance requirements of FMVSS 301 - Sections S3., S5., S6. and S7.

Safety Documentation Compliance Report

Prepared By: Anne Stefango **Approved By:** Edward A Zylik Date: 03/21/2001 Date: 03/21/2001

Issued By: 1060 - Impact Development (Jeep)

Discussion

The "KJ" series Jeep is a new vehicle for the 2002 model year.

The following design features have been incorporated:

Vehicle/Body:

- Four (4) door vehicle only
- outside mounted swing gate with rear flipper glass and outside spare tire
- trailer hitch (optional)
- skid plate (optional)

- Capacity
 Five (5) person seating capacity
 300 pounds of luggage capacity
 fuel tank capacity of 18.5 gallons

Drivetrain

- 3.7L (6-cyl) engine with manual and automatic transmission or 2.4L (4-cyl) engine with manual transmission only are offered (The 2.4L is scheduled for in November 2001)
- 4 wheel drive and 2 wheel drive are offered with either engine configuration

Occupant Restraint/Interior Systems:

- A 3-point active seat belt with adjustable upper anchorage and a pretensioner is the primary restraint for the driver.
- A 3-point active seat belt with adjustable upper anchorage and a constant force retractor is the primary restraint for the passenger
- Next generation airbags controlled through a center module with front remote
- A supplementary driver restraint airbag is contained in the four (4) spoke steering wheel
- A supplementary passenger restraint airbag is contained in the instrument panel
- Side inflatable curtain controlled by autonomous sensors mounted at the b-pillar (optional)

Eight (8) of vehicles were tested to demonstrate compliance of the "KJ" to the requirements of FMVSS 301, Fuel System Integrity. A summary of these vehicles and the test results are attached.

CONCLUSION:

Based on the testing conducted, the DaimlerChrysler 2002 model year 3.7 Litre 'KJ' Body Jeep "Liberty" Sport Utility Vehicle, complies with the performance requirements of FMVSS 301 - Sections S3., S5., S6. and S7.

SUMMARY FUEL SYSTEM INTEGRITY 2002 MODEL YEAR 'KJ' BODY JEEP "LIBERTY"

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 VC09108 tested 3/18/01 3.7Litre, 4x4, auto, S1 1/8GL58K32W	Zero Oz.	Zero Oz.	Zeto Oz.	Zero Oz.
Flat Frontal VC09096 tested 3/17/01 3.7Litre, 4x2, auto, S1 1/8GK48K02W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Right Angular VC09027 tested 3/16/01 3.7Litre, 4x4, auto, S1 1J8GL58K82W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Left Angular VC09085 tested 3/9/01 3.7Litre 4x2, auto, S2 1J8GL58K22W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Rear VC09094 tested 3/12/01 3.7Litre, 4x4, auto, S1 1J8GL58K02W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Rear VC09026 tested 1/29/01 3.7Litre, 4x4, auto, S1 1J8GL48K92W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Left Lateral VC09071 tested 2/28/01 3.7Litre, 4x4, auto, S1 1J8GL48K72W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Right Lateral VC09106 tested 3/17/01 3,7Litre, 4x4, auto, S2 1J4GL48K32W	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.



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: KJ

Approvals

Christopher J Nowak

Department Manager

03/28/2002 02:04:14 PM

Approval Date

John H Broomall Executive Engineer Aphs Haronall

03/28/2002 05:21:40 PM Approval Date

Summary

Daimler Chrysler

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 DaimlerChrysler 2003 model year "KJ" Body, Jeep "Liberty" Sport Utility vehicle, complies with the performance requirements of FMVSS 301, Sections S3, S5, S6, and S7.

Safety Documentation Compliance Report

 Prepared By:
 Eric G Willis
 Date: 03/21/2002

 Approved By:
 Christopher J Nowak
 Date: 03/28/2002

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

Discussion

DAIMLERCHRYSLER

The 2003 model year "KJ" series Jeep Liberty is carry-over in terms of FMVSS 301 Fuel Loss Limitations and Static Rollover Test Procedures to Determine Vehicle Fuel Systems Integrity. No additional testing was conducted.

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

Vehicle/Body:

- Four (4) door vehicle only
- Rear outside mounted spare tire on swing gate with rear flipper glass
- Trailer hitch (optional)

- Capacity:

 Five (5) person seating capacity

 Laggage capacity 400 pounds of luggage capacity Fuel tank capacity of 18.5 gallons

Drivetrain:

- 3.7L (6-cyl) engine with manual and automatic transmission or 2.4L (4-cyl) engine with manual transmission only are offered
- 4 wheel drive and 2 wheel drive are offered with either engine configuration

Occupant Restraint/Interior Systems:

- A 3-point active seat belt with adjustable upper anchorage, a 3.3kN constant force retractor,
- and a pretensioner is the primary restraint for the driver.

 A 3-point active seat belt with adjustable upper anchorage and a 2.5kN constant force retractor
- is the primary restraint for the passenger.
- Next generation airbags are controlled through a center module with front remote sensors (standard)
- A supplementary driver restraint airbag is contained in the four (4) spoke steering wheel. Configuration: 28" dia, 230kPA inflator, 11" tether, 2X30mm venting
- A supplementary passenger restraint airbag is contained in the instrument panel.
- Configuration: 125L, P6.3 HGI inflator, 2X65mm venting Side inflatable curtains (left and right sides) are controlled by autonomous sensors mounted at the b-pillar (optional)

CONCLUSION:

Based on the testing and analysis conducted on the 2002 model year, the DaimlerChrysler 2003 model year "KJ" Body, Jeep "Liberty" Sport Utility vehicle, complies with the performance requirements of FMVSS 301, Sections S3, S5, S6, and S7.

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 VC09108 tested 3/18/01 3.7Litre, 4x4, auto, S1 1J8GL58K32W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Flat Frontal VC09096 tested 3/17/01 3.7Litre, 4x2, auto, S1 1J8GK48K02W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Right Angular VC09027 tested 3/16/01 3.7Litre, 4x4, auto, S1 1J8GL58K82W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Left Angular VC09085 tested 3/9/01 3.7Litre 4x2, auto, S2 1J8GL58K22W	Zero Oz	Zero Oz.	Zero Oz.	Zero Oz
Rear VC09094 tested 3/12/01 3.7Litre, 4x4, auto, S1 1J8GL58K02W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
Rear VC09026 tested 1/29/01 3.7Litre, 4x4, auto, S1 1J8GL48K92W	Zero Oz	Zero Oz.	Zero Oz.	Zero Oz
Left Lateral VC09071 tested 2/28/01 3.7Lifre, 4x4, auto, S1 1J8GL48K72W	Zero Oz.	Zero Oz.	Zero Oz.	Zero Qz
Right Lateral VC09106 tested 3/17/01 3.7Litre, 4x4, auto, S2 1J4GL48K32W	Zero Oz	Zero Oz.	Zero Oz.	Zero Oz
Flat Frontal VC09373 tested 9/18/01 2.4Litre, 4x4, manual, S1 1J8GL48192W	Zero Oz.	Zero Oz.	Zera Oz.	Zero Oz.
Flat Frontal VC09386 tested 9/28/01 2.4Litre, 4x2, manual, \$1 1J4FK48142W	Zero Oz.	Zero Oz.	Zero Oz	Zero Oz.
Right Angular VC09385 tested 9/28/01 2.4Litre, 4x4, manual, S1 1J4GL48172W	Zero Oz.	Zero Oz.	Zero Oz	Zero Oz.



Compliance Report

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

2006 Model Year: CP-246H Procedure: Standard Information

CMVSR Requirements

Standard # 301

TitleFuel System integrity

Section S5.1,S5.2,S5.5,S5.6

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

FMVSS Requirements

Standard #

TitleFuel System integrity

Section S5.1,S5.2,S5.5,S5.6

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

Vehicle Type: Body Codes: KJ, KJ-Diesel

Approvals

Approvals

Lawrence E Brookes Responsible Executive

Jeffrey P Zyburt
Approving Executive

Approved by Lawrence E Brookes 02/09/2005 05:43:10 PM Approval Date

Approved by Jeffrey P Zyburt 02/10/2005 08:03:35 AM Approval Date

Summary

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

Objective: Verification of design Compliance with the requirements of Vehicle Safety Standard CMVSR 301, FMVSS 301.

Conclusion: The DaimlerChrysler 2006 model year "KJ" Body, Jeep "Liberty" Sport Utility vehicle, complies with the performance requirements of FMVSS 301, Sections S5.1, S5.5, and S5.6.

Safety Documentation Compliance Report

 Prepared By:
 Suzanne M Marsh
 Date:
 02/07/2005

 Approved By:
 Lawrence E Brookes
 Date:
 02/09/2005

Issued By: Energy Management/NVH (Jeep)

Discussion

The 2006 model year "KJ" series Jeep Liberty is carry-over in terms of FMVSS 301 Fuel Loss Limitations and Static Rollover Test Procedures (For CMVSR or FMVSS 301). No additional testing was conducted

The 2006 model year "KJ" series Jeep Liberty design features include:

Vehicle/Body:

- Four (4) door vehicle only
- Rear outside mounted spare tire on swing gate with rear flipper glass
- Trailer hitch (optional)

- Capacity:

 Five (5) person seating capacity
- Fuel tank capacity of 20.5 gallons

Drivetrain:

- 3.7L (6-cyl) engine with manual and automatic transmission or 2.8L Diesel (4-cyl) with automatic transmission are offered
- 4 wheel drive and 2 wheel drive are offered with the 3.7L engine configurations. 4 wheel drive only is offered for the 2.8L engine configuration

Occupant Restraint/Interior Systems:

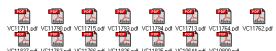
- A 3-point active seat belt with adjustable upper anchorage, a 9.5mm diameter torsion bar (3.3kN) constant force retractor, and a retractor pretensioner is the primary restraint for the driver.
- A 3-point active seat belt with adjustable upper anchorage, a 9.5mm diameter torsion bar (3.3kN) constant force retractor, and a retractor pretensioner is the primary restraint for the passenger.
- Next generation airbags are controlled through a center module with front remote sensors (standard)
- A supplementary driver restraint airbag is contained in the four (4) spoke steering wheel. Configuration: 28" dia, 230kPA inflator, 9" tethers, 2X27.5mm venting
- A supplementary passenger restraint airbag is contained in the instrument panel. Configuration: 160L, PPI32S 50/50 V508 inflator, 2X50mm venting
- Side inflatable curtains (left and right sides) are controlled through a center module with left and right remote sensors mounted at the b-pillar (optional)

CONCLUSION:

Based on the testing and analysis conducted on the 2005 model year, the DaimlerChrysler 2006 model year "KJ" Body, Jeep "Liberty" Sport Utility vehicle, complies with the performance requirements of FMVSS 301, Sections S5.1, S5.5, and S5.6.

Appendix

Test Mode Vehicle Crash Number and Date Description of Vehicle Vehicle Identification Data (VIN) Test Speed Test Weight 30 minutes At Impact 30 minutes Total Le 30mph Rear VC11711 on 5/13/04 3.7L 4x4, Manual, S1 Build 48.9 kph 2233.98 kg 30mph Rear VC11790 on 6/14/04 2.8L 4x4, Auto, S1 Build 2ero Oz. Zero Oz.	
Description of Vehicle Vehicle Identification Data (VIN) Test Speed Test Weight At Impact 30 minutes 42 Ero Oz. 43 Ero Oz. 44 Ero Oz. 45 Ero Oz. 46 Ero Oz. 47 Ero Oz. 48 Ero Oz. 49 Ero Oz. 49 Ero Oz. 40 Ero Oz. 41 Ero Oz. 42 Ero Oz. 43 Ero Oz. 44 Ero Oz. 45 Ero Oz. 46 Ero Oz. 47 Ero Oz. 47 Ero Oz. 48 Ero Oz. 48 Ero Oz. 48 Ero Oz. 48 Ero Oz. 49 Ero Oz. 49 Ero Oz. 40 Ero Oz. 41 Ero Oz. 42 Ero Oz. 43 Ero Oz. 44 Ero Oz. 45 Ero Oz. 47 Ero Oz. 47 Ero Oz. 48 Ero Oz. 49 Ero Oz. 49 Ero Oz. 40 Ero Oz. 41 Ero Oz. 41 Ero Oz. 41 Ero Oz. 42 Ero Oz.	
Vehicle Identification Data (VIN) At Impact the following 30 minutes the rollover fixture Total Le 30mph Rear VC11711 on 5/13/04 Zero Oz.	
Test Speed Test Weight At Impact 30 minutes fixture Total Le 30mph Rear VC11711 on 5/13/04 3.7L 4x4, Manual, S1 Build Zero Oz. JBGL58585W Zero Oz. JBGL58585W Zero Oz. Damph Angular / Left	
30mph Rear VC11711 on 5/13/04 3.7L 4x4, Manual, S1 Build Zero Oz.	
VC11711 on 5/13/04 3.7L 4x4, Manual, S1 Build Zero Oz. Oz. Zero Oz	Oz.
3.7L 4x4, Manual, S1 Build Zero Oz. Oz. Zero Oz. Zero Oz. Oz. Oz. Zero Oz. Zero Oz.	Oz.
48.9 kph 2233.98 kg 30mph Rear VC11790 on 6/14/04 2.8L 4x4, Auto, S1 Build 2.8L 58585W 48.63 kph 2327.87 kg 30mph Angular / Left	
30mph Rear VC11790 on 6/14/04 2.8L 4x4, Auto, S1 Build Zero Oz. Ze	
VC11790 on 6/14/04 2.8L 4x4, Auto, S1 Build 1J8GL58585W 48.63 kph 2327.87 kg 30mph Angular / Left	
2.8L 4x4, Auto, S1 Build Zero Oz. Zero Oz. Zero Oz. Zero Oz. Jaro Oz. Zero Oz. Zero Oz. Zero Oz. Jaro	
1J8GL58585W 48.63 kph 2327.87 kg 30mph Angular / Left	O-7
48.63 kph 2327.87 kg 30mph Angular / Left	O2.
30mph Angular / Left	
VC11715 on 5/17/04	
3.7L 4X4, Auto, S1 Build Zero Oz. Zero Oz. Zero Oz. Zero Oz.	Oz.
1J8GL48K05W	
48.63 kph 2201.77kg	
30mph Angular / Left VC11793 on 6/21/04	
2.8L 4x4, Auto, S1 Build Zero Oz. Zero Oz. Zero Oz. Zero Oz.	Oz.
1J8GL48585W	
48.79 kph 2308.37 kg	
30mph Angular / Right	
VC11794 on 6/22/04 2.8L 4x4, Auto, S1 Build Zero Oz. Zero Oz. Zero Oz. Zero Oz.	0-
	UZ.
1J8GL485X5W 48.63 kph 2302.47 kg	
33.5mph Lateral / Left	
VC11713 on 5/15/04	
3.7L 4X4, Manual, S1 Build Zero Oz. Zero Oz. Zero Oz. Zero Oz.	Oz.
1J8GL48K25W	
54.4 kph 2203.58kg	
33.5mph Lateral / Left VC11764 on 6/10/04	
2.8L 4x4, Auto, S1 Build Zero Oz. Zero Oz. Zero Oz. Zero Oz.	Oz
1J8GL48585W	
54.42 kph 2301.56 kg	
30mph Flat Frontal Female	
VC11762 on 5/24/04	
2.4L 4X2, Manual, S0PhC Build Zero Oz. Zero Oz. Zero Oz. Zero	Oz.
1J8FK481X5W 48.63 kph 1928.7 kg	
30mph Flat Frontal Female	
VC11837 on 7/16/04	
2.8L 4x4, Auto, S1 Build Zero Oz. Zero Oz. Zero Oz. Zero	Oz.
1J8GL58545W	
48.6 kph 2273.9 kg	
25mph Flat Frontal Female	
VC11763 on 5/24/04 3.7L 4X4, Auto, S0PhC Build Zero Oz. Zero Oz. Zero Oz. Zero Oz.	O-7
1J8GL58K65W	O2.
40.41 kph 2160.0 kg	
25mph Flat Frontal Male	
VC11766 on 5/26/04	
2.4L 4X4, Manual, S1 Build Zero Oz. Zero Oz. Zero Oz. Zero Oz.	Oz.
1J8G6C8155W	
40.57 kph 2066.6 kg 25mph Angular / Right	\dashv
VC11826 on 6/24/04	
2.8L 4x4, Auto, S1 Build Zero Oz. Zero Oz. Zero Oz. Zero Oz.	Oz.
1J8GL58565W	
40.74 kph 2320.16 kg	
25mph Angular / Left	
VC11825 on 6/25/04	07
2.8L 4x4, Auto, S1 Build Zero Oz. Zero Oz. Zero Oz. Zero Oz. Zero Oz.	UZ.
40.57 kph 2298.39 kg	
20mph Flat Frontal	
VC10644 on 5/24/03	
2.4L 4X2, Manual, S1 Build Zero Oz. Zero Oz. Zero Oz. Zero Oz.	Oz.
1J8FK48164W	
32.69 kph 1962 kg	
20mph Flat Frontal	
183 - 1340 BULLUL - 1/20/03	
VC10800 on 5/26/03 2.4L 4X2, Manual, S1 Build Zero Oz Zero Oz Zero Oz Zero Oz	Oz
VC10800 on 5/26/03 2.4L 4X2, Manual, S1 Build Zero Oz. Zero Oz. Zero Oz. Zero Oz.	Oz.



Contact Info

Compliance Procedure Specialist:	Vehicle Safety Certification Supervisor:
Phone:	Phone:

Compliance Report

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

2007 Model Year: Procedure: CP-246H Standard Information

CMVSR Requirements

Standard # 301

Title Fuel System integrity

Section S5.1,S5.2,S5.5,S5.6

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

FMVSS Requirements

Standard #

TitleFuel System integrity

Section S5.1,S5.2,S5.5,S5.6

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

Vehicle Type: Body Codes: KJ

Approvals

Approvals

Lawrence E Brookes Responsible Executive

Jeffrey P Zyburt
Approving Executive

Approved by Lawrence E Brookes 03/10/2006 09:37:34 AM Approval Date

Approved by Jeffrey P Zyburt 03/10/2006 10:09:42 AM Approval Date

Summary

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

Objective: Verification of design Compliance with the requirements of Vehicle Safety Standard CMVSR 301, FMVSS 301.

Conclusion: The DaimlerChrysler 2007 model year "KJ" Body, Jeep "Liberty" Sport Utility vehicle, complies with the performance requirements of FMVSS 301, Sections S5.1, S5.5, and S5.6.

Safety Documentation Compliance Report

 Prepared By:
 Suzanne M Marsh
 Date:
 12/09/2005

 Approved By:
 Lawrence E Brookes
 Date:
 03/10/2006

Issued By: Energy Management/NVH (Jeep)

Discussion

The 2007 model year "KJ" series Jeep Liberty is carry-over in terms of FMVSS 301 Fuel Loss Limitations and Static Rollover Test Procedures (For CMVSR or FMVSS 301). No additional testing was conducted

The 2007 model year "KJ" series Jeep Liberty design features include:

Vehicle/Body:

- Four (4) door vehicle only
- Rear outside mounted spare tire on swing gate with rear flipper glass
- Trailer hitch (optional)

- Capacity:

 Five (5) person seating capacity
- Fuel tank capacity of 20.5 gallons

Drivetrain:

- 3.7L (6-cyl) engine with manual and automatic transmission or 2.8L Diesel (4-cyl) with automatic transmission are offered
- 4 wheel drive and 2 wheel drive are offered with the 3.7L engine configurations. 4 wheel drive only is offered for the 2.8L engine configuration

Occupant Restraint/Interior Systems:

- A 3-point active seat belt with adjustable upper anchorage, a 9.5mm diameter torsion bar (3.3kN) constant force retractor, and a retractor pretensioner is the primary restraint for the driver.
- A 3-point active seat belt with adjustable upper anchorage, a 9.5mm diameter torsion bar (3.3kN) constant force retractor, and a retractor pretensioner is the primary restraint for the passenger.
- Next generation airbags are controlled through a center module with front remote sensors (standard)
- A supplementary driver restraint airbag is contained in the four (4) spoke steering wheel. Configuration: 28" dia, 230kPA inflator, 9" tethers, 2X27.5mm venting
- A supplementary passenger restraint airbag is contained in the instrument panel. Configuration: 160L, PPI32S 50/50 V508 inflator, 2X50mm venting
- Side inflatable curtains (left and right sides) are controlled through a center module with left and right remote sensors mounted at the b-pillar (optional)

CONCLUSION:

Based on the testing and analysis conducted on the 2005 model year, the DaimlerChrysler 2007 model year "KJ" Body, Jeep "Liberty" Sport Utility vehicle, complies with the performance requirements of FMVSS 301, Sections S5.1, S5.5, and S5.6.

Appendix

	ı			ı
Test Mode				
Vehicle Crash Number and Date Description of Vehicle		Leakage in	Leakage in	
Vehicle Identification Data (VIN)		the following	the rollover	
Test Speed Test Weight	At Impact	30 minutes	fixture	Total Leakage
30mph Rear	·			
VC11711 on 5/13/04				
3.7L 4x4, Manual, S1 Build	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
1J8GL38K65W				
48.9 kph 2233.98 kg				
30mph Rear VC11790 on 6/14/04				
2.8L 4x4, Auto, S1 Build	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
1J8GL58585W	2010 02.	20.0 02.	20.0 02.	2010 02.
48.63 kph 2327.87 kg				
30mph Angular / Left				
VC11715 on 5/17/04				
3.7L 4X4, Auto, S1 Build	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
1J8GL48K05W 48.63 kph 2201.77kg				
30mph Angular / Left				
VC11793 on 6/21/04				
2.8L 4x4, Auto, S1 Build	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
1J8GL48585W				
48.79 kph 2308.37 kg		ļ		
30mph Angular / Right				
VC11794 on 6/22/04	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
2.8L 4x4, Auto, S1 Build 1J8GL485X5W	2610 02.	2610 02.	2010 UZ.	2610 02.
48.63 kph 2302.47 kg				
33.5mph Lateral / Left				
VC11713 on 5/15/04				
3.7L 4X4, Manual, S1 Build	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
1J8GL48K25W				
54.4 kph 2203.58kg				
33.5mph Lateral / Left VC11764 on 6/10/04				
2.8L 4x4, Auto, S1 Build	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
1J8GL48585W				
54.42 kph 2301.56 kg				
30mph Flat Frontal Female				
VC11762 on 5/24/04				
2.4L 4X2, Manual, S0PhC Build	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
1J8FK481X5W 48.63 kph 1928.7 kg				
30mph Flat Frontal Female				
VC11837 on 7/16/04				
2.8L 4x4, Auto, S1 Build	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
1J8GL58545W				
48.6 kph 2273.9 kg				
25mph Flat Frontal Female				
VC11763 on 5/24/04 3.7L 4X4, Auto, S0PhC Build	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
1J8GL58K65W	2610 02.	2610 02.	2010 UZ.	2610 02.
40.41 kph 2160.0 kg				
25mph Flat Frontal Male				
VC11766 on 5/26/04				
2.4L 4X4, Manual, S1 Build	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
1J8G6C8155W				
40.57 kph 2066.6 kg				
25mph Angular / Right VC11826 on 6/24/04				
VC11826 on 6/24/04 2.8L 4x4, Auto, S1 Build	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
1J8GL58565W	25.5 02.		20.0 02.	25.5 02.
40.74 kph 2320.16 kg	<u> </u>	<u> </u>		
25mph Angular / Left				
VC11825 on 6/25/04				l _
2.8L 4x4, Auto, S1 Build	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
1J8GL48565W				
40.57 kph 2298.39 kg 20mph Flat Frontal				
VC10644 on 5/24/03				
2.4L 4X2, Manual, S1 Build	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
1J8FK48164W				
	ĺ			
32.69 kph 1962 kg				
32.69 kph 1962 kg 20mph Flat Frontal				
32.69 kph 1962 kg 20mph Flat Frontal VC10800 on 5/26/03	7	7. 6	7. 6	7. 6
32.69 kph 1962 kg 20mph Flat Frontal VC10800 on 5/26/03 2.4L 4X2, Manual, S1 Build	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.
32.69 kph 1962 kg 20mph Flat Frontal VC10800 on 5/26/03	Zero Oz.	Zero Oz.	Zero Oz.	Zero Oz.



Contact Info

Compliance Procedure Specialist:	Vehicle Safety Certification Supervisor:
Phone:	Phone:

EA12-005

CHRYSLER

12-13-2012

Enclosure 6D

301 Compliance Documents

XJ 1984 - 1992 Compliance Documentation

1985 JEEP XJ WAGONEER/CHEROKEE

FMVSS #301 - TEST STRATEGY

The 1985 XJ Wagoneer/Cherokee was certified to the requirements of FMVSS #301 "Fuel System Integrity" due to the inclusion of the 2.1L turbo diesel engine. Engine placement, fuel line routing and the operating environment in general are unique when compared to the gas engine models. Barrier Crash Test numbers 1801, 1802, 1803, 1805 and 1806 are shown here to demonstrate compliance with FMVSS #301.

"Casoline engine models were not changed from 1984 and, therefore, were not

1076L/9 07/19/84

Page 1 of 2

FMVSS #301, "FIEL SYSTEM INTEGRITY"

	E TYPE: 2.1L Dies.1 VERIOF TEST STORE
TYPE	OF BARRIER IMPACT: Front - Fixed Barrier
A.	Does the vehicle fuel system meet the requirements specified in A Specification Number SF AM-14046? Yes
8.	What was the actual crash speed? (30.5/32.0 front or rear, 20.5/21.
C.	Was was the fuel spillage (by weight) during impact (from impact unti- motion of the vehicle has ceased - max. D.5 oz.)? None
D.	What is the total fuel spillage (by weight) after a 5-minute periodic following cessation of motion (max. 5 oz.)? None
E.	What is the fuel spillage (by weight) during any 1-minute interval for the subsequent 25-minute officed (max., 0.5 oz./min.)? None
F.	If fuel spillage occurred, describe location(s) and amount(s). N/A
ROLLOV	ER:
Α.	What were the time durations for each successive position of 200, 1800, 2700, and 3600 (max: 2.5 oz.)? 5 min.
А. В.	From the onset of rotational motion, what was the fuel spillage (by seight) for the first 5-minutes of testing for each successive position at 900, 1800, 2700, and 3600 (max: 2.5 oz.)?
в.	From the onset of rotational motion, what was the fuel spillage (by at 900, 1800, 2700, and 3600 (max: 2.5 oz.)? None For the remaining testing period, for each successive position so that are successive positions.
. 3 4.	From the onset of rotational motion, what was the fuel spillage (by weight) for the first 5-minutes of testing for each successive position at 90°, 180°, 270°, and 360° (max: 2.5 oz.)? None For the remaining testing period, for each successive position of 90; 180°, 270°, and 360°, what was the fuel spillage (by weight) jouring any 1-minute interval (max. 0.5 oz./min.)? None
в. Э.	From the onset of rotational motion, what was the fuel spillage (by at 900, 1800, 2700, and 3600 (max: 2.5 oz.)? None For the remaining testing period, for each successive position so that are successive positions.

This fuel system as it applies to models and applications noted conforms to Federal Motor Vehicle Safety Standard No. 301.

Local Do	
FMVSS/OMVSS RESPONSIBLE PNGINEER (Date	(BIW)
FMVSS/CMVSS RESPONSIBLE ENGINEER 7-18-P4	(Ibdarbada)
FMVSS MANSS RESPONSIBLE ENGINEER (Date)	(Fuel Tank)
FMVSS/DAVSS RESPUNSIBLE ENGINEER (Date)	(Fuel Handling)
MYSS/CHYSS RESPONSIBLE ENGINEER (Date)	

Vehicle, Environmental and Safety Affairs has reviewed the above information and found it to satisfactorily document demonstration of compliance with the above Regulation, Requirement or Standard, and is therefore acceptable for inclusion in the Certification Compliance Manual.

VESA ENGINEER POR 07/20/34 (Date)

10761/4

VEHICLE SAFETY COMPLIANCE INFORMATION FMVSS #301, "FUEL SYSTEM INTEGRITY"

ENGI	HICLE MODELS: 1985 Wagoneer/Cherokee (8575/78) - GINE TYPE: 2.1L Diesel	
TYPE	GINE TYPE: 2.1L Diesel VENICLE T PE OF BARRIER IMPACT: Left Side - Moveable Barri	EST WEIGHT: 4258 Lbs.
Α.	Does the vehicle fuel system meet the requ Specification Number SF AM-14046? Yes	irements specified in A
В.	What was the actual crash speed? (30.5/32.0 lateral) 20.3 MPH	front or rear. 20.5/21
c.	Was was the fuel spillage (by weight) during motion of the vehicle has ceased - max. 0.5 cz.	
D.	What is the total fuel spillage (by weight) following dessation of motion (max. 5 oz.)?	after a 5-minute perio
Ε.	What is the fuel spillage (by weight) during a the subnequent 25-minute period (max., 0.5 pz.//	ny 1-minute interval for
•	If fuel spillage occurred, describe location(s)	and amount(s). N/A
. 7/-	What were the time durations for each succe 1800, 2700, and 3600 (max: 2.5 oz.)? 5 min.	THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TW
	From the onset of rotational motion, what was at 900, 1800, 2700, and 3600 (m. 2.5 oz.)?	DOCCESSIVE DOSIFION
11.15	90, 1800, 2700, and 360, what was the weight) jouring any 1-minute interval (may 0.5)	successive position of
	If fuel spillage occurred, describe location(s) a	rid amount(s) N/A
-	copy of Test Report No. 1802 (6/13/84)	
ach	1802 (6/13/9A)	July 1975 - Trake

This fuel system as it applies to models and applications noted conforms to Federal Motor Vehicle Safety Standard No. 301.

Q10.000		
FMVSS/OMVSS RESPONSIBLE ENGINEER	7-/8-84 (Date)	(BIW)
PMVSS ONVSS RESPONSIBLE ENGINEER	7-18-84 (Date)	(Underbody
FMVSS/CMVSS RESPONSIBLE ENGINEER	(Date)	(Fuel Tank)
PMVSS/ONVSS RESPONSTBLE ENGINEER	7-/8-84 (Date)	(Fuel Handling)
MVSS/OMVSS RESPONSIBLE ENGINEER	2/18/84 (Date)	(Cert. Services)

Vehicle, Environmental and Safety Affairs has reviewed the above information and found it to satisfactorily document demonstration of compliance with the above Regulation, Requirement or Standard, and is therefore acceptable for inclusion in the Certification Compliance Manual.

Rockied. Rock 07/20/84

1076/1

VEHICLE SAFETY COMPLIANCE INFORMATION FMVSS #301, "FUEL SYSTEM INTEGRITY"

ENG	HICLE MODELS: 1985 Wagoneer/Cherokee (8575/78) WGINE TYPE: 2.1L Diesel VEHICLE TEST WEIGHT: 4	Variation 1
TYPE	PE OF WARIER IMPACT: Right Side - Moveable Barrier	258 Lbs.
A.	Does the vehicle fuel system meet the requirements spec Specification Number SF AM-14046? Yes	ified in A
В.	What was the actual crash speed? (30.5/32.0 front or real lateral) 20.4 MPH	
C.	Was was the fuel spillage (by weight) during impact (from motion of the vehicle has ceased - max. 0.5 oz.)? None	Impact until
D.	What is the total fuel spillage (by weight) after a 5-mi following cessation of motion (max. 5 oz.)? None	nute period
E		
		nterval for
F.	What is the fuel spillage (by weight) during any 1-minute is the subsequent 25-minute period (max., 0.5 oz./min.)? None of fuel spillage occurred, describe location(s) and amount(s)	
ROLLO	the subsequent 25-minute period (max., 0.5 oz./min.)? None If fuel spillage occurred, describe location(s) and amount(s) LOVER: What were the time durations for each successive position (max., 270°, and 360° (max., 2.5 oz.)? 5 min.	. N/A
ROLLO	the subsequent 25-minute period (max., 0.5 oz./min.)? None If fuel spillage occurred, describe location(s) and amount(s) LOVER: What were the time durations for each successive position (max., 2.5 oz.)? 5 min. From the onset of rotational motion, what was the fuel spillage occurred, describe location(s) and amount(s)	. N/A
ROLLO A.	the subsequent 25-minute period (max., 0.5 oz./min.)? None If fuel spillage occurred, describe location(s) and amount(s) LOVER: What were the time durations for each successive position 180°, 270°, and 360° (max: 2.5 oz.)? 5 min. From the onset of rotational motion, what was the fuel spillage occurred to the first 5-minutes of testing for each successive at 50°, 180°, 270°, and 360° (max: 2.5 oz.)? None For the remaining testing period, for each successive and some testing period.	on of 900,
=	the subsequent 25-minute period (max., 0.5 oz./min.)? None If fuel spillage occurred, describe location(s) and amount(s) LOVER: What were the time durations for each successive position 180°, 270°, and 360° (max: 2.5 oz.)? 5 min. From the onset of rotational motion, what was the fuel spillage of the first 5-minutes of testing for each successive at 50°, 180°, 270°, and 360° (max: 2.5 oz.)? None For the remaining battern	on of 900, dillage (by de position of llage (by

Page 2 of 2 FMVSS #301

This fuel system as it applies to models and applications noted conforms to Federal Mutor Vehicle Safety Standard No. 301.

FMVSS/OMVSS RESPONSIBLE ENGINEER (Date)

Vehicle, Environmental and Safety Affairs has reviewed the above information and found it to satisfactorily document demonstration of compliance with the above Regulation, Requirement or Standard, and is therefore acceptable for inclusion in the Certification Compliance Manual.

Rochie J. Rock 07/20/84
VESA ENGINEER (Date)

10761/4

VEHICLE SAFETY COMPLIANCE INFORMATION FMVSS #301, "FUEL SYSTEM INTEGRITY"

-1.	CLE MODELS: 1985 Wagoneer/Cherokee (8575/78) INE TYPE: 2.1L Diesel VEHICLE TEST NEEDS
TYPE	OF BARRIER IMPACT: Right Oblique - Fixed Barrier
Α.	Does the vehicle fuel system meet the requirements specified in AMSpecification Number SF AM-14046? Yes
В.	What was the actual crash speed? (30.5/32.0 front or rear, 20.5/21.5
C.	Was was the fuel spillage (by weight) during impact (from impact until motion of the vehicle has ceased - max. 0.5 oz.)? None
D.	What is the total fuel spillage (by weight) after a 5-minute period
E.	What is the fuel spillage (by weight) during any 1-minute interval for the subsequent 25-minute period (max., 0.5 oz./min.)? None
F.	If fuel spillage occurred, describe location(s) and amount(s). N/A
11	
ROLLO	/ER:
	What were the time durations for each successive position of 900, 1800, 2700, and 3600 (max: 2.5 oz.)? 5 min. From the onset of totational motion, what was the fuel spillage (by st 900, 1800, 2700, and 3600 (max: 2.5 oz.)? None For the remaining testing period, for each successive position 90. 1800, 2700, 2700.
	What were the time durations for each successive position of 900, 1800, 2700, and 3600 (max: 2.5 oz.)? 5 min.
	What were the time durations for each successive position of 900, 1800, 2700, and 3600 (max: 2.5 oz.)? 5 min. From the onset of totational motion, what was the fuel spillage (by weight) for the first 5-minutes of testing for each successive position at 900, 1800, 2700, and 3600 (max: 2.5 oz.)? None For the remaining testing period, for each successive position of weight) jouring any 1-minute interval (max, 0.5 oz./min)?

This fuel system as it applies to models and applications noted conforms to FeJeral Motor Vehicle Safety Standard No. 301.

9,0,0	15 E. W. 15 E. 15 E.	9
FMVSS/OMVSS RESPONSIBLE ENGINEER	7-/8-84 (Oate)	(BIW)
FMVSS/ONVSS PESPONSIBLE ENGINEER	7-18-84 (Date)	(Underbody)
FMVSS/ONVSS RESPONSIBLE ENGINEER	(Date)	(Fuel Tank)
FMVSS/OMVSS RESPONSIBLE ENGINEER	7-18-84 (Date)	(Fuel Handling)
PHYSSICHUSS RESPONSIBLE ENGINEER	7/18/84 (Date)	(Cert. Services)

Vehicle, Environmental and Safety Affairs has reviewed the above information and found it to satisfactorily document demonstration of compliance with the above Regulation, Requirement or Standard, and is therefore acceptable for inclusion in the Certification C mpliance Manual.

Rockie J. Rock 07/20/84 VESA ENGINEER J. ROCK 07/20/84

1076L/4 07/10/84

VEHICLE SAFETY COMPLIANCE INFORMATION FMYSS #301, "FUEL SYSTEM INTEGRITY"

	CLE MODELS: 1985 Wagoneer/Cherokee (8575/78)
CMGI	WE TYPE: 2.1L Diesel VEHICLE TEST WEIGHT: 4254 Lbs.
TYPE	OF BARRIER IMFACT: Left Oblique - Fixed Barrier
Α.	Does the vehicle fuel system meet the requirements specified in AM Specification Number SF AM-14046? Yes
В.	What was the actual crash speed? (30.5/32.0 front or rear, 20.5/21.5 lateral) 30.7 MPH
C.	Was was the fuel spillage (by weight) during impact (from impact until motion of the vehicle has ceased - max. 0.5 oz.)? None
D.	What is the total fuel spillage (by weight) after a 5-minute period following cessation of motion (max. 5 oz.)? None
E.	What is the fuel spillage (by weight) during any 1-minute interval for the subsequent 25-minute period (msx., 0.5 oz./min.)? None
F.	If fuel spillage occurred, describe location(s) and amount(s). N/A
22.50	
ROLLO	VER:
ROLLO	What were the time durations for each successive position of 900, 1800, 2700, and 3600 (max: 2.5 oz.)? 5 min.
	What were the time directions for and
A.	What were the time durations for each successive position of 90°, 180°, 270°, and 360° (max: 2.5 oz.)? 5 min. From the onset of rotational motion, what was the fuel spillage (by weight) for the first 5-minutes of testing for each successive position at 90°, 180°, 270°, and 360° (max: 2.5 oz.)? None For the remaining testing period, for each successive position of 90°, 180°, 270°, and 360° (max: 2.5 oz.)?
A. B.	What were the time durations for each successive position of 90°, 180°, 270°, and 360° (max: 2.5 oz.)? 5 min. From the onset of rotational motion, what was the fuel spillage (by weight) for the first 5-minutes of testing for each successive position at 90°, 180°, 270°, and 360° (max: 2.5 oz.)? None For the remaining testing period for each successive position
A. B. C.	What were the time durations for each successive position of 90°, 180°, 270°, and 360° (max: 2.5 oz.)? 5 min. From the onset of rotational motion, what was the fuel spillage (by weight) for the first 5-minutes of testing for each successive position at 90°, 180°, 270°, and 360° (max: 2.5 oz.)? None For the remaining testing period, for each successive position of 90°, 180°, 270°, and 360°, what was the fuel spillage (by weight) jouring any 1-minute interval (max. 0.5 oz./min.)? None

Page 2 of 2 FMVSS #301

This fuel system as it applies to models and applications noted conforms to Federal Motor Vehicle Safety Standard No. 301.

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FMVSS/OMVSS RESPONSIBLE ENGINEER	7-18-84 (Date)	(BIW)
FMVSS/QMYSS/PESPONSIBLE ENGINEER	7-18-94 (Date)	(Underbody)
FRYSTONISS RESPONSIBLE ENGINEER	(Date)	(Fuel Tank)
FMVSS/CMVSS RESPONSIBLE ENGINEER		(Fuel Handling)
FMVSS/CMVSS RESPONSIBLE ENGINEER	and the second second	Cert. Services)

Vehicle, Environmental and Safety Affairs has reviewed the above information and found it to satisfactorily document demonstration of compliance with the above Regulation, Requirement or Standard, and is therefore acceptable for inclusion in the Certification Compliance Manual.

VESA ENGINEER ROCK 01/20/84

1076_/4

CARRYOVER, SIMILAR SYSTEM AND/OR PARTS STATEMENT

The	
have the same or similar design and performance levels in the environme application pertaining to FMVSS/CMVSS No. 301; Fuel System Integra / AS_ the 1984 XJ Wagoneer & Cherokee gas engine models. (Part No(s): which was tested and compliance demonstrated with the above Standard in Test Report No date and/or covered in Safety Compliance Check Sheet dated Additional Comments:	
ASthe 1984 XJ Wagoneer & Cherokee gas engine models. (Part No(s): which was tested and compliance demonstrated with the above Standard in Test Report No date and/or covered in Safety Compliance Check Sheet dated Additional Comments:	_
which was tested and compliance demonstrated with the above Standard in Test Report No	_) nt
which was tested and compliance demonstrated with the above Standard in Test Report No date and/or covered in Safety Compliance Check Sheet dated Additional Comments:	_
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FMVSS/CMVSS RESPONSIBLE ENGINEER (DATE) (Cert. Service	
Vehicle Environmental and Safety Affairs has reviewed the about information and found it to satisfactorily document demonstration compliance with the above Regulation, Requirement or Standard, and therefore acceptable for inclusion in the Certification Compliance Manual Archief Rock 07/20/VESA ENGINEER	m E

LOB/mm 1107L/1

IntraCompany Correspondence

D. C. Mallett

Location

Date

Amtek

Сору То

M. A. Lalinsky R. G. Pochert

From

E. A. Zylik

Location - Ext

Safety Cert/32074

Subject.

8660/70

Fuel Line Revisions FMVSS #301

November 15, 1985

The 8660/70 XJ Series Jeeps equipped with a 2.5L TBI Engine have a running change to the fuel lines for the 8600 model year. The changes, as per ECR Q6J1036, signify an improvement from the previous design and therefore will not require recertification.

The changes as requested by ECR Q6J1036 improve accessibility for assembly as required by Manufacturing to assure quality control.

The change involves relocating the quick connect fittings by shortening the fuel supply and return lines within the engine compartment with a corresponding lengthening of the return hoses.

e a Jylk
E. A. Zylik

Concur:

gg



VEHICLE SAFETY COMPLIANCE INFORMATION

FMVSS/CMVSS #301 - "FUEL SYSTEM INTEGRITY"

XJ UTILITY

VEHICLE MODELS:	8677	8677	8677	8677	8678 (8578 Updated)
ENGINE TYPES:	2.5L/14	2.5L/I4	2.5L/I4	2.5L/I4	2.8L/V6
TYPES OF BARRIER IMPACT:	Front	Rear	30°R/O	_30°L/0	_Rear
VEHICLE TEST WEIGHTS:	4078	4072	3786	4076	4201
TEST REPORTS:	1887	1888	1889	890	_1932
TEST DATES:	05/13/85	05/21/85	04/25/85	06/10/85	06/04/85

ADDITIONAL COMMENTS:

L. C. Miller FMVSS/CMVSS RESPONSIBLE ENGINEER

Vehicle Environmental and Safety Affairs has reviewed the above information and found it to satisfactorily document compliance with the above Standard, and is acceptable for inclusion in the Certification Compliance Manual.

VESA ENGINEER

(DATE)

EA12-005- Chrysler -006489

FMVSS/CMVSS #301 FUEL INTEGRITY 8760 XJ TRUCKS

The 8760 Series XJ Jeep Trucks equipped with the 2.5L I-4 and the 2.1L Turbo Diesel are carry-over from the 8500 model year in terms of FMVSS 301 and therefore, will not require rotesting.

However, the 4.0L MPI 1-6, which is a new engine replacing the 2.8L V-6, will require testing to demonstrate compliance to FMYSS 301 - Fuel Systems Integrity. The 8760 test strategy ca'is for three (3) tests. The test modes will be rear, right side and left side.

The side impact tests will be conducted on a single vehicle with the left side hit first as the fuel filler neck is on the left side. The test vehicle will be a 6-ft. bed model which is new for the 8700 model year. The 7-ft. bed is carry-coor from the 8600 model year.

A rear impact will be conducted on a 6-ft. bed vehicle because the fuel tank is closer to the rear axle. The 7-ft. bed is carry-over from the 8600 model

The XJ Truck, being structurally identical to the XJ Utility forward of the "A" pillar, has the same crash performance of the XJ Utility in terms of all frontal barrier impacts.

Development Status

- . Product Group Responsibility: Fuel & Emissions Systems/Chassis Engineering
- . Responsible Engineer: R.G. Pochert, D.B. Maru/W.E. Fedelem
- . Development Component(s) Test Matrix:

Veh. No. 5P71-23 SP71-23	Mode1 77(4WD) 77(4WD)	Frontal Rear	Engine 1-6	Trans.	204	Remarks Wts. Tested	3/6/86
	111 AND 1	Kear	1-6	Manual		Re-Hit	0/0/00

- . Design Release Date: July 8, 1985
- . Development Component Order Date:
- . Development Review Status & Date: 08/19/85--Yehicle expected in Development Garage. 10/16/85--Vehicle SP7T-23 received 9/10. Vehicle is in Development Garage. Pier Arrend is in process of acquiring mecessary parts, i.e. 4.0L MPI Engine and Fuel System. 03/06/86--Vehicle SP7T-23 underwent a frontal impact on 3/5/86. The vehicle had the latest supply line P/N 8953004686.

0031G/18 EAZ - 7/22/86

E C R CHANGES

ECR NUMBER	DESCRIPTION	DATE	REASON
G790347	Add upset bead on tubes (all)	4/11/86	Aid Assembly
G790443	Increase hose length (1.7L)	6/04/86	Aid Assembly

0028/3G EAZ = 7/22/86



Certification Requirement/Status

The FMVSS Standard requires fuel system integrity during barrier crash testing and static rollover.

. Certification Component Test Matrix:

Yeh. No.	Mode1	Test Mode	1.8	Engine	Trans.	Test No.	/Date
PP764-059 PP763-055 PP763-055 PP765-056	64(2WD) 63(4WD) 63(4WD) 65(4WD)	Rear R/Side L/Side L/Side		I-6 I-6 I-6 I-6	Man. Man. Man.	#2005 #2002 #2001 #2011	7/03 6/27 6/20 7/11

- . Certification Component(s) Order Date: August 20, 1985
- . Certification Component(s) Received Date: All test vehicles available as of 6/11/86.
- Certification Review Status: 6/11/86--Due to similarities of the Truck (60 series) and Utility (70 series) forward of the "A" pillar, as discussed in the strategy above, the perpendicular frontal test was cancelled.

 7/02/86--Vehicle PP763-055, Test #2001-Left Side Impact, leaked fluid excueding the amount allowed by FMYSS/CMYSS 301. Upon inspection, it was found that a fuel line locating clip was missing which permitted the fuel line to be pinched. Also, the thermal insulation sleeve was improperly located which also contributed to the leakage. The left side impact will be retested under Test #2011 on vehicle PP765-056.

 7/21/86--Barrier trash testing completed and indicates the 8760/70 XJs are capable of meeting the performance requirements of FMVSS/CMYSS 301 Fuel Integrity. ECR G771747C releases a shield in place of "P" clip 4001718 to facilitate assembly. The new shield improves protection of the fuel supply line and therefore, will not require additional barrier testing.

Certification Test Report Nos. & Dates testing completed: Test 2001 - 6/20/86, Test 2002 - 6/27/86, Test 2005 - 7/03/86, Test 2011 - 7/11/86.

Stan-Off

Product Group
Responsible Engr.
R. G. Bochert

Safety Certification Responsible Engr. E. A. Lyrk

Enfedelen

EAT 22/86

The 8770 Series RJ Utility Jeops equipment with the E.R. I-I and the E.H. Terbo Diesel are corry-dier Trum the \$500 metal year in terms of FRVES 301, and therefore will not require recesting. Reserver, the 4.G. W1 1-6, which is a common replacing the 2.Q. V-5, will require testing to disconstrate compliance to FRVES 301 - Feel Quatema Integrity. The 8770 test strategy calls for three (3) tests. The test mades will be perpindicular frontal left college, and right college. The tests will be conducted in the right, left side or reor impact test mades with the vehicle stracture as well as the fuel system roor of the "A" either feel mades the fuel task, are carry-over from the 8600 model year. piller, technica the feel tank, are corry-over from the 8600 model year.

- Responsibilitor Fool & Extestons Systems/Chassis Engineering aglanger B.G. Packert, D.B. Here/d.E. Fedelon supensont(s) Test Matrix:
 - Tested 10/37/85

- Comment Companied Great Sate: Aspess 25, 1954
- Dete:

 Totalcle build in process in Development Gerege.

 Septicle 5770-16 skipped 10/16/85. Test 1949 not scheduled 18/19/20 work to 50/C 11 stripped 10/16/8

Scalesore requires feel system integrity during berrier crash testing

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CORRECTION PREVIOUS DOCUMENT(S) REPHOTOGRAPHED TO ASSURE LEGIBILITY

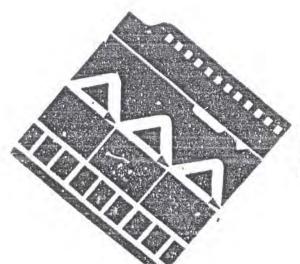


Image Source Inc.

Strotom

The 2770 Series %3 Stillty Jeeps equipped with the 2.8. I-4 and the 2.1. Torbe bleest are correspond from the 2500 model year in ten. of FNRS 301, and theorefore will not require recesting. However, the 4.8. MP1 I-6, which is a new ampire replacing the 2.8. V-6, will require testing to demonstrate compliance to FRESE 301 - Fuel System Estoppity. The 8770 test strategy calls for three (3) thets. The test medes will be perpindicular frontal, left oblique, and right oblique. On tests will be considered in the right, left side or root impact test medes a fine the testing the structure as tell as the feel tentor reter of the "A" piller, testualing the feel test, are corry-over free the 5600 mess) year.

Service and Alexander

Product Group Responsibilities First & Enfections Systems/Charats Engineering Systems/Sheat Engineering Systems/Fig. Fedelon Systems (a) Test Matrix:

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Mat 200 Booms

Aren Company Company to the Company Co

Revolucion de la Company de la

8/79/201--Vehicle build in process in Development Gerego.
18/79/201--Vehicle SP7C-18 shipped 10/16/85. Test 1949 not actedyled
2015 this time.

CONTITUENT OF BUILDING TOWNS /S CATHE

The FROSS Standard requires feel system integrity during barrier cresh testing

Correspond Comment Test Retries

EER CHIEF

G790347 Incredit beet loopth (1.41) 4/11/26 644 Accessely
G790343 Increase best loopth (1.71) 6/10/20

EMY35/EMV55 301 Fuel System Integrity 8860/70

trategy

e 8860/70 Series Jeeps will have revised fuel return lines, necessitated the Automatic Braking System (ABS), which has been canceled for the 8800 model year. The revised fuel line will be retained.

Engineering judgement, based on the evaluation of previous certification barrier crash tests as well as 8800 development crash tests with the revised fuel line, indicates further crash testing will not be required.

Requirements

FMVSS/CMVSS 301 requires fuel system integrity during barrier crash

Development Status

- . Product Group Responsibility: Chassis/Fuel & Emissions Systems/Body Eng'g
- . Responsible Engineer: W.E.Fedelem, R.G.Pochert/D.B.Maru/G, .Tarian
- . Test Matrix:

Test Vehicle Model EngiTrans	Test	Mode		Rema	arks
2042 PP773-052 73 I-6 Auto. 2061 PP777-053 77 I-6 Auto. # With revised fuel line	204	Frt	88	ABS	Devl.

Component(s) Order Date: Review Date & Status: 10/15/86 - 204 barrier crash scheduled for 10/19/86 which will monitor 301 performance.

Certification Status

. Test Matrix:

. Component(s) Order Date:

- . Component(s) Received Date: Not Received
- . Test Report Number(s):

. Review Date & Status: 10/15/86 - Vehicle not received. 5/28/87 - Based on the evaluation of previous certification barrier crash tests as well as 8800 development crash tests with the revised fuel line, further crash testing will not be required.

Sign Off Testing Completed: 5/7/87

Product Group Engineer(s) Date

Safety Certification Engr.

5/29/87 1 of 1



Chipeles Maires Cusposation

CONFLIANCE REPORT

SUBJECT: PURE SYSTEM INTEGRATY - 1989 'MJ' PICKOP TRICK AND

STANDARD IDENTIFICATION: VMVSS 301, Section 53., 35., 86, and 87.

STANDARD TITLE! Fuel System Integrity

APPROVALS

Name (Print or Type) Title Signature Date

H. A. Bosen Department Sanager MA Bossan 923-88

H. A. Bonea Department Hanager // A Daylor 9:23-68

He Lo PARKER Chilef Engineer 10011 10110 11110

Date Received by Safety Programs and Finet Engineering SEP U.C. 1939 ORC

111u No. 89-HJ/XJ-301

Detron All SPYRK THE

INTRODUCTION

Subjecti

Insued by

Fuel System Integrity - 1989 'HJ' Pickup Truck and 'XJ' Sport Utility Verification of design compliance with the requirements of Federal Motor Febicle Safety Standard No. 101. Objecti CP-194, CP-232, CP-233, CP-234, CP-245 and CP-245 Procedurat All Chryster Motors 1989 'HJ' Pickup Truck and 'XJ' Sport Utility with G.V.W.K. of 10,000 lbs. and under, as design released, comply with the requirements of FMVSS 301. Conclusions SAYETY DOCUMENTATION CHMPLIANCE REPORT (Page 1 of 8) Propared by: Approved by Nameger, Department 2530

Impact Test & Development Department

File No. 89-HJ/XJ-301

1988 , M.I. SICKIN LENCK YOU, Y.I., SHORL DILL'ILL.

Federal Hotor Venicle Safety Standard No. 301 - Sections St., 95., S6.1 thru 56.4.

D18C03310N

The Chrysler Motors 1989 'MJ' Body Josp "Casancha" - Biss, Pioneer and Kliminetor Pickup Track and the 'XJ' Eody Josp "Charakea" - Bass, Lioneer, Laredo, Euro, Limited and Maganear Sport Utility vehicles (2 and 4-whost drive), are essentially carryover from the 1988 model year with the exception of Anti-Lock Brake System (ABS) uption, which is relocated for the Charakee (XJ).

These vehicles are of unitedy construction, offered in 113 and 120 inch whosibase for the pickup with 5.0 and 7.0 foot double well "Sweptline" cargo boxes. The sport utility is offered in 101 inch wheelbase.

All vehicles are possion by electronically fuel injected four cylinder (14) engines with 2.5 litre or six cylinder (16) engines with 4.0 litre displacement. The 2.5 litre and the 5.0 litre engines are available with either automatic or 5-speed manual transmission. The 2.5 litre ongine is also available with 4-speed manual.

The funt system consists of a steal tank mounted at mid-frame for the pickup and rear mounted for the aport utility. The filter neck is located on the last side of the cehicle. Fuel tank capacities (in gallons) and as follows:

MJ-Pickup 7.0' Bux MJ-Pickup 6.0' Box 81-Sport Utility

Standard 16.0 18.5 13.5 Option 23.5 20.2

These fuel tanks have a standard plastic stone shield and an optional skid plate.

The front and rear humper systems consist of a stool beam with optional humper guards.

All volicles are offered with a compact spire tire or a conventional space option.

Vehicle seating capacity for the 'MJ' is thron or two passengers when vehicle to equipped with bench or bucket seats respectively. Seating capacity for the 'XJ' is five passengers.

The 'MJ' home paytoad is 1475 ibs. and maximum paytoad is 2205 ibs. The luggage apacity for the 'XJ' is 300 ibs.

Rightson vahicles were tosted to dominatrate compliance of the 'HJI and 'XJI to the requirements of FMVSS 301, Final System Integrity: These vahicles and test regults are shown on Summaries I thru V.

VII. No. 89-MJ/XJ-10/

Baloty Documentation Compliance Report

DISCUSSION (Cont)

That numbers 1551, 1906 and 2011 were prepared and tested in accordance with the following Chrysler Motors Corporation Compliance Procedure:

CP-233 "Noving Barrier 20 MPH Lateral Impact Test", Change 'R', dated 2/20/85.

Test numbers 1853, 1889, 1890, 1901, 1985 and 1998 were prepared and tested in secondance with the following Chrysler dotors Corporation Compliance Procedure:

CP-212 "Fixed Collision Barris, 30 MPH Angled Frontal Impact Test", Charge 'o', dated 1/4/83.

Test numbers 1887, 1898, 1990 and 2029 were propared and tested in secondance with the following Chrysian Motors Corporation Compliance Procedure:

CP-194 "Fixed Collision Barrier 30 MPH Frontal Impact Tost", Change 'C', dated 1/7/85.

Test numbers 1988, 1909, 2005, 2028 and 2061 were prepared and tested in necordance with the following Chrysler Motors Corporation Compilance Proceedings:

CF-234 "Maying Barrier TO MPH Hear Impact Test", Change 'F', dated 2/20/85.

The above that vehicles, did not experience fluid losses that exceed the fuel spillage critaria specified in Chrysler Motors Corporation Compliance Procedure:

CP-245 "Fuel System Integrity", Change 'K', dated 2/3/86.

Pollowing barrier impact, wehicles were further tested in accordance with the following Chrysler Motors Corporation Compliance Procedure:

GF-245 "Fuel System Integrity - Static Rollovac Test", Change 'C', dated 1/7/85.

Finid leakage ducing and following impact and during static rollower in these tests were within the limits specified in FMVSS 301 - Sections 55.5 and 85.0.

Based on the above, the 1980 'HO' and 'XO' Bodies, as design released, comply with the requirements of FMVSS 301 - Sections 81., 85, and 86.1 thru 86.4.

Proported by

Unto

File No. 89-HJ/XJ-301

				6 of speed, recorded was	Leaksav_f a	Mux.	In Any
Test No.	Mode	Vehicle Model & Description	Vehicle Loant If Leat Lep No.	At.	Pollowing 10 Houses	Kollover	(0s./Hin.)
1851 (12/10/84)	20 MPH Lateral Left	Juan "Cherokea", 4-Boor, 4-Wheel Drive Sport Utility, Manual Transmis and 2.3 Litra (14) TOLK	nuta	-0-	~ () n	-0-	-0-
(12/06/8A)	Anglu	Joup "Cherokee", 4-Boor. 2 Whoo! Drive Sport Utility, Hanual Transmis and 2.5 Litre (14) TBI K	ston	-0-	-0-	-0-	-0-
1687 (05/13/85)	Flat Frontal	Joop "Cherokee", 2-Door, A-Whool Drive Sport Utility, Manual Transmis and 2-5 Litre (14) THI E	Number	-0-	-0+	-0-	-0+
1888 (05/21/85)	Rear	Jeep "Cherokee", 2-Door, A-Wheel Drive Sport ULL Hangel Transmission and 2.5 Lites (14) TBI Engin	ILY.	-0-	-0 -	-0-	-0-

Allowable Lesters by Meight

1. One (Ox.) at impact.

2. Not more than one (Ox.) per minute following 30 minutes.

1. Five (Ox.) for first 5 minutes after each 90° rotation and not more than one (Ox.) per minute thereafter.

Propared by

Dalei

FILO No. 89-HJ/XJ-301

Safety Documentation Compliance Report

SIRMANY II

NORTH THREE TARGET TO THE STORY OFFICTY

					Luakage Hi	TOPOLY (OAL)	In Any
Tost No.	Impact Node	Voltere Model	Vehicle Identification No.	At impact	Yollowing 30 Hinutes		Position (Ve./Min.)
1089 (04/25/85)	300 Ht.	Jeep "Cherokee", 2-Door, 4-Wheel Drive Sport Utility, Automatic Transmission and 2.5 Litre (14) TBL Engine.	PP6C-012	-0-	-0-	-0-	-0-
1890 (06/10/85)	angla	Jeep "Cherokoo", 7-Door. 4-Wheel Prive Sport Utility, Automatto Transmission and 2.5 Litro (14) TBI Engine.	#6C-017	.0.	-0+	-0-	-0 -
(05/13/85)	Flat	Juop "Comancho", Pickup Truci 7.0 Ft. Cargo Box, 4-Wheel Drive, Manual Transmission and 2.5 Litro (14) TBI Engine		+0+	-0-	-0-	-0-
1901 (05/29/85)	300 Rt.	Joep "Comanche", Pickup Truck 7.0 Ft. Gargo Box, 4-Wheel Drive, Automatic Transmission and 2.5 Litra (14) TBI Engine	1	•0•	-0+	-0-	-0-

Allowable Leakage by Weight

1. One (Uz.) 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.

Date

Yite No. 80-MJ/XJ-301

STHMWARA TIT

1989 'MJ' PICAUP TRIMA AND 'KJ' NPORT UTILITY

					Luckage B	MOMENTY (UZ.)	-
Test No.	Hode .	Vehicla Hodel	Volte le Identification No.	At	10 Hington	Hollover (Da.)	ide:/win/j
(05/02/85)	20 HPH Lateral Late	Juap "Comminche" Pickup Truci 7.0 Ft. Cargo Box, 4-Wheel Drive, Ha ini Transmission and 2.5 Litro (14) The Englis		-0-	-0-	-0-	:0 ~
(06/18/85)	Rear	Jesp "Committee" Pickup Truct 7.0 Ft. Cargo Box, 3-Wheel Drive, Manual Transmission and 2.5 Litte (14) THE Engin		-0-	*u*-	-6-	.0+
1985 (05/11/86)	YuMfn 100 Kr	Jusp "Cherokee" 2-Door, 4-W Drive Sport Utility, Manual Transgission and 4.0 Litra (16) TBI Engine.	hest IJCML77*5KT	-0-	•0-	-0-	-0-
[990 (97/21/86)	Flat	Jeep "Cherokee" 2-boor, 4-W brive Sport Billity, Automa Transsission and 4.0 Litre (16) TBI Engine.	huel IJCHR7712PT	-0-	-0-	0.	-0-

Allowable Lantage by Weight

1. One (Ox.) at impact.

2. Not more than one (Ox.) per minute following 30 minutes:

3. Five (Ox.) for first 5 minutes after each 90° rotation and not more than one (Ox.) per minute thereafter.

Pile No. 80-HJ/XJ-301

Safety Incommitation Compliance Report

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1989 'M', BLUTAL ANDRA ATT, BEOKL ALITITAL AND ANTI- BEOKL ALITITAL

				ALL STATE BARBANE	Leokego S	monary (Da.)	
(Date)	Hode .	Ventele Hedel	Manicle Ideat Illeation No.	Ar Impact	Following 30 Minutes		in Any Postition [Uz./iiin.]
1098 (06/04/86)	angle	Josep "Charakos" 2-Poor, 4-Wheel Drive Sport Utility, Hannal Transmission and 4.0 Litta (16) THE Engine.	LJCHL771XET	-6-	-0-	-0-	-U-
2005 (01/03/86)	Roar	Jeup "Communitio" Pickup Truck 6.3 Ft. Cargo Mox, 2-Wheel brivo, Manual Transmission and 4.0 Litro (10) THI Englis		-0-	- 0 •	-0-	*Ø**
2011 (07/11/86)	20 HPH Lateral Luft	June "Commucho" Fickup Truck 7.0 Ft. Cargo Box, 4-Whoel Drive, Manuel Transmission and 4.0 Litre (16) 781 Engin		-0-	-0-	-0-	-0.
2028 (03/17/A7)	Roar	Jeep "Charokes" 4-Deor, 2-Weel Drive Sport Utility, Antopalio Transmission and 4.0 Litro (16) The Englis.	1JCHU7423FF	•0•	+0-	-0-	-0+

Allowable Leakage by Weight

1. One (Oz.) at impact.

2. Not more than one (Oz.) pur minute following 30 minutes.

3. Pive (Oz.) for first 5 bit iss after each 90° rotation and not more than one (Oz.) pur minute the eafter.

Datos

File No. 89 MJ/XJ-301

Safety Documentation Compliance Report

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YURL SYSTEM INTRORITY 1989 'HJ' PICKUP TRUCK AND 'XI' SPORT UTTLITY

	-				Loakage S	unniary (Oz.	In Any
Test lie.	Impact Hode	Vahicle Model & Description	Vehicle Identification No.	At Impact	Pollowing 30 Minutes		r Position (Oz./Min.)
2029 (12/13/86)	Flat Pront	Josp "Cherokee" 4-Door, h-Wheel Drive Sport Utility Manual Transmission and 4.4 Litro (16) TBI Regime!		-0-	-0-	-0-	-0-
(03/17/87)	Rear	Joop "Cherokae" 5-Door, 2-Wheel Drive Sport Utility Manual Transmission and 5.1 Litra (16) TBI Engine.		-0-	-0-	-0-	-0-

Atl tists are carry: of from 1988 American Motors Corporation Compliance Report, Reference Report dated 12/09/87.

Altogable Leatage by Maight

1. Und (Oz.) At impact.

2. Not pure 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.

Propared by:

Dater

EA12-005- Chrysler -006506

CHRYSLER

Chryster Minters Curporerion

COMPLIANCE REPORT

SUBJECT: FUEL, SYSTEM INTEGRITY - 1990 'HJ'-BODY, JEEF "COHANCHE" PICKUP TRUCK AND 'XJ'-BODY, JEEF "CHBROKEE" SPORT UTILITY

STANDARD IDENTIFICATION: PHYSS 301, - Section 83., 85., 86. and 87.

STANDARD TITLE: Fool System Integrity

APPROVALS.

O. H. Aboud

Name (Print or Type) Title Signature

Supervisor 6.1-37

H. in Shellunberger Department Sanagar 12 Michael Continued

H. C. VOD BUSTEN Executive Engineer ACUON Author 6/6/54

Date Ruceived by Safety Programs and First Engineering JUN 5 1989.

Filo No. 90-MJ/XJ- 101

14750 Paragraph Coad R 1 1 1014 One of the 19737 1,5 ct

INTRODUCTION

Fuel System Integrity - 1990 'MJ'-Budy; Joop "Comantho" Pickup Truck and 'XJ'-Body, Joop "Cherokne" Sport Utility Subjecti

Vatification of design compliance with the requirements of Federal Hotor Volicie Safety Standard No. 301.

CP-194; CP-232, CP-233, CP-234, CP-245 and CP-246 Proundure!

All Chrysler Rotors 1990 'HJ1-Body "Commache" Pickup Truck and 'XJ'-Rody "Cherokee" Sport Utility with G.V.W.R. of 10,000 lbs. and under, as design released, comply with the requirements of PMVSS 301. Conclusions:

Objecti

SAPETY DOCUMENTATION COMPLIANCE REPORT (PARE 1 of 8)

Approved by G. H. Aboud, Supervisor, Department 1000

Approved by W. L. Shollenburger, Manager,

lyd housel Josp/Truck Safuty Department,

File No. 90-M.1/X.1-301

Safety Resumentation Compliance Report

PURI. SYSTEM INTEGRITY
1990 'MJ'-BODY, JEEP "COMANCHE" PICKUP TRUCK AND
'KJ'-BODY, JEEP "CHEROKEE" SPORT UTILITY

Federal Hotor Vehicle Safety Standard No. 301 - Sections 93., 95., 86.1 thru

DISCUSSION

The Chryster Meters 1990 'MJ'-Body, Jesp "Communio" - Base, Piones; and Eliminator Pickup Truck and the 'KJ'-Body, Jesp "Chirokes" - Same, Pionesr, Laredo, Euro, and Wagonner Limited Sport Utility valueles (2 and 4-wheel drive), are essentially corryover from the 189 model year.

These vehicles are of unibody construction, offered in 113 and 120 inch wheelbase for the pickup with 6.0 and 7.0 feet double wall "Sweetline" cargo boxes. The Aport utility is offered in 101 inch wheelbase.

All vahities are powered by electronically fuel injucted four cylinder (14) obgines with 2.5 litrs or six cylinder (16) engines with 4.0 litre displacement. The 2.5 litrs and the 4.0 litre engines are available with either automatic or 5-speed manual transmission. The 2.5 litre engine is also available with 4-speed manual.

The fuel system consists of a stoul tank mounted at mid frame for the plokup and rear mounted for the sport utility. The filler nack is located on the left side of the vehicle. Fuel tank capacities (in gallons) are as follows:

MJ-Pickup 7.0' Dox MJ-Pickup 6.0' Box XJ-Sport Utlilty

Standard	16.0	18.5		13.5
Option	23.5	9	*	20.2

These fuel times have a standard plantic stone shield and an optional skie place.

The front and rear bumper systems consist of a steel beam with optional bumper guards.

All vanicins are offered with a compact apare tire or a conventional space option.

Value to seating capacity for the 'M.I' is three or two passengers when vehicle is equipped with beach or bucket seats respectively. Seating capacity for the 'XJ' is five passengers.

The 'Al' base payload is 1475 lbs. and maximum payload is 2205 lbs. The luggage reports for the 'Al' is 300 lbs.

Bighteen vehicles were tested to demonstrate compliance of the 'HJ' and 'XJ' to the requirements of FMVSS 301, Fuel System Integrity. These vehicles and test results are shown on Summaries I thru V.

File No. 90-MJ/KJ-301

Safety Documentation Compilance Report

DISCUSSION (Con Inued)

Test numbers 1851, 1906 and 2011 Wore prepared and tested in accordance with the following Chrysler Motors Corporation Compliance Procedura:

CP-233 "Moving Barrier 20 MPH Lateral Impact Test", Change 181, dated 2/20/85.

Tost numbers 1853, 1889, 1890, 1901, 1985 and 1998 were proposed and tested in accordance with the following Clayslar Hotels Corporation Compilance Procedure:

CP-232 "Fixed Collision Barrier 30 8PH Angled Frontal Impact Test", Chango 'D', dated 1/4/03.

Test numbers 1887, 1898, 1990 and 2029 were proported and tested in accordance with the following Chrysler Hotors Corp ration Compilance Procedure:

CP-194 "Fixed Collision Barrier 30 MPH Frontal Impact Test", Change 'C', dated 1/2/8%.

Test numbers 1888, 1909, 2005, 2028 and 2041 wave propared and tested in accordance with the following Chrysler Hotors Corporation Compliance Procedular

CP-234 "Moving Barrier 30 MPR Rear Impact Test", Change 'P', dated 2/20/85.

The above test vehicles, did not experience fluid losses that exceed the fuel spillage criteria specified in Chrysler Motors torporation Compliance Procedures

Cr-246 "Fuel System Integrity", Change 'E', dated 2/3/84.

Following harrier impact to were further tusted in accordance with the following Chrysler Hoto: at'm Compliance Procedure:

GP-2A5 "F: 4m integrity - Static Hollover Test", Ch. 1, dated 1/7/85.

Fluid lookage during and following impact and during static collever in these tosts were within the limits specified in FRVSS 301 - Sections 55.5 and 55.6.

Based on the above, the 1990 'M,T'-Body, Jeep "Gomanche" Pickup Truck and 'XJ'-Body, Joep "Cherokee" Sport Utility, as dosign released, comply with the requirements of FHYNS 301 - Sections 33, 35, and 56.1 thru \$6.4.

Prepared byt

Datei

811u No. 90-MJ/XJ-301

SUMMARY I

PURL SYSTEM INTEGRITY 1990 'HJ' HODY, JEEP "COMANCHE" PICKUP TRUCK AND 'XJ' HODY, JEEP "CHEROKER" SPORT UTILITY

	1				Loakage	Summary (1)E)	-
Test No.	Impact Hode	Vehicle Hode: & Description	Validela Identification No.	At, Impact	Pollowing 30 Minutes		In Any Position (Os./Min.)
(12/10/84)	20 Min Lateral Late	Josp "Cherokee", 4-Door, 4-Wheel Brive Sport Utility, Manual Trans, and 2.31 (14) TBI Engine,	1.JCUX7822FT	*0-	-0-	-0-	-0-
(12/06/84)	30° Lt. Angla	Jaep "Cherokaa", A-Door, 2 Whael Drive Sport Utility, Manuel Trans, and 2.51 (14) TBI Engine.	iJoua/418FT	*0-	-0-	0- ti	-0-
1887 (05/13/85)	Flat Frontal	Jesp "Cherokee", 2-Door, 4-Wheel brive Spott Billity, Manual Trans, and 2.5L (14) Tal Engine.	No Vahicle Number	-0-	-0-	-h-	-0-
(05/21/85)	Rear	deep "Cherokee", 2-Door, 4-Wheel brive Sport Utilit Hanval Transmission and 2.51, (14) TOI Engine	#6C-0008	-0-	-0+	-0-	-0-

Allowable Lockage by Weight

1. One (0x.) at impact.

2. Not more than one (0x.) per minute following 30 minutes.

3. Five (0x.) for first 5 minutes after each 90° rotation and not more than one (0x.) per minute thereafter.

Datai

File No. 90-HJ/XJ-301

SUMMARY II

-5-

FURL SYSTEM INTEGRITY 1990 'HJ'-BODY, JEEP "COMANCHE" PICKUP THUCK AND 'XJ'-BODY, JEEP "CHEROKLE" SPORT UTILITY

				after money of many lands	Lunkagu	Summery (Oz)	-
(Date)	Impact Hodn		Vehicle Militication No.	At Impact	Politowing 30 Hinutes		Position (Oz./Nin.)
1889 (04/25/85)	30° Hr. Angla	Joep "Cherokee", 2-Door, 4-Wheal Drive Sport Willity Automatic Tran mission and 2.5 Litra (14) Int Engine.	PP6C-012	-0-	-0.	-0-	-0-
1890 (06/10/85)	300 Lt.	Jeep "Cheroken", 2-Door, 6-Wheel Drive Sport Utility Automatic Transmission and 2.5 Litra (14) TBF Engine.	#6C-017	-0-	- n -	•n•	-0-
1898 (05/13/85)	Flut. Front	Juen "Comenche", Pickup Truc 7.0 Pt. Gargo Box, 4-Wheel Drive, Hanual Transmission and 2.5 Litre (14) TBY Engin		-1)-	0.	-0-	-0-
(05/29/85)	300 Rt.	Jean "Comanche", Pickup Truc 7.0 Pt. Cargo Box, 4 Mheel Drive, Automatic Tronsmissio and 2.5 Litre (14) TAI Engin	n	-0-	~O~	×0~	-0-

1. One (Oz.) at impact.

2. Not from them one (Oz.) per minute following 30 minutes.

3. Five (Oz.) for first 5 minutes after each 30° retation and not more than one (Oz.) per minute thereafter.

Datos

File No. 90-HJ/XJ-301

ILI YHAM'RIS

PUBL SYSTEM INTEGRITY 1990 'MJ'-BODY JEEP "COHANCHE" PICKUP TRUCK AND 'XJ'-BODY JEEP "CHEROKEE" SPORT UTILITY

		1		tended and a	Lear un Si	umary (Oz.)	Econolis and	
(Date)	Impact Hode	Volteta Hodel	Vahicie Lientification No.	At Impact	Following 30 Limitos		Fosition (Or./Hin.)	
(15/02/85)	20 Mpli Lutoral Loft	Joap "Comanche" Pickup Trace Pt. Cargo Box, 4-When to, Hannel Transmission 2.5 Litro (14) TBI Eng	1	-0-		-0-	-0-	
1989 (94/18/85)	Ronr	Jaep "Commanche" Pickup Tro 7.0 Pt. Cargo Box, 4-Wime Drive, danual Transmission and 2.5 Litre (14) Tal Eng		-()-	-0-	-0-	ų.	
1985 (05/13/86)	JO" Rt. Augla	Jeap "Cherokee" 2-Door, 4- Drive Sport Utility, Manua Transmission and 4.0 Litre (16) TBI Engine.	1	+Ô+	-0-	*0*	-0-	
1990 (07/21/86)	Fiat	Jeep "Charokee" 2-boor, 4- brive Sport "Hillty, Autom Transmission and 4.0 Litre (16) Thi Engine.	al.1c	•0 +	-0-	+0+	-0-	

Allowable Leakage by Woland

1. One (Co.) at impact.

2. Not more than one (Oz.) per minute following 30 minutes.

3. Five (Oz.) for first 3 minutes after each 90° rotation and not more than one (Oz.) per minute thereafter.

Datei

Ptin No. 90 MJ/XJ-301

SUMMARY IV

1990 M.F. BODY JEEP "COMANCIES" PICKUP TRUCK AND XXI BODY JEEP "CPEPOKKE" STORT UTILITY

and a		- T.W.			Leekago S	Homery Con	
(Date)	Hode Hode	& Lescription	Identification No.	At Impage	Following 20 Sinutes		In Any Position (Oz./Hin.)
1998 (06/04/86)	300 Lt.	Junn "Cherokas" 2-Deer, 4-Wheel Drive Sport Hell Hanus! Transmission and Litre [16] The Engine.	ilty, Light.721Vift	-0-	- 1	.0-	
2003 (07/03/86)	Ronz	Jean "Comanche" Fickup T 6.0 Ft. Cargo Rox, 2-Who Brive, Manual Transmissi and 4.0 Litre (16) The R	ol.	-0-	-04	*(f) *	-0-
2011 (07/11/86)	20 MPH Interal	Comp "Communit" Pickup T 7.0 Ft. Cargo Box, 4-Who Drivo, Hanual Transmissi and 4.0 bitre (16) TRI E	61	-0-	÷() ÷	-0-	-0-
20)8 (05/1//87)	Hnar	Jeap "Churokee" 4-Door, Z-Whael Drive Sport Util: Automatic, Transmission at 4.0 Litre (16) TBI Engine	nd .	-0-	-0-	-0-	-0-

Allowable tearage by beight

1. One (Oz.) at impact.

2. Not more than one (Oz.) per minute following 30 minutes.

3. Five (Uz.) for first 5 minutes after each 90° refactor and not more than one (Oz.) per minute thereafter.

Prepared bys

Dates

File No. 90-M1/X1-301

1990 'HJ'-BODY JEEF "COHANCHE" PICKUT TRUCK AND 'XJ'-BODY JEEF "CHEROKKE" SPORT UTILITY

		A Second Second	. A.	Lookes Symmery (On)			
(Into)	Node .	A Description	Identification No.	At	Policying 39 Minutes	Maxi	Position (2s./Htm.)
(12/12/86)	Flat	Grop "Charokee" A-Duor, A-Wheol Drive Sport Hil Manual Transmission and Litre (16) TAI Engine.	1114.	-0-	*0*	-1)-	-0-
2041 (03/17/87)	Heat	Jeep "Charokee" 4-bodr, 2-Wheal Drive Sport Util Monual Transmission and Litre (to) Thi Englis.	140.	-0-	-0-	-0-	-0-

All temis are carryover from 1989 Compliance Report, Reference File No. 89-MJ/XJ-301.

Allocable Legange by Height

1. One (On.) at impact.

2. Not more than one (On.) per minute following 30 minutes.

3. Five (On.) for first 5 minutes after each 90° rotation and not more than one (On.) per sine a thereafter.

Prapared by:

Datut

Pile No. 90-MJ/XJ-101



Chrysler Maters Corporation

		JANCE REPORT	
RUMISCO	PUELSYSTEM INTEOR	TIY 1991 MJ-BODY, JEHP COMAN	ICHE PICKUP TRUCK
KLANIARD IDES	NTIFICATION: F	MVSS 301, - Sections \$3., 85., 86. and	\$7.
STANDARD THE	Tr in	uel System Integrity	
APPROYALS	7		
Namo (Print or Typ	e) Tue	Signaturo	Dete
S.M. About	Supervisor	GALOND	6:14-90
D.G. MacDonald	Dopertment Manager	D.C. Macodonal	R 6-14-91
ILC. NO HUSTEN	Bacculve Bagineer	He was Punton	6-14-90
No. 10	oty Programe and Fleet He	Jul \$ 1 1650	

File No. 91 MJ/XJ-301

Hor Jibis Defroit 40232 - 514

INTRODUCTION Mablock Feel System Integrity - 1991 'MU'-Body, Juop "Compache" Pickup Track and 'X.P.-Body, Joep "Cherokee" Sport Utility QU'LL Verification of design compliance with the requirements of Federal Motor Vehicle Safety Standard No. 301. CP-194, CP-232, CP-233, CP-234, CP-245 and CP-246 Procedure: All Chysler Corporation 1991 'MJ' Body 'Comanche' Pichup Truck and 'XJ' Body 'Cherotee' Sport Utility with O.V.W.R. of 10,000 lbs. and under, as design released, comply with the requirements of FMVSS 301. Conclusions: SAFETY DOCUMENTATION COMPLIANCE REPORT (PAge 1 of 8) Apparoved by: Approved by list od by: loep/Truck Safety Program Management

Pile No. 91-MI/XJ-301

Safety Decumentation Compliance Report

FUIL SYSTEM INTEGRITY 1991 W.J.BODY, JEEP "CHEROKEE" SPORT UTILITY 'XJ.BODY, JEEP "CHEROKEE" SPORT UTILITY

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

DISCUSSION

The Chypler Corporation 1991 'MJ-Body, Jeep "Comanche" Pickup Truck and the 'XJ-Body, Jeep "Cherokee", 2 and 4 door model, Sport Utility vehicles (2 and 4-wheel drive), are essentially carryover from the 1990 model year with the exception of the following:

- The 2.5 lite (14) Throttle Body injection engine (TBI) is revised to a Multi-Point injection engine (MPI).
- Revised Intake manifold.
- New fuel lines.

The 2.5 line MPI and the 4.0 litro MPI (with a single board electronic control) engines are available with either 4-speed automatic or 5-speed manufi transmission. The 2.5 litre engine is also available with 4-speed manufi transmission.

These vehicles are of unibody construction, offered in 11° 2. 1°6 fact wheelbase for the pickup with 6.0 and 7.0 foot double wall "Sweptiline" cargo boxes. The spot unity of cr.d i. 101 inch wheelbase.

The fuel system consists of a steel tank mounted at mid-frame for the pickup and rear mounted for the speciality. The filter neak is located on the left side of the vehicle. Fuel tank capacities (in gallons) are as follows:

	MI Pickup 10 Dos	MI-Pickup 6.0' Box	XI Sport Ullin
Standard	16.0	18.5	13.5
Option	23.5		20.2

These fuel tanks have a standard plastic stone shield and an optional shirt plate.

The front and rear humper systems consist of a steel beam with optional humper guards.

All vehicles are of ored with a compact spare tire or a conventional spare option.

Vehicle scaling capacity for the 'MJ' is three or two passengers when vehicle is equipped with bench or bucket scale respectively. Scaling capacity for the 'MJ' is five passengers.

The 'MJ' hase payload is 1475 lbs, and maximum payload is 2205 lbs. The luggage capacity for the 'XJ' is 300 lbs.

All losts were conducted with two restrained dummics at driver and right front passenger location and with MO lost of luggage ballast.

Thirteen vehicles were lested to demonstrate compliance of the 'MJ' and 'XJ' to the requirements of FMVSS 301, Fuel System Integrity. These vehicles and test results are shown on Summaries I thire V.

File No. 91-M1/X1-101

Safety Documentation Compliance Report

DISCUSSION (Continued)

Test numbers 1851, 1906 and 2011 were propered and lested in accordance with the following Chrysler Corporation Compilesco Precodure:

CP-213 "Moving Barrier 20 MPH Lateral Impact Test", Change 'B'.

Test numbers VC4010 and 4049 were prepared and tested in accordance with the following Chapster Corporation Compliance Procedure:

CP-232 'Fixed Collision Barrier 30 MPH Angled Frontal Impact Test', Chan, 3 'D'.

Test numbers VC3999, 4011 and 4094 were prepared and tested in accordance with the following Chrysler Corporation Compliance Procedure:

CP-194 'Flacd Collision Barrier 30 MPH Prontal Impact Test', Change 'I'.

Test numbers 1886, 1909, 2005, 2028 and 2041 were prepared and tested in accordance with the following Chrysler Corporation Compliance Procedure:

CP-734 'Moving Barrier 30 MPH Rear Impact Tost', Change 'P'.

The above test vehicles, did not experience fluid to see that exceed the feet spillage criteria specified in Cityster Corporation Compliance Procedure:

CP-246 'Puel System Integrity', Change 'U'.

Following barrier impact, vehicles were further tested in scoordance with the following Chrysler Corporation Compilance Procedure:

CP-245 'Fuel System Integrity - Static Rolliever Teat', Change 'R'.

Plack leakage during and following impact and during static relieve. In these tests were within the Fults specified in FMVSS Mil - Sections \$3.5 and \$5.6.

Based on the above, the 1991 'MJ'-Body, Jeep "Commache" Pickup Truck and 'XJ'- Body, Jusp "Cherokee" Sport Utility, as design released, comply with the requirements of FMVSS 301 - Sections S. , 55, 36, and 87.

Premared bu-

Dele:

June 13, 1990

FIIO No. 91-MJ/XJ-301

BUMMARY I

PUBL SYSTEM INTEGRITY 1991 "MU-BODY, HEEP "COMANCHE" FICKUP TRUCK AND "XJ-BODY, HEEP "CHEROKEE" SPORT UTILITY

		Introve		Loakero Symmany (On)				
Tosi No.	Muso	Vehicle Model & Description	Vehicle Identification No.	timpact	Potlowing 30 Minutes	Rollo	ver Postuon (Qz/Min.)	
[85]** (12/10/84)	20 MPH Lateral Len	Jeep "Cherokee", 4-Door, 4-Wheel Drive Sport Utility, Magual Transand 2-3L (14) TBI Engine:	IJCUX78226 r	4	.0-	0	0	
1886** (05/21/85)	Real	Jeep "Cherokee", 2-Door, 4-Wheel Drive Sport Utility, Manual Transmission and 2.5L (14) Thi Engine.	#60-0008	•	-0-	.0.	-0.	
(05/02/85)	20 MPH Lateral Left	Jeep "Commache" Pickup Truck, 7.0 Ft. Cargo Box, 4-Wheel Drive, Manual Transmission and 2.5 Litro (14) TBI Pagino.	#6T-108	4	-0.	-0-	0-	

^{**} Tests are carryever from 1990 Compliance Report, Reference Pile No. 90-MI/KJ.WI.

Allomable Leatage by Welchi

1. One (O.) at Impact.

2. Not more than one (O.) per minute following 30 minutes.

3. Five (Ob.) for first 5 minutes after each 90° rotating and not more than one (Oz.) per minute thereafter.

Prepared by:

File No. 91-MJ/XJ-301

BUMMARY II

PUEL EVEREM INTEGRATY 1991 "MF-HODY, JEEP COMANCHIC PICKUP TRUCK AND 'XJ-HODY, JEEP CHEROKIES SPORT UTILITY

				to market garge	Lakero Sumu	MCV (194)	
(Osto)	Impaci Mode	Vehicle Model & Prescription	Vehicle Ideatification No.	At Imstacs	Following 30 Minutes	300	Men in Ally very Prefetor (Oz./Min.)
(04/18/85)	Rear	Joep "Comanche" Pictup Truck, 7.0 Pt. Cargo Dox, 4 Wheel Dive, Manual Transmission and 2.5 Litre (14) TBI Hagine.	#6T-108	.0.	.0.	.0.	4
2005** (07/03/86)	Rear	Joep 'Comanche' Pichup Truck, 60 Pt. Cargo Box, 2 Whett Drive, Manual Transmission and 40 Litro (16) Till Engine.	LITMW64*7HT	0-	0	.0.	0
(07/1 36)	20 MPH Lateral Left	Joep "Comanche" Pickup Truck, 7.0 Ft. Cargo Box. 4-Wheel Driv: Manual Transmission and 4.0 Litro (16) 1Bl Engine.	LITMLAS*93FT	-0-	•	-0-	-0-

Tests are carryover from 1990 Compliance Report, Reference File No. 90-MJ/KJ-301.

Allowable Leakage by Welshi

1. One (Oz.) at Iripari.

2. Not note that one (Oz.) per infaute following 30 minutes.

3. Pive (Oz.) for first 5 minutes after each 90° rotation and not more than one (Oz.) per minute thereafter.

" sparce by

Pile No. 91-MJ/XJ-301

Sufety Docus & alson Compliance Report

1991 MF BUTY THEF "COMMICTE" PICKUP TRUCK AND XJ-BUDY THEF "CHUROKIE" SPORT UTILITY

C 4. 7			7	Lestago Summary (Oc)			
Tost No.	of the c	Vehicle Model	Ideatification No.	Impact	Pollowing 30 Miliputes	Rollow	in Any er Postikia (Oz/Mia)
2020** (03/17/87)	Ros	Joen "Cherokee" 4-Door, 2-Wheel Drive Sport Utility, Automatic Transmission 4.0 Litre (16) TDI Engine,	IJCMU7423HT	•	0-	.0.	-0-
2041** (0)/17/87)	Rest	Jeep "Cherokee" 4-Duor, 2-Wheel Drive Sport Utility, Manual Transmission and 1.0 Litte (16) TBI Engine.	IJCMW782AHT	.0.	0	٥	-0-
VC3999 (12/19/89)	Pront	Jodo "Comanua." Truck, 60 Poot Cargo Bor, 4-Wissel Drive, Manual Trans- mission, Power Storting, Air Conditioning and 2.5 ltre (14) MPI Ragiae.	7F126L7ML	.().	.0- /	.0.	-0-

Tests are carryover from 1990 Co. inliance Report, Refers to File No. 94 M (20130).

Alternable f. estage by Weight

1. Uno (OL) a limpact.

2. Not more than one (OL) per minute following 30 minutes.

3. Pive (OL) for first 3 minutes after, each 90° so tilon and not note than time (OL) per traute thereafter.

"pared by:

Date:

File No. 91-MJ/AJ-101

.7-SUMMARY IV

FUEL SYSTEM INTEGRALY. 1991 "MP-BODY JEEP "CHERO" "E" SPYRT UTILITY W-BODY JEEP "CHERO" "E" SPYRT UTILITY

Man 11			20	-	Losten Symp	W. O	War anyunda	
(Date)	-Mode	& Description	Identification No.	At	Collowing 30 Minutes	Rollo	az in Any ver Position (Oz./Min.)	
VC4010 (01/10/90)	10° Li. Angle	Joep "Cherokee" Sport Utility, 4. Wheel Drive, Manual Transmission, Power Sterlag, Air Conditioning and 4.0 Extre (16) MP! Elagine.	114P13H.7ML	40-	-0-	.0.	-0-	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
VC40[1 (01/19/90)	Plai Pront	Jeep 'Cherokee' Sport Uillity, 4: Wheel Drive, Manual Transmission, Power Steering, Air Conditioning and 5 Litro (14) MPI Bag	HAFINE?ML	•	•	4.	.0.	
VC4049 (03/09/9U)	30° Rt. Angle	Joep 'Cherokee' Sport Utility, 4-Wheel Drive, Manual Transmission, Power Steering, Air Conditioning and 25 Litre (14) MPI Engin.	11487357ML	0	.0.		4	

Allowable Leakage by Wolch:

1. One (OL) at impact.

2. Not more than one (Or.) per minute following 30 minutes.

3. Piru (Oz.) for first 5 minutes after each 90° roution and not more than one (Oz.) per etisate thereafter.

Prepared by

Date:

File No. 91-ML/KJ-301

Safety Documentation Compliance Report

SUMMARY V

PUID. BYKTEM INTEGRITY 1991 'MF-BODY JEEP 'COMANCINE' PICKUP TRUCK AND 'XJ-BODY JEEP 'CHEROKIEP BYORT UTILITY

					LCAKARO SWIDDIARY (Oz.)				
	Tost No.	Impace Mode.	Vehicle Model A. Destipiles	Vehicle Ideasification No.	At	Following 30 Minnion	Rollover Position (Oz.) (Oz./Mia.		
Y	VC4094 (05/24/90)	Plai Prosi	Jeep "Cherokee" Sport Utility, 4-Wacel Drive, Manual Transmission, Power Stooring, Air Conditioning	114P338L7M1.	·o.	4	0. 0.		

Altoroble Leaking by Wolch!

1. One (On.) at Irapact.

2. Not more than one (Or.) per inlines following 30 minutes.

3. Pive (On.) for first 3 minutes after each 40° rotation and not more than one (On.) per minute thereafter.

Propered by:

Deter

Pilo No. 91-MJ/XJ-301

EA12-005- Chrysler -006524



Chrysier Meters Corpugelles

COMPLIANCE REPORT

Bundret :	TRUCK AND 'XJ' B	ORIFY - 1992 'MJ' BODY, JEEP " HODY, JEEP "CHEROKEE" SPORT U	COMANONS" PICKUP
STANDARD IDEN	CIPICANION:	FMV88 301 - Sections 83.,	85., 86. and 87.
etandard titl	n	Fuel Systom Integrity	
DEPROVALE:			
MAKE	Title	Siguature	Date
Aboud, o	pertment Manager		05-30-91
R.P. LUNDABRO	Executive Engineer	RPRunda	5 3041
Date rodelved	by Automotive Safety	and Security	
			No. 92-HJ/XJ-301

Bafaty Documentation Compliance Rep .

Phiert

INTRODUCTION

Subject: Fuel System Integrity - 15. " 'MJ' Body, Jeap "Commucha" Pickup
Truck and 'IJ' Body, Jeep "Cherokee" "port Utility &

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

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

Renelusions:
All Chrysler Corporation 1992 'MJ' Pickup Truck and 'KJ' Sport Utility with Q.V.W.R. of 10,000 lbs and under, as design released, comply with the requirements of PMVSS 301 - Sections 53., 85., 56. and 87.

BAFETY DOCUMENTATION COMPLIANCE REPORT (Page 1 of 7)

Property by Dana aur May 16, 1991

Approved by: 646, About 05-70-41

Issued by: Jeep/Truck Rafety Program Management

File No: 92-HJ/XJ-301

. 17, SODA' THEE . CHRYCKER. BLOKE AZITELE 1885 . NO. BODA' THEE . COMPHCHE. BICKEN LANCK WAS TABLE BASTEM INTECNIENT.

Federal Hotor Vehicle Sefety Standard No. 301 - Sections 83., 85.. 86. end 87.

DISCUSSION

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The Chrysler Corporation 1992 'NJ' Body, Jeep "Comanche" Pickup Truck and the 'XJ' Body, Jeep "Cherokee," 2 and 4 door model, Sport Utility vehicles (2 and 4-wheel drive), are essentially carryover in design from the 1891 model year.

These vehicles are offered with two power plants. The 2.5 litre MPI and 4.6 litre MPI engines are available with either 4-speed automatic or f-speed manual transmission.

The 'AJ' and the 'AJ' vehicles are of unibody construction, offered in 113 and 120 inch whielbase for the plokup with 6.0 and 7.0 foot double wall "sweptline" cargo boxes. The Sport utility if offered in 121 inch wheelbase.

The front humper system consists of a steel beam with optional humper guards and nurf strip.

All vehicles are offered with a compact spere tire or a conventional spare outlin.

vehicles seating capacity for the 'HJ' is three or two passengers when vehicle is squipped with banch or bucket costs respectively. Seating capacity of the 'XJ' is five passengers.

The 'MJ' base payload is 1475 lbs. and maximum payload is 2205 lbs. The juggage capacity for the 'XJ' is 300 lbs.

The fuel systum consists of a plastic tenk mounted at mid-frame for the plukup and rear mounted for the sport utility. The filler mack is located on the left wide of the vehicle. Fuel tank capacities (in gallons) are as follows:

MJ-Pickup 7.0' Box 18 MJ-Pickup 6.0' Box 18 KJ-Sport Utility 20

These fuel tanks have a standard plastic atons shield and an optional skid plate.

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

rile No: 92-43/XJ-301

Safety Documentation Compliance Report

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DISCUSSION (cont'd) Eleven' Volicies were tested to domonstrate compliance of the 'HJ' and 'XJ' to the requirements of FMVHS 101, Fuel System Integrity. These vehicles and test results are shown on Summaries I thru IV.

Test numbers 1851 and 2011 were prepared and tested in accordance with the following Chrysler Corporation Compliance Procedure:

"Mounting Barrier 20 mph Lateral Impact Tect," Change 'F,'

Test numbers VC4010 and 4049 were prepated and tested in accordance with the following Chrysler corporation compliance Procedure:

"Fixed Collision Barrier 30 mph Anyled Front Impact Test," Change 'E,' dated 04/09/90.

Test. numbers VC3999, 4011 and 4094 were prepared and tested in accordance with the following Chrysler Corporation Compliance Procedure:

"Fixed Collision Barrier 10 mph Frontal Impact Test," Change 'I.' dated U5/30/9U.

Test numbers 1888, 1909, 2005 and 2041 were prepared and tested in accordance with the following Chrysler Corporation Compilance Procedure:

"Hoving Barrier 30 mph Rear impact Test," Change 'O, dated CP-234 04/09/90.

The above test vehicles, did not experience fluid losses that exceed the fuel upillage criteria specified in Chrysle: Corporation Compliance Procedure:

"Fuel Syriam Integrity," Change 'Q, dated 03/26/90.

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

"Fuel System Integrity-Static Rollover Test," Change 'E,' dated CP-245 03/23/90.

fluid leakage during and following impact and during static rollover in these tests were within the limits specified in PHVSE 301, Sections 85.5 and 85.6.

Based on the above, the 1992 'HJ' Body, Jeep "Comanche" Pickup Tr ck and 'XJ' Body, Jeep "Cherokee" sport Utility, as design released, comply with the requirements of PHVSS JOI - sections 81, 85, 86, and 87.

Prepared by

F118 NO! 97-HJ/XJ-301

PUEL SYSTEM INTROSTT! 1992 'NJ'-BODY, JERF "COMANCES" SPORT UTILITY 'IJ'-BODY, JERF "CHEROKRE" SPORT UTILITY

					Lackage &		
Test No.	Impact Hoda	Vehicle Model	Vehicle	At	Following 30 Hinutes		or Position
1851** (12/10/84)	20 MPH Lateral Left	Josp "Cherokes", 4-Door, 4-Wheek Drive Sport Utility, Hanual Trans, and 2.5L (14) TBI Engine.	13001182277	-0-	-0	-0-	-0-
(05/21/65)	Pear	Jeep "Cheroken", 2-Boor, t-Wheel Drive Sport Unility Henuel Transmission and 7.5% (14) TBI Engine.	#6C~0008	-0-	-0-	-0-	-0-
1909** (04/18/85)	RAAL	Jeep "Comanche" Pickup Truc 1.0 Ft. Cargo Box, 4-Wheel Drive, Hanual Transmission and 2.0 Litre (14) TB1 Engl		-0-	~0 ~	-0-	~0 <i>-</i>

Tosta are derryover from 1991 Compliance Report, Reference File No. 91-MJ/KJ-301.

Allowable Leakage by Haight 1. One (Os.) at impact,

2. Not more than one (Oc.) per minute following 30 minutes.

3. Five (Oc.) for first 5 minutes after each 90° rotation and not more than one (Oc.) per minute thereafter.

File No: 92-MJ/XJ-301

BURGUARY II

FUEL SYSTEM INTEGRITY 1992 'MJ'-BODY, JEEP "COMANCHE" PICKUP TRUCK AND 'XJ'-BODY, JENP "CHENORMS" SPORT UTILITY

				Leakage Summery (OA)			
Test No.	Impaot	Vehicle Hodel	Vehicle Identification No.	At	Following 10 Hinutes		er Posttion
2008**	Rear	Jeep "Comanche" Pickup Trus 6.0 ft. Cargo Box, 3-Nheel Dilve, Manual Transmission and 4.0 Litre (16) TBI Engi		-0-	-0-	-0-	-0-
2011** (07/11/86)	20 MPH Lateral Left:	Jesp . manche" Pickup Truc 7.0 Ft. Cargo Box, 4-Wheel Drive, Hanual Transmission and 4.0 Litre (16) TBI Engi		-0-	+0-	-0-	-0-
2041** (03/17/87)	Rear	Jeep "Charokea" 4-Door, 2-Wheel Drive Sport Utility Habual Trangmission and 4.0 Litro (16) TBL Engine.		+0-	-0-	-0+	-0-

Teste are carryover from 1991 Compliance Report, Heference File No. 91-MJ/KJ-301.

Allowable Leakage by Height 1. One (Or.) at impact.

- 2. Not more than one (Ox.) per minute following 30 minutes.
- J. Five (Os.) for first 5 minutes after each 90° rotation and not more than one (Os.) per minute thereafter.

Prepared by:

EA12-005- Chrysler -006530

III YEARMUB

FUSIL STUTEN INTEGRITY 1883 . MA: - BORA MEEL . COMMAGRE. SICLAR MUNCK WAD AT. - HODA ABID . CHREOME. MICHA GALL CALLTANA

			Vehicls	Luahago Supmary (Os)			
Test No.				At	Pallowing.		or Position
(13/13/83) Ad3333	Front Pront	Jeep "Comenche" Pickup Truck, 6.0 Foot Cargo Box, 4-Wheel Drive, Nanual Trans- mission, Power Steering, Air Conditioning and 2.5 Litre (14) MPI Engine.	137¥326L/HL	-0-	*0**	·D-	-0-
V04010** (01/10/90)	30° Lt. Anglo	Jeep "Cherokee" Sport Utility, 4-Wheel prive, Hanual Transmission, Power Steering, Air Conditioning and 4.0 Litre (16) MPI Engine.	134F33717HL	-0-	-0-	-0-	-0-
(01/19/90) VG4C(144	Flat	Juan "Cherokee" Sport Utility, 4-Wheel Drive, Hanual Transmission, Power Steering, Air Conditioning and 2.5 Litre (14) MPI Engine.	134731687НЪ	-0-	O =-	-0-	-0-

Teams are carryover from 1991 Compliance Report, Reference File No. 91-MJ/XJ-301.

Allowable Lembage by Molight 1. One (Os.) at impact,

- 2. Hot more than one (Ox.) per minute following 10 minutes.
 3. Five (Ox.) for first 5 minutes after each 90° rotation and not more than one (Ox.) per minute thoroafter.

V.P. Hannaul

Dater

File No: 92-HJ/XJ-301

EA12-005- Chrysler -006531

BUMMARY IV

. EA. -BODA TERE .. COMMUNE. BLOKE LHECK THROK WHO FALL - SOUTH SALEM INTEGELL?

					Leakage Bu	motary (Or	u
Test No.	Impact Hode	Vehicle Model	Vehiule Identification No.	At Impact	Following 30 Kinutes		or Position 10z./Hin.)
(03/09/90) V04049**	30° Rt. Angla	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Hanual Transmission, Power Steering, Air Conditioning and 2.5 Litre (14) MP1 Engine.	1J4FJ38PPML	-0-	~0-	-0-	~0~
VC4094** (05/24/90)	Flat Front	Jeep "Obsrokee" Sport Utility, 4-Wheel Drive, Hand Transmission, Power Steering Air Conditioning and 4.0 Lit (16) MPI Knighne.	·	-0-	-0-	-0-	-0-

^{**} Teste are darryover from 1991 Compliance Report, Ref. File No: 91-MJ/XJ-301.

1. One (O4.) at impact.

2. Not more than one (Oz.) per minute following 30 minutes.
3. Yive (Oz.) for first 5 minutes after each 90° rotation and not more than one (Oz.) per minute thereafter.

#118 No: 92-NJ/XJ-301

EA12-005- Chrysler -006532

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SHEYELER

Chryslar Corporation

COMPLIANCE REPORT

SUBJECT		" BODY, JESP "CHERON		
STANDARD IDEN	PIPICATION	YHV88 301 - pec	tione 83., 85	., 86. and 87.
STANDARD TITLE	21	Fuel Bystom Int	egrity	
APPROVALS:				
NAME	Title	dig	nature	Date
Q.M. Aboud, pe	partment Hanagek	6AGn		06-18-72
A.P. LUNDBARG.	Executive Engine	· PL	moles 3	6-18-92
bate received	by Automotive Safe	ety and security		

File No: 93-MJ/XJ-301

14750 Plyint: ib Hoad But 33514 Detroit Mt 48232-5514 safety Documentation compliance Report

objects

INTRODUCTION

Subject: Yuel System Integrity - 1993 'MJ' Body, Jeep "Comanche" Fickup Truck and 'MJ' Body, Jeep "Cherokee" Sport Utility

Verification of design compliance with the requirements of Federal Motor Vehicle Mafety standard No. 301.

Procedure: CP-194, CP-232, CP-233, CP-334, CP-245 and CP-246.

Conclusions:

All Chrysler Corporation 1993 'MJ' Flokup Truck and 'KJ' Sport
Utility with G.V.M.A. of 10,000 lbs and under, as design
released, couply with the requirements of FKVSS 301 - Sections
SJ., 85., 86. and 87.

SAPETY DOCUMENTATION COMPLIANCE REPORT (Page 1 of 7)

Prepared by: V.P. Hannawi, Safety Specialist, Dapt. 1060 Date

Approved by: 6-78-92 O.H. Aboud, Manager, Department 1060 Date

Issued by: Jeap/Truck Safety Program Management

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. safety Documentation Compliance Report

PURL SYSTEM INTROUTTY
1993 'MJ' BODY, JEEP "COMANCES" SPORT UTILITY
'IJ' BODY, JEEP "CERROKES" SPORT UTILITY

Federal Hotor Vehicle Safety Stendard No. 301 - Sections 83., 85., 86. and 87.

DISCUSSION

The Chrysler Corporation 1993 'MJ' Body, Jeep "Comannhe" Plokulp Truck and the 'MJ' Body, Jeep "Cherokee," 2 and 4 door model, Sport Utility vehicles (2 and 4-wheel drive), are essentially carryover in design from the 1992 model year. Kowever, the MJ Util also be offered in right hand drive (RHD) configuration for commercial and postal carrier use.

These vehicles are offered with two power plants. The 2.5 litre (14) MPI and 4.0 litre (16) MPI engines are available with either 4-speed automatic or 4-/5-speed manual transmission.

The 'HJ' and the 'XJ' vehicles are of unitody construction, offered in 113 and 120 inch wheelbase for the pickup with 5.0 and 7.0 foot double wall "sweptime" cargo boxes. The Sport Utility If offered in 101 inch wheelbase.

The front bumper system consists of a steel beam with optional bumper guards and nerf strip.

All vehicles are offered with a compact spars tire or a conventional spare option.

Vehicles seating capacity for the 'MJ' is three or two passengers when vehicle is equipped with bench or bucket seats respectively. Scating capacity of the 'MJ' is five passengers.

The 'HJ' base payload is 1475 lbs. and maximum payload is 2205 lbs. The luggage capacity for the 'XJ' is 300 lbs.

The fuel system consists of a plastic tank mounted at mid-frame for the pickup and rear mounted for the sport utility. The filler neck is located on the left side of the vehicle. Fuel tank capacities (in gallons) are as follows:

MJ-Pickup 7.0' Box 2: MJ-Pickup 6.0' Box 1: KJ-Sport Utility 2:

These fuel tanks have a standard plastic stone shield and an optional skid plate.

All tests were conducted with two restrained dummies at driver and right front

711e No: 93-MJ/XJ-301

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Safety Documentation Compliance Report

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DISCUSSION (cont'd)

passenger location and with 300 lbs. of lugoage ballast.

Twelve vehicles were tested to demonstrate compliance of the 'MJ' and 'MJ' to the requirements of FMVes 301, Fuel System Integrity. These vehicles and test results are shown on Summaries 1 thru IV.

Test numbers 1851 and 2011 were prepared and tested in accordance with the following chrysler Corporation Compliance Procedure:

CP-233 "Mounting Barrier 20 mph Leteral Impact Test," Change G.

Test numbers VC(01) and 4049 were prepared and tested in accordance with the following Chrysler Corporation Compliance Procedure:

CP-232 "Fixed Collision Barrier 30 aph Angled Front Impact Test," Change E.

Test numbers V03999, 4011, 4094 and XTAIAS were prepared and tested in accordance with the following Chrysler Corporation Compliance Procedure:

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

Test numbers 1886, 1909, 2005 and 2041 were prepared and tested in accordance with the following chryster Corporation compliance Procedure:

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

The above test vehicles, did not experience fluid losses that exceed the fuel spillage criteria specified 'n chrysler corporation compliance Procedure:

CP-246 *Fuel System Integrity, * Change G.

rollowing barrier impact, vehicles were further testod in accordance with the following Chrysler Corporation Compliance Procedure:

CP-245 "ruel System Integrity-Static Rollover Test," Change 1'.

Fluid leakage during and following impact and during static rollerer in these tests were within the limits specified in FMVSS 301, sections 85.5 and 85.6.

Based on the above, the 1993 'MJ' Body, Jrep "Comandhe" Pickup Truck and 'XJ' Body, Josep "Cherokee" Sport Utility, as design released, comply with the requirements of FMVSS 301 - Sections S3., 85., 86. and 87.

Prepared by: Department v.b. Hannawi Date: 06/15/92

File No: 93-MJ/XJ-301

BUINGARY I

PURE SYSTEM INTEGRITY 1993 'MJ'-BODY, JEEP "COMANCEN" PICKUP TRUCE AND 'EJ'-BODY, JEEP "CHEROKER" SPORT UTILITY

				-	Luakage Hu		in Any
Test No.	Impaot Hode	Vehicle Model	Vehicle Identification No.	At.	Yollowing 10 Hinutes		for fortion
1851 (12/10/84)	20 MPH Intorel Left	Jean "Cherokee", 4-boor, 4-Wheel Orive Sport Utility, Manual Trans.and 2.86 (14) Tal Engine.	LJCUK7 RZZFT	-0-	() La	a+ 0 ==	-0-
1688 (05/21/05)	Resr	Jeep "Cherokye", 2-Door, 4-wheel Orive Sport Utility Manual Transmission and 2.5L (14) THE Engine.	46G-0008	-0-	-0-	-0-	-0-
1909 (04/18/85)	Rear	Jesp "Comandhe" Pidwin Truc 7.0 Ft. Cargo Box, 4-wheel Drive, Manual Transmission and 2.5 Litre (14) TBI Engl		-1)-	-0-	₩ 0₩	-0-

All test vehicles are carryove. from 1992 Compliance Report, Reference File No. 92-MJ/XJ-301,

Allowable Leakage by Weight

1. One (Os.) at 1 pact.

2. Not more than one (Os.) per minute following 10 minutes.

3. Five (Os.) for first 5 minutes after each 90° rotation and not more than one (Os.) per minute thereafter.

Prepared by: Dillanne

08/15/95

711e No: 93-M7' ...-301

SUMMARY II

PURE STATEM INTEGRATY 'XJ'-BODY, JEEP "COMMUNE" PYCKUP TANCE AND 'XJ'-BODY, JEEP "CREMONER" SPORT UTILITY

				Conta Cara Cara	Yoakhaa Bu	UNMARY (QX	1
Test No.	Impadt Hode	Vehicle Model	vehicle Identification No.	At Impaot	rollowing		or Position
2005 (07/03/86)	Hear	Jeep "Commanche" Fickup True 6.0 Ft. Cargo Box, 1-Wheel Drive, Kenuel Transmission and 4.0 Litre (16) Tel Engi		-0-	-0-	-0-	-0-
2011 (07/11/86)	20 MPH Lateral Loft	Jeep "Commanche" Pickup Truc 7.0 Pt. Cargo Box, 4-Wheel Drive, Hanual Transmission and 4.0 Litre (16) THI Engi		~0	-0-	-0-	-0-
2041 (03/17/87)	Rear	Jeep "Cherokee" 4-Door, 2-Wheel Drive Sport Utility Habusi Transmission and 4.0 Litre (16) The Engille.	13CHW1828HT	-0-	-0	-0-	-0-

All test vehicles are carryover from 1992 compliance Report, Reference File No. 92-MJ/XJ-J01.

Alloyable Leakage by Welght

1. one (ox.) at impact.

2. Not more than one (Ox.) per minute following :0 minutes.

3. Five (Oz.) for first 5 minutes after each 90° rotation and not more than one (Oz.) per minute theresiter.

Prepared by: Deta wast

ate 06/15/82

File No: 93-NJ/XJ-301

safety Ducumentation compliance Report.

BURGIARY ETT

PUBL STRIPS INTEGRITY 1993 'MJ'-BOOY JEEP "COMPARCES" PICKUP TRUCK AND 'XJ'-BODY JEET "CHARORES" SPORT UTILITY

				-	Leakage Bu		Lucian mana
Test No.	Hois.	Leanty Lion	vohicle identification go.	At Impagt	Polloving 10 Hinutes		or Position
V03999 (12/1:/89)	flat Front	Jeep "Comenche" Pickup Truck, 6:0 Frot Cargo Box, 4-Wheel Drive, Hanual Trans mission, Power Steering, Air Conditioning And 2:5 Litte (26) MPI Engles.	1378326L716L	+0+	-0-	*0=	-0-
VC4010 (01/10/90)	10° Lt.	Jeep "Cherokae" Sport Utility, 4-khael Drive, Manual Transmission, Power Steering, Air Conditioning and 4.0 Litre (14) MPI Rogi	AJAPJ37LFRG	-0-	+0-	-0-	-0-
1/04011 (/21/19/90)	Flat Front	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Hanual Transmission, Power Steering, Air conditioning and 2.5 Little [14] NFY Engl	12/47338R7ML	-0~	= 0·o	-0-	~0~

All test vehicles are cerryover from 1992 compliance Report, feterence File No. \$2-KJ/XJ-301.

Allowable Leakage by Meight 1. One (OI.) at impact.

- 2. Not more than one (Oz.) per minute following 10 ainutes.
 3. Five (Oz.) for first 5 minutes after each 90° rotation and not more than one (Oz.) per minute thereafter.

Safety Documentation Compliance Report

MUMMARY IV FUEL STETEN INTEGRITY 1991 'MJ -- BODY JEEP "COMANCES" PICKUP TRUCK AND "IJ'-BODY JEEF "CHEROKER" SPORT UTILITY

				-	Lunkage St	DENEKY_(Q)	1)
Test Ho.	Inpact Hode	Vehicle Hodel	Vehicle Identification No.	At Impact	Following AP. Minutes		ver Position (Os./Min.)
V04049 (03/09/90)	30° Rt. Anglu	deep "Cheroket" Sport Utility, 4-wheel Drive, Menual Transmission, Power Stmering, Air Conditioning and 2.5 Litre (14) MP1 Engine.	1J4FJ38P7HL	-0-	-0-	-0-	-0-
V04094 (05/24/90)	rist Front	Jesp "Cheroxee" Sport Utility, 4-Wheel Drive, Har Transmission, Power Stearin Air Conditioning and 4.0 f.s (16) MPI Engine.	ng,	-0-	-0-	-0-	-0-
(12/3c/91	Flat Front	Jeep "Cherokee" Aport Utils 4-Wheel Drive, 4-speed Auto Transmission, fower Steerin (Tilt), 4.0 Litre MPI engin Air Conditioning and Right Drive (RKD).	matic	-0-	.ò-	-0-	-0-

Times are carryover from 1992 Compilance Report, Ref. File Hot 92-MJ/XJ-301, except MTR166.

Speer haund on development tweek conducted the MJ Right Hand Drive was judged to be capable to meet all performance regulromenta of HV88301.

Aliquable leakage by Meight

1. One (Os.) At impact.

2. Not more than one (Os.) per minute following 30 minutes.

3. Five (Os.) for first 5 minutes after each 90° rotation and not more than one (Os.) per minute thereafter.

V.P. Hannavi

Safety Documentation Compliance Report

BURNARY IV PURL BYSTEM INTEGRITY 1915 'MJ '-BODY JEEP "COMANCES" PICKUY TRUCK AND 'IJ .- BODY JEEP "CHEROKES" SPORT VILLITY

					LGAKAGO AL	TOTAL Y TO	And the supplemental to
						100 - 1	. in Any
Test No.	Impact	Vehicle Hodel	Vehicle	At	Following	100000000000000000000000000000000000000	er Position
(Date)	_Node_	& Deadkiption	Identification No.	Impact	10 Minutes	1941	(Os./Hin.)
V04049 (03/09/90)	30° At. Angle	deep "Cherokee" Sport Utility, 4-Wheel Drive, Henual Transmission, Power Steering, Air Conditioning and 2.5 Litre (14) HPI Snyine.	1347338P7HL	-0-	-0-	-q-	#0 *
VC4098 (05/24/90)	Flat	Jeep "Uherokee" Sport Utility, 4-Wheel Drive, Ham Transmission, Power Steerin Air Conditioning and 4.0 Lit (16) MPI Engine.		-0-	~0~	-0-	-0-
XTR168 (12/30/91	71st Front	Jesp "Cherokee" Sport Utilit 4-Wheel Drive, 4-speed Autor Transmission, Power Steerin (Tilt), 4.0 Litre HPI engin Air Conditioning and Right 1 Drive (RHD).	Matio	-0~	-0-	-0-	-0-

Tists are carryover from 1992 Compliance Report, Ref. File No: 92-KJ/XJ-101, except XfR168.

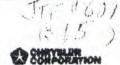
Note: Based on development tests conducted the XJ Right Hand Drive was judged to be capable to meet all performance requirements of MV65301.

Allowable Leakage by Meight 1. One (Oz.) at Impact.

- 2. Not more than one (Us.) per minute following 30 minutes:

 3. Five (Os.) for first 5 minutes after each 90° rotation and not more than one (Os.) per minute thereafter.

Propared by: V.P. Hannawi 06/15/92 P110 Hot 93-HJ/XJ-J01



Chiyelsi Corporation

COMPLIANCE REPORT

SUBJECT!

FUEL SYSTEM INTEGRIFY - 1994 'NJ' BODY, JESF "CHEROKES" SPORT

STAMBARD IDENTIFICATION:

tires 301 - sections 83., 85., 86. and 87.

STANDARD TITLE!

Fuel System Integrity

APPROVALE:

MANOR

fitte

R.A. Rider, Department Hanager

D. C. u.C.

D.Q. HIM! Executive Engineer

JUN 1 7 1993

Date Received by Mafety Programe:

File 50: 94-XJ-301

14250 Plymouth Read Box 33614 Detroit Mr 48232 5514

safety Documentation Compliance Maport

INTRODUCTION

Fuel System Integrity - 1994 'XJ' Body, Jesy "Cherokeo" Sport Utility Bubieck!

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

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

Oppulusions:

All Chrysler Corporation 1994 'XJ' Sport Utility with G.V.W.R. of 10,000 lbs and under, as design released, comply with the requirements of FNVSS 301 ~ sections 83., 85., 86. and 87.

SAFETT DOCUMENTATION COMPLIANCE REPORT (Page 1 of 6)

geel col/03/93

Issued by: Jeep/Truck, Vehicle Tepact Davelopment

File No: 94-13-301

FUEL SYSTEM INTEGRATT 1994 'IJ' BODY, JEEP "CERRORES" SPORT UFILITY

Federal Motor Vehicle Safety Standard No. 301 - Secti 18 83., 65., 86. and 87.

DISCUSSION

The Chrysler Corporation 1994 'XJ' Body, Josp "Chexokes," Sport Utility vehicles, 2 and 4-door model, 2 and 4-wheel drive, are essentially varryover from the 1993 model year. The XJ is size offered in right hand drive (RHD) configuration.

This wehicle is offered with two power plants. The 2.6 litre (14) MPI Engine is available with either 3-speed automatic or 5-speed manual transmission. The 4.0 litre (16) MPI engine is available with either 4-speed overdrive automatic or 5-speed manual transmission. The vehicle is also offered with Anti-Lock Brake Bystem (ABS) for the 4.0 litre only as an optional feature.

The "XJ" is of unibody construction, offered in 101 Inch wheelbase.

The front bumper system consists of a steel beam with optional bumper guards and norf atrip.

All "XJ" vehicles are offered with a compute spare tire or a conventional spare option.

Vehicles capacity including seating for five passengers, 100 lbs. of luggaus and 20 gallons of fust.

The fuel system consists of a 20 gallon plastic tank rear mounted. The filler neck is located on the laft side of the vehicle. Vehicle is equipped with a standard plastic stone shield and an optional skid plate.

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

Right vehicles were tested to demanstrate compliance of the 'XJ' to the requirements of FMYRS 301, Fuel System Integrity. These vehicles and test results are shown on Summeries I, II, and III.

Test number 1851 was procured and tested in accordance with the following Chrysler Corporation Compliance Procedure:

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

File No: 94-XJ-301

Safety Documentation Compliance Report DISCUSSION (cont'd) Yest numbers VC4010 and 4049 were procured and tested in sucordance with the following Chrysler Corporation Compliance Procedure: "Fixe' Collision Sarrier 30 mph Angled Front Impact Test," Change 'F' OP-232 Test numbers 4011, 4394 and KTR168 were produced and tested in Accordance with this following Chrysler Corporation Compilance Procedure: "Fixed Collision Barrier 30 mph Frontal Impact Teet," Change CP-194 Tagi numbers 1888, and 2041 were propured and tested in accordance with the following Chrysler Corporation Compliance Procedure: "Moving Sarrier 10 mph Rear Impact Test," Change 'II'. The above test vehicles, did not experience fluid lonese that exceed the fuel spinlage criteria specified in Chrysler Corporation Compliance Procedures "Fuel System Integrity," Change 'O'. OP-246 Following barrier impact, vehicles were further tested in accordance with the following Chrysler Corporation Compliance Procedure: "Fuel System Integrity-Statio Enliover Test," Change 'F'. Fluid laskage during and following impact and during static rollover in these tests were within the limits specified in FNVSS 301, Sections 85.6 and 85.6. Hasad on the above, the 1994 'XJ' bindy, Jeep "Cherokee" Sport Utility vehicles, so design released, comply with the requirements of PNVSS 301 - dections 83., 86., 86. and 87. 06/03/93

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MTT# MO! 84-X7-,41

STRABBING I

1996 XJ -2007, JEED "CHERONES" BYONE UTILINE

				-	Inchage ou		I In May
Test No.	Linds	Vehicle Model	Vehicle Identification No.	At Inpage	20 Midutes		Position 10s./Nin.)
1851 (12/10/84)	20 MPH Lateral Left	Jeep "Cherokee", 4-Duor, 4-Mheel Orive Sport Utility, Manual Trans.and 2.BL [14] TBI Engine.	1JCUX1822#7	-0-	*0*	~O-	-0-
1888 (05/21/63)	Rear	Jeep "Charokos", 2-Door, 4-Wheel Drive Sport Utility Menual Transplanion and 2.3L (14) THI Mogins.	#60-000%	+0	~0~	-0-	-0-
2041 (03/17/87)	Rear	Jeep "Cherokee" 4-Door, 2-Wheel Drive Sport Utility Manual Transmission and 4-0 Litre (18) TSI Engine.	1JCHW7825H2	-0-	-0-	-0-	~0~

All test vehicles sig corryover from 1993 Compilance Report, Reference File No. 91-XJ-101.

#ilomable Inskers by Meicht

1. one (Or.) at impact.

2. Not more than one (Or.) per minute following 30 minutes.

3. Five (Or.) for first 5 minutes after each 96° rotation and not more than one (Or.) per minute thereafter.

FL1e Not 94-XJ-301

II YEAMEDS

FURL STRIBM INTRORITY 1494 'ZJ'-BODY JEEF "CEERONES" SPORT UTILITY

		evice her carsaluca			Lwakege Su	MAKY_(QA)	-
Test No. (DATE)	Impact	Vaniole Hodel	Vehicle Identification No.	At Impagt	Following 10 Hinuses		in Any r Position 10s./Hin.)
(01/10/a0) A04010	10° Lt. Angle	Jeep "Chetckee" Sport Utility, 4-Wheel Drive, Manual Transmission, Power Steering, Air Conditioning and 4.0 Litre (16) MPI Wing		-0-	-0-	-0-	+0-
V04011 (01/19/90)	viet vront	Jeep "Cheroked" Sport Utility, 4-Wheel Drive, Hanual Transmission, Power Summering, Air Conditioning and 2.5 Litre (14) MPI Eng.	134933887ML	-0-	~0~	-0•	≈Q.•
VC4049 (03/09/90)	30° At. Angle	Jeep "Uherokee" Sport Utility, 4-Whem! Drive, Menual Transmission, Fower Stewring, Alr Conditioning and 3.5 Litre (14) MPI Engine.	1J4PJ38P9ML	-0-	-0-	-0-	-0-

All test vehicles are carryover from 1993 Compliance Muyort, Reference File No. 93-XJ-301.

Allowable Leakage by Medubt

1. One (Os.) at impact.

2. Not more than one (Os.) per minute following 30 minutes.

3. Five (Os.) for first 5 minutes after each 90° rotation and not more than one (Os.) per minute thereafter.

Prepared by: De Hannawi

File Mo: 94-23-101

EA12-005- Chrysler -006547

Safety Documentation Compliance Report

TIL YEARSONE YUEL SYSTEM INTENSITE 1004 'IJ'-BODY JERF "CHEROKER" SPORT UTILITY

				-	Louisado Bu		
Test No.	Impact	A Description	Vehicle Identification No.	At Impaut	Following 10 Minutes		Position
VC4094 (05/26/90)	Flat Front	Jesp "Charokee" Sport Utility, 4-Mhesi Drive, Transmission, Power Stee Air Conditioning and 4.0 (16) MPI Engl. 4.	ring,	-0-	-0-	-0-	-0-
XTR160 (12/30/91	Plat Front	Jeep "Cherokee" Sport Ut 4-Wheel Drive, 4-speed A Transmission, Power Stee (Tilt), 4.0 Litre MvI en Air Conditioning and Big Drive (RED).	urtoseti uring ugine,	-0-	-0-	-0-	-0-

All test vehicles and carryover from 1993 Compliance Report, Ref. File No. 93-XJ-301.

Based on development tests conducted the XJ Right Hand Drive was judged to be capable to meet all performance Motesi requirements of MV88301.

- (4) Test Letters included as Attachment "A".
- (4) Fiel Eyalem and Static Rollover Ausmany us Attachment "B".

Allowable Leakage by Height

- 1. One (Os.) at Impact.
- 2. Not more than one (Ot.) per minute following 30 minutes.
 3. Five ('s.) for first 5 minutes after each 90° rotation and not more than one (Ot.) per minute thereefter.

ATTACHMENT "A"

ATTACHMENT A 1044

VEHICLE CRASH TEST LETTER

PAGE 01

	VEHICLE CRASH LES	St. PETTER	
VC014010 30 MPH 30 DI 1 1 FNVSS 301 VALID TEST DATE 01/10/00	DATION, FUEL SYSTEM		
TEST PURPOSE	PRIMARY, 1991 MYS	8 301 VALIDATION. MINE FUEL SYSTEM INTO	SORITY.
	SECONDARY, 1902 MY OBSERVE AND DETERI INJURY CRITERIA.	VSS, 208 DEVELOPMENT, MINE LT AND RT FRONT	
IMPACT TYPE	BARRIER SURFACE:	30 DEGREE	
VEHICLE	BODY CLASS; CAR LINE; BODY; ENGINE; ENGINE NOTE; TRANSMISSION;	XJ J 72 4.0 LITRF MP1 5 SPEED MANUAL 4X4	
	VIN AS TESTED; VIN AS HUILT;	1 J4FJ37L?ML 1 J4FJ37L1KL	MOD.
ST SPEED	30.7 MPH BY ELECT	HONIC TRAP TIMER	
TEST WEIGHT (LBS)	4307 TOTAL, 2037	FRONT, 2270 REAR	
OCCUPANTS	RESTRAINT-UNIBELT	RID III, INSTRUMENTE	
	RESTRAINT-UNIDELT	D III, INSTRUMENTED.	VD-90
BUILD CONDITION	SENT 1001 BUILD POWER STR'O, POWE 101.4 INCH WHEELB 20.2 GAL STEEL FU MOUNTED REAR OF P206/75R15 TIRES	R BRAKES, AND AIR CO ABE. EL TANK, WITH IN TAN "THE AXLE. MOUNTED ON STEEL WHE ITED INSIDE -LT. REAR	NDITIONING K FUEL PUMP. ELS WITH FULL
TARGET WEIGHT (LDS)	3655 TOTAL, 2022 NOT INCLUDING O	FRONT, 1633 REAR, RE	P MAX OPT WY

2 0F9

SAFETY TEST VEHICLE CRASH TEST LETTER

PAGE 02

VC 4010 30 MPH 30 DEG LT ANG .MPACT, XJ72, 4.0MPI ITEM DXJ63 1 1 FMV88 301 VALIDATION, FUEL SYSTEM PERFORMANCE. TEST DATE 01/10/90

FUEL AND BALLAST	19.2 UALLONS OF STODDARD SOLVENT. 300 LBS, OF LUGGAGE BALLAST SECURED IN CARGO AREA. 200 LBS BALLAST SECURED ON THE REAR FLOORPAN. 140 LBS BALLAST SECURED IN THE REAR SEAT FOOTWELL. 80 LBS BALLAST SECURED ON THE REAR SEAT PLATFORM.	011 02: 08: 04:
POST TEST REMARKS	THERE WAS NO FUEL LEAKAGE AT IMPACT NOR DURING THE THIRTY MINUTES IMMEDIATELY FOLLOWING IMPACT. THE DRIVER DUMMY, RESTRAINED BY A UNIBELT, CONTACTED THE STEFRING WHEFL RIM AND HUB WITH HILL HEAD AND CHIN, AND HIS KNEES CONTACTED THE LOWER INSTRUMENT PANEL. SHOULDER BELT PAYOUT MEASURED 1.4 IN, ON THE B-PILLAR. THE PASSENGER DUMMY, RESTRAINED BY A UNIBELT, CONTACT.) THE LOWER INSTRUMENT PANEL WITH HIS KNEES. SHOULDER BELT PAYOUT MEASURED 1.0 IN, ON THE B-PILLAR.	701778
REPORT CODES	A = TRANSDUCER DATA C = HIGH SPEED FILM D = ENGINEER'S MEPORT E = DUMMY KINEMATICS C = UNDERBODY I = DYNAMIC CRUSH D = ENGINE COMPARTMENT L = FORCE/CRUSH/ENERGY	790 812 83 84 88
DISTRIBUTION	T.P. MAULE 422-05-01 (A) J.M. BERLINER 422-05-01 (A) J.W. HANIKA 418-42-22 (AB) W.A. BREITMOSER 422-05-6 (AB) W.R. HARBAUGH 418-42-22 (AB)	87 88 80 00
	DATE 01/10/90 TIME 18.11.25.	

PAGE 01

11 130

31 31 36

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30 40 41

42302

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48 80 51

6. 81 BI

81 0

" '4011 30 MPN FRONT BARN IMPACT, XJ74, 2.5L MP1 1TEM 0XJ30 1..1 MVSS 301 VALIDATION, FUEL SYSTEM INTEGRITY. TEST DATE 01/19/90

PRIMARY, 1001 MVSS 301 VALIDATION.
OBSERVE AND DETERMINE FUEL SYSTEM INTEGRITY.
SECONDARY, 1002 MVSS 208 DEVELOPMENT.
OBSERVE AND DETERMINE PERFORMANCE IN TERMS OF MVSS 208 INJURY CRITERIA. TEST PURPOSE

TARGET SPEED; 30.5 MPH
DAMAGE LOCATION; FRONT
IMPACT TYPE; DAMRIER
BARRIER SURFACE; PLYWOOD
DIRECTION; O DEGREE: INCACT TYPE PLYWOOD O DEUREES

50769012345878001

. .

BODY CLASS; CAR LINE; BODY; VEHICLE ENGINE: 2.5 LITRE

ENGINE NOTE: TRANSMISSION; TRANS. NOTE; VIN AS TESTED; VIN AS BUILT; 6 SPEED MANUAL 4X4 1J4FJ38E7ML 1J4FJ38E8KL MOD. MOD .

TEST SPEED 30.1 MPH BY ELECTRONIC TRAP TIMER TEST WEIGHT (LBS) 4174 TOTAL, 1938 FRONT, 2230 REAR

LEFT FRONT BOTH MALE HYB II' INSTRUMNTD. AD-80 RESTRAINT-3-PT UNIDELT ONLY. HIGHT FRT BOTH MALE HYB III INSTRUMENTD. AD-87 RESTRAINT-3-PT UNIBELT ONLY. UCCUPANTE

BUILD CONDITION

1080 PRODUCTION JEEP CHEROKEE MODIFIED TO REPRESENT 1901 PRODUCTION.

2.6 LITRE MP1 ENGINE, 5-SFEED MAN., POWER STEERING
POWER BRAKES AND AIR CONDITIONING.

SAGINAW STEERING COLUMN - FIXED.

101.4 INCH WHEELBASE.

20 GALLON STEEL FUEL TANK W/ELEC IN-TANK FUEL
PUNP.

P205/76815 TIRES ON STRRL WHEELS AND FULL SIZE
SPARE MOUNTED INSIDE LT. SIDE.

DRIVER AND PASSENGER UNIBELTS WITH FREE FALLING
TIP.

TARGET WEIGHT (LBS) 3516 TOTAL, 1876 PRONT, 1640 REAR REP MAX OFT WT.

EA12-005- Chrysler -006552

PAGE 02

02 03 06

97

0077777777778888:

888888

274011 30 MFH FRONT BARR IMPACT, XJ74, 2.66 MPI ITEM GXJ80 J1 NVB9 301 VALIDATION, FUEL SYSTEM INTEGRITY, TEST DATE 01/10/00

FUEL AND BALLAST

11

11

11

1000

50780012301578001....

19 CALLONS OF STODDARD SCLVENT.
3UC LBS OF LUGGACE BALLAST SECURED IN CARGO ARFA.
NOTE: CALL ED ZYLIK TO RESOLVE ANY QUESTIONS
ABOUT BALLAST DISTRIBUTION.
100 LB ON REAR SEAT FLOOR PAN AND POO LB ON FRONT

END OF CARGO AREA.

POST TEST REMAIKS

DRIVER CONTACT WITH VEHICLE; NOSE ON UPPER RIM OF STEERING WHEEL RIM, LOVER CHEST ON LOWER RIM OF STEERING WHEEL AND KNEES ON THE STEERING COVER RIGHT FRONT PASSENGER CONTACT WILL THE VEHICLE; KNEES ON THE GLOVE BOX DOOR. THE LEFT REAR CORNER OF THE HOOD DEFORMED AND CRACKED THE WINGSHIELD. THE SPARE TIRE WAS HETAINED IN PLACE.

REPORT CODES

TRANSDUCER DATA
HIGH SPEED FILM
DUMMY KINEMATICS
UNDERBODY
DYNAMIC CRUSH
DOOR CRUSH B = ALL FILM DATA
D = ENGINEER'S REPORT
F = STEERING COLUMN
H = A-POST
J = ENGINE COMPARTMENT
L = FORCE/CRUSH/ENERGY OIK - SPECIAL

PISTRIBUTION

W.A. BREITMOSER, JR.
J.W. HANIKA
T.P. MAULE
E.A. ZYLIK
S.P. GIERAK
M. KHALIFA
W.R. HARBAUGH 422-05-01 418-42-27 422-06-01 514-17-31 418-22-23 418-22-23 (AB) (AB) (AB) (AB) (ABEIO) (AB) (AB) 482-05-01

DATE 01/19/90

TIME 14.31.02.

S 05 14

5 05 9

ITEM NO. 0X428

PAOR 01

CHRYSLER HOTOFJ
"AFETY TEST
VEHICLE CRASH TEST REQUEST

ITCH OX428

CHARGE NO. 6321001 ISSUE DATE 2/27/90

VC 4049 30 MPH R/ANG. BARR. 1MPACT XJ74,2.5L MPI

TEST DATE

03 / 09 / 90 SPRED 30 5 MPH

KNOINERR SOURCE

TEST PURPOSE

PRIMARY, 1991 MVSS 301 VALIDATION.

OBSERVE AND DETERMINE FUEL SYSTEM INTEGRITY.

RECONDARY, 1982 MV98 208 DEVELOPMENT.

DESERVE AND DETERMINE LT AND RT FRONT DUMMY

INJURY CRITERIA.

IMPACT TYPE

TARGET SPEED! 30.5 MPH DAMAGE LOCATION RIGHT FRONT IMPACT TYPE: 30 DRORKE BARRIER SURFACE: PLYWOOD

30 DEGREES

RHICLE

CAR LINE: XJ BODY: BHOINK: 2.5 LITER

ENGINE NOTE; "HANBHIBBION: MPI

TRANS, NOTI; VIN AS TESTED: VIN AS BU'LT;

5 SPEED HANUAL 1X4

134FA38P7ML 1J4FJ38K91.L

Mon.

BUILD CONDITION

1990 PRODUCTION JEEP DHEROKEE MODIFIED TO PRPRESENT 1991 BUILD CONDITION.
POWER STR'C, POWER BRAKES, AND AIR CO.DITIONING
101.4 INCH WHEELBASR.
20.2 GAL STEEL FUEL TANK, WITH IN TANK FUEL PUNP.
MOUNTED BRAK OF THE AXLE.
P205/75RIS TIRES MOUNTED ON STEEL WHEELS WITH FULL
BIZE SPARE HOUNTED INSIDE - LT. WEAR.
FIXED COLUMN, SAGINAM

PARGET WRIGHT (LBB) 3370 TOTAL, 1802 FRONT, 1568 REAR, REP MAX OPT WT NOT INCLUDING OCCUPANTS OR LUJGAGE BALLAST.

TEST WEIGHT (LBS)

4022 TOTAL, 1916 PRONT 106 REAR

FUEL BALLAST

19.2 GALLONS OF STODDARD SOLVENT.

LUCCAOR BALLAST

300 LBS. OF LUGGAGE BALLAST SECURED IN CARGO ARRA.

POST TEST REMARKS

INTER COMPANY CORRESPONDENCE

FILE OHLO82290

DATE 08/29/90

OISTRIBUTION FROM HANTKA

CHRYSLER CENTER

TEST PURPUSE

PACHARY. 1991 HV68 JUL VALIDATION : INTEGRITY .

IMPACT TYPE

TAROET BPEED: 30.2 MPH
ORMAGE LECATION: FRONT
I HEACT TYPE: BARRIER
BARRIER BURFACE: PLYHOGO
DIRECTION: O DEOREE

VEHICLE

ALO LITRE

TEST OPEED

HPH BY ELECTRONIC TRAP TIMER test HEIGHT (LBO) TOTAL . 2008 FRONT . 2164 REAR

UCCUPANTE

RONT BOTH HALE HYBILL UNINBIRUHNTO AD-38

BUILD CONDITION

THE CHEROKEE NUDIFIED TO REPRETOUCHEN AND PROPER STEERING.
THE CONDITION NO.
THE C

TARGET HEIGHT (LBS) 3611 TATAL. 1980 FRONT, 1818 REAR REP MAX OPT HT.

 ATTACHMENT B' PAGE VI-1 / C/F 4
 FUEL SYSTEM AND STATIC ROLLOVER SUMMARY
TEST HUMBER VC4010, ITEM HUMBER GXJ03, TEST ENGINEER WINTH
FUEL: TYPE AND PURPOSE
I was a said a second company to the Calaba second and the property of the company to the company to the Calaba second and the company to the
I TUEL SYSTEM DATA I POST TEST CONDITION
FILLER TOUR
OROMATI FUEL PUMP - IN TALE BTRAPS -
BTRAPS - MANAGEMENT AND
ATH CLEANER -
POST THEATT ! KARAGE(02); AT IMPACT Z2, 18T 5 MIN. Z. HEXT 25 MIN Z2
STATIC ROLL LEAKAGE WITH VEHICLE RIGHT SIDE DOWN FIRST
IROLL TIME ICANBIFUELIATH IFUELIFUEL IGRO-IFILLIOTIERITOTALI
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O-90 IIOT 8 MIN I
POST 5 MINI
1 90-1501/87 8 MIN
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1270-380 197 5 MIN
POST 8 WIN 1 1 1 1 1 (44
STATIO ROLL LEARAGE WITH VEHICLE LEFT SIDE OWN FIRST
0-90 18T & MIN
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90-180 187 6 WIN
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12:10 IPOST 8 MIN 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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STATIC ROLL LEAKAGE	HITH E	VEHI	CLE LE	FT 81	וסם פט	WH FIR	ST			
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FUEL SYSTEM	AND 8	TATIO	ROLL	en ny	UMALAN		PACK	VI-L				1
ST NUMBER VC4C49. 1.N. 14F138 F.M. ST TYPE AND PURPOREL; TYPE AND QUAN- ST SPEED 30 G MPI	SE &	7E8	ANG S	APR.	ARD SO	LVENT	755	HO L	AL			
FUEL SYSTEM DATA						N		*****	*****			
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FILLER TUBE - CAF FUEL FILTER - GROWERT - FUEL PUMP STRAPS LINES AIR CLEANER - CARBURETOR -				1	_/	-		*****	*************			ľ
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IntraCompany Correspondence

Mr. D. A. Spytman

Location

Copy To:

From:

AMTEK

A. J. Rock

Location - Ext.

Date:

R. C. Lunn J. A. Seidl L. K. McDonald

Vehicle Safety/33170

Subject

1984 Compliance Manual Jeep XJ

August 2, 1982

FMVSS/CMVSS/FMVSR 301-75

The 1984 model year Compliance Manual for FMVSS/CMVSS/FMVSR 301-75, Fuel System Integrity, has been prepared to reflect the documentation necessary to assure compliance with this standard or regulation.

The Jeep XJ is a new vehicle and complete certification information is

Please complete the attached compliance manual and return it to the Vehicle Safety office by March 11, 1983. Additional check sheets are available in our

If you should need any assistance or have any questions, please feel free to

a.J. Rock

AUR /ag

1619v

VEHICLE SAFETY COMPLIANCE INFORMATION

FMVSS #301, "FUEL SYSTEM INTEGRITY"

101	Acylinder VEHICLE
YPE	NE TYPE: 4-cylinder VEHICLE TEST WEIGHT: 3098 lbs
	VEHICLE TEST WEIGHT: 30gg lbs Does the vehicle fuel system meet the requirements specified in AM What was the
	What was the actual crash speed? (30.5/32.0 front or rear, 20.5/21.5 What was the first
	What was the fuel spillage (by weight) during impact (from impact until none
	motion of the vehicle has ceased - max. 0.5 oz.)?
	What is the total fuel spillage (by weight) after a 5-minute period What is the fuel spillage (max. 5 oz.)?
	What is the fuel spillage (by weight) during any 1-minute interval for If fuel spillage occurred (max. 0.5 oz/min.)? none
	If fuel spillage occurred, describe location(s) and amount(s).
	amount(s).
OVE	
	What were the time durations for each successive position of 900, 2700, 3600 (req'd 5 minutes)? 8 minutes
0	weight) for the first 5-minutes of testing for each successive position of 900, 1800, 2700, and 3600 (max: 2.5 oz.)? none
1	or the remaining testing period, for each successive position of 90°, 270°, and 360°, what was the fuel spillage (by weight) during any fuel spillage occurred, describe location(s) and amount(s)
	sprinage occurred, describe location(s) and

Attach copy of Test Report No. 1633

This fuel system as it applies to models and applications noted conforms to Federal Motor Vehicle Safety Standard No. 301.

FAVSS/CMVSS RESPONSIBLE ENGINEER (DATE)

Vehicle Safety Programs has reviewed the above information, and found it to satisfactorily document demonstration of compliance with the above inclusion in the Certification Compliance Manual.

Grachie J. Bock 12/2/8:

Rev. 1/81 1/82

VEHICLE SAFETY COMPLIANCE INFORMATION FMVSS #301, "FUEL SYSTEM INTEGRITY"

	NE TYPE: V-6
	OF BARRIER IMPACT: 30 MPH 30° Right Front Impact - Fixed Barrier
	Does the vehicle fuel system meet the requirements specified in A
	What was the actual crash speed? (30.5/32.0 front or rear, 20.5/21.
	What was the fuel spillage (by weight) during impact (from impact untimotion of the vehicle has cased (max. O.
	What is the total fuel spillage (by weight) after a 5-minute period What is the total fuel spillage (by weight) after a 5-minute period What is the following cessation of motion (max. 5 oz.)? NONE
	What is the fuel spillage (by weight) during any 1-minute interval for the subsequent 25-minute period (max. 0.5 oz/min.)? NONE
	If fuel spillage occurred, describe location(s) and amount(s).
	amount(s).
LOV	/ER:
LOV	What were the at
	What were the time durations for each successive position of 90°, 180°, 270°, 360° (rea'd 5 minutes)? 8 minutes From the onset of rotational motion, what was the fuel spillage (by of 90°, 180°, 270°, and 360° (max: 2.5 oz.)?
	What were the time durations for each successive position of 900, 1800, 2700, 3600 (reg'd 5 minutes)? 8 minutes

This fuel system as it applies to models and applications noted conforms to Federal Motor Vehicle Safety Standard No. 301.

PHYSS/CHYSS RESPONDIBLE ENGINEER (DATE)

Vehicle Safety Programs has reviewed the above information and found it to satisfactorily document demonstration of compliance with the above Regulation, Requirement or Standard, and is therefore acceptable for inclusion in the Certification Compliance Manual.

archie Rock 12/02/83

Rev. 1/81 1/82

VEHICLE SAFETY COMPLIANCE INFORMATION FMVSS #301, "FUEL SYSTEM INTEGRITY"

	(O477) With Type A Traffer W.
-	INE TYPE: V-6
TYPE	OF BARRIER IMPACT: 30MPH Perpendicular Rear Impact Movemble Barrier Does the vehicle 5
Α.	Does the vehicle fuel system meet the requirements specified in A
1.	What was the actual crash speed? (30.5/32.0 front or rear, 20.5/21.
	what was the fuel spillag: (by weight) during impact (from impact until oz.) NONE vehicle has cased (max. 0.6
	following cessation of motion (max, 5 or 13
	What is the fuel spillage (by weight) during any 1-minute interval for If fuel spillage (by weight) during any 1-minute interval for If fuel spillage.
èΤ	If fuel spillson
	If fuel spillage occurred, describe location(s) and amount(s).
LLO	VER:
LLO	What were the time durations for each successive position of 900, 2700, 3600 (req'd 5 minutes)?
	What were the time durations for each successive position of 90°, 180°, 270°, 360° (req'd 5 minutes)? 8 minutes From the onset of rotational motion, what was the fuel spillage weight) for the first 5-minutes of testing for each successive position of 90°, 180°, 270°, and 360° (max: 2.5 oz.)?
	What were the time durations for each successive position of 900, 2700, 3600 (req'd 5 minutes)?

This fuel system as it applies to models and applications noted conforms to Federal Motor Vehicle Safety Standard No. 301.

THIVSSTCHUSS RESPONSIBLE ENGINEER "(-15-8)

Vehicle Safety Programs has reviewed the above information and found it to satisfactorily document demonstration of compliance with the above Regulation, Requirement or Standard, and is therefore acceptable for inclusion in the Certification Compliance Manual.

Archis Rock 12/02/83

Rev. 1/81 1/82

VEHICLE SAFETY COMPLIANCE INFORMATION FHYSS #301, "FUEL SYSTEM INTEGRITY"

VEH.	ICLE MODELS: Sport (8477)
ENG	INE TYPE: 4-Cylinder
TYPE	OF BARRIER IMPACT: 20 1PH Right Side Impact - Poveable Barrier Does the vehicle fuel
Α.	Does the vehicle funl suctor
D	Does the vehicle fuel system meet the requirements specified in AM-140.157 YES
8.	lateral) 20.6 MTH speed? (30.5/32.0 front or rear 20.5/32.
C.	motion of the vehicle las cased (max
D.	What is the total fuel spillage (oy weight) after a 5-minute period What is the fuel spillage (ox weight) after a 5-minute period What is the fuel spillage (ox weight) after a 5-minute period
E.	(max. 5 dz.)? NONE
	the subsequent 25-minute of th
F.	What is the fuel spillage (by weight) during any 1-minute interval for the subsequent 25-minute period (max. 0.5 oz/min.)? NONE If fuel spillage occurred, describe location(s) and amount(s).
	the subsequent 25-minute period (max. 0.5 oz/min.)? NONE If fuel spillage occurred, describe (cation(s) and amount(s).
F.	the subsequent 25-minute period (max. 0.5 oz/min.)? NONE If fuel spillage occurred, describe (cation(s) and amount(s).
ROLLOV A. B.	the subsequent 25-minute period (max. 0.5 oz/min.)? NONE If fuel spillage occurred, describe location(s) and amount(s). What were the time durations for each successive position of 900. From the onset of rotational motion, what was the fuel spillage (by of 900, 1300, 2700, and 3600 (max: 2.5 oz/min.)? NONE What were the time durations for each successive position of 900, 8 minutes
ROLLOV A. B.	the subsequent 25-minute period (max. 0.5 oz/min.)? NONE If fuel spillage occurred, describe (cation(s) and amount(s). What were the time durations for each successive position of and 1800, 2700, 3600 (regin 5 minutes)?

This fuel system as it applies to models and applications noted conforms to Federal Motor Vehicle Safety Standard No. 301.

FMVSS/CMVSS RESPONSIBLE ENGINEER (DATE)

Venicle Safety Programs has reviewed the above information and found it to satisfactorily document demonstration of compliance with the above Regulation, Requirement or Standard, and is therefore acceptable for inclusion in the Certification Compliance Manual.

VSP ENGINEER /

Rev. 1/81

YEHICLE SAFETY COMPLIANCE INFORMATION FMYSS #301, "FUEL SYSTEM INTEGRITY"

NGIP	NE TYPE: AMC I_4
YPE	OF BARRIER IMPACT: 30 mph Pu pendicular Rear Impact Movable Barrier Does the vehicle fuel and
	Does the walter a same and the same Berrier
	Specification No. SF AM-140467 yes
	What was the actual crash speed? (30.5/32.0 front or rear, 20.5/21.
	What was the fuel spillage (by weight) during impact (from impact until motion of the vehicle has cased (max. 0.5
	What is the total fuel spillage (by weight) after a 5-minute period following cessation of motion (max. 5 oz.)?none
1	What is the fund
7.	the subsequent 25-minute period (max 0.5 or fine laminute interval for
1	What is the fuel spillage (by weight) during any 1-minute interval for the subsequent 25-minute period (max. 0.5 oz/min.)? none If fuel spillage occurred, describe location(s) and amount(s).
-	If fuel spillage occurred, describe location(s) and amount(s).
LOV	
	If fuel spillage occurred, describe location(s) and amount(s). VER: What were the time durations for each successive position of 900. 1800, 2700, 3600 (req'd 5 minutes)? 8 minutes
	If fuel spillage occurred, describe location(s) and amount(s). VER: What were the time durations for each successive position of 900. From the onset of rotational motion, what was the fuel could be weight) for the fuel could be weight) for the fuel could be weight).
	If fuel spillage occurred, describe location(s) and amount(s). VER: What were the time durations for each successive position of 900. From the proof of minutes)? 8 minutes

This fuel system as it applies to models and applications noted conforms to Federal Motor Velicle Safety Standard No. 301.

FMVSS7CHVSS RESPONSIBLE ENGINEER (DATE)

Vehicle Safety Programs has reviewed the above information and found it to satisfactorily document demonstration of compliance with the above inclusion in the Certification Compliance Manual.

VSP ENGINEER

(DATE) 2/8.

Rev. 1/31

VEHICLE SAFETY COMPLIANCE INFORMATION FMVSS £301, "FUEL SYSTEM INTEGRITY"

VE	HICLE MODELS: Sport 8477
EN	GINE TYPE: A COLL.
TY	PE OF BARRIER IMPACT: 30 mph 30° Left Front I wast Fixed Barrier
A.	Does the vehicle fuel system meet the requirements specified in AM
8.	What was the actual crash speed? (30.5/32.0 front or rear, 20.5/21.5
C.	motion of the vehicle has correct (from impact until
D.	What is the total fuel spillage (by weight) after a 5-minute period
E.	what is the fuel spillage (by weight) during any 1-minute interval for If fuel spillage.
F.	If fuel spillage occurred, describe location(s) and amount(s). none
ROLL	DYER:
A.	What were the time durations for each successive position of 900, 2700, 2500 (reg'd 5 minutes)? 8 minutes
В.	From the onset of rotational motion, what was the fuel spillage (by of 900, 1800, 2700, and 3600 (max: 2.5 oz.)? none
C.	For the remaining testing period, for each successive position of 90°. 180°, 270°, and 360°, what was the fuel spillage (by weight) during any
D.	If fuel spillage occurred, describe location(s) and amount(s) none
	A PARTY COLOR AND ADDRESS AND

This fuel system as it applies to models and applications noted conforms to Federal Motor Vehicle Safety Standard No. 301.

FMVSS/CHVSS RESPUNSIBLE ENGINEER (DATE)

Vehicle Safety Programs has reviewed the above information and found it to satisfactorily document demonstration of compliance with the above Regulation, Requirement or Standard, and is therefore acceptable for inclusion in the Certification Compliance Manual.

archie Rock 12/02/8;

Rev. 1/81 1/82

VEHICLE "AFETY COMPLIANCE INFORMATION FMVSS #301, "FUEL SYSTEM INTEGRITY"

	ICLE MODELS: Sport (8477)
ENGI	NE TYPE: 4 Cylinder
TYPE	OF BARRIER IMPACT: 30 mph 30° Right Front Impact Fixed Barrier Does the vehicle fuel
۹.	Does the voldage a sugar Front Impact Fixed Barrier
	Specification No. SF AM-14046? The requirements specified
	What was the actual crash speed? (30.5/32.0 front or rear, 20.5/21.
	motion of the vehicle has cased (from impact until
	What is the total fuel spillage (by weight) after a 5-minute
	What is the fuel and
(0)	the subsequent 25 in lage (by weight) during any
	the subsequent 25- inute period (max. 0.5 oz/min.)? none interval for
	the subsequent 25- inute period (max. 0.5 oz/min.)? none If fuel spillage occurred, describe location(s) and amount()
	What is the fuel spillage (by weight) during any 1-minute interval for the subsequent 25-minute period (max. 0.5 oz/min.)? none If fuel spillage occurred, describe location(s) and amount(s).
LOVE	
LOVE	R:
	What were the time durations for each successive position as and
	What were the time durations for each successive position of 900. From the onset of rotational motion which weight)
	What were the time durations for each successive position of son

This fuel system as it applies to models and applications noted conforms to Federal Motor Vehicle Safety Standard No. 301

FMVSS/CHVSS RESPONS POLE ENGINEER (DATE)

Vehicle Safety Programs has reviewed the above information and found it to satisfactorily document demonstration of compliance with the above inclusion in the Certification Compliance Manual.

archie Rock 12/02/83

Rev. 1/81 1/82

VEHICLE SAFETY COMPLIANCE INFORMATION FMVSS #301, "FUEL SYSTEM INTEGRITY"

EMO	INE TYPE: 4 Cylinder
Түр	E OF BARRIER IMPACT: 20 mph Left Side Impact Movable Barrier
	Does the vehicle fuel system meet the requirements specified in A
В.	What was the actual crash speed? (30.5/32.0 front or rear, 20.5/21.
C.	motion of the vehicle has case!
D.	What is the total fuel spillage (by weight) after a 5-minute period What is the total fuel spillage (by weight) after a 5-minute period
E.	(max. 5 pz.)? none
	MIGE IS the Sunt
F.	What is the fuel spillage (by weight) during any 1-minute interval for the subsequent 25-minute period (max. 0.5 oz/min.)? none If fuel spillage occurred, describe location(s) and amount(s).
F.	the subsequent 25-minute period (max. 0.5 oz/min.)? none If fuel spillage occurred, describe location(s) and amount(s).
	the subsequent 25-minute period (max. 0.5 oz/min.)? none If fuel spillage occurred, describe location(s) and amount(s). VER:
F.	the subsequent 25-minute period (max. 0.5 oz/min.)? none If fuel spillage occurred, describe location(s) and amount(s). VER: What were the time durations for each successive position of 900, 2700, 3600 (reg'd 5 minutes)? 8 minutes From the onset of rotational motion, what
F.	the subsequent 25-minute period (max. 0.5 oz/min.)? none If fuel spillage occurred, describe location(s) and amount(s). VER: What were the time durations for each successive position of 900 1800, 2700, 3600 (reg'd 5 minutes)?

This fuel system as it applies to models and applications noted conforms to Federal Motor Vehicle Safety Standard No. 301.

PHÝSSÍCHÝSS RESPONSÍBLE ENGINEER (DATE)

Vehicle Safety Programs has reviewed the above information and found it to satisfactorily document demonstration of compliance with the above Regulation, Requirement or Standard, and is therefore acceptable for inclusion in the Certification Compliance Manual.

Archie J. Bock 12/02/83

Rev. 1/81

VEHICLE SAFETY COMPLIANCE INFORMATION FMVSS #301, "FUEL SYSTEM INTEGRITY"

NGI	NE TYPE: AMC 1-4
YPE	OF BARRIER IMPACT: 30 mph Perpendicular Rear Impact Movable Barrier Does the vehicle fuel system
	Does the vehicle fuel system meet the requirements specified in AM-140467 yea
	What was the actual crash speed? (30.5/32.0 front or rear, 20.5/21.5
	What was the fuel spillage (by weight) during impact (from impact until oz.) none vehicle has cased (max. 0.5
	following cessation of motion (max, 5 oz 12
	What is the first
	the subsequent 25-minute period (max, 0.5 artists) l-minute incerval for
	What is the first
	what is the fuel spillage (by weight) during any 1-minute interval for the subsequent 25-minute period (max. 0.5 oz/min.)? none If fuel spillage occurred, describe location(s) and amount(s). ER:
LOV	what is the fuel spillage (by weight) during any 1-minute incerval for the subsequent 25-minute period (max. 0.5 oz/min.)? none If fuel spillage occurred, describe location(s) and amount(s). ER: What were the time durations for each successive position of 90°, 180°, 270°, 360° (req'd 5 minutes)? 8 minutes From the onset of rotational motion, what was the fuel spillage (by of 90°, 180°, 270°, and 360° (max: 2.5 oz.)?
LOV	what is the fuel spillage (by weight) during any 1-minute incerval for the subsequent 25-minute period (max. 0.5 oz/min.)? none If fuel spillage occurred, describe location(s) and amount(s). ER: What were the time durations for each successive position of 900 1800, 2700, 3600 (req'd 5 minutes)? - 8 minutes

This fuel system as it applies to models and applications noted conforms to Federal Motor Vehicle Safety Standard No. 301.

THIS STORYS RESPONSIBLE ENGINEER (DATE)

Vehicle Safety Programs has reviewed the above information and found it to satisfactorily document demonstration of compliance with the above inclusion in the Certification Compliance Manual.

Perchip Rock 12/02/83

Rev. 1/81 1/82

YEHICLE SAFETY COMPLIANCE INFORMATION FMVSS \$301, "FUEL SYSTEM INTEGRITY"

ENGI	CLE MODELS: Family (8478) NE TYPE: 4-Cylinder
TYPE	OF BARRIER IMPACT: 30MFH Perpendicular Front Impact - Fixed Barrier Does the vehicle fuel
A.	Does the vehicle fuel system meet the requirements specified in A What was the
В.	What was the actual crash speed? (30.5/32.0 front or rear, 20.5/21.
c.	motion of the vehicle has cased from impact until
D. E.	what is the total fuel spillage (by weight) after a 5-minute period What is the fuel spillage (by weight) during any 1-minute interval the subsequent 25-minute period (max.)
	If fuel spillage occurred, describe location(s) and amount(s).
	roct spillage occurred, describe location(s) and amount(s).
ROLLOVE	R: What were the time durations for each successive position of cold 180°, 270°, 360° (reg'd 5 minutes)?
ROLLOVE	What were the time durations for each successive position of 900, 1800, 2700, 3600 (req'd 5 minutes)? 8 minutes From the onset of rotational motion, what was the fuel spillage (by 900, 1800, 2700, and 3600 (max. 25.5)
ROLLOVE	R: What were the time durations for each successive position of cold 180°, 270°, 360° (reg'd 5 minutes)?

This fuel system as it applies to models and applications noted conforms to Federal Motor Vehicle Safety Standard No. 301.

FHVSSTCHVSS RESPONSIBLE ENGINEER (1-15-83

Vehicle Safety Programs has reviewed the above information and found it to satisfactorily document demonstration of compliance with the above inclusion, Requirement or Standard, and is therefore acceptable for inclusion in the Certification Compliance Manual.

Archie Rock 12/02/8

Rev. 1/81

1/82

VEHICLE SAFETY COMPLIANCE INFORMATION FMVSS #301, "FUEL SYSTEM INTEGRITY"

ENGI	ME TYPE: 4-Cylinder
TYPE	ME TYPE: 4-Cylinder VEHICLE TEST WEIGHT: 4023 OF BARRIER IMPACT: 20HPH Left Side Impact - Moveable Barrier Does the vehicle fuel
A.	Does the vehicle fuel system meet the requirements specified in Al
В.	What was the actual crash speed? (30.5/32.0 front or rear, 20.5/21.5
C.	What was the fuel spillage (by weight) during impact (from impact until oz.) NONE the vehicle has cased (max. 0.5
D.	What is the total fuel spillage (by weight) after a 5-minute period What is the 5 minute period What is the 5 minute period
E.	DE A . NONE
F.	What is the fuel spillage (by weight) during any 1-minute interval for the subsequent 25-minute period (max. 0.5 oz/min.)? NONE If fuel spillage occurred, describe location(s) and amount(s).
F.	the subsequent 25-minute period (max. 0.5 oz/min.)? NONE If fuel spillage occurred, describe location(s) and amount(s).
F.	the subsequent 25-minute period (max. 0.5 oz/min.)? NONE If fuel spillage occurred, describe location(s) and amount(s). ER:
F. ROLLOV	the subsequent 25-minute period (max. 0.5 oz/min.)? NONE If fuel spillage occurred, describe location(s) and amount(s). ER: What were the time durations for each successive position of 900, From the onset of rotational motion, what
ROLLOV	the subsequent 25-minute period (max. 0.5 oz/min.)? NONE If fuel spillage occurred, describe location(s) and amount(s). ER: What were the time durations for each successive position of 900, 2700, 3600 (req'd 5 minutes)? R minutes)?

This fuel system as it applies to models and applications noted conforms to Federal Motor Vehicle Safety Standard No. 301.

PHYSSTCHUSS RESPONSTBUE ENGINEER (DATE)

to satisfactorily document demonstration of compliance with the above inclusion in the Certification Compliance Manual.

Parkie J. Rock 12/02/83

Rev. 1/81

1517P

VEHICLE SAFETY COMPLIANCE INFORMATION FMVSS #301, "FUEL SYSTEM INTEGRITY"

ENG	INE TYPE: V6
TYP	VEHICLE TEST WEIGHT: 4199 Does the vehicle fuel system most
Α.	Does the vehicle fuel system meet the requirements specified in Av
B.	What was the actual crash speed? (30.5/32.0 front or rear, 20.5/21.5
C.	motion as spillage (by weight)
D.	oz.) none the vehicle has cased (max. 0.5
E.	What is the total fuel spillage (by weight) after a 5-minute period What is the fuel spillage (by weight) after a 5-minute period
F.	What is the fuel spillage (by weight) during any 1-minute interval for the subsequent 25-minute period (max. 0.5 oz/min.)? none If fuel spillage occurred, describe location(s) and amount(s).
	describe location(s) and amount(s).
ROLLOVI	What were the time durations for each successive points
ROLLOV	What were the time durations for each successive position of 900, 1800, 2700, 3600 (req'd 5 minutes)? 8 minutes From the onset of rotational motion, what was the fuel spillage (by per 1900, 1800, 2700, and 3600 (many 2000), and 3600 (many 2000).
ROLLOV	What were the time durations for each successive points

This fuel system as it applies to models and applications noted conforms to Federal Motor Vehicle Safety Standard No. 301.

FHVSSTCHVS TESPONSTBLE ENGINEER (DATE)

Vehicle Safety Programs has reviewed the above information and found it to satisfactorily document demonstration of compliance with the above inclusion in the Certification Compliance Manual.

Unchief Rock 12/02/83

Rev. 1/81

ZMU	ICLE MODELS: Family with Type B Trailer Hitch INE TYPE: V6
TYPE	OF BARRIER IMPACT: 30 mph Perpendicular hear Impact Hovable Barrier Does the vehicle
Α.	Does the vehicle fuel system meet the requirements specified in A
В.	What was the actual crash speed? (30.5/32.0 front or rear, 20.5/21.
C.	motion of the webicle has cased (mar.
D.	What is the total fuel spillage (by weight) after a 5-minute period What is the second of motion (max. 5 oz.)? none
ε.	
f.	What is the fuel spillage (by weight) during any 1-minute interval for the subsequent 25-minute period (max. D.5 oz/min.)? none If fuel spillage occurred, describe location(s) and amount(s).
	the .ubsequent 25-minute period (max. D.5 oz/min.)? pone If fuel spillage occurred, describe location(s) and amount(s).
F. ROLLOV	the subsequent 25-minute period (max. D.5 oz/min.)? pone If fuel spillage occurred, describe location(s) and amount(s). (ER: What were the time durations for each successive position of 200, 2700, 3600 (reg'd 5 minutes)?
F. ROLLOVA.	the subsequent 25-minute period (max. D.5 oz/min.)? pone If fuel spillage occurred, describe location(s) and amount(s). (FR: What were the time durations for each successive position of 900, 1800, 2700, 3600 (req'd 5 minutes)? B minutes weight) for the first 5-minutes of testing for each successive position of 900, of 900, 1800, 2700, and 3600 (max: 2.5 oz.)
F. ROLLOV	the subsequent 25-minute period (max. D.5 oz/min.)? pone If fuel spillage occurred, describe location(s) and amount(s). (ER: What were the time durations for each successive position of 200, 2700, 3600 (reg'd 5 minutes)?

This fuel system as it applies to models and applications noted conforms to Federal Motor Vehicle Safety Standard No. 301.

THYSS TON'S RESPONS THE ENGINEER "TOATET

Vehicle Safety Programs has reviewed the above information and found it to satisfactorily document demonstration of compliance with the above inclusion in the Certification Compliance Manual.

PER ENGINEER PROCK 12/02/8

Rev. 1/81

YEHICLE SAFETY COMPLIANCE INFORMATION FHYSS #301, "FUEL SYSTEM INTEGRITY"

TYPE	NE TYPE: 1-4 OF BARRIER IMPACT: 30 mph 30° Pt VEHICLE TEST WEIGHT: 4051
1116	- Find Stable P
A.	OF BARRIER IMPACT: 30 mph 30° Right Front Impact Fixed Farrier Does the vehicle fuel system meet the requirements specified in AM What was the actual
8.	What was the actual crash speed? (30.5/32.0 from or rear, 20.5/21.5
c.	What was the fuel spillage (by weight) during impact (from impact until oz.) none the vehicle has cased (max
D.	What is at 0.5
	following cessation of motion (max. 5 oz.)? none What is the fuel spillage (by weight) during any 1-minute interval for If fuel spillage as for the subsequent 25-minute period (max. 0.5 oz/min.)? none
	the subsequent 25-minute period (max. 0.5 oz/min.)? nose If fuel spillage occurred, describe location(s) and amount(s).
	(s).

- A. What were the time durations for each successive position of 900, 1800, 2700, 3600 (reg'd 5 minutes)? 8 minutes
- B. From the onset of rotational motion, what was the fuel spillage (by weight) for the first 5-minutes of testing for each successive position of 900, 1800, 2700, and 3600 (max: 2.5 oz.)7 900-1800 1.2 oz.
- C. For the remaining testing period, for each successive position of 90°. 180°, 270°, and 360°, what was the fuel spillage (by weight) during any 1 minute interval (max. 0.5 oz/min)? 90°-180° 1.2 oz.
- p. If fuel spillage occurred, describe location(s) and amount(s) 1.2 os.

 from Carb. Rowl Vent, 0°-90° (.7 os. from Carb. Bowl Vent)

This fuel system as it applies to models and applications noted conforms to

PHYSS/CHYSS NESPONSIBLE ENGINEER (DATE)

Vehicle Safety Programs has reviewed the above information and found it to satisfactorily document demonstration of compliance with the above inclusion in the Certification Compliance Manual.

Per ENGINEER BOTH 12/02/83

Rev. 1/81 1/82

VEHICLE SAFETY COMPLIANCE INFORMATION FMYSS #301, "FUEL SYSTEM INTEGRITY"

ENG	GINE TYPE: V6
	E OF BARRIER IMPACT: 20 mpn Right Side Topact Movable Barrier Does the vehicle first
	Does the vehicle fuel system meet the requirements specified in AM What was the
В.	lateral) 20.5 mph crash speed? (30.5/32.0 front or rear 30 cont
C.	motion of the vehicle has cased from impact until
D. E.	What is the total fuel spillage (by weight) after a 5-minute
	mid is the fuel coding
F.	the subsequent 25-minute period (by weight) during any 1-minute
F.	the subsequent 25-minute period (mex. 0.5 oz/min.)? none If fuel spillage occurred, describe location(s) and amount(s).
	the subsequent 25-minute period (max. 0.5 oz/min.)? none If fuel spillage occurred, describe location(s) and amount(s). VER: What were the time durations for each successive position.
ROLLO	the subsequent 25-minute period (max. 0.5 oz/min.)? none If fuel spillage occurred, describe location(s) and amount(s). VER: What were the time durations for each successive position of 900, 2700, 3600 (req'd 5 minutes)? 3 minutes From the caset of rotational matter.
ROLLO	the subsequent 25-minute period (max. 0.5 oz/min.)? none If fuel spillage occurred, describe location(s) and amount(s). VER:

Attach copy of Test Report No. _1664

This fuel system as it applies to models and applications noted conforms to Federal Motor Vehicle Safety Standard No. 301.

FAVSS/CHVSS RESPONSIBLE ENGINEER (DATE)

Unicle Safety Programs has reviewed the above information and found it to satisfactorily document demonstration of compliance with the above Regulation, Requirement or Standard, and is therefore acceptable for inclusion in the Certification Compliance Manual.

VSP ENGINEER ROCK 12/02/87

Rev. 1/81

1517P

VEHICLE SAFETY COMPLIANCE INFORMATION FMVSS #301, "FUEL SYSTEM INTEGRITY"

TYP	F. OF BARRIER IMPACT: 30 mph Permands. VEHICLE TEST WEIGHT: 4112
A.	Possible Test Weight: 4112 Does the vehicle fuel system meet the requirements specified in April What was the actual crash
В.	What was the actual crash speed? (30.5/32.0 front or rear, 20.5/21.5
C.	What was the fuel spillage (by weight) during impact (from impact until oz.) none vehicle has cased (max.
D.	following cessation of motions (by weight)
E.	subsequent 25-minute continue and during and
OLLOVE	gescribe location(s) and amount(s), none
	What were the time durations for each successive position of 900. 2700, 3600 (req'd 5 minutes)? 8 minutes
	From the onset of rotational motion, what was the fuel spillage (by goo, 1800, 2700, and 3600 /ma :: 2.5 oz.)? nore
	or the remaining tasting period, for each successive position 80°, 270°, and 350°, what was the fuel spillage (by weight) during any fuel spillage occurred.
11	fuel spillage occurred, describe location(s) and amount(s)

VEHICLE SAFETY CONFLIANCE INFORMATION FRIVSS #301, "FUEL SYSTEM INTEGRITY"

4,770	No. 1112: 1-6
TYPE	INE TYPE: V-6 VEHICLE TEST WEIGHT: 4121 Does the vehicle fuel Type: One of the vehicle fuel Type:
Α.	Opes the vehicle fuel system meet the requirements specified in A What was the
8.	What was the actual crash speed? (30.5/32.0 front or rear, 20.5/21.
c.	rotion of the vehicle has cased (from impact until
D.	What is the total fuel spillage (by wright) after a 5-minute period What is the fuel
E.	What to MONE NONE period
	the subsequent 25-minute period (by weight) during any l-minute (at
F.	What is the fuel spillage (by weight) during any 1-minute interval for the subsequent 25-minute period (max. 0.5 oz/min.)? NONE If fuel spillage occurred, describe location(s) and amount(s).
	the subsequent 25-minute period (max. 0.5 oz/min.)? NONE If fuel spillage occurred, describe location(s) and amount(s).
ROLLOV	the subsequent 25-minute period (max. 0.5 oz/min.)? NONE If fuel spillage occurred, describe location(s) and amount(s).
ROLLOVA.	the subsequent 25-minute period (max. 0.5 oz/min.)? NONE If fuel spillage occurred, describe location(s) and amount(s). (ER: What were the time durations for each successive position of 900, 1800, 2700, 3600 (reg'd 5 minutes)? 8 minutes From the caset of rotational motion, what was the fuel spillage (by of 900, 1800, 2700, and 3600 (max: 2.5 minutes)?
ROLLOV	the subsequent 25-minute period (max. 0.5 oz/min.)? NONE If fuel spillage occurred, describe location(s) and amount(s). Mat were the time durations for each successive position of 1802, 2700, 3600 (reg'd 5 minutes)?

Attach copy of Test Report No. 1663

This fuel system as it applies to models and applications noted conforms to Federal Motor Vehicle Safety Standard No. 301.

PHYSSTCHVSS RESPONSIBLE ENGINEER (DATE)

Vehicle Safety Programs has reviewed the above information and found it to satisfactorily document demonstration of compliance with the above inclusion in the Certification Compliance Manual.

Rochier J. Both 12/02/83

Rev. 1/81

15179

YEHICLE SAFETY COMPLIANCE INFORMATION FMVSS #301, "FUE. SYSTEM INTEGRITY"

ENGI	NE TYPE: 4 Cylinder
TYPE	OF PARRIER IMPACT: 20 mph Right Side Impact - Hoveble Berrier
Α.	Does the vehicle fuel system meet the requirements specified in A
8.	What was the actual crash speed? (30.5/32.0 front or rear, 20.5/21.
C.	What was the fuel spillage (b; weight) during impact (from impact until oz.) none the vehicle has cased (max. 0.5
D.	What is the total fuel spillage (by weight) after a 5-minute period What is the following cessation of motion (max. 5 oz.)? None
•	(max, 5 0z.)? None period
Ε.	What is the first
F.	What is the fuel spillage (by weight) during any 1-minute interval for the subsequent 25-minute period (max. 0.5 oz/min.)? None If fuel spillage occurred, describe location(s) and amount(s).
	what is the fuel spillage (by wright) during any 1-minute interval for the subsequent 25-minute period (max. 0.5 oz/min.)? None If fuel spillage occurred, describe location(s) and amount(s).
F.	the subsequent 25-minute period (max. 0.5 oz/min.)? None If fuel spillage occurred, describe location(s) and amount(s). ER:
ROLLOV	what is the fuel spillage (by weight) during any 1-minute interval for the subsequent 25-minute period (max. 0.5 oz/min.)? None If fuel spillage occurred, describe location(s) and amount(s). ER: What were the time durations for each successive position of 900, 1800, 2700, 3600 (req'd 5 minutes)? 8 minutes From the onset of rotational motion, what was the fuel spillage (by of 900, 1800, 2700, and 3600 (max: 2.5 ox 100 each successive position)
ROLLOV	the subsequent 25-minute period (max. 0.5 oz/min.)? None If fuel spillage occurred, describe location(s) and amount(s). ER: What were the time durations for each successive position of 200, 2700, 3600 (reg'd 5 minutes)?

Attach copy of Test Report No. _1639

This fuel system as it applies to models and applications noted conforms to Federal Motor Vehicle Safety Stand rd No. 301.

THYSS TONYS RESPONSTIBLE ENGINEER (DATE)

Vehicle Safety Programs has reviewed the above information and found it to satisfactorily document demonstration of compliance with the above Regulation, Requirement or Standard, and is therefore acceptable for inclusion in the Certification Compliance Manual.

VSF ENGINEER (DATE) 48)

Rev. 1/81 1/82

1517P

FMYSS #301, "FUEL SYSTEM INTEGRITY"

E NG I	NE TYPE: V-5
TYPE	OF BARRIER IMPACT: 10 MPH 300 Left Front Impact - Fixed Barrier Does the vehicle fuel system most the
A.	Does the vehicle fuel system meet the requirements specified in A
В.	What was the actual crash speed? (30.5/32.0 front or rear, 20.5/21.
c.	motion of the vehicle has cased (from impact unti
D.	What is the total fuel spillage (by weight) after a 5-minute period What is the fuel weight weight) where a 5-minute period what is the fuel with the fuel what is the fuel with the fue
E.	What is a second (max. 5 az.)? Nonz
F.	the subsequent 25-minute period (by weight) during any 1-minute total
F. ROLLOVE	the subsequent 25-minute period (max. 0.5 oz/min.): NONE If fuel spillage occurred, describe location(s) and amount(s).
ROLLOVE	the subsequent 25-minute period (max. 0.5 oz/min.); NONE If fuel spillage occurred, describe location(s) and amount(s). ER:
A.	the subsequent 25-minute period (max. 0.5 oz/min.); NONE If fuel spillage occurred, describe location(s) and amount(s). ER: What were the time durations for each successive position of 900. From the onset of rotational motion, what was the fuel spillage (by of 900, 1800, 2700, and 3600 (max. 2.5 out the first 5-minutes of testing for each successive position.
ROLLOVE A. B.	the subsequent 25-minute period (max. 0.5 oz/min.); NONE If fuel spillage occurred, describe location(s) and amount(s). ER: What were the time durations for each successive position of another 1800, 2700, 3600 (reg'd 5 minutes)?

Attach copy of Test Report No. 1659

This fuel system as it applies to models and applications noted conforms to Federal Motor Vehicle Safety Standard No. 301.

THVSS TONVSS RESPONSTBLE ENGINEER " (BATE)

Vehicle Safety Programs has reviewed the above information and found it to satisfactorily document demonstration of compliance with the above Regulation, Requirement or Standard, and is therefore acceptable for inclusion in the Certification Compliance Manual.

archief Rock 12/02/83

Rev. 1/81 1/82

15179

EA12-005

CHRYSLER

12-13-2012

Enclosure 6D

301 Compliance Documents

XJ 1993 - 2001 Compliance Documentation

DAIMLER CHRYSLER

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

C.C. Zylik John Aberonell

System Integrity

Vehicle Type: **MPV**

Family Codes: XJ

Approvals

Edward A Zylik

Department Manager

John H Broomall **Executive Engineer** 05/24/99 08:20:19 AM

Approval Date

05/24/99 08:48:37 AM **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 2000 'XJ' Body, Jeep "Cherokee" Sport Utility vehicles, as design released, meet the

performance requirements of FMVSS 301 - Sections S3., S5., S6. and S7.

Safety Documentation Compliance Report

Prepared By:Edward A ZylikDate: 05/24/99Approved By:Edward A ZylikDate: 05/24/99

Issued By: 1060 - Vehicle Impact & Safety

Development (Jeep)

Discussion

DAIMLER CHRYSLER

The 2000 MY XJ is essentially carryover from the 1999 & 1998 model year.

The following design features remain standard as carryover from the 1999 & 1998 M.Y.;

Vehicle/Body:

- Left hand drive and right hand drive models.
- 2-door and 4-door body style (4-door only in right hand drive).
- 101 inch wheelbase and unibody construction.
- The front bumper system consists of a steel bumper with foam filled bumperettes.

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 skid plate is optional.

Drivetrain:

- 2.5L (I4) or 4.0L (I6) multi-point injection (MPI) (I6 only in right hand drive).
- Rear or 4 wheel drive.
- $\hbox{-} 5\hbox{-speed manual transmission or automatic transmission (3-speed (I4) or 4-speed (I6)) (automatic only in right hand drive))}.$

Occupant Restraint/Interior Systems:

- Corporate energy absorbing steering column (shear capsule design non-tilt and torsion bar design tilt with a floor console shifter.
 - A 3-point active seat belt with adjustable upper anchorage is a primary restraint for the driver.
 - A supplementary driver restraint airbag is contained in the two spoke luxury steering wheel.
 - A 3-point active seat belt with adjustable upper anchorage is a primary restraint for the passenger
 - An airbag is provided as a supplementary restraint for the passenger.
 - A single point 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.

A total of nine vehicles were tested (for the 1997 & 1998 model year) to demonstrate compliance of the 'XJ' to the requirements of FMVSS 301, Fuel System Integrity. These vehicles and test results are shown on the attached summary.

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:

EA12-005- Chrysler -006607

Compliance Report : 2000 CP-246G CP-245F CP-234I CP-233H (

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 2000 'XJ' Body, Jeep "Cherokee" Sport Utility vehicles, as design released, <u>MEET</u> the performance requirements of FMVSS 301 - Sections S3., S5., S6. and S7.

SUMMARY I

FUEL SYSTEM INTEGRITY 2000 'XJ'-BODY, JEEP "CHEROKEE" SPORT UTILITY

			Leaka	ige Summary (Oz)
Test No. Impact		Vehicle Model		Max. in Any
-		% Description	At Following	Rollover Position
(Date) Mode 30 Minu	<u>ites</u>	& Description (Oz.)	(Oz./Min.)	<u>Impact</u>
VC 6156 Left		Jeep "Cherokee"		-0-
-0- (11/05/96)	-0- Side	-0- Sport Utility,		
,		2-Wheel Driv	e, Man. Trans.	
		4.0L litre MP Air Condition		
VC 6156R	Right	Ioon "Chonolis	20"	-0-
-0-		Jeep "Cheroke	3E	-0-
(11/06/96)	Side	Sport Utility, 2-Wheel Driv	e, Man. Trans.	
		4.0L litre MP	I Engine,	
		Air Condition	ing.	
VC 6062Rear	0	Jeep "Cherokee"		-0-
-0- (08/19/96)	-0-	-0- Sport Utility,		
		4-Wheel Driv 4.0L litre MP	e, Man. Trans.	
		Air Condition		
VC 6146Rear		Jeep "Cherokee"		-0-
-0-	-0-	-0-		-0-
(10/16/96)		Sport Utility, Drive,Manual		
		4.0L litre MP	I Engine,	
		Air Condition Factory Traile		
		-		
VC06229Flat		Jeep "Cherokee"		-0-
-0-	-0-	-0-		

EA12-005- Chrysler -006609

(12/09/96) Front Sport Utility, 4-Wheel

Drive, Auto Transmission Right Hand Drive, 4.0 Litre(I6)MPI Engine

XT0071630 Lt. Jeep "Cherokee"

-0- -0-

(05/05/97) Angle Sport Utility, 4-Wheel

Drive, Man. Transmission 2.5 Litre(I4)MPI Engine and Driver & Passenger Air Bag with Belt, Tilt Wheel. -0-

XT0071730 Rt. Jeep "Cherokee" -0-

-0- -0-

(05/06/97) Angle Sport Utility, 4-Wheel

Drive, Auto Transmission 4.0 Litre(I6)MPI Engine and Driver & Passenger Air Bag with Belt, Tilt Wheel.

XT00718 Flat Jeep "Cherokee" -0-

-0- -0-

(05/07/97) Front Sport Utility, 4-Wheel

Drive, Man. Transmission 2.5 Litre(I4)MPI Engine and Driver & Passenger Air Bag with Belt, Non-Tilt Wheel.

XT00719 Flat Jeep "Cherokee" -0-

-0- -0-

(05/08/97) Front Sport Utility, 4-Wheel

Drive, Auto Transmission 4.0 Litre(I6)MPI Engine and Driver & Passenger Air Bag with Belt,Tilt Wheel.

Allowable Leakage by Weight

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

Attached are copies of the test report information demonstrating compliance.

FMVSS 301.pdf

VC06186 20 MPH LEFT LATERAL IMPACT, XJTL74, 4.0L ITEM XJ6356 1997 FMVSS 301 COMPLIANCE, FUEL SYSTEM INTEGRITY. TEST DATE 11/05/96

TEST PURPOSE

PRIMARY, 1997 USA 301 COMPLIANCE.

FUEL SYSTEM INTEGRITY.

IMPACT TYPE

T'ARGET SPEED; 20.2 MPH

DAMAGE LOCATION; LEFT CENTER

BARRIER TYPE; LEFT TYPE IV BARRIER SURFACE; PLYWOOD

VEHICLE

BODY CLASS;

ХJ J

CAR LINE; BODY;

74

ENGINE;

4.0 LITRE

ENGINE NOTE;

ELECTRONIC FUEL INJECTION

TRANSMISSION;

5 SPEED MANUAL

TRANS. NOTE; VIN AS TESTED;

1J4FT68S1VL

MOD.

VIN AS BUILT;

1J4FT68S1VL

MOD.

TEST SPEED

20.2 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS)

4064 TOTAL, 2060 FRONT, 2004 REAR

OCCUPANTS

LEFT FRONT, HYB II, UNINSTRUMENTED.

AD-76

RESTRAINT-UNIBELT ONLY.

RIGHT FRONT, HYB II, UNINSTRUMENTED.

AD-65

RESTRAINT-UNIBELT ONLY.

BUILD CONDITION

1997 XJ C1 4-DR, RWD, MAN. TRANS, 4.0L ENGINE. 4.0L ENGINE, MAN. TRANS, P/S, P/B, A/C. P225/75R15 TIRES ON STEEL WHEELS & FULL SPARE.

FUEL SYSTEM PRODUCTION INTENT.

TARGET WEIGHT (LBS) 3433 TOTAL, 1834 FRONT, 1599 REAR REP MAX OPT WT NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

FUEL AND BALLAST

19 GALLONS OF STODARD SOLVENT.

300 LBS LUGGAGE BALLAST SECURED IN CARGO AREA.

100 LBS ON FRONT FLOORPAN.

Post-it* Fax Note 7671	Date # of pages ► 6
TOMARU LEVINE	From JOHN MANNEY
Co./Dept.	Co.
Phone #	Phone #
Fax #	Fax #

VC06186 20 MPH LEFT LATERAL IMPACT, XJTL74, 4.0L ITEM XJ6356 1997 FMVSS 301 COMPLIANCE, FUEL SYSTEM INTEGRITY. TEST DATE 11/05/96

REPORT CODES

A = TRANSDUCER DATA

C = HIGH SPEED FILM

E = DUMMY KINEMATICS

G = UNDERBODY

I = DYNAMIC CRUSH

K = DOOR CRUSH

D = ENGINEER'S REPORT'

H = A-POST

J = ENGINE COMPARTMENT

K = DOOR CRUSH

L = FORCE/CRUSH/ENERGY

M = SPECIAL

N = CATALOG EDP DATA

M = SPECIAL N = CATALOG EDP DATA * = REPORT REQUESTOR

DISTRIBUTION D.J. MCKENZIE 422-05-01 (AB)
M.P. LEVINE 422-05-01 (AB)

DATE 11/06/96 TIME 10.54.47.

FUEL	SYSTEM	AND	STATI	C ROLLO	VER SUMMARY

TEST NUMBER VC6186, ITEM NUMBER XJ6356, TEST	ENGINEER MANNEY
V.I.N. 1J4FT68S1VI TEST DATE 11/05/90	ROLL DATE 11:05:96
TEST TYPE; 20 MPH TYPE IV MOVING BARRIER LT.	LATERAL IMPACT
FUEL; TYPE AND QUANITY767 S.G. STODDARD	SOLVENT, 19.0 GALLONS
TEST SPEED 20.2 MPH, TEST WEIGHT 40	64 POUNDS.
POST IMPACT LEAKAGE(OZ); AT IMPACT 6	
1ST 5 MIN. O	
NEXT 25 MIN.	
POST TEST PRESSURE CHECK NA	
ELECTRIC FUEL PUMP RUN MA	
NO STATIC ROLL PERFORMED	
STATIC ROLL LEAKAGE WITH VEHICLE Left SI	DE DOWN FIRST
FUEL LEAKAGE LOCATIONS E	URING STATIC ROLL
ROLL TIME	TOTAL
0-90 1ST 5 MIN	0 *
1:51 POST 5 MIN	
90-180 1ST 5 MIN	\mathcal{Q}^*
1:49 POST 5 MIN	C.
180-270 IST 5 MIN	\mathcal{O}^*
1:40 POST 5 MIN	4 *
270-360 IST 5 MIN	\mathcal{Z} .
1º42 POST 5 MIN	* \tau_*
* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE	
POST TEST FUEL SYSTEM OBSERVATIONS	
	7/
No fuel leaks during Static Ro	//-
TAGE BODM MODIFICATION 08/22/96 - GAB (TE	STOBS896,DOCVCFORMS)

VC06187 20 MPH RIGHT LATERAL IMP., XJTL74, 4.0L ITEM XJ6356R 1997 FMVSS 301 COMPLIANCE, FUEL SYSTEM INTEGRITY. TEST DATE 11/06/96

TEST PURPOSE

PRIMARY, 1997 USA 301 COMPLIANCE.

FUEL SYSTEM INTEGRITY.

IMPACT TYPE

20.2 MPH TARGET SPEED; DAMAGE LOCATION; RIGHT CENTER BARRIER TYPE; LEFT TYPE IV

BARRIER SURFACE; PLYWOOD

VEHICLE

BODY CLASS; ιŢ CAR LINE; 74 BODY;

ENGINE;

4.0 LITRE ELECTRONIC FUEL INJECTION ENGINE NOTE; 5 SPEED MANUAL TRANSMISSION;

TRANS. NOTE;

VIN AS TESTED; VIN AS BUILT;

1J4FT68S1VL 1J4FT68S1VL MOD. MOD.

TEST SPEED

20.2 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS)

4064 TOTAL, 2060 FRONT, 2004 REAR

OCCUPANTS

LEFT FRONT, HYB II, UNINSTRUMENTED.

AD-65

RESTRAINT-UNIBELT ONLY.

RIGHT FRONT, HYB II, UNINSTRUMENTED.

RESTRAINT-UNIBELT ONLY.

BUILD CONDITION

1997 XJ C1 4-DR, RWD, MAN. TRANS, 4.0L ENGINE. 4.0L ENGINE, MAN. TRANS, P/S, P/B, A/C.

P225/75R15 TIRES ON STEEL WHEELS & FULL SPARE.

FUEL SYSTEM PRODUCTION INTENT.

TARGET WEIGHT (LBS) 3433 TOTAL, 1834 FRONT, 1599 REAR REP MAX OPT WT NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

FUEL AND BALLAST

19 GALLONS OF STODARD SOLVENT. 300 LBS LUGGAGE BALLAST SECURED IN CARGO AREA. 100 LBS SANDBAGS ON FRONT FLOORPAN.

VC06187 20 MPH RIGHT LATERAL IMP., XJTL74, 4.0L 1TEM XJ6356R 1997 FMVSS 301 COMPLIANCE, FUEL SYSTEM INTEGRITY. TEST DATE 11/06/96

REPORT CODES

A = TRANSDUCER DATA

C = HIGH SPEED FILM

E = DUMMY KINEMATICS

G = UNDERBODY

I = DYNAMIC CRUSH

K = DOOR CRUSH

M = SPECIAL

* REPORT REQUESTOR

DISTRIBUTION

D.J. MCKENZIE

M.P. LEVINE

B = ALL FILM DATA

D = ENGINEER'S REPORT

H = A-POST

L = FORCE/CRUSH/ENERGY
N = CATALOG EDP DATA

422-05-01 (AB)

M.P. LEVINE

DATE 11/06/96 TIME 10.57.56.

FUEL SYSTEM AND STATIC ROLLOVER SCHOOLS		
TEST NUMBER VC6187, ITEM NUMBER XJ6356R, TEST ENGINEER MANNEY	,	
V.I.N. 1J4FT68S1VL TEST DATE 11/6/96, ROLL DATE 11/6/	١٥	
TEST TYPE; 20 MPH TYPE IV MOVING BARRIER RT. LATERAL IMPACT		
FUEL; TYPE AND QUANITY767 S.G. STODDARD SOLVENT, 19.0 GALL	ONS	
TEST SPEED 202 MPH, TEST WEIGHT 4064 POUNDS.		
POST IMPACT LEAKAGE (OZ); AT IMPACT		
1ST 5 MIN. O		
NEXT 25 MIN.		
POST TEST PRESSURE CHECK		
ELECTRIC FUEL PUMP RUN NA		
NO STATIC ROLL PERFORMED		
STATIC ROLL LEAKAGE WITH VEHICLE LEFT SIDE DOWN FIRST		
FUEL LEAKAGE LOCATIONS DURING STATIC ROLL	1	_
ROLL	TOTAL	
TIME 0-90 1ST 5 MIN	0	*
1154 POST 5 MIN	0	**
90-180 1ST 5 MIN	O	*
POST 5 MIN	0	* *
180-270 1ST 5 MIN	0	*
1:40 POST 5 MIN	0	* *
270-360 1ST 5 MIN	0	[* ⊥
1.42 POST 5 MIN		**
* OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE		
POST TEST FUEL SYSTEM OBSERVATIONS		

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

PAGE 01

SAFETY TEST VEHICLE CRASH TEST LETTER

VC06186 20 MPH LEFT LATERAL IMPACT, XJTL74, 4.0L ITEM XJ6356 1997 FMVSS 301 COMPLIANCE, FUEL SYSTEM INTEGRITY. TEST DATE 11/05/96

g NG LE RECLEVIZ RECLEDISEE L'EEUCLES (111 ATTITTE DI CEEF FILK

TEST PURPOSE

PRIMARY, 1997 USA 301 COMPLIANCE.

FUEL SYSTEM INTEGRITY.

IMPACT TYPE

TARGET SPEED; 20.2 MPH
DAMAGE LOCATION; LEFT CENTER BARRIER TYPE; LEFT TYPE IV

BARRIER SURFACE; PLYWOOD

VEHICLE

BODY CLASS; ΧJ CAR LINE; 74 BODY;

4.0 LITRE ENGINE;

ELECTRONIC FUEL INJECTION ENGINE NOTE; TRANSMISSION; 5 SPEED MANUAL

TRANS. NOTE;

VIN AS TESTED; VIN AS BUILT;

1J4FT68S1VL 1J4FT68S1VL

MOD. MOD.

TEST SPEED

20.2 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS)

4064 TOTAL, 2060 FRONT, 2004 REAR

OCCUPANTS

LEFT FRONT, HYB II, UNINSTRUMENTED.

AD-76

RESTRAINT-UNIBELT ONLY.

RIGHT FRONT, HYB II, UNINSTRUMENTED.

AD-65

RESTRAINT-UNIBELT ONLY.

BUILD CONDITION

1997 XJ C1 4-DR, RWD, MAN. TRANS, 4.0L ENGINE.

4.0L ENGINE, MAN. TRANS, P/S, P/B, A/C.

P225/75R15 TIRES ON STEEL WHEELS & FULL SPARE.

FUEL SYSTEM PRODUCTION INTENT.

TARGET WEIGHT (LBS) 3433 TOTAL, 1834 FRONT, 1599 REAR REP MAX OPT WT NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

FUEL AND BALLAST

19 GALLONS OF STODARD SOLVENT.

300 LBS LUGGAGE BALLAST SECURED IN CARGO AREA.

100 LBS ON FRONT FLOORPAN.

Date pages 6
From THU MANNEY
Co.
Phone #
Fax •

PAGE 02

SAFETY TEST VEHICLE CRASH TEST LETTER

over official to find feature of Articlares of Living County Counter for the

VC06186 20 MPH LEFT LATERAL IMPACT, XJTL74, 4.0L ITEM XJ6356 1997 FMVSS 301 COMPLIANCE, FUEL SYSTEM INTEGRITY. TEST DATE 11/05/96

REPORT CODES

A = TRANSDUCER 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

DISTRIBUTION D.J. MCKENZIE 422-05-01 (AB)
M.P. LEVINE 422-05-01 (AB)

DATE 11/06/96 TIME 10.54.47.

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMB	ER VC6186,	ITEM NUMBE	R XJ6356, T	EST ENGINEE	R MANNEY	· /
V.I.N. 1J	4FT68S1VL	TEST	DATE 11/0	% ROLL	ATE //05/	16
TEST TYPE	; 20 MPH TY	PE IV MOVI	NG BARRIER	LT. LATERAL	, IMPACT	
FUEL: TYP	E AND QUANI	TY767	S.G. STODDA	ARD SOLVENT,	19.0 GALI	LONS
TEST SPEE	D 20.2 M	рн, т	EST WEIGHT	4064 POL	MDS.	
	ACT LEAKAGE					
		1ST 5	MIN. O			
		NEXT 25	MIN. 0			
POST TES	T PRESSURE	CHECK _/	[A			
ELECTRIC	FUEL PUMP	RUN	A			
1 NO	STATIC ROLL	PERFORMED				
STATIC F	ROLL LEAKAGE	WITH VEHI	ICLE Left	_ SIDE DOWN	FIRST	
•				NS DURING S		TOTAL
ROLL						TOTAL
0-90	1ST 5 MIN					P
1:51	POST 5 MIN					P.
90-180	1ST 5 MIN					1
1:49	POST 5 MIN					0
180-270	1ST 5 MIN					
1:40	POST 5 MIN		-			Z "
270-360	1ST 5 MIN					0
1042	POST 5 MIN	1				\\(\psi \)
OUNCES	IN 5 MINUT	ES, ** OUN	CES PER MI	NUTE		,
POST TES	T FUEL SYST	EM OBSERVA	TIONS			
1 1	P 1 1 12	, ,	di	7/		
_No 7	vel leak	s during	STANL	Roll-		
LAST FOR	RM MODIFICAT	ION 08/22/	96 - GAB	(TESTOBS89	6, DOCVCFORM	S)

VC06187 20 MPH RIGHT LATERAL IMP., XJTL74, 4.0L ITEM XJ6356R 1997 PMVSS 301 COMPLIANCE, FUEL SYSTEM INTEGRITY. TEST DATE 11/06/96

TEST PURPOSE

PRIMARY, 1997 USA 301 COMPLIANCE.

FUEL SYSTEM INTEGRITY.

IMPACT TYPE

20.2 MPH TARGET SPEED; DAMAGE LOCATION; RIGHT CENTER LEFT TYPE IV BARRIER TYPE;

BARRIER SURFACE; PLYWOOD

VEHICLE

BODY CLASS; ΧJ CAR LINE; 74 BODY;

4.0 LITRE ELECTRONIC FUEL INJECTION ENGINE;

ENGINE NOTE;

5 SPEED MANUAL

TRANSMISSION;

TRANS. NOTE; VIN AS TESTED; VIN AS BUILT;

1J4FT68S1VL 1J4FT68S1VL MOD. MOD.

AD-76

NOVIGE THE CHICLIFF WHELPER WITH CHIEF

20.2 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS)

TEST SPEED

4064 TOTAL, 2060 FRONT, 2004 REAR

LEFT FRONT, HYB II, UNINSTRUMENTED. OCCUPANTS

RESTRAINT-UNIBELT ONLY. RIGHT FRONT, HYB II, UNINSTRUMENTED. AD-65

RESTRAINT-UNIBELT ONLY.

BUILD CONDITION

1997 XJ C1 4-DR, RWD, MAN. TRANS, 4.0L ENGINE. 4.0L ENGINE, MAN. TRANS, P/S, P/B, A/C. P225/75R15 TIRES ON STEEL WHEELS & FULL SPARE.

FUEL SYSTEM PRODUCTION INTENT.

TARGET WEIGHT (LBS) 3433 TOTAL, 1834 FRONT, 1599 REAR REP MAX OPT WT NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

FUEL AND BALLAST

19 GALLONS OF STODARD SOLVENT.

300 LBS LUGGAGE BALLAST SECURED IN CARGO AREA.

100 LBS SANDBAGS ON FRONT FLOORPAN.

. . <u>. . .</u>

SAFETY TEST VEHICLE CRASH TEST LETTER

VC06187 20 MPH RIGHT LATERAL IMP., XJTL74, 4.0L 1TEM XJ6356R 1997 FMVSS 301 CCMPLIANCE, FUEL SYSTEM INTEGRITY. TEST DATE 11/06/96

NAC SECOND 14952 FRO FELSER CORROS EFF

REPORT CODES

A = TRANSDUCER DATA

C = HIGH SPEED FILM

E = DUMMY KINEMATICS

G = UNDERBODY

I = DYNAMIC CRUSH

K = DOOR CRUSH

M = SPECIAL

* = REPORT REQUESTOR

B = ALL FILM DATA

D = ENGINEER'S REPORT

F = STEERING COLUMN

J = ENGINE COMPARTMENT

L = FORCE/CRUSH/ENERGY

N = CATALOG EDP DATA

DISTRIBUTION D.J. MCKENZIE 422-05-01 (AB)
M.P. LEVINE 422-05-01 (AB)

DATE 11/06/96 TIME 10.57.56.

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST DATE 1 / 6 / 96, ROLL DEST TYPE; 20 MPH TYPE IV MOVING BARRIER RT. LATERAL	
FUEL; TYPE AND QUANITY767 S.G. STODDARD SOLVENT,	
TUEL; TYPE AND QUANTTY 767 S.G. STOUDARD BOZZETT	INDS
TEST SPEED 20.2 MPH, TEST WEIGHT 4064 POL	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
POST IMPACT LEAKAGE(OZ); AT IMPACT O	
1ST 5 MIN.	
NEXT 25 MIN.	
POST TEST PRESSURE CHECK	
ELECTRIC FUEL PUMP RUN NA	
NO STATIC ROLL PERFORMED	
STATIC ROLL LEAKAGE WITH VEHICLE LEFT SIDE DOWN	FIRST
FUEL LEAKAGE LOCATIONS DURING S	TATIC ROLL
	TOTAL
ROLL	
ROLL TIME 0-90 1ST 5 MIN	0 *
TIME 0-90 IST 5 MIN	0 *
TIME 0-90 1ST 5 MIN	0
TIME 0-90 1ST 5 MIN 154 POST 5 MIN	0
TIME 0-90 1ST 5 MIN POST 5 MIN 90-180 1ST 5 MIN POST 5 MIN	0 0
TIME 0-90 1ST 5 MIN POST 5 MIN 90-180 1ST 5 MIN POST 5 MIN 180-270 1ST 5 MIN	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
TIME 0-90 1ST 5 MIN 90-180 1ST 5 MIN 90-180 1ST 5 MIN 180-270 1ST 5 MIN 1:40 POST 5 MIN	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
TIME 0-90 1ST 5 MIN 90-180 1ST 5 MIN 90-180 1ST 5 MIN 180-270 1ST 5 MIN 1:40 POST 5 MIN 270-360 1ST 5 MIN	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
TIME	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
TIME	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
11ME 0-90 1ST 5 MIN 90-180 1ST 5 MIN 90-180 1ST 5 MIN 180-270 1ST 5 MIN 1:40 POST 5 MIN 270-360 1ST 5 MIN 1:42 POST 5 MIN	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
TIME	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

VC06229 30 MPH BARRIER IMPACT XJUL74, 4.0L ITEM XJ6406 1997 MVSS 208, 212, 219, 301 COMPLIANCE TEST DATE 12/09/96

TEST PURPOSE

PRIMARY, 1997 USA 208 COMPLIANCE. PRIMARY, 1997 USA 212 COMPLIANCE PRIMARY, 1997 USA 219 COMPLIANCE

PRIMARY, 1997 USA 301 COMPLIANCE.

TARGET SPEED; 30 MPP DAMAGE LOCATION; FRONT 30 MPH IMPACT TYPE

BARRIER TYPE; FLAT FIXED BARRIER SURFACE; PLYWOOD 0 DEGREES

DIRECTION;

BODY CLASS; ХJ VEHICLE CAR LINE; J 74 BODY;

4.0 LITRE ENGINE;

ENGINE NOTE; MPI

4 SPEED AUTO 4x4 TRANSMISSION;

TRANS. NOTE;

VIN AS TESTED; 1J4FN28S6VL MOD. 1J4FN28S6VL MOD. VIN AS BUILT;

30.3 MPH BY ELECTRONIC TRAP. TEST SPEED

4300 TOTAL, 2189 FRONT, 2111 REAR TEST WEIGHT (LBS)

LEFT FRNT, CERT 50TH% HIII H&AROM 9-CH AD-93 OCCUPANTS

RESTRAINT-AIRBAG AND SEAT BELT RIGHT FRNT, CERT 50TH% HIII H&AROM 9-CH AD-95

RESTRAINT-AIRBAG AND SEAT BELT

1997 XJ, PVP, 4DR, AUTO TRANS, RHD 4.0L VEHICLE 4.0L ENGINE, AUTO TRANS, P/S, P/B, A/C, NON-TILT BUILD CONDITION

COLUMN.

P215/75R15 TIRES ON STEEL WHEELS.

TARGET WEIGHT (LBS) 3662 TOTAL, 1996 FRONT, 1666 REAR REP MAX OPT WT. FOR A 4.0L 4-DR 4X4 DOMESTIC RHD VEHICLE. NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

VC06229 30 MPH BARRIER IMPACT XJUL74, 4.0L ITEM XJ6406 1997 MVSS 208, 212, 219, 301 COMPLIANCE TEST DATE 12/09/96

FUEL AND BALLAST		SECURED IN CARGO AREA. ED TO LR FLOORPAN. ED TO RR FLOORPAN.
REPORT CODES	A = TRANSDUCER DATA C = HIGH SPEED FILM E = DUMMY KINEMATICS G = UNDERBODY I = DYNAMIC CRUSH K = DOOR CRUSH M = SPECIAL	B = ALL FILM DATA D = ENGINEER'S REPORT F = STEERING COLUMN H = A-POST J = ENGINE COMPARTMENT L = FORCE/CRUSH/ENERGY
DISTRIBUTION	M.P. LEVINE D.R. BAILEY M. STEBELTON	514-17-41 (AB) 514-18-03 (AB) 422-05-01 (AB)

OCCUPANT DATA

TEST NUMBER VC6229 ITEM NUMBER	XJ6406 TEST ENGINEER COLLINGS
OCCUPANT DIMENSIONS RELATIVE TO _	XJ TEMPLATE RHD
TEMPLATE LOCATION DATA - **SHOULD	BE SAME AS WHAT IS ON "J826" SHEET**
**"X" 6.C INCHES FORWARD OF STR	iker mounting vertical surface 5.9
"Z" $\sqrt{2.1}$ INCHES ABOVE SILL SURI	FACE /2. Z
OCCUPANT LOCATION DATA	2,
LEFT FRONT	RIGHT FRONT HYBRID III X (INCHES) Z (INCHES) PELVIC ANG
X (INCHES) Z (INCHES) FWD RWD UP DOWN	X (INCHES) Z (INCHES) PELVIC ANG FWD RWD UP DOWN LT RT
HEAD 0.0 1.4	24 1.2 23° 22°
HIP 0.8 0.4	0.3 0.3
KNEE) Q	0.2 1.2
0,7 0,2	0,6/,6
<u>LT</u> <u>RT</u>	
KNEE CLEARANCE 1L $\frac{3.3}{1}$	
1R 4.1 3.9	120 WHIT
STEERING WHEEL ANGLE MEASURED FROM	M HORIZONTAL 62.1 DEGREES
SILL ANGLE // DEGREES	FRONT HIGH X FRONT LOW
	ND TO INTERIOR MEASUREMENTS DEFINED
	TO TOP REAR SURFACE OF UPPER
"NH" 16.1 STEERING WHI	EEL RIM TO CENTER OF STEERING WHEEL HUB
	HES DOWN FROM CHIN TO CENTER OF
PASSENGER - "A" 21.3 BRIDGE OF NO	EEL HUB OSE FORWARD TO WINDSHIELD
"B" $\frac{24.6}{}$ EAR TARGET	FORWARD TO WINDSHIELD
"C" 20.3 CHEST 9 INCI	HES DOWN FROM CHIN FORWARD TO
SHOULDER BELT PAYOUT- LEFT 3.	•
LAP BELT PAYOUT- LEFT N LAST FORM MODIFICATION 08/22/96 -	A IN. RIGHT MA IN. GAB (TESTOBS896, DOCVCFORMS)

J826 MACHINE POSITIONING

TEST NUMBER VC6229, ITEM NUMBER XJ6406, TEST ENGINEER COLLINGS
CAR LINE XJ DATE MECHANIC(S)
TEMPLATE LOCATION DATA FOR XJ TEMPLATE
"x" 6.0 inches forward of striker mounting vertical surface
"Z" /2,/ INCHES ABOVE SILL SURFACE
*****CHECK OR FILL IN APPROPRIATE BOXES********************** * DRIVER - SEAT DESCRIPTION BUCKET MANUAL ELECTRIC
* SEAT LOCATION MID TRACK OTHER #
* #DESCRIPTION OF "OTHER" * SEAT BACK ANGLE 70 DEGREES MEASURED FROM VERTICAL PLANE * CHECK IF NOT (TYPICAL 18 TO 24 DEGREES IF * DESIGN LOCATION 66 TO 72 SUBTRACT FROM 90) *
* "OSCAR" DIMENSIONS AND ANGLES
* H-POINT "X" 0.9 INCHES FORWARD OF TEMPLATE POINTER
* INCHES REARWARD OF TEMPLATE POINTER *
* H-POINT "Z" /12 INCHES ABOVE TEMPLATE POINTER
* INCHES BELOW TEMPLATE POINTER *
* HIP ANGLE 105° DEGREES, BACK ANGLE 25° DEGREES
LEFT KNEE ANGLE $\frac{700}{128}$, RIGHT KNEE ANGLE $\frac{124^{\circ}}{124^{\circ}}$ DEGREES
* RIGHT FRONT - SEAT DESCRIPTION BUCKET MANUAL ELECTRIC
* * SEAT LOCATION MID TRACK OTHER #
* #DESCRIPTION OF "OTHER" * SEAT BACK ANGLE 70 DEGREES MEASURED FROM VERTICAL PLANE * CHECK IF NOT (TYPICAL 18 TO 24 DEGREES IF * DESIGN LOCATION 66 TO 72 SUBTRACT FROM 90)
*
* "OSCAR" DIMENSIONS AND ANGLES * H-POINT "X" A 0 INCHES FORWARD OF TEMPLATE POINTER
* * * * * * * * * * * * * * * * * * *
* H-POINT "Z" // INCHES ABOVE TEMPLATE POINTER
* * * * * * * * * * * * * * * * * * *
* HIP ANGLE 102 DEGREES, BACK ANGLE
* LEFT KNEE ANGLE 132 DEGREES , RIGHT KNEE ANGLE

LAST FORM MODIFICATION 8/22/96 - GAB (DOCVCFORMS, MASTER, OSCAR896.DAT)

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

	BER VC6229,						
V.I.N. 13	J4FN28S6VL	TEST	г DATE <u>(</u> <u>/</u> <u>0</u> '	1/96, ROLL 1	DATE 12/10/	16	
TEST TYPE	E; 30 MPH F	RONT FLAT	FIXED BARRIE	R IMPACT			
	PE AND QUAN					LONS	
TEST SPE	ed <u>30.3</u> h	MPH,	rest weight	4300 POT	JNDS.		
POST IM	PACT LEAKAGE	E(OZ); AT	IMPACT				
		1ST S	MIN.				
		NEXT 25	5 MIN				
POST TES	ST PRESSURE	CHECK 10	min- NO /	loaks			
ELECTRI	ST PRESSURE	RUN	لعائمة سسرد أسا	LAKS			_
	STATIC ROLI						
STATIC E	ROLL LEAKAGE	WITH VEH	ICLE Left	SIDE DOWN	FIRST		
		FUEL LEAK	AGE LOCATION	S DURING ST	TATIC ROLL	1	
ROLL TIME						TOTAL	
0-90	1ST 5 MIN					0	*
2:01	POST 5 MIN				,	0	**
90-180	1ST 5 MIN					0	- *
2.03	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 MINUTE	ES, ** OUNC	ES PER MINU	9 1 1 1.	1. 1	ارم	_
POST TEST	F BUEL SYSTE	EM OBSERVAT	TIONS NO K	iel leafs,	at impactor	Affer	mphet
No	weller	Ks JUNIN	, Static	X0/1-			_
No tre	1 PAKS	deving)	post imple?	testing	·	,	_
1.12	1 SVE	לינות חו	early in	As much	17/4/100/	<u>.</u>	
LAST FOR	M MODIFICATI	ON 08/22/9	96 - GAB	TESTOBS896	, DOCVCFORMS)	

WINDSHIELD AND HOOD DATA

TEST NUMBER VC6229 ITEM NUMBER XJ6406 TEST ENGINEER COLLINGS
AMBIENT TEMPERATURE AT TEST TIME DEG-F READY ROOM
WINDSHIELD RETENTION INFORMATION
RETENTION PERCENTAGE - <u>00</u> % LEFT ++++++++ +++++++++++++++++++++++++++
RETENTION LOST, LOCATIONS AND LENGTHS SHOWN ON SKETCH
IN. FENCE/RETENTION MATERIAL
IN. GLASS/RETENTION MATERIAL WINDSHIELD INTRUSION INFORMATION
INTRUSION ZONE IDENTIFICATION;
NONE, LINE ONLY, 3-DIMENSIONAL STYROFOAM UPPER ZONE
LOWER ZONE INTRUSION - NO, YES
UPPER ZONE INTRUSION - X NO, YES
POST TEST OBSERVATIONS No Windshield Zene in The Simi.
No loss of windshield vetentian.
•

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

VEHICLE ATTITUDE

TEST NUMBER VC6229

TEST ENGINEER COLLINGS

ITEM NUMBER XJ6406

TEST DATE /2/09/96

X FENDER/WHEELWELL HEIGHTS ____ SILL HEIGHTS

AS RECEIVED

AS BUILT-UP

AS TESTED

LF	LR	RF	RR
32.0	31.9	32.0	31.9
30.3	30.9	30.3	31.0
30.3	30.9	30,3	31.0

DATE 08/28/96 ELECTRONIC DATA PROCESSING VEHICLE CRASH ENGINEERING TIME 12.28.18. EDP TEST LETTER DEPT 5320

VC06062 ITEM XJ6205

VC06062 30 MPH TYPE IV REAR IMPACT, XJTL72, 4.0L ITEM XJ6205

1997 FMVSS 301, FUEL SYSTEM INTEGRITY.

TEST DATE 08/20/96

TEST PURPOSE

PRIMARY, 1997 USA 301 VALIDATION.

FUEL SYSTEM INTEGRITY.

TARGET SPEED; 30.1 MPH IMPACT TYPE

DAMAGE LOCATION; REAR

BARRIER TYPE; REAR TYPE IV BARRIER SURFACE; PLYWOOD

VEHICLE

BODY CLASS; ХJ CAR LINE; J 72 BODY;

ENGINE;

4.0 LITRE

ENGINE NOTE; ELECTRONIC FUEL INJECTION TRANSMISSION; 4 SPEED AUTO 4x4

TRANS. NOTE;

VIN AS TESTED;

1J4FJ6759VL

MOD. MOD.

VIN AS BUILT;

1J4FJ6759VL

31.0 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS)

TEST SPEED

4010 TOTAL, 2343 FRONT, 1667 REAR

LEFT FRONT, HYB II, UNINSTRUMENTED. OCCUPANTS

RESTRAINT-UNIBELT ONLY. RIGHT FRONT, HYB II, UNINSTRUMENTED.

RESTRAINT-UNIBELT ONLY.

BUILD CONDITION

1997 XJ PO 2-DR, 4X4, AUTO TRANS, 4.0L ENGINE. PRODUCTION INTENT 20 GALLON PLASTIC FUEL TANK.

4.0L ENGINE, AUTO TRANS., P/S, P/B, A/C. P225/75R15 TIRES ON STEEL WHEELS & FULL SPARE.

FUEL SYSTEM PRODUCTION INTENT.

TARGET WEIGHT (LBS) 3369 TOTAL, 1816 FRONT, 1553 REAR REP MAX OPT WT

NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

FUEL AND BALLAST

19 GALLONS OF STODARD SOLVENT.

300 LBS LUGGAGE BALLAST SECURED IN CARGO AREA.

POST TEST REMARKS

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

STATIC ROLLOVER WAS CONDUCTED WITHOUT FUEL

LEAKAGE. A POST-TEST PRESSURE CHECK WAS CONDUCTED

WITHOUT FUEL LEAKAGE.

DATE 08/28/96 ELECTRONIC DATA PROCESSING VEHICLE CRASH ENGINEERING TIME 12.28.18. EDP TEST LETTER DEPT 5320

VC06062 ITEM XJ6205 VC06062 30 MPH TYPE IV REAR IMPACT, XJTL72, 4.0L ITEM XJ6205 1997 FMVSS 301, FUEL SYSTEM INTEGRITY. TEST DATE 08/20/96

EDP TECHNICIAN S. MARCHENIA

No. of Pages 49

M. P. LEVINE 422-05-01 D. J. MCKENZIE 422-05-01

VC06146 30 MPH TYPE IV REAR IMPACT, XJJL74, 4.0L ITEM XJ6359 1997 FMVSS 301, FUEL SYSTEM INTEGRITY. TEST DATE 10/16/96

TEST PURPOSE

PRIMARY, 1997 USA 301 COMPLIANCE.

FUEL SYSTEM INTEGRITY.

IMPACT TYPE

TARGET SPEED;

30.1 MPH

DAMAGE LOCATION; REAR

BARRIER TYPE; REAR TYPE IV BARRIER SURFACE; PLYWOOD

VEHICLE

BODY CLASS;

ΧĴ

CAR LINE; BODY;

J 74

ENGINE;

4.0 LITRE

ENGINE NOTE;

ELECTRONIC FUEL INJECTION

TRANSMISSION;

5 SPEED MANUAL 4x4

TRANS. NOTE;

VIN AS TESTED; VIN AS BUILT;

1J4FJ28S3VL 1J4FJ28S3VL

MOD. MOD.

30.1 MPH BY ELECTRONIC TRAP.

TEST WEIGHT (LBS)

4315 TOTAL, 2270 FRONT, 2045 REAR

OCCUPANTS

TEST SPEED

LEFT FRONT, HYB II, UNINSTRUMENTED.

AD-67

RESTRAINT-UNIBELT ONLY.

RIGHT FRONT, HYB II, UNINSTRUMENTED.

AD-65

RESTRAINT-UNIBELT ONLY.

BUILD CONDITION

1997 XJ C1 4-DR, 4X4, MAN. TRANS, 4.0L ENGINE.

FACTORY TRAILER HITCH INSTALLED.

4.0L ENGINE, MAN. TRANS, P/S, P/B, A/C. P225/75R15 TIRES ON STEEL WHEELS & FULL SPARE.

FUEL SYSTEM PRODUCTION INTENT.

TARGET WEIGHT (LBS) 3677 TOTAL, 2006 FRONT, 1671 REAR REP MAX OPT WT NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

FUEL AND BALLAST

19.0 GALLONS OF STODARD SOLVENT.

300 LBS OF LUGGAGE BALLAST SECURED IN REAR

SEATING AREA. 125 LBS OF BALLAST SECURED IN REAR SEATING AREA.

(425 LBS TOTAL BALLAST.)

VC06146 30 MPH TYPE IV REAR IMPACT, XJJL74, 4.0L ITEM XJ6359 1997 FMVSS 301, FUEL SYSTEM INTEGRITY. TEST DATE 10/16/96

REPORT CODES

A = TRANSDUCER DATA

C = HIGH SPEED FILM

E = DUMMY KINEMATICS

G = UNDERBODY

I = DYNAMIC CRUSH

K = DOOR CRUSH

M = SPECIAL

* = REPORT REQUESTOR

B = ALL FILM DATA

D = ENGINEER'S REPORT

F = STEERING COLUMN

J = ENGINE COMPARTMENT

L = FORCE/CRUSH/ENERGY

N = CATALOG EDP DATA

DISTRIBUTION D.J. MCKENZIE 422-05-01 (AB) M.P. LEVINE 422-05-01 (AB)

DATE 10/17/96 TIME 08.50.55.

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

	BER VC6146,						
V.I.N. 13	14FJ28S3VL	TEST	DATE /0 / /6	/ 96 , RO	LL DATE 🙋	1/1/196	
	E; 30 MPH TY	•					
FUEL; TYP	PE AND QUANI	TY767	S.G. STODDA	ARD SOLV	ENT, <u>19.0</u>	GALLONS	
TEST SPEE	30.1 M	1PH,	TEST WEIGHT	43/5	POUNDS.		
POST IME	PACT LEAKAGE	E(OZ); AT	IMPACT <u></u>				
			MIN				٠.
		NEXT 25	MIN	<u> </u>			
POST TES	T PRESSURE	CHECK					
ELECTRIC	FUEL PUMP	RUN					
NO	STATIC ROLI	PERFORME) / 01				
STATIC F	ROLL LEAKAGE	WITH VEH	ICLE Left	_ SIDE D	OWN FIRST		
		FUEL LEAK	AGE LOCATION	NS DURIN	G STATIC I	ROLL	т
ROLL TIME						TOTAL	<u>'</u>
0-90	1ST 5 MIN					$\mathcal{Q}_{\mathcal{L}}$	*
1:54	POST 5 MIN					(4)	↓**
90-180	1ST 5 MIN					0	
1:46	POST 5 MIN					\mathcal{P}	_ **
180-270	1ST 5 MIN					$\mathcal{O}_{\mathcal{C}}$	*
1:38	POST 5 MIN					\mathcal{I}_{c}	**
270-360	1ST 5 MIN					\mathcal{Q}_{\perp}	*
1:36	POST 5 MIN	ļ				10	*
	IN 5 MINUT		, ,	7 /	1.1	1: 1	_
POST TES	T FUEL SYST	EM OBSERVA	TIONS <u>///</u>	tre	ICALS 1	4T MARI	_
- · · · · · · · · · · · · · · · · · 	PII	6 1		<u></u>	1/		
No	tiel 10	its do	MINS STA	-11ر	10110	/	
Fuel	System	TAHOS	vity who	•	NAME	(0	
TAST FOR	M MODIFICAT	ION 08/22/	98 - GAB	(TESTOB	S896,DOCVC	FORMS)	

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: XJ

Approvals

Edward A Zylik **Department Manager**

03/01/2000 03:52:21 PM

John H Broomall **Executive Engineer** O3/01/2000 03:52:21 PM Approval Date

03/13/2000 05:45:31 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 2001 'XJ' Body, Jeep "Cherokee" Sport Utility vehicles, as design released, meet the

performance requirements of FMVSS 301 - Sections S3., S5., S6. and S7.

Safety Documentation Compliance Report

Prepared By:Mark P LevineDate: 02/29/2000Approved By:Edward A ZylikDate: 03/01/2000

Issued By: 1060 - Impact Development (Jeep)

Discussion

DAIMLER CHRYSLER

The 2001 MY XJ is essentially carryover from the 2000, 1999 & 1998 model year.

The following design features remain standard as carryover from the 2000, 1999 & 1998 M.Y.;

Vehicle/Body:

- Left hand drive and right hand drive models.
- 2-door and 4-door body style (4-door only in right hand drive).
- 101 inch wheelbase and unibody construction.
- The front bumper system consists of a steel bumper with foam filled bumperettes.

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 skid plate is optional.

Drivetrain:

- 2.5L (I4) or 4.0L (I6) multi-point injection (MPI) (I6 only in right hand drive).
- Rear or 4 wheel drive.
- $\hbox{-} 5\hbox{-speed manual transmission or automatic transmission (3-speed (I4) or 4-speed (I6)) (automatic only in right hand drive))}.$

Occupant Restraint/Interior Systems:

- Corporate energy absorbing steering column (shear capsule design non-tilt and torsion bar design tilt with a floor console shifter.
 - A 3-point active seat belt with adjustable upper anchorage is a primary restraint for the driver.
 - A supplementary driver restraint airbag is contained in the two spoke luxury steering wheel.
 - A 3-point active seat belt with adjustable upper anchorage is a primary restraint for the passenger
 - An airbag is provided as a supplementary restraint for the passenger.
 - A single point 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.

A total of nine vehicles were tested (for the 1997 & 1998 model year) to demonstrate compliance of the 'XJ' to the requirements of FMVSS 301, Fuel System Integrity. These vehicles and test results are shown on the attached summary.

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:

EA12-005- Chrysler -006638

Compliance Report : 2001 CP-246G CP-245F CP-234I CP-233H (

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 2001 'XJ' Body, Jeep "Cherokee" Sport Utility vehicles, as design released, <u>MEET</u> the performance requirements of FMVSS 301 - Sections S3., S5., S6. and S7.

DAIMLERCHRYSLER

SUMMARY I

FUEL SYSTEM INTEGRITY 2001 'XJ'-BODY, JEEP "CHEROKEE" SPORT UTILITY

			_	Leakag	ge Summary (C	Oz)
Test No. Impact		Vehicle Model			Max. in	Any
			At Fo	ollowing	Rollover Po	sition
(Date) Mode 30 Minu	<u>ites</u>	& Description (Oz.)	(Oz./Min.)		<u>Impact</u>	
VC 6156 Left -0- (11/05/96)	-0- Side	Jeep "Cherokee" -0- Sport Utility, 2-Wheel Drive 4.0L litre MPl Air Condition			-0-	
VC 6156R -0- (11/06/96)	Right Side	Jeep "Cheroke -00- Sport Utility, 2-Wheel Drive 4.0L litre MPl Air Condition	e, Man. Trans. I Engine,			-0-
VC 6062Rear -0- (08/19/96)	-0-	Jeep "Cherokee" -0- Sport Utility, 4-Wheel Drive 4.0L litre MPl Air Condition			-0-	
VC 6146Rear -0- (10/16/96)	-0-	Jeep "Cherokee" -0- Sport Utility, Drive,Manual 4.0L litre MPl Air Condition Factory Traile	4-Wheel Trans., Engine, ing,		-0-	
VC06229Flat -0- (12/09/96)	-0- Front	Jeep "Cherokee" -0- Sport Utility,	4-Wheel		-0-	

EA12-005- Chrysler -006641

Drive, Auto Transmission Right Hand Drive, 4.0 Litre(I6)MPI Engine

XT0071630 Lt. Jeep "Cherokee"

-0- -0-

(05/05/97) Angle Sport Utility, 4-Wheel

Drive, Man. Transmission 2.5 Litre(I4)MPI Engine and Driver & Passenger Air Bag with Belt, Tilt Wheel. -0-

XT0071730 Rt. Jeep "Cherokee" -0-

-0- -0-

(05/06/97) Angle Sport Utility, 4-Wheel

Drive, Auto Transmission 4.0 Litre(I6)MPI Engine and Driver & Passenger Air Bag with Belt, Tilt Wheel.

XT00718 Flat Jeep "Cherokee" -0-

-0- -0-

(05/07/97) Front Sport Utility, 4-Wheel

Drive, Man. Transmission 2.5 Litre(I4)MPI Engine and Driver & Passenger Air Bag with Belt, Non-Tilt Wheel.

XT00719 Flat Jeep "Cherokee" -0-

-0- -0-

(05/08/97) Front Sport Utility, 4-Wheel

Drive, Auto Transmission 4.0 Litre(I6)MPI Engine and Driver & Passenger Air Bag with Belt, Tilt Wheel.

Allowable Leakage by Weight

- 1. One (Oz.) at impact.
- 2. Not more than one (Oz.) per minute following 30 minutes.
- 3. Five (Oz.) for first 5 minutes after each 900 rotation and not more than one (Oz.) per minute thereafter.

Attached are copies of the test report information demonstrating compliance.

FMVSS 301.pdf

VC06186 20 MPH LEFT LATERAL IMPACT, XJTL74, 4.0L 1TEM XJ6356 1997 FMVSS 301 COMPLIANCE, FUEL SYSTEM INTEGRITY. TEST DATE 11/05/96

TEST PURPOSE

PRIMARY, 1997 USA 301 COMPLIANCE.

FUEL SYSTEM INTEGRITY.

IMPACT TYPE

TARGET SPEED;

20.2 MPH

DAMAGE LOCATION; LEFT CENTER

BARRIER TYPE; LEFT TYPE IV BARRIER SURFACE; PLYWOOD

VEHICLE

BODY CLASS;

XJ J

CAR LINE; BODY;

74

ENGINE;

4.0 LITRE

ENGINE NOTE;

ELECTRONIC FUEL INJECTION

TRANSMISSION;

5 SPEED MANUAL

TRANS. NOTE; VIN AS TESTED;

1J4FT68S1VL

MOD. MOD.

VIN AS BUILT;

1J4FT68S1VL

TEST SPEED

20.2 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS)

4064 TOTAL, 2060 FRONT, 2004 REAR

OCCUPANTS

LEFT FRONT, HYB II, UNINSTRUMENTED.

AD-76

RESTRAINT-UNIBELT ONLY.

RIGHT FRONT, HYB II, UNINSTRUMENTED.

AD-65

RESTRAINT-UNIBELT ONLY.

BUILD CONDITION

1997 XJ C1 4-DR, RWD, MAN. TRANS, 4.0L ENGINE. 4.0L ENGINE, MAN. TRANS, P/S, P/B, A/C.

P225/75R15 TIRES ON STEEL WHEELS & FULL SPARE.

FUEL SYSTEM PRODUCTION INTENT.

TARGET WEIGHT (LBS) 3433 TOTAL, 1834 FRONT, 1599 REAR REP MAX OPT WT NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

FUEL AND BALLAST

19 GALLONS OF STODARD SOLVENT.

300 LBS LUGGAGE BALLAST SECURED IN CARGO AREA.

100 LBS ON FRONT FLOORPAN.

Post-it* Fax Note 7671	Date fages ► 6
TOMARK LEVINE	From JOHN MANNEY
Ço./Dept.	Co.
Phone #	Physic #
Fax #	Fax #

VC06186 20 MPH LEFT LATERAL IMPACT, XJTL74, 4.0L ITEM XJ6356 1997 FMVSS 301 COMPLIANCE, FUEL SYSTEM INTEGRITY. TEST DATE 11/05/96

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

K = DOOR CRUSH

L = FORCE/CRUSH/ENERGY

M = SPECIAL

N = CATALOG EDP DATA

* = REPORT REQUESTOR

DISTRIBUTION D.J. MCKENZIE 422-05-01 (AB)
M.P. LEVINE 422-05-01 (AB)

DATE 11/06/96 TIME 10.54.47.

FUEL	SYSTEM	AND	STATI	C ROLLO	VER SUMMARY

ing the manager of leading the continuous street of the case of

TEST NUMB	ER VC6186,	ITEM NUMBE	R XJ6356, T	EST ENGINEE	R MANNEY		
V.I.N. 1J	4FT68S1VI	TEST	DATE 11/0	F 96 ROLL I	DATE 11/05	96	
	; 20 MPH TY						
	E AND QUANT					LONS	
TROT COE	D 20.2	ADH T	rest weight	4064 POT	INDS.		
	PACT LEAKAGE		_				
POPT IME	ACI DEARAGE		MIN. O				
			5 MIN				
	ST PRESSURE		1				
			1				_
	FUEL PUMP						
NO	STATIC ROLL ROLL LEAKAGE	L PERFORME	1 of	TOP DOWN	enee e		
STATIC F	ROLL LEAKAGI					1	
ROLL		FUEL_LEAK	AGE LOCATION	NS DURING S	TATIC ROLL	TOTAL	
0-90	1ST 5 MIN					1	*
1101	POST 5 MIN					1	* *
90-180	1ST 5 MIN					6	*
1.6/9	POST 5 MIN					7	* *
180 - 270	1ST 5 MIN					1	*
1140	POST 5 MIN					7	* *
270-360	1ST 5 MIN					17	*
10117	POST 5 MIN	1			1	H.	**
* CUNCES	IN 5 MINUT		CES PER MIN	UTE		14	Ŀ
	T FUEL SYST						
No +	vel leak	s during	Static	Roll.			
	اد ع <i>اده کا انجیشت میشد</i> د.						
LAST FOR	M MODIFICAT	ION 08/22/	96 - GAB	(TESTOBS896	,DOCVCFORMS	S)	
		•					

VC06187 20 MPH RIGHT LATERAL IMP., XJTL74, 4.0L ITEM XJ6356R 1997 FMVSS 301 COMPLIANCE, FUEL SYSTEM INTEGRITY. TEST DATE 11/06/96

TEST PURPOSE

PRIMARY, 1997 USA 301 COMPLIANCE.

FUEL SYSTEM INTEGRITY.

IMPACT TYPE

20.2 MPH TARGET SPEED; DAMAGE LOCATION; RIGHT CENTER BARRIER TYPE; LEFT TYPE IV

BARRIER SURFACE; PLYWOOD

VEHICLE

BODY CLASS; ιŢ CAR LINE; 74 BODY;

4.0 LITRE ELECTRONIC FUEL INJECTION ENGINE;

ENGINE NOTE; 5 SPEED MANUAL TRANSMISSION;

TRANS. NOTE;

VIN AS TESTED; VIN AS BUILT;

1J4FT68S1VL 1J4FT68S1VL MOD. MOD.

TEST SPEED

20.2 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS)

4064 TOTAL, 2060 FRONT, 2004 REAR

OCCUPANTS

LEFT FRONT, HYB II, UNINSTRUMENTED.

RESTRAINT-UNIBELT ONLY.

RIGHT FRONT, HYB II, UNINSTRUMENTED.

AD-65

RESTRAINT-UNIBELT ONLY.

BUILD CONDITION

1997 XJ C1 4-DR, RWD, MAN. TRANS, 4.0L ENGINE. 4.0L ENGINE, MAN. TRANS, P/S, P/B, A/C.

P225/75R15 TIRES ON STEEL WHEELS & FULL SPARE.

FUEL SYSTEM PRODUCTION INTENT.

TARGET WEIGHT (LBS) 3433 TOTAL, 1834 FRONT, 1599 REAR REP MAX OPT WT NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

FUEL AND BALLAST

19 GALLONS OF STODARD SOLVENT. 300 LBS LUGGAGE BALLAST SECURED IN CARGO AREA. 100 LBS SANDBAGS ON FRONT FLOORPAN.

VC06187 20 MPH RIGHT LATERAL IMP., XJTL74, 4.0L 1TEM XJ6356R 1997 FMVSS 301 COMPLIANCE, FUEL SYSTEM INTEGRITY. TEST DATE 11/06/96

REPORT CODES

A = TRANSDUCER DATA

C = HIGH SPEED FILM

E = DUMMY KINEMATICS

G = UNDERBODY

I = DYNAMIC CRUSH

K = DOOR CRUSH

M = SPECIAL

** REPORT REQUESTOR

D.J. MCKENZIE

M.P. LEVINE

B = ALL FILM DATA

D = ENGINEER'S REPORT

E = DYNAMIC CRUSH

D = ENGINE COMPARTMENT

L = FORCE/CRUSH/ENERGY

N = CATALOG EDP DATA

422-05-01 (AB)

422-05-01 (AB)

DATE 11/06/96 TIME 10.57.56.

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY		
TEST NUMBER VC6187, ITEM NUMBER XJ6356R, TEST ENGINEER MANNEY	,	
V.I.N. 1J4FT68S1VL TEST DATE 11/6/96, ROLL DATE 11/6/	10	
TEST TYPE; 20 MPH TYPE IV MOVING BARRIER RT. LATERAL IMPACT		
FUEL; TYPE AND QUANITY767 S.G. STODDARD SOLVENT, 19.0 GALL	CNS	
TEST SPEED 20.2 MPH, TEST WEIGHT 4064 POUNDS.		
POST IMPACT LEAKAGE (OZ); AT IMPACT		
1ST 5 MIN. O		
NEXT 25 MIN.		
POST TEST PRESSURE CHECK		
ELECTRIC FUEL PUMP RUN		
NO STATIC ROLL PERFORMED		
STATIC ROLL LEAKAGE WITH VEHICLE LEFT SIDE DOWN FIRST		
	1	
FUEL LEAKAGE LOCATIONS DURING STATIC KUME	l	-
ROLL ROLL	TOTAL	Ţ
	TOTAL	*
ROLL TIME 0-90 1ST 5 MIN		
ROLL TIME 0-90 1ST 5 MIN	0	*
ROLL TIME 0-90 1ST 5 MIN 154 POST 5 MIN	0	**
ROLL TIME 0-90 1ST 5 MIN 157 POST 5 MIN 90-180 1ST 5 MIN	0	* * *
ROLL TIME 0-90 1ST 5 MIN 154 POST 5 MIN 90-180 1ST 5 MIN POST 5 MIN	0 0 0	*
ROLL TIME 0-90 1ST 5 MIN 90-180 1ST 5 MIN 90-180 1ST 5 MIN 180-270 1ST 5 MIN 1:40 POST 5 MIN 1:40 POST 5 MIN 270-360 1ST 5 MIN	0 0 0	*
ROLL TIME 0-90 1ST 5 MIN 90-180 1ST 5 MIN 90-180 1ST 5 MIN 180-270 1ST 5 MIN 1:40 POST 5 MIN 1:40 POST 5 MIN 270-360 1ST 5 MIN	0 0 0 0 0	* * * * * * * * * * * * * * * * * * * *
ROLL TIME 0-90 1ST 5 MIN 90-180 1ST 5 MIN 90-180 1ST 5 MIN 180-270 1ST 5 MIN 1:40 POST 5 MIN	0 0 0 0 0	* * *
ROLL TIME 0-90 1ST 5 MIN	0 0 0 0 0	* * *
ROLL TIME	0 0 0 0 0	* * *

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

PAGE 01

SAFETY TEST VEHICLE CRASH TEST LETTER

VC06186 20 MPH LEFT LATERAL IMPACT, XJTL74, 4.0L ITEM XJ6356 1997 FMVSS 301 COMPLIANCE, FUEL SYSTEM INTEGRITY. TEST DATE 11/05/96

g NG LE RECLARIZATE CHEQGER COFFIC LABOR DID ATTITUT DI CEEF FILM

TEST PURPOSE

PRIMARY, 1997 USA 301 COMPLIANCE.

FUEL SYSTEM INTEGRITY.

IMPACT TYPE

TARGET SPEED; 20.2 MPH
DAMAGE LOCATION; LEFT CENTER BARRIER TYPE; LEFT TYPE IV

BARRIER SURFACE; PLYWOOD

VEHICLE

BODY CLASS; ΧJ CAR LINE; 74 BODY;

ENGINE;

4.0 LITRE ELECTRONIC FUEL INJECTION

ENGINE NOTE; TRANSMISSION;

TRANS. NOTE;

VIN AS TESTED; VIN AS BUILT;

1J4FT68S1VL 1J4FT68S1VL

5 SPEED MANUAL

MOD. MOD.

TEST SPEED

20.2 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS)

4064 TOTAL, 2060 FRONT, 2004 REAR

OCCUPANTS

LEFT FRONT, HYB II, UNINSTRUMENTED.

AD-76

RESTRAINT-UNIBELT ONLY.

RIGHT FRONT, HYB II, UNINSTRUMENTED.

AD-65

RESTRAINT-UNIBELT ONLY.

BUILD CONDITION

1997 XJ C1 4-DR, RWD, MAN. TRANS, 4.0L ENGINE.

4.0L ENGINE, MAN. TRANS, P/S, P/B, A/C.

P225/75R15 TIRES ON STEEL WHEELS & FULL SPARE.

FUEL SYSTEM PRODUCTION INTENT.

TARGET WEIGHT (LBS) 3433 TOTAL, 1834 FRONT, 1599 REAR REP MAX OPT WT NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

FUEL AND BALLAST

19 GALLONS OF STODARD SOLVENT.

300 LBS LUGGAGE BALLAST SECURED IN CARGO AREA.

100 LBS ON FRONT FLOORPAN.

Date pages 6
From THU MANNEY
Co.
Phone #
Fax •

PAGE 02

SAFETY TEST VEHICLE CRASH TEST LETTER

over official to find feature of Articlares of Living County Counter for the

VC06186 20 MPH LEFT LATERAL IMPACT, XJTL74, 4.0L ITEM XJ6356 1997 FMVSS 301 COMPLIANCE, FUEL SYSTEM INTEGRITY. TEST DATE 11/05/96

A = TRANSDUCER DATA
C = HIGH SPEED FILM
E = DUMMY KINEMATICS
B = ALL FILM DATA
D = ENGINEER'S REPORT
F = STEERING COLUMN REPORT CODES H = A - POSTG = UNDERBODY

I = DYNAMIC CRUSH J = ENGINE COMPARTMENT L = FORCE/CRUSH/ENERGY K = DOOR CRUSH N = CATALOG EDP DATA M = SPECIAL * = REPORT REQUESTOR

422-05-01 (AB) 422-05-01 (AB) D.J. MCKENZIE DISTRIBUTION

M.P. LEVINE

TIME 10.54.47. DATE 11/06/96

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

V.I.N. 1J4FT68S1VL TEST DATE 11/05 96 ROLL DATE 11/05/96
TEST TYPE; 20 MPH TYPE IV MOVING BARRIER LT. LATERAL IMPACT
FUEL; TYPE AND QUANITY767 S.G. STODDARD SOLVENT, 19.0 GALLONS
rest speed 20.2 MPH, TEST WEIGHT 4064 POUNDS.
POST IMPACT LEAKAGE(OZ); AT IMPACT 6
NEXT 25 MIN. O
NEXT 25 MIN.
POST TEST PRESSURE CHECK NA
ELECTRIC FUEL PUMP RUN
NO STATIC ROLL PERFORMED
STATIC ROLL LEAKAGE WITH VEHICLE LEFT SIDE DOWN FIRST
PURT, LEAKAGE LOCATIONS DURING STATIC ROLL
ROLL TIME
0-90 1ST 5 MÎN
1'51 POST 5 MIN
90-180 IST 5 MIN
1.49 POST 5 MIN
180-270 IST 5 MIN *
1:40 POST 5 MIN
270-360 1ST 5 MIN *
1047 POST 5 MIN
OUNCES IN 5 MINUTES, ** OUNCES PER MINUTE
POST TEST FUEL SYSTEM OBSERVATIONS
No fuel leaks during Static Roll.
LAST FORM MODIFICATION 08/22/96 - GAB (TESTOBS896, DOCVCFORMS)

VC06187 20 MPH RIGHT LATERAL IMP., XJTL74, 4.0L ITEM XJ6356R 1997 FMVSS 301 COMPLIANCE, FUEL SYSTEM INTEGRITY. TEST DATE 11/06/96

ngo ce nye suksti ffichéwsem commo uma

TEST PURPOSE

PRIMARY, 1997 USA 301 COMPLIANCE.

FUEL SYSTEM INTEGRITY.

IMPACT TYPE

20.2 MPH TARGET SPEED; DAMAGE LOCATION; RIGHT CENTER LEFT TYPE IV BARRIER TYPE;

BARRIER SURFACE; PLYWOOD

VEHICLE

BODY CLASS; ХJ CAR LINE; 74

BODY; 4.0 LITRE

ENGINE; ELECTRONIC FUEL INJECTION ENGINE NOTE;

5 SPEED MANUAL TRANSMISSION;

TRANS. NOTE;

VIN AS TESTED; VIN AS BUILT; 1J4FT68S1VL 1J4FT68S1VL MOD. MOD.

AD-76

TEST SPEED

20.2 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS)

4064 TOTAL, 2060 FRONT, 2004 REAR

LEFT FRONT, HYB II, UNINSTRUMENTED. OCCUPANTS

RESTRAINT-UNIBELT ONLY. RIGHT FRONT, HYB II, UNINSTRUMENTED. AD-65

RESTRAINT-UNIBELT ONLY.

BUILD CONDITION

1997 XJ C1 4-DR, RWD, MAN. TRANS, 4.0L ENGINE. 4.0L ENGINE, MAN. TRANS, P/S, P/B, A/C. P225/75R15 TIRES ON STEEL WHEELS & FULL SPARE.

FUEL SYSTEM PRODUCTION INTENT.

TARGET WEIGHT (LBS) 3433 TOTAL, 1834 FRONT, 1599 REAR REP MAX OPT WT NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

FUEL AND BALLAST

19 GALLONS OF STODARD SOLVENT.

300 LBS LUGGAGE BALLAST SECURED IN CARGO AREA.

100 LBS SANDBAGS ON FRONT FLOORPAN.

. . <u>. . .</u>

SAFETY TEST VEHICLE CRASH TEST LETTER

VC06187 20 MPH RIGHT LATERAL IMP., XJTL74, 4.0L 1TEM XJ6356R 1997 FMVSS 301 CCMPLIANCE, FUEL SYSTEM INTEGRITY. TEST DATE 11/06/96

NAC 25 OF LARGO THE HELICAN CHAIN LATE .

REPORT CODES

A = TRANSDUCER DATA

C = HIGH SPEED FILM

E = DUMMY KINEMATICS

G = UNDERBODY

I = DYNAMIC CRUSH

K = DOOR CRUSH

M = SPECIAL

* = REPORT REQUESTOR

B = ALL FILM DATA

D = ENGINEER'S REPORT

H = A-POST

J = ENGINE COMPARTMENT

L = FORCE/CRUSH/ENERGY

N = CATALOG EDP DATA

DISTRIBUTION D.J. MCKENZIE 422-05-01 (AB)
M.P. LEVINE 422-05-01 (AB)

DATE 11/06/96 TIME 10.57.56.

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

The state of the s

EST TYPE; 2					, <u>19.0</u> GALL	ONS
est speed _0	AN A MO	ੇ ਦੇ ਦੇ ਜ਼ਿਲ੍ਹਾ ਸ਼ਿਲ੍ਹਾ	rest We ight	4069 PO	UNDS.	
POST IMPACT						
POSI IMPACI	DMM4402 (5 MIN. 0			
		NEXT 2	()			
POST TEST P	oregipe (
ELECTRIC FU	TI DIMEN	DITIN /	IA			
·		PERFORME		SIDE DOWN	FIRST	
STATIC ROLL				ONS DURING S		1
		WIEL LEAK	AGE LOCALLO	JNS DURING -	THITO NOTE	TOTAL
ROLL		1 000 2012				
TIME	5 MIN					0
0-90 1ST						0
0-90 151	5 MIN					0
71ME 0-90 157 157 POS 90-180 157	S MIN					ļ <u> </u>
71ME 0-90 1ST 1054 POS 90-180 1ST	S MIN ST 5 MIN F 5 MIN ST 5 MIN					0
71ME 0-90 157 90-180 157 180-270 157	ST 5 MIN F 5 MIN F 5 MIN F 5 MIN F 5 MIN					0 0 0
71ME 0-90 157 90-180 157 90-180 157 180-270 157 1:40 PO	ST 5 MIN					0 0 0 0 0
71ME 0-90 157 90-180 157 180-270 157 1:40 PO 270-360 15	ST 5 MIN					0 0 0

VC06229 30 MPH BARRIER IMPACT XJUL74, 4.0L ITEM XJ6406 1997 MVSS 208, 212, 219, 301 COMPLIANCE TEST DATE 12/09/96

TEST PURPOSE

PRIMARY, 1997 USA 208 COMPLIANCE. PRIMARY, 1997 USA 212 COMPLIANCE PRIMARY, 1997 USA 219 COMPLIANCE

PRIMARY, 1997 USA 301 COMPLIANCE.

TARGET SPEED; 30 MP1
DAMAGE LOCATION; FRONT 30 MPH IMPACT TYPE

BARRIER TYPE; FLAT FIXED BARRIER SURFACE; PLYWOOD DIRECTION; 0 DEGREES

BODY CLASS; ХJ VEHICLE

TEST SPEED

CAR LINE; J 74 BODY;

4.0 LITRE ENGINE;

ENGINE NOTE; MPI

4 SPEED AUTO 4x4 TRANSMISSION;

TRANS. NOTE;

VIN AS TESTED; 1J4FN28S6VL MOD. MOD. 1J4FN28S6VL VIN AS BUILT;

30.3 MPH BY ELECTRONIC TRAP.

4300 TOTAL, 2189 FRONT, 2111 REAR TEST WEIGHT (LBS)

LEFT FRNT, CERT 50TH% HIII H&AROM 9-CH AD-93 OCCUPANTS

RESTRAINT-AIRBAG AND SEAT BELT RIGHT FRNT, CERT 50TH% HIII H&AROM 9-CH AD-95

RESTRAINT-AIRBAG AND SEAT BELT

1997 XJ, PVP, 4DR, AUTO TRANS, RHD 4.0L VEHICLE 4.0L ENGINE, AUTO TRANS, P/S, P/B, A/C, NON-TILT BUILD CONDITION

COLUMN.

P215/75R15 TIRES ON STEEL WHEELS.

TARGET WEIGHT (LBS) 3662 TOTAL, 1996 FRONT, 1666 REAR REP MAX OPT WT. FOR A 4.0L 4-DR 4X4 DOMESTIC RHD VEHICLE.

NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

VC06229 30 MPH BARRIER IMPACT XJUL74, 4.0L ITEM XJ6406 1997 MVSS 208, 212, 219, 301 COMPLIANCE TEST DATE 12/09/96

19.0 GALLONS STODDARD TOTAL. FUEL AND BALLAST 300 LBS LUGGAGE BALLAST SECURED IN CARGO AREA. 175 LBS OF BALLAST SECURED TO LR FLOORPAN.
75 LBS OF BALLAST SECURED TO RR FLOORPAN.
25 LBS OF BALLAST SECURED TO RR WHEELWELL. A = TRANSDUCER DATA C = HIGH SPEED FILM E = DUMMY KINEMATICS B = ALL FILM DATAREPORT CODES D = ENGINEER'S REPORT F = STEERING COLUMN H = A - POSTG = UNDERBODY I = DYNAMIC CRUSH J = ENGINE COMPARTMENT L = FORCE/CRUSH/ENERGY K = DOOR CRUSH M = SPECIAL M.P. LEVINE 514-17-41 (AB) DISTRIBUTION D.R. BAILEY 514-18-03 (AB) 422-05-01 (AB) M. STEBELTON

DATE 12/10/96 TIME 10.04.58.

OCCUPANT DATA

TEST NUMBER VC6229 ITEM NUMBER XJ6406 TEST ENGINEER COLLINGS	
occupant dimensions relative to xj template RHD	
TEMPLATE LOCATION DATA - **SHOULD BE SAME AS WHAT IS ON "J826" SHEET	: *
**"x" $6.c$ inches forward of striker mounting vertical surface 5.9	!
"Z" /2./ INCHES ABOVE SILL SURFACE /2.	2
OCCUPANT LOCATION DATA	1
LEFT FRONT RIGHT FRONT HYBRID III	-
X (INCHES) Z (INCHES) X (INCHES) Z (INCHES) PELVIC ANG FWD RWD UP DOWN FWD RWD UP DOWN LT RT	-
HEAD 0.0 1.4 Q4 1.2 23° 22°	
HIP 0.8 0.4 0.3 0.3	-
KNEE 0,9 0,2 0.2 /.2	
0,7 0,6	
LT RT	
KNEE CLEARANCE 1L $\frac{3.3}{111}$ $\frac{3.3}{39}$ 1)ON. 1	
1R 4.1 3.7	-
STEERING WHEEL ANGLE MEASURED FROM HORIZONTAL 62.1 DEGREES	
sill angle $\frac{1,4}{}$ degrees $ \overline{-} $ front high $ \overline{\chi} $ front low	
THE FOLLOWING DIMENSIONS CORRESPOND TO INTERIOR MEASUREMENTS DEFINED	
BY NHTSA; DRIVER - "NR" 5.8 TIP OF NOSE TO TOP REAR SURFACE OF UPPER	
"NH" 16.1 STEERING WHEEL RIM TIP OF NOSE TO CENTER OF STEERING WHEEL HUB	
"CH" 10.9 CHEST 9 INCHES DOWN FROM CHIN TO CENTER OF	
PASSENGER - "A" 21.3 STEERING WHEEL HUB BRIDGE OF NOSE FORWARD TO WINDSHIELD	,
"B" 24.6 EAR TARGET FORWARD TO WINDSHIELD	
"C" 20.3 CHEST 9 INCHES DOWN FROM CHIN FORWARD TO INSTRUMENT PANEL	
shoulder belt payout- Left 3.4 in. Right 3.5 in.	
LAP BELT PAYOUT- LEFT NA IN. RIGHT NA IN. LAST FORM MODIFICATION 08/22/96 - GAB (TESTOBS896, DOCVCFORMS)	

J826 MACHINE POSITIONING

TEST NUMBER VC6229, ITEM NUMBER XJ6406, TEST ENGINEER COLLINGS

CAR LINE XJ	DATE	MECHAN	IC(S) _	
TEMPLATE LOCATION DATA	FOR XJ	TEMP	LATE_	
"X" 6.0 INCHES	FORWARD OF STR	IKER MOUNTING	VERTICAL	SURFACE
"Z" /2 // INCHES ******CHECK OR FILL IN * DRIVER - SEAT DESCRIP			I ————————————————————————————————————	**************************************
	LOCATION	MID TRACK	OTH	IER #
* #DESCRIPTION OF "OTH * SEAT BACK ANGLE	7° DEGREES	MEASURED FROM (TYPICAL 18 TO 66 TO 72 SUB	24 DEGF	REES IF
* "OSCAR" DIMENSIONS AND * H-POINT "X"	- INCHEC POR	WARD OF TEMPLA	יים ם∩דאיז	סקי
0.	9	RWARD OF TEMPLA		
				NIER
* H-POINT "Z" /	2	VE TEMPLATE PO		
*		OW TEMPLATE PO		
* HIP ANGLE *	105° DEGREE	S, BACK ANGLE		25° DEGREES
* LEFT KNEE ANGLE *	128' DEGREE	S , RIGHT KNEE	ANGLE	124° DEGREES
**************************************	DESCRIPTION	BUCKET	1	V*************************************
	LOCATION	MID TRACK	OTH	HER #
* #DESCRIPTION OF "OTH * SEAT BACK ANGLE * CHECK IF NOT * DESIGN LOCATION	7, DEGREES	MEASURED FROM (TYPICAL 18 TO 66 TO 72 SUB	24 DEGF	REES IF
* "OSCAR" DIMENSIONS AND * H-POINT "X"	- T1101110 T0F	WARD OF TEMPLA	ייי די די די	רהס
* H-POINT "X"),8	RWARD OF TEMPLA		
*				VIEK
* H-POINT "Z" *	<i>i</i> /	VE TEMPLATE PO		
*		OW TEMPLATE PO		A DECEMBER
* HIP ANGLE *	102 DEGREE			24 O DEGREES
* LEFT KNEE ANGLE *	192° DEGREE	S, RIGHT KNEE	ANGLE	/24° DEGREES
**************************************	**************************************	**************************************	******* , MASTER,	**************************************

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

	BER VC6229,						
V.I.N. 13	J4FN28S6VL	TEST	r date <u>(2</u> / <u>0</u>	<u>9/96</u> , roll i	DATE <u>/2</u> //0/	76	
TEST TYPE	E; 30 MPH FF	RONT FLAT	FIXED BARRII	ER IMPACT			
FUEL; TY	PE AND QUANI	TY767	S.G. STODDA	ARD SOLVENT	, <u>19.0</u> GALI	LONS	
TEST SPE	ed <u>30.3</u> r	MPH,	rest weight	4300 POT	JNDS.		
POST IM	PACT LEAKAGE	E(OZ); AT	IMPACT O				
		1ST S	MIN.				
		NEXT 25	5 MIN				
POST TES	ST PRESSURE	CHECK 10	min- NO	lesks			_
ELECTRIC	ST PRESSURE	RUN	له الله الله الله	Laks			
NO	STATIC ROLI	PERFORME					_
STATIC F	ROLL LEAKAGE	WITH VEHI	ICLE Left	SIDE DOWN	FIRST		
	1		AGE LOCATION			1	
ROLL TIME						TOTAL	-
0-90	1ST 5 MIN					0	*
2:01	POST 5 MIN					0	**
90-180	1ST 5 MIN					0	*
2.03	POST 5 MIN					0	**
180-270	1ST 5 MIN					0	*
7.00	POST 5 MIN					D	**
270-360	1ST 5 MIN					0	*
2.03	POST 5 MIN					0	**
	IN 5 MINUTE			(3 4 1 1	1	<u> </u>	-
POST TEST	r BUEL SYSTE	M OBSERVAT	TIONS NO X	rel leaks	at impactor	Affer	mp het
No:	weller	Ks durin	, Static	Koll-			_
No to	1 laks	deving)	post imple	t testing		,	_
1.10	1 SV=	m - Jul	corite in	As mit	1the red	4	
LAST FOR	M MODIFICATI	ON 08/22/9	96 - GAB	(TESTOBS896	, DOCVCFORMS)	

WINDSHIELD AND HOOD DATA

TEST NUMBER VC6229 ITEM NUMBER XJ6406 TEST ENGINEER COLLINGS
AMBIENT TEMPERATURE AT TEST TIME DEG-F READY ROOM
WINDSHIELD RETENTION INFORMATION
RETENTION PERCENTAGE - <u>/00</u> % LEFT ++++++++ +++++++ LEFT + A-POS'
/ <u>////</u> % RIGHT + + + + + + + + + + + + + + + + + + +
RETENTION LOST, LOCATIONS AND LENGTHS SHOWN ON SKETCH
IN. FENCE/RETENTION MATERIAL
IN. GLASS/RETENTION MATERIAL WINDSHIELD INTRUSION INFORMATION
INTRUSION ZONE IDENTIFICATION;
NONE, LINE ONLY, 3-DIMENSIONAL STYROFOAM UPPER ZONE
LOWER ZONE INTRUSION - NO, YES
UPPER ZONE INTRUSION - X NO, YES
POST TEST OBSERVATIONS No Winkhield Zene intrusion.
No loss of windshield votentian.

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

VEHICLE ATTITUDE

TEST NUMBER VC6229

TEST ENGINEER COLLINGS

ITEM NUMBER XJ6406

TEST DATE /2/09/96

X FENDER/WHEELWELL HEIGHTS ____ SILL HEIGHTS

AS RECEIVED

AS BUILT-UP

AS TESTED

LF	LR	RF	RR
32.0	31.9	32.0	31.9
30.3	30.9	30.3	31.0
30.3	30.9	30,3	31.0

DATE 08/28/96 ELECTRONIC DATA PROCESSING VEHICLE CRASH ENGINEERING TIME 12.28.18. EDP TEST LETTER DEPT 5320

VC06062 ITEM XJ6205

VC06062 30 MPH TYPE IV REAR IMPACT, XJTL72, 4.0L ITEM XJ6205

1997 FMVSS 301, FUEL SYSTEM INTEGRITY.

TEST DATE 08/20/96

TEST PURPOSE

PRIMARY, 1997 USA 301 VALIDATION.

FUEL SYSTEM INTEGRITY.

TARGET SPEED; 30.1 MPH IMPACT TYPE

DAMAGE LOCATION; REAR

BARRIER TYPE; REAR TYPE IV BARRIER SURFACE; PLYWOOD

BODY CLASS; ХJ VEHICLE

CAR LINE; J 72 BODY;

ENGINE; 4.0 LITRE

ENGINE NOTE; ELECTRONIC FUEL INJECTION TRANSMISSION; 4 SPEED AUTO 4x4

TRANS. NOTE;

1J4FJ6759VL VIN AS TESTED; 1J4FJ6759VL VIN AS BUILT;

MOD. MOD.

TEST SPEED

31.0 MPH BY ELECTRONIC TRAP TIMER.

4010 TOTAL, 2343 FRONT, 1667 REAR TEST WEIGHT (LBS)

LEFT FRONT, HYB II, UNINSTRUMENTED. OCCUPANTS

RESTRAINT-UNIBELT ONLY.

RIGHT FRONT, HYB II, UNINSTRUMENTED.

RESTRAINT-UNIBELT ONLY.

1997 XJ PO 2-DR, 4X4, AUTO TRANS, 4.0L ENGINE. BUILD CONDITION

PRODUCTION INTENT 20 GALLON PLASTIC FUEL TANK.

4.0L ENGINE, AUTO TRANS., P/S, P/B, A/C. P225/75R15 TIRES ON STEEL WHEELS & FULL SPARE.

FUEL SYSTEM PRODUCTION INTENT.

TARGET WEIGHT (LBS) 3369 TOTAL, 1816 FRONT, 1553 REAR REP MAX OPT WT

NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

19 GALLONS OF STODARD SOLVENT. FUEL AND BALLAST

300 LBS LUGGAGE BALLAST SECURED IN CARGO AREA.

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

ING THE SUBSEQUENT THIRTY MINUTES. A POST-TEST

STATIC ROLLOVER WAS CONDUCTED WITHOUT FUEL

LEAKAGE. A POST-TEST PRESSURE CHECK WAS CONDUCTED

WITHOUT FUEL LEAKAGE.

DATE 08/28/96 ELECTRONIC DATA PROCESSING VEHICLE CRASH ENGINEERING TIME 12.28.18. EDP TEST LETTER DEPT 5320

VC06062 ITEM XJ6205 VC06062 30 MPH TYPE IV REAR IMPACT, XJTL72, 4.0L ITEM XJ6205 1997 FMVSS 301, FUEL SYSTEM INTEGRITY. TEST DATE 08/20/96

EDP TECHNICIAN S. MARCHENIA

No. of Pages 49

M. P. LEVINE 422-05-01 D. J. MCKENZIE 422-05-01

VC06146 30 MPH TYPE IV REAR IMPACT, XJJL74, 4.0L ITEM XJ6359 1997 FMVSS 301, FUEL SYSTEM INTEGRITY. TEST DATE 10/16/96

TEST PURPOSE

PRIMARY, 1997 USA 301 COMPLIANCE.

FUEL SYSTEM INTEGRITY.

IMPACT TYPE

TARGET SPEED;

30.1 MPH

DAMAGE LOCATION; REAR

BARRIER TYPE; REAR TYPE IV BARRIER SURFACE; PLYWOOD

VEHICLE

BODY CLASS;

ΧĴ

CAR LINE; BODY;

J 74

ENGINE;

4.0 LITRE

ENGINE NOTE;

ELECTRONIC FUEL INJECTION

TRANSMISSION;

5 SPEED MANUAL 4x4

TRANS. NOTE;

1J4FJ28S3VL 1J4FJ28S3VL

MOD. MOD.

VIN AS TESTED; VIN AS BUILT;

TEST WEIGHT (LBS)

30.1 MPH BY ELECTRONIC TRAP.

TEST SPEED

OCCUPANTS

4315 TOTAL, 2270 FRONT, 2045 REAR

LEFT FRONT, HYB II, UNINSTRUMENTED. RESTRAINT-UNIBELT ONLY.

RIGHT FRONT, HYB II, UNINSTRUMENTED.

AD-67 AD-65

RESTRAINT-UNIBELT ONLY.

BUILD CONDITION

1997 XJ C1 4-DR, 4X4, MAN. TRANS, 4.0L ENGINE.

FACTORY TRAILER HITCH INSTALLED.

4.0L ENGINE, MAN. TRANS, P/S, P/B, A/C. P225/75R15 TIRES ON STEEL WHEELS & FULL SPARE.

FUEL SYSTEM PRODUCTION INTENT.

TARGET WEIGHT (LBS) 3677 TOTAL, 2006 FRONT, 1671 REAR REP MAX OPT WT NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

FUEL AND BALLAST

19.0 GALLONS OF STODARD SOLVENT.

300 LBS OF LUGGAGE BALLAST SECURED IN REAR

SEATING AREA. 125 LBS OF BALLAST SECURED IN REAR SEATING AREA.

(425 LBS TOTAL BALLAST.)

VC06146 30 MPH TYPE IV REAR IMPACT, XJJL74, 4.0L ITEM XJ6359 1997 FMVSS 301, FUEL SYSTEM INTEGRITY. TEST DATE 10/16/96

REPORT CODES

A = TRANSDUCER DATA

C = HIGH SPEED FILM

E = DUMMY KINEMATICS

G = UNDERBODY

I = DYNAMIC CRUSH

K = DOOR CRUSH

M = SPECIAL

* = REPORT REQUESTOR

B = ALL FILM DATA

D = ENGINEER'S REPORT

F = STEERING COLUMN

J = ENGINE COMPARTMENT

L = FORCE/CRUSH/ENERGY

N = CATALOG EDP DATA

DISTRIBUTION D.J. MCKENZIE 422-05-01 (AB) M.P. LEVINE 422-05-01 (AB)

DATE 10/17/96 TIME 08.50.55.

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

	BER VC6146,							
V.I.N. 13	14FJ28S3VL	TEST	DATE /0 / /6	<u>/96</u> , R	OLL DATE	<u> </u>	<u>16</u>	
TEST TYPE	E; 30 MPH TY	PE IV MOVI	NG BARRIER	REAR I	MPACT			
FUEL; TYP	E AND QUANT	TY767	S.G. STODDA	ARD SOL	VENT, <u>19.</u>	O GALLO	NS	
TEST SPEE	30.1 M	MPH,	TEST WEIGHT	43/5	POUNDS.			
POST IME	PACT LEAKAGE	E(OZ); AT 1	IMPACT O					
		1ST 5	5 MIN					
		NEXT 25	MIN					
POST TES	ST PRESSURE	CHECK						_
ELECTRIC	FUEL PUMP	RUN						_
NO	STATIC ROLL	PERFORME	/ 11					
STATIC I	ROLL LEAKAGE	E WITH VEH	ICLE Lett	SIDE	DOWN FIRS	T		
			AGE LOCATION				TOTAL	Г
ROLL TIME								
0-90	1ST 5 MIN						<i>Q</i> .	*
1:54	POST 5 MIN						<i>Q</i>	**
90-180	1ST 5 MIN						0	*
1:46	POST 5 MIN						<i>P</i>	**
180-270	1ST 5 MIN						0,	*
1:38	POST 5 MIN						D.	**
270-360	1ST 5 MIN						Ø,	*
1:36	POST 5 MIN	ļ					1	*
	IN 5 MINUT		11.	UTE	Lake	11:	1	,
POST TES	T FUEL SYST	EM OBSERVA	TIONS <u>///</u>	TVY	1EALS	AT IN	1 <i>7</i> 42.[*	
-11 :	P 1 1	· L /		+	100//			
NO	Nel 10	T do	MINS SIA	-110	CATA ALC	1		
Fuel	<u> System</u>	-LAHBY	VITE WAS	,	LATHINE			
LAST FOR	M MODIFICAT	ION 08/22/	96 - GAB	(TESTO	35896,DOC	VCFORMS)	

Unique to Despoin in a

COMPLIANCE REPORT

FUEL SYSTEM INTEGRITY - 1995 'XJ' BODY, TRED "CHEROREE" SPORT

STANDARD IDENTIFICATION:

PMYBS 301 : Sactions 51., 55., 56. count 57.

STANDARD TITLE:

Puel System Intermity

APPROVALS:

NAME

stanature

BAA ZYLIK, Burner VI sor

P.F. BURER, Exer of two Briginser

Date Received by Esteny Programmer AUG 1 9 1954

Ideas of the en

EA12-005- Chrysler -006559

safety odeumentation dempidance Report

INTRODUCTION

Subject:

Firel System Integrity - 1995 'XJ' Body, Jeep "Cherokee" Sport

Utility

Objective:

Verification of design compliance with the requirements of

Federal Motor Vehicle Safety Standard No. 361.

Procedure:

CP-194, CP-232, CP-233, CP-234, CP-245 and CF 246.

Conclusions:

All Chrysler Corporation 1995 'Ad' Sport Stilley with 5.V.4.N of 10,000 lbs and under, as design released, comply with the requarements of FMVSS 301 Sections 83., 55., 56. and 57.

SAPETY DOCUMENTATION COMPLIANCE REPORT (Page 1 of 4)

Prepared by:

Collings and Lightly or

* 1 1

never event by

E A ZVIEW SUBSTITUTE

7

Insued by: Seop/Truck, Vehicle Passer beverapment

21.10 颗点 95-33-308

Safety Documentation Compliance Report

FUEL SYSTEM INTEGRITY
1995 'XJ' BODY, JEEP "CHEROKEE" SPORT UTILITY

Federal Motor Vahicle Safety Standard No. 301 - Sections 53., 85., \$6. and \$7.

DISCUSSION

The Chrysler Corporation 1995 'XJ' Body, Jeep "Cherokee," Sport Utility vehicles, 2 and 4-door model, 2 and 4 wheel drive, are essentially carryover from the 1994 model year. The XJ is also offered in right hand drive (RMD) configuration. However, there is a new fuel tank sending unit locking ring for 1995. Therefore, testing was conducted to confirm compliance to FMVSS 301

This vehicle is offered with two power plants. The 2.5 litre (I4) MPI engine is available with either 3-speed automatic or 5-speed manual transmission. The 4.0 litre (I6) MFI engine is available with either 4-speed overdrive automatic or 5-speed manual transmission. The vehicle is also offered with Anti-Lock Brake System (ABS) for the 4.0 litre only as an optional feature.

The "XJ" is of imibody construction, offered in 101 inch wheelbase.

The front bumper system consists of a steel beam with optional bumper guards and nerf strip.

All "XJ" vehicles are offered with a compact space tire or a conventional space option.

Vehicles capacity including seating for five passengers, 300 lbs. of luggage and 28 gallons of fuel.

The fuel system consists of a 20 gallon rear mounted steel tank. The filler neck is located on the left side of the vehicle. Vehicle is equipped with a standard plastic stone shield or an optional skid place.

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

Four vehicles were tested to demonstrate compliance of the 'XJ' to the requirements of PAWSS 301. Fuel System Integrity. These vehicles and test results are shown on the attached summary.

Pile Net . Ditt

Battery Decementation Compliance Report

DISCUSSION (cont to)

Tour were conducted according to the following test procedure:

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

CP-194 "Fixed Collision Barrier 30 mph Frontal Impact Test." Change

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

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

EP 246 "Fuel System Integrity," Change 'G'.

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

"Fire! System Integrity-Static Rollover Test," Change 'F'

hased on the move, the 1395 'XJ' Body, Jeep "Cherokee" Sport Utility vehicles, as design released, <u>DID MERT</u> the performance requirements of FMVSS 301 - Sections 51., 55., 56. and S7.

Prepared by: C.C. Corneau

Date: 3-(1.74

EA12-005- Chrysler -006562

EFERMAN STEPANS

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OF TO VENERAL HELDER

SUMMARY I

FUEL SYSTEM INTEGRITY 1995 'XJ'-BODY, JEEP "CFILOREE" SPURT LTILITY

PERM					Leak	age Summary	(50)
Test No.	Minact Hide	Vehicle Model	Vehicle Identification No.	AI Impact	Following	Max. in Rollover F	a Any
Versioner Tappassuser	- variet	Jeep "Cherokee" Sport Deility, 4-Wheel Brive. Auto Trans., Power Steering (tilt) 9.01 litre MP1 Engine, air conditioning.	CHARGEBERSE	-0-	ψÜ.s	÷ 0 -	-0-
VCスGGニ 情が女才がある。	Soar	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Auto Frans., Power Steering (tilt) 4.0L litre MPI Engine, eir conditioning.	13451785681	0	-0-	-0-	-0:
10/3/24)	ingle	Jeep "Cherokee" Sport Brility, 4-Wheel Drive, Auto Frans., Power Steering (tilt) 4.0L litre MPI Engine, air conditioning.	1J4FJ78S5SI	- ů -	- G =	-0-	-0-
1655-7561	Flat Front	Geep "Cherokee" Sport Stility, 4-Wheel Drive, Auto Trans., Power Steering (tilt) 4.05 litre MPI Engine, air conditioning.	1J4FJ78S6SI	-0-	-0 =	-0-	- <u>U</u> -

Allowable Beakage by Weight

1. One 102 1 at impact.

2. Will about the control of the following 30 minutes.

3. Why was a few first 8 minutes after each 90° rotation and not more than one (Oz.) per minute thereafter.

Prepared by:	A A america
	C.C. Corneau
Dates	

FUEL SYSTEM INTEGRITY 1995 KJI-BODY, JEEP "GPENDAGE" DEUNT CTILITY

				-	Lea	kage S
Test do.	Impact Mode	Wehicle Model & Description	Vehicle Identification No.	At Impact	Following 30 Minutes	Ro
VC5208 (7782/94)	Plat Front	Jeep "Cherokee" Sport D: Pity 4-Wheel Drive, Auto Frans Power Steering (tife) 4.0L litre MPI Engine, all conditioning.	13453685851	-3:	-0-	-0
VC5211 (8/2/94)	Rear	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Auto Trans., Fower Steering (tilt) 4.UL litra MPI Engine, air conditioning.	1.14 PJ7856SI	-0-	•9+	-0
VC5212 (8/4/94)	Right Angle	Jeep "Cherokee" Sport Utility, 4 Wheel Drive, Auto Trans., Power Steering (tilt) 4.0L litre MPI Engine, air conditioning.	IJ4FJ78SESL	- O =	~(O=	-0
VC5214 (8/5/94)	Flat	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Auto Trans., Power Steering (tilt) 4.0L litre MPI Engine, air conditioning.	1.1470785651	0	0	- 0

Allowable Leakage by Weight

- 1. One (Oz.) at impact.
- 2: Not more than one (Oz.) per minute following 30 minutes.
- St give (Q2.) for first 5 minutes after each 90° rotation and not more than one (Oz.) per minute t

	Fre	pare	ed i	y:	1
-			- rdo sa		
	1	30	Dai		
	9.7	24.54			

Change Im

Sport Writing vehicles Wif PMyss 1012 Sections

SAFETY TEST VEHICLE CRASH TEST LETTER

VC05211 30 NPH REAR IMPACT, XJJL74, 4.0L ITEM XJ6864 1995 MVSS 301 COMPLIANCE. TEST DATE 08/02/94

TEST PURPOSE

PRIMARY, 1995 MVSS 301 COMPLIANCE.

1995 COMPLIANCE - FUEL SYSTEM INTEGRITY.

IMPACT TYPE

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

VEHICLE

BODY CLASS: XJ CAR LINE; J BODY; 74

ENGINE: 4.0 LITRE

ENGINE NOTE;

MPI TRANSMISSION; 4 SPEED AUTO 4X4

TRANS. NOTE;

VIN AS TESTED; 1J4FJ78S6SL VIN AS BUILT; 1J4FJ78S6SL

MOD. MOD.

TELT SFEED

30.4 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS) 4273 TOTAL, 1924 FRONT, 2349 REAR.

OCCUPANTS

LEFT FRONT, BALLAST DUMMY, UNINSTRUMNTD. AD-52 RESTRAINT-AIR BAG AND 3-POINT SEAT BELT (ACTIVE) . RIGHT FRONT, BALLAST DUMMY, UNINSTRUNTD. AD-57 RESTRAINT-3-POINT SEAT BELT (ACTIVE).

BUILD CONDITION

1995 PRODUCTION CHEROKEE SPORT (D5XJ-6864). 1995 PRODUCTION FUEL SYSTEM WHICH INCLUDES NEW FUEL SENDING UNIT LOCKING RING.

4.0L ENGINE, AUTO TRANS., P/S, P/B, A/C.

TARGET WEIGHT (LBS) 3627 TOTAL, 2001 FRONT, 1626 REAR REP MAX OFT. WT NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

FUEL AND BALLAST

19 GALLONS TOTAL STODDARD.

100

300 LBS OF LUGGAGE BALLAST SECURED IN CARGO AREA

170 LBS SECURED TO REAR FLOOR PAN.

SAFETY TEST VEHICLE CRASH TEST LETTER

VC09211 30 MPH REAR INPACT, KJJL74, 4.0L ITEM KJ6864 1995 MVSS 301 COMPLIANCE. TEST DATE 08/02/94

POST TEST REMARKS

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

STATIC ROLLOVER.

NOTE: THE LIFTGATE WAS LATCHED BUT NOT LOCKED.

REPORT CODES

A = TRANSDUCER DATA C = HIGH SPEED FILM

B = ALL FILM DATA D = ENGINEER'S REPORT F = STEERING COLUMN

E = DUMMY KINEMATICS G = UNDERBODY

H = A-POSTJ = ENGINE COMPARTMENT I = DYNAMIC CRUSH K = DOOR CRUSH L = FORCE/CRUSH/ENERGY

M = SPECIAL

DISTRIBUTION

W.A. BREITMOSER C.C. CORNEAU D.T. MCKENZIE

422-05-01 (AB) 514-15-58 (AB) 422-05-01 (AB)

DATE 08/03/94

TIME 15.09.45.

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

heste wind	BER VC5211, I	TRM NUMBER	XJ6854,	TEST ENGINE	ER WEIGEL	
.I.M. 1	MFJ7886L5	TEST I	DATE 8/	2/94 ROLL	DATE \$/2/	99
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	so 302 4 mp			L. C. San Control Comp.		
					4110.0	
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LIST FORM MODIFICATION 5/27/93 - GAB

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STE# 419 (10/3) Chrysler Corporation

Chrysler Corporation

COMPLIANCE REPORT

SUBJECT:	FUEL SYSTEM IN UTILITY	TEGRITY - 1996 'XJ' BO	DY, JEEP "CHEROKEE" SPOR	T
STANDARD IDENTIFI	CATION:	FMVSS 301 - Section	ons S3., S5., S6. and S7	7.
STANDARD TITLE:		Fuel System Integ	rity	
APPROVALS: NAME Title		Signature	Date	
E.A. Zylik, Mana	ger .	C.a. Jylk	<u>6-27-</u>	<u>9</u> 5
D.F. BUSER, Execu	tive Engineer	D & Buses	6/27/	<u>9</u> 5
Date Received by	Safety Program	s: JUN 2 9 19	95	

File No: 96-XJ-301 EA12-005- Chrysler -006568

INTRODUCTION

Subject:

Fuel System Integrity - 1996 'XJ' Body, Jeep "Cherokee" Sport

Utility

Objective:

Verification of design compliance with the requirements of

Federal Motor Vehicle Safety Standard No. 301.

Procedure:

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

Conclusions:

All Chrysler Corporation 1996 'XJ' Sport Utility with G.V.W.R. of 10,000 lbs and under, as design released, comply with the requirements of FMVSS 301 - Sections S3., S5., S6. and S7.

SAFETY DOCUMENTATION COMPLIANCE REPORT (Page 1 of 4)

Issued by: Jeep Vehicle Impact Development

FUEL SYSTEM INTEGRITY 1996 'XJ' BODY, JEEP "CHEROKEE" SPORT UTILITY

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

DISCUSSION

The Chrysler Corporation 1996 'XJ' Body, Jeep "Cherokee," Sport Utility vehicles, 2 and 4-door model, 2 and 4-wheel drive, are essentially carryover from the 1995 model year. The XJ is also offered in right hand drive (RHD) configuration. This report contains the proper documentation for the testing of the 1995 fuel tank sending unit locking ring to confirm compliance to FMVSS 301.

This vehicle is offered with two engines. The 2.5 litre (I4) MPI engine is available with either 3-speed automatic or 5-speed manual transmission. The 4.0 litre (I6) MPI engine is available with either 4-speed overdrive automatic or 5-speed manual transmission. The vehicle is also offered with Anti-Lock Brake System (ABS) for the 4.0 litre only as an optional feature.

The "XJ" is of unibody construction, offered in 101 inch wheelbase.

The front bumper system consists of a steel beam with optional bumper guards and nerf strip.

All "XJ" vehicles are offered with a compact spare tire or a conventional spare option.

Vehicles capacity including seating for five passengers, 300 lbs. of luggage and 20 gallons of fuel.

The fuel system consists of a 20 gallon rear mounted steel tank. The filler neck is located on the left side of the vehicle. Vehicle is equipped with a standard plastic stone shield or an optional skid plate.

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

Four vehicles were tested to demonstrate compliance of the 'XJ' to the requirements of FMVSS 301, Fuel System Integrity. These vehicles and test results are shown on the attached summary.

EA12-005- Chrysler -006570

File No: 96-XJ-301

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'						=		

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

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 1996 'XJ' Body, Jeep "Cherokee" Sport Utility vehicles, as design released, <u>DID MEET</u> the performance requirements of FMVSS 301 - Sections S3., S5., S6. and S7.

Prepared by:

J.B. Estes

Date:

EA12-005- Chrysler -006571

File No: 96-XJ-301

SUMMARY I FUEL SYSTEM INTEGRITY 1996 'XJ'-BODY, JEEP "CHEROKEE" SPORT UTILITY

					Leak	age Summary	(Oz)
Test No. (Date)	Impact Mode	Vehicle Model & Description	Vehicle Identification No.	At Impact	Following 30 Minutes	Max. i Rollover (Oz.)	
VC5206 (7/22/94)	Flat Front .	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Auto Trans., Power Steering (tilt) 4.0L litre MPI Engine, air conditioning.	1J4FJ6858SL	÷0-	·- 0 -	-0-	-0-
VC5211 (8/2/94)	Rear	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Auto Trans., Power Steering (tilt) 4.0L litre MPI Engine, air conditioning.	1J4FJ7856SL	-0-	-0-	- O-	-0-
VC5212 (8/4/94)	Right Angle	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Auto Trans., Power Steering (tilt) 4.0L litre MPI Engine, air conditioning.	1.J4FJ78S5SL	-0-	- 0 -	- Q =	-0-
VC5214 (8/5/94)	Flat Front	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Auto Trans., Power Steering (tilt) 4.0L litre MPI Engine, air conditioning.	1J4FJ78S6SL	-0-	- 0 =	- 0 -	- 0 -

Allowable Leakage by Weight

1. One (Oz.) at impact.

2. Not more than one (Oz.) per minute following 30 minutes.

3. Five (Oz.) for first 5 minutes after each 90° rotation and not more than one (Oz.) per minute thereafter.

Prepared by:

SAFETY TEST VEHICLE CRASH TEST LETTER

VC05211 30 MPH REAR IMPACT, XJJL74, 4.0L ITEM XJ6864 1995 MVSS 301 COMPLIANCE. TEST DATE 08/02/94

TEST PURPOSE PRIMARY, 1995 MVSS 301 COMPLIANCE.

1995 COMPLIANCE - FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED; 30.2 MPH DAMAGE LOCATION; RIGHT REAR

IMPACT TYPE; BARRIER BARRIER SURFACE; PLYWOOD

DIRECTION; 0 DEGREES

BODY CLASS; XJ VEHICLE

CAR LINE; J 74 BODY;

4.0 LITRE ENGINE;

ENGINE NOTE; MPI TRANSMISSION; 4 SE 4 SPEED AUTO 4X4

TRANS. NOTE:

VIN AS TESTED; 1J4FJ78S6SL VIN AS BUILT; 1J4FJ78S6SL MOD. VIN AS BUILT; MOD.

TEST SPEED 30.4 MPH BY ELECTRONIC TRAP TIMER.

TEST WEIGHT (LBS) 4273 TOTAL, 1924 FRONT, 2349 REAR.

LEFT FRONT, BALLAST DUMMY, UNINSTRUMNTD. AD-52 OCCUPANTS

RESTRAINT-AIR BAG AND 3-POINT SEAT BELT (ACTIVE).

RIGHT FRONT, BALLAST DUMMY, UNINSTRANTD. AD-67

RESTRAINT-3-POINT SEAT BELT (ACTIVE).

1995 PRODUCTION CHEROKEE SPORT (D5XJ-6864). BUILD CONDITION

1995 PRODUCTION FUEL SYSTEM WHICH INCLUDES NEW

FUEL SENDING UNIT LOCKING RING.

4.0L ENGINE, AUTO TRANS., P/S, P/B, A/C.

TARGET WEIGHT (LBS) 3627 TOTAL, 2001 FRONT, 1626 REAR REP MAX OPT. WT.

NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

FUEL AND BALLAST 19 GALLONS TOTAL STODDARD.

300 LBS OF LUGGAGE BALLAST SECURED IN CARGO AREA.

170 LBS SECURED TO REAR FLOOR PAN.

SAFETY TEST VEHICLE CRASH TEST LETTER

VC05211 30 MPH REAR IMPACT, XJJL74, 4.0L ITEM XJ6864 1995 MVSS 301 COMPLIANCE. TEST DATE 08/02/94

POST TEST REMARKS

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

NOTE: THE LIFTGATE WAS LATCHED BUT NOT LOCKED.

REPORT CODES

DISTRIBUTION

A = TRANSDUCER 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

W.A. BREITMOSER C.C. CORNEAU D.T. MCKENZIE 422-05-01 (AB) 514-15-58 (AB) 422-05-01 (AB)

> DATE 08/03/94 TIME 15.09.45.

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUM	BER VC5211,	ITEM NUMBE	ER XJ6864,	rest engine	ER WEIGEL		
TEST NUMBER VC5211, ITEM NUMBER XJ6864, TEST ENGINEER WEIGEL V.I.N. 1J4FJ78S6L TEST DATE 8/2/94 ROLL DATE 8/2/94							
TEST TYPE; 30 MPH FRONT FLAT FIXED BARRIER IMPACT							
				ARD SOLVENT	. 19.0 GALL	ONS	
				<u>4273</u> pot		J.1.5	
				7,220 100	JADS.		
POST TES	r fuel systi	M OBSERVAT	LIONS				_
·		 					_
		· · · · · · · · · · · · · · · · · · ·	·				
		· ·					_
			 _				
POST IM	PACT LEAKAGI	E(OZ); AT	IMPACT)			
		NEXT 2	o min.				
POST TE	ST PRESSURE	CHECK	NIA				
	C FUEL PUMP				· · · ·		
STATIC 1	ROLL LEAKAGE	WITH VEH	ICLE LEFE	SIDE DOWN	FIRST		
	٠.			NS DURING S	1 .2	1 .	
ROLL						TOTAL	ſ
0-90	1ST 5 MIN					0	*
248	POST 5 MIN					0	**
	1ST 5 MIN			<u> </u>		0	*
01111	POST 5 MIN					0	**
	1ST 5 MIN					 	*
1	i i					0	ļ.,
2:05	POST 5 MIN					0	
270-360	IST 5 MIN					.0	*
2:06	POST 5 MIN					0	**
* OUNCES	IN 5 MINUTE	ES, ** OUNG	CES PER MIN	UTE			-

LAST FORM MODIFICATION 5/27/93 - GAB



Chrysler Motors Corporation

COMPLIANCE REPORT AMENDED 8-17-96

SUBJECT:

Fuel System Integrity - Multipurpose Passenger Vehicles - 1996 "XJ" Body (Amended for reintroduction of a fuel rail mounted pressure regulator for 2.5L engine equipped vehicles only.)

STANDARD:

FMVSS 301 - Sections S3., S5., S6., and S7.

CMVSS 301 - Sections S2., S3., S4., S5., S6., S7. and S8.

STANDARD TITLE: Fuel System Integrity

APPROVALS:

NAME

Title

Signature

Date

E.A Zylik , Manager

9-23-96

9-24-94

Date received by Safety and Security ______ JAN 1 5 1997

EA12-005- Chrysler -006576

File No: XJ-96-301

INTRODUCTION

Subject: Fuel System Integrity - Multipurpose Passenger Vehicles - 1996 "XJ' Body

(Amended for reintroduction of a fuel rail mounted pressure regulator for 2.5L

engine vehicles only)

Object: Verification of design compliance with the requirements of Motor Vehicle

Safety Standard No. 301.

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

Conclusions: The 1996 "XJ" Sport Utility with a 2.5L engine and a returnless fuel system

which includes a fuel rail mounted pressure regulator complies with the

requirements of MVSS 301.

<u>Discussions:</u> The fuel system for the 1996 "XJ" body Sport Utility vehicle was essentially

carryover from the 1995 model with the exception that the 1996 system was of a returnless design that did not require nor include a fuel rail mounted pressure regulator. A fuel rail mounted pressure regulator is reintroduced to improve driveability for late production model year 1996 vehicles and as a service part for 1996 model year "XJ" body vehicles equipped with 2.5L engines. The location and design of the reintroduced fuel rail with attached

pressure regulator is similar to that of the 1995 model year "XJ" vehicle.

Based upon the above, the compliance documentation utilized for the 1995 and 1996 model year vehicle as design released are also valid to ensure compliance of the 1996 vehicle with the addition of the fuel rail mounted

pressure regulator.

SAFETY DOCUMENTATION COMPLIANCE REPORT

File No: XJ-96-301

Safety Documentation Compliance Report

Prepared by:

An Okunj

5-16-96

Date

Issued by: Jeep Impact Engineering, Dept. 1060



Chrysler Mators Corporation

COMPLIANCE REPORT

SUBJECT:	FUEL SYSTEM INTEG	Xי 1997 - RITY	J' BODY, JEEP	"CHEROKEE" SPORT
STANDARD IDENTIFIC	CATION:	FMVSS 301 -	Sections S3.,	S5., S6. and S7.
STANDARD TITLE:		Fuel System	Integrity	
APPROVALS:	`			
NT 1 4 77	-1.5			
NAME	Title		Signature	Date
E.A. Zylik, Manage		e.C.	Julk	
	er	e.C.	Sylk Busin	
E.A. Zylik , Manage	er	e.C.	Julk	

FEA 62-005: CH975H6X-J008507D

INTRODUCTION

<u>Subject</u>: Fuel System Integrity - 1997 'XJ' Body, Jeep "Cherokee" Sport

Utility

Objective: Verification of design compliance with the requirements of

Federal Motor Vehicle Safety Standard No. 301.

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

<u>Conclusions</u>: All Chrysler Corporation 1997 'XJ' Sport Utility with G.V.W.R.

of 10,000 lbs and under, as design released, comply with the requirements of FMVSS 301 - Sections S3., S5., S6. and S7.

SAFETY DOCUMENTATION COMPLIANCE REPORT (Page 1 of 4)

Prepared by: M. P. Levine Pent 1060 Pate

M.P. Levine, Dept. 1060 Date

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

Issued by: Jeep/Truck, Vehicle Impact Development

FUEL SYSTEM INTEGRITY 1997 'XJ' BODY, JEEP "CHEROKEE" SPORT UTILITY

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

DISCUSSION

The Chrysler Corporation 1997 'XJ' Body, Jeep "Cherokee", Sport Utility vehicles, 2 and 4-door model, 2 and 4-wheel drive, are essentially carryover from the 1996 model year. However, there is a new 20 gallon plastic fuel tank for 1997. Therefore, testing was conducted to confirm compliance to FMVSS 301

This vehicle is offered with two engines, a 2.5L inline 4 cylinder and a 4.0L inline 6 cylinder engine. The 2.5 litre (I4) MPI engine is available with a 5-speed manual transmission. The 4.0 litre (I6) MPI engine is available with either 4-speed overdrive automatic or 5-speed manual transmission. The vehicle is also offered with Anti-Lock Brake System (ABS) for the 4.0 litre only as an optional feature.

The "XJ" is of unibody construction, offered in 101 inch wheelbase.

The front bumper system consists of a steel beam with foam filled bumperettes.

All "XJ" vehicles are offered with a compact spare tire or a conventional spare option.

The vehicle's capacity includes seating for five passengers, 300 lbs. of luggage and 20 gallons of fuel.

The fuel system consists of a 20 gallon rear mounted plastic tank. The filler neck is located on the left side of the vehicle. Vehicle can be equipped with an optional skid plate.

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

Five vehicles were tested to demonstrate compliance of the 'XJ' to the requirements of FMVSS 301, Fuel System Integrity. These vehicles and test results are shown on the attached summary.

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

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

The test vehicles, 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 1997 'XJ' Body, Jeep "Cherokee" Sport Utility vehicles, as design released, <u>DID MEET</u> the performance requirements of FMVSS 301 - Sections S3., S5., S6. and S7.

Prepared by:

M D Levine

Date: 11/8/92

EA12-005- Chrysler -006582

File No: 97-XJ-301

SUMMARY I

FUEL SYSTEM INTEGRITY 1997 'XJ'-BODY, JEEP "CHEROKEE" SPORT UTILITY

				_	Leak	age Summary	(Oz)
						Max.	in Any
Test No.	Impact	Vehicle Model	Vehicle	At	Following	Rollover	Position
(Date)	Mode	& Description	Identification No.	Impact	30 Minutes	(Oz.)	(Oz./Min.)
VC 6062 (08/19/96)	Rear	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Man. Trans., Power Steering 4.0L litre MPI Engine, Air Conditioning.	1J4Fj6759vl	-0-	-0-	-0-	-0-
VC 6148 (10/15/96)	Flat Front	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Man. Trans., Power Steering 2.5L litre MPI Engine, Air Conditioning.	1J4FJ27PXVL	-0-	-0-	-0-	-0-
VC 6144 (10/15/96)	Flat Front	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Man. Trans., Power Steering 4.0L litre MPI Engine, Air Conditioning.	1J4FJ68S0VL	-0-	-0-	-0-	-0-
VC 6146 (10/16/96) EA12-005- Chrys	Rear	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Manual Trans., Power Steering 4.0L litre MPI Engine, Air Conditioning, Factory Trailer Hitch.	1 J4FJ28 S3VL	-0-	-0-	-0-	-0-
VC (11/16/96)	Right Angle	Jeep "Cherokee" Sport Utility, 2-Wheel Drive, Man. Trans., Power Steering 2.5L litre MPI Engine, Air Conditioning.	1J4FT27P2VL	-0-	-0-	-0-	-0-

File No: 97-XJ-301

Allowable Leakage by Weight

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

Prepared by:

M.P. Levine

Date: 11/8/96

File No: 97~XJ-301



Proceed on Percented Prepar

Chrysler Corporation

14250 Plymouth Road Detroit MI 48227-3086

COMPLIANCE REPORT AMENDED 1/15/97

SUBJECT: Fuel System Integrity - 1997 "XJ" Body (Amended for the domestic reintroduction of a 4-door right-hand-drive special purpose Cherokee (Rural Letter Carrier) equipped with either 2 or 4 wheel drive and a 4.0L engine with a 4-speed automatic transmission.)

		·	
STANDARD:	FMVSS 301		
STANDARD TIT	Fuel System Integrity		
APPROVALS:			
ВМАИ	Title	Signature	Date
E.A Zylik	, Manager	e.a. zylk	3-11-97
D. Buser	, Executive Engineer	D. Busin	3/11/97
Date received	d by Safety and Security _	EA12-005	5- Chrysler -006585

File No: XJ-97-301

INTRODUCTION

Subject:

Fuel System Integrity - 1997 'XJ' Body (Amended for the domestic reintroduction of a 4-door right-hand-drive special purpose Cherokee (Rural Letter Carrier) equipped with either 2 or 4 wheel drive and a 4.0L engine with a 4-speed automatic transmission.)

Object:

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

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

<u>Conclusions:</u> The Chrysler Corporation 1997 Right-Hand-Drive Special Purpose (Rural Letter Carrier) 'XJ' Body Sport Utility with a 4.0L engine, automatic transmission, 4 doors and either 2 or 4 wheel drive, as design released, complies with the performance requirements of MVSS 301 Sections S3., S5., S6. and S7.

Discussions:

The 1997 MY Right Hand Drive 'XJ' is essentially the same as the 1997 Left-Hand-Drive 'XJ' and the fuel system is essentially the same in both models. The 1997 MY 'XJ' is also essentially a carryover from the 1996 model year. There are noted the following changes:

A new instrument panel design that contains a new electronically operated driver and passenger airbag (replacing the mechanical driver side-only airbag system)and updated kneeblockers on the driver and passenger sides.

A new energy absorbing steering column (shear capsule design non-tilt column and torsion bar design tilt column).

A new 20 gallon plastic fuel tank - rear mounted.

Safety Documentation Compliance Report

Adjustable upper anchorages for the front outboard seating position seat belts.

Front seat belt in board anchorages that are seat mounted and thus travels with the seat.

The following design features remain standard as carryover from the 1996 M.Y.;

- Five (5) person seating capacity front bucket seats.
- 4-door body style.
- 300 lbs. of luggage.
- 101 inch wheelbase and unibody construction.

The powertrain is comprised of a 4.0L (I6) multi-point injection (MPI) engine, 4-speed automatic transmission and 2 or 4-wheel drive configuration.

A Corporate energy absorbing steering column (sheer capsule design non-tilt and torsion bar design tilt) is released with a floor console shifter. A two spoke luxury steering wheel with driver airbag is a supplementary restraint and 3-point active seat belt with adjustable upper anchorage is a primary restraint. A passenger airbag is provided as a supplementary restraint and 3-point active seat belt with adjustable upper anchorage is a primary restraint. The driver and passenger airbag supplemental restraint system is an electronic system with a single point sensor mounted under the front left (Passenger) seat.

The front bumper system consists of a steel bumper with foam filled bumperettes.

The five vehicles tested to confirm compliance of the Left-Hand-Drive 1997 "XJ" also are valid for the Right-Hand-Drive vehicles. One Right-Hand-Drive vehicle was tested in addition to these five vehicles to confirm compliance of the 1997 "XJ" to the performance requirements of FMVSS 301, Fuel System Integrity. Summary I of these vehicles and test results are attached.

VC06229 was prepared and tested in accordance with the following Chrysler Corporation Compliance Procedures:

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

CP-370 "Steering Control Rearward Displacement," Change "B".

Based on testing conducted, the 1997 'XJ' Body, Jeep "Cherokee" Sport Utility vehicles, <u>DID MEET</u> the performance requirements of FMVSS 301 Sections S3., S5., S6. and S7.

Issued by: Jeep Impact Engineering, Dept. 1060

SUMMARY I

OCCUPANT CRASH PROTECTION 1997 'XJ' BODY JEEP "CHEROKEE" SPORT UTILITY

Test No. (Date)	Impact Mode	Vehicle Model & Description	Vehicle Identification No.	At Impact	Following 30 Minutes	Max. in	Summary (02) Any Position (02./Min.)
VC 6062 (08/19/96)	Rear	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Man. Trans., Power Steering 4.0L litre MPI Engine, Air Conditioning,	1J4Fj6759vl	-0-	-0-	- ū -	-0-
VC 6148 (10/15/96)	Flat Front	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Man. Trans., Power Steering 2.5L litre MPI Engine, Air Conditioning.	1J4FJ27PXVL	-0-	-0-	-0+	~ 0-
VC 6144 (10/15/96)	Flat Front	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Man. Trans., Power Steering 4.0L litre MPI Engine, Air Conditioning.	1J4FJ68SOVL	-0-	-0-	-0-	- 0 ÷
VC 6146 (10/16/96)	Rear	Jeep "Cherokee" Sport Otility, 4-Wheel Drive, Manual Trans., Power Steerin 4.0L litre MPT Engine, Air Conditioning,	1J4FJ28S3VL	-0-	-0-	-0-	-0-
VC 6190 (11/7/96)	Right Angle	Factory Trailer Hitch. Jeep "Cherokee" Sport Utility, 2-Wheel Drive, Man. Trans., Power Steering 2.5L litre MPI Engine, Air Conditioning.	1J4FT27P2VI	-0-	-0=	-0-	-0-
EA29 (12/05- Chrysler -006588	Flat Front	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Auto Transmission Right Hand Drive, 4.0 Litre(I6)MPI Engine	1J4FN28S6VL	-0-	-0-	a 0 -	-0-

File No: XJ-97-301

SAFETY TEST VEHICLE CRASH TEST LETTER

VC06229 30 MPH BARRIER IMPACT XJUL74, 4.0L ITEM XJ6406 1997 MVSS 208, 212, 219, 301 COMPLIANCE TEST DATE 12/09/96

TEST PURPOSE PRIMARY, 1997 USA 208 COMPLIANCE.

PRIMARY, 1997 USA 212 COMPLIANCE PRIMARY, 1997 USA 219 COMPLIANCE

PRIMARY, 1997 USA 301 COMPLIANCE.

IMPACT TYPE TARGET SPEED; 30 MPH

DAMAGE LOCATION; FRONT

BARRIER TYPE; FLAT FIXED BARRIER SURFACE; PLYWOOD DIRECTION; 0 DEGREES

VEHICLE BODY CLASS; XJ

CAR LINE; J
BODY; 74

ENGINE; 4.0 LITRE

ENGINE NOTE; - MPI

TRANSMISSION; 4 SPEED AUTO 4x4

TRANS. NOTE;

VIN AS TESTED; 1J4FN28S6VL VIN AS BUILT; 1J4FN28S6VL

TEST SPEED 30.3 MPH BY ELECTRONIC TRAP.

TEST WEIGHT (LBS) 4300 TOTAL, 2189 FRONT, 2111 REAR

OCCUPANTS LEFT FRNT, CERT 50TH% HIII H&AROM 9-CH AD-93

RESTRAINT-AIRBAG AND SEAT BELT

RIGHT FRNT, CERT 50TH% HIII H&AROM 9-CH AD-95

RESTRAINT-AIRBAG AND SEAT BELT

BUILD CONDITION 1997 XJ, PVP, 4DR, AUTO TRANS, RHD 4.0L VEHICLE

4.0L ENGINE, AUTO TRANS, P/S, P/B, A/C, NON-TILT

COLUMN.

P215/75R15 TIRES ON STEEL WHEELS.

TARGET WEIGHT (LBS) 3662 TOTAL, 1996 FRONT, 1666 REAR REP MAX OPT WT.

FOR A 4.0L 4-DR 4X4 DOMESTIC RHD VEHICLE.
NOT INCLUDING OCCUPANTS OR LUGGAGE BALLAST.

MOD.

MOD.

SAFETY TEST VEHICLE CRASH TEST LETTER

VC06229 30 MPH BARRIER IMPACT XJUL74, 4.0L ITEM XJ6406 1997 MVSS 208, 212, 219, 301 COMPLIANCE TEST DATE 12/09/96

FUEL AND BALLAST	19.0 GALLONS STODDARD TO 300 LBS LUGGAGE BALLAST 175 LBS OF BALLAST SECUR 75 LBS OF BALLAST SECUR 25 LBS OF BALLAST SECUR	SECURED IN CARGO AREA. ED TO LR FLOORPAN. ED TO RR FLOORPAN.
REPORT CODES	A = TRANSDUCER DATA C = HIGH SPEED FILM E = DUMMY KINEMATICS G = UNDERBODY I = DYNAMIC CRUSH K = DOOR CRUSH M = SPECIAL	B = ALL FILM DATA D = ENGINEER'S REPORT F = STEERING COLUMN H = A-POST J = ENGINE COMPARTMENT L = FORCE/CRUSH/ENERGY
DISTRIBUTION	M.P. LEVINE D.R. BAILEY M. STEBELTON	514-17-41 (AB) 514-18-03 (AB) 422-05-01 (AB)

DATE 12/10/96 TIME 10.04.58.

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER VC622	29, ITEM NUMB	ER XJ6406, T	EST ENGINE	ER COLLINGS		
V.I.N. 1J4FN28S6	VL TES	r date (2/0°	1/ <u>96</u> , roll i	DATE 12/10/7	16	
TEST TYPE; 30 MP	H FRONT FLAT	FIXED BARRIE	R IMPACT			
FUEL; TYPE AND Q					LONS	
TEST SPEED 30.	<u>3</u> мрн, г	rest weight	4300 POT	JNDS.		
POST IMPACT LEAD	KAGE(OZ); AT	IMPACT <u></u>				
	1ST S	5 MIN		-		
	NEXT 2	5 MIN. <u>O</u>	 ,		. Se	
POST TEST PRESSU	URE CHECK 10	min- NO /	eaks_	· · · · · · · · · · · · · · · · · · ·		
POST TEST PRESSU	UMP RUN	May a present different	100KS			_
· — ·	ROLL PERFORME	f) I			•	
STATIC ROLL LEAD	KAGE WITH VEH	ICLE Left	SIDE DOWN	FIRST	;	
		AGE LOCATION	S DURING ST	TATIC ROLL		_
ROLL TIME				·	TOTAL	- .
0-90 IST 5 M					0	*
2.º POST 5					0	**
90-180 1ST 5 M			··· <u></u> -		0	*
2.03 POST 5					0	**
180-270 1ST 5 M			····		0	*
7.00 POST 5 1					0	**
270-360 1ST 5 M					0	*
2.03 POST 5					0	**
* OUNCES IN 5 MI		1. 4	9 4 1 1	1	.01	
No hel	eaks durin	TIONS NOT	Koll-	at implet ov	ATTVI.	<u>m</u> phe)
No Frel Peak	's deving,	post imple?	testing	ĵ		
Fuel Sys	com The	corily in	As more	1 HAS LEEN	/. 	_
LAST FORM MODIFI	CATION 08/22/	96 - GAB	TESTOBS896	, DOCVCFORMS)	



Chrysler Corporation

SUBJECT:

COMPLIANCE REPORT

FUEL SYSTEM INTEGRITY - 1998 'XJ' BODY, JEEP "CHEROKEE" SPORT

	UTILITY				
STANDARD IDENT	IFICATION:	FMVSS 301 -	Sections S3.,	S5., S6.	and S7.
STANDARD TITLE	•	Fuel System	Integrity		
APPROVALS:	Title		Signature		Date
AMA	11016				
E.A. Zylik, Man	nager		. g. l.l		5-19-97
D.F. BUSER, Exc	ecutive Engineer	Do	Busy		5-19-97
Date Received	by Safety Programs: _				

File No: 98-XJ-301 EA12-005- Chrysler -006592



Chrysler Corporation

INTRODUCTION

Subject:

Fuel System Integrity - 1998 'XJ' Body, Jeep "Cherokee" Sport Utility

Objective:

Verification of design compliance with the requirements of Federal

Motor Vehicle Safety Standard No. 301.

Procedure:

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

Conclusions: All Chrysler Corporation 1998 'XJ' Sport Utility vehicles with G.V.W.R. of 10,000 lbs and under, as design released, comply with the requirements of

FMVSS 301 - Sections S3., S5., S6. and S7.

SAFETY DOCUMENTATION COMPLIANCE REPORT (Page 1 of 4)

Prepared by: 2 Prepared by: M.P. Levine, Engineer

Dept. 1060

Issued by: Jeep Vehicle Impact Development

FUEL SYSTEM INTEGRITY 1998 'XJ' BODY, JEEP "CHEROKEE" SPORT UTILITY

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

DISCUSSION

The Chrysler Corporation 1998 'XJ' Body, Jeep "Cherokee", Sport Utility vehicles, 2 and 4-door model, 2 and 4-wheel drive, left and right hand drive are essentially carryover from the 1997 model year.

This vehicle is offered with two engines, a 2.5L inline 4 cylinder and a 4.0L inline 6 cylinder engine. The 2.5 litre (I4) MPI engine is available with a 5-speed manual transmission or a 3 speed automatic transmission. The 4.0 litre (I6) MPI engine is available with either 4-speed overdrive automatic or 5-speed manual transmission. The vehicle is also offered with Anti-Lock Brake System (ABS) for the 4.0 litre only as an optional feature. The right hand drive vehicle is available only with the 4.0L 4-speed overdrive automatic in a 4-door body style with either rear or 4-wheel drive.

The "XJ" is of unibody construction, offered in 101 inch wheelbase.

The front bumper system consists of a steel beam with foam filled bumperettes.

All "XJ" vehicles are offered with a compact spare tire or a conventional spare option.

The vehicle's capacity includes seating for five passengers, 300 lbs. of luggage and 20 gallons of fuel.

The fuel system consists of a 20 gallon rear mounted plastic tank. The filler neck is located on the left side of the vehicle. The vehicle can be equipped with an optional skid plate.

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 nine vehicles were tested (for the 1997 & 1998 model year) to demonstrate compliance of the 'XJ' to the requirements of FMVSS 301, Fuel System Integrity. These vehicles and test results are shown on the attached summary.

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

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

The test vehicles, 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 1998 'XJ' Body, Jeep "Cherokee" Sport Utility vehicles, as design released, <u>DID MEET</u> the performance requirements of FMVSS 301 - Sections S3., S5., S6. and S7.

Prepared by: 3, P Jewine

M.P Eevi

Date: 5/19/97

SUMMARY I

FUEL SYSTEM INTEGRITY 1998 'XJ'-BODY, JEEP "CHEROKEE" SPORT UTILITY

Test No.	Impact		Vehicle	At	Following	Leakage Summary (Oz) Max. in Any Rollover Position	
(Date)	Mode	& Description	Identification No.	Impact	30 Minutes	(Oz.)	(Oz./Min.)
VC 6156 (11/05/96)	Left Side	Jeep "Cherokee" Sport Utility, 2-Wheel Drive, Man. Trans. 4.0L litre MPI Engine, Air Conditioning.	1J4FT6851VL	-0-	-0-	-0-	-0-
VC 6156R (11/06/96)	Right Side	Jeep "Cherokee" Sport Utility, 2-Wheel Drive, Man. Trans. 4.0L litre MPT Engine, Air Conditioning.	1J4FT6851VL	-a-	- 0 -	- O -	- O -
VC 6062 (08/19/96)	Rear	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Man. Trans. 4.0L litre MPI Engine, Air Conditioning.	1J4FJ6759VL	-0-	-0-	-0-	-0-
EA12006146 (167/16/96)	Rear	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Manual Trans., 4.0L litre MPI Engine, Air Conditioning, Factory Trailer Hitch.	1J4FJ28S3VL	-0-	-0-	-0-	-0-

File No: 98-XJ-301

Test No. _(Date)_	Impact Mode	Vehicle Model & Description	Vehicle Identification No.	At Impact	Following 30 Minutes	<u>Leakage S</u> ,Max. i Rollover (Oz.)	
VC 6229 (12/09/96)	Flat Front	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Auto Transmission Right Hand Drive, 4.0 Litre(I6)MPI Engine	1J4FN28S6VL	-0-	-0-	-0-	- a -
XT00716 (05/07/97)	30 Lt. Angle	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Man. Transmission 2.5 Litre(I4)MPI Engine and Driver & Passenger Air Bag with Belt, Tilt Wheel.	1J4FJ28P4VL	-0-	- 0 ≈	-0-	-0-
XT00717 (05/08/97)	30 Rt. Angle	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Auto Transmission 4.0 Litre(I6)MPI Engine and Driver & Passenger Air Bag with Belt, Tilt Wheel.	1J4FJ68S6VL	-0-	∌ - 0 - −	-0-	-0-
XT00718 (05/05/97)	Flat Front	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Man. Transmission 2.5 Litre(I4)MPI Engine and Driver & Passenger Air Bag with Belt, Non-Tilt Whe	1J4FJ28P0VL	-0-	- Ó -	-0-	= O =
EA12-00(C)(7)(9) X (0)(9)(9)(9) (0)(9)(9)(9)(9)(9)(9)(9)(9)(9)(9)(9)(9)(9)	Flat Front	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Auto Transmission 4.0 Litre(I6)MPI Engine and Driver & Passenger Air Bag with Belt, Tilt Wheel.	1J4FJ68S8VL	= Ö =	= 0 =	= 0 -	-0-

Allowable Leakage by Weight

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

Prepared by:	
	M.P. Levine
Date:	

File No: 97-XJ-301

Information



Report #:

Compliance Report

Subject: Fuel Loss Limitations and Static Rollover Test Procedures (For MVSS 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

Ca. Jylk Parald D Buser

System Integrity

Vehicle Type: MPV

Family Codes: XJ

Approvals

Edward A Zylik

Department Manager

Donald F Buser
Executive Engineer

05/13/98 01:24:13 PM Approval Date

05/14/98 07:13:39 AM Approval Date

Summary



Subject: Fuel Loss Limitations and Static Rollover Test Procedures (For MVSS 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: All Chrysler Corporation 1999 `XJ' 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:Mark P LevineDate: 05/13/1998Approved By:Edw ard A ZylikDate: 05/13/1998

Issued By: 1060 - Vehicle Impact & Safety

Development (Jeep)

Discussion



The 1999 MY XJ is essentially carryover from the 1998 model year.

The following design features remain standard as carryover from the 1998 M.Y.;

Vehicle/Body:

- Left hand drive and right hand drive models.
- 2-door and 4-door body style (4-door only in right hand drive).
- 101 inch w heelbase and unibody construction.
- The front bumper system consists of a steel bumper with foam filled bumperettes.

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 skid plate is optional.

Drivetrain:

- 2.5L (I4) or 4.0L (I6) multi-point injection (MPI) (I6 only in right hand drive).
 - Rear or 4 w heel drive.
- 5-speed manual transmission or automatic transmission (3-speed (I4)or 4-speed (I6))(automatic only in right hand drive)).

Occupant Restraint/Interior Systems:

- Corporate energy absorbing steering column (sheer capsule design non-tilt and torsion bar design tilt with a floor console shifter.
 - A 3-point active seat belt with adjustable upper anchorage is a primary restraint for the driver.
 - A supplementary driver restraint airbag is contained in the two spoke luxury steering wheel.
- A 3-point active seat belt with adjustable upper anchorage 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 front left occupant seat 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 nine vehicles were tested (for the 1997 & 1998 model year) to demonstrate compliance of the 'XJ' to the requirements of FMVSS 301, Fuel System Integrity. These vehicles and test results are shown on the attached summary.

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'.

EA12-005- Chrysler -006601

Compliance Report: 1999 CP-246G CP-245F CP-234I CP-233H CP-232F CP-194k

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 'XJ' Body, Jeep "Cherokee" Sport Utility vehicles, as design released, <u>MEET</u> the performance requirements of FMVSS 301 - Sections S3., S5., S6. and S7.

Appendix



Leakage S	Summary	(Oz)				
Test No. Impact (Date) Mode		Max. in Any Vehicle Model <u>& Description</u>	A: <u>Impa</u>	0	Rollover Po <u>(Oz.)</u>	sition (Oz./Min.)
VC 6156Left (11/05/96)	Side	Jeep "Cherokee" Sport Utility, 2-Wheel Drive, Man. Trans. 4.0L litre MPI Engine, Air Conditioning.	-0-	-0-	-0-	-0-
VC 6156R	Right	Jeep "Cherokee"	-0-	-0-	-0-	-0-
(11/06/96)	Side	Sport Utility, 2-Wheel Drive, Man. Trans. 4.0L litre MPI Engine, Air Conditioning.				
VC 6062 (08/19/96)	Rear	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Man. Trans. 4.0L litre MPI Engine, Air Conditioning.	-0-	-0-	-0-	-0-
VC 6146 (10/16/96)	Rear	Jeep A Cherokee@ Sport Utility, 4-Wheel Drive, Manual Trans., 4.0L litre MPI Engine, Air Conditioning, Factory Trailer Hitch.	-0-	-0-	-0-	-0-
VC06229 (12/09/96)	Flat Front	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Auto Transmission Right Hand Drive, 4.0 Litre(I6)MPI Engine	-0-	-0-	-0-	-0-

EA12-005- Chrysler -006603

XT00716 (05/05/97)	30 Lt. Angle	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Man. Transmission 2.5 Litre(I4)MPI Engine and Driver & Passenger Air Bag with Belt, Tilt Wheel.	-0	0-		-0-	-0-
XT00717 (05/06/97)	30 Rt. Angle	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Auto Transmission 4.0 Litre(I6)MPI Engine and Driver & Passenger Air Bag with Belt, Tilt Wheel.	-0-	-0-	-0-	-0-	
XT00718 (05/07/97)	Flat Front	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Man. Transmission 2.5 Litre(I4)MPI Engine and Driver & Passenger Air Bag with Belt, Non-Tilt Whee	-0- el.	-0-	-0-	-0-	
XT00719 (05/08/97)	Flat Front	Jeep "Cherokee" Sport Utility, 4-Wheel Drive, Auto Transmission 4.0 Litre(I6)MPI Engine and Driver & Passenger Air Bag w ith Belt, Tilt Wheel.	-0-	-0-	-0-	-0-	

Allowable Leakage by Weight

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

Full details (test reports) of the tests can be found in the test report files for each test.