

U.S. DEPARTMENT OF TRANSPORTATION

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

LABORATORY TEST PROCEDURE

FOR

FMVSS 302

Flammability of Interior Materials



SAFETY ASSURANCE
Office of Vehicle Safety Compliance
Mail Code: NSA-32
400 Seventh Street, SW
Washington, DC 20590

OVSC LABORATORY TEST PROCEDURE NO. 302

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1. PURPOSE AND APPLICATION

The Office of Vehicle Safety Compliance (OVSC) provides contracted laboratories with Laboratory Test Procedures (TPs) which serve as guidelines for obtaining compliance test data. The data are used to determine if a specific vehicle or item of motor vehicle equipment meets certain minimum requirements of the subject Federal Motor Vehicle Safety Standard (FMVSS). The purpose of the OVSC Laboratory Test Procedures is to present a uniform testing and data recording format, and provide suggestions for the use of specific equipment and procedures. Any contractor interpreting any part of an OVSC Laboratory Test Procedure to be in conflict with a Federal Motor Vehicle Safety Standard or observing any deficiencies in a Laboratory Test Procedure is required to advise the Contracting Officer's Technical Representative (COTR) and resolve the discrepancy prior to the start of compliance testing.

Contractors are required to submit a detailed test procedure to the COTR before initiating the compliance test program. The procedure must include a step-by-step description of the methodology to be used.

The OVSC Laboratory Test Procedures are not intended to limit or restrain a contractor from developing or utilizing any testing techniques or equipment which will assist in procuring the required compliance test data.

NOTE:

The OVSC Laboratory Test Procedures, prepared for use by independent laboratories under contract to conduct compliance tests for the OVSC, are not intended to limit the requirements of the applicable FMVSS(s). In some cases, the OVSC Laboratory Test Procedures do not include all of the various FMVSS minimum requirements. Sometimes, recognizing applicable test tolerances, the Test Procedures specify test conditions which are less severe than the minimum requirements of the standards themselves. Therefore, compliance of a vehicle or item of motor vehicle equipment is not necessarily guaranteed if the manufacturer limits its certification tests to those described in the OVSC Laboratory Test Procedures.

2. GENERAL REQUIREMENTS

Federal Motor Vehicle Safety Standard (FMVSS) No. 302, "Flammability of Interior Materials," specifies burn resistance requirements for materials used in the occupant compartments of motor vehicles.

The purpose of this standard is to reduce the deaths and injuries to motor vehicle occupants caused by vehicle fires, especially those originating in the interior of the vehicle from sources such as matches or cigarettes. The standard applies to passenger cars, multipurpose passenger vehicles (MPVs), trucks, and buses.

The following components of vehicle occupant compartments shall meet the requirements of the standard. Any portion of a single or composite material which is within 0.5 inches of the occupant compartment air space shall meet the requirements of the standard.

- Seat cushions
- Seat backs
- Seat belts
- Headlining
- Convertible tops
- Arm rests
- Trim panels
- Compartment shelves
- Head restraints
- Floor coverings
- Sun visors
- Curtains
- Shades
- Wheel housing covers
- Engine compartment covers
- Mattress covers
- Instrument panel padding
- Other material designed to absorb crash energy

Material shall not burn, nor transmit a flame front across its surface, at a rate of more than 4 inches per minute. However, the requirement concerning transmission of a flame front shall not apply to a surface created by the cutting of a test specimen for purposes of testing. If a material stops burning before it has burned for 1 minute from the start of timing, and has not burned more than 2 inches from the point where timing was started, it shall be considered to meet the burn-rate requirement of the standard.

3. SECURITY

The contractor shall provide appropriate security measures to protect the OVSC test specimens from unauthorized personnel during the entire compliance testing program. The contractor is financially responsible for any acts of theft which occur during the storage of test specimens. Any security problems which arise shall be reported by telephone to the Industrial Property Manager (IPM), Office of Contracts and Procurement, within two working days after the incident. A letter containing specific details of the security problem will be sent to the IPM (with copy to the COTR) within 48 hours.

The contractor shall protect and segregate the data that evolves from compliance testing before and after each test. No information concerning the safety compliance testing program shall be released to anyone except the COTR, unless specifically authorized by the COTR or the COTR's Branch Chief or Division Chief.

NO INDIVIDUALS, OTHER THAN CONTRACTOR PERSONNEL, SHALL BE ALLOWED TO WITNESS ANY COMPLIANCE TEST UNLESS SPECIFICALLY AUTHORIZED BY THE COTR.

4. GOOD HOUSEKEEPING

Contractors shall maintain the entire compliance testing area, test fixtures and instrumentation in a neat and clean condition with test instruments arranged in an orderly manner consistent with good test laboratory housekeeping practices.

5. TEST SCHEDULING AND MONITORING

The contractor shall submit a test schedule to the COTR prior to conducting the first compliance test. Tests shall be completed as required in the contract. All compliance testing shall be coordinated with the COTR in order to allow monitoring by the COTR or other OVSC personnel.

6. TEST DATA DISPOSITION

The contractor shall make all preliminary compliance test data available to OVSC within four hours after the test, if requested. Final test data, including digital printouts and computer generated plots (if applicable), shall be furnished to the COTR in accordance with the contract schedule.

All backup data sheets, strip charts, recordings, plots, technician's notes etc., shall be retained by the contractor for a minimum of three years after conclusion of each delivery order, purchase order, etc. The COTR shall direct final disposition at that time.

7. **GOVERNMENT FURNISHED PROPERTY (GFP)**

TEST SAMPLE IDENTIFICATION AND STORAGE

Upon receipt at the laboratory, the items to be tested shall be assigned laboratory serial numbers and shall also be tagged with the vehicle model year, make and model, location (in vehicle), and sample name and function.

Example:

199X XYZ SafeRider, left rear door panel

An inventory shall be made of the number, name and condition of samples received.

The test samples shall be stored in a dry, clean, dust free area specifically designated by the Laboratory Project Manager.

8. CALIBRATION OF TEST INSTRUMENTS

Before the contractor initiates the safety compliance test program, a test instrumentation calibration system will be implemented and maintained in accordance with established calibration practices. Guidelines for setting up and maintaining such calibration systems are described in MIL-C-45662A, "Calibration System Requirements". The calibration system shall be set up and maintained as follows:

- A. Standards for calibrating the measuring and test equipment shall be stored and used under appropriate environmental conditions to assure their accuracy and stability.

- B. All measuring instruments and standards shall be calibrated by the contractor, or a commercial facility, against a higher order standard at periodic intervals NOT TO EXCEED TWELVE (12) MONTHS except for static types of measuring devices such as rulers, weights, etc., which shall be calibrated at periodic intervals not to exceed two years. Records, showing the calibration traceability to the National Institute of Standards and Technology (NIST), shall be maintained for all measuring and test equipment.

- C. All measuring and test equipment and measuring standards will be labeled with the following information:
 - (1) Date of calibration
 - (2) Date of next scheduled calibration

- D. A written calibration procedure shall be provided by the contractor which includes as a minimum the following information for all measurement and test equipment unless the calibration is performed by a licensed commercial facility.
 - (1) Type of equipment, manufacturer, model number, etc.
 - (2) Measurement range
 - (3) Accuracy
 - (4) Calibration interval
 - (5) Type of standard used to calibrate the equipment (calibration traceability of the standard must be evident)

- E. Records of calibration for all test instrumentation shall be kept by the contractor in a manner which assures the maintenance of established calibration schedules. All such records shall be readily available for inspection when requested by the COTR. The calibration system will need the acceptance of the COTR before the test program commences.

9. PHOTOGRAPHIC DOCUMENTATION

Each final test report shall include a glossy black and white or color (minimum size of 4 inches by 6 inches) photograph of a typical test setup properly focused for a clear image.

10. DEFINITIONS

OCCUPANT COMPARTMENT AIR SPACE

The space within the occupant compartment that normally contains refreshable air.

11. PRETEST REQUIREMENTS

IN-HOUSE TEST PROCEDURE

Prior to conducting any compliance test, contractors are required to submit a detailed in-house compliance test procedure to the COTR which includes a step-by-step description of the methodology to be used. Written approval must be obtained from the COTR before initiating the compliance test program so that all parties are in agreement.

TEST DATA LOSS

A compliance test is not to be conducted unless all of the various test conditions specified in this OVSC Laboratory Test Procedure have been met. Failure of a contractor to obtain the required test data and to maintain acceptable limits on test parameters in the manner outlined in this OVSC Laboratory Test Procedure shall require a retest at the expense of the contractor.

TEST CONDITIONS

Unless otherwise specified all tests and measurements shall be conducted under the following environmental conditions.

Temperature	70°F ± 10°F
Relative Humidity	50%, + 10%, - 0% R.H.
Atmospheric Pressure	28 to 32 inches of mercury

Continuous recording of environmental temperature and relative humidity of the test area shall be available during all tests.

TEST PERSONNEL PERFORMANCE

Personnel supervising and/or performing the compliance test program shall be thoroughly familiar with the requirements, test conditions, and equipment for the test to be conducted.

RECORDING OF TEST DATA

Environmental data shall be recorded on permanent strip charts, circular recording charts, or other acceptable print-out media.

Test data shall be recorded on standard forms specifically prepared for this purpose such as that shown in Attachment I.

11. PRETEST REQUIREMENTS....Continued

The following are required entries for all samples.

- A. Vehicle Model Year, Make, and Model (such as 1992 XYZ SafeRider)
- B. Sample Name or Function (such as instrument panel pad, front seat cushion cover, driver's door trim panel, etc.)
- C. Sample Orientation - The direction of flame travel (burn direction described as either longitudinal (i.e. parallel to the vehicle longitudinal centerline when normally installed in the vehicle) or transverse (perpendicular to the vehicle longitudinal centerline when normally installed in the vehicle).
- D. Sample Dimensions - Length, width, height, and shape if other than flat.
- E. Date Tested
- F. Sample Compositions - Descriptive statement to include, color, type of material, and composite distribution (if sample is of composite construction).
- G. Burn Distance - Distance flame traveled in inches measured as follows.

Begin timing when the flame front of the burning specimen reaches a point 1.5 inches from the open end of the specimen.

Measure the time that it takes the flame to progress to a point 1.5 inches from the clamped end of the specimen. If the flame does not reach the specified end point, time its progress to the point where flaming stops or at the end of 5 minutes.

- H. Burn Time - Record flame progress as described above.
- I. Burn Rate - Calculate the burn rate from the formula shown below.

$$B = 60 \times (D/T)$$

Where:

- B = burn rate in inches per minute
- D = length the flame travels in inches from the start to the stopping point
- T = time in seconds for the flame to travel D inches

- J. The outcome of the test shall be indicated on the data sheet as either PASS (P) or FAIL (F)

12. COMPLIANCE TEST EXECUTION

TEST REQUIREMENTS

For the purpose of compliance testing, the following interpretations of FMVSS 302 are provided below. The applicable paragraph of FMVSS 302 is referenced in each case.

REQUIREMENTS OF PARAGRAPH S4.1

The following components of vehicle interior material shall meet the requirements of paragraph S4.3:

- A. Seat cushions (upholstery and padding)
- B. Seat backs (upholstery and padding)
- C. Seat belts, including protective boots etc.
- D. Headlining
- E. Convertible top
- F. Arm rests
- G. Trim panels (door, front, rear, side)
- H. Compartment shelves
- I. Head restraints
- J. Floor coverings
- K. Sun visors
- L. Curtains
- M. Shades
- N. Wheel housing covers
- O. Steering wheel covers
- P. Mattress covers and padding
- Q. Instrument panel crash pads
- R. Crash deployed elements
- S. Any other materials found in the vehicle occupant compartment designed to absorb crash energy

REQUIREMENTS OF PARAGRAPH S4.2

The portions of the above components which shall meet the requirements are as described in paragraph S4.2 with the following exception:

Materials which are bonded or mechanically attached to metal structural members may be separated from the metal structures prior to testing.

Example: Instrument panel crash pad material bonded to steel instrument panel board frame.

12. COMPLIANCE TEST EXECUTION....Continued

REQUIREMENTS OF PARAGRAPH S4.3

The materials described in paragraphs S4.1 and S4.2 shall meet the requirements of paragraph S4.3 with the following exception:

When testing materials with a loose, fibrous texture, a phenomenon, which shall be described as "surface flash", may occur. This is characterized by a rapidly advancing flame front across the surface of the test sample supported by combustion of a relatively small amount of loose, protruding surface fibers.

If encountered, this situation shall be noted on the data sheet, but shall not constitute a noncompliance if the surface exhibiting flash is an artificial surface caused by the cutting of the sample. The Contracting Officer's Technical Representative (COTR) must be contacted under any other conditions.

TEST CONDITIONS

The test shall be conducted in a metal cabinet as shown in Figure 1.

Prior to testing, each specimen is to be maintained, for a minimum of 24 hours, at the environmental conditions detailed previously in this procedure. Each specimen will then be tested under those conditions.

For the purposes of test, the specimen is inserted between 2 matching U-shaped frames of metal stock configured as shown in Figure 2.

Provision shall be made for installations of thin heat resistant wires (at one inch intervals) to support specimens which may tend to soften and bend at the flaming end or which are less than 2 inches in width.

A suitable stand shall be employed to hold the U-shaped frames during testing.

A bunsen burner with a tube of 0.375 inches inside diameter shall be used. The gas adjusting valve is set to provide a flame, with the tube vertical, of 1.5 inches in height. The air inlet to the burner is closed.

The gas supplied to the burner shall have a flame temperature nominally equal to that of natural gas.

Each specimen of material to be tested shall be a rectangle 4 inches wide by 14 inches long, wherever possible. The thickness of the specimen is that of the single or composite material used in the vehicle, except that if the material's thickness exceeds 0.5 inch, the specimen is cut down to that thickness measured from the surface of the specimen closest to the occupant compartment air space. Where it is not possible to obtain a flat specimen

BURN TEST CABINET

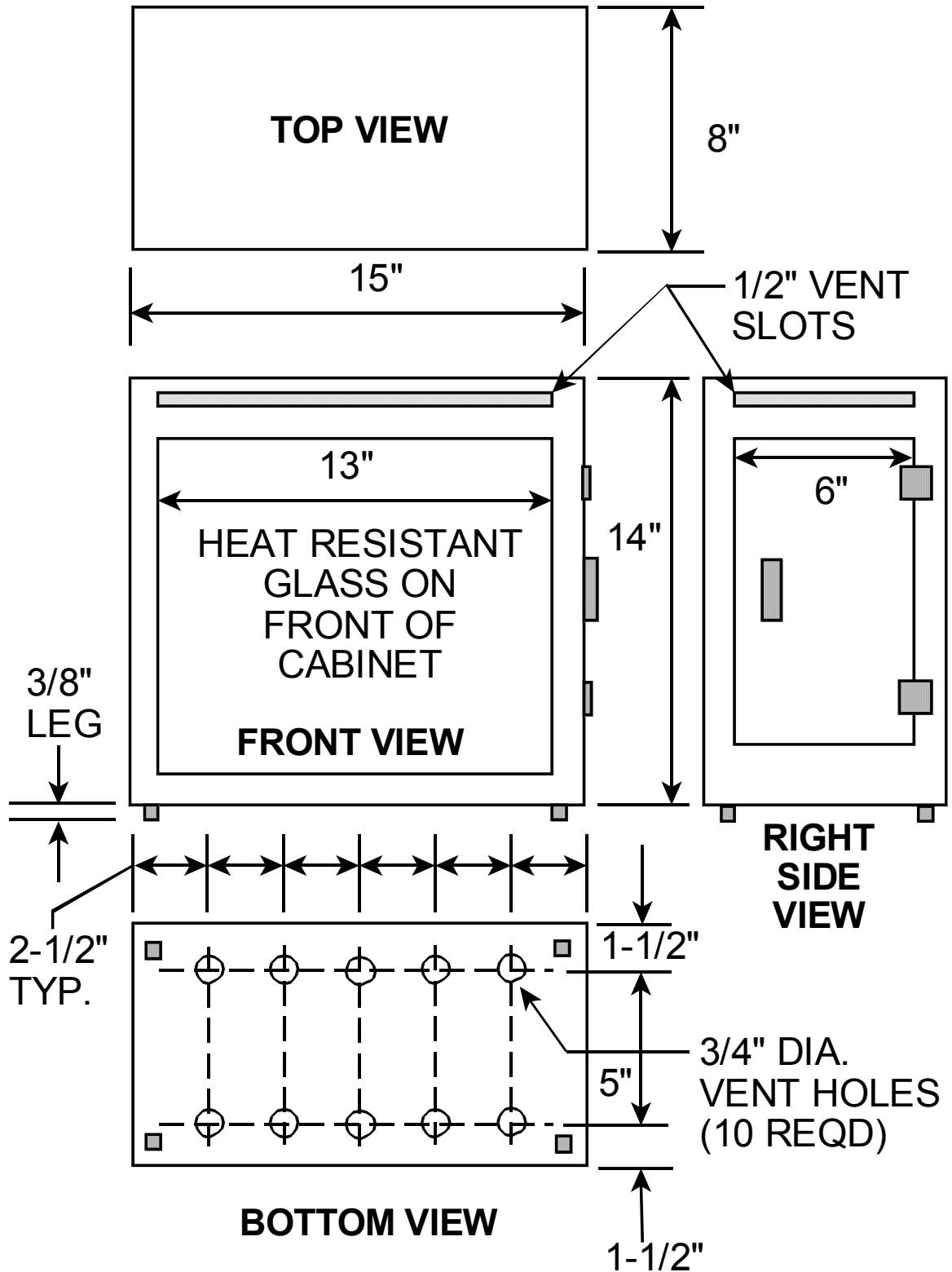
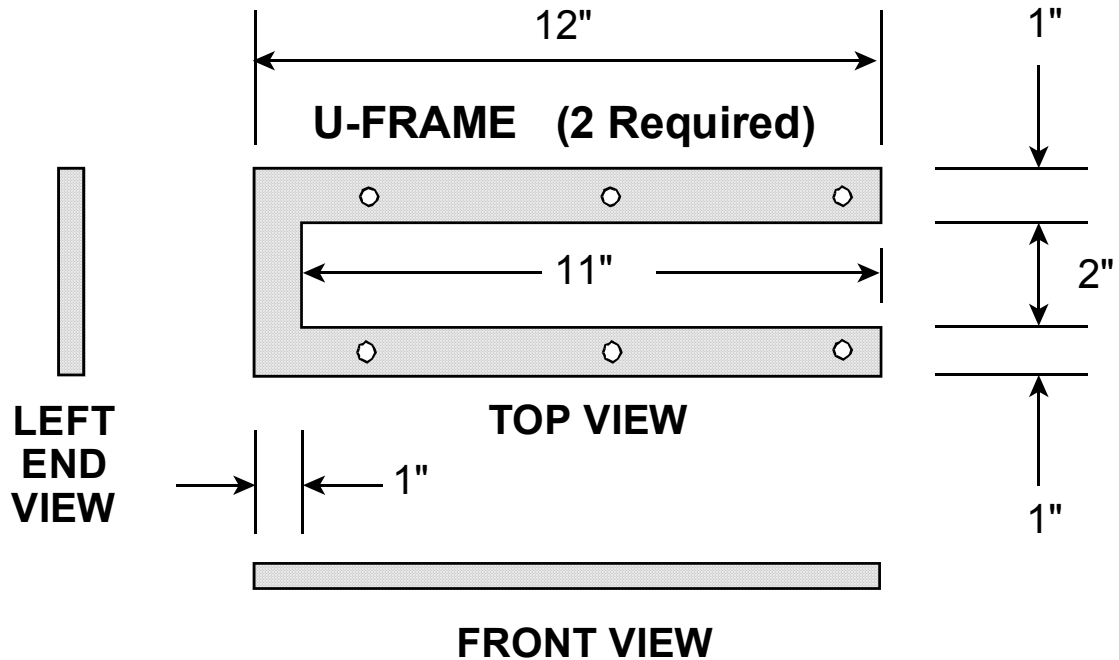


FIGURE 1

12. COMPLIANCE TEST EXECUTION....Continued

SPECIMEN SUPPORT FRAMES

NOTE: U-FRAME STAND SHALL SUPPORT MATCHING U-FRAMES 6-1/2" ABOVE BOTTOM OF CABINET

FIGURE 2

because of surface curvature, the specimen is cut to not more than 0.5 inch in thickness at any point. The maximum available length or width of a specimen is used where either dimension is less than 14 inches or 4 inches, respectively, unless surrogate testing is allowed by the COTR.

Typical test samples are shown in Figure 3.

PREPARATION OF SPECIMENS

Materials determined to have directional effects shall be oriented so as to produce the most unfavorable results. The sample should be oriented so that surface closest to the occupant compartment air space should face downward in the fixture (toward the flame).

Verify that materials with napped or tufted surfaces have been combed twice against the nap. Materials with a tight fiber loop construction, such as some vehicle carpets need not be combed.

12. COMPLIANCE TEST EXECUTION....Continued

TYPICAL TEST SAMPLE

COMPOSITE AND NON-COMPOSITE SAMPLES

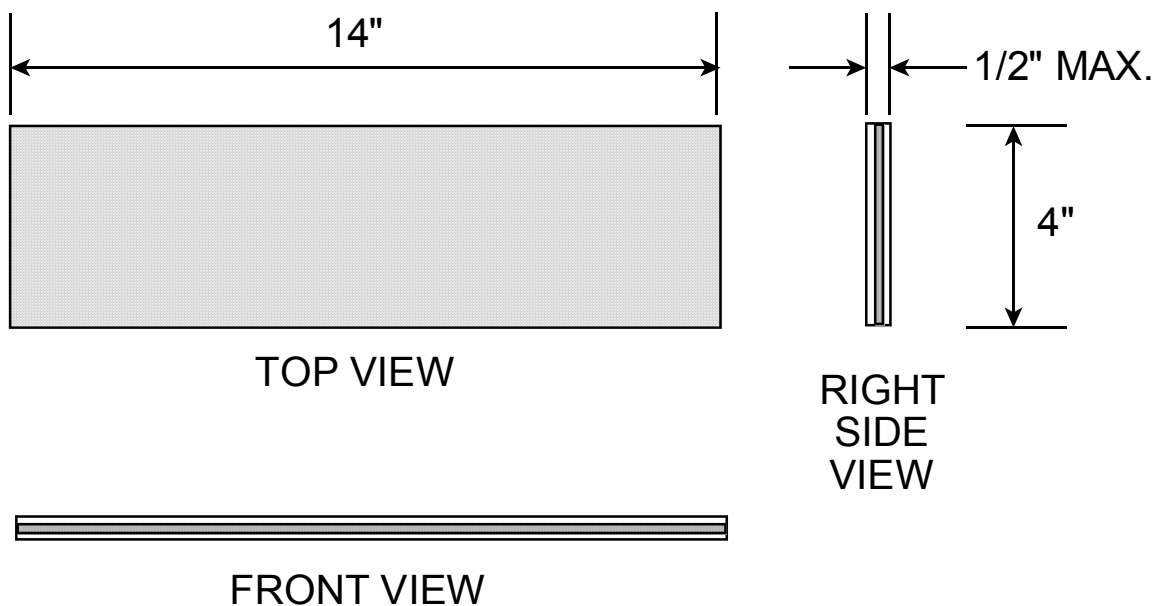


FIGURE 3

TEST PROCEDURE

- A. Install test specimen in "U" shaped frames exterior side down.

Heat resistant wire may be installed in the lower frame for additional support if bending or curling of the specimen during test is anticipated or if the specimen is less than 2 inches wide.

- B. Place specimen and frame assembly in the stand inside the burn box with the specimen free end nearest to the door.
- C. Turn on the gas supply and ignite the bunsen burner. Adjust the burner valve for a flame height of 1.5 inches.
- D. Position the top of the bunsen burner tube so that it is 0.75 inches below the center of the free end of the specimen.
- E. Expose the specimen to the burner flame for 15 seconds, + 0, -1. Turn off gas supply to burner and reset timer to zero.

12. COMPLIANCE TEST EXECUTION....Continued

- F. Begin timing flame progression when the flame from the burning specimen reaches a point 1.5 inches from the free end of the specimen. (Use the forward most point of visible flame as a reference point).
- G. Record the time it takes the flame to progress to a point 1.5 inches from the clamped end of the specimen. If the flame does not reach the specified end point, time its progress to the point where flaming stops, (if an extremely slow burning specimen is encountered the test may be aborted 5 minutes after the start of timing).
- H. Calculate the burn rate from the following formula.

$$B = 60 \times (D/T)$$

Where: B = Burn rate in inches per minute
 D = length flame traveled in inches
 T = Time in seconds for flame to travel D inches

SAFETY CONSIDERATIONS

A means of extinguishing flaming specimens shall be available during all tests. A standard CO₂ type fire extinguisher may be used for this purpose.

It should be noted that certain samples may produce noxious gases during combustion. For this reason it is strongly suggested that these tests be conducted under a fume hood or similar facility. Air turbulence around the burn cabinet (produced by the exhaust system) must be low level and **MUST NOT, IN ANYWAY, EFFECT THE OUTCOME OF A TEST.**

13. POST TEST REQUIREMENTS

The contractor shall re-verify all instrumentation and check data sheets. Make sure data is recorded in all data blocks.

14. REPORTS

14.1 MONTHLY STATUS REPORTS

The contractor shall submit a monthly Test Status Report and an Inventory Status Report to the COTR. The Status Reports shall be submitted until all final reports are accepted. Samples of the required Test Results Data Sheet and the Monthly Inventory Status Report are contained in the Data Sheets and Forms sections. The reports shall be submitted in accordance with the schedule requirements of the contract or purchase order.

14.2 APPARENT NONCOMPLIANCE

Any indication of a test failure shall be communicated by telephone to the COTR within 24 hours with written notification mailed within 48 hours (Saturdays and Sundays excluded). A Notice of Test Failure (see Forms section) with a copy of the test data sheet shall be included.

In the event of a test failure, a post test calibration check of some critically sensitive test equipment and instrumentation may be required for verification of accuracy. The necessity for the calibration shall be at the COTR's discretion and shall be performed without additional costs to the OVSC.

14.3 FINAL TEST REPORTS

14.3.1 COPIES

In the case of a test failure, **SEVEN** copies of the Final Test Report shall be submitted to the COTR for acceptance within three weeks of test completion. The Final Test Report format to be used by all contractors can be found in the "Report Section".

Where there has been no indication of a test failure, **FOUR** copies of each Final Test Report shall be submitted to the COTR within three weeks of test completion. Payment of contractor's invoices for completed compliance tests may be withheld until the Final Test Report is accepted by the COTR. Contractors are requested to NOT submit invoices before submitting copies of the Final Test Report.

Contractors are required to submit the first Final Test Report in draft form within two weeks after the compliance test is conducted. The contractor and the COTR will then be able to discuss the details of both test conduct and report content early in the compliance test program.

Contractors are required to PROOF READ all Final Test Reports before submittal to the COTR. The OVSC will not act as a report quality control office for contractors. Reports containing a significant number of errors will be returned to the contractor for correction, and a "hold" will be placed on invoice payment for the particular test.

14. REPORTS...Continued

14.3.2 REQUIREMENTS

The Final Test Report, associated documentation (including photographs) are relied upon as the chronicle of the compliance test. The Final Test Report will be released to the public domain after review and acceptance by the COTR. For these reasons, each final report must be a complete document capable of standing by itself.

The contractor should use **detailed** descriptions of all compliance test events. Any events that are not directly associated with the standard but are of technical interest should also be included. The contractor should include as much **detail** as possible in the report.

Instructions for the preparation of the first three pages of the final test report are provided below for the purpose of standardization.

14.3.3 FIRST THREE PAGES

A. FRONT COVER --

A heavy paperback cover (or transparency) shall be provided for the protection of the final report. The information required on the cover is as follows:

- (1) Final Report Number such as 302-ABC-9X-001

where --

302 is the FMVSS tested
ABC are the initials for the laboratory
9X is the Fiscal Year of the test program
001 is the Group Number (001 for the 1st test,
002 for the 2nd test, etc.)

- (2) Final Report Title And Subtitle such as

SAFETY COMPLIANCE TESTING FOR FMVSS NO. 302
Flammability of Interior Materials

World Motors Corporation
199X XYZ SafeRider

- (3) Contractor's Name and Address such as

COMPLIANCE TESTING LABORATORIES, INC.
4335 West Dearborn Street
Detroit, Michigan 48090-1234

14. REPORTS....Continued

NOTE: DOT SYMBOL WILL BE PLACED BETWEEN ITEMS (3) AND (4)

- (4) Date of Final Report completion
- (5) The words "FINAL REPORT"
- (6) The sponsoring agency's name and address as follows

U. S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Safety Assurance
Office of Vehicle Safety Compliance
400 Seventh Street, SW
Mail Code: NSA-32
Washington, DC 20590

14. REPORTS...Continued**B. FIRST PAGE AFTER FRONT COVER --**

A disclaimer statement and an acceptance signature block for the COTR shall be provided as follows

This publication is distributed by the U. S. Department of Transportation, National Highway Traffic Safety Administration, in the interest of information exchange. The opinions, findings and conclusions expressed in this publication are those of the author(s) and not necessarily those of the Department of Transportation or the National Highway Traffic Safety Administration. The United States Government assumes no liability for its contents or use thereof. If trade or manufacturers' names or products are mentioned, it is only because they are considered essential to the object of the publication and should not be construed as an endorsement. The United States Government does not endorse products or manufacturers.

Prepared By: _____

Approved By: _____

Approval Date: _____

FINAL REPORT ACCEPTANCE BY OVSC:

Accepted By: _____

Acceptance Date: _____

14. REPORTS....Continued**C. SECOND PAGE AFTER FRONT COVER --**

A completed Technical Report Documentation Page (Form DOT F1700.7) shall be completed for those items that are applicable with the other spaces left blank. Sample data for the applicable block numbers of the title page follows.

Block 1 -- REPORT NUMBER

302-ABC-9X-001

Block 2 -- GOVERNMENT ACCESSION NUMBER

Leave blank

Block 3 -- RECIPIENT'S CATALOG NUMBER

Leave blank

Block 4 -- TITLE AND SUBTITLE

Final Report of FMVSS 302 Compliance Testing of 199X XYZ SafeRider

Block 5 -- REPORT DATE

March 1, 199X

Block 6 -- PERFORMING ORGANIZATION CODE

ABC

Block 7 -- AUTHOR(S)

John Smith, Project Manager
Bill Doe, Project Engineer

Block 8 -- PERFORMING ORGANIZATION REPORT NUMBER

ABC-DOT-XXX-001

Block 9 -- PERFORMING ORGANIZATION NAME AND ADDRESS

Compliance Testing Laboratories, Inc
4335 West Dearborn Street
Detroit, MI 48090-1234

14. REPORTS...Continued**Block 10 -- WORK UNIT NUMBER**

Leave blank

Block 11 -- CONTRACT OR GRANT NUMBER

DTNH22-9X-D-12345

Block 12 -- SPONSORING AGENCY NAME AND ADDRESS

US Department of Transportation
National Highway Traffic Safety Administration
Safety Assurance
Office of Vehicle Safety Compliance
400 Seventh Street, SW, Mail Code: NSA-32
Washington, DC 20590

Block 13 -- TYPE OF REPORT AND PERIOD COVERED

Final Test Report
Feb. 15 to Mar. 15, 199X

Block 14 -- SPONSORING AGENCY CODE

NSA-32

Block 15 -- SUPPLEMENTARY NOTES

As Required

Block 16 -- ABSTRACT

Compliance tests were conducted on interior materials from a 199X XYZ SafeRider passenger car in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-302-XX for the determination of FMVSS 302 compliance. Test failures identified were as follows:

None

NOTE: Above wording must be shown with appropriate changes made for a particular compliance test. Any questions should be resolved with the COTR.

14. REPORTS...Continued**Block 17 -- KEY WORDS**

Compliance Testing
Safety Engineering
FMVSS 302

Block 18 -- DISTRIBUTION STATEMENT

Copies of this report are available from --

National Highway Traffic Safety Administration
Technical Reference Division
Room 5108 (NAD-52)
400 Seventh St., SW
Washington, DC 20590
Telephone No.: 202-366-4946

Block 19 -- SECURITY CLASSIFICATION OF REPORT

Unclassified

Block 20 -- SECURITY CLASSIFICATION OF PAGE

Unclassified

Block 21 -- NUMBER OF PAGES

Add appropriate number

Block 22 -- PRICE

Leave blank

14. REPORTS....Continued

14.3.4 TABLE OF CONTENTS

Final test report Table of Contents shall include the following:

- A. Section 1 — Purpose of Compliance Test
- B. Section 2 — Compliance Data Summary
- C. Section 3 — Test Data
- D. Section 4 — Test Equipment List and Calibration Information
- E. Section 5 — Photographs
- F. Section 6 — Notice of Test Failure (if applicable)

15. DATA SHEETS

FLAMMABILITY TEST RESULTS

TEST REPORT NO. _____

VEH. MOD YR/MAKE/MODEL: _____

TEST DATE: _____

TEST LABORATORY: _____

TEST CONDUCTED BY: _____

TEST ITEM*	COMPOSITION	BURN DIRECTIONS	SAMPLE DIMENSIONS (in.)
A-		A1 - Longitudinal	
		A2 - Longitudinal	
		A3 - Transverse	
		A4 - Transverse	
B-		B1 - Longitudinal	
		B2 - Longitudinal	
		B3 - Transverse	
		B4 - Transverse	
C-		C1 - Longitudinal	
		C2 - Longitudinal	
		C3 - Transverse	
		C4 - Transverse	
D-		D1 - Longitudinal	
		D2 - Longitudinal	
		D3 - Transverse	
		D4 - Transverse	

* From Items Listed In Section 2

15. DATA SHEETS....Continued

TEST ITEM*	COMPOSITION	BURN DIRECTIONS	SAMPLE DIMENSIONS (in.)
A-		E1 - Longitudinal	
		E2 - Longitudinal	
		E3 - Transverse	
		E4 - Transverse	
B-		F1 - Longitudinal	
		F2 - Longitudinal	
		F3 - Transverse	
		F4 - Transverse	

REQUIREMENTS: A Burn Rate in excess of 4.0 inches per minute shall constitute a failure unless the specimen burned less than 60 seconds and the flame traveled less than 2 inches from the point where timing was started.

BURN DIRECTION	NOTES*	BURN DISTANCE (inches)	BURN TIME (Seconds)	BURN RATE (in./min.)	PASS	FAIL
A1						
A2						
A3						
A4						
B1						
B2						
B3						
B4						
C1						
C2						
C3						
C4						
D1						
D2						

15. DATA SHEETS....Continued

BURN DIRECTION	NOTES*	BURN DISTANCE (inches)	BURN TIME (Seconds)	BURN RATE (in./min.)	PASS	FAIL
D3						
D4						
E1						
E2						
E3						
E4						
F1						
F2						
F3						
F4						

- * NOTES:
1. Specimen did not ignite.
 2. Specimen ignited but self-extinguished prior to entering time zone.
 3. Test was discontinued after 5.0 minutes.
 4. The (**) denotes that specimens were not provided by the manufacturer or by NHTSA
 5. Specimen ignited but did not burn to the timing zone in 5.0 minutes

REMARKS:

RECORDED BY: _____ DATE: _____

APPROVED BY: _____

16. FORMS...Continued

LABORATORY NOTICE OF TEST FAILURE TO OVSC

FMVSS NO.: 302 TEST DATE: _____

LABORATORY: _____

CONTRACT NO.: _____; DELV. ORDER NO.: _____

LABORATORY PROJECT ENGINEER'S NAME: _____

TEST SPECIMEN DESCRIPTION: _____

VEHICLE MAKE/MODEL: _____

PART NO.: _____ MFR: _____

TEST FAILURE DESCRIPTION: _____

FMVSS REQUIREMENT, PARAGRAPH § ____ : _____

NOTIFICATION TO NHTSA (COTR) : _____

DATE: _____ BY: _____

REMARKS: _____
