REPORT NUMBER 401-STF-08-002

SAFETY COMPLIANCE TESTING FOR FMVSS NO. 401 TIRE PRESSURE MONITORING SYSTEMS

MITSUBISHI MOTORS CORPORATION
2008 MITSUBISHI LANCER
FOUR-DOOR PASSENGER CAR
NHTSA NO. C85603

U.S. DOT SAN ANGELO TEST FACILITY
131 COMANCHE TRAIL, BUILDING 3527
GOODFELLOW AFB, TEXAS 76908

September 24, 2008

FINAL REPORT

PREPARED FOR

U. S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
ENFORCEMENT
NVS-220
OFFICE OF VEHICLE SAFETY COMPLIANCE
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16. Abstract Compliance tests were conducted on the subject 2008 Mitsubishi Lancer four-door passenger car in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-401-01 for the determination of FMVSS 401 compliance. Test failures identified were as follows: NONE.		
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SECTION 1

INTRODUCTION

1.1 PURPOSE OF COMPLIANCE TEST

A 2008 Mitsubishi Lancer four-door passenger car was tested to determine if the vehicle was in compliance with the requirements of FMVSS 401. All tests were conducted in accordance with NHTSA/Office of Vehicle Safety Compliance (OVSC) Laboratory Test Procedure TP-401-01 dated August 8, 2007.

1.2 TEST VEHICLE

The test vehicle was a 2008 Mitsubishi Lancer four-door passenger car. Nomenclatures applicable to the test vehicle are:

A. Vehicle Identification Number: JA3AU16U08U036749

B. NHTSA Number: C85603

C Manufacturer: Mitsubishi Motors Corporation

D. Manufacture Date: 10/2007

1.3 TEST DATE

The test vehicle was tested August 14, 2008.

SECTION 2

TEST PROCEDURE AND DISCUSSION OF RESULTS

2.1 TEST PROCEDURE

Prior to test, the test vehicle was inspected for completeness and systems operability, including battery capability and trunk closure function. The vehicle was then photographically documented as required by the NHTSA/OVSC Test Procedure. The owner's manual was reviewed, and pertinent trunk release information was noted.

The rear trunk manual release system stationary vehicle tests were conducted with an occupant enclosed in the trunk compartment with the lid shut. An assistant was present and prepared to release the occupant if necessary. The compartment was evaluated with all removable equipment furnished by the manufacturer stowed in accordance with vehicle label instructions.

The procedure used consists of the following steps:

1. Determine the means by which a trapped person within the trunk would escape from the compartment, e.g. pull of a T-handled release mechanism, rotation of fixed lever release mechanism, push of a button, etc.
2. For informational purposes, install a linear force transducer to the release mechanism determined above and record the force required to be applied by the trapped occupant to escape.
3. Verify that the release mechanism is visible in the darkened trunk S4.2(a), and determine method used, e.g. phosphorescence or auxiliary lighting. Some time may be required to allow for the eyes to adjust to the darkened environment within the trunk compartment. Photograph if possible the lighted release mechanism.
4. With the vehicle stationary and no key in the ignition (representing unoccupied vehicle), actuate the release mechanism and verify that the trunk lid releases from all latching positions. Record force required during 3 attempts to release trunk latching mechanism.
5. Repeat step 4 above, except with the engine idling (time with trunk lid latched not to exceed 30 seconds).

2.2 DISCUSSION OF RESULTS

The force required to release the trunk lid did not exceed four (4) Newtons on any attempt. The data indicate compliance of the test vehicle's manual trunk release system for the No Key in Ignition and the Idling Vehicle trunk release tests.

SECTION 3

TEST DATA

DATA SHEET 1
FMVSS No. 401 – TEST DATA SUMMARY

MODEL YEAR/MAKE/MODEL/BODY STYLE: 2008 Mitsubishi Lancer 4-door passenger car

VEHICLE NHTSA NUMBER: C85603 VIN: JA3AU16U08U036749

GVWR: 1,850 kg (4,079 lbs) DATE OF MANUFACTURE: 10/2007

TEST LAB: U. S. DOT San Angelo Test Facility TEST DATE: August 14, 2008

	PASS/FAIL	COMMENTS
Automatic or Manual release mechanism inside the trunk compartment. S4.1	**PASS**	Manual
If manual release, lighting feature is included. S4.2(a)	**PASS**	Phosphorescence
Except as provided by S4.3(b), actuation of release mechanism required by S4.1 completely releases trunk lid from all latching positions of the trunk lid latch. S 4.3(a)	**PASS**	

REMARKS: None

RECORDED BY: Jack R. Stewart DATE: August 14, 2008

APPROVED BY: Kenneth H. Yates

DATA SHEET 2
TEST PREPARATION INFORMATION

MODEL YEAR/MAKE/MODEL/BODY STYLE: 2008 Mitsubishi Lancer four-door passenger car

VEHICLE NHTSA NUMBER: C85603 TEST DATE: August 14, 2008

TRUNK LOCATION: Rear

NUMBER OF TRUNK LATCHING POSITIONS: One

INTERIOR TRUCK RELEASE: Manual

EQUIPPED WITH POWER CLOSURE ASSISTING DEVICE: No

OWNER'S MANUAL DESCRIPTION OF TRUNK RELEASE: Yes

REMOVABLE EQUIPMENT DELIVERED IN TRUNK:

SPARE TIRE: Yes SIZE: T125/70D16

TIRE JACK: Yes

LUG WRENCH: Yes

REMARKS: Spare and tire change equipment is stored beneath removable trunk floor.

RECORDED BY: Jack R. Stewart DATE: August 14, 2008

APPROVED BY: Kenneth H. Yates

DATA SHEET 3 (Sheet 1 of 2)
MANUAL TRUNK RELEASE OPERATION

MODEL YEAR/MAKE/MODEL/BODY STYLE: 2008 Mitsubishi Lancer four-door passenger car

VEHICLE NHTSA NUMBER: C85603 TEST DATE: August 14, 2008

Method used to actuate interior trunk release: Rotating lever

Can test personnel enter trunk and be closed within? Yes

Size of occupant: 5' 10", large frame

Is there access to the trunk compartment by folding down rear seat or partition? No

Does release mechanism require electric power? No

Can release mechanism be easily seen inside the closed trunk? Yes

Method used by vehicle manufacturer to ensure that
release mechanism is visible in the closed trunk compartment: Phosphorescence

Laboratory test method used to determine visibility of release mechanism: Trunk entry

DATA SHEET 3 (Sheet 2 of 2)
MANUAL TRUNK RELEASE OPERATION

Vehicle Stationary (0 km/h)	Force in Newtons Required to Release Trunk Lid (no requirement)	Trunk Released from **All** Latching Positions	Pass/Fail
NO KEY IN IGNITION			
Attempt 1	3.6	Yes	Pass
Attempt 2	4.0	Yes	Pass
Attempt 3	4.0	Yes	Pass
Average	3.9		
ENGINE IDLING			
Attempt 1	3.6	Yes	Pass
Attempt 2	3.8	Yes	Pass
Attempt 3	3.4	Yes	Pass
Average	3.6		

TEST RESULTS **PASS**

REMARKS: None

RECORDED BY: Jack R. Stewart DATE: August 14, 2008

APPROVED BY: Kenneth H. Yates

SECTION 4

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

EQUIPMENT	DESCRIPTION	MODEL/ SERIAL NO	CAL. DATE	NEXT CAL. DATE
DIGITAL FORCE GAGE	WAGNER INSTRUMENTS FORCE TEN	SERIAL #10363	8/6/2008	8/6/2009

SECTION 5

PHOTOGRAPHS

2008 MITSUBISHI LANCER
NHTSA NO. C85603
FMVSS NO.401

FIGURE 5.1
FRONT OF VEHICLE

2008 MITSUBISHI LANCER
NHTSA NO. C85603
FMVSS NO.401

FIGURE 5.2
LEFT SIDE VIEW OF VEHICLE

2008 MITSUBISHI LANCER
NHTSA NO. C85603
FMVSS NO. 401

FIGURE 5.3
RIGHT SIDE VIEW OF VEHICLE

2008 MITSUBISHI LANCER
NHTSA NO. C85603
FMVSS NO. 401

FIGURE 5.4
LEFT REAR QUARTER VIEW

2008 MITSUBISHI LANCER
NHTSA NO. C85603
FMVSS NO. 401

FIGURE 5.5
RIGHT REAR QUARTER VIEW

2008 MITSUBISHI LANCER
NHTSA NO. C85603
FMVSS NO. 401

FIGURE 5.6
VEHICLE CERTIFICATION LABEL

2008 MITSUBISHI LANCER
NHTSA NO. C85603
FMVSS NO. 401

FIGURE 5.7
VEHICLE TRUNK COMPARTMENT INTERIOR
SHOWING ORIGINAL EQUIPMENT INSTALLED

2008 MITSUBISHI LANCER
NHTSA NO. C85603
FMVSS NO. 401

FIGURE 5.8
VEHICLE TRUNK COMPARTMENT MANUAL RELEASE MECHANISM

2008 MITSUBISHI LANCER
NHTSA NO. C85603
FMVSS NO. 401

FIGURE 5.9
RELEASE MECHANISM WITH TEST EQUIPMENT ATTACHED

2008 MITSUBISHI LANCER
NHTSA NO. C85603
FMVSS NO. 401

FIGURE 5.10
TEST OBSERVER IN TRUNK COMPARTMENT

2008 MITSUBISHI LANCER
NHTSA NO. C85603
FMVSS NO. 401

FIGURE 5.11
TRUNK LID EXTERIOR

2008 MITSUBISHI LANCER
NHTSA NO. C85603
FMVSS NO. 401

FIGURE 5.12
RELEASE MECHANISM INSIDE CLOSED TRUNK

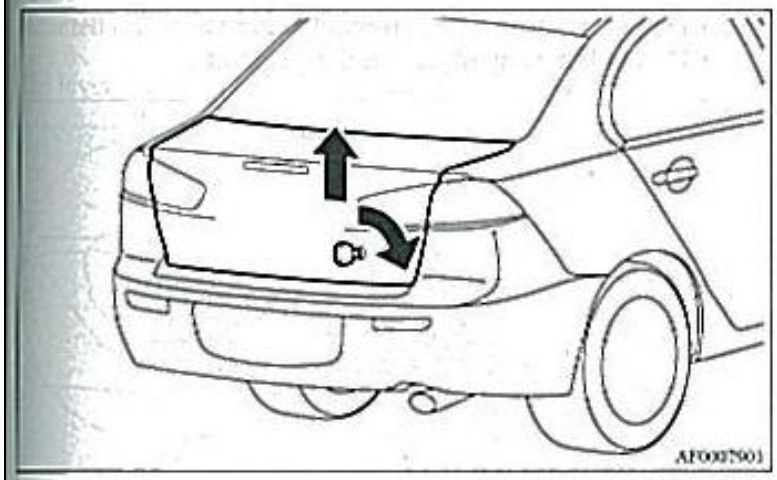
SECTION 6

OWNER’S MANUAL PAGES

To open

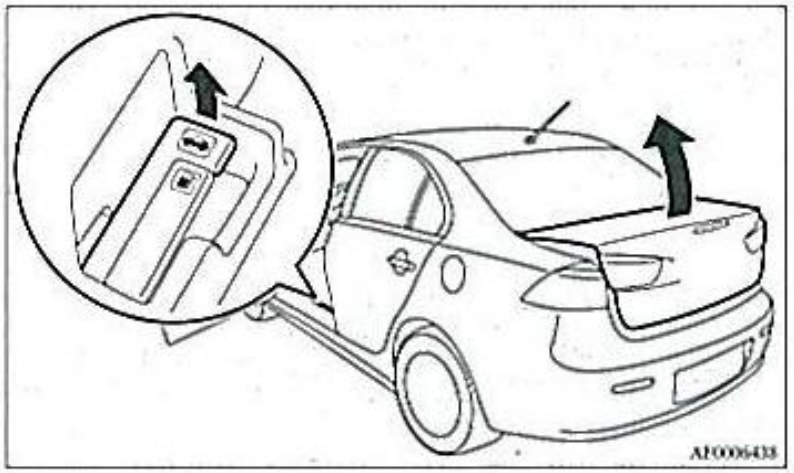
Operation from outside the vehicle

Using the key (Vehicles with key cylinder)
Insert the key and turn it clockwise.
The trunk lid will unlock and pop up slightly. Lift it to open the trunk.



Using the remote control transmitter (Vehicles with keyless entry system or F.A.S.T.-key)
Press the trunk button (Vehicles with keyless entry system or F.A.S.T.-key) or OPEN switch (Vehicles with F.A.S.T.-key). (See "Keyless entry system" on page 3-9, 3-43 or "Free-hand Advanced Security Transmitter (F.A.S.T.-key)" on page 3-16.)
The trunk lid will unlock and pop up to slightly. Lift it to open the trunk.

Operation from inside the vehicle



Pull the trunk lid release lever, located to the left of the driver's seat, up to open the trunk.

⚠ *CAUTION*

- **Do not use the trunk lid release lever while the vehicle is moving. If the trunk lid is opened, objects in the trunk could fall onto the road and cause an accident.**

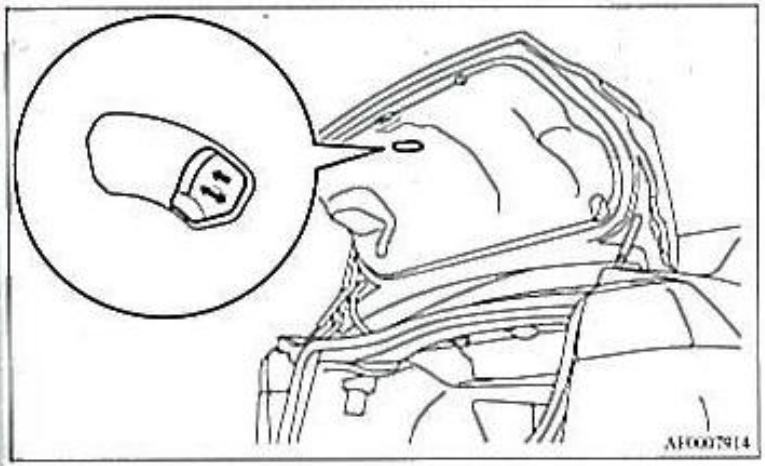
NOTE
- The trunk area light comes on when the trunk lid is opened, and goes out when it is closed.

Inside emergency trunk lid release

The emergency trunk lid release is designed to provide a way to open the trunk lid from inside the trunk. It was developed to help prevent death and serious injuries to children who might become locked inside a vehicle trunk.

The emergency trunk lid release lever (see illustration) is mounted on the trunk lid.

The lever glows in the dark after exposure to sunlight.

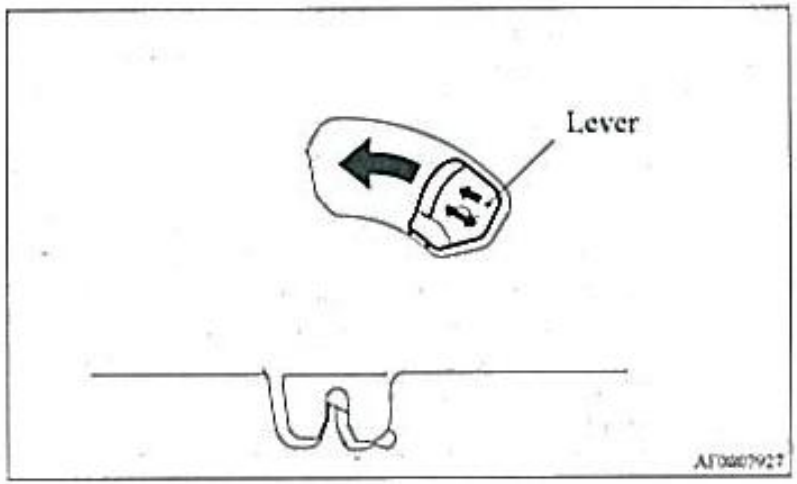


You and your family should familiarize yourselves with the location and operation of the emergency trunk lid release lever. Children should be taught not to play in or around vehicles.

⚠ WARNING

- **Children should never be left unsupervised in or around vehicles.**
- **Unsupervised children could lock themselves in an open vehicle or trunk.**
- **People trapped inside a vehicle or trunk, even if only for a short period of time, can quickly die from suffocation or heat stroke, especially on hot days. Interior temperatures in vehicles can rise in minutes.**
- **Keep your vehicle doors locked and the trunk lid closed when not in use. Keep your vehicle keys away from children.**

To open the trunk from the inside, move the lever in the direction of the arrow on the lever. Push up on the trunk lid to open the trunk and climb out.



⚠ CAUTION

- **When loading the trunk, place your things so that they will not touch the emergency trunk lid release lever when you close the trunk. Otherwise you could damage the lever and make it unusable.**

Theft-alarm system (if so equipped)

The theft-alarm system is designed to provide protection from unauthorized entry into the vehicle. This system is operated in three stages: the first is the "armed" stage, the second is the "alarm" stage, and third is the "disarmed" stage. If triggered, the system provides both audible and visual alarm signals.

Armed stage

Park the vehicle and stop the engine. Arm the system as described below.

1. Turn the ignition switch to the "LOCK" position. Also, if a key was used to start the engine, remove the key from the ignition switch.
2. Make sure that the trunk lid is locked.