### FINAL REPORT NUMBER 401-NSA-04-004

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# SAFETY COMPLIANCE TESTING FOR FMVSS 401 Interior Trunk Release

2004 Mazda 6 4-Door NHTSA No. C45405

Prepared by:
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March 30, 2004

# FINAL REPORT

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Date:

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#### 1.0 PURPOSE OF COMPLIANCE TEST

The purpose of this compliance test was to determine whether the subject vehicle, a 2004 Mazda 6 4-Door, meets the performance requirements of FMVSS 401, Interior Trunk Release.

The test was conducted in accordance with the U. S. Department of Transportation, National Highway Traffic Safety Administration's Laboratory Test Procedure TP-401-01.

The test was conducted at a Mazda Dealership in Northern Virginia on March 10, 2004 by NHTSA Office of Vehicle Safety Compliance test engineers.

# 2.0 TEST PROCEDURE AND DISCUSSION OF RESULTS

Based on the test performed, the 2004 Mazda 6 4-Door, NHTSA No. C45405 appeared to meet the requirements of FMVSS 401.

The vehicle was tested by entering the trunk and closing the Iid. The release handle was easily observed in the darkened, enclosed trunk. A force gauge was attached to the release handle and 3 separate attempts were made to exit the trunk by applying a load to the instrument. For each attempt, the trunk released from the single latching position at a force level of approximately 6.8 newtons (1.5 lbs.) or less.

# 3.0 COMPLIANCE TEST DATA

# DATA SHEET 1

# FMVSS 401 - VEHICLE DESCRIPTION

VEHICLE MY/MAKE/MODEL 2004/MAZDA 6 / MAZDA 6
BODY STYLE: 4-DOOR
VEH. NHTSA NO.: <u>C45405</u> ; VIN: <u>1YVFP80DX45N30499</u>
DATE OF TEST: 03/10/04 TEST LAB: BY OVSC @ DEALER
GVWR: 1958 KG MANUFACTURED DATE: 11/03
TRUNK LOCATION: DEAD V EDONT
TRUNK LOCATION: REAR X FRONT
If Front, Front Opening? <u>na</u>
NUMBER OF TRUNK LID LATCHING POSITIONS:1
INTERIOR TRUNK RELEASE: MANUAL_X_; AUTOMATIC;
BOTH
POWER OPERATED CLOSURE: na
OWNER'S MANUAL DESCRIPTION OF TRUNK RELEASE: YES X
NO
.40
REMOVABLE EQUIPMENT DELIVERED IN TRUNK:
SPARE TIRE: X (SIZE)
TIRE JACK: X
LUG WRENCH: X
TOOL BOX: (SIZE)
PARTITIONS:
OTHER:
REMARKS:
RECORDED BY: SSe DATE: 03/10/04
APPROVED BY: S. Seigel

#### 3.0 DATA SHEETS....Continued

# DATA SHEET 2 (1 of 2)

FMVSS 401 - All trunks except for front trunk compartments with front opening hoods

#### MANUAL TRUNK RELEASE OPERATION

VEHICLE MY/MAKE/MODEL/BODY STYLE: <u>2004/MAZDA 6/4-DOOR</u>				
VEH. NHTSA NO.: C45405; VIN: <u>1YVFP80DX45N30499</u>				
DATE OF TEST:3/10/04				
Method used to actuate interior trunk release: SLIDE LEVER (Grab handle,				
Rotating lever, etc.)				
Can test personnel enter trunk and be closed within: Yes_XNo				
if Yes, size of occupant:At least 50th percentile male				
Is there access to the trunk compartment by folding down rear seat or partition:				
Yes X No_				
Does Release Mechanism require electric power: Yes No_X				
Can release mechanism be easily seen inside the closed trunk: Yes_X_ No				
Describe method used by vehicle manufacturer to ensure that release mechanism is visible in a closed trunk compartment: Phosphorescence (Phosphorescence, auxillary lighting, etc)				

Describe laboratory test method used to determine visibility of release mechanism: <u>Trunk Entry</u> (Trunk entry, darkened room, etc.)

Vehicle Stationary Force Required to Trunk Released from All Pass/Fall (0 km/h) Release Trunk Lid latching positions (Newtons) [no requirement] NO KEY IN IGNITION 6.8 N - 1.5 pounds Attempt 1 Yes pass Attempt 2 6.8 N - 1.5 pounds Yes pass Attempt 3 6.8 N - 1.5 pounds Yes pass Average -6.8N - 1.5 pounds

#### 3.0 DATA SHEETS....Continued

#### DATA SHEET 2 (2 of 2)

FMVSS 401 - MANUAL TRUNK RELEASE OPERATION (continued)

NOTE: <u>Interior Trunk Release is a totally mechanical system with its</u> operation and functioning not dependent upon engine operation or vehicle speed. The release mechanism will function identical to that of the stationary vehicle with the no key in the ignition (as previously tested) and thus the following tests were not required to be conducted.

Vehicle Stationary	Force Required to	Trunk Released from All	Pass/Fall
(0 km/h)	Release Trunk Lid	latching positions	
	(Newtons)		
ENGINE IDLING	[no requirement]		
Attempt 1			
Attempt 2			
Attempt 3			,
Average -	·	<del> </del>	

Force Required to Release Trunk Lid (Newtons) [no requirement]	Trunk Released from All latching positions	Pass/Fall
	*	
	-	

Describe method used to propel vehicle	3:		
PASS X FAIL		REMARKS:	
RECORDED BY: SSe	DATE:	3/10/04	
APPROVED BY: S. Seigel			
3.0 DATA SHEETS Continued			

# DATA SHEET 3 FMVSS 401 - TEST SUMMARY

·	PASS	FAIL	COMMENTS
Automatic or Manual release mechanism inside the trunk compartment. S4.1	x		Manual release lever handle
If manual release, lighting feature is included. S4.2(a)	х		Self Lighting
If automatic release, unlatches trunk lid within 5 minutes. S4.2(b)	Na		
Except as provided by \$4.3(b), actuation of release mechanism required by \$4.1 completely releases trunk lid from all latching positions of the trunk lid latch. \$4.3(a)	x		Single Latch Position Only
For front trunk compartments, front opening hoods, when vehicle is stationary latch releases trunk lid from all locking positions. When moving forward at a speed less than 5km/h, must release the primary latch and may release all latches. At speeds greater than 5km/h must release the primary latch only.  S4.3(b)	Na		

PASS _	X FAIL		
REMAR	KS: RECORDED BY: _	SSe	_
APPRO\	/ED BY: S.Seigei		
DATE: _	3/10/04_		

# 4.0 - Test Equipment List and Calibration Information

EQUIPMENT	DESCRIPTION	MODEL/SERIAL NO.	CALIBRATION DATE	NEXT CAL.
Force Transducer	Viking Jr. Hanson Instrument	Model 890	Manufacturer	Manufacturer

# 5.0 - Photographs

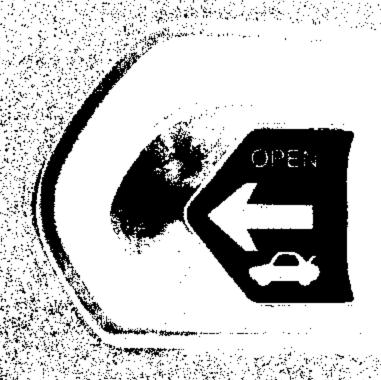




7004 MAZDA 6 NHTSA #1 645405 VEh. Le Ren



2004 MAZJAC vitticle contification bother.



TRUNK RELEASE Slide LEVER

6.0 Vehicle Owner's Manual (applicable pages)

the halis open.



bush open sucine is

# Trunk Release Slide Life

Four vehicle is equipped with a tent release slide lever that provides a many of escape for children and adults in the event they become locked inside the trunk.

No matter how careful adults might be with keys and locking their cars, pages simulable aware that challen may be compled to play around vehicles and us the trink as a hiding place.

Adolts are advised to tampliarize themselves with the operation and location of the trunk release slide lavers this all smildren can be told about it in a appropriate way, keeping hi midd that must vehicles slow! have such leves?

# AWARNING.

Open Trugh lid and Children;
heaving the trunk lid open of leaving a
children in the behicle with the part in
dargerous Children could open that
up at lid and clinib history periods
grantial truncy in dential com had
exposited from the
exposure. Chore the trank lid, incheshe
reas reathers, and do not given
children; to play inside the vehicle

Linatikusles Children and Pets
Leaving children or dinimals
unattended in a parkel velocid is
dangerous. Babies left sleeping and
etils who lock themselves in causion stranks can die very apickly from heat
nationalisti. Dagte leavenous children
of pets alongs in a cost of any dimens
Can i peave the can the rear fulfille of
person theorems an lockest. It was
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Topening the Trunk Lid trong the Inside

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