

FINAL REPORT NUMBER 401-NVS-04-009

2/3  
HS-#  
637080

**SAFETY COMPLIANCE TESTING FOR  
FMVSS 401  
Interior Trunk Release**

**2004 Nissan Sentra 4-Door  
NHTSA No. C45208**

**Prepared by:  
NHTSA  
OFFICE OF VEHICLE SAFETY COMPLIANCE  
400 7<sup>th</sup> Street, SW  
Washington, D.C. 20590**



April 20, 2004

**FINAL REPORT**

PREPARED FOR:

**U.S. DEPARTMENT OF TRANSPORTATION  
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION  
ENFORCEMENT  
OFFICE OF VEHICLE SAFETY COMPLIANCE  
400 SEVENTH STREET, SW  
ROOM 6111 (NVS-221)  
WASHINGTON, D.C. 20590**

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:

  
Stuart Seigel, Safety Compliance Engineer

Accepted By:

  
Stuart Seigel

Date:

4/20/04

### TECHNICAL REPORT STANDARD TITLE PAGE

1. Report No. 401-NVS-04-009		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle Final Report of FMVSS 401 Compliance Testing of a 2004 Nissan Sentra 4-Door, NHTSA No. C45208		5. Report Date April 20, 2004		6. Performing Organization Code OVSC	
		7. Author(s) Stuart Selgel, Safety Compliance Engineer		8. Performing Organization Report No. 401-NVS-04-009	
9. Performing Organization Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Enforcement Office of Vehicle Safety Compliance (NVS-221) 400 Seventh Street, SW Room 6111 Washington, DC 20590		10. Work Unit No.		11. Contract or Grant No.	
		12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Enforcement Office of Vehicle Safety Compliance (NVS-221) 400 Seventh Street, SW Room 6111 Washington, DC 20590		13. Type of Report and Period Covered Final Test Report	
				14. Sponsoring Agency Code NVS-220	
15. Supplementary Notes					
16. Abstract A compliance test was conducted on the subject 2004 Nissan Sentra 4-Door, NHTSA No. C45208, 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. The test was conducted at a Nissan Dealership in Northern Virginia, by NHTSA personnel on April 13, 2004. Test failures identified were as follows: NONE					
17. Key Words Compliance Testing Safety Engineering FMVSS 401 2004 Nissan Sentra 4-Door		18. Distribution Statement Copies of this report are available from: NHTSA Technical Reference Division, Mail Code: NAD-52 400 Seventh Street, SW, Room 5108 Washington, D.C. 20590 Telephone No. (202) 366-4946			
19. Security Classif. (of this report) Unclassified	20. Security Classif. (of this page) Unclassified	21. No. of Pages		22. Price	

**TABLE OF CONTENTS**

<b><u>SECTION NO.</u></b>	<b><u>DESCRIPTION</u></b>	<b><u>PAGE</u></b>
1.0	PURPOSE OF COMPLIANCE TEST	5
2.0	TEST PROCEDURE AND DISCUSSION OF RESULTS	6
3.0	COMPLIANCE TEST DATA	7
4.0	TEST EQUIPMENT LIST AND CALIBRATION INFORMATION	11
5.0	PHOTOGRAPHS	12
	List of Photographs	
	A. Vehicle Front	
	B. Vehicle Rear	
	C. Trunk Open	
	D. Vehicle Certification Label	
	E. Trunk Release Rotating Lever	
	F. Force Transducer Attached to Release Lever	
6.0	VEHICLE OWNER'S MANUAL (applicable pages)	13

## **1.0 PURPOSE OF COMPLIANCE TEST**

The purpose of this compliance test was to determine whether the subject vehicle, a 2004 Nissan Sentra 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 Nissan Dealership in Northern Virginia on April 13, 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 Nissan Sentra 4-Door, NHTSA No. C45208 appeared to meet the requirements of FMVSS 401.

The vehicle was tested by entering the trunk and closing the lid. The release rotating lever was easily observed in the darkened, enclosed trunk. A force gauge was attached to the release lever 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 9 newtons (2 lbs.) or less.

**3.0 COMPLIANCE TEST DATA**

**DATA SHEET 1**

**FMVSS 401 - VEHICLE DESCRIPTION**

VEHICLE MY/MAKE/MODEL 2004/NISSAN SENTRA/4DOOR

BODY STYLE: 4-DOOR

VEH. NHTSA NO.: C45208 ; VIN: 3N1CB51D74L882611

DATE OF TEST: 04/13/04

TEST LAB: BY OVSC @ DEALER

GVWR: 1613 KG

MANUFACTURED DATE: 11/03

TRUNK LOCATION: REAR X FRONT \_\_\_\_\_

If Front, Front Opening? na

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 \_\_\_\_\_

**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: 04/13/04

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: 2004/NISSAN SENTRA/4-DOOR

VEH. NHTSA NO.: C45208 ; VIN: 3N1CB51D74L882611

DATE OF TEST: 4/13/04

Method used to actuate interior trunk release: Rotating Lever (Grab handle, Rotating lever, etc.)

Can test personnel enter trunk and be closed within: Yes X No     

If Yes, size of occupant: At least 50<sup>th</sup> 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, auxiliary lighting, etc)

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

Vehicle Stationary (0 km/h) <b>NO KEY IN IGNITION</b>	Force Required to Release Trunk Lid (Newtons) [no requirement]	Trunk Released from <u>All</u> latching positions	Pass/Fail
Attempt 1	9.0 N - 2.0 pounds	Yes	pass
Attempt 2	9.0 N - 2.0 pounds	Yes	pass
Attempt 3	9.0 N - 2.0 pounds	Yes	pass
Average -	9.0N - 2.0 pounds		



## 3.0 DATA SHEETS....Continued

## DATA SHEET 2 (2 of 2)

## FMVSS 401 - MANUAL TRUNK RELEASE OPERATION (continued)

**NOTE: Interior Trunk Release is a totally mechanical system with its operation and functioning not dependant 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 (0 km/h)	Force Required to Release Trunk Lid (Newtons) [no requirement]	Trunk Released from <u>All</u> latching positions	Pass/Fail
<b>ENGINE IDLING</b>			
Attempt 1			
Attempt 2			
Attempt 3			
Average -			

Vehicle Speed (km/h)	Force Required to Release Trunk Lid (Newtons) [no requirement]	Trunk Released from <u>All</u> latching positions	Pass/Fail
10			
20			
30			

Describe method used to propel vehicle: \_\_\_\_\_

PASS  FAIL \_\_\_\_\_

REMARKS:

RECORDED BY: SSe

DATE: 4/13/04

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		<b>Manual Rotating Release Lever</b>
If manual release, lighting feature is included. S4.2(a)	X		<b>Self Lighting</b>
If automatic release, unlatches trunk lid within 5 minutes. S4.2(b)	Na		
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)	X		<b>Single Latch Position Only</b>
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       

REMARKS: RECORDED BY:   SSe  

APPROVED BY:   S.Seigel  

DATE:   4/13/04

**4.0 - Test Equipment List and Calibration Information**

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

## 5.0 - Photographs

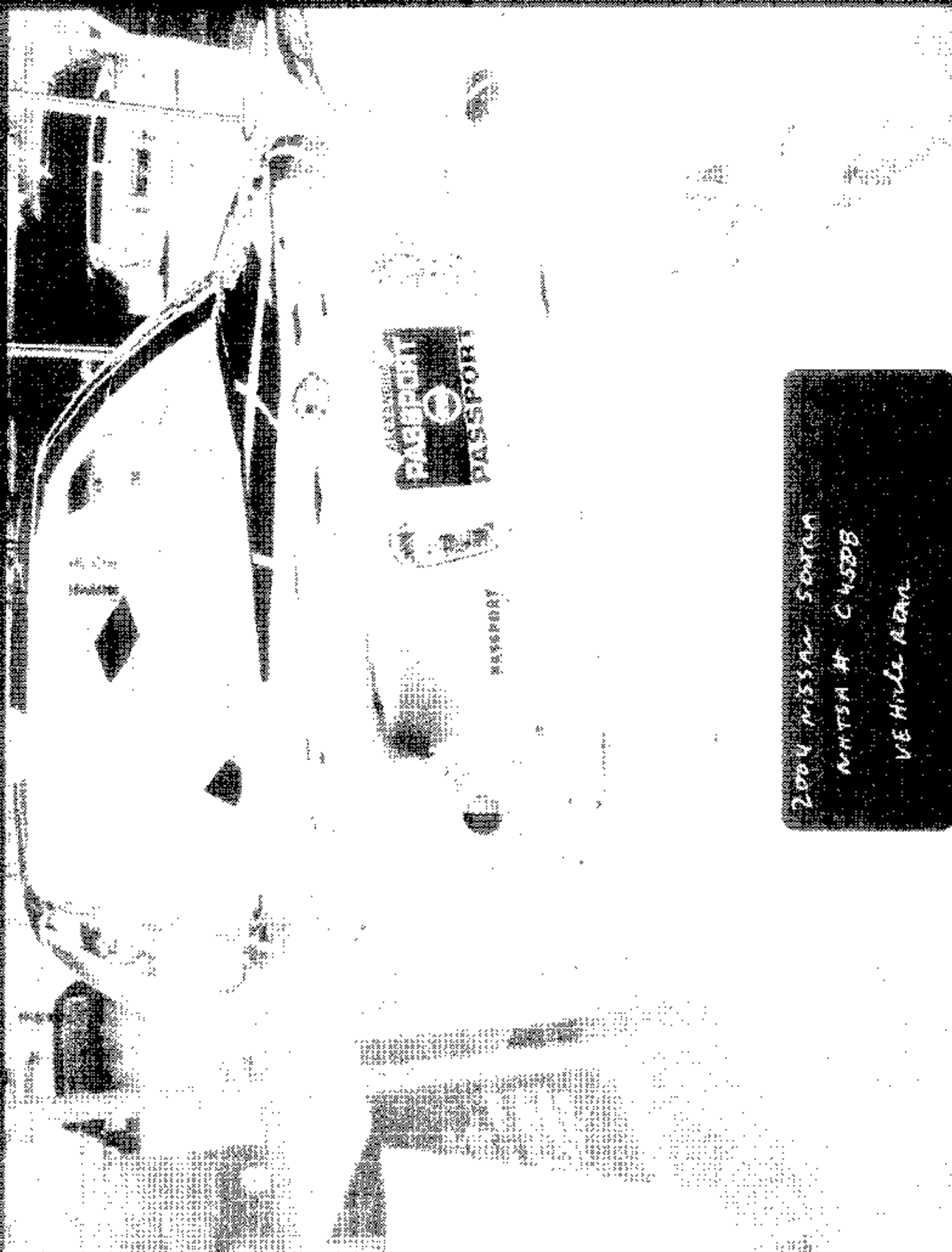


2004 NISSAN SENTRA

NATSA A C45708

VEHICLE FRONT

EVERETT  
EVERETT, WASH. 98001



PASSPORT  
PASSPORT

2004 HISSAL SONTA  
NHTSA # C4528  
VE Hilde RIAN

2004 NISSAN SENTRA  
NHTSA # C45208  
TRUNK OPEN

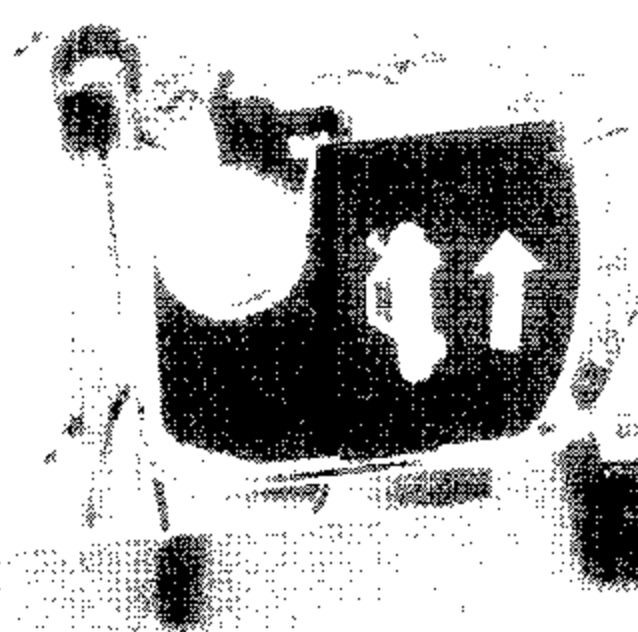
MANUFACTURED BY NISSAN MOTOR CO., LTD.  
DATE: 11/20/03 GVWR: 3519 LBS  
GAWR FR: 1722 LBS GAWR RR: 1688 LBS

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR  
VEHICLE SAFETY, BUMPER AND THEFT PREVENTION STANDARDS  
IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.  
SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION.

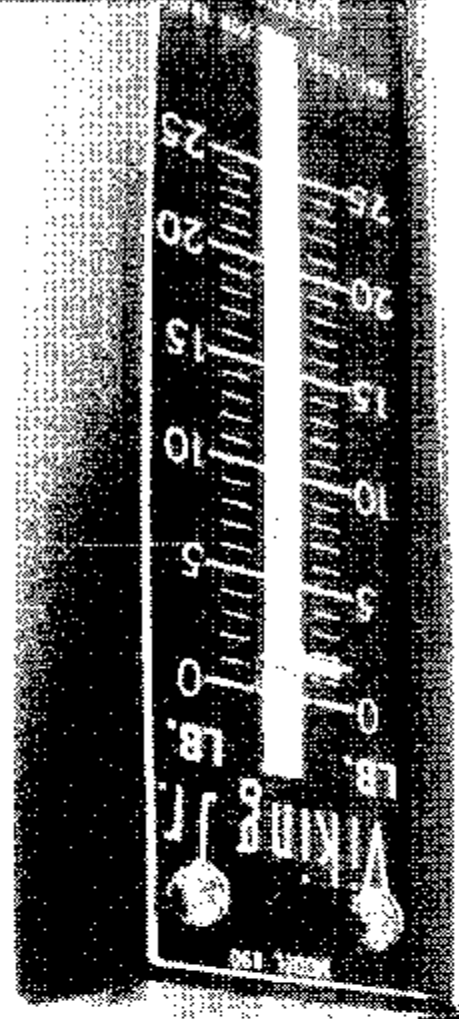
VIN: EN1CB5LD74L8B611 PASSENGER CAR  
COLOR TRIM TRANS AXLE ENGINE  
BYA X REUF03B FA8B 6GRADE 1759 CC  
MODEL: DATALEA-EUA 4700SD  
  
EN1CB5LD74L8B611

2004 NISSAN SENTRA  
WMTSA # C45208  
VEHICLE CERTIFICATION LABEL





2004 NISSAN SENTRA  
VIN# BA 45208  
TRUNK RELEASE LEVER



2004 NISSAN SENTRA  
NHTSA # C45208  
FORCE TRANSDUCER ATTACHED  
TO RELEASE LEVER



**6.0 Vehicle Owner's Manual (applicable pages)**

2004 MITSUBISHI SOUTHA  
WESTERN  
WHYSA # 445208

OWNER'S MANUAL