

REPORT NUMBER 118-GTL-18-004

**SAFETY COMPLIANCE TESTING FOR
FMVSS NO. 118
POWER-OPERATED WINDOW, PARTITION
AND ROOF PANEL SYSTEMS**

**BAYERISCHE MOTOREN WERKE AG
2018 BMW 530i PASSENGER CAR
NHTSA NO. C20184100**

**GENERAL TESTING LABORATORIES, INC.
1623 LEEDSTOWN ROAD
COLONIAL BEACH, VIRGINIA 22443**



November 28, 2017

FINAL REPORT

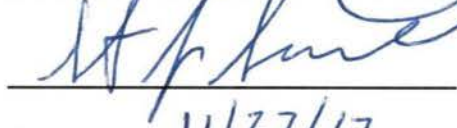
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**U. S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
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Approval Date: 11/28/17

FINAL REPORT ACCEPTANCE BY OVSC.

Accepted By: 
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SECTION 1

PURPOSE OF COMPLIANCE TEST

1.0 PURPOSE OF TEST

A model year 2018 BMW 530i Passenger Car was subjected to Federal Motor Vehicle Safety Standard (FMVSS) No. 118 testing to determine if the vehicle was in compliance with the requirements of the standard. FMVSS 118 specifies requirements for power-operated window, partition, and roof panel systems to minimize the likelihood of death or injury from their accidental operation.

1.1 The test vehicle was a 2018 BMW 530i Passenger Car. The vehicle was identified as follows:

A. Vehicle Identification Number: WBAJA5C5XJWA36363

B. NHTSA No.: C20184100

C. Manufacturer: BAYERISCHE MOTOREN WERKE AG

D. Manufacture Date: 09/17

1.2 TEST DATE

The test vehicle was subjected to FMVSS No. 118 testing on November 7-8, 2017.

SECTION 2

TEST PROCEDURE AND SUMMARY OF RESULTS

2.0 TEST PROCEDURE

All tests were conducted in accordance with NHTSA, Office of Vehicle Safety Compliance (OVSC) Laboratory Procedure TP-118-06 dated 12 April 2006 and General Testing Laboratories, Inc. (GTL) Test Procedure, TP-118-06, "Power Operated Window, Partition and Roof Panel Systems".

FMVSS 118 Compliance Testing was performed in the following sequence:

- A. Test Vehicle Identification/Documentation
- B. Power Window, partition and roof panel identification/documentation
- C. Interior, exterior and remote control switch identification/documentation
- D. Pre-test operation of all power windows, partitions and roof panels
- E. Photograph vehicle and interior, exterior and remote control devices
- F. Perform Interior Locking System Off Test
- G. Perform Interior Locking System Off with Key Removed Test
- H. Perform Occupant Compartment Actuation Device Test(Sphere Test and Pull up or Pull Out Test)
- I. Perform Auto Reverse Force Testing (information purpose only)

2.1 SUMMARY OF RESULTS

The power window operational test resulted in no anomalies being noted. Test data indicate the FMVSS 118 requirements appear to have been satisfied. All test data resulting from the tests were recorded on test data sheets in Section 3.

SECTION 3

TEST DATA

3.0 TEST RESULTS

The following data sheets document the results of FMVSS 118 testing on the 2018 BMW 530i Passenger Car.

FMVSS 118
COMPLIANCE DATA SUMMARY SHEET

VEHICLE MAKE/MODEL/BODY STYLE: 2018 BMW 530i

VEHICLE NHTSA NO: C20184100

VIN: WBAJA5C5XJWA36363

VEHICLE TYPE: PASSENGER CAR

DATE OF MANUFACTURE: 09/17

LABORATORY: GENERAL TESTING LABORATORIES

TEST DATE: 11/07/17-11/08/17

REQUIREMENT	PASS	FAIL	N/A
S4 Interior Locking system in Off Position(s)	X		
S4 Interior Locking System Off with Key Removed	X		
S4 Exterior Locking System			X
S4 Remote Actuation Device			X
S6 Occupant Compartment Actuation Devices (Sphere Test/Pull Up or Pull Out Test)	X		
S5 Automatic Reversal System			X

REMARKS:

RECORDED BY: G. Farrand

DATE: 11/08/17

APPROVED BY: D. Messick

WPRP PRE-OPERATIONAL CHECK

VEHICLE MAKE/MODEL/BODY STYLE: 2018 BMW 530i
 VEHICLE NHTSA NO: C20184100 VIN: WBAJA5C5XJWA36363
 VEHICLE TYPE: PASSENGER CAR DATE OF MANUFACTURE: 09/17
 LABORATORY: GENERAL TESTING LABORATORIES TEST DATE: 11/07/17

Identify power-operated WPRP and WPRP actuation devices

	LEFT FRONT	LEFT REAR	RIGHT FRONT	RIGHT REAR	TAIL GATE	PARTITION	ROOF PANEL
Power WPRP Installed	X	X	X	X			X
Individual Interior Actuation Devices	X	X	X	X			X
Master Control Panel Actuation Devices	X	X	X	X			
WPRP Operated by Exterior Locking System							
WPRP Operated by Remote Control	Down only	Down only	Down only	Down only			Open only
WPRP with Auto-Reverse Capability	X	X	X	X			X
WPRP with Express-Up Capability	X	X	X	X			X

Master Control Panel Location: Driver's door panel
 WPRP Exterior Locking System Location: N/A
 WPRP Remote Control Type () Line of Sight () Non-line of Sight () Both (X) N/A
 WPRP Actuation Device Design (Toggle, Rocker, Push/Pull (Lever) or describe other):
 Master Control Panel Push/Pull
 Individual Window Push/Pull
 Roof Panel Push/Pull
 Vents _____

Interior Locking System Key Positions (clockwise): Push button start with Off, Standby, Drive-Ready

All WPRP open/close cycles are satisfactory with key in "ON" position:

(X) YES () NO If NO, compliance test shall not proceed

All WPRP open/close cycles are satisfactory with key in "ACCESSORY" position:

(X) YES () Not Applicable –Not operative in Accessory position

REMARKS: With key FOB within the vehicle, the vehicle Start/Stop button will start vehicle engine when depressed from the off state. The Start/Stop button will then turn off the engine and put vehicle in accessory mode when depressed from the running state and the windows are operational. The Start/Stop button will not put vehicle into full off state. To put vehicle in the full off state after engine is turned off (accessory/radio and windows do not function) requires the radio power button to be depressed (key FOB within vehicle), or the key FOB to pass thru any door threshold to the outside of the vehicle. Opening of the doors with the engine off but with key FOB still within the vehicle will not disable the window function. Engine off with key FOB within the vehicle is similar to traditional keyed ignition in accessory mode where windows will function.

RECORDED BY: G. Farrand
 APPROVED BY: D. Messick

DATE: 11/07/17

DATA SHEET 1
INTERIOR LOCKING SYSTEM TEST

VEHICLE MAKE/MODEL/BODY STYLE: 2018 BMW 530i
 VEHICLE NHTSA NO: C20184100 VIN: WBAJA5C5XJWA36363
 VEHICLE TYPE: PASSENGER CAR DATE OF MANUFACTURE: 09/17
 LABORATORY: GENERAL TESTING LABORATORIES TEST DATE: 11/07/17

Key lock position at start of test execution: (X) ON () ACCESSORY THEN TO

Key lock off position during test execution: (X) LOCK (X) OFF () ACCESSORY

ACTUATION DEVICES	DOORS CLOSED		LEFT DOOR OPEN		RIGHT DOOR OPEN		PASS/ FAIL
	INOP.	OPER.	INOP.	OPER.	INOP.	OPER.	
MASTER CONTROL PANEL ACTUATION DEVICES							
Left Front (LF)	X		X		X		P
Right Front (RF)	X		X		X		P
Left Rear (LR)	X		X		X		P
Right Rear (RR)	X		X		X		P
Vent Window(s)							
Tail Gate (TG)							
Partition (P)							
Roof Panel (RP)	X		X		X		P
INDIVIDUAL ACTUATION DEVICES							
Left Front (LF)	X		X		X		P
Right Front (RF)	X		X		X		P
Left Rear (LR)	X		X		X		P
Right Rear (RR)	X		X		X		P
Vent Window(s)							
Tail Gate Window							
Partition Window							
Roof Panel Window	X		X		X		P

REMARKS: Test conducted with engine off, and radio button pressed. Vehicle is completely off similar to conventional key ignition with key in the off position or removed.

RECORDED BY: G. Farrand

DATE: 11/07/17

APPROVED BY: D. Messick

DATA SHEET 2
INTERIOR LOCKING SYSTEM WITH KEY REMOVED TEST

VEHICLE MAKE/MODEL/BODY STYLE: 2018 BMW 530i
 VEHICLE NHTSA NO: C20184100 VIN: WBAJA5C5XJWA36363
 VEHICLE TYPE: PASSENGER CAR DATE OF MANUFACTURE: 09/17
 LABORATORY: GENERAL TESTING LABORATORIES TEST DATE: 11/07/17

Key lock position at start of test execution: (X) ON (X) ACCESSORY Then: Engine off, and key out of range.

ACTUATION DEVICES	DOORS CLOSED		LEFT DOOR OPEN		RIGHT DOOR OPEN		PASS/FAIL
	INOP.	OPER.	INOP.	OPER.	INOP.	OPER.	
MASTER CONTROL PANEL ACTUATION DEVICES							
Left Front (LF)	X		X		X		P
Right Front (RF)	X		X		X		P
Left Rear (LR)	X		X		X		P
Right Rear (RR)	X		X		X		P
Tail Gate (TG)							
Vent Windows(s)							
Partition (P)							
Roof Panel (RP)	X		X		X		P
INDIVIDUAL ACTUATION DEVICES							
Left Front (LF)	X		X		X		P
Right Front (RF)	X		X		X		P
Left Rear (LR)	X		X		X		P
Right Rear (RR)	X		X		X		P
Vent Window(s)							
Tail Gate Window							
Partition Window							
Roof Panel Window	X		X		X		P

REMARKS: Window switches will not work without key FOB within vehicle interior.

RECORDED BY: G. Farrand
 APPROVED BY: D. Messick

DATE: 11/07/17

DATA SHEET 3
EXTERIOR LOCKING SYSTEM TEST

VEHICLE MAKE/MODEL/BODY STYLE: 2018 BMW 530i
 VEHICLE NHTSA NO: C20184100 VIN: WBAJA5C5XJWA36363
 VEHICLE TYPE: PASSENGER CAR DATE OF MANUFACTURE: 09/17
 LABORATORY: GENERAL TESTING LABORATORIES TEST DATE: 11/07/17

Is vehicle equipped with an exterior locking system that can close any of the power windows, partitions, or roof panels? () YES (X) NO

Location of exterior locking system: _____

Describe how the exterior locking system is activated: _____

Identify the windows, partitions or roof panels that can be closed by the exterior system. Also, in each case, identify whether continuous activation of the locking system is required.

WINDOW, PARTITION AND ROOF PANEL IDENTIFICATION	EXTERIOR LOCKING SYSTEM		EXTERIOR LOCKING SYSTEM (PASS/FAIL)*
	OPERABLE (YES/NO)	CONTINUOUS ACTIVATION REQUIRED (YES/NO)	
LEFT FRONT (LF)			
RIGHT FRONT (RF)			
LEFT REAR (LR)			
RIGHT REAR (RR)			
VENT WINDOW(S)			
PARTITION(P)			
ROOF PANEL (RP)			
TAIL GATE (TG)			

*NOTE: Continuous activation of the locking system is required for each WPRP to pass the exterior locking system safety standard requirement.

REMARKS:

RECORDED BY: G. Farrand
 APPROVED BY: D. Messick

DATE: 11/07/17

DATA SHEET 4 REMOTE ACTUATION DEVICE

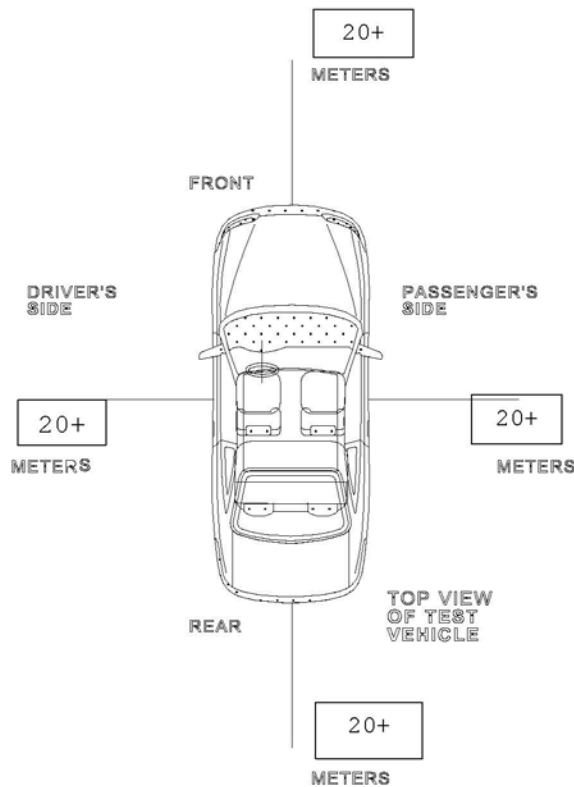
VEHICLE MAKE/MODEL/BODY STYLE: 2018 BMW 530i
 VEHICLE NHTSA NO: C20184100 VIN: WBAJA5C5XJWA36363
 VEHICLE TYPE: PASSENGER CAR DATE OF MANUFACTURE: 09/17
 LABORATORY: GENERAL TESTING LABORATORIES TEST DATE: 11/07/17

Type of remote actuation device installed on vehicle (check one):
 Non Line-Of-Site* Line-of-Site None

Measured range of Operation:

Record the maximum operating distance of the remote actuation device in the boxes below. The range of operation shall not exceed six meters for a **Non-Line-of-Site Device** or eleven meters for a **Line-of-Site Device** in any measured direction and continuous activation of the remote actuation device is required until all operable windows, partitions, or roof panels are completely closed.

Pass/Fail N/A



REMARKS: Remote Key Fob will only open windows. It does not close them. 20+ meters for information purposes only.

RECORDED BY: G. Farrand
 APPROVED BY: D. Messick

DATE: 11/07/17

DATA SHEET 5
OCCUPANT COMPARTMENT ACTUATION DEVICE TEST
SPHERE TEST

VEHICLE MAKE/MODEL/BODY STYLE: 2018 BMW 530i
 VEHICLE NHTSA NO: C20184100 VIN: WBAJA5C5XJWA36363
 VEHICLE TYPE: PASSENGER CAR DATE OF MANUFACTURE: 09/17
 LABORATORY: GENERAL TESTING LABORATORIES TEST DATE: 11/07/17

ACTUATION DEVICES	APPLICABLE (YES/NO*)	SPHERE ACTIVATED ACTUATION DEVICE CLOSSES WPRP (YES/NO)	TEST RESULT PASS/FAIL	COMPLIANCE REQUIRED (Y/N)
MASTER CONTROL PANEL ACTUATION DEVICES				
Left Front (LF)	YES	NO	PASS	YES
Right Front (RF)	YES	NO	PASS	YES
Left Rear (LR)	YES	NO	PASS	YES
Right Rear (RR)	YES	NO	PASS	YES
Tail Gate (TG)				
Vent Window(s)				
Partition (P)				
Roof Panel (RP)	YES	NO	PASS	YES
INDIVIDUAL ACTUATION DEVICES				
Left Front (LF)	YES	NO	PASS	YES
Right Front (RF)	YES	NO	PASS	YES
Left Rear (LR)	YES	NO	PASS	YES
Right Rear (RR)	YES	NO	PASS	YES
Vent Window(s)				
Tail Gate(TG)				
Partition(P)				
Roof Panel (RP)	YES	NO	PASS	YES

*This requirement does not apply to actuation devices that are mounted in a vehicle's roof, headliner, or overhead console and that can close a window, partition, or roof panel only by continuous rather than momentary switch actuation or actuation devices that comply with the reversing requirement of FMVSS 118, S5.

REMARKS:

RECORDED BY: G. Farrand
 APPROVED BY: D. Messick

DATE: 11/07/17

**DATA SHEET 6
OCCUPANT COMPARTMENT ACTUATION DEVICE TEST
FOR POWER-OPERATED WINDOWS ONLY
PULL UP OR PULL OUT TEST**

VEHICLE MAKE/MODEL/BODY STYLE: 2018 BMW 530i
 VEHICLE NHTSA NO: C20184100 VIN: WBAJA5C5XJWA36363
 VEHICLE TYPE: PASSENGER CAR DATE OF MANUFACTURE: 09/17
 LABORATORY: GENERAL TESTING LABORATORIES TEST DATE: 11/07/17

ACTUATION DEVICES	SWITCH ORIENTATION A – horizontal B – vertical C - angled	CLOSES POWER-OPERATED WINDOW ONLY IF: PULL UP OR PULL OUT	TEST RESULT PASS/FAIL	COMPLIANCE REQUIRED (Y/N)
MASTER CONTROL PANEL ACTUATION DEVICES				
Left Front (LF)	A	PULL UP	PASS	YES
Right Front (RF)	A	PULL UP	PASS	YES
Left Rear (LR)	A	PULL UP	PASS	YES
Right Rear (RR)	A	PULL UP	PASS	YES
Vent Window(s)				
INDIVIDUAL ACTUATION DEVICES				
Left Front (LF)	A	PULL UP	PASS	YES
Right Front (RF)	A	PULL UP	PASS	YES
Left Rear (LR)	A	PULL UP	PASS	YES
Right Rear (RR)	A	PULL UP	PASS	YES
Vent Window(s)				

RECORDED BY: G. Farrand
 APPROVED BY: D. Messick

DATE: 11/07/17

DATA SHEET 7
WPRP PHYSICAL CONTACT REVERSAL CAPABILITY

VEHICLE MAKE/MODEL/BODY STYLE: 2018 BMW 530i
 VEHICLE NHTSA NO: C20184100 VIN: WBAJA5C5XJWA36363
 VEHICLE TYPE: PASSENGER CAR DATE OF MANUFACTURE: 09/17
 LABORATORY: GENERAL TESTING LABORATORIES TEST DATE: 11/08/17

WPRP's equipped with reversal capability: FRONT DRIVER AND PASSENGER
 WPRP's that must meet reversal requirement: NONE
 Locking System Position: _____

GTL Test #	Window, Partition, Roof Panel	Test Rod Placement in Window, Partition or Roof Panel	Test Rod Size/Deflection	Window, Partition or Roof Panel Opening Before/After Closing (mm)	Maximum Force Measured on Test Rod (Newtons)	Window, Partition, or Roof Panel Reversing Distance (mm)	Pass/Fail*
7633	LEFT FRONT	FRONT	6MM/20NM	112/210	59	210	N/A*
7634	LEFT FRONT	REAR	6MM/20NM	157/212	67	212	N/A*
7635	LEFT REAR	CENTER	6MM/20NM	205/155	40	155	N/A*
7636	SUNROOF	CENTER	6MM/20NM	430/185	82	185	N/A*
7637	RIGHT FRONT	CENTER	50MM/65NM	196/260	94	260	N/A*
7638	RIGHT REAR	FRONT	50MM/65NM	218/205	95	205	N/A*

*WPRP must reverse direction before contacting or exerting a squeezing force of 100 Newtons. Upon such reversal, the WPRP must open to one of the following positions.

- A. A position that is at least as open as the position at the time closing was initiated
- B. A position that is not less than 125 mm more open than the position at the time the window reversed direction, or
- C. A position that permits a semi-rigid cylindrical rod that is 200 mm in diameter to be placed through the opening at the same contact point(s) used in 12.5.

REMARKS: *Vehicle does not need to meet the reversing requirements (FMVSS 118, S5) and this test was run for informational purposes only.

RECORDED BY: G. Farrand
 APPROVED BY: D. Messick

DATE: 11/08/17

SECTION 4
TEST EQUIPMENT LIST

VEHICLE MAKE/MODEL/BODY STYLE: 2018 BMW 530i
 VEHICLE NHTSA NO: C20184100 VIN: WBAJA5C5XJWA36363
 VEHICLE TYPE: PASSENGER CAR DATE OF MANUFACTURE: 09/17
 LABORATORY: GENERAL TESTING LABORATORIES TEST DATE: 11/07/17

ITEM	MFR	MODEL	S/N	CAL. PERIOD	DATE OF LAST CALIB.	REMARKS
SLR DIGITAL CAMERA	NIKON	D50	N/A	N/A	N/A	
PINCH FORCE SENSOR	SENSOR DEVELOPMENTS, INC.	10293	179104	36 MO.	05/20/16	

REMARKS:

RECORDED BY: G. FARRAND

DATE: 11/07/17

APPROVED BY: D. MESSICK

SECTION 5
PHOTOGRAPHS



2018 BMW 530i
NHTSA NO. C20184100
FMVSS NO. 118

FIGURE 5.1
¾ FRONTAL VIEW FROM LEFT SIDE OF VEHICLE



2018 BMW 530i
NHTSA NO. C20184100
FMVSS NO. 118

FIGURE 5.2
¾ REAR VIEW FROM RIGHT SIDE OF VEHICLE




2018 BMW 530i
NHTSA NO. C20184100
FMVSS NO. 118

FIGURE 5.3
CLOSE-UP VIEW OF VEHICLE CERTIFICATION LABEL

ATTENTION!

Always refer to the owner's manual for correct tire pressures.

Consultez le manuel de l'utilisateur pour les pressions de gonflage recommandées.




TIRE AND LOADING INFORMATION
RENSEIGNEMENTS SUR LES PNEUS ET LE CHARGEMENT

SEATING CAPACITY NOMBRE DE PLACES	TOTAL 5	FRONT AVANT 2	REAR ARRIÈRE 3
--------------------------------------	----------------	-------------------------	--------------------------

The combined weight of occupants and cargo should never exceed **390 kg or 860 lbs.**
 Le poids total des occupants et du chargement ne doit jamais dépasser **390 kg ou 860 lb.**

TIRE / PNEU	SIZE DIMENSIONS	COLD TIRE PRESSURE PRESSION DES PNEUS A FROID	<div style="background-color: black; color: yellow; padding: 5px;"> SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION VOIR LE MANUEL DE L'USAGER POUR PLUS DE RENSEIGNEMENTS </div>
FRONT / AVANT	245/45 R 18 XL	220 KPA, 32 PSI	
REAR / ARRIÈRE	245/45 R 18 XL	260 KPA, 38 PSI	
SPARE DE SECOURS	NONE	NONE KPA, NONE PSI	

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2018 BMW 530i
 NHTSA NO. C20184100
 FMVSS NO. 118

FIGURE 5.4
 CLOSE-UP VIEW OF TIRE INFORMATION LABEL



2018 BMW 530i
NHTSA NO. C20184100
FMVSS NO. 118

FIGURE 5.5
CLOSE-UP VIEW OF LEFT FRONT/MASTER POWER WINDOW SWITCHES



2018 BMW 530i
NHTSA NO. C20184100
FMVSS NO. 118

FIGURE 5.6
CLOSE-UP VIEW OF RIGHT FRONT POWER WINDOW SWITCH



2018 BMW 530i
NHTSA NO. C20184100
FMVSS NO. 118

FIGURE 5.7
CLOSE-UP VIEW OF LEFT REAR POWER WINDOW SWITCH



2018 BMW 530i
NHTSA NO. C20184100
FMVSS NO. 118

FIGURE 5.8
CLOSE-UP VIEW OF RIGHT REAR POWER WINDOW SWITCH



2018 BMW 530i
NHTSA NO. C20184100
FMVSS NO. 118

FIGURE 5.9
CLOSEUP VIEW OF SUNROOF CONTROL SWITCH



2018 BMW 530i
NHTSA NO. C20184100
FMVSS NO. 118

FIGURE 5.10
VEHICLE KEY/REMOTE



2018 BMW 530i
NHTSA NO. C20184100
FMVSS NO. 118

FIGURE 5.11
VEHICLE START/STOP SWITCH AND VEHICLE ON/OFF SWITCH



2018 BMW 530i
NHTSA NO. C20184100
FMVSS NO. 118

FIGURE 5.12
VEHICLE IDLE STATE/STANDBY STATE SWITCH



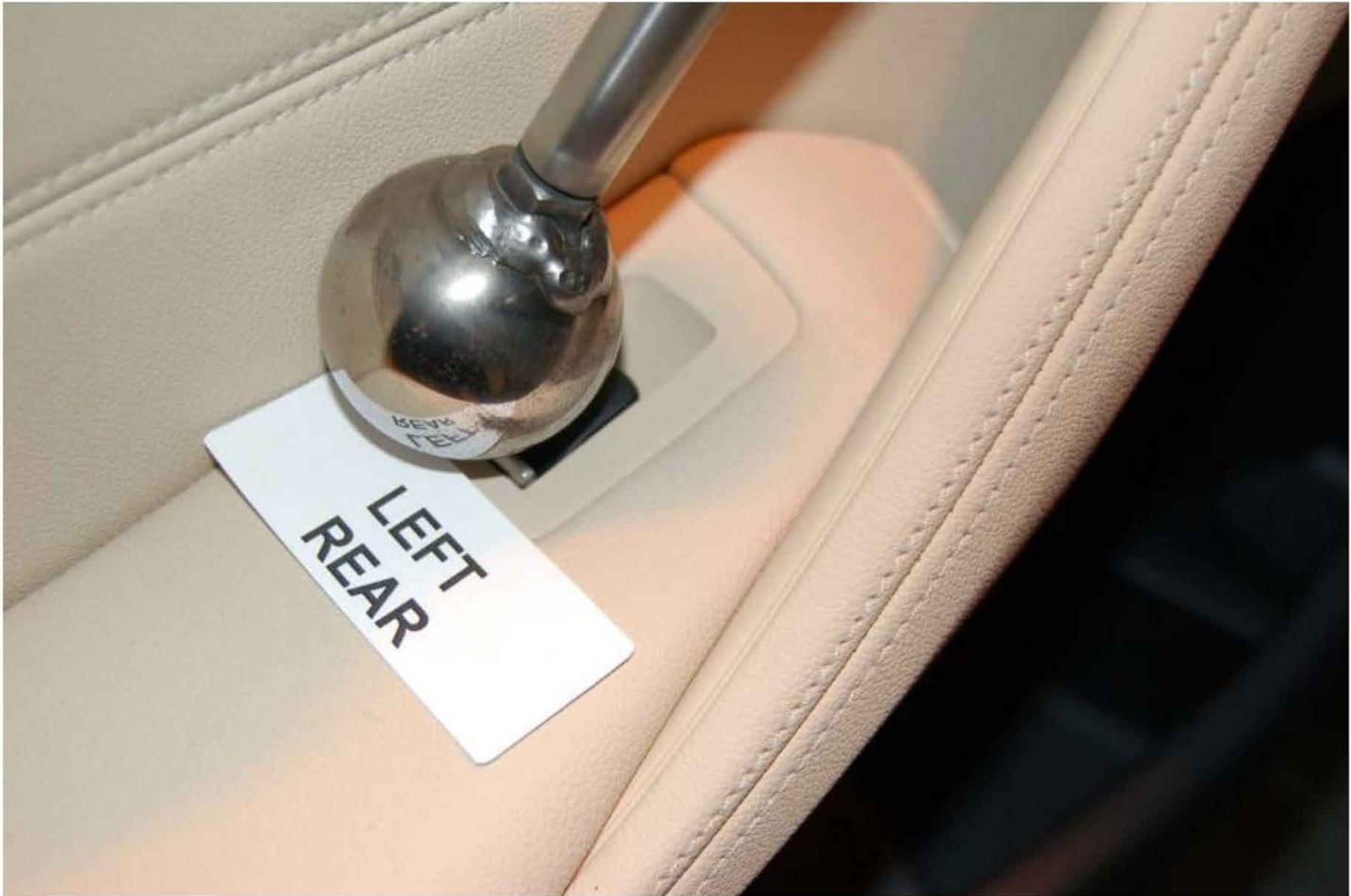
2018 BMW 530i
NHTSA NO. C20184100
FMVSS NO. 118

FIGURE 5.13
SPHERE TEST ON LEFT FRONT/MASTER WINDOW SWITCH



2018 BMW 530i
NHTSA NO. C20184100
FMVSS NO. 118

FIGURE 5.14
SPHERE TEST ON RIGHT FRONT WINDOW SWITCH



2018 BMW 530i
NHTSA NO. C20184100
FMVSS NO. 118

FIGURE 5.15
SPHERE TEST ON LEFT REAR WINDOW SWITCH



2018 BMW 530i
NHTSA NO. C20184100
FMVSS NO. 118

FIGURE 5.16
SPHERE TEST ON RIGHT REAR WINDOW SWITCH



2018 BMW 530i
NHTSA NO. C20184100
FMVSS NO. 118

FIGURE 5.17
SPHERE TEST ON SUNROOF CONTROL SWITCH



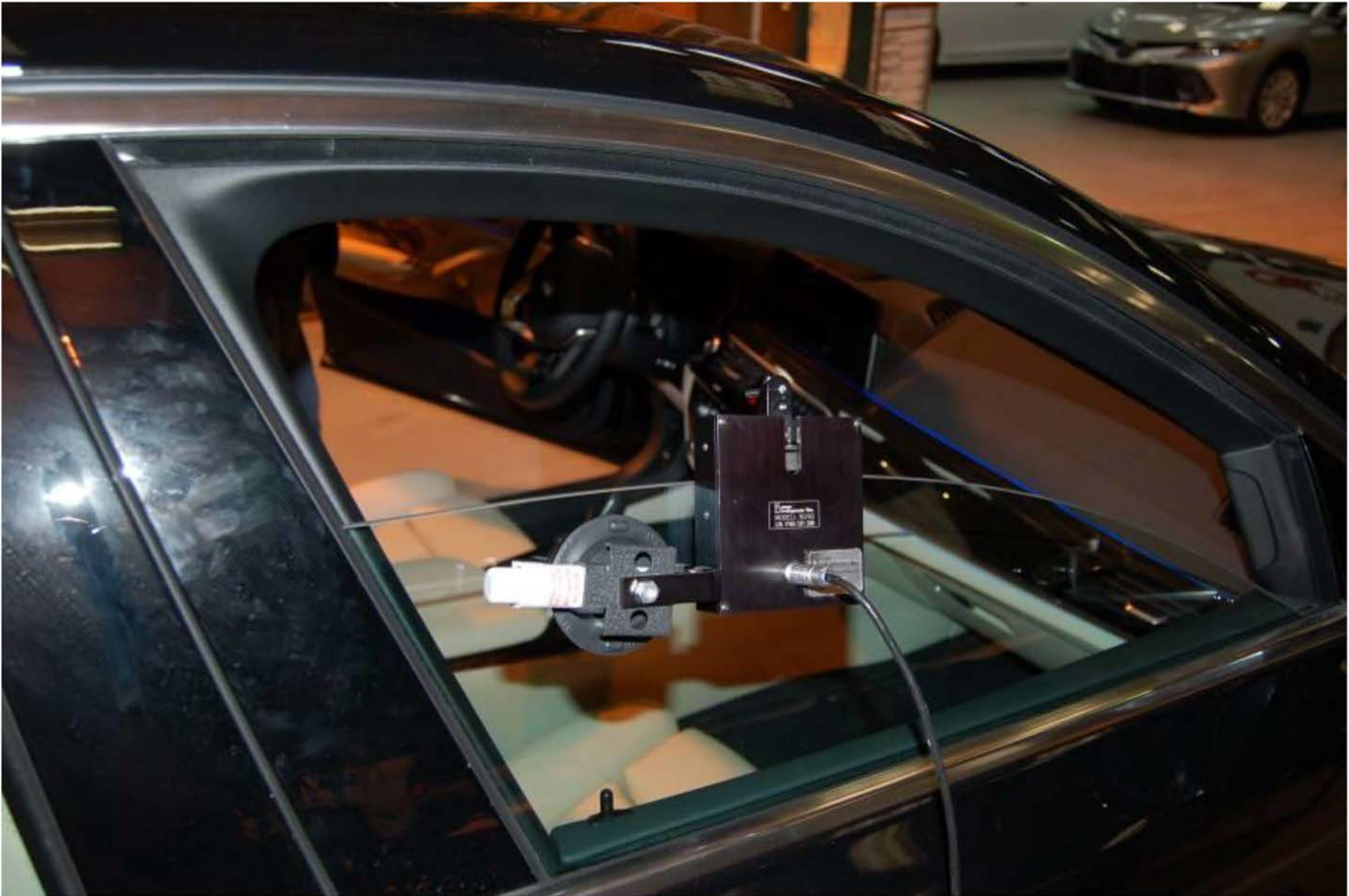
2018 BMW 530i
NHTSA NO. C20184100
FMVSS NO. 118

FIGURE 5.18
PINCH FORCE TEST WITH 6 MM ROD ON LEFT FRONT WINDOW



2018 BMW 530i
NHTSA NO. C20184100
FMVSS NO. 118

FIGURE 5.19
PINCH FORCE TEST WITH 6 MM ROD ON LEFT REAR WINDOW



2018 BMW 530i
NHTSA NO. C20184100
FMVSS NO. 118

FIGURE 5.20
PINCH FORCE TEST WITH 50 MM ROD ON RIGHT FRONT WINDOW



2018 BMW 530i
NHTSA NO. C20184100
FMVSS NO. 118

FIGURE 5.21
PINCH FORCE TEST WITH 50 MM ROD ON RIGHT REAR WINDOW



2018 BMW 530i
NHTSA NO. C20184100
FMVSS NO. 118

FIGURE 5.22
PINCH FORCE TEST WITH 6 MM ROD ON SUNROOF

SECTION 6
OWNER'S MANUAL INFORMATION

Opening and closing

Vehicle features and options

This chapter describes all standard, country-specific and optional features offered with the series. It also describes features that are not necessarily available in your vehicle, e. g., due to the selected options or country versions. This also applies to safety-related functions and systems. When using these functions and systems, the applicable laws and regulations must be observed.

Remote control

General information

The vehicle is supplied with two remote controls with integrated key.

Each remote control contains a replaceable battery. Replacing the battery, refer to page 58.

You may set the key functions depending on the optional features and country-specific version. Settings, refer to page 73.

The vehicle stores personal settings for every remote control. Driver profile, refer to page 71.

The remote controls hold information about required maintenance. Service data in the remote control, refer to page 308.

Safety information

WARNING
People or animals in the vehicle can lock the doors from the inside and lock themselves in. In this case, the vehicle cannot be opened from the outside. There is a risk of injury. Take the remote control with you so that the vehicle can be opened from the outside. ◀

WARNING
For some country-specific variants, unlocking from the inside is only possible with special knowledge.

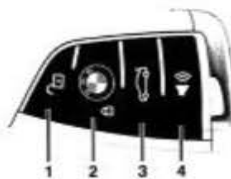
Persons who spend a lengthy time in the vehicle while being exposed to extreme temperatures are at risk of injury or death. Do not lock the vehicle from the outside when there are people in it. ◀

WARNING
Unattended children or animals can cause the vehicle to move and endanger themselves and traffic, e.g., due to the following actions:

- ▷ Pressing the Start/Stop button.
- ▷ Releasing the parking brake.
- ▷ Opening and closing the doors or windows.
- ▷ Engaging selector lever position N.
- ▷ Using vehicle equipment.

There is a risk of accidents or injuries. Do not leave children or animals unattended in the vehicle. Take the remote control with you when exiting and lock the vehicle. ◀

Overview



- 1 Unlocking
- 2 Locking

- 3 Open tailgate
- 4 Press and hold or press three times in quick succession: panic mode
Press briefly: headlight courtesy delay feature

Unlocking

Press button on the remote control.

Depending on the settings, refer to page 73, the following access points are unlocked:

- ▷ Driver's door and fuel filler flap.
Press the button of the remote control again to unlock the other vehicle access points.
- ▷ All doors, tailgate, and fuel filler flap.

In addition, the following functions are executed:

- ▷ The settings stored in the driver profile, refer to page 71, are applied.
- ▷ The driver's seat is set to the last position saved in the driver's profile. This function must be activated in the settings, refer to page 73.
- ▷ The interior lights are switched on, unless they were manually switched off. Switch the interior lights on/off manually, refer to page 139.
- ▷ Depending on the settings, the welcome light and headlight courtesy delay feature, refer to page 136, are switched on.
- ▷ Automatically folded in exterior mirrors are folded open. This function must be activated in the settings, refer to page 73.
- ▷ With anti-theft protection: Anti-theft protection is switched off.
- ▷ The alarm system, refer to page 75, is switched off.

After opening one of the front doors, the vehicle is ready for operation, refer to page 22.

The light functions may depend on the ambient brightness.

Convenient opening

Press and hold this button on the remote control after unlocking.

The windows and the glass sunroof are opened, as long as the button on the remote control is pressed.

Locking

1. Close the driver's door.
2. Press button on the remote control.
 - ▷ All doors, the tailgate, and the fuel filler flap are locked.
 - ▷ The exterior mirrors are folded in. This function must be activated in the settings, refer to page 73.
 - ▷ With anti-theft protection: Anti-theft protection is switched on. This prevents the doors from being unlocked using the lock buttons or the door openers.
 - ▷ The alarm system, refer to page 75, is switched on.


If the drive-ready state is still switched on when you lock the vehicle, the vehicle horn honks twice. In this case, the drive-ready state must be switched off by means of the Start/Stop button.

With Comfort Access: convenient closing

Safety information


WARNING
With convenient closing, body parts can be jammed. There is a risk of injury. Make sure that the area of movement of the doors is clear during convenient closing. ◀

Closing

 Press and hold this button on the remote control in the area close to the vehicle after locking.

The windows and the glass sunroof are closed, as long as the button on the remote control is pressed.

Switching on the interior and exterior lights

 Press button on the remote control with the vehicle locked.

The function is not available for the first 10 seconds after locking.

- ▷ The interior lights are switched on, unless they were manually switched off. Switch the interior lights on/off manually, refer to page 139.
- ▷ Depending on the settings, the headlight courtesy delay feature, refer to page 136, is switched on. The welcome light is only switched on when the vehicle is being unlocked.

The light functions may depend on the ambient brightness.


Tailgate


General information

To avoid locking it in the vehicle, do not place the remote control in the cargo area.


Depending on the features and the country version, it is also possible to have the doors unlocked. Adjusting the settings, refer to page 73.

Safety information

 **WARNING**
Body parts can be jammed when operating the tailgate. There is a risk of injury. Make sure that the area of movement of the tailgate is clear during opening and closing. ◀


 **NOTE**
During opening, the tailgate pivots back and up. There is a risk of property damage. Make sure that the area of movement of the tailgate is clear during opening and closing. ◀

Opening

 Press and hold button on the remote control for approx. 1 second.


Panic mode

You can trigger the alarm system if you find yourself in a dangerous situation.

- ▷  Press button on the remote control and hold for at least 3 seconds.
- ▷ Briefly press the button on the remote control three times in succession.

To switch off the alarm: press any button.

Switching on the headlight courtesy delay feature

 Press button on the remote control.
Set the duration, refer to page 136.

Replacing the battery

1. Remove the integrated key from the remote control, refer to page 64.
2. Place the integrated key underneath the battery compartment cover, arrow 1, and


lift the cover with a lever movement of the integrated key, arrow 2.



3. Push battery in the direction of the arrow using a pointed object and lift it out.



4. Insert a type CR 2032 battery with the positive side facing up.
5. Press the cover closed.

 Have old batteries disposed of by a dealer's service center or another qualified service center or repair shop or take them to a collection point.

Additional remote controls

Additional remote controls are available from a dealer's service center or another qualified service center or repair shop.

Loss of the remote controls

A lost remote control can be blocked and replaced by a dealer's service center or another qualified service center or repair shop.

Malfunction

General information

A Check Control message, refer to page 120, is displayed.

Remote control detection by the vehicle may malfunction under the following circumstances:

- ▷ The battery of the remote control is discharged. Replacing the battery, refer to page 58.
- ▷ Interference of the radio connection from transmission towers or other equipment with high transmitting power.
- ▷ Shielding of the remote control due to metal objects.

Do not transport the remote control together with metal objects.

- ▷ Interference of the radio connection from mobile phones or other electronic devices in direct proximity to the remote control.

Do not transport the remote control together with electronic devices.

- ▷ Interference of radio transmission by a charging process of mobile devices, for instance charging of a mobile phone.

- ▷ The remote control is in direct proximity of the wireless charging tray.
Place the remote control down at a different location.

In the case of interference, the vehicle can be unlocked and locked from the outside with the integrated key, refer to page 64.

locked. The hazard warning system flashes once.

Panic mode

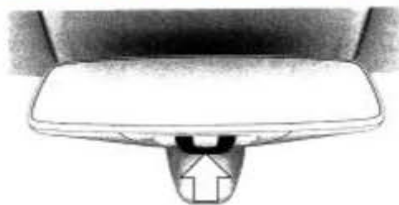
You can trigger the alarm system if you find yourself in a dangerous situation.



- ▷ Press button on the remote control and hold for at least 3 seconds.
- ▷ Briefly press the button on the remote control three times in succession.

To switch off the alarm: press any button.

Indicator light on the interior mirror



- ▷ The indicator light flashes briefly every 2 seconds:
The alarm system is switched on.
- ▷ Indicator light flashes for approx. 10 seconds, then it flashes briefly every 2 seconds:
Interior motion sensor and tilt alarm sensor are not active, as doors, hood, or tailgate are not correctly closed. Correctly closed access points are secured.
When the still open access points are closed, interior motion sensor and tilt alarm sensor will be switched on.
- ▷ The indicator light goes out after unlocking:
The vehicle has not been tampered with.
- ▷ The indicator light flashes after unlocking until drive-ready state is switched on, but no longer than approx. 5 minutes:

An alarm has been triggered.

Tilt alarm sensor

The tilt of the vehicle is monitored.

The alarm system responds in situations such as attempts to steal a wheel or when the vehicle is towed.

Interior motion sensor

The windows and the glass sunroof must be closed for the system to function properly.

Avoiding unintentional alarms

General information

The tilt alarm sensor and interior motion sensor can trigger an alarm, although no unauthorized action occurred.

Possible situations for an unwanted alarm:

- ▷ In automatic vehicle washes.
- ▷ In duplex garages.
- ▷ During transport on trains carrying vehicles, at sea or on a trailer.
- ▷ With animals in the vehicle.

The tilt alarm sensor and the interior motion sensor can be switched off in such situations.

Switching off the tilt alarm sensor and interior motion sensor

- ▷ Press the remote control button again within 10 seconds as soon as the vehicle is locked.

The indicator lamp lights up for approx. 2 seconds and then continues to flash.

The tilt alarm sensor and interior motion sensor are turned off until the vehicle is locked again.

Switching off the alarm

- ▷ Unlock the vehicle using the remote control, if needed, through emergency detection of the remote control, refer to page 59.
- ▷ With Comfort Access: if you are carrying the remote control on your person, grasp the driver side or front passenger side door handle completely.

Power windows

Safety information

- ▷ **WARNING**
When operating the windows, body parts and objects can be jammed. There is a risk of injury or risk of property damage. Make sure that the area of movement of the windows is clear during opening and closing. ◀

Overview



Power windows

Safety switch

Functional requirements

- The windows can be operated under the following conditions.
- ▷ Standby state is established.
 - ▷ Drive-ready state is established.
 - ▷ The remote control is in the car's interior.

Opening

- ▷ Press the switch to the resistance point.
The window opens while the switch is being held.
- ▷ Press the switch beyond the resistance point.
The window opens automatically. Pressing the switch again stops the motion.

Convenient opening via the remote control, refer to page 57.

Closing

- ▷ Pull the switch to the resistance point.
The window closes while the switch is being held.
- ▷ Pull the switch beyond the resistance point.
The window closes automatically if the door is closed. Pulling again stops the motion.

Closing via Comfort Access, refer to page 65.

Jam protection system

General information

If closing force exceeds a specific threshold as a window closes, closing is interrupted. The window opens slightly.



Safety information

- ▷ **WARNING**
Accessories on the windows such as antennas can impact jam protection. There is a risk of injury. Do not install accessories in the area of movement of the windows. ◀



Closing without the jam protection system

In case of danger from the outside or if ice might prevent normal closing, proceed as follows:


-  Pull the switch past the resistance point and hold it there.
The window closes with limited jam protection. If the closing force exceeds a specific threshold, closing is interrupted.
-  Pull the switch past the resistance point again within approx. 4 seconds and hold it there.
The window closes without jam protection.

Safety switch

Concept

The safety switch in the driver's door can be used to prevent children, for instance from opening and closing the rear windows using the switches in the rear.


Switching on/off

-  Press button.
The LED lights up if the safety function is switched on.


Rear window roller sunblind

Overview



-  Button for the roller sunblind.

Operation

-  Press the button to open the closed roller sunblind or to close the open roller sunblind.


If the button is pressed again during the movement, the roller sunblind is moved in the opposite direction.

System limits

If you are no longer able to move the roller sunblind after having activated it consecutively a number of times, the overheating protection mechanism is active. The system is blocked for a limited time to prevent overheating. Let the system cool.

The roller sunblind cannot be moved at low interior temperatures.

Roller sunblinds, rear side windows

-  **WARNING**
With closed roller sunblinds and open windows, the roller sunblinds can be loaded heavily while driving due to the wind. The roller sunblinds can be damaged and compromise the occupants. There is a risk of injury. Do not

open the windows while driving if the roller sunblinds are closed. ◀

Pull out the roller sunblind at the strap and hook it onto the bracket.


Glass sunroof

General information

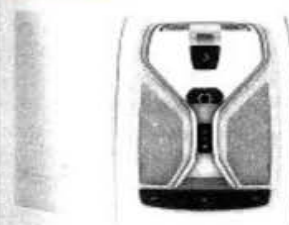
The glass sunroof and the sliding visor can be operated together or separately using the same switch.

The glass sunroof is ready for operation when standby state is switched on.

Safety information

-  **WARNING**
Body parts can be jammed when operating the glass sunroof. There is a risk of injury. Make sure that the area of movement of the glass sunroof is clear during opening and closing. ◀

Overview



Open/close the glass sunroof/sliding visor.

Functional requirements

The windows can be operated under the following conditions.

- ▷ Standby state is established.
- ▷ Drive-ready state is established.
- ▷ The remote control is in the car's interior.

Lifting/closing glass sunroof



- ▷ Push switch briefly upward.
 - ▷ The closed glass sunroof tilts and the sliding visor opens slightly.
 - ▷ The opened glass sunroof closes until it is in the tilted position. The sliding visor does not move.
- ▷ The tilted glass sunroof closes.

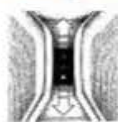
Opening/closing the glass sunroof and sliding visor separately



- ▷ Press the switch in the desired direction to the resistance point and hold it there.
The sliding visor opens while the switch is being held. If the sliding visor is already fully open, the glass sunroof opens.
The glass sunroof closes while the switch is being held. If the glass sunroof is already closed or in the tilted position, the sliding visor closes.

- ▷ Press the switch in the desired direction past the resistance point.
The sliding visor opens automatically. If the sliding visor is already fully open, the glass sunroof opens automatically.
The glass sunroof closes automatically. If the glass sunroof is already closed or in the tilted position, the sliding visor closes automatically.
Pressing the switch upward stops the motion.

Opening/closing the glass sunroof and sliding visor together



Briefly press the switch twice in succession in the desired direction past the resistance point.

The glass sunroof and sliding visor move together. Pressing the switch upward stops the motion.

Convenient opening via the remote control, refer to page 57.

Closing by means of Comfort Access, refer to page 65.

Comfort position

If the glass sunroof is not completely opened automatically, the comfort position has been attained. In this position the wind noises in the interior are the least.

If desired, continue the movement by pressing the switch.

Jam protection system

General information

If the closing force exceeds a certain value when closing the glass sunroof, the closing operation is interrupted once the roof reaches the half-open position, or it is stopped when closing from the tilted position.

The glass sunroof opens slightly.

Closing from the open position without jam protection

If there is an external danger, proceed as follows:

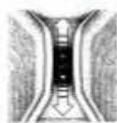


1. Push the switch forward past the resistance point and hold.

The glass sunroof closes with limited jam protection. If the closing force exceeds a specific threshold, closing is interrupted.

2. Push the switch forward again past the resistance point and hold until the glass sunroof closes without jam protection. Make sure that the closing area is clear.

Closing from the raised position without jam protection



If there is an external danger, push the switch forward past the resistance point and hold it.

The glass sunroof closes without jam protection.

Initializing after a power interruption

General information

After a power failure during the opening or closing process, the glass sunroof can only be operated to a limited extent.

The system can be initialized under the following conditions.

- ▷ The vehicle is parked in a horizontal position.
- ▷ The drive-ready state is established.
- ▷ The external temperature is above 41 °F/5 °C.

During initialization, the glass sunroof closes without jam protection.

Make sure that the closing area is clear.

Initializing the system



Press the switch up and hold it until the initialization is complete:

Initialization begins within 15 seconds and is completed

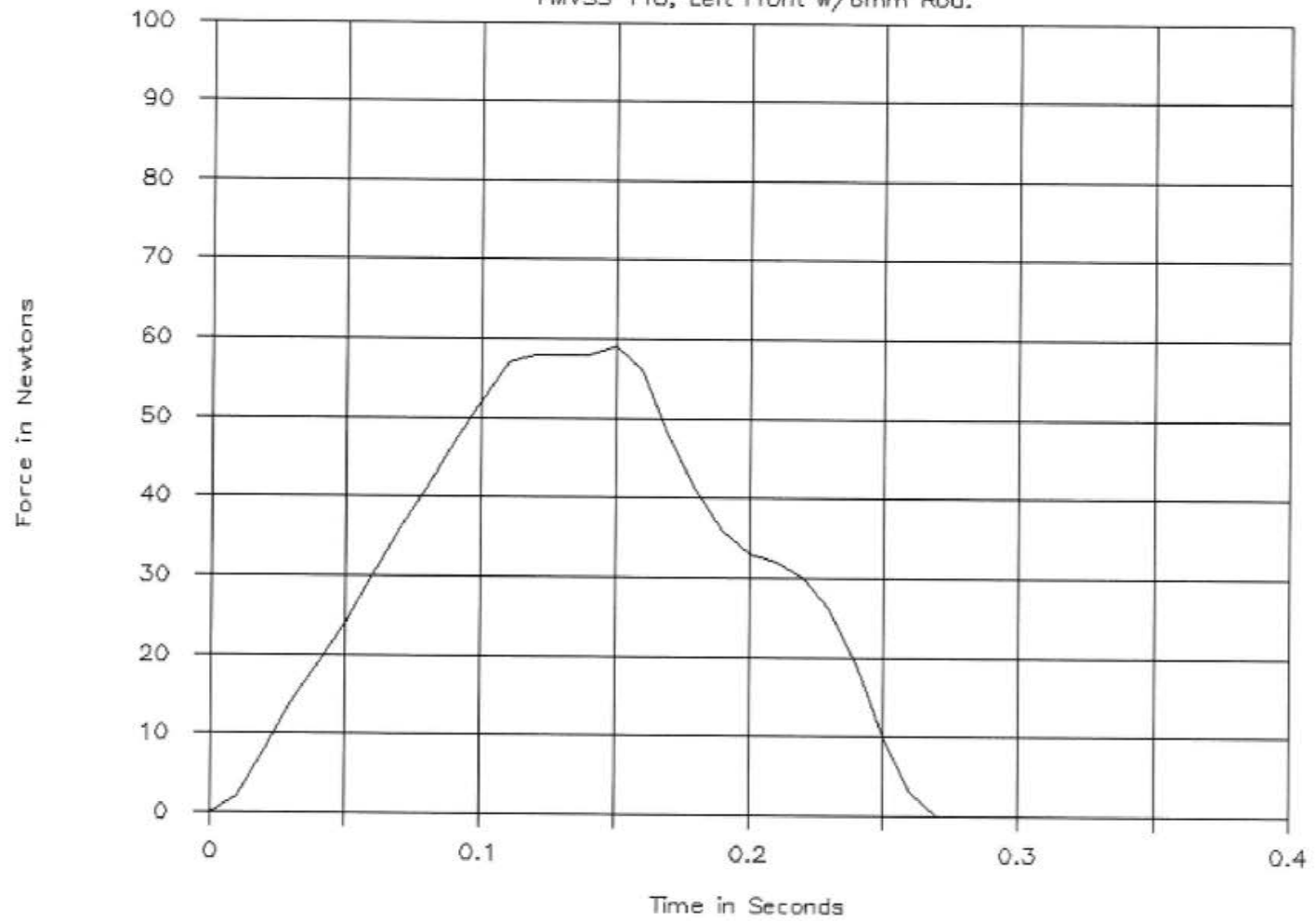
when the glass sunroof and sliding visor are completely closed.



SECTION 7
TEST PLOTS

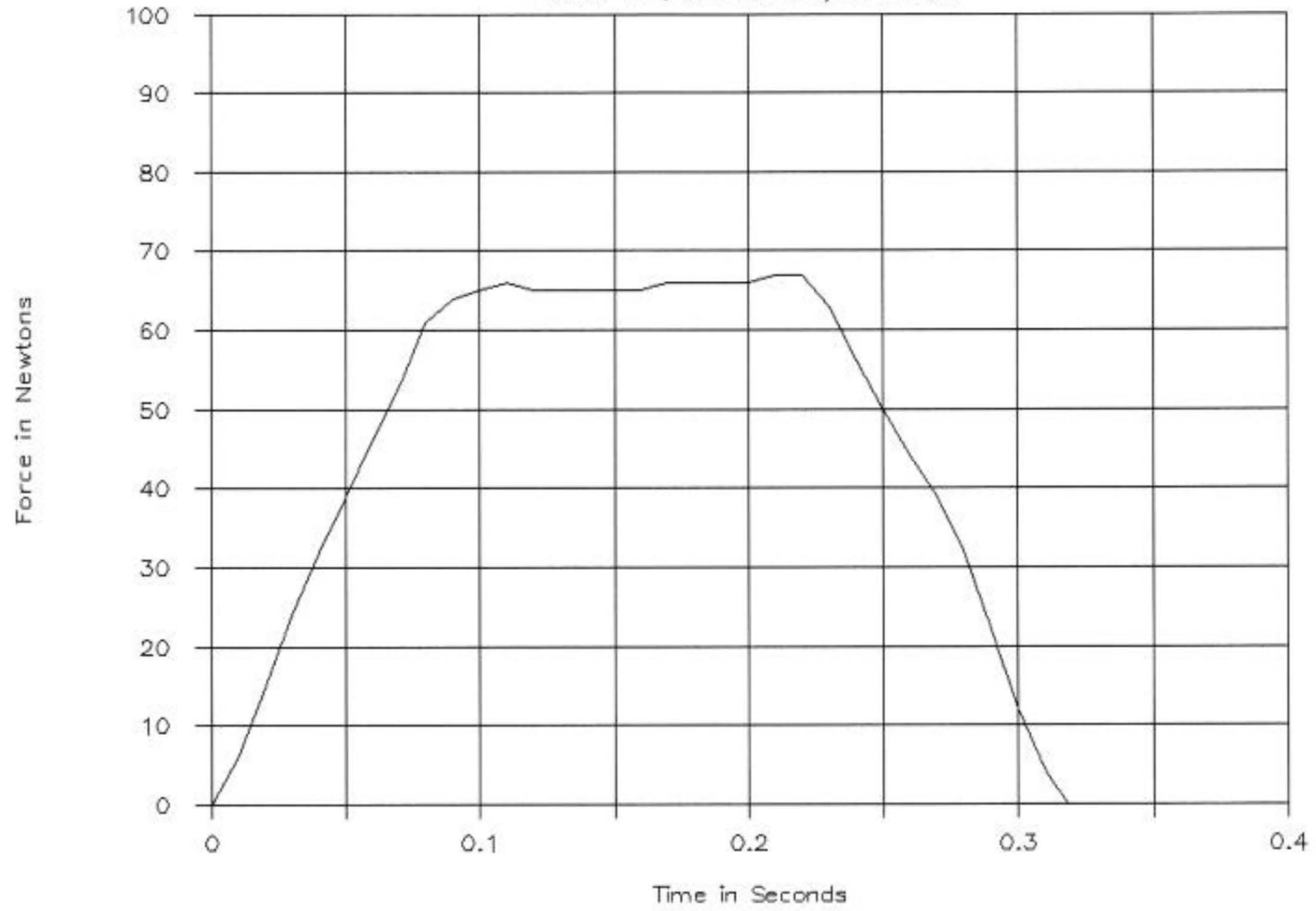
GTL 7633, NHTSA C20184100

FMVSS 118, Left Front w/6mm Rod.



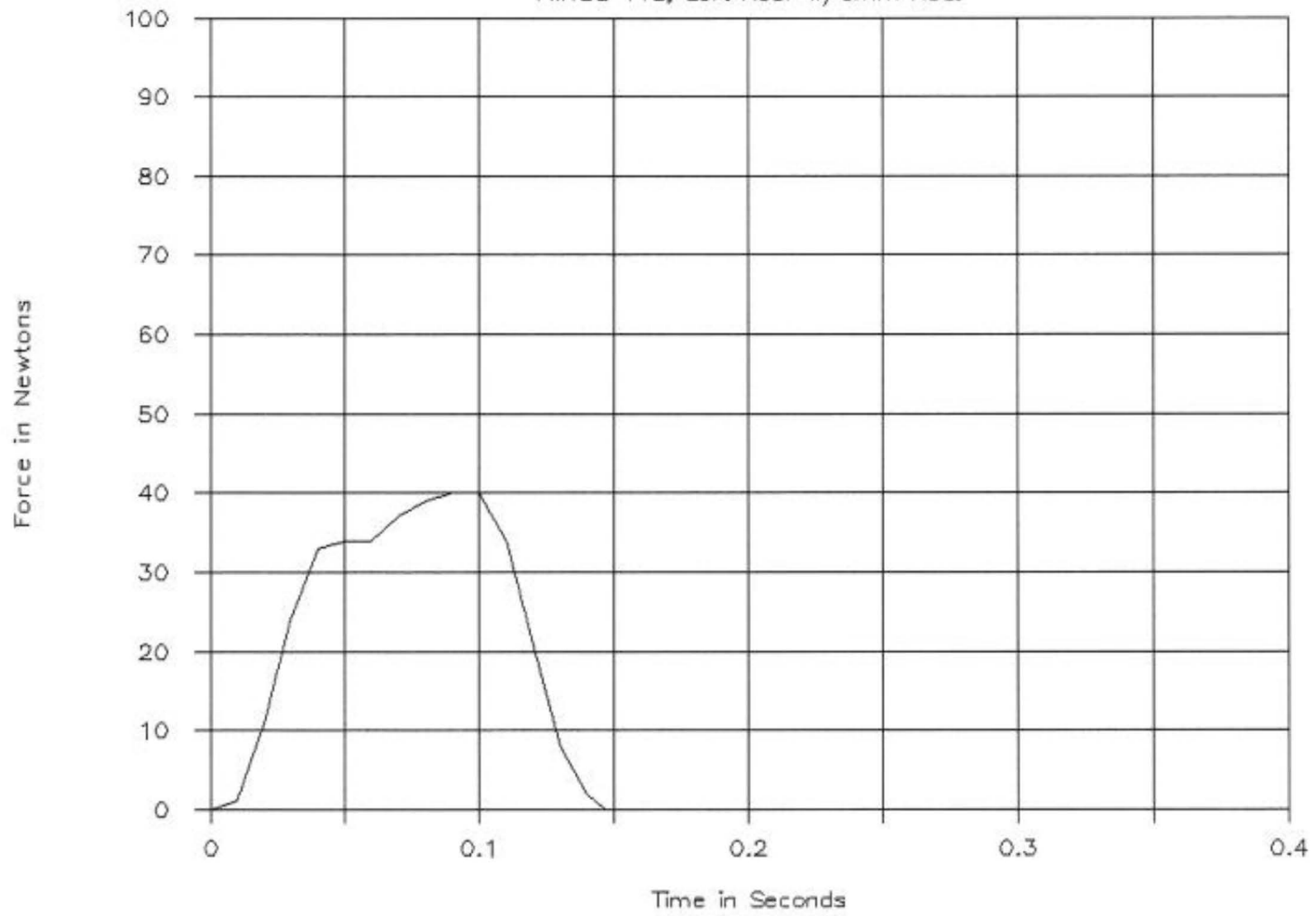
GTL 7634, NHTSA C20184100

FMVSS 118, Left Front w/6mm Rod.



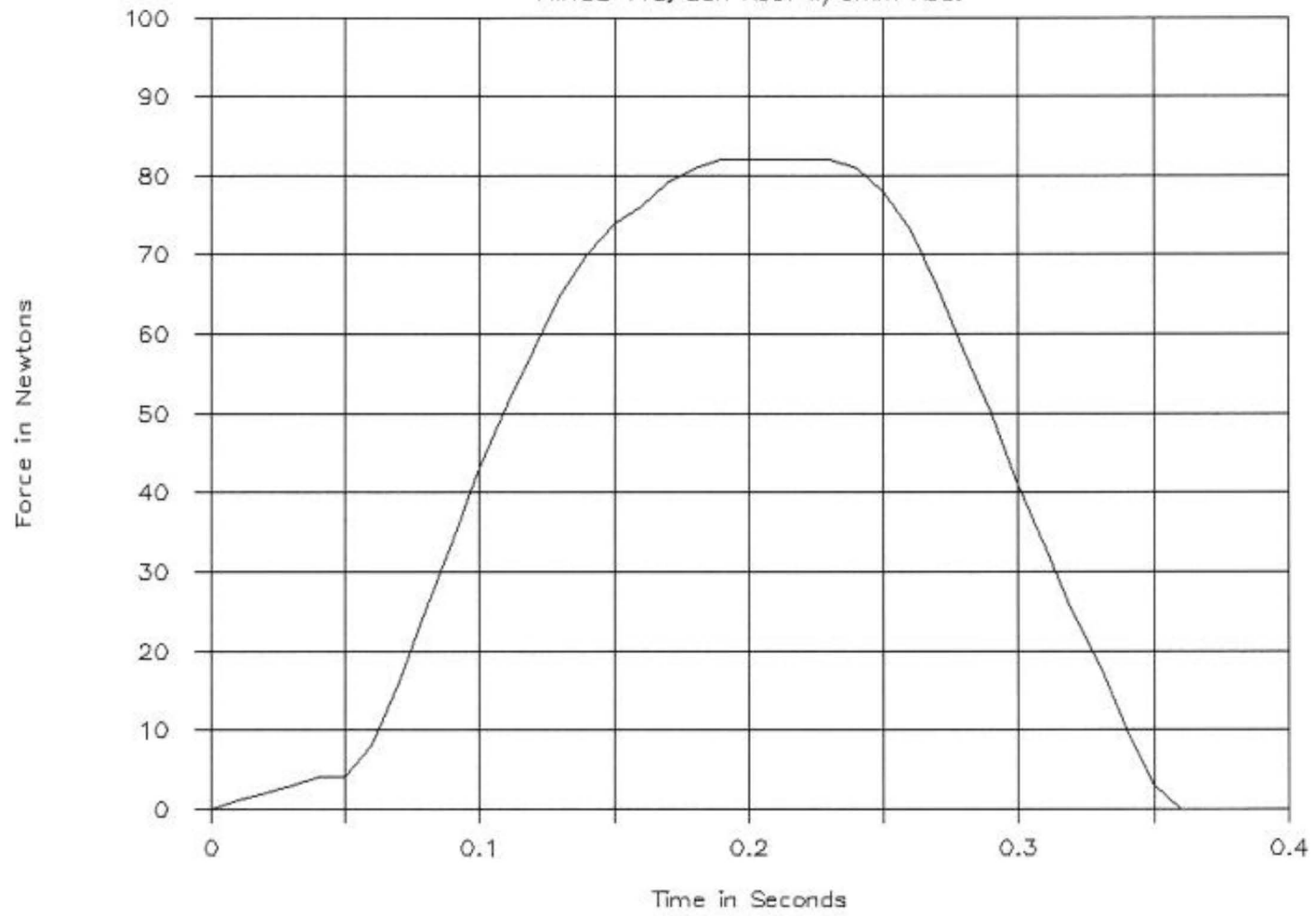
GTL 7635, NHTSA C20184100

FMVSS 118, Left Rear w/6mm Rod.



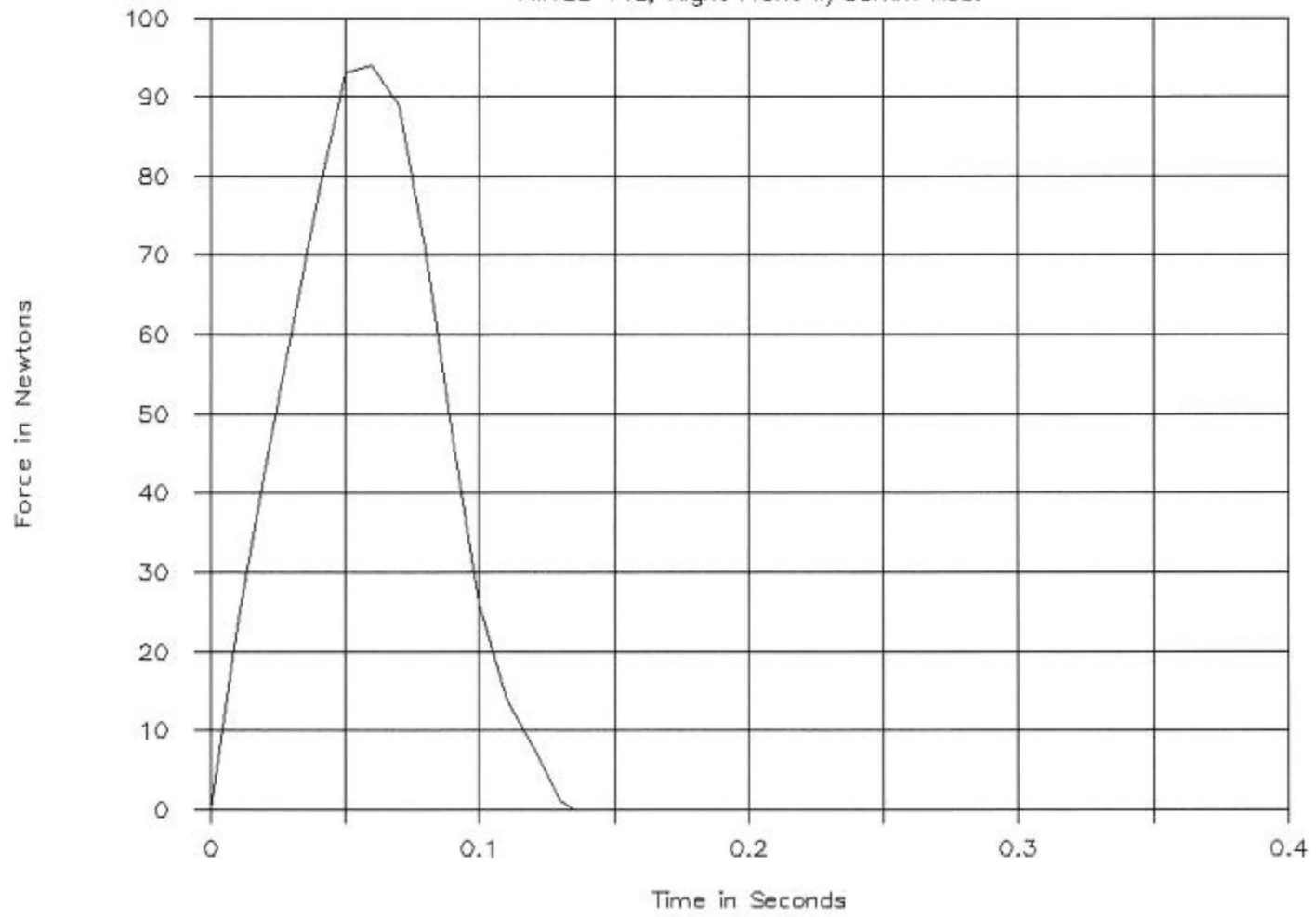
GTL 7636, NHTSA C20184100

FMVSS 118, Sun Roof w/6mm Rod.



GTL 7637, NHTSA C20184100

FMVSS 118, Right Front w/50mm Rod.



GTL 7638, NHTSA C20184100

FMVSS 118, Right Rear w/50mm Rod.

