



**2017 Tesla Model S**

Large luxury car



2016 Tesla Model S shown

CRASHWORTHINESS

Small overlap front	<b>A</b>
Moderate overlap front	<b>G</b>
Side	<b>G</b>
Roof strength	<b>G</b>
Head restraints & seats	<b>G</b>

CRASH AVOIDANCE & MITIGATION

Front crash prevention	 <b>NOT AVAILABLE</b>
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Headlights	<b>P</b>
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CHILD SEAT ANCHORS (LATCH) EASE OF USE	<b>M</b>
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Ratings shown are the latest available for this model year.  
See below for ratings based on manufacture date.

Check for NHTSA recalls 

**The photos and videos shown here may be of a different model, model year or body type from the one selected.** The ratings of one vehicle often apply to other models if they are built on the same platform. In addition, a test of a vehicle from one model year may apply to earlier or later model years if the vehicle hasn't been significantly redesigned.



**Small overlap front** — Action shot taken during the small overlap frontal crash test.



**Small overlap front** — The dummy's position in relation to the door frame, steering wheel, and instrument panel after the crash test indicates that the driver's survival space was maintained very well.



**Small overlap front** — The seat belt allowed far too much forward movement of the dummy to the extent that its head hit the steering wheel hard through the airbag.



**Small overlap front** — Forces on the right lower leg were just high enough to indicate a moderate risk of injury (the knee airbag has been pulled upward to make both dummy's legs visible).



**Moderate overlap front** — Action shot taken during the moderate overlap frontal crash test.



**Moderate overlap front** — The dummy's position in relation to the steering wheel and instrument panel after the crash test indicates that the driver's survival space was maintained very well.



**Moderate overlap front** — Smearing greasepaint indicates where the dummy's head contacted the side curtain airbag during rebound.



**Moderate overlap front** — Intrusion into the driver's space was minimal, and all leg and foot injury measures were low.



**Side impact** — View of the vehicle and barrier just after the crash test.



**Side impact** — View of the vehicle after the crash with doors removed, showing the side airbags and damage to the occupant compartment.



**Side impact** — Smeared greasepaint shows where the driver dummy's head was protected from being hit by hard structures by the side curtain airbag.



**Side impact** — Smeared greasepaint shows where the rear passenger dummy's head was protected by the side airbag.



**2016 Tesla Model S small overlap test**

Applies to 2016-17 models built after September 2016



**2016 Tesla Model S moderate overlap test**

Applies to 2016-17 models built after October 2016



### 2016 Tesla Model S side test

Applies to 2016-17 models built after October 2016

## Other model years

Model year	Front overlap		Side	Roof strength	Head restraints & seats	Front crash prevention
	Small	Moderate				
2017	A	G	G	G	G	 NOT AVAILABLE
2016	A	G	G	G	G	 NOT AVAILABLE

## Small overlap front Models built after September 2016

### Test details

Applies to 2016-17 models built after September 2016

Overall evaluation	A
Structure and safety cage	G
Injury measures	
Head/neck	A
Chest	G
Hip/thigh	G
Lower leg/foot	A
Restraints and dummy kinematics	A

Important: Frontal crash test ratings should be compared only among vehicles of similar weight.

The Tesla Model S was introduced in the 2012 model year. The car is a plug-in battery-electric vehicle with no gasoline or diesel engine to help power the car. The EPA city and highway values listed below are based on a comparison of the energy content of a kWh of electricity vs. a gallon of gasoline.

Beginning with 2016 models built after September 2016, the side curtain airbags were lengthened to improve occupant protection in small overlap frontal crashes. (Information about when a specific vehicle was manufactured is on the certification label typically affixed to the car on the driver door or adjacent B-pillar.)

### Structure

The driver space was maintained well, with maximum intrusion of the lower interior of 4 cm at the lower hinge pillar. Upper interior intrusion also measured 4 cm at the hinge pillar and instrument panel.

### Injury measures

A high head acceleration occurred when the dummy's head hit the steering wheel through the airbag, indicating that head injuries would be possible in a crash of this severity. Measures indicate that injuries to the right lower leg also would be possible.

### Restraints and dummy kinematics

The dummy's head contacted the frontal airbag but started to slide off the left side because the seat belt allowed excessive forward excursion of the head and torso. The side curtain airbag deployed and has sufficient forward coverage to protect the head from contact with side structure and outside objects. The side torso airbag also deployed.

#### Tested vehicle specifications

Tested vehicle	2016 Tesla Model S 60 4-door
Weight	4,410 lbs.
Side airbags	front and rear head curtain airbags and front seat-mounted torso airbags
Wheelbase	117 in.
Length	196 in.
Width	77 in.
Engine	Electric motor with 60-kWh lithium-ion battery
EPA ratings	97 mpg city / 100 mpg highway

#### How this test is conducted

### Technical measurements

#### Measures of occupant compartment intrusion on driver side

Test ID	CEN1630
<b>Lower occupant compartment</b>	
Lower hinge pillar max (cm)	4
Footrest (cm)	1
Left toepan (cm)	1
Brake pedal (cm)	1
Parking brake (cm)	
Rocker panel lateral average (cm)	0
<b>Upper occupant compartment</b>	
Steering column	0
Upper hinge pillar max (cm)	4
Upper dash (cm)	4
Lower instrument panel (cm)	4

#### Driver injury measures

Test ID	CEN1630
<b>Head</b>	
HIC-15	262
Peak gs at hard contact	77
<b>Neck</b>	
Tension (kN)	1.4
Extension bending moment (Nm)	5
Maximum Nij	0.29
<b>Chest maximum compression (mm)</b>	19
<b>Femur (kN)</b>	
Left	1.0
Right	0.6
<b>Knee displacement (mm)</b>	
Left	0
Right	1

<b>Knee-thigh-hip injury risk (%)</b>	
Left	0
Right	0
<b>Maximum tibia index</b>	
Left	0.53
Right	0.49
<b>Tibia axial force (kN)</b>	
Left	2.8
Right	4.1
<b>Foot acceleration (g)</b>	
Left	68
Right	100

## Moderate overlap front Models built after October 2016

### Test details

#### Applies to 2016-17 models built after October 2016

<b>Overall evaluation</b>	<b>G</b>
<b>Structure and safety cage</b>	<b>G</b>
<b>Injury measures</b>	
Head/neck	<b>G</b>
Chest	<b>G</b>
Leg/foot, left	<b>G</b>
Leg/foot, right	<b>G</b>
<b>Restraints and dummy kinematics</b>	<b>G</b>

Important: Frontal crash test ratings should be compared only among vehicles of similar weight.

The Tesla Model S was introduced in the 2012 model year. The car is a plug-in battery-electric vehicle with no gasoline or diesel engine to help power the car. The EPA city and highway values listed below are based on a comparison of the energy content of a kWh of electricity vs. a gallon of gasoline.

Beginning with 2016 models built after October 2016, a structural brace between the frame and rocker panel was reinforced and deployment guides were added to the side curtain airbags to improve occupant protection in moderate overlap frontal crashes. (Information about when a specific vehicle was manufactured is on the certification label typically affixed to the car on the driver door or adjacent B-pillar.)

### Injury measures

Measures taken from the dummy indicate a low risk of any significant injuries in a crash of this severity.

### Restraints and dummy kinematics

Dummy movement was well controlled. The driver side curtain airbag deployed during the crash. After the dummy moved forward into the frontal airbag, its head contacted the side curtain airbag.

### Tested vehicle specifications

Tested vehicle	2016 Tesla Model S 60 4-door
Weight	4,363 lbs.
Side airbags	front and rear head curtain airbags and front seat-mounted torso airbags
Wheelbase	117 in.



Length	196 in.
Width	77 in.
Engine	Electric motor with 60-kWh lithium-ion battery
EPA ratings	98 mpg city / 101 mpg highway

### How this test is conducted

## Technical measurements

### Measures of occupant compartment intrusion on driver side

Test ID	CEF1611
<b>Footwell intrusion</b>	
Footrest (cm)	1
Left (cm)	2
Center (cm)	2
Right (cm)	2
<b>Brake pedal (cm)</b>	2
<b>Instrument panel rearward movement</b>	
Left (cm)	1
Right (cm)	2
<b>Steering column movement</b>	
Upward (cm)	-2
Rearward (cm)	-6
<b>A-pillar rearward movement (cm)</b>	0

### Driver injury measures

Test ID	CEF1611
<b>Head</b>	
HIC-15	323
Peak gs at hard contact	no contact
<b>Neck</b>	
Tension (kN)	1.4
Extension bending moment (Nm)	15
Maximum Nij	0.28
<b>Chest maximum compression (mm)</b>	23
<b>Legs</b>	
Femur force - left (kN)	1.0
Femur force - right (kN)	0.7
Knee displacement - left (mm)	0
Knee displacement - right (mm)	1
Maximum tibia index - left	0.27
Maximum tibia index - right	0.28
Tibia axial force - left (kN)	2.4
Tibia axial force - right (kN)	3.3
<b>Foot acceleration (g)</b>	
Left	46
Right	71

### Side Models built after October 2016

## Test details

### Applies to 2016-17 models built after October 2016

<b>Overall evaluation</b>	<b>G</b>
<b>Structure and safety cage</b>	<b>G</b>
<b>Driver injury measures</b>	
Head/neck	<b>G</b>
Torso	<b>G</b>
Pelvis/leg	<b>G</b>
Head protection	<b>G</b>
<b>Rear passenger injury measures</b>	
Head/neck	<b>G</b>
Torso	<b>G</b>
Pelvis/leg	<b>G</b>
Head protection	<b>G</b>

Side crash test ratings can be compared across vehicle categories.

The Tesla Model S was introduced in the 2012 model year. The car is a plug-in battery-electric vehicle with no gasoline or diesel engine to help power the car. The EPA city and highway values listed below are based on a comparison of the energy content of a kWh of electricity vs. a gallon of gasoline.

Beginning with 2016 models built after October 2016, the B-pillars and roof rails were reinforced and deployment guides were added to the side curtain airbags to improve occupant protection in side impact crashes. (Information about when a specific vehicle was manufactured is on the certification label typically affixed to the car on the driver door or adjacent B-pillar.)

### Injury measures

Driver — Measures taken from the dummy indicate a low risk of any significant injuries in a crash of this severity.

Passenger — Measures taken from the dummy indicate a low risk of any significant injuries in a crash of this severity.

### Head protection

Driver — The dummy's head was protected from being hit by any hard structures, including the intruding barrier, by a side curtain airbag that deployed from the roof.

Passenger — The dummy's head was protected from being hit by any hard structures, including the intruding barrier, by a side curtain airbag that deployed from the roof.

### Tested vehicle specifications

Tested vehicle	2016 Tesla Model S 60 4-door
Weight	4,384 lbs.
Side airbags	standard front and rear head curtain airbags and standard front seat-mounted torso airbags
Wheelbase	117 in.
Length	196 in.
Width	77 in.
Engine	Electric motor with 60-kWh lithium-ion battery
EPA ratings	98 mpg city / 101 mpg highway

### How this test is conducted

## Technical measurements

### Measures of occupant compartment intrusion on driver side

Test ID	CES1613
<b>B-pillar to longitudinal centerline of driver's seat (cm)</b>	-20.5
Negative numbers indicate the amount by which the crush stopped short of the seat centerline.	

### Driver injury measures

Test ID	CES1613
<b>Head HIC-15</b>	192
<b>Neck</b>	
Tension (kN)	0.9
Compression (kN)	0.2
<b>Shoulder</b>	
Lateral deflection (mm)	45
Lateral force (kN)	1.7
<b>Torso</b>	
Maximum deflection (mm)	36
Average deflection (mm)	34
Maximum deflection rate (m/s)	3.80
Maximum viscous criterion (m/s)	0.44
<b>Pelvis</b>	
Iliac force (kN)	1.4
Acetabulum force (kN)	0.6
Combined force (kN)	1.9
<b>Left femur</b>	
L-M force (kN)	0.4
L-M moment (Nm)	188
A-P moment (Nm)	55

### Passenger injury measures

Test ID	CES1613
<b>Head HIC-15</b>	212
<b>Neck</b>	
Tension (kN)	0.3
Compression (kN)	1.0
<b>Shoulder</b>	
Lateral deflection (mm)	30
Lateral force (kN)	1.4
<b>Torso</b>	
Maximum deflection (mm)	33
Average deflection (mm)	21
Maximum deflection rate (m/s)	2.53
Maximum viscous criterion (m/s)	0.45
<b>Pelvis</b>	
Iliac force (kN)	0.5
Acetabulum force (kN)	0.9
Combined force (kN)	1.3
<b>Left femur</b>	
L-M force (kN)	0.3

L-M moment (Nm)	49
A-P moment (Nm)	-34

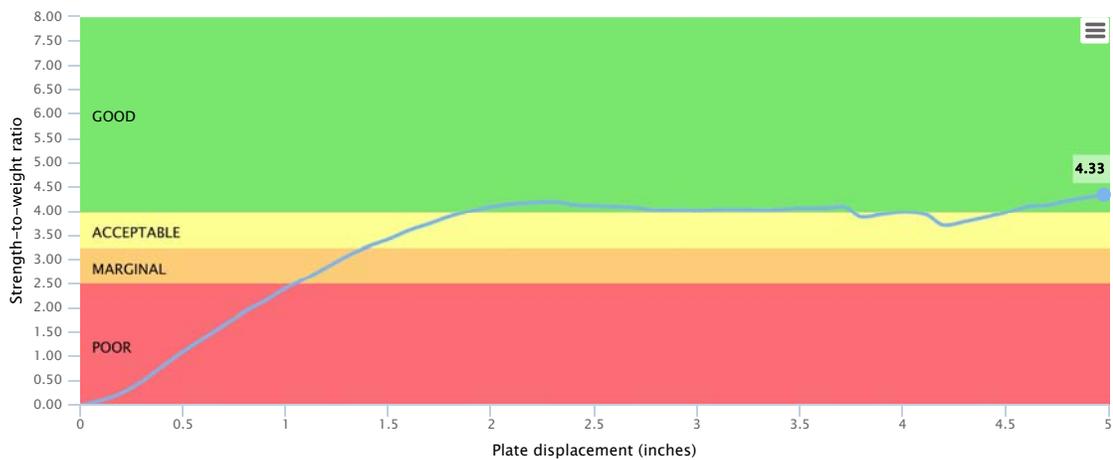
## Roof strength Models built after October 2016

### Test details

Applies to 2016-17 models built after October 2016

Overall evaluation	<b>G</b>
Curb weight	4,452 lbs
Peak force	19,271 lbs
Strength-to-weight ratio	4.33
Tested vehicle	2016 Tesla Model S 60
Rating does not apply to Model S P100D. Rating of this model is Acceptable.	4-door

Roof strength test ratings can be compared across vehicle categories.



In the test, the strength of the roof is determined by pushing a metal plate against one side of it at a slow but constant speed. The force applied relative to the vehicle's weight is known as the strength-to-weight ratio. This graph shows how the ratio varied as the test of this vehicle progressed. The peak strength-to-weight ratio recorded at any time before the roof is crushed 5 inches is the key measurement of roof strength.

A good rating requires a strength-to-weight ratio of at least 4. In other words, the roof must withstand a force of at least 4 times the vehicle's weight before the plate crushes the roof by 5 inches. For an acceptable rating, the minimum required strength-to-weight ratio is 3.25. For a marginal rating, it is 2.5. Anything lower than that is poor.

### How this test is conducted

## Head restraints & seats Models built after August 2016

### Test details

**Applies to 2016-17 models built after August 2016**

<b>Overall evaluation</b>	<b>G</b>
<b>Dynamic rating</b>	<b>G</b>
<b>Seat/head restraint geometry</b>	<b>G</b>

Important: Ratings for head restraints & seats should be compared only among vehicles of similar weight.

**Seat type**

Power leather seat

**How this test is conducted**

**Technical measurements**

<b>Seat type</b>	Power leather seat
<b>Geometry</b>	
Backset (mm)	10
Distance below top of head (mm)	5
<b>Seat design parameters</b>	
Pass/fail	Pass
Max T1 acceleration (g)	13.2
Head contact time (ms)	58
Force rating	1
<b>Neck forces</b>	
Max neck shear force (N)	0
Max neck tension (N)	279

**Front crash prevention Models built after October 2016**

**Details**

**Applies to 2016-17 models built after October 2016**

<b>Overall evaluation</b>	 NOT AVAILABLE 0 points total
<b>Forward collision warning</b>	0 points
Not available.	
<b>Low-speed autobrake</b>	0 points
Not available.	
<b>High-speed autobrake</b>	0 points
Not available.	

**How this rating is determined**

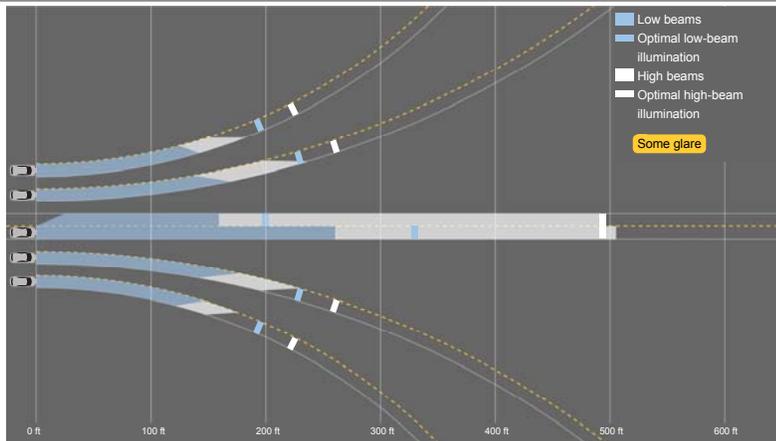
## Headlights

### Test details

Ratings are given for 2 different headlight variations available for this vehicle.

<b>Trim level(s)</b>	60 trim 60D trim 75 trim 75D trim 90D trim 100D trim P100D trim
<b>Low-beam headlight type</b>	LED reflector
<b>High-beam headlight type</b>	LED reflector
<b>Curve-adaptive?</b>	No
<b>Automatically switches between low beams and high beams (high-beam assist)?</b>	No
<b>Overall rating</b>	<b>P</b>

Distance at which headlights provide at least 5 lux illumination:



#### Low beams

On the straightaway, visibility was fair on both sides of the road. On curves, visibility was inadequate in all 4 tests.

The low beams created some glare.

#### High beams

On the straightaway, visibility was good on both sides of the road. On curves, visibility was inadequate in all 4 tests.

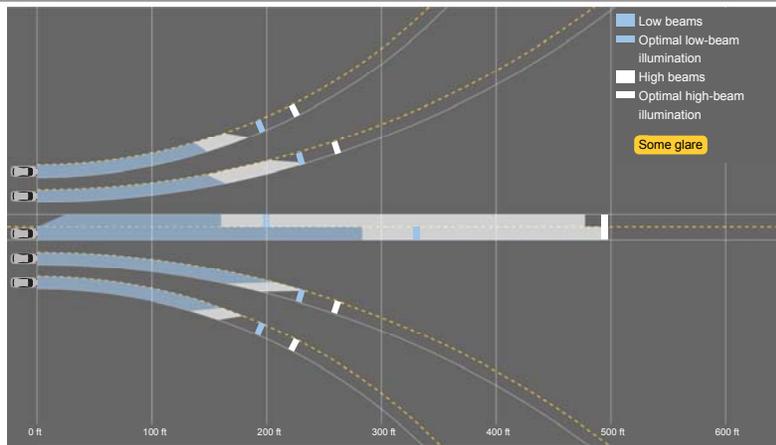
#### How this test is conducted

<b>Trim level(s)</b>	60 trim equipped with Premium Upgrades package 60D trim equipped with Premium Upgrades package 75 trim equipped with Premium Upgrades package
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75D trim equipped with Premium Upgrades package  
 90D trim equipped with Premium Upgrades package  
 100D trim equipped with Premium Upgrades package  
 P100D trim equipped with Premium Upgrades package

<b>Low-beam headlight type</b>	LED reflector
<b>High-beam headlight type</b>	LED reflector
<b>Curve-adaptive?</b>	Yes
<b>Automatically switches between low beams and high beams (high-beam assist)?</b>	No
<b>Overall rating</b>	<b>P</b>

Distance at which headlights provide at least 5 lux illumination:



**Low beams**

On the straightaway, visibility was fair on both sides of the road. On curves, visibility was inadequate in all 4 tests.

The low beams created some glare.

**High beams**

On the straightaway, visibility was good on both sides of the road. On curves, visibility was inadequate in all 4 tests.

**How this test is conducted**

**Technical measurements**

<b>Trim level(s)</b>	60 trim 60D trim 75 trim 75D trim 90D trim 100D trim P100D trim
<b>Low-beam headlight type</b>	LED reflector
<b>High-beam headlight type</b>	LED reflector
<b>Curve-adaptive?</b>	No

<b>High-beam assist?</b>	No
<b>Overall rating</b> Applies to 2017 models	<b>P</b>

LOW BEAMS	Average minimum useful illumination distance (5 lux)	Amount glare exceeded threshold
Straightaway right edge	79.4 m	25.6 %
Straightaway left edge	48.5 m	25.6 %
250m radius right curve, right edge	43.9 m	None
250m radius left curve, left edge	42.3 m	None
150m radius right curve, right edge	37.8 m	None
150m radius left curve, left edge	38.8 m	None

HIGH BEAMS	Average minimum useful illumination distance (5 lux)
Straightaway right edge	154.0 m
Straightaway left edge	149.9 m
250m radius right curve, right edge	60.5 m
250m radius left curve, left edge	61.4 m
150m radius right curve, right edge	46.4 m
150m radius left curve, left edge	46.9 m

<b>Trim level(s)</b>	60 trim equipped with Premium Upgrades package 60D trim equipped with Premium Upgrades package 75 trim equipped with Premium Upgrades package 75D trim equipped with Premium Upgrades package 90D trim equipped with Premium Upgrades package 100D trim equipped with Premium Upgrades package P100D trim equipped with Premium Upgrades package
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<b>Low-beam headlight type</b>	LED reflector
<b>High-beam headlight type</b>	LED reflector
<b>Curve-adaptive?</b>	Yes
<b>High-beam assist?</b>	No
<b>Overall rating</b> Applies to 2017 models	<b>P</b>

LOW BEAMS	Average minimum useful illumination distance (5 lux)	Amount glare exceeded threshold
Straightaway right edge	86.3 m	41.3 %
Straightaway left edge	48.8 m	41.3 %
250m radius right curve, right edge	50.9 m	None
250m radius left curve, left edge	45.5 m	None
150m radius right curve, right edge	41.7 m	None
150m radius left curve, left edge	42.7 m	None

HIGH BEAMS	Average minimum useful illumination distance (5 lux)
Straightaway right edge	151.6 m
Straightaway left edge	145.5 m
250m radius right curve, right edge	60.6 m
250m radius left curve, left edge	62.8 m
150m radius right curve, right edge	49.5 m
150m radius left curve, left edge	51.3 m



## Child seat anchors (LATCH) ease of use 60 Base Leather — leather seats

### Details

Applies to 2016-17 models

Overall evaluation **M**

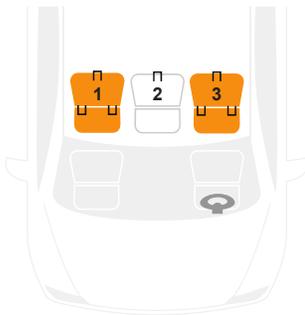
[How this rating is determined](#)

Vehicle trim 60 Base Leather

Seat type leather

This vehicle has 2 rear seating positions with complete child seat attachment (LATCH) hardware.

It has 1 additional seating position with a tether anchor only.



Good
Acceptable
Marginal
Poor
<input type="checkbox"/> Seating positions that rely on borrowed lower anchors or have only a tether anchor available are not rated.
Tether anchor
Lower anchors
Lower anchor(s) can be borrowed from adjacent position(s)
No hardware available

### Details by seating position

1	<b>Tether anchor</b>
	easy-to-find location
	no other hardware could be confused for anchor
	<b>Lower anchors</b>
	too deep in seat
	not too much force needed to attach
	difficult to maneuver around anchors
2	<b>Tether anchor</b>
	easy-to-find location
	no other hardware could be confused for anchor

<b>Lower anchors</b>	
none available	
<b>3</b>	<b>Tether anchor</b>
easy-to-find location	
no other hardware could be confused for anchor	
<b>Lower anchors</b>	
too deep in seat	
not too much force needed to attach	
difficult to maneuver around anchors	

**Technical measurements**

**Seat position 21 3**

<b>Lower anchor A</b>	
Open access rated	No
Depth (cm)	4-6
Force (lbs)	29
Clearance angle (degrees)	40
<b>Lower anchor B</b>	
Open access rated	No
Depth (cm)	4-6
Force (lbs)	27
Clearance angle (degrees)	46
<b>Tether anchor</b>	
Location	Middle seatback
Confusing hardware present	No
Has contrasting label within 3 inches of tether anchor	No

**Seat position 22 2**

<b>Lower anchor A</b>	
No lower latch for this seat position	
<b>Lower anchor B</b>	
No lower latch for this seat position	
<b>Tether anchor</b>	
Location	Middle seatback
Confusing hardware present	No
Has contrasting label within 3 inches of tether anchor	No

**Seat position 23 1**

<b>Lower anchor A</b>	
Open access rated	No
Depth (cm)	4-6
Force (lbs)	36
Clearance angle (degrees)	47
<b>Lower anchor B</b>	
Open access rated	No
Depth (cm)	4-6
Force (lbs)	36
Clearance angle (degrees)	42
<b>Tether anchor</b>	
Location	Middle seatback
Confusing hardware present	No

Has contrasting label  
within 3 inches of tether anchor

No

### Other safety features

Side airbags: front and rear head curtain airbags and front seat-mounted torso airbags

Rollover sensor: designed to deploy the side curtain airbags in the event of an impending rollover

Driver and front passenger knee airbags: separate airbags in the lower instrument panel designed to minimize knee injuries in frontal crashes

Electronic stability control

Antilock brakes

Daytime running lights

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