

Crash Test Results

New Car Safety

MAZDA BT50 4x4 FORD RANGER 4x4

2007 on Dual front airbags



Offset crash test at 64km/h



ANCAP Occupant Protection
Rated ★★★★★

Occupant Protection Score 22.46 out of 37

Variant: DX Dual cab utility Eng: 3 litre Turbo Diesel

Kerb weight: 1870 kg

Category: UTILITY

Vehicles built: 9/2007

Model History and Safety Features

The tested model of Mazda BT50 utility was introduced in Australia during 2007. The Ford Ranger is based on the same design and can be expected to have similar crashworthiness.

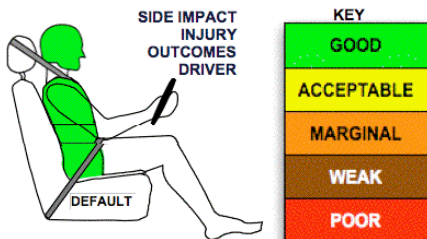
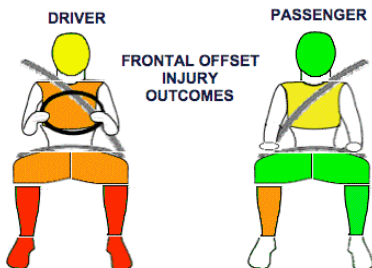
Dual front airbags and front seat belts with pretensioners are standard equipment on most BT50 variants but are optional on the single cab/chassis DX in Australia. They are standard on all Ford Rangers in Australia but airbags are not available on some New Zealand Rangers. Antilock brakes (ABS) with electronic brake distribution (EBD) are optional on some variants and standard other variants of the BT50 and Ranger. Side airbags with head and chest protection are optional on some variants of the Australian Ford Ranger as part of a safety pack. Side airbags are standard on some variants of the BT50 and Ranger in New Zealand.

A two point seat belt is fitted to the centre rear seat. This provides inferior protection compared with a three point seat belt. Child restraint anchorages are fitted behind the rear seat but are difficult to reach.

OCCUPANT PROTECTION: 3 Stars

The BT50 scored 6.457 out of 16 in the offset crash test. Passenger compartment integrity was compromised. Protection from serious leg injury was poor for the driver. Chest and upper leg protection was marginal for the driver.

The vehicle was awarded a default score of 16 out of 16 in the side impact crash test.



FRONTAL OFFSET CRASH TEST (v4.1)

Body region scores out of 4 points each: Head/neck 3 pts, chest 1.46 pts, upper legs 2 pts, lower legs zero pts.

The passenger compartment was severely deformed in the offset crash test. The brake pedal moved rearwards by 472 mm and upwards 139 mm, ending up near the front edge of the driver seat. The steering wheel hub moved 125 mm rearward, 106 mm upward and 18 mm sideways. The front ("A") pillar moved 230 mm rearwards. All doors remained closed during the crash. After the crash tools were required to open the driver door. The airbag cushioned the head of the driver and contact was marginally stable. Steering column and dash components and the park brake lever were potential sources of injury for the driver's knees. The passenger's head was cushioned by the airbag.


SIDE IMPACT CRASH TEST (v4.1)

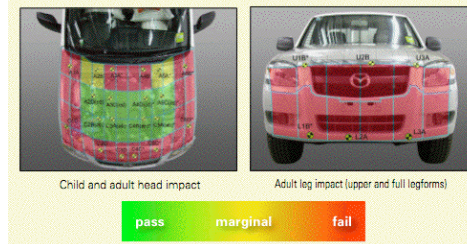
Body region scores out of 4 points each: Head 4 pts, chest 4 pts, abdomen 4 pts, pelvis 4 pts.

The side impact test normally used by ANCAP simulates a small car striking the driver's door of the vehicle under test. It is based on a regulation test but the regulation does not apply to vehicles with a high seat height like the BT50. Experience shows that such vehicles can be expected to perform well in this test so ANCAP has decided to award full score for these vehicles instead of conducting a crash test.

PEDESTRIAN PROTECTION: 1 Star (BT50)

This rating applies to the Mazda BT50. The Ford Ranger has panel differences that might affect the pedestrian protection rating. Like many vehicles of this type, a poor result for the BT50. The central region of the bonnet performed well for both child and head impacts, however the edges of the bonnet performed poorly. The results for both upper and full leg tests were universally poor.

PEDESTRIAN PROTECTION		
 ANCAP Rated ★★★★★ Mazda BT50 only v4.1	Child head impacts	4
	Adult head impacts	4.18
	Upper leg impacts	Zero
	Lower leg impacts	Zero
	Total (out of 36)	8.18



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ANCAP

Crash testing for safety

AUSTRALASIAN
NEW CAR ASSESSMENT
PROGRAM

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TECHNICAL DATA - MAZDA BT50/FORD RANGER 4x4 Dual cab - 2007 on

INJURY MEASUREMENTS

Body region	Offset Crash Test at 64km/h (v4.1)		Side Impact Crash Test at 50km/h (v4.1)
	Driver	Passenger	Driver
Head HIC	200	266	Default score awarded
Acceleration (g for 3ms)	39.9	41.7	
Neck - Shear (kN)	0.42	0.90	
Tension (kN)	1.08	1.55	
Extension (Nm)	16.2	15.1	
Chest Accln (g for 3ms)	25.800	33.100	
Compression (mm)	25.80	28.96	
Viscous criterion (m/s)	0.15	0.14	
Abdomen - Force (kN)	-	-	
Pelvis - Force (kN)	-	-	
Upper legs Force (kN)			
Left	3.02	0.23	
Right	1.19	2.04	
Knee displ (mm)			
Left	1.66	4.69	
Right	0.06	0.79	
Lower legs Force (kN)			
Left	9.59	1.25	
Right	6.67	3.58	
Index (Upper/Low)			
Left	1.49 /2.20	0.36 /0.40	
Right	1.19 /1.07	0.72/0.62	

Bonus points (maximum 5)

Pole Test: Not eligible due to a lack of head-protecting side airbags on BT50

Seat belt reminders: None (see table below for details)

Modifiers - deductions from offset test scores

Head	Steer col. movement	1 pt deduction
Chest	A-pillar movement	2 pt deduction*
	Loss of structural integrity	1 pt deduction*
Upper leg	Variable & conc. loading	2 pt deduction Left & Right
Lower leg	Pedal upward movement	1 pt deduction
Foot score	Pedal rearward movement	Score zero points

Note: Steering column and pedal movements are measured relative to the driver's seat.

* Maximum deduction of 2 points from chest score

Modifiers - deductions from side impact test scores

Default score awarded

Safety features

These specifications are subject to change. Please check with manufacturer for the latest specifications.

Driver airbag	O* √ (V NZ)	Antilock (ABS) brakes / Electronic brake distribution / Brake Assist	O/O/X (V NZ)
Passenger front airbag	O* √ (V NZ)	Electronic stability control (ESC, VSC, DSC, ESP, VSA)	X#
Side airbags, front seats - chest protection	V** (V NZ)	3 point centre rear seat belt	X
Side airbags, front seats - head protection	V** (V NZ)	Active head restraints - front seats	X
Side airbags, rear seats - head protection	X	Intelligent seat belt reminder - driver	X
Driver knee airbag	X	Intelligent seat belt reminder - front passenger	X
Front seat belt pretensioners	O* √ (V NZ)	Rear seat belt status indicator	X

Key: √ = Fitted to vehicle that was crash tested * Dual airbags and seat belt pretensioners are standard on all Australian Ford Rangers ** Side airbags with chest and head protection optional on Australian Ford Rangers.

S = standard on all variants

O = optional on base variant. May be standard on higher variants

V = not available on base variant but standard or optional on higher variants

X = not available on any variant

ESC required by ANCAP for 5 star rating from 2008

