

April 4, 2018

Contact: Becky Mueller +1 434 985 9203 (office) or +1 414 530 8478 (cell)

Russ Rader +1 703 247 1530 (office) or +1 202 257 3591 (cell)

VNR: WED. 4/4/2018, 10:30-11 a.m. EDT; repeat 1:30-2 p.m. EDT (KU) GALAXY 17
SD transponder 17/slot 1 (dl12025H) bandwidth 6 MHz; symbol rate 3.9787 FEC ¾
HD transponder 17-upper (dl12049H) bandwidth 18 MHz; symbol rate 13.235 FEC ¾

Good ratings for 5 small SUVs in passenger-side small overlap crash test

ARLINGTON, Va. — In a new round of evaluations, 5 of 7 small SUVs earn good ratings from the Insurance Institute for Highway Safety for occupant protection in a passenger-side small overlap front crash.

The ratings bring to 16 the number of small SUVs the Institute has evaluated in the passenger-side small overlap front test, which was introduced in 2017 to encourage manufacturers to offer the same level of protection for front-seat passengers as drivers in this type of crash.

The BMW X1; Chevrolet Equinox and its twin, the GMC Terrain; Jeep Compass and Mitsubishi Outlander earn good ratings in the passenger-side small overlap front test. The Mitsubishi Outlander Sport earns a marginal rating, and the Ford Escape earns poor. For the 2018 model year, the Equinox shed weight to join the small SUV size class. Earlier models were classified as midsize.

A good or acceptable passenger-side rating is needed to qualify for the Institute's 2018 *TOP SAFETY PICK+* award, as well as good-rated headlights. To earn *TOP SAFETY PICK*, vehicles must achieve good ratings in the driver-side small overlap front, moderate overlap front, side, roof strength and head restraint tests; earn an advanced or superior rating



The passenger's survival space was maintained reasonably well in the BMW X1 (left) test. In contrast, the Ford Escape's (right) occupant compartment allowed too much intrusion.

for front crash prevention; and also have at least acceptable-rated headlights. The Outlander is among the nine small SUVs that have qualified for a 2018 *TOP SAFETY PICK* award. So far no small SUV has earned the "plus" award, mainly because they fall short of a good rating for headlights.

None of the newly rated 2018 models earns better than acceptable marks for structure. (The Honda CR-V and Mazda CX-5 are the only small SUVs evaluated so far to earn good ratings for structure in the passenger-side small overlap front test.) The Outlander Sport is marginal, and the Escape is rated poor. Both the Outlander Sport and Escape allowed too



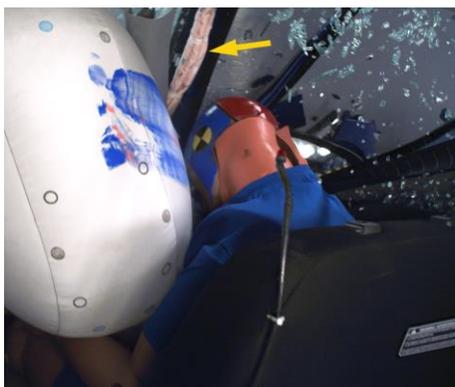
much intrusion into the occupant compartment on the right side.

The Escape struggled in the test as intruding structure seriously compromised space for the right-front passenger. Intrusion measured 10 inches at the upper door-hinge pillar, compared with 5 inches in the driver-side test. The passenger-side door sill was pushed 4 inches laterally into the occupant compartment. Measures taken from the dummy indicate that right hip injuries would be likely in a real-world crash of this severity.

Starting with 2017 models, Ford reinforced the structure on the driver side of the Escape to improve occupant protection in a small overlap front crash but didn't make the same change to the passenger side. The Escape earns an acceptable rating in the driver-side small overlap front test.

"Disparities like this one are why we decided to formally rate the passenger side in the small overlap test after five years of evaluating only the driver side," says Becky Mueller, a senior research engineer with the Institute who helped develop the passenger-side small overlap front test. "Manufacturers shouldn't shortchange protection for front seat passengers."

The X1's structure resisted intrusion reasonably well to maintain the passenger space. The safety belt and front and side curtain airbags worked together to keep the dummy in place, and measures taken from the dummy showed there would be a low risk of injury in a similar real-world crash.



The Outlander Sport's side curtain airbag, indicated by the yellow arrow (left), didn't deploy, and the dummy's head slid off the front airbag. In the Compass test (right), the front and side curtain airbags worked together to keep the dummy's head from contacting any stiff structure or outside objects that could cause injury.

Side airbag issue

In contrast, the side curtain airbags in the Escape and Outlander Sport didn't deploy. This contributed to the Escape's marginal rating and the Outlander Sport's poor rating for restraints and kinematics.

"That's not something we expect to see after so many years of crash testing," Mueller says. "Side curtain airbags should deploy in crashes like this."

Without side airbag protection, the right front passenger would be vulnerable to contact with side structure and outside objects in a small overlap front crash. In the Escape, the dummy's head contacted the front airbag but then rolled around the right side. In the Outlander Sport, the dummy's head barely contacted the front airbag before sliding off the right side, allowing the head to move sufficiently far forward to hit the upper interior trim panel on the door.

About the passenger-side test

In the driver-side small overlap front test, a vehicle travels at 40 mph toward a barrier with 25 percent of the vehicle's front end overlapping the barrier. The test mimics what happens when the front driver-side corner of a vehicle collides with another vehicle or with an obstacle such as a tree or utility pole.

The passenger-side test is virtually identical to the driver-side one, except the vehicle overlaps the barrier on the right side. Instead of just a driver dummy, a passenger dummy also is seated in front.

The Institute doesn't conduct passenger-side small overlap front tests on every vehicle it rates. Some vehicles — those with good driver-side ratings — qualify to be rated on the basis of the automaker's own test data. If they follow IIHS



protocol, manufacturers can submit their data and video to IIHS engineers, who evaluate it to assign a rating. IIHS will conduct occasional audit tests.

The Institute has used that process, known as test verification, to assign other types of ratings under certain circumstances. In the case of the passenger-side small overlap ratings, verification will allow more vehicles to vie for a *TOP SAFETY PICK+* award than the Institute would have time to test on its own.

Passenger-side small overlap front crash ratings for small SUVs 2018 models tested

	Overall	Structure	Passenger restraints & kinematics	Passenger injury measures			
			Head & neck	Chest	Hip & thigh	Lower leg & foot	
BMW X1	G	A	G	G	G	G	G
Mitsubishi Outlander	G	A	G	G	G	G	G
Chevrolet Equinox	G	A	G	G	G	G	A
GMC Terrain	G	A	G	G	G	G	A
Jeep Compass	G	A	G	G	G	G	A
Mitsubishi Outlander Sport	M	M	P	G	G	G	G
Ford Escape	P	P	M	G	G	P	G

Good **G** Acceptable **A** Marginal **M** Poor **P**

For more information, go to iihs.org

The Insurance Institute for Highway Safety is an independent, nonprofit scientific and educational organization dedicated to reducing the losses — deaths, injuries and property damage — from motor vehicle crashes. The Institute is wholly supported by auto insurers.

