The Insurance Institute for Highway Safety has evaluated the crashworthiness of the Trooper in three 40 mph frontal offset crash tests into a deformable barrier. Three tests were conducted because major fuel leaks occurred in the first two tests. Isuzu identified defects in the design and recalled the affected models. A third test was conducted to assess the effect of the design fixes. Head restraint and bumper designs are evaluated separately.

OVERALL EVALUATION: MARGINAL The driver space was maintained reasonably well in all three frontal offset crash tests. However, footwell intrusion contributed to the likelihood of leg and foot injuries, and there was far too much steering wheel movement, which allowed the dummy's head to strike the steering wheel through the airbag in all three tests. The major fuel leaks that occurred in the first two crash tests indicate high risk of fire in an on-the-road crash and resulted in two safety-related recalls of the relevant models. The third test indicated that the two fixes to prevent fuel leakage in high-speed crashes were successful.

STRUCTURE/SAFETY CAGE: ACCEPTABLE There was moderate intrusion into the driver footwell area and minimal rearward movement of the instrument panel in all three tests. In the first test, a connection joining two segments of the fuel supply line underneath the vehicle failed, allowing a large amount of the fluid in the fuel system to leak. In the second test, there still was significant leakage from a fuel hose that was pinched and torn between the transmission housing and the firewall. In the third test, after fixes were made there was no fuel leakage.

RESTRAINTS/DUMMY KINEMATICS: MARGINAL Dummy movement wasn't well controlled during any of the three offset tests. There was far too much upward movement of the steering wheel, which contributed to the dummy's head bottoming out the airbag and striking the steering wheel in each of the tests. During rebound in the first test, the dummy's head contacted the upper B-pillar near the roof side rail. In the second test, the dummy rebounded into the seat. In the third test, the dummy's head grazed the B-pillar on rebound.

INJURY MEASURES: BOTH LEGS/FEET POOR Measures taken from the neck and chest indicate low risk of injury to these body regions. However, forces on both lower legs and feet indicate the likelihood of leg and foot injuries in all three tests. Head acceleration from the steering wheel contact in all of the tests was high, but head acceleration from the B-pillar contact was low in the first test and negligible in the third test.