

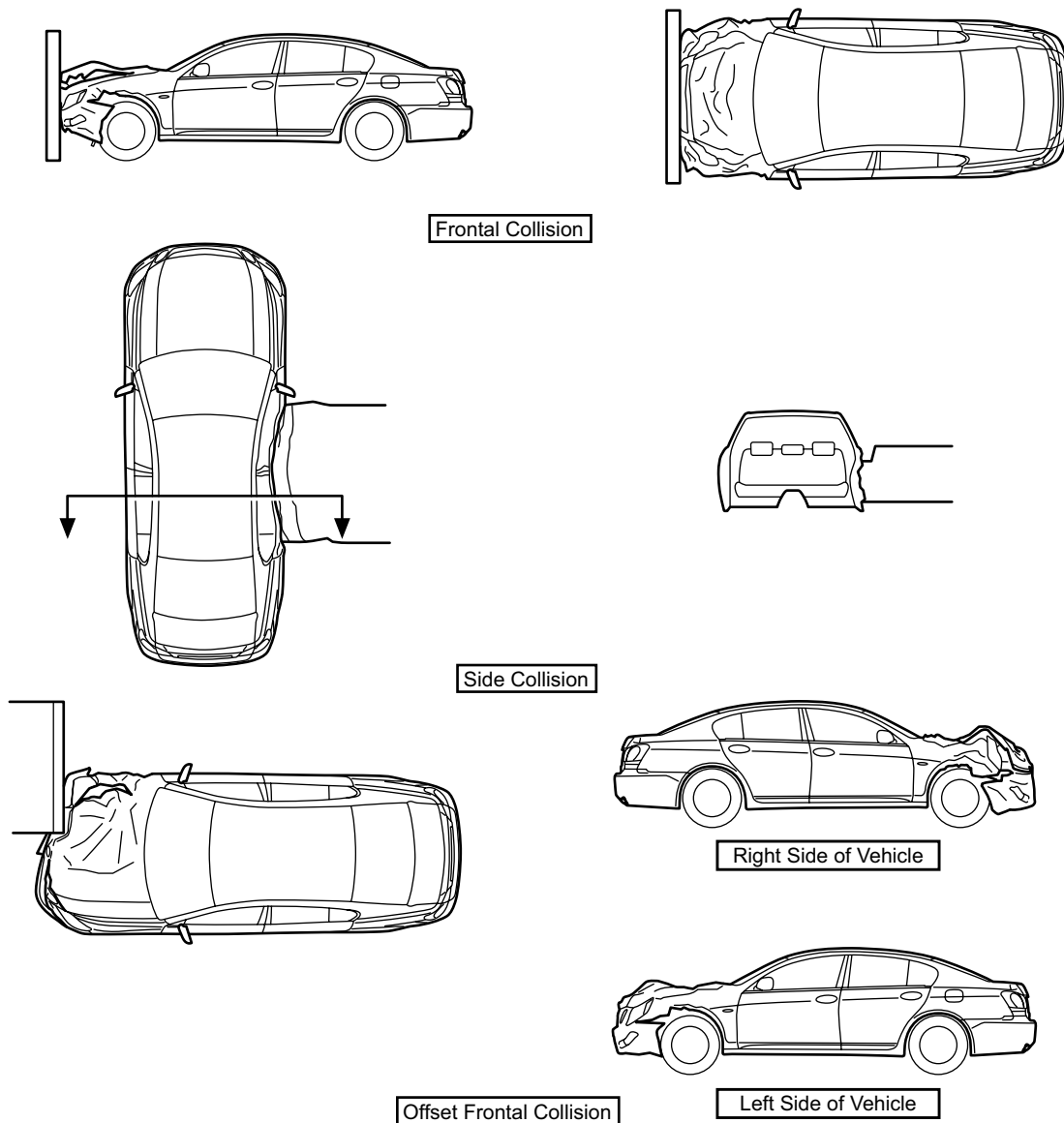
Safety Features

- A crash safety body, which minimizes the deformation of the cabin by effectively absorbing and dissipating the energy of a collision through the use of crushable front and rear body sections and highly rigid cabin parts, is used.
- It has an omni-directional compatibility body structure that gives the vehicle the world's top-level collision safety performance in its class* for preserving the cabin space during a frontal, side, or rear collision.

❖REFERENCE❖

*Comparison of vehicles with the same cylinder displacement in the class.

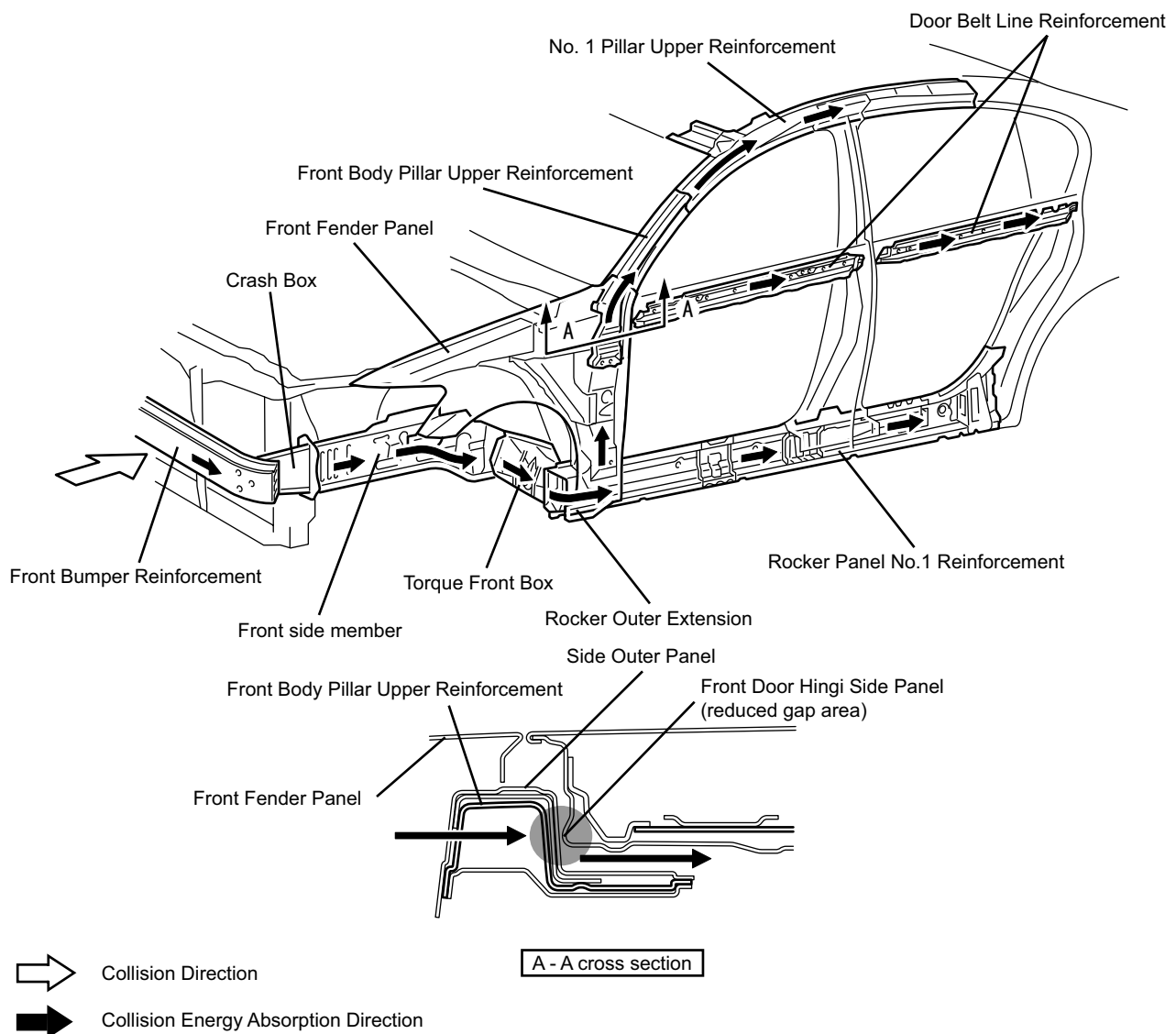
- A rational body structure has been achieved through the use of computer-generated collision simulations and numerous on-vehicle tests. It effectively absorbs and dissipates the energy of the impact not only during a frontal or side collision, but during an offset frontal collision (in which an impact is applied only to one end of the vehicle) as well.



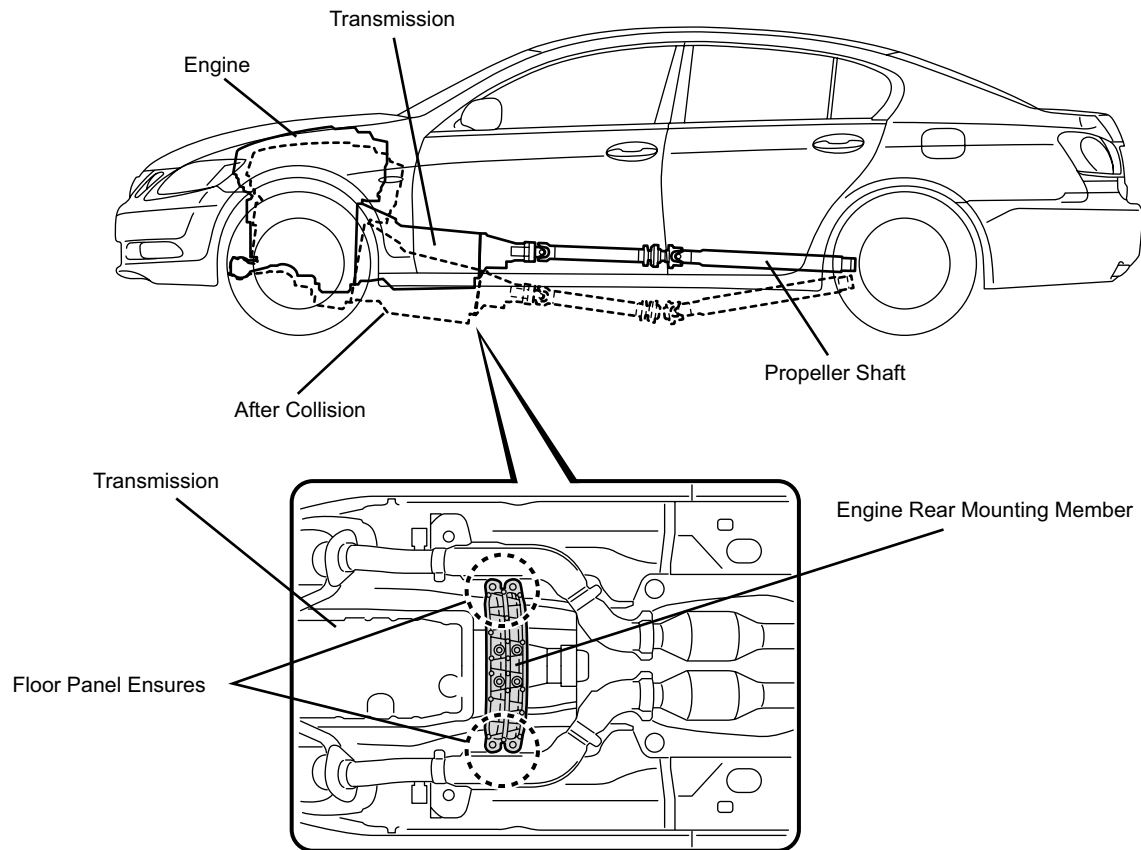
Note: The illustration above is based on a collision test between two vehicles.
A real accident will be different from the illustration in terms of speed and collision location.
Typical vehicle examples have been used.

Impact Absorbing Structure for Front Collision

- This structure effectively dissipates the energy of a frontal collision to the right and left front side members by way of large front bumper reinforcements. Furthermore, crush boxes have been designed with reparability in mind, and front side members with a hexagon-shaped cross section provide high yield strength. Thus, an efficient energy absorbing structure has been achieved.
- With respect to the energy of an offset frontal collision, the load that is applied to the front pillar is effectively dissipated by enhancing the energy transmission to the door belt line area. This has been accomplished by reducing the gap between the front door hinge side panel and the side outer panel (see A-A cross section).
- A rocker outer extension is provided at the front end of the rocker, and the rocker has been extended forward, in order to absorb the impact of a collision that is transmitted from the wheel during an offset frontal collision. This feature minimizes the deformation of the body around the cabin.



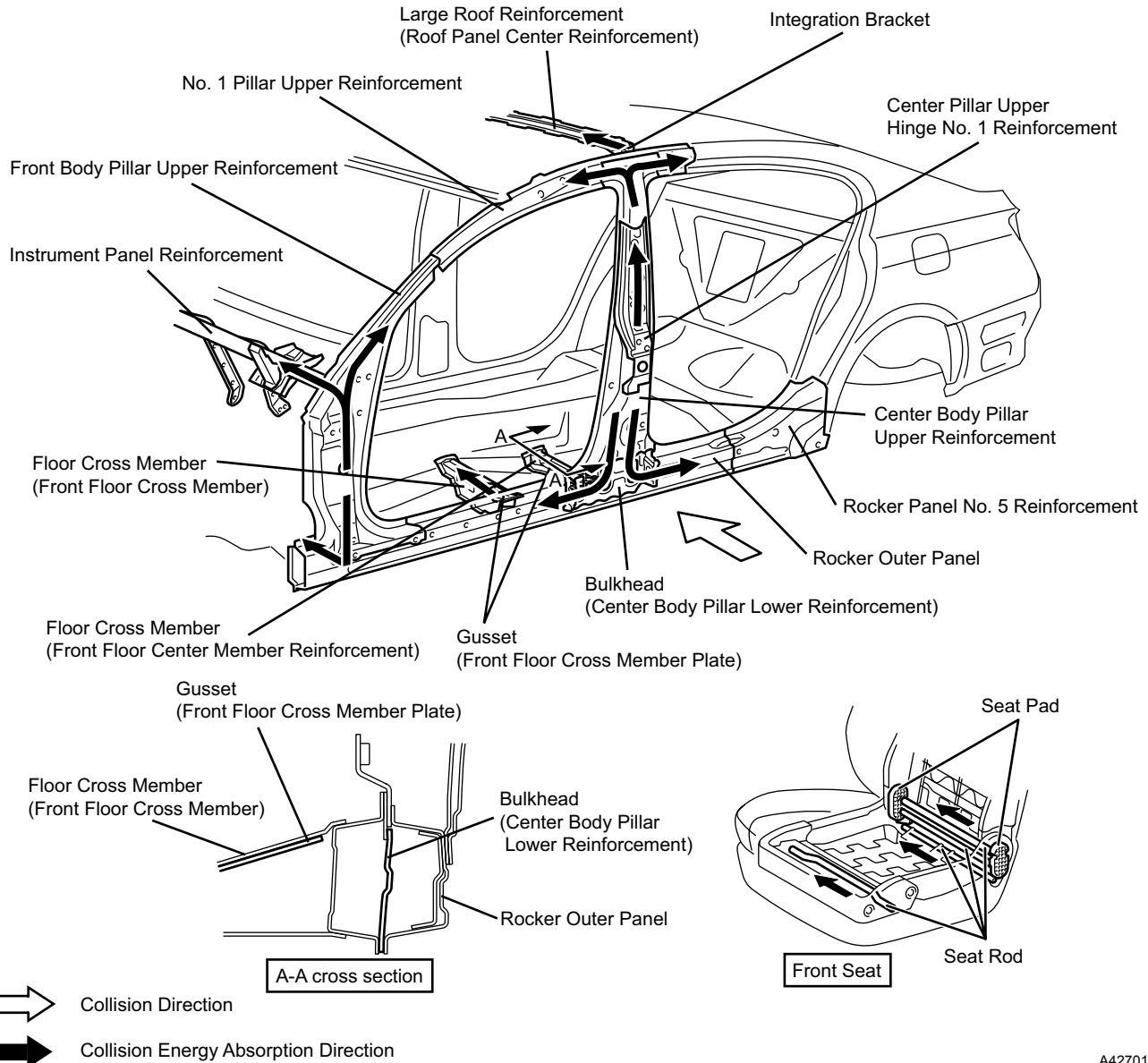
- The portion in which the engine rear mounting member is mounted to the floor panel has been revised. When the load from the engine and the transmission is applied to this area during a frontal collision, this portion separates. By suppressing the intrusion of the dash panel into the cabin in this manner, this structure helps to reduce the injury sustained by the occupants.



A4270166B

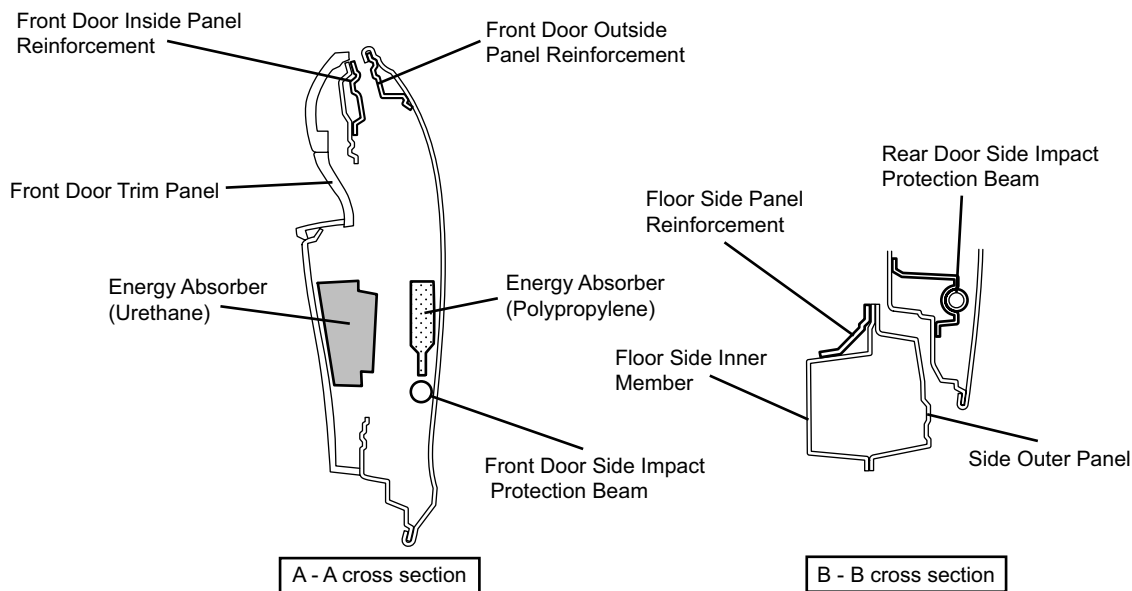
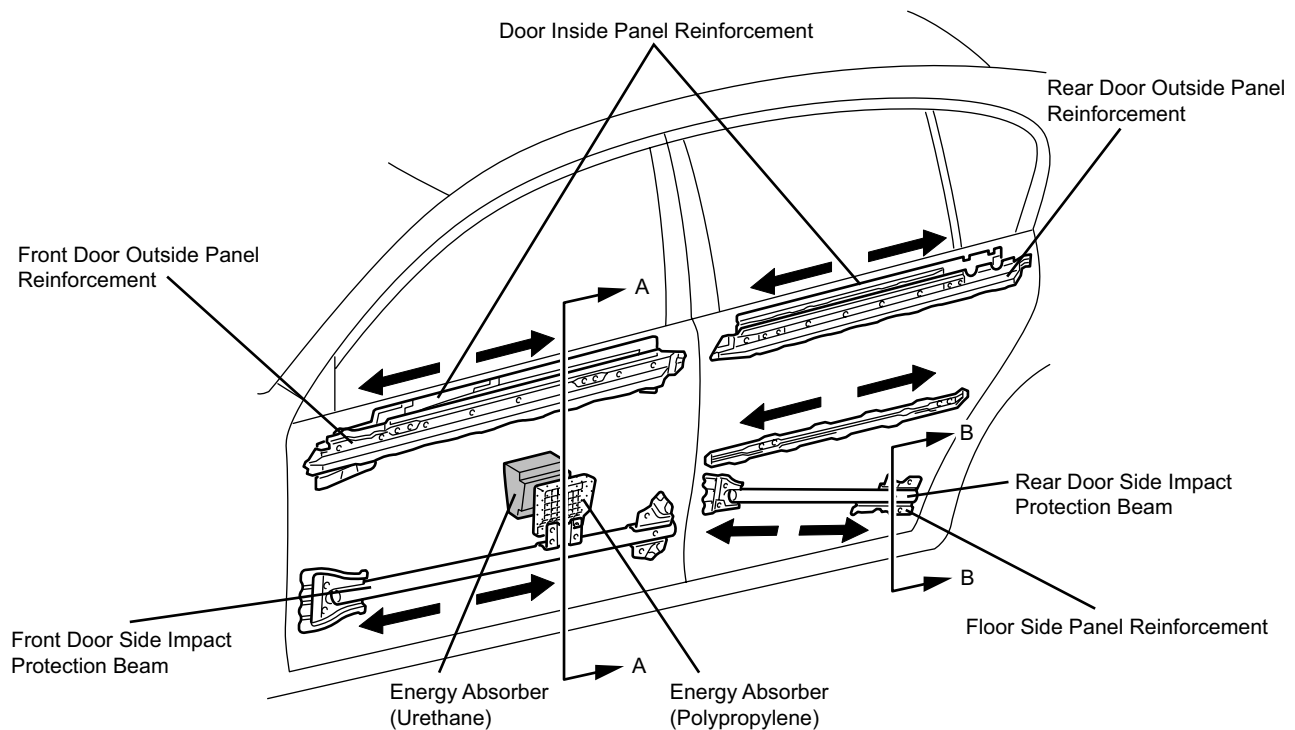
Impact Absorbing Structure for Side Collision

- A center body pillar upper reinforcement, which is shaped with different thicknesses by joining materials with different thicknesses, is provided at the center pillar. In addition, the strength distribution of the center pillar has been optimized. Furthermore, the center pillar upper hinge No. 1 reinforcement is provided inside the center pillar to ensure its rigidity. As a result, a structure that minimizes cabin deformation has been achieved.
- Various materials are used effectively in order to transmit the energy of the collision (which has dissipated from the center pillar to the rocker during a side collision) to the floor tunnel via pads and rods provided in the seats, thus reducing the extent of body deformation. A bracket is provided to join the roof side rail and the large roof reinforcement in order to effectively transmit the energy of the collision that has dissipated above the center pillar, thus suppressing the intrusion of the roof side rail into the cabin.
- The rocker consists of a rocker outer panel made of high tensile strength sheet steel and a bulkhead that is provided in the cross section in order to effectively dissipate the energy of the collision, which is input from the bottom of the center pillar, to the floor.
- The portion of the floor cross member that is joined to the rocker has been raised (see A-A cross section) in order to strengthen the joint between the floor and the rocker. In addition, gussets made of high tensile strength sheet steel are provided to ensure the proper strength.



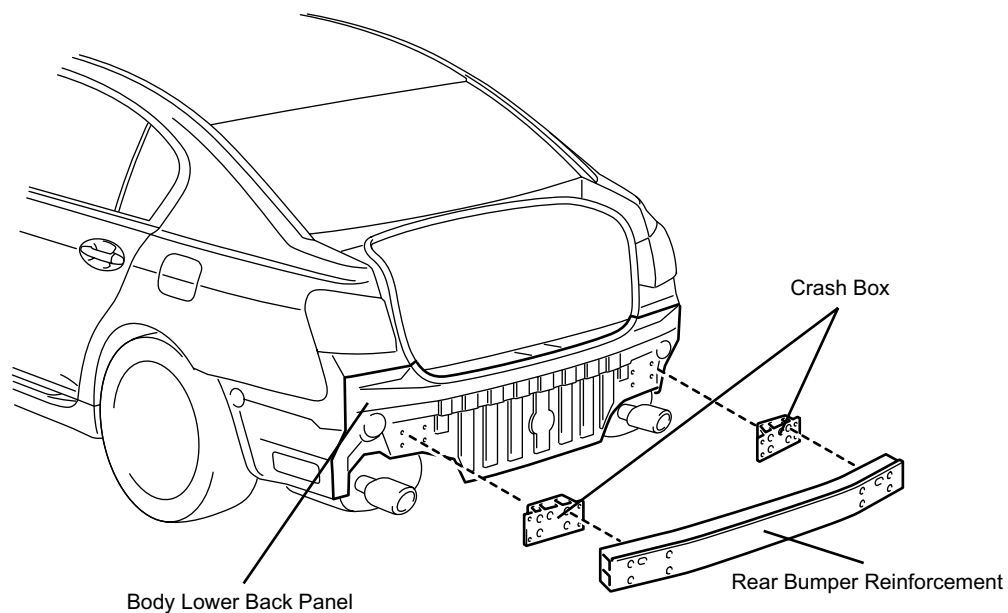
- In the door panel, the side impact protection beam has been located to overlap at the bottom with the pillars in order to effectively absorb and dissipate the energy of a collision. Furthermore, the reinforcements at the belt line and inside the door panel have been located optimally in order to ensure the proper door strength.
- Energy absorbers are provided inside the front doors in order to dampen the impact that is applied to the occupants during a collision (see A-A cross section).
- A floor side panel reinforcement, which overlaps with the rear door side impact protection beam, is provided at the rear end of the rocker facing the cabin, in order to ensure the proper strength and reduce the extent of body deformation during a collision (see B-B cross section).

➡ Collision Energy Absorption Direction



Impact Absorbing Structure for Rear Collision

- On all models, an aluminum rear bumper reinforcement is provided inside the rear bumper for weight reduction. In addition, crush boxes are provided between the rear bumper and the body lower back panel in order to absorb the impact of a minor collision.



A4270151B