## ■LOW VIBRATION AND LOW NOISE BODY

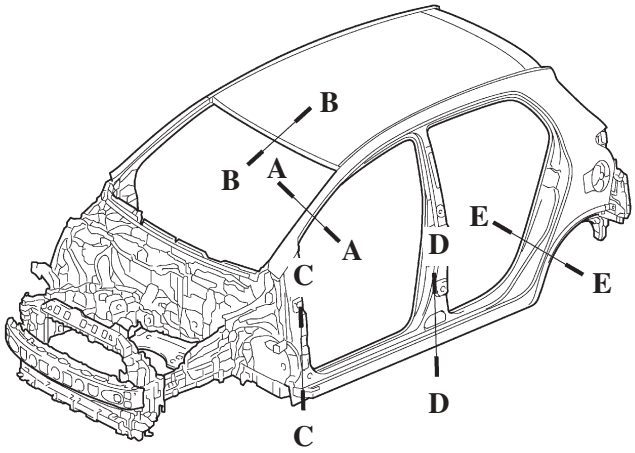
### 1. General

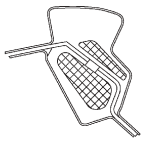
Effective application of vibration damping and noise suppressant materials reduces engine noise and road noise.

### 2. Sound Absorbing and Vibration Damping Materials

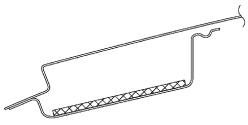
- The locations of the sound insulation materials in the frame cross sections have been optimized, creating a quiet drive.

**: Foamed Seal Material**
**: Foamed Urethane Material**

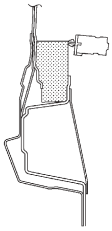


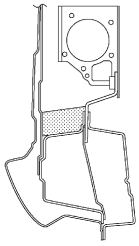
**A – A Cross Section**



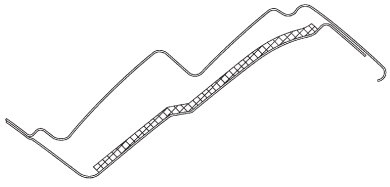
**B – B Cross Section**



**C – C Cross Section**



**D – D Cross Section**



**E – E Cross Section**

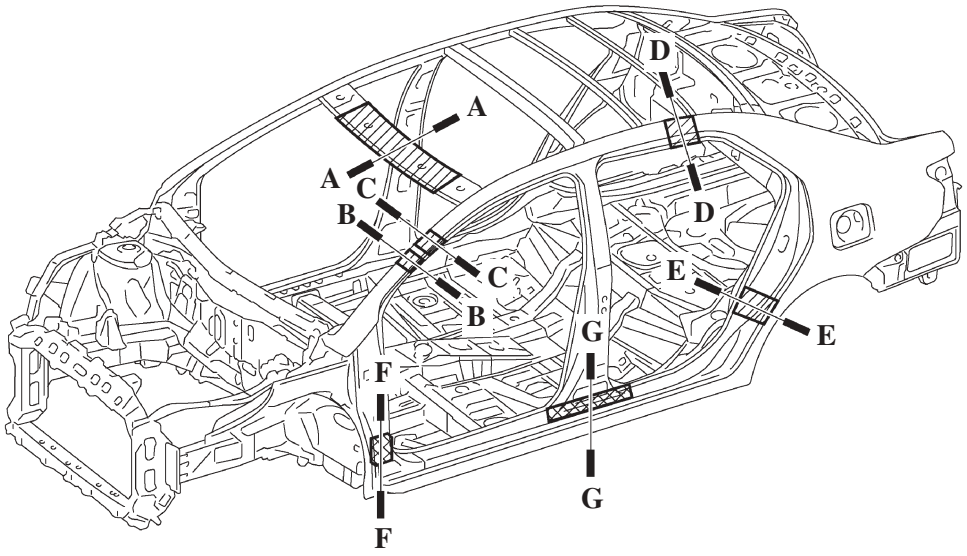
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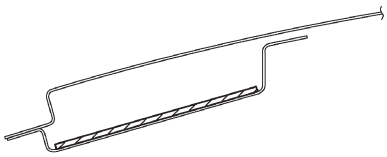
**5-door Hatchback Model**

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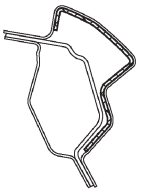
: Foamed Seal Material

: Foamed Urethane Material

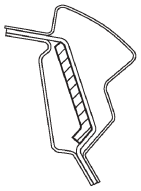


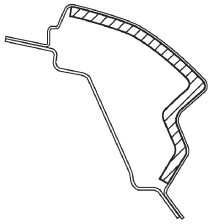
A – A Cross Section



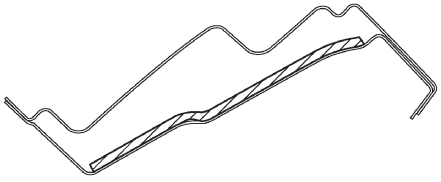
B – B Cross Section



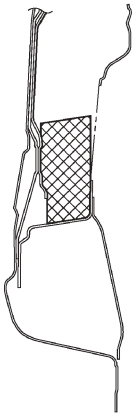
C – C Cross Section



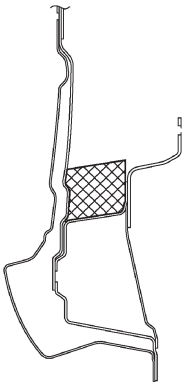
D – D Cross Section



E – E Cross Section



F – F Cross Section



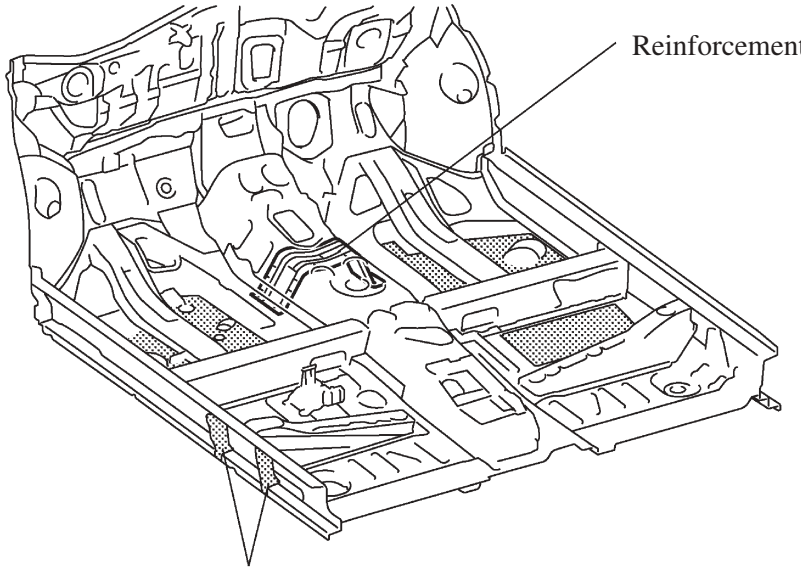
G – G Cross Section

**4-door Sedan Model**

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- The front floor panel is curved and the rigidity of the panel has been ensured, restricting vibration.
- A reinforcement is used on the front of the tunnel section, restricting the movement of the body frame and reducing vibration.
- Two bulkheads are used on the inner side in the rocker panel, restricting the movement of the body frame and reducing vibration.

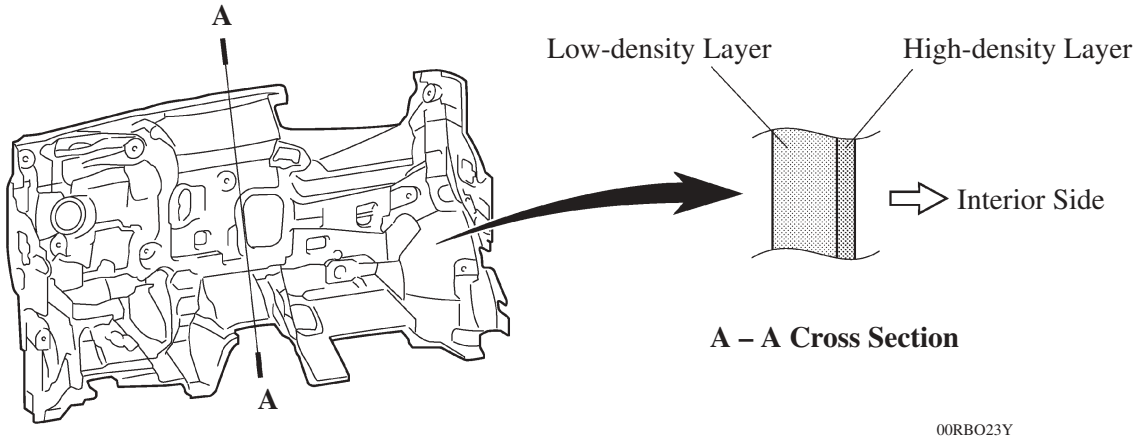
**: Curved Area**




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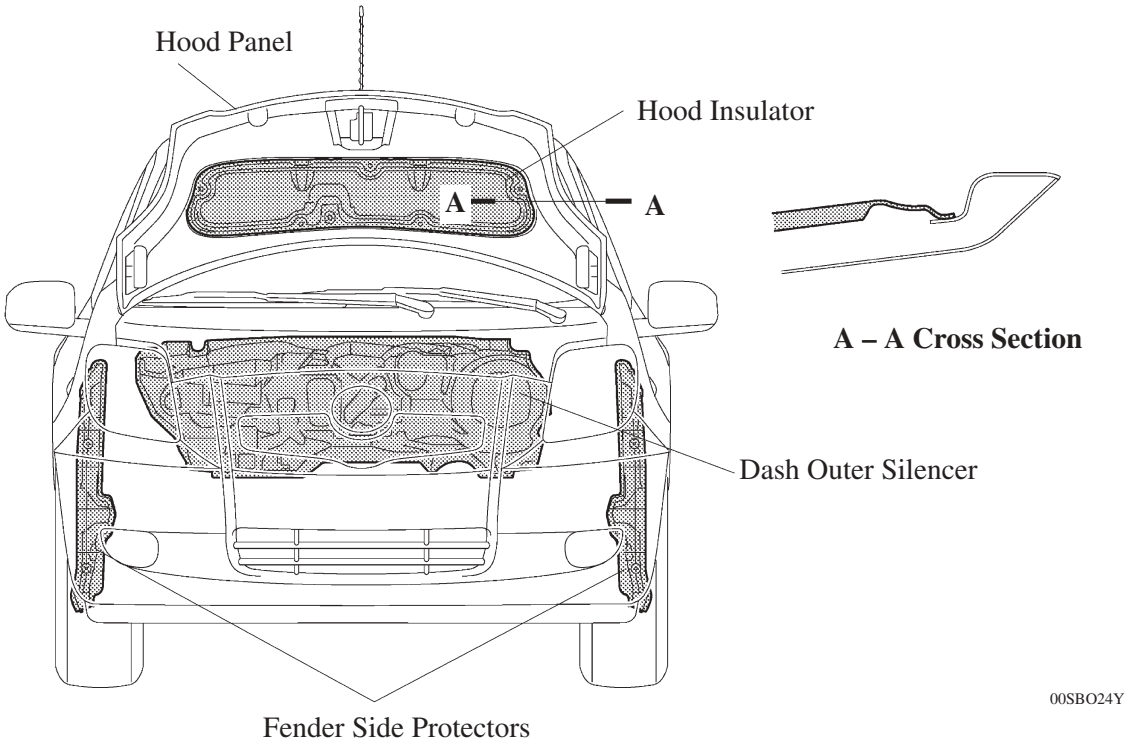


- The dash silencer has been enlarged. At the same time, a structure is used with two layers of different sound absorbing materials, creating a lightweight structure and reducing the engine noise that enters the interior.



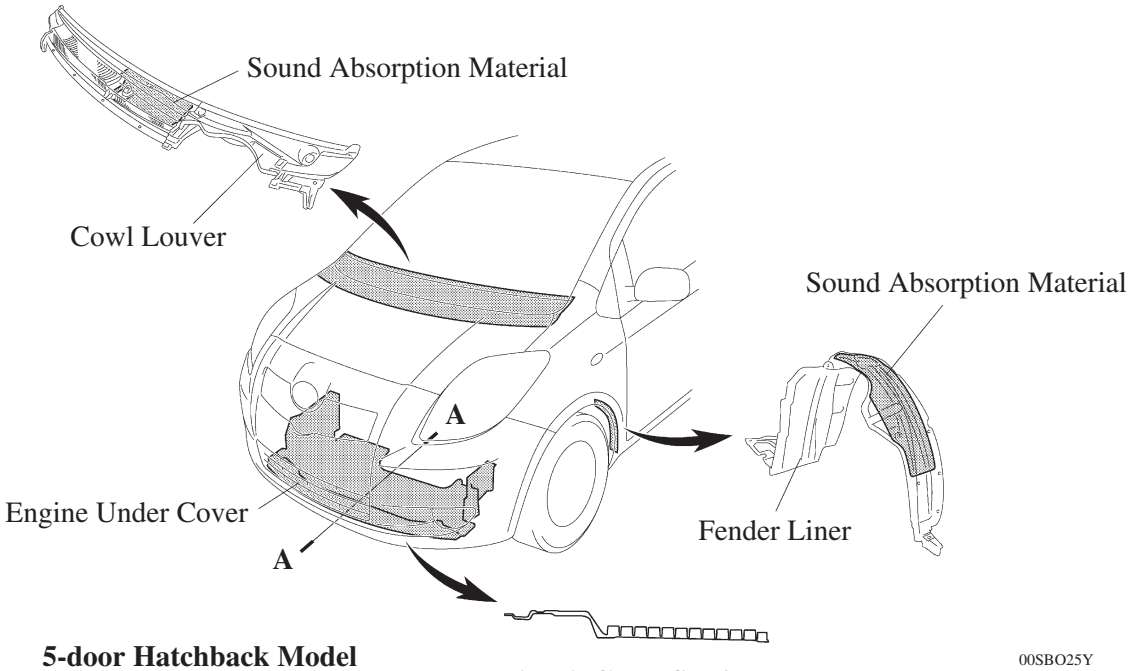

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- In addition to the hood insulator provided on the rear of the hood panel on the SOL grade for the Europe models, a two-layer construction is used with a layer of air between the hood panel and insulator. This realizes the excellent sound insulation performance.
- Fender side protectors are provided on the SOL grade for the Europe models, which stops the flow of sound to the door side and creates a quiet drive.
- A two-layer construction silencer is provided in the outer side of the dash panel, reducing the engine noise in the vehicle interior.

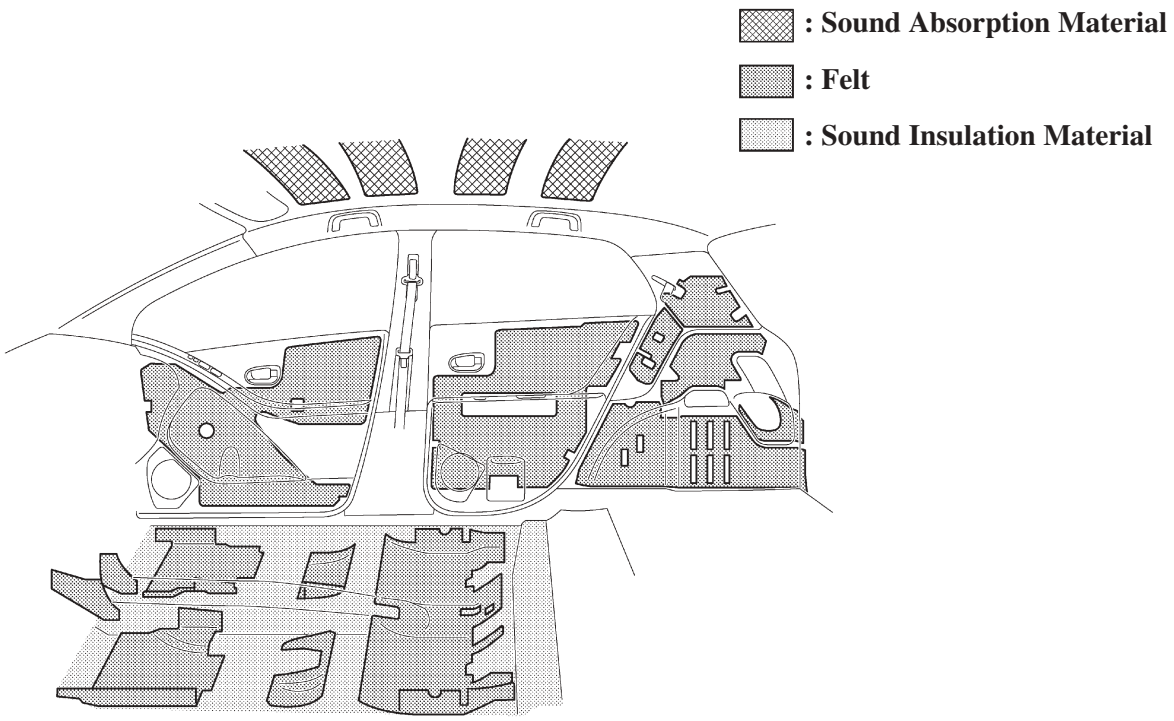



**5-door Hatchback Model**

- Only on the diesel engine models, a two-layer construction engine under cover with an inner layer of air is used. Also, sound absorbing materials are provided in the fender liner and cowl louver, realizing an excellent sound insulation performance.



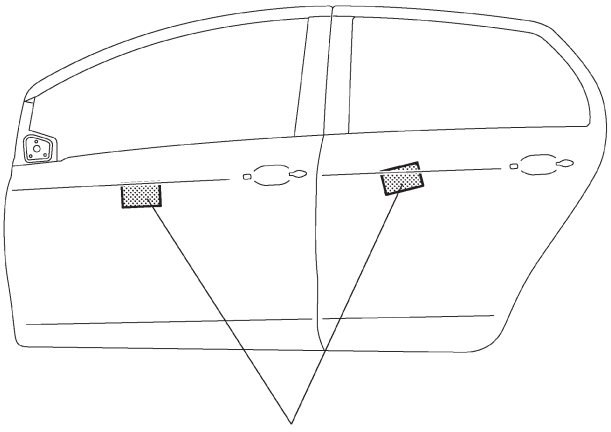
- All the locations of sound insulation and absorption materials in the cabin have been optimized, creating a quiet drive.




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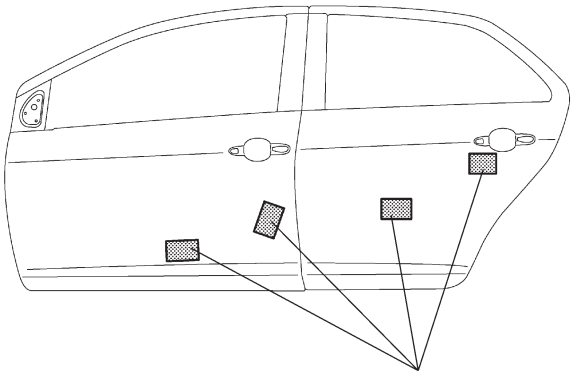
**5-door Hatchback Model**

- Damping materials are used in the side door outer panel on both the 5-door and 3-door hatchback models and 4-door sedan models, reducing the sound when closing the doors.




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**5-door Hatchback Model**




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**4-door Sedan Model**

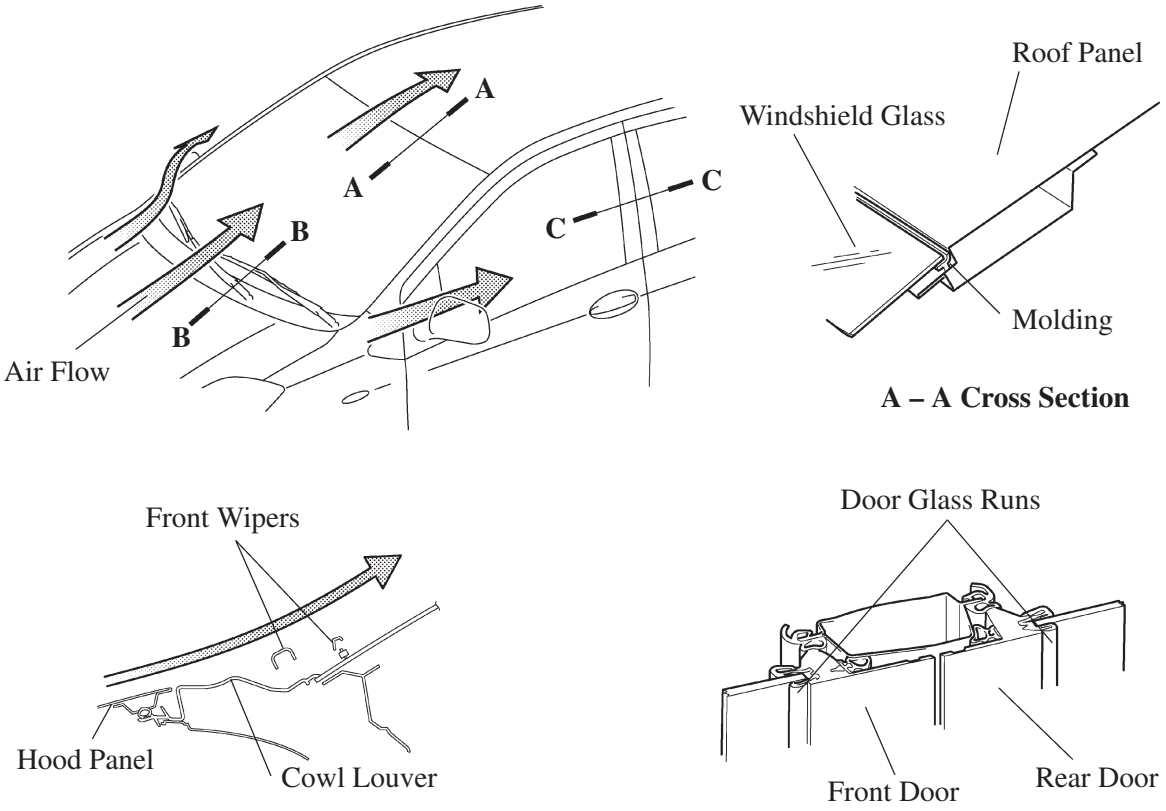
- An under coat is applied on the rear of the floor, reducing splash noise.
- A foam type under coat material is used in the wheel house section. In addition, the thickness of the under coat on the rear half of the rear wheel house has been doubled to realize the excellent sound insulation performance.

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## 3. Reducing Wind Noise

Wind noise has been reduced through the adoption of the following constructions:

- The upper surface of the cowl louver has a raised shape to restrict the flow of wind onto the wipers.
- A molding-less windshield glass and door glass run with minimal level differences are used, realizing the excellent aerodynamic performance.




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**5-door Hatchback Model**