

BRAKE PEDAL

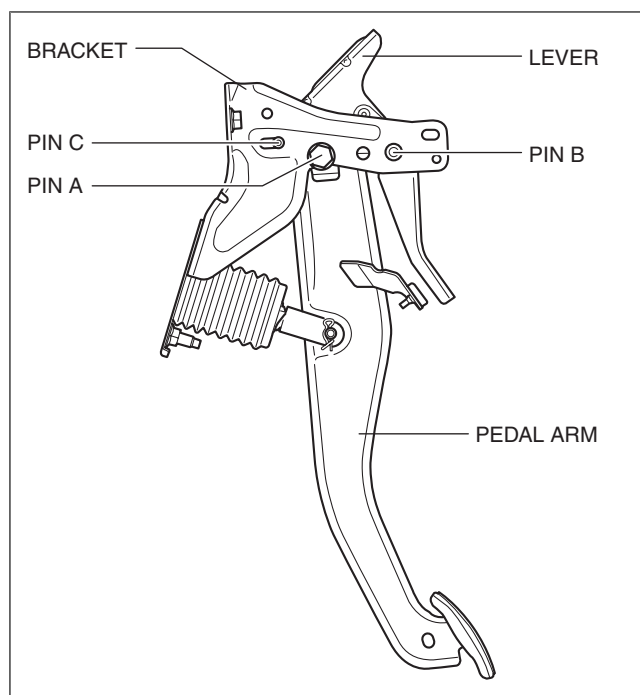
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Purpose/Function

- An intrusion-minimizing brake pedal has been adopted to the brake pedal to provide for a measure of safety in the event of an accident.
- The intrusion-minimizing brake pedal mechanism reduces impact to the lower extremities of the driver by minimizing the amount of rearward brake pedal thrust in a frontal collision.

Construction

- The intrusion minimizing brake pedal mechanism is structured on the brake pedal and consists of the following parts.
 - Pedal arm
 - Lever
 - Pin A
 - Pin B
 - Pin C
 - Bracket



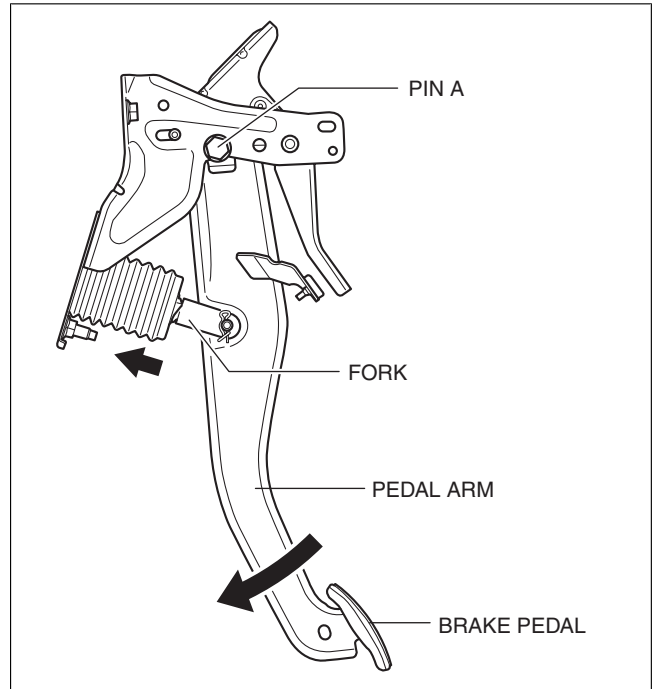
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Operation

During normal braking

- When the brake pedal is depressed, the pedal arm rotates at the pin A fulcrum point, and the pedal depression force is transmitted to the fork of the power brake unit.

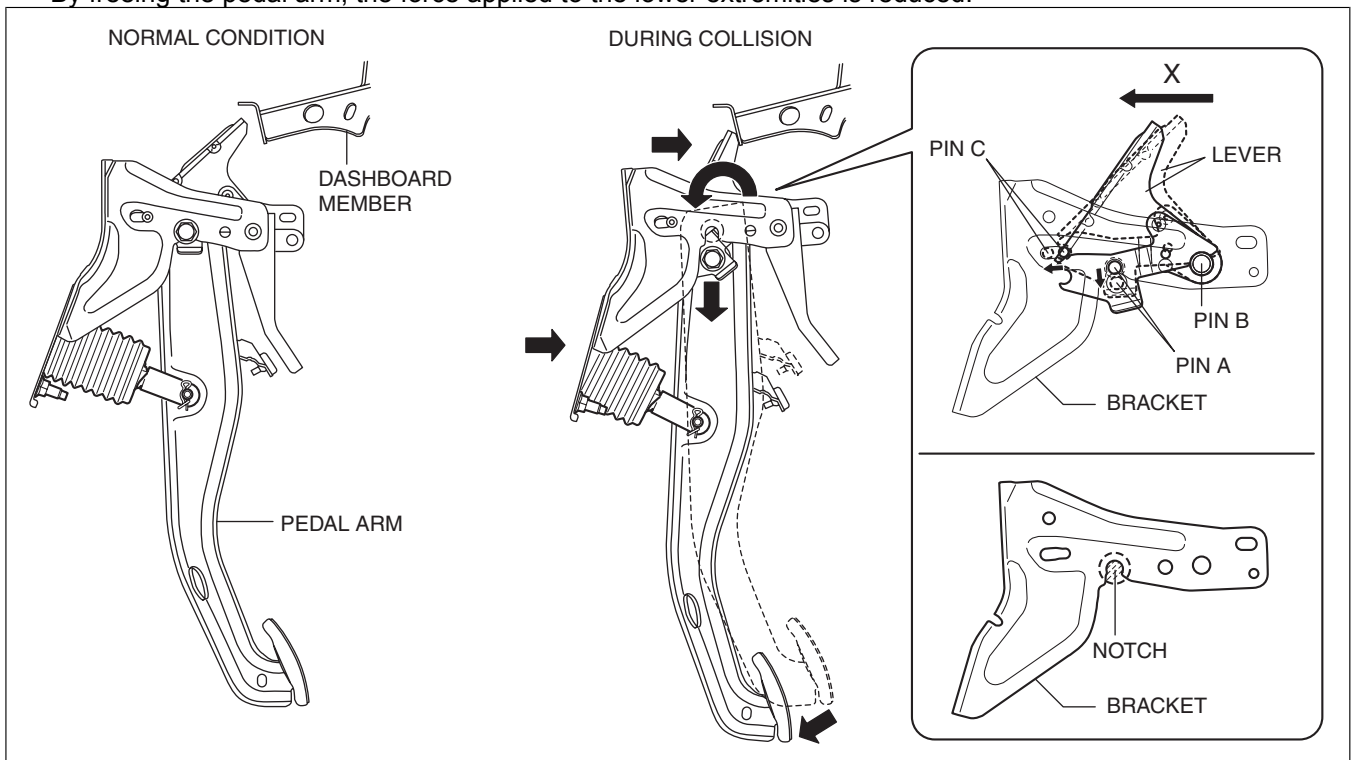
- This pedal depression force pushes in the fork to operate the brakes.



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Intrusion-minimizing operation

- In a frontal collision, the brake pedal is forced rearward by the movement of the dashboard.
- In response to this, force in the direction of X is applied to the brake pedal lever because the dashboard member and brake pedal lever interfere.
- With the addition of force in the direction of X, pin C releases from the lever, and the lever rotates around the pin B fulcrum point.
- When the lever rotates, it obstructs pin A at the fulcrum point of the pedal arm.
- If the pedal rotates further, pin A separates from the bracket (notch), and the pedal is freed.
- By freeing the pedal arm, the force applied to the lower extremities is reduced.



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