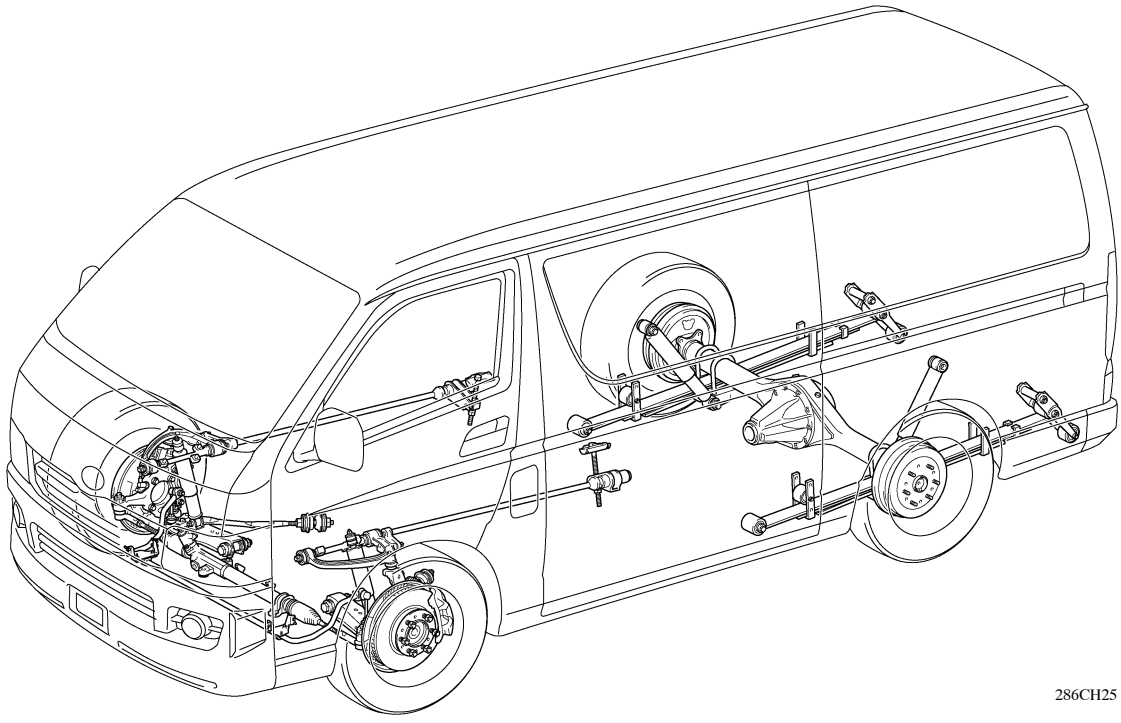
SUSPENSION AND AXLE

■ SUSPENSION

1. General

- A double-wishbone type suspension with upper torsion bar is used in the front.
- A rigid axle suspension with leaf spring is used in the rear.



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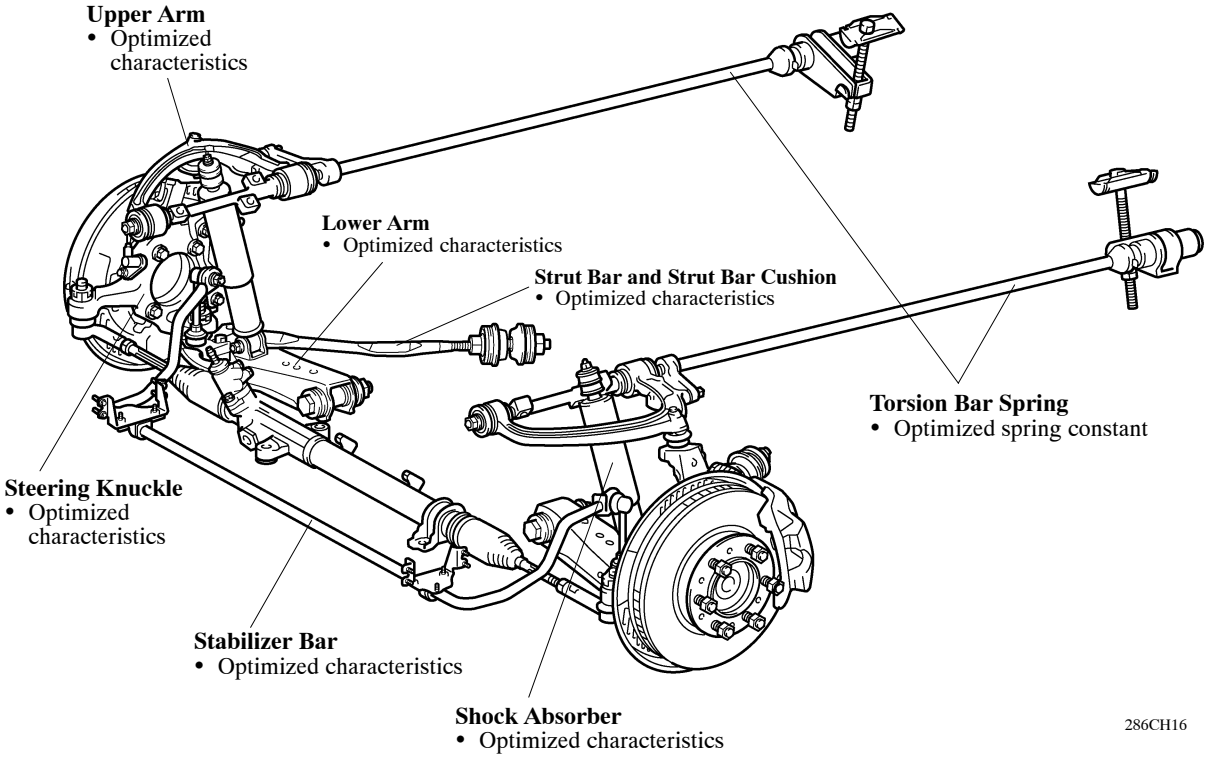
▶ Specifications ◀

Body Type/Wheel Base			Standard/Standard	Wide/Standard	Wide/Super Long
Tread	Front	mm (in.)	1470 (57.9)	1655 (65.2)	←
	Rear	mm (in.)	1465 (57.7)	1650 (65.0)	←

2. Front Suspension

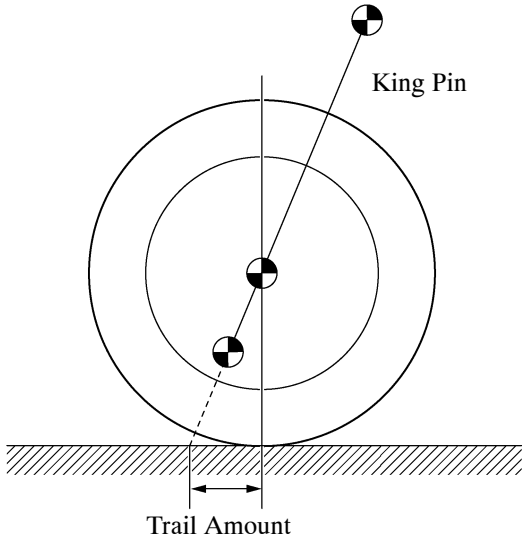
General

- By optimizing the suspension geometry and the component parts, excellent drivability and stability as well as ride comfort are attained.
- A stabilizer bar is used in all models to ensure drivability, stability and excellent ride comfort.
- The roll center height is optimized to ensure a roll position with a secure feeling.
- The wheel vertical stroke has been increased to ensure excellent ride comfort.



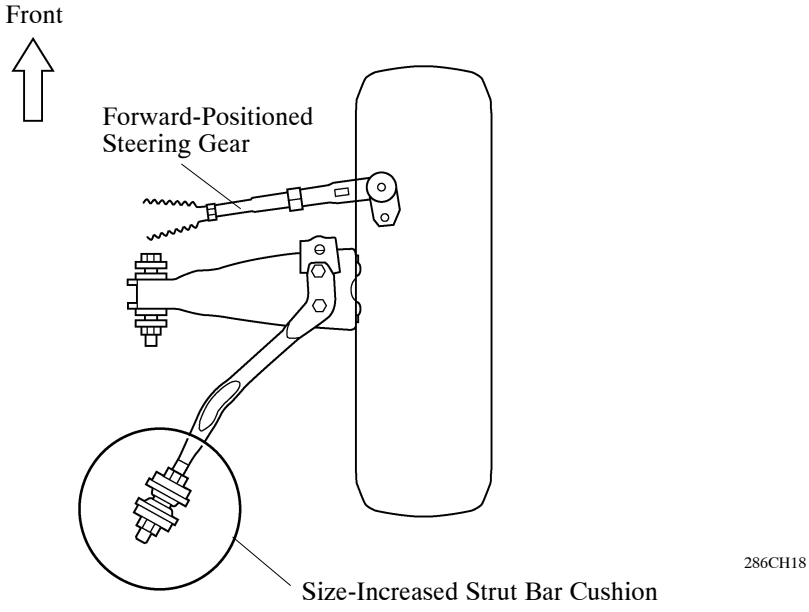
Optimized Caster Angle and Caster Trail

By optimizing the caster angle and setting a large caster trail, excellent straight-line stability and steering responsiveness are attained.



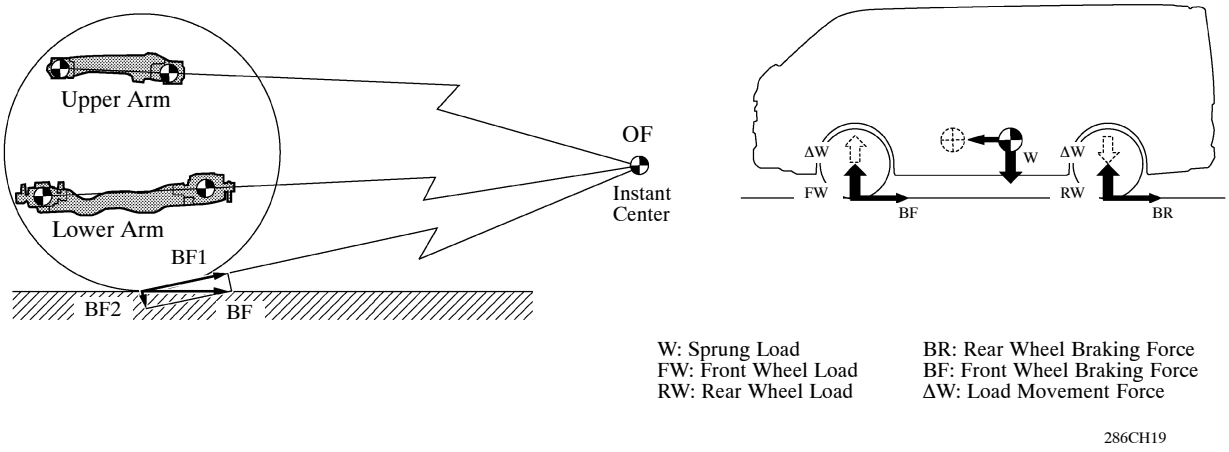
Optimized Compliance

By increasing the size of the strut bar cushion, optimized compliance is ensured and excellent drivability and stability as well as ride comfort are attained. Also, by positioning the steering gear in front of the axle, optimized compliance of the steering characteristic is ensured and excellent drivability and stability are attained.



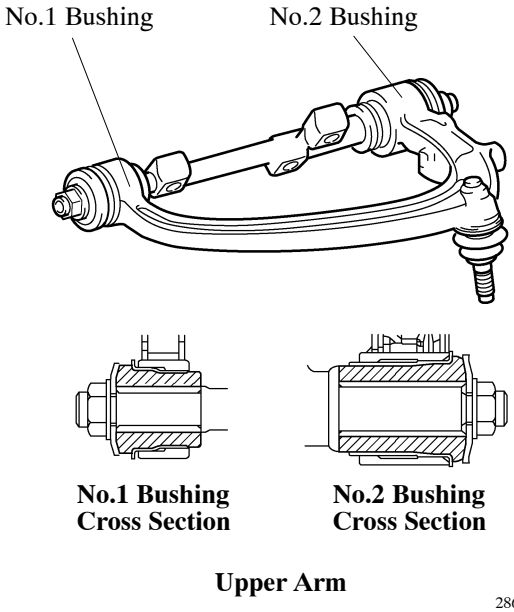
Anti-dive Geometry

- The lower arm is mounted to the body higher at the back than at the front, and the rear of the upper arm is set lower. As a result, the intersecting point OF, to which the lines extend geometrically from the lower and upper arms, has been set higher than the road surface.
- The intersecting point OF is in a position in which the vehicle body sustains the braking force BF that acts on the front wheels during braking. For this reason, the braking force BF generates the followings: the force BF1 that acts on the intersecting point OF, and the force BF2 that acts in the direction of the ground surface. The direction and the intensity of the force BF2 that acts in the direction of the ground surface vary by the position of the intersecting point OF. Thus, by setting the intersecting point OF at a position higher than the road surface, the increase in the front wheel load that is increased by the inertia during braking can be suppressed geometrically.

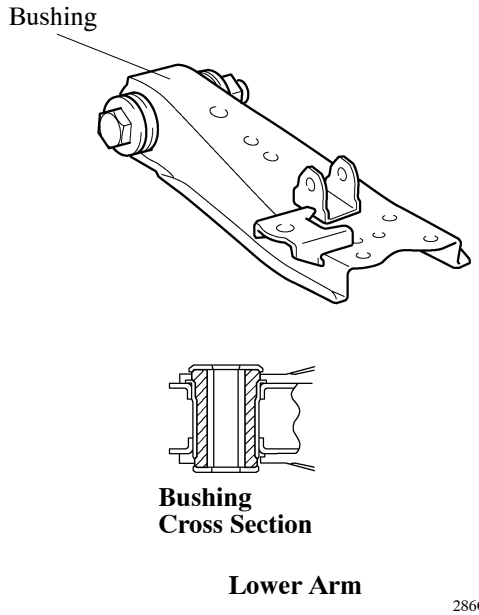


Upper Arm and Lower Arm

- An A-shaped cast arm is used, and the arm shape is optimized for the upper arm, which contributes to reducing the minimum turning radius.
- An I-shaped pressed steel plate arm is used for the lower arm.
- Rubber bushings are used for both the upper arm and the lower arm.



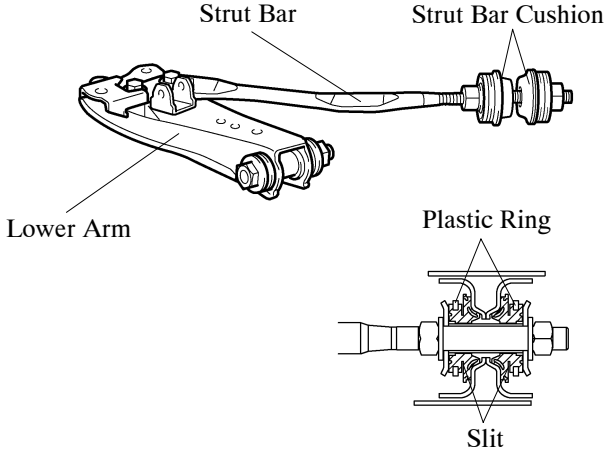
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Strut Bar and Strut Bar Cushion

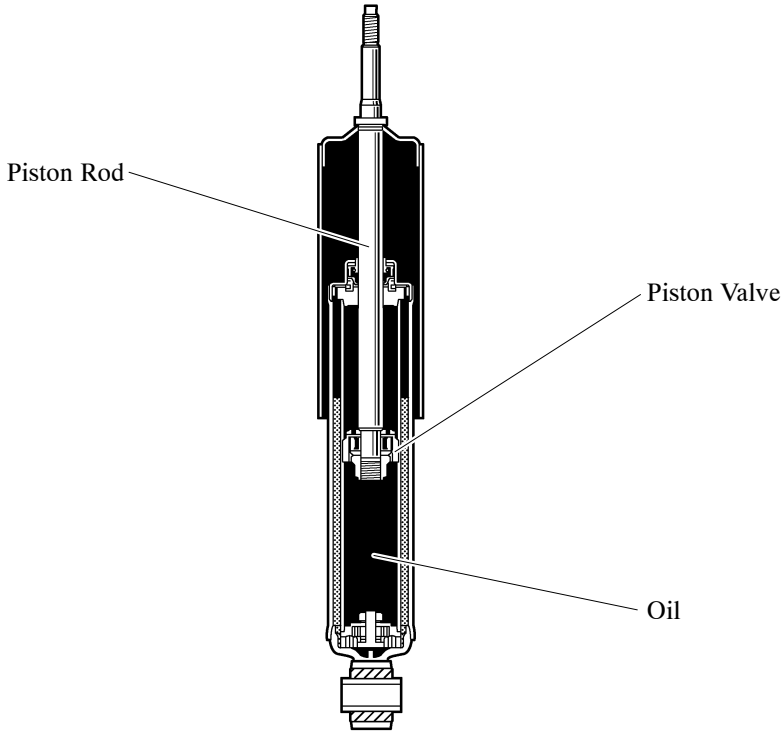
- A highly rigid, solid type strut bar is used.
- By adding slit sections and plastic rings to the strut bar cushion, the cushion rubber is given a non-linear spring characteristic.
- When a load applied on the strut bar is low, vibrations are absorbed by the slit in the low spring characteristic range, thus reducing harshness. When the load is high, the slit is crushed and the load is received by the cushion section containing the plastic rings, thus vibrations are absorbed in the high spring characteristic range. Through this, suspension movement is controlled, and excellent drivability and stability as well as ride comfort are attained.



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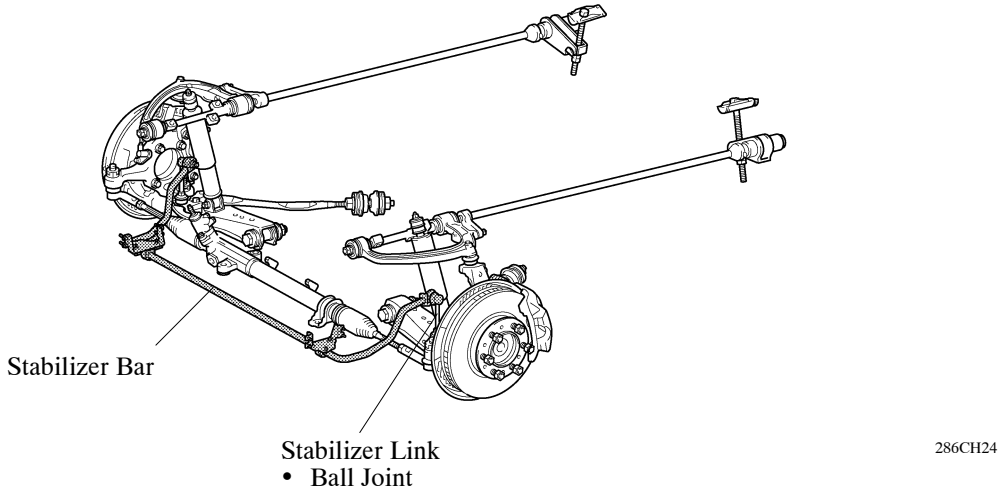
Shock Absorber

By using cylindrical, compound movement shock absorbers and optimizing the attenuation force, excellent drivability and stability as well as ride comfort are attained.



Stabilizer Bar

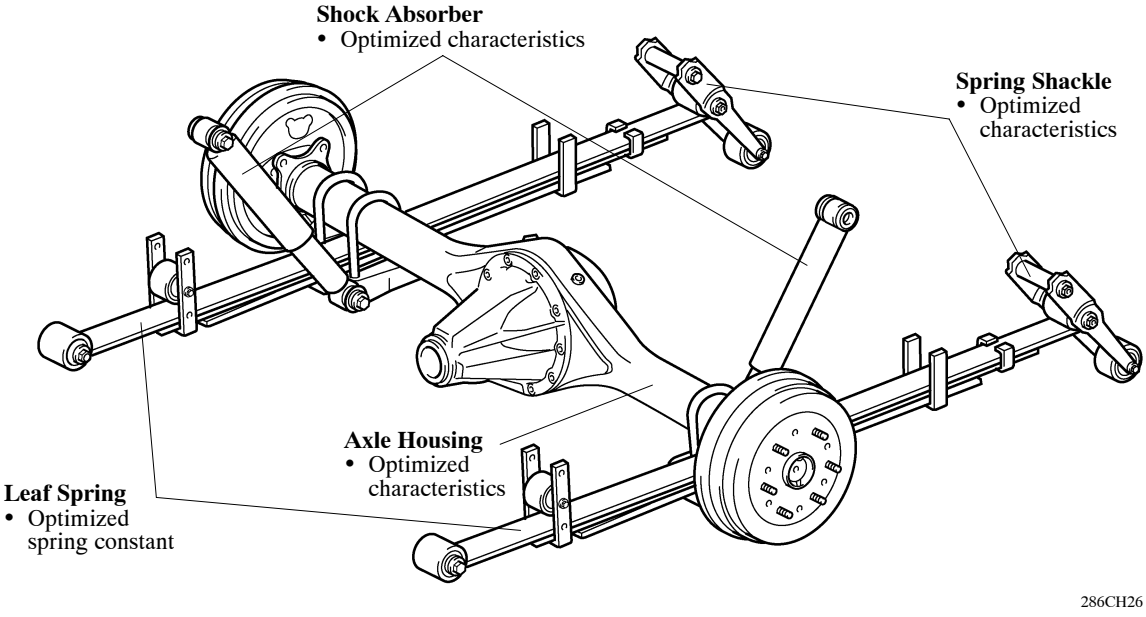
A ball joint is used between the stabilizer link and the stabilizer bar. This helps reduce suspension friction and increase link rigidity.
As a result, the ball joints perform effectively even for slight rolling and maintain stable roll feeling.



3. Rear Suspension

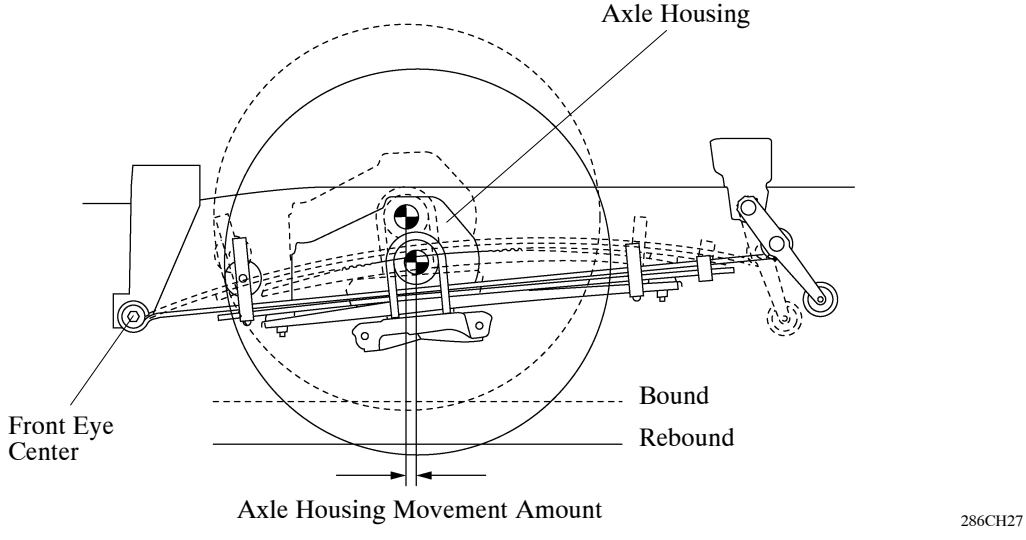
General

By optimizing the component parts, excellent drivability and stability as well as ride comfort are attained.



Axle Understeering Movement

By lowering the leaf spring front eye center, the leaf spring forward tilting is increased. Therefore, the axle housing moves up and down at a slant against the ground plane, which ensures the amount of forward and rearward movements. Through this, the axle housing can be steered to the same directions as the front tires.



Leaf Spring and Shock Absorber

- High stress material is used for the leaf springs to ensure durability and strength, reduce the number of springs, and optimize the spring characteristic, thus ensuring excellent ride comfort and lightweight.
- The leaf spring front eye uses a berlin eye shape (the spring end section is first bent down, then bent up) to allow the axle understeering.
- As the front, by using cylindrical, compound movement shock absorbers and optimizing the attenuation force, excellent drivability and stability as well as ride comfort are attained.
- The shock absorber is located by a crosswise arrangement, which restrains rear axle movement to ensure road holding.

