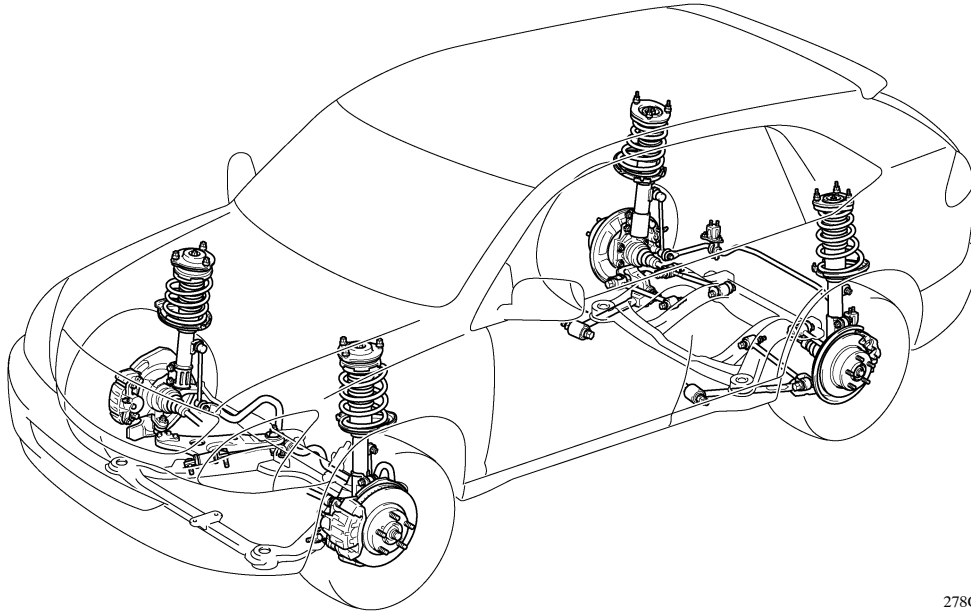


SUSPENSION AND AXLE

■ SUSPENSION

1. General

- A MacPherson strut type independent suspension is used for the front.
- A dual link MacPherson strut type independent suspension is used for the rear.



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► Specifications ◀

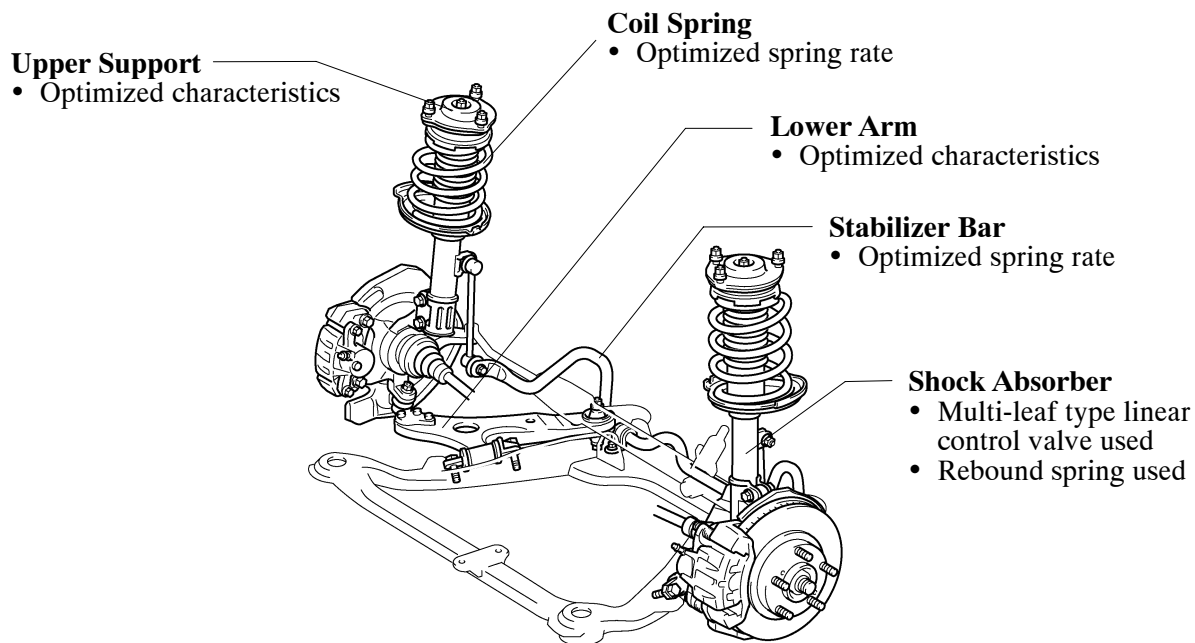
Front Wheel Alignment	Type		MacPherson Strut
	Tread*	mm (in.)	1,575 (62.0)
	Caster*	degrees	2° 25'
	Camber*	degrees	-0° 40'
	Toe-in*	mm (in.)	0
	King Pin Inclination*	degrees	10° 40'
Rear Wheel Alignment	Type		Dual link MacPherson Strut
	Tread*	mm (in.)	1,550 (61.0)
	Camber*	degrees	-0° 35'
	Toe-in*	mm (in.)	3 (0.12)

*: Unload Vehicle Condition

2. Front Suspension

General

Through the optimal location of components, and the use of Nachlauf geometry, the front suspension provides excellent riding comfort and controllability.



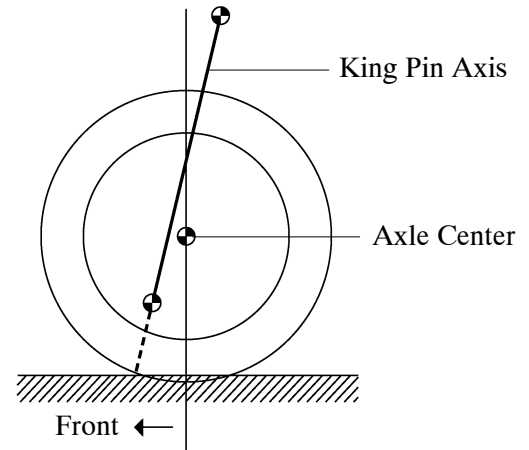
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Service Tip

- To adjust the camber of the front suspension, change the location of the bolts and nuts fastened onto the lower side of the shock absorber and front axle. For details, see the LEXUS RX400h Repair Manual (Pub. No. RM1139E).
- To prevent injury or hazard when discarding a low-pressure (N₂) gas sealed shock absorber, make sure to remove the gas before disposal. For details, see the LEXUS RX400h Repair Manual (Pub. No. RM1139E).

Nachlauf Geometry

The front suspension uses the Nachlauf geometry in which the king pin axis is located ahead of the axle center. As a result, excellent straightline stability and steering feel has been improved.



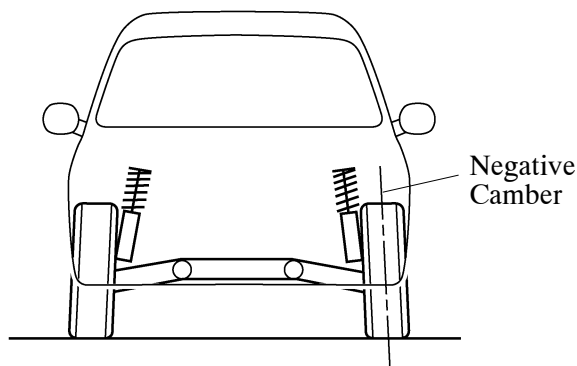
181CH22

Negative Camber

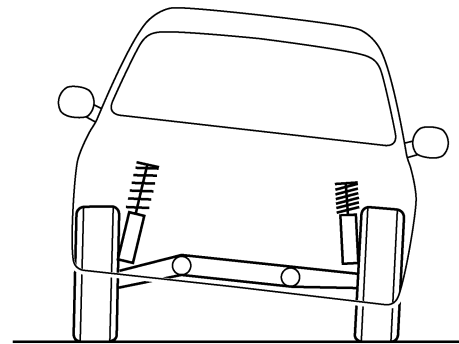
The front suspension uses negative camber to reduce the ground contact camber angle of the outer wheel during of turning (cornering), and provide excellent cornering performance.

► During Cornering ◄

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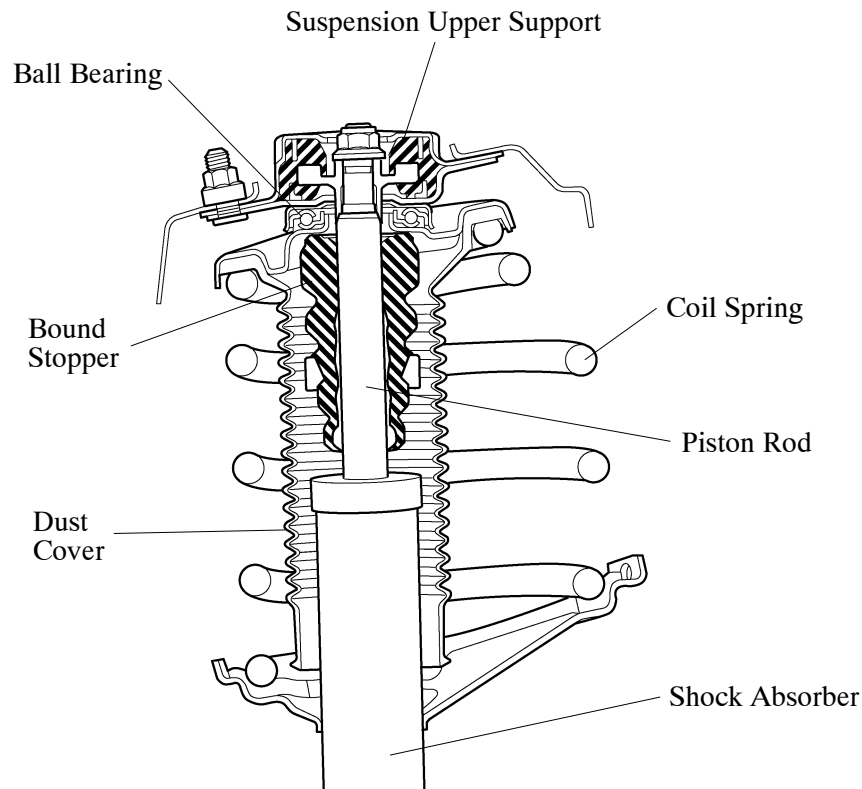
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Suspension Upper Support and Coil Spring

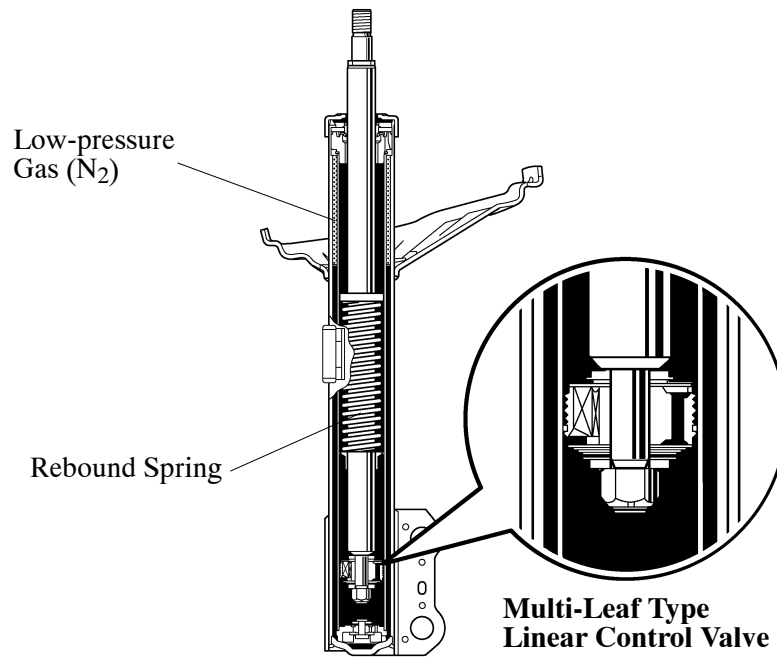
- The suspension upper support transmits the load that is applied via the spring through its metal structure, while the rubber portion receives only the load that is applied through the shock absorber.
- The center axis of the coil spring is slanted toward the outside of the vehicle compared to the center axis of the shock absorber. This reduces the lateral force bearing on the shock absorber piston rod and piston, and prevents increased sliding resistance while helping to maintain riding comfort.
- The dust cover is designed to completely cover the piston rod to reduce the intrusion of dust and improves the durability of the shock absorber.



Shock Absorber

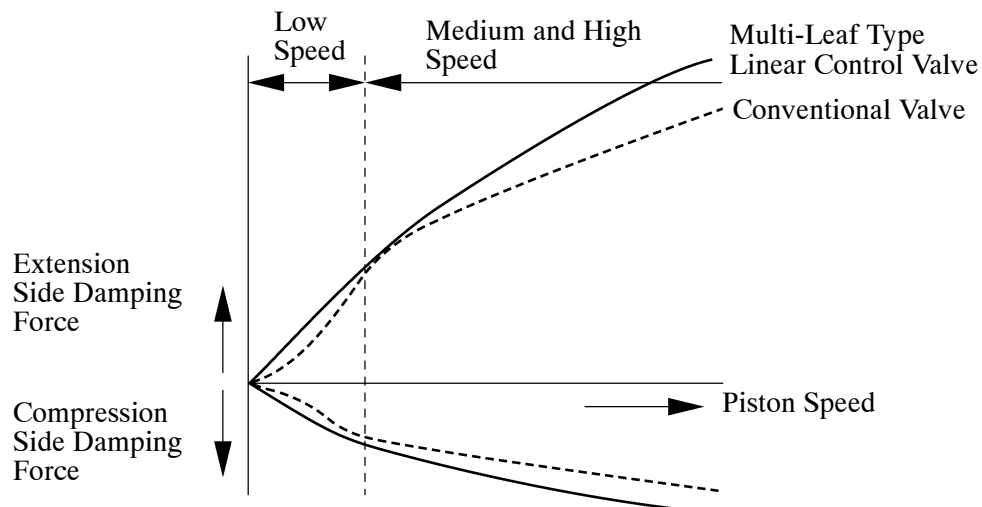
1) General

- Low-pressure (N_2) gas sealed front shock absorbers with a linear control valve are used to realize both driving stability and riding comfort.
- A multi-leaf type linear control valve is used to attain linear damping force characteristics.
- A rebound spring is used to ensure vehicle stability during cornering.



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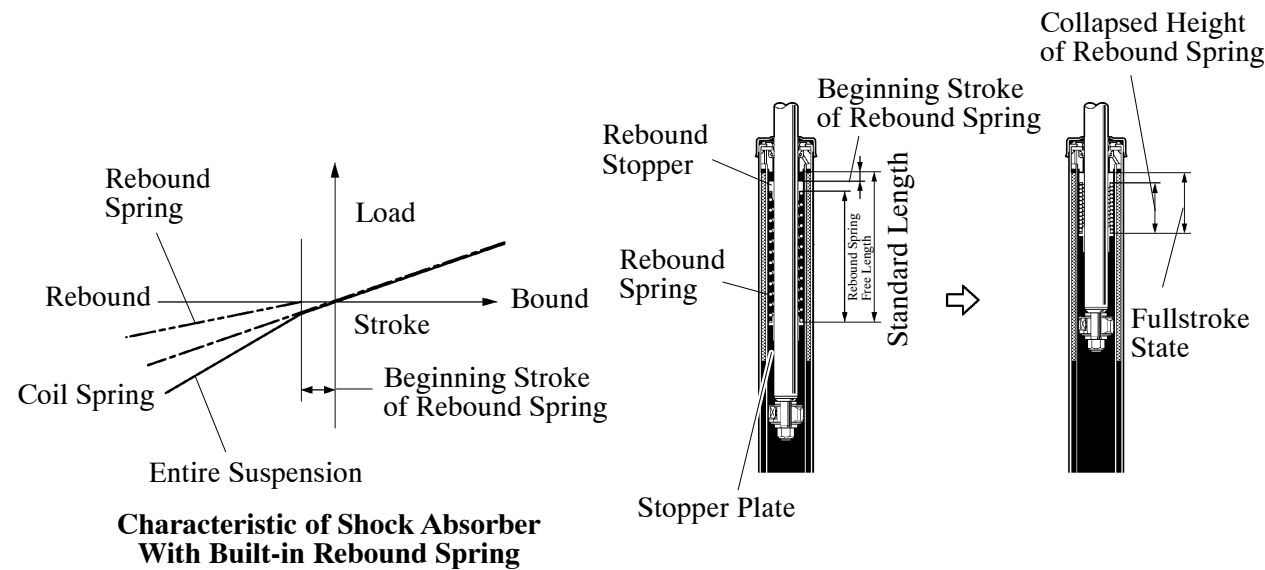
► Multi-Leaf Type Damping Force Characteristics ◀



199CH110

2) Rebound Spring

The function of the built-in rebound spring is to combine with the function of the coil spring in order to restrain the elongation of the entire suspension during rebounds. Consequently, only the function of the coil spring is applied when the suspension stroke is small during normal driving, in order to realize a soft and comfortable ride. However, when the inner wheel makes large rebounds, such as when the vehicle is cornering, the functions of both the rebound spring and the coil spring are combined in order to reduce the elongation of the entire suspension. As a result, the vehicle has excellent maneuverability and stability.

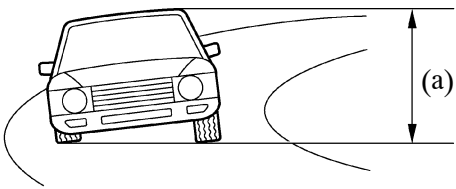


Characteristic of Shock Absorber With Built-in Rebound Spring

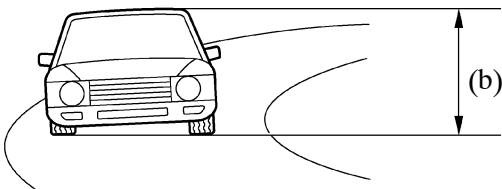
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► During Cornering ◀



Without Rebound Spring



With Rebound Spring

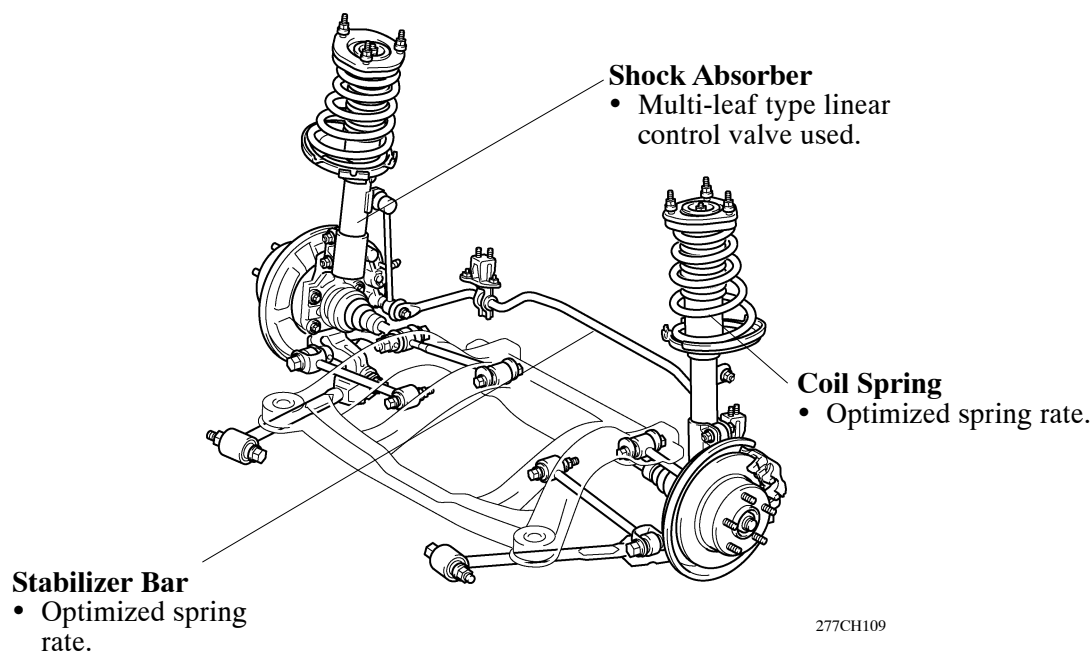
241CH90

(a) > (b)

3. Rear Suspension

General

Rear suspension realizes excellent stability and controllability by optimizing the suspension geometry and the allocation of components.



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Shock Absorber

- Low-pressure (N_2) gas sealed front shock absorbers with a linear control valve realize driving stability and riding comfort.
- As with the front shock absorbers, a multi-leaf type linear control valve is used in order to attain the linear damping force characteristics.

