

# FRONT SUSPENSION

## 1. SYSTEM OVERVIEW

### Overview

The suspension is the device to connect the axle and vehicle frame. It absorbs the vibrations and impacts from road surface, which enhances the comforts, driving force, braking force and drivability.

1. Suspension type: Double Wishbone

2. Components

Knuckle, upper arm assembly, lower arm assembly, coil spring, shock absorber assembly and stabilizer

### Upper Arm Assembly

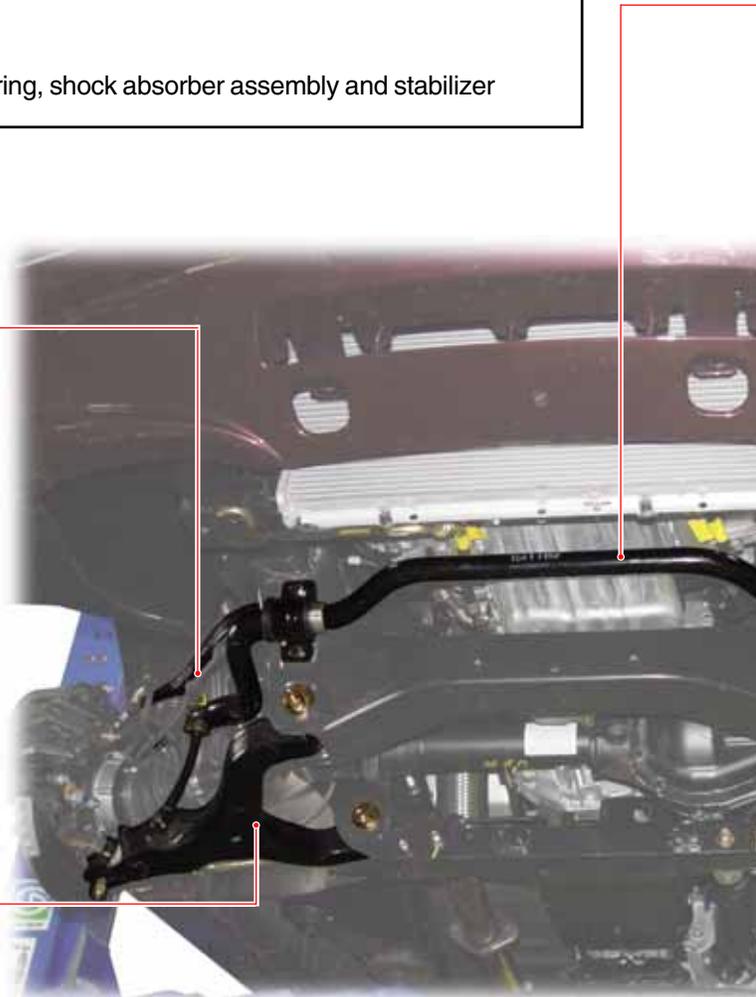


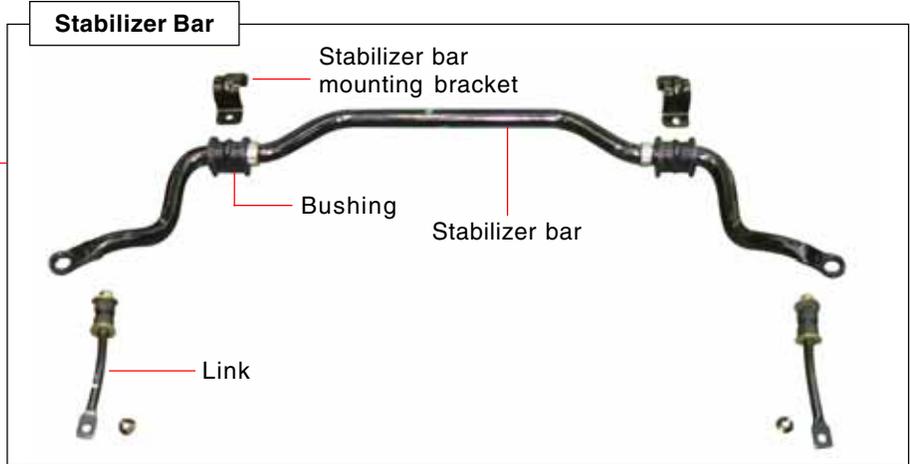
The upper arm is mounted to the frame and the knuckle and it relieves the load delivered from the tire to the knuckle. This enables to absorb the various impacts according to the load shapes and to ensure the drivability.

### Lower Arm Assembly



The lower arm is mounted to the knuckle, the shock absorber and the lower arm assembly. It relieves the load delivered from the tire to the knuckle. This enables to absorb the various impacts according to the load shapes and to ensure the drivability.





A transverse mounted spring steel bar controls and minimizes body lean or tipping on corners. This is a round bar which connects the left wheel suspension assembly with the right side. The main function is to keep both wheels rolling at the same rate when meeting bumps, but it also affects handling.

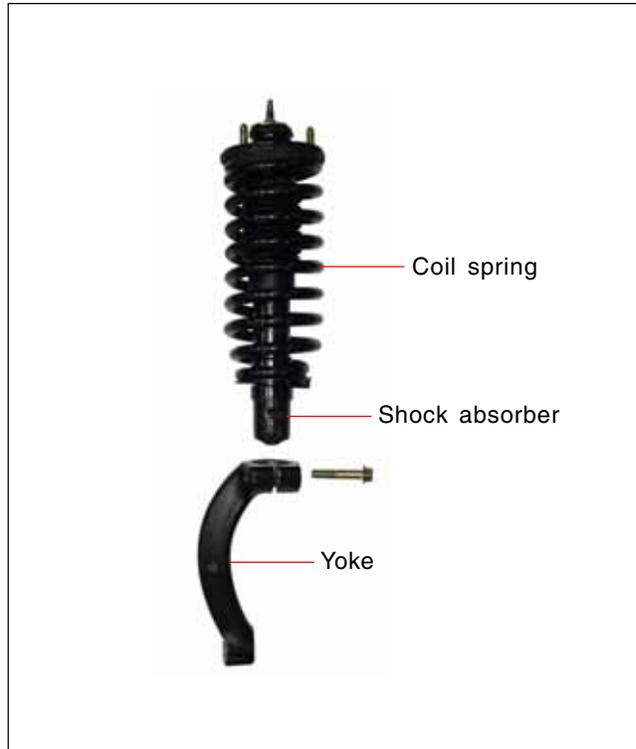


A section of spring steel rod is wound in a spiral pattern or shape coil provides a cushion to absorb road imperfections and returns the vehicle to a predetermined right height. It is a major contributor to a vehicle's handling balance and ride quality. Higher spring rates and shorter overall lengths are commonly used to lower the vehicle's ride height for enhanced appearance and improved handling.

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## Shock Absorber Assembly

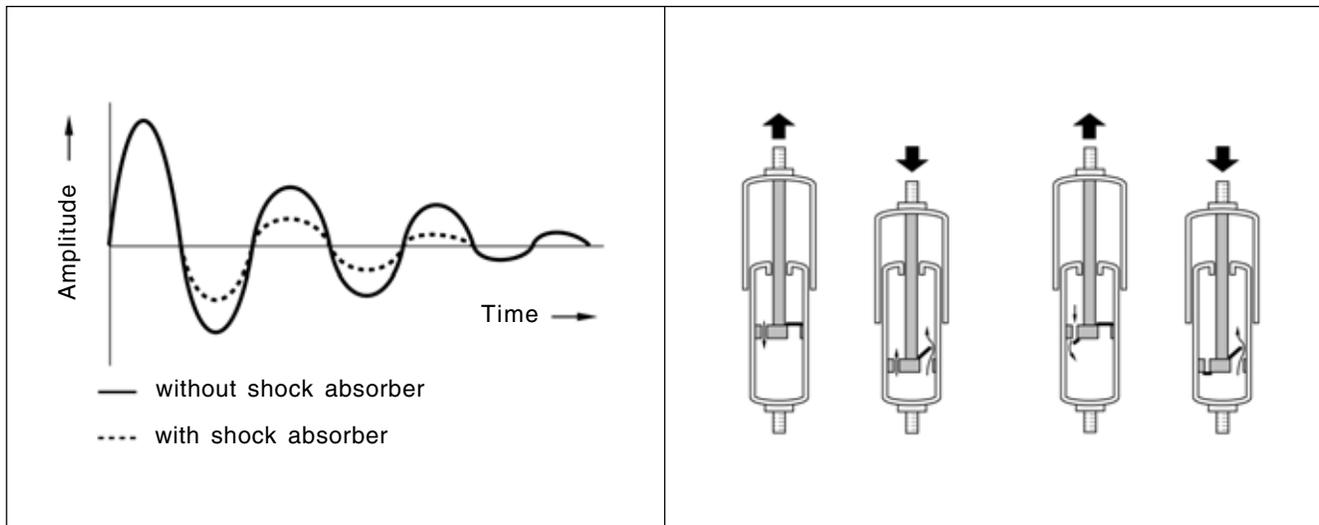
1. This vehicle uses the strut type shock absorber. This shock absorber is connected to the piston rod in the strut. This relieves the vertical vibrations of vehicle to provide ride comforts, prevents the spring break, enhances drivability, and extends the life span of steering components.



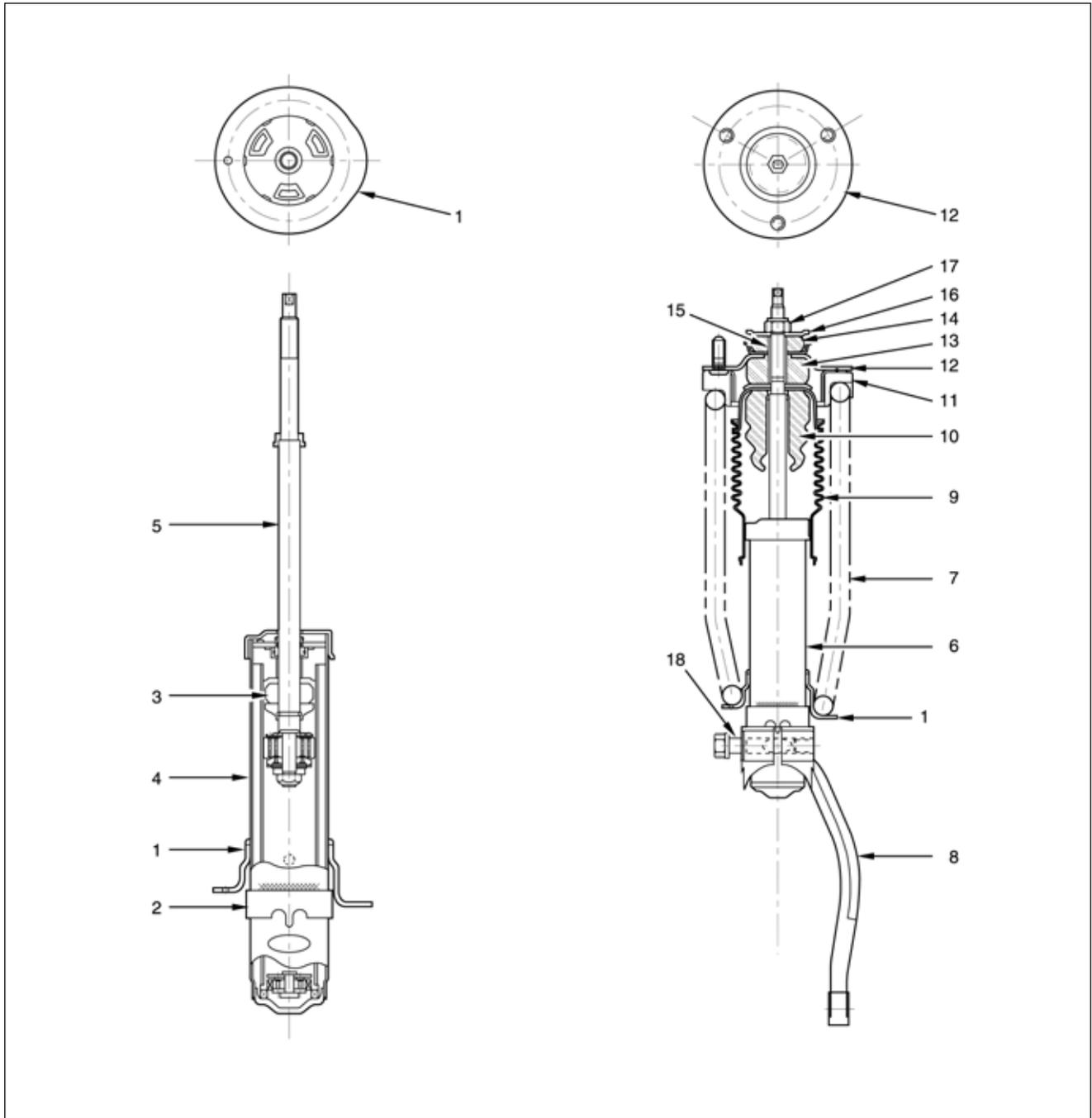
2. The shock absorber consists of a tube with piston and rod, and a cylinder tube. The piston has an orifice and valve and the cylinder is filled with oil.

This double tube type shock absorber restrains the vibrations by using oil resistance. This provides better drivability even though the structure is complicated.

This vehicle uses the gas shock absorber with cylindrical double tube.



► Sectional Drawing of Shock Absorber



- 1. Lower spring seat
- 2. Yoke bracket
- 3. Rebound stopper
- 4. Cylinder
- 5. Piston

- 10. Bumper stopper
- 11. Spring seat rubber
- 12. Upper spring seat
- 13. Rubber
- 14. Rubber
- 15. Spacer
- 16. Washer
- 17. Nut
- 18. Bolt

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A / T
M / T
T / C
CLUTCH
AXLE
SP
ST'NG
BRAKE
A / BAG
A / CON