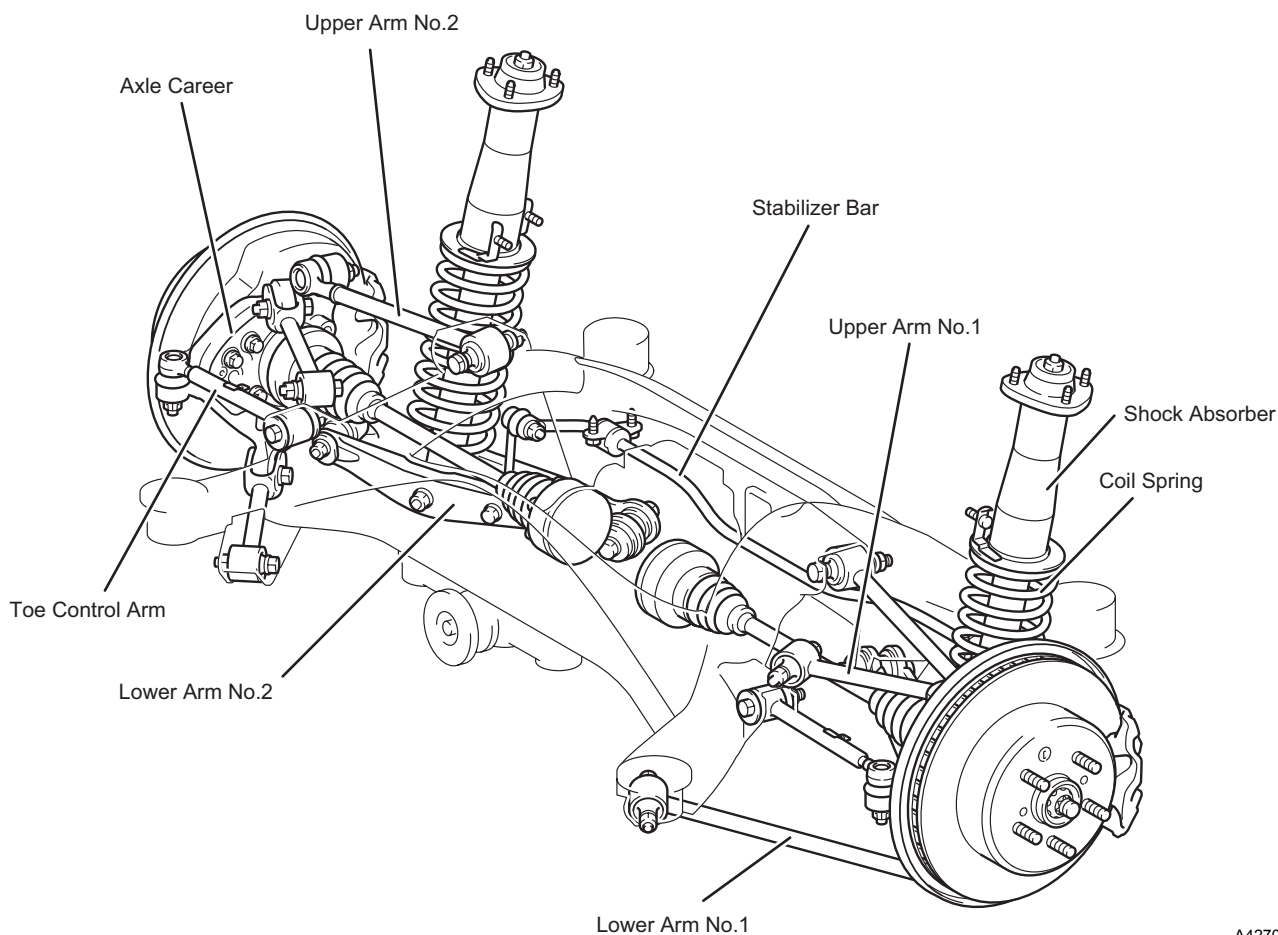


Rear Suspension Outline

- All models use a multi-link type suspension that consists of two upper arms, lower arms, and toe control arms.
- Through the use of the double-link upper arms, the suspension changes to a linear alignment in order to ensure the proper sprung stability during a thrust-up input or the cornering of the vehicle.
- Cast-aluminum carriers are used for weight reduction.
- The coil springs have been placed downward to ensure ample luggage space.
- The roll center height and its change rate have been optimized to minimize the changes in the center of gravity during a roll, thus ensuring a stable roll posture.
- The arms have been optimally allocated and the bushing characteristics have been optimized to ensure the proper ride comfort performance. At the same time, the proper behavioral stability has been ensured during braking and driving, realizing ride comfort, drivability, and stability at high levels.



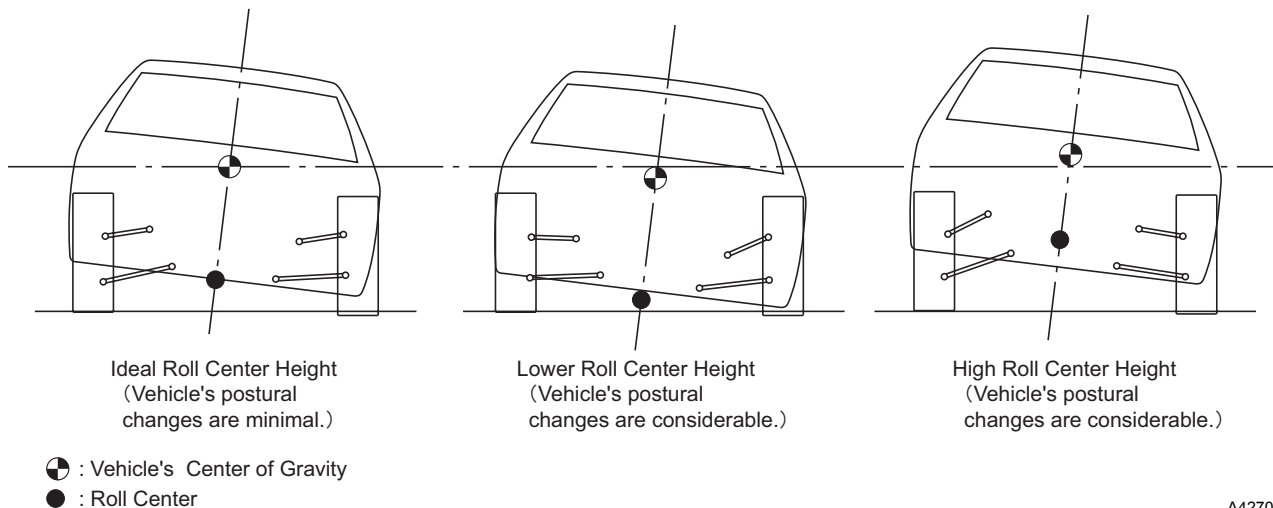
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Alignment Specification

		GS300	GS430
Camber	Degrees	-1°10'	-1°19'
Toe—in	mm(in.)	3(0.12)	←

Optimized Roll Center

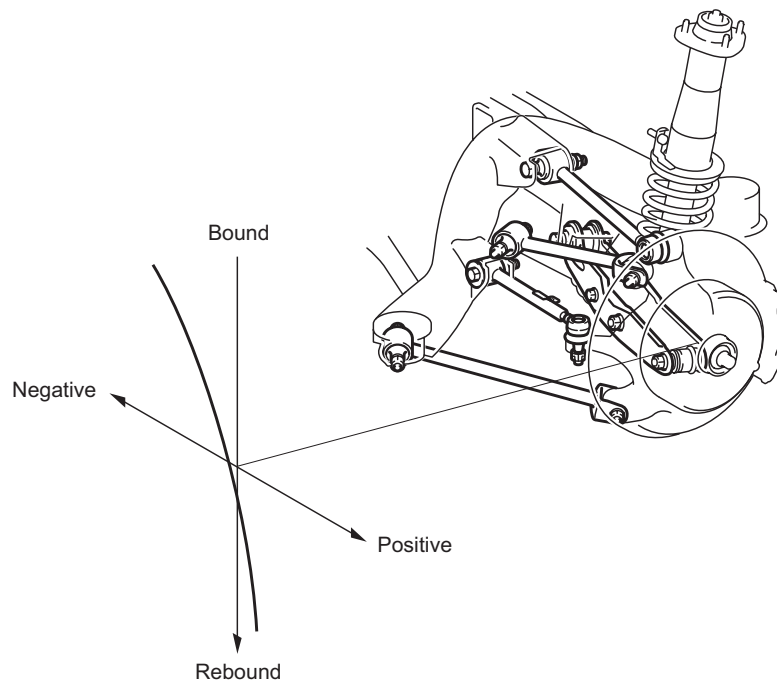
- A Vehicle with a roll center that is set low has a tendency to dip during a roll. Conversely, if its roll center is set high, the vehicle has a tendency to rise during a roll. In either case, the vehicle undergoes a considerable amount of the vehicle.



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Optimized Camber

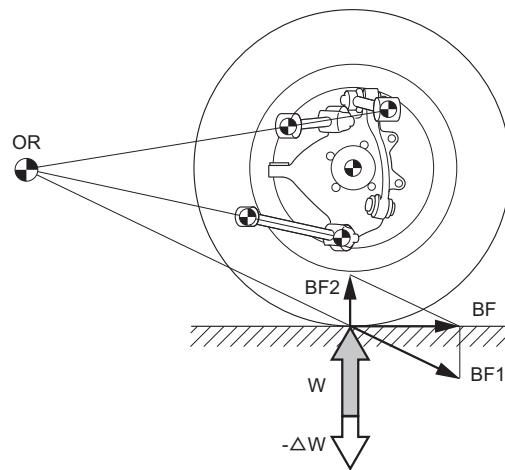
- Both the initial camber and the camber change rate have been optimized to ensure excellent driving stability.



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Anti-Lift

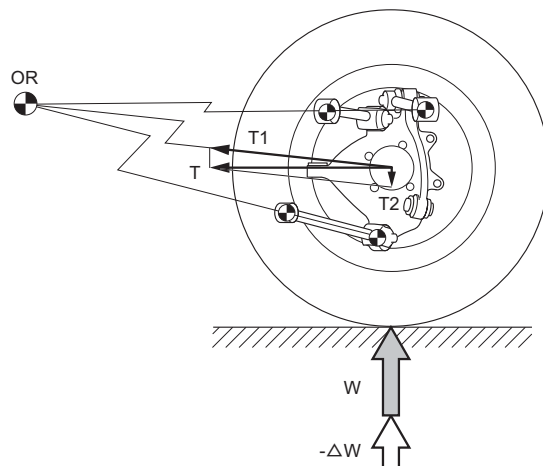
- During braking, the inertial force causes the center of gravity of the vehicle body to move, and reduces the load on the rear wheels. As a result, the rear end of the vehicle lifts up.
- The vehicle body attempts to use the geometric intersecting point OR of the suspension to sustain the braking force that is generated at the road surface. Then, the braking force BF generates the following components: 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 this force, which acts in the direction of the ground surface, can be changed by changing the height of the intersecting point OR. Thus, by setting it at a position higher than the road surface, it acts in the opposite direction of the load movement ΔW , and suppresses the lifting of the rear end of the vehicle.



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Anti-Squat

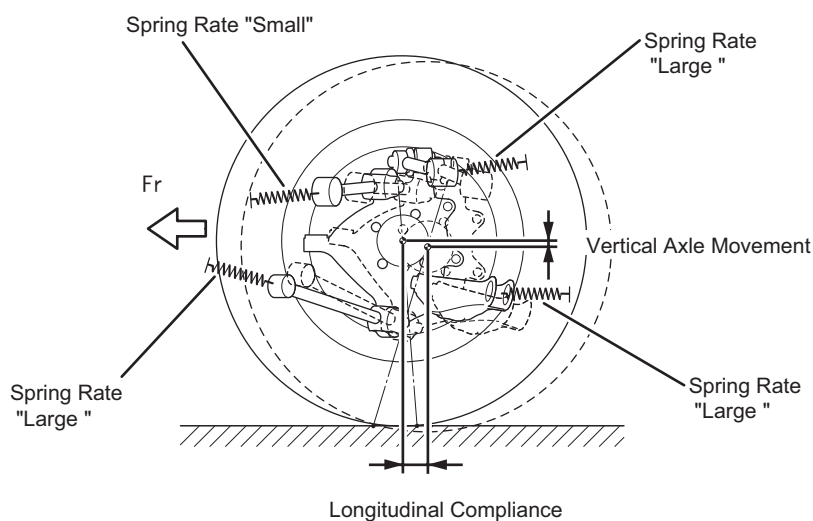
- During a start off or acceleration, the inertial force causes the center of gravity of the vehicle body to move. This increases the load on the rear wheels, causing the rear end of the vehicle to squat.
- The vehicle body uses the geometric intersecting point OR of the suspension to sustain the drive force that acts on the axle center as well as during anti-lift. Then, the drive force T generates the following components: the force T1 that acts in the direction of the intersecting point, and the force T2 that acts in the direction of the ground surface. By setting the intersecting point OR at a position higher than the axle center, the force that acts in the direction of the ground surface will cancel out the load ΔW that increases with the start off or acceleration. As a result, it suppresses the squatting of the rear end of the vehicle.



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Optimizing Longitudinal Compliance and Ensuring Braking Stability

- When the vehicle goes over a bump on the road, a load is input to the axle center in the rear direction of the vehicle. The longitudinal movement of the axle in response to the load that is input from the road surface at this time is called "longitudinal compliance". The ride comfort can be improved by setting a large compliance. For this reason, the spring constant of the bushing in upper arm No. 1, which bears a small input load during braking, has been reduced to ensure ample longitudinal compliance. Furthermore, the spring constant of the lower arm bushing has been increased to suppress the changes in the toe angle during a braking load. As a result, both excellent ride comfort and driving stability have been realized at high levels.



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