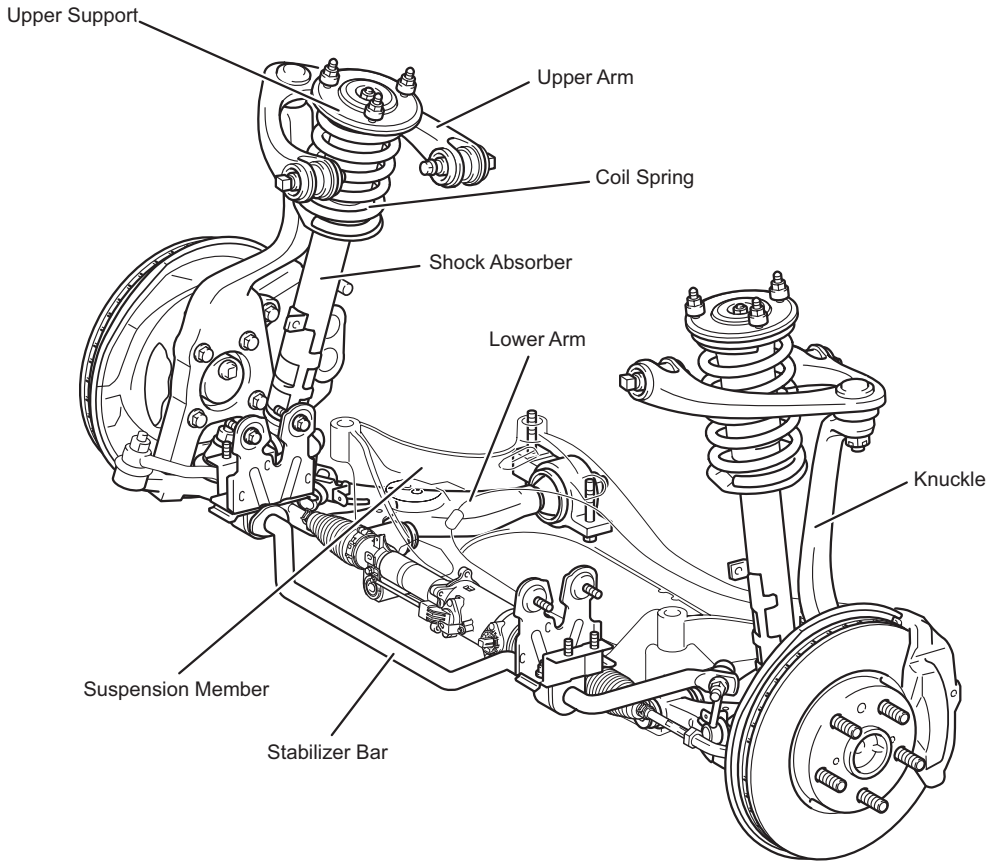
SUSPENSION

Front Suspension Outline

- All models use a high-mount, upper arm, double-wishbone type suspension.
- Arms made of high-strength sheet steel and aluminum alloy are used for weight reduction.
- The steering gear has been placed forward of the axle. During cornering, this changes the steering angle to toe-out in accordance with the lateral force. As a result, a smoother response has been realized during high-speed driving.
- The suspension components have been optimally allocated to increase the steering angle of the wheels. As a result, the minimum turning radius has been reduced and excellent maneuverability has been realized.
- The wheel stroke has been increased, urethane bound stoppers are used, and various components have been optimized to ensure excellent ride comfort.
- A large, liquid-filled bushing is used at the rear of the lower arm to optimize vibration and harshness.



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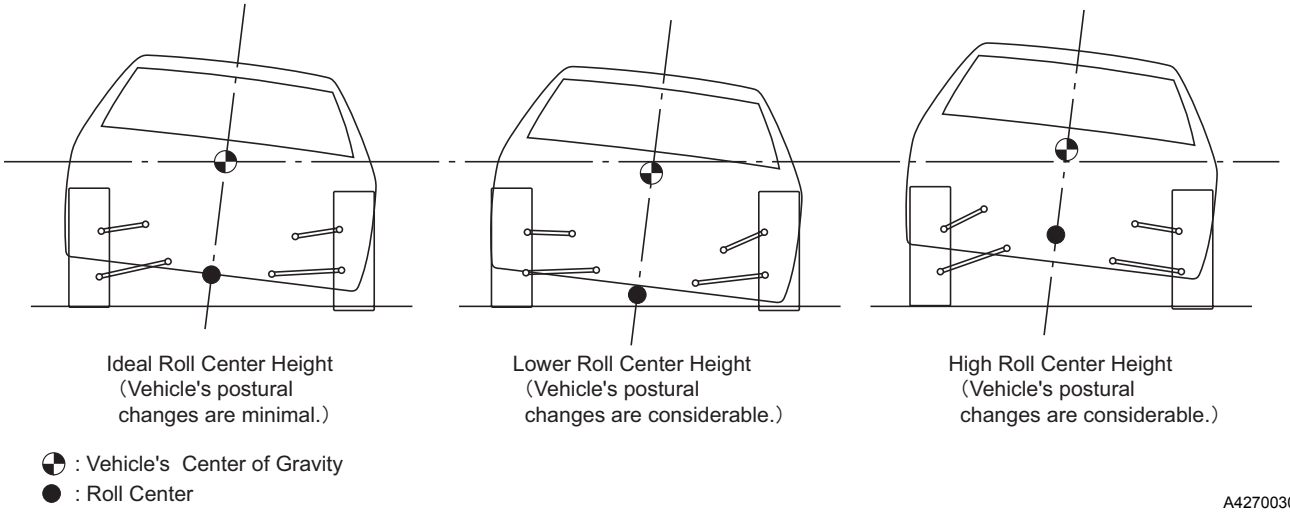
Alignment Specification

		GS300	GS430
Camber	Degrees	-0°23'	-0°26'
Caster	Degrees	7°23'	7°26'
King Pin Inclination	Degrees	9°23'	9°26'
Toe-in	mm(in.)	1(0.04)	←

Optimized Roll Center

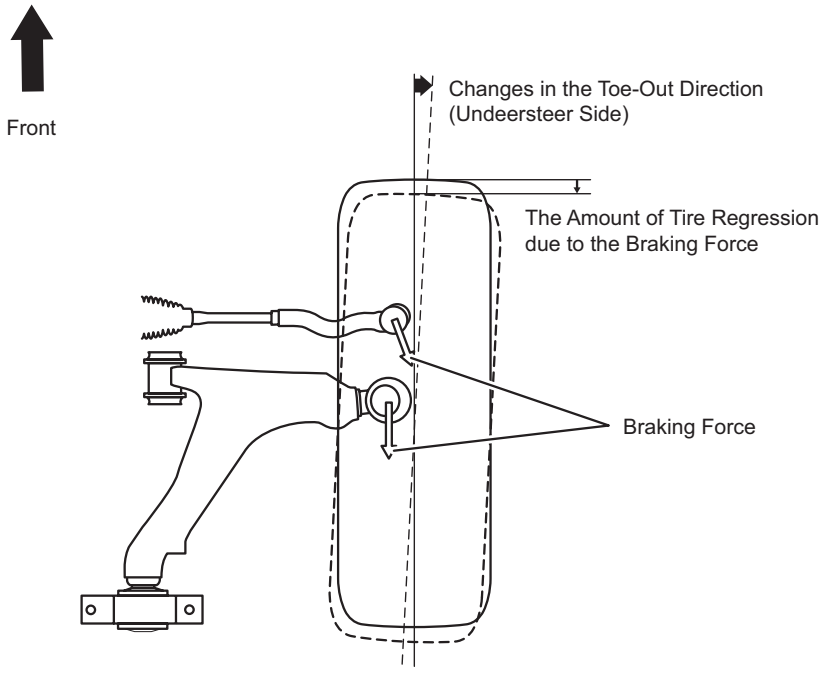
• A Vehicle with a roll center that is set low has a tendency to dip during a roll. Conversery,if its roll center is set high,the vehicle has a tendency to rise during a roll. In either case,the vehicle undergoes a considerable amount of the vehicle.



Braking Understeer

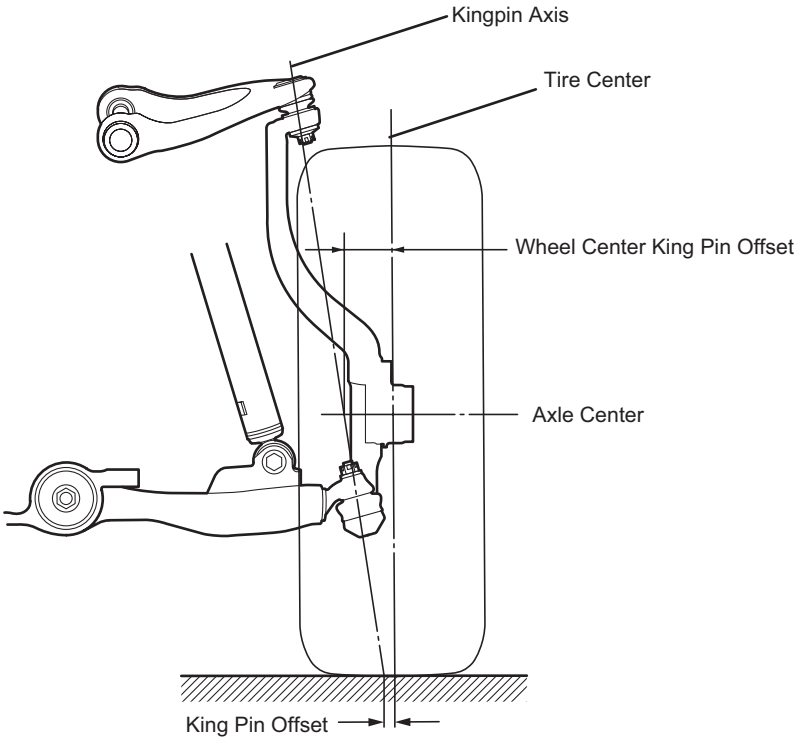
• During braking, the load of the vehicle moves to the front wheels. If the direction of the wheels during a turn is constant, the vehicle will exhibit the behavior of rolling inward of the turn, due to the nature of the wheels. To gain the appropriate understeer (thus reducing the steering angle of the wheels) during braking, the components have been appropriately allocated so that the wheels will change to toe out during braking.

• This ensures the proper stability and longitudinal compliance, as well as superior ride comfort.



Optimized Kingpin Offset

• By adopting the high-mount type upper arms, the offset between the tire center and the king pin is reduced at the axle center height. This reduces the moment around the king pin and suppresses the generation of flutter.



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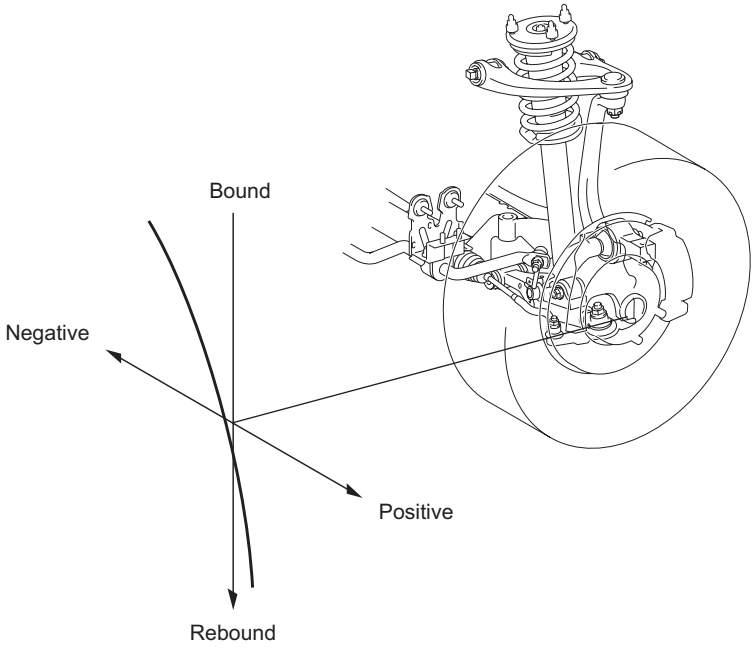
Optimized Camber

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



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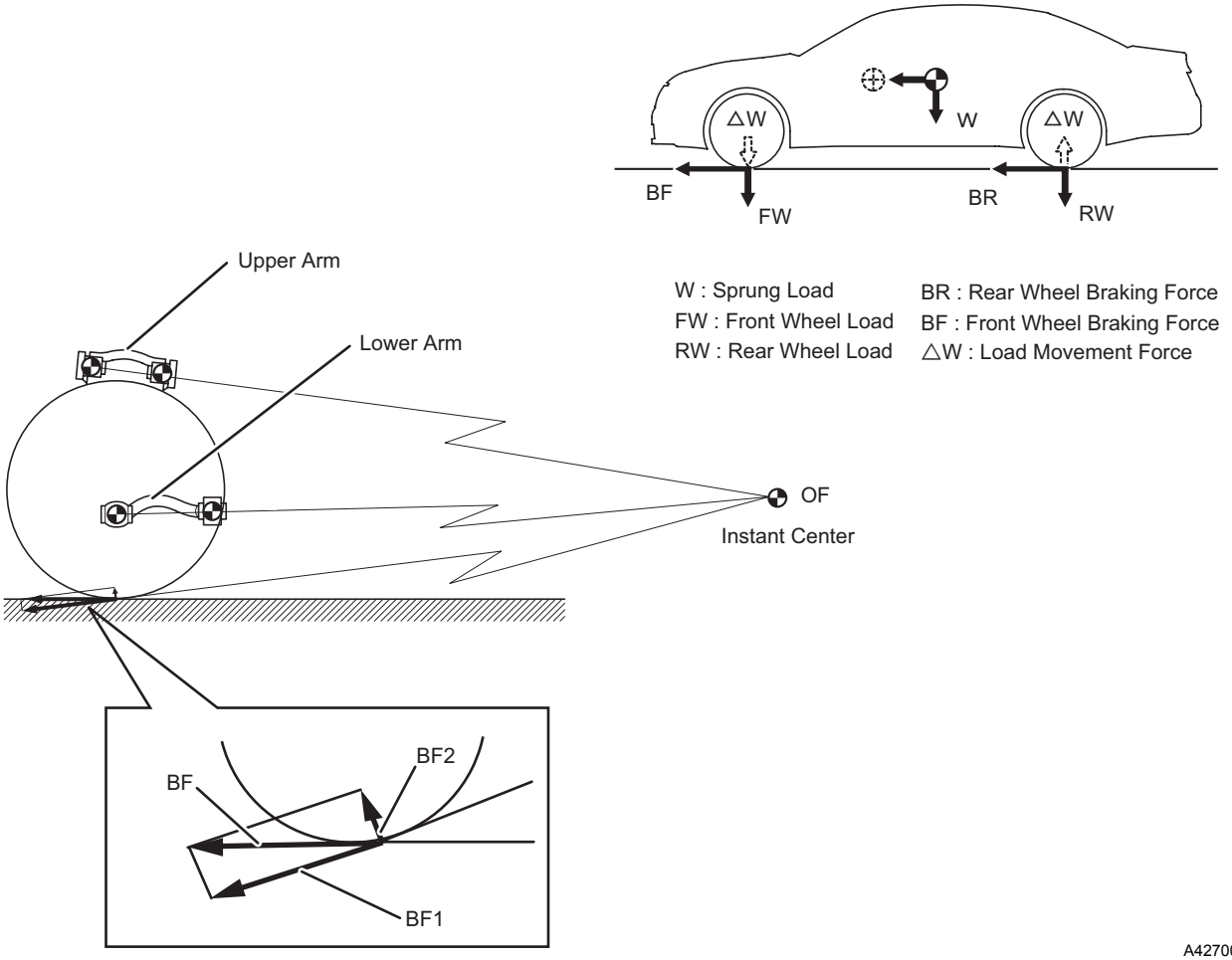
SA

Anti-Dive

- 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 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 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.



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