
GROUP 33

**FRONT
SUSPENSION**

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GENERAL INFORMATION

M2330000101281

The MacPherson strut type suspension is adopted.

IMPROVEMENT IN SUSPENSION RIGIDITY

- Based on the highly rigid full-flat crossmember, by adding the reinforcement part such as a brace, the respective rigidity of the crossmember has been improved significantly.
- The forged knuckle has been adopted. The deformation of knuckle by ground contact force has been suppressed, and the camber rigidity and lateral rigid brake caliper supporting rigidity have been improved.

IMPROVEMENT IN CORNERING PERFORMANCE

- The 18-inch low-aspect ratio tire has been equipped, the wheel tread has been widened, and the suspension rigidity has been improved, for better cornering performance and cornering limit.
- By adopting the 18-inch low-aspect ratio tire, the caster trail amount has been increased, resulting in the better steering feel and steering response for slight steering operation.
- The caster angle has been increased and the camber angle to the ground while operating the steering wheel has become negative, for better cornering performance within the middle and large steering angle range.
- By widening the stabilizer diameter, the optimal roll posture for cornering limit improvement has been secured.

IMPROVEMENT IN QUALITY

- The compact lower arm pillow ball bush has newly been designed. The stroke feeling by the pillow has been improved, the rubber damping characteristics has been tuned, and the vibration from the ground has been reduced, for improved quality.
- The Bilstein shock absorber and the Eibach coil spring* have been established.<GSR: optional equipment, MR: standard equipment>.

*NOTE: *: The Eibach coil spring has widely been adopted in the motor sport field; sports vehicles in Europe, F1, WRC, etc.*

WEIGHT SAVING

- To respond the increase of weight and ground surface force by adopting the 18-inch low-aspect ratio tire, the suspension structure has been optimized, resulting in weight saving.
- By adopting the Bilstein shock absorber, the outer cylinder thickness has been reduced, resulting in weight saving.

IMPROVEMENTS IN RELIABILITY

- The deep groove upper bearing, which supports the vehicle weight to the strut upper insulator, has been enlarged and sealed for the better reliability.
- The upper part of the coil spring has been squeezed, making the pig-tail shape. Consequently though the vehicle weight is increased and the spring constant is high, the gap between coils can be widened, reducing the rattle noise and scratches.

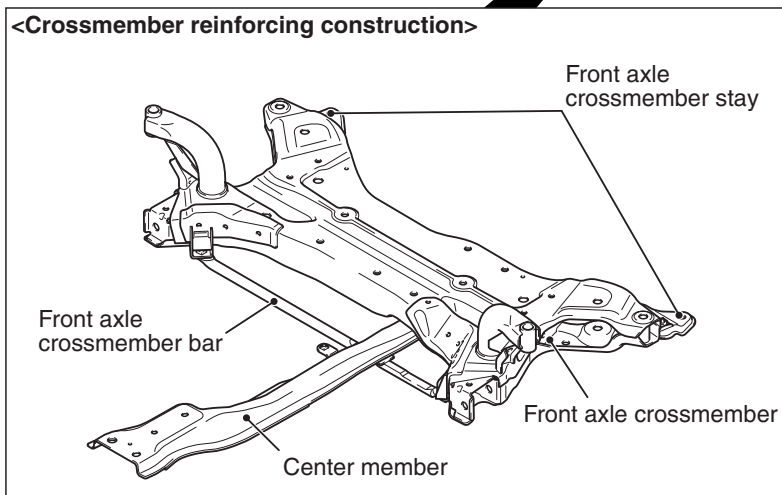
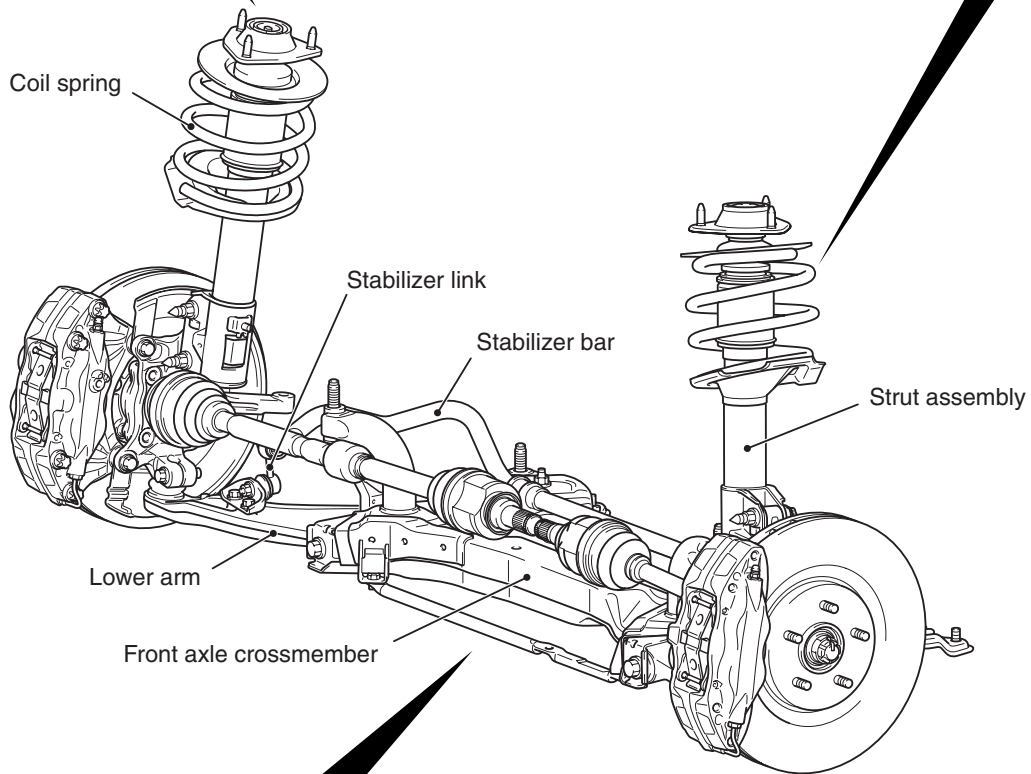
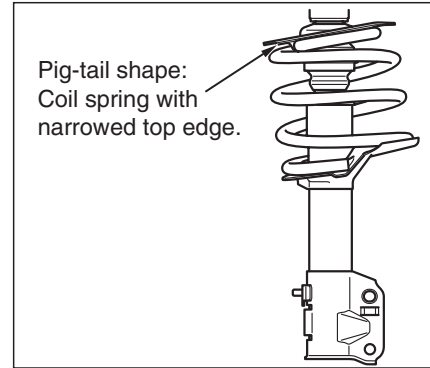
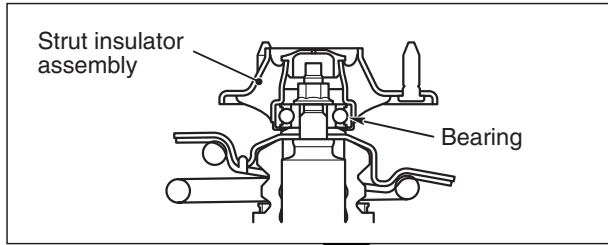
HEXAVALENT CHROMIUM-FREE COMPONENT

- Hexavalent chromium has been eliminated from bolts and nuts.

LEAD-FREE COMPONENT

- The lead-free grease has been adopted for the ball joint.

CONSTRUCTION DIAGRAM



AC705713 AC

SPECIFICATIONS

SUSPENSION SYSTEM

Item	Specification
Suspension type	MacPherson strut with coil spring

WHEEL ALIGNMENT

Item	Specification
Camber	- 1°00'
Caster	4°25'
Kingpin inclination	13°50'
Toe-in mm (in)	0 ± 2 (0.07)

COIL SPRING

Item	GSR		MR
	M/T	TC-SST	
Wire diameter mm (in)	14 (0.55), 15* (0.59)	14 (0.55), 15* (0.59)	15 (0.59)
Average outside diameter mm (in)	121 – 159 (4.7 – 6.2), 120 – 160* (4.7 – 6.2)	121 – 159 (4.7 – 6.2), 120 – 160* (4.7 – 6.2)	120 – 160 (4.7 – 6.2)
Free length mm (in)	286 (11.2), 287* (11.2)	291 (11.4), 292* (11.4)	292 (11.4)

NOTE: * : Optional