

GROUP 34

REAR SUSPENSION

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GENERAL DESCRIPTION

A trailing arm type multi-link suspension is used for the rear suspension. In contrast to the trailing arm multi-link system used on the Lancer, the Lancer Evolution uses a newly developed multi-link system built on a double wishbone base to achieve superior handling stability. Optimum design of the suspension points and use of aluminum parts for the suspension arms and crossmember reduces weight. In addition, use of ball joints on the suspension arms reduce friction and creates a suspension system that exhibits superior stroke characteristics that respond well under all driving conditions.

STRUCTURE

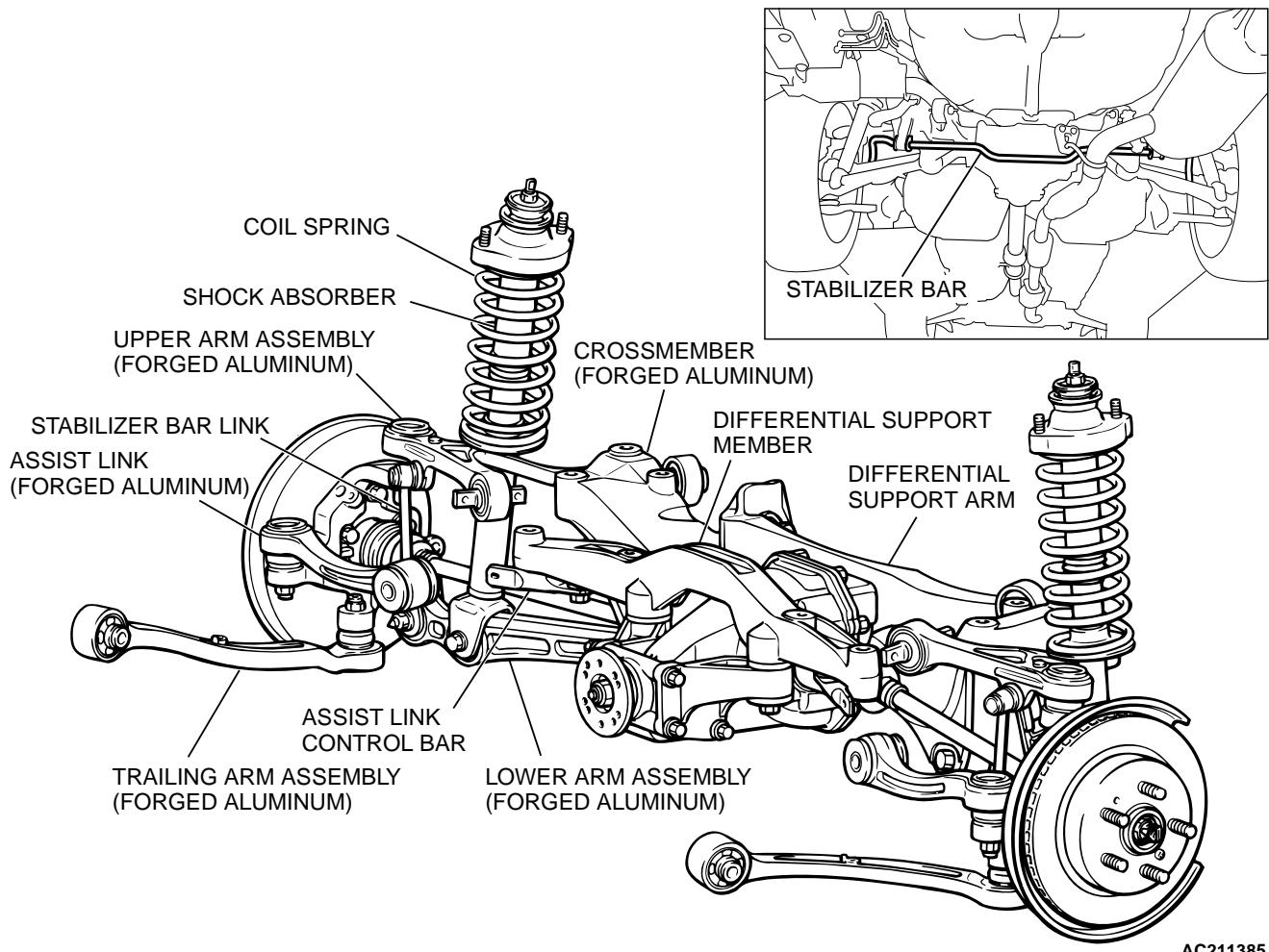
1. The A-shape upper arm assembly mounted inside the wheel combines with the three I-shaped arms including the trailing arm assembly that runs in front-rear orientation with the vehicle's body, the lower arm assembly and the assist link to support the knuckle.
2. Each arm uses a ball joint and pillow ball bushing at the knuckle end and a pillow ball bushing at the body end, and are mounted on the body via the crossmember.
3. Alignment and suspension stroke, a wider track, and optimization of roll center height improves cornering response throughout the range from initial response through to the cornering limit.

COMPONENT CHARACTERISTICS (COMPARED TO THE LANCER)

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1. Suspension arm (made of forged aluminum)
 - The trailing arm assembly, upper arm assembly, lower arm assembly and assist link are made of forged aluminum to reduce weight and increase rigidity.
 - The knuckle mount and body-end mount for the lower arm assembly use pillow ball bushings for high rigidity and reduce suspension friction.
 - The body-end mount for the assist link uses a low-friction slide bushing.
2. Crossmember (made of forged aluminum)
 - The crossmember is made of forged aluminum to reduce weight and increase rigidity.
3. Shock absorber, coil spring, stabilizer, bump rubber
 - The shock absorber size was changed and the rod diameter was increased to improve stability during roll by increasing damping response.
 - Optimization of shock absorber damping, spring rate, bump rubber characteristics and bushing characteristics improves cornering response throughout the range from initial response through to the cornering limit.

CONSTRUCTION DIAGRAM



AC211385AB

SPECIFICATIONS

SUSPENSION SYSTEM

ITEM	SPECIFICATION
Suspension method	Trailing arm type multi-link

WHEEL ALIGNMENT

ITEM	LANCER EVOLUTION	LANCER
Camber	-1°00'	-0°40'
Toe-in mm (in)	3 (0.12)	3 (0.12)

COIL SPRING

ITEM	LANCER EVOLUTION	LANCER
Wire diameter mm (in)	12 (0.5)	10 (0.4)
Average diameter mm (in)	88 (3.5)	90 (3.5)
Free length mm (in)	287 (11.3)	370 (14.6)

NOTES