GROUP 37

POWER STEERING

CONTENTS

GENERAL INFORMATION

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FEATURES

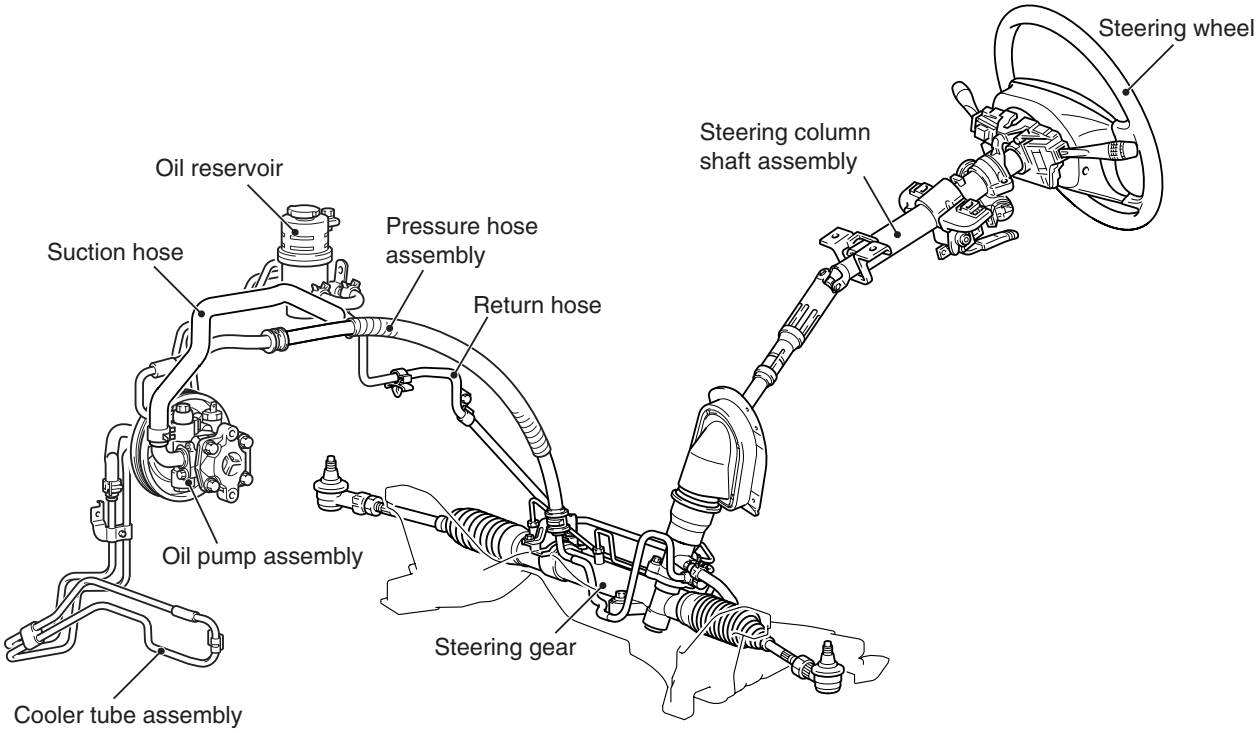
Power steering has been adopted in all vehicles to make the steering system easier to handle.

- A 4-spoke steering wheel is used.
- A steering column has a shock absorbing mechanism and a tilt steering mechanism.
- Integral-type rack and pinion gear with high rigidity and excellent response is used.
- A vane type pump with a fluid flow rate control system which changes steering effort according to the engine speed is used.
- The separate plastic resin oil reservoir is used to reduce weight and to make the fluid level checking easier.
- The cooler tube assembly, which is located in front of the radiator, is installed on the power steering fluid line to improve the cooling performance of the power steering fluid.

SPECIFICATIONS

Item		Specification
Steering wheel	Type	4-spoke type
	Outside diameter mm	380
	Maximum number of turns	2.7
Steering column	Column mechanism	Shock absorbing mechanism and Tilt steering mechanism Tilt up: 20 mm Tilt down: 20 mm
Power steering type		Integral type
Oil pump	Type	Vane pump
	Basic discharge amount mL/rev.	9.6 <2000> 8.1 <2400>
	Relief pressure MPa	8.8
	Reservoir type	Separate type (plastic)
	Pressure switch	Equipped
Steering gear	Type	Rack and pinion
	Stroke ratio (Rack stroke/Steering wheel maximum turning radius)	51.45
	Rack stroke mm	141
Steering angle	Inner wheel	34°50'
	Outer wheel	29°20'
Power steering fluid	Specified lubricants	ATF DEXRON III or DEXRON II
	Quantity L	Approximately 1.0

CONSTRUCTION DIAGRAM



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STEERING WHEEL

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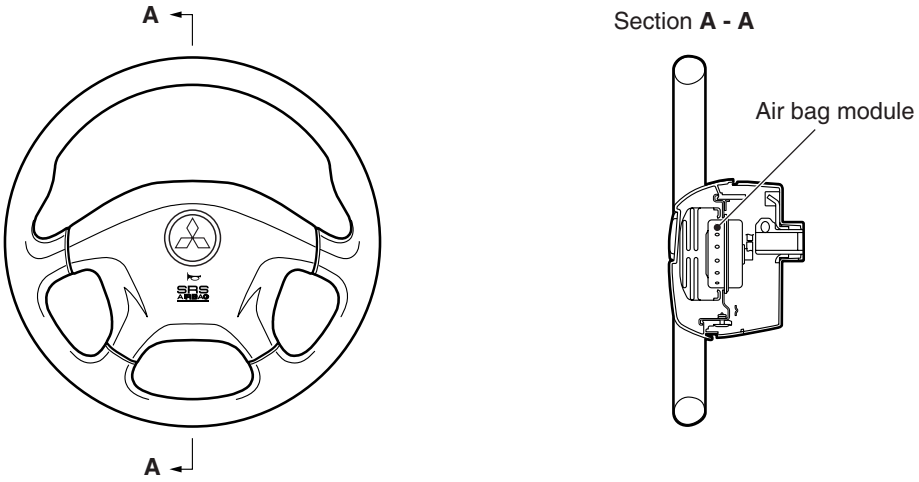

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The steering wheel is designed to improve operability, safety and maintainability and has the following features:

- It has four spokes and comes in two types: with and without a (synthetic) leather cover.The leather steering wheel is standard equipped on INTENSE model.
- It incorporates an air bag module to protect the driver in the event of a frontal collision.
- The air bag module is equipped with an inflator that does not contain sodium azide.

STEERING SHAFT AND COLUMN

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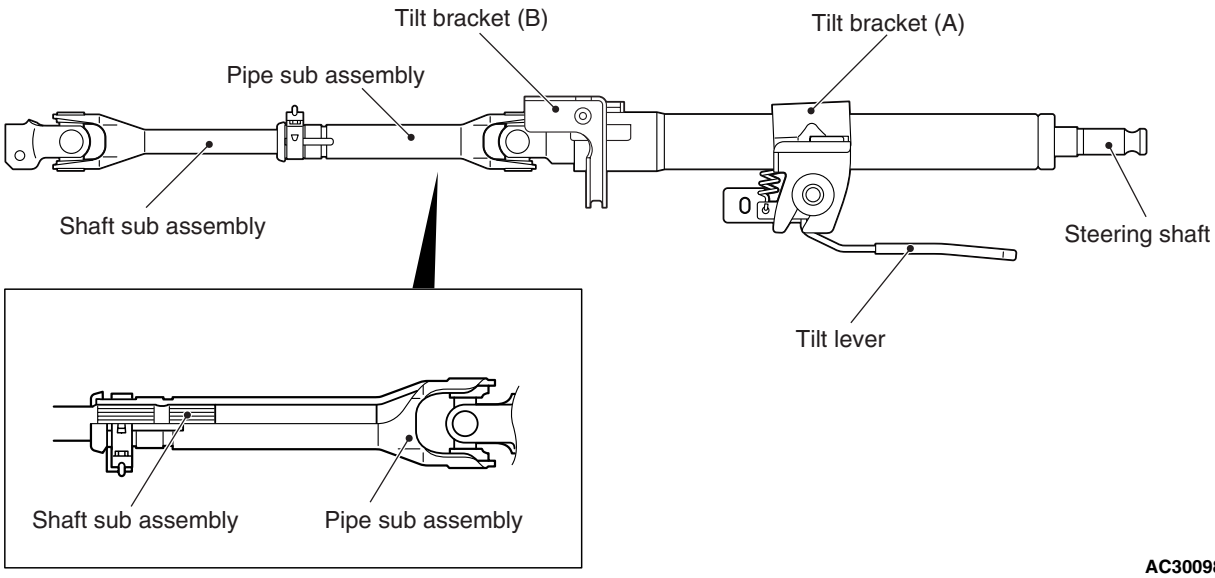
The steering column uses an impact absorbing mechanism which absorbs impact energy in the event of a collision as well as a tilt steering mechanism which enables the driver to obtain an optimum driving position.

The tilt steering mechanism is essentially the same as the conventional one.



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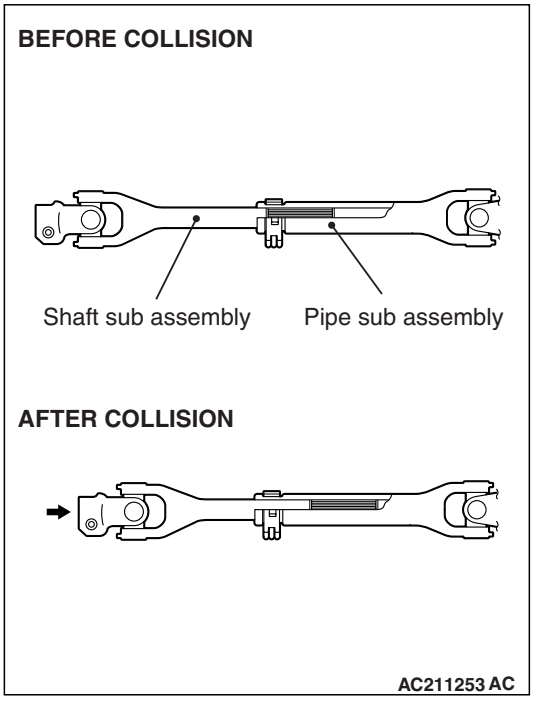
SHOCK ABSORBING MECHANISM

PRIMARY IMPACT



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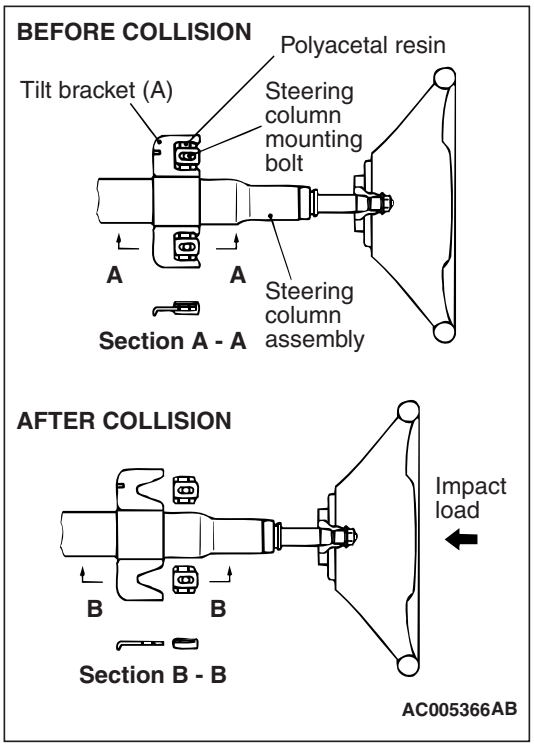
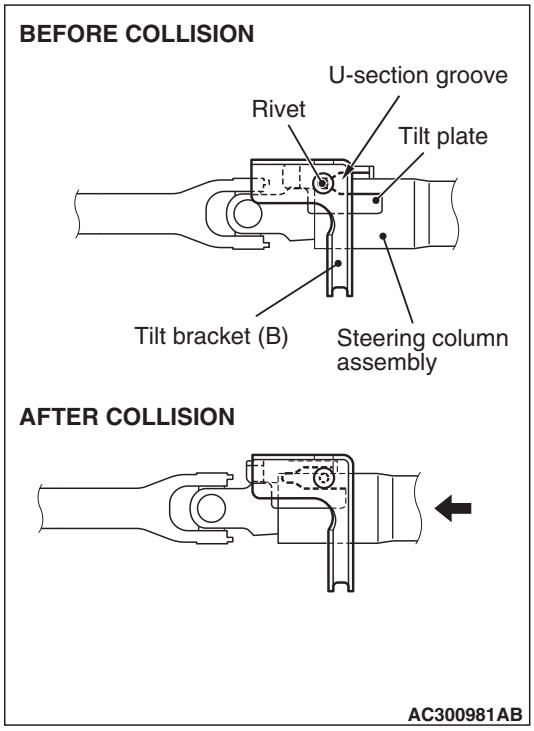
When the vehicle collides with something and there is a load added to the shaft sub assembly from the gearbox, the shaft sub assembly slides in the pipe sub assembly to absorb the shock load. This prevents the steering column from moving backwards during the impact.

SECONDARY IMPACT



1. When the driver's body falls against the deployed air bag, the tilt bracket (A) moves forwards by crushing the polyacetal resin, causing the steering column assembly to move into the engine compartment.



2. As the bracket breaks free, the rivet comes out of the U-section groove in the tilt plate, allowing the steering column assembly to move forward.

OIL PUMP

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The oil pump is a vane type with a fluid flow control system which functions so the steering wheel turning effort will be reduced at low engine speeds and it increased at higher speeds.

The oil pump is essentially the same as the conventional one in construction.

STEERING GEAR

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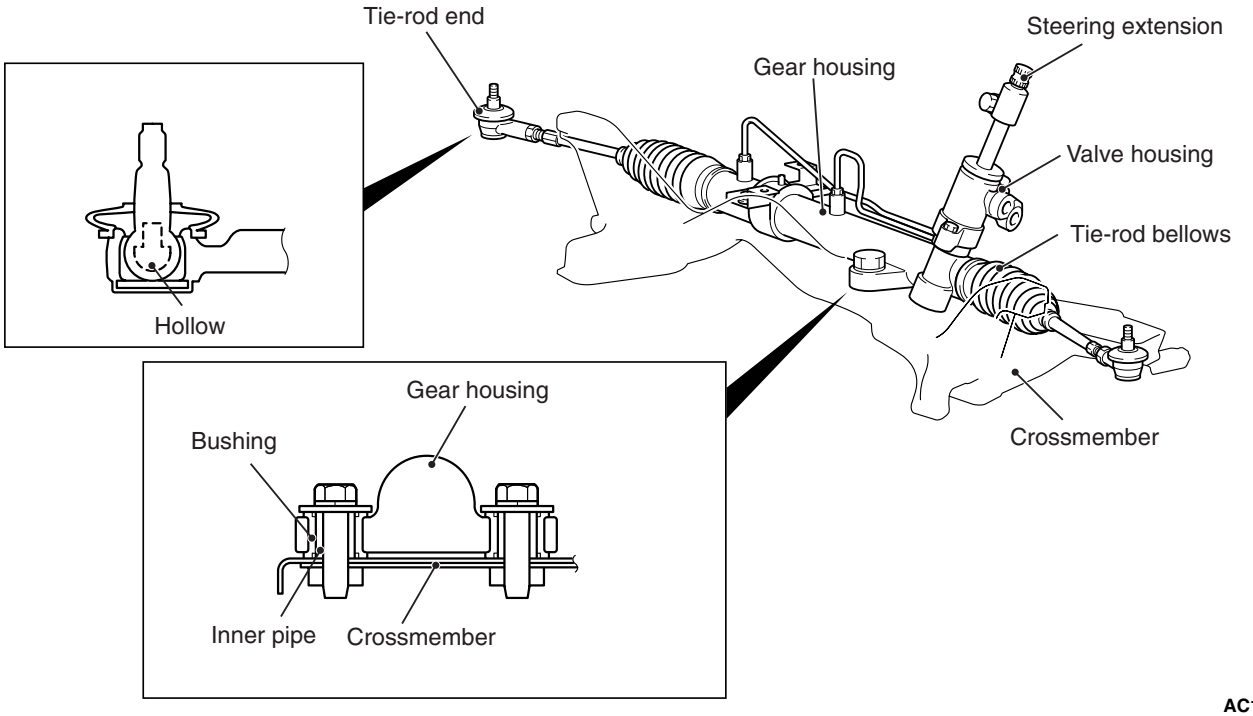

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- Using the following parts have contributed to save weight; an aluminium steering gear and linkage valve housing, a plastic tie-rod bellows, and the hollow-type tie-rod stud.
- The installation accuracy, rigidity and steering stability have been improved by using an eye bushing, which secures the steering gear to the crossmember.

OIL RESERVOIR

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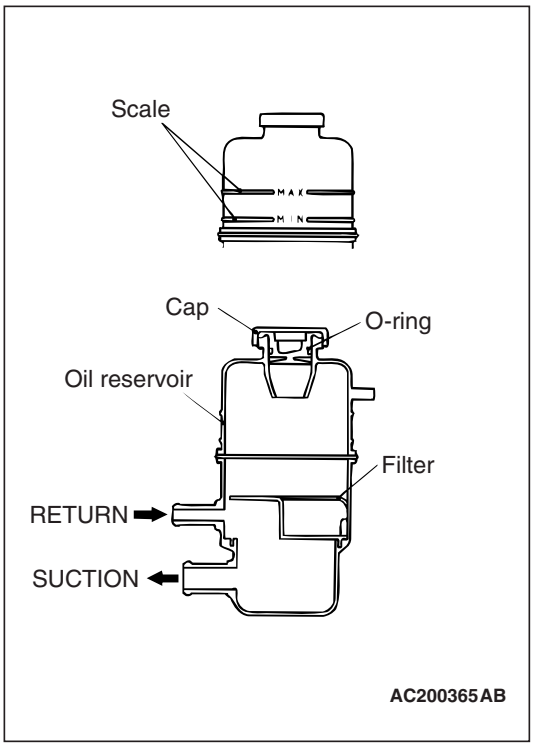

A plastic oil reservoir separated from the pump is used to reduce weight. It also allows the oil reservoir itself to be semi-transparent, and it has a scale (MAX and MIN lines) which lets you check the fluid level visually, making inspection much easier. It is located at the engine compartment right side.

NOTES