

GROUP 00

GENERAL

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HOW TO USE THIS MANUAL

M2000029000435

MODEL INDICATIONS

The following abbreviations are used in this manual for identification of model types.

2400:Indicates an engine with the 2,378 mL <4G69> petrol engine.

MPI:Indicates the multipoint fuel injection.

SOHC:Indicates an engine with the single overhead camshaft.

MIVEC:Indicates an engine with the mitsubishi innovative valve timing electronic control system.

M/T:Indicates the manual transmission.

A/T:Indicates the automatic transmission.

A/C:Indicates the air conditioner.

TARGETS OF DEVELOPMENT

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The New LANCER has improved competitiveness to satisfy the needs specific to wagon owners.

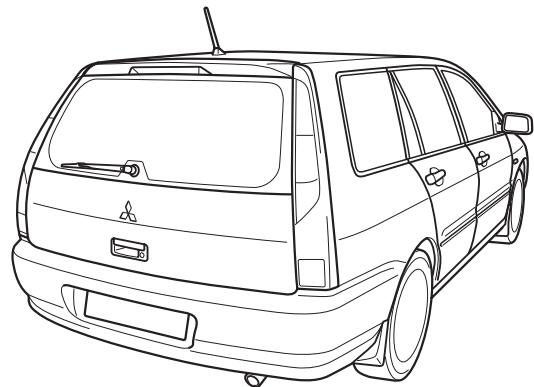
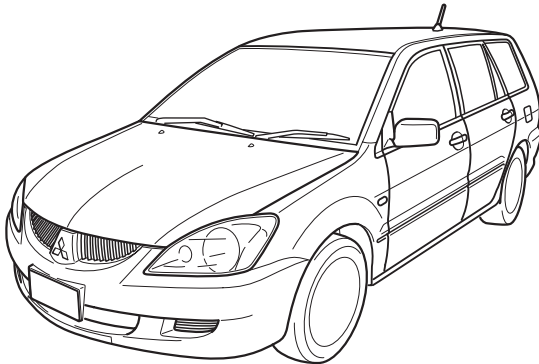
TECHNICAL FEATURES

EXTERIOR

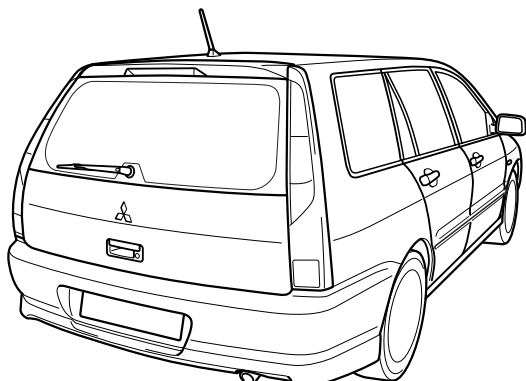
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DESIGN FEATURES

<ES>



<VR-X>



AC504892AD

BETTER APPEARANCE

- Employs a bumper-integrated radiator grille.
- Front and rear bumper extensions have been installed. <VR-X>
- Side air dams have been installed.<VR-X>
- Tailgate spoiler has been installed.
- Plastic wiper arm and blade assembly have been adopted for the rear wiper.

BETTER AERODYNAMIC CHARACTERISTICS

- Front and rear bumper extensions have been installed. <VR-X>
- Side air dams have been installed.<VR-X>
- Tailgate spoiler has been installed.

BETTER USER-FRIENDLINESS

Features power remote controlled door mirrors.

BETTER PRODUCT PACKAGE

- Front mudguards have been installed.<ES>
- Rear mudguards have been installed.<ES>
- Comes with a vehicle speed sensitive intermittent time variable windshield wiper.
- Comes with an initial continuous operation and reverse interlocked operating rear intermittent wiper.

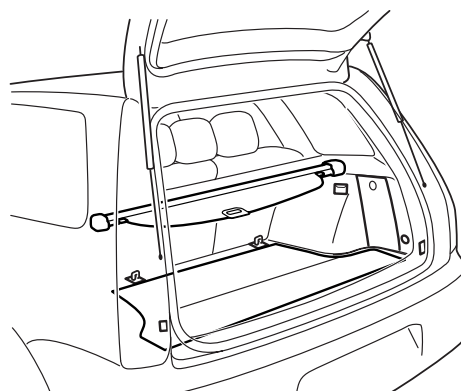
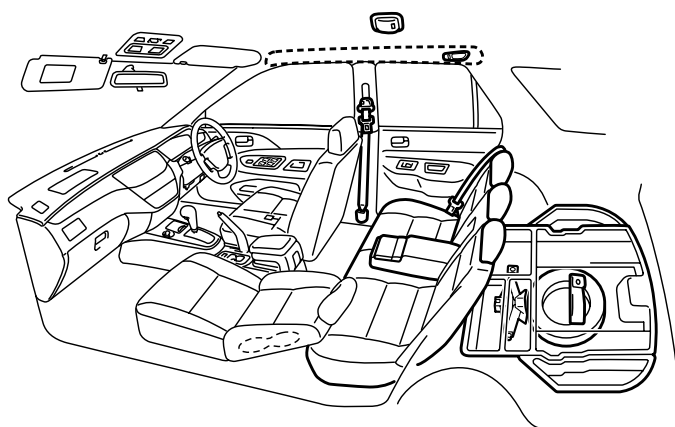
SUPPORT RECYCLING OF RESOURCES

Aggressively uses PP materials that are easy to recycle and easy to recognize material symbols stamped on the plastic (resin) parts.

INTERIOR

DESIGN FEATURES

M2000018000550



AC403727

QUALITY IMPROVEMENT

- The interior is fully trimmed.
- Titanium colour panels have been adopted.

CONSIDERATION FOR THE OPTIMUM DRIVING POSITION

- A height adjustment function has been adopted for the driver's seat.
- Adjustable seat belt anchors have been adopted for the front seat belts.
- A height adjustable headrest has been adopted for all the seats.

SAFETY IMPROVEMENT

- Three-point seat belts with ELR have been adopted (front).
- Three-point seat belts with ALR/ELR changeover mechanism have been adopted (rear).
- Fire-retarding material has been adopted for the instrument panel, floor console and trims.

BETTER USER-FRIENDLINESS

- A floor console with a lid has been installed. <VR-X>
- A 60/40 back split bench has been adopted for the rear seat.
- Arm rest with a cup holder.

CONVENIENT BOXES

- Glove box.
- Centre lower case. <ES>
- Coin holder.
- Cup holder (front and rear).
- Door pocket (front).
- Quarter side box.
- Luggage floor box.

MEASURES FOR RESOURCE RECYCLING

Material labelling on plastic parts.

ENGINE

M2000020000427

The 4G69-SOHC-MIVEC engine is based on 4G64-SOHC engine installed on SPACE WAGON, but employs the new Mitsubishi Innovative Valve timing & lifting Electronic Control system (MIVEC). The followings are main design changes:

- The cylinder head is designed to reexamine the port profile and to improve the coolant flow.
- The rocker cover is designed to reduce noise by using aluminium die-casting.
- The cylinder block is designed to be lightweight.
- The piston diameter is larger and has molybdenum coating.
- The connecting rod is designed to be lightweight.
- The crankshaft is designed to be lightweight.
- The counter balancer shaft is designed to be lightweight.
- The crankshaft pulley hub is made aluminium.

MAJOR SPECIFICATIONS

ITEM		4G69-SOHC-MIVEC
Total displacement mL		2,378
Combustion chamber		Pent roof type
Bore × Stroke mm		87.0 × 100.0
Compression ratio		9.5
Camshaft arrangement		SOHC-16 valve
Valve timing	Intake Open	6° BTDC <Low speed cam A>
		6° BTDC <Low speed cam B>
		20° BTDC <High speed cam>
	Intake Close	38° ABDC <Low speed cam A>
		38° ABDC <Low speed cam B>
		72° ABDC <High speed cam>
	Exhaust Open	60° BBDC
	Exhaust Close	16° ATDC
Maximum output kW/rpm		113/5,750
Maximum torque N·m/rpm		216/3,500
Lash adjuster		Not quipped

TRANSMISSION

M2000021000420

MANUAL TRANSMISSION

The F5M42 manual transmission has been adopted.

SPECIFICATIONS

Item		Specification
Transmission model		F5M42-2-F7B5
Transmission type		5-speed forward, 1-speed reverse constant mesh
Transmission gear ratio	1st	3.583
	2nd	1.947
	3rd	1.379
	4th	1.030
	5th	0.820
	Reverse	3.363
Final reduction ratio (Differential gear ratio)		4.058
Speedometer gear ratio		30/36
Transmission oil	Specified lubricants	Gear oil API classification GL-4 SAE 75W-85W or 75W-90
	Quantity L	2.2

AUTOMATIC TRANSMISSION

The F4A4B automatic transmission have been adopted.

SPECIFICATIONS

Item		Specification
Transmission model		F4A4B-4-L2Z
Torque converter	Type	3-element, 1-stage, 2-phase type
	Lock-up	Provided
	Stall torque ratio	2.1
Transmission type		4 forward speeds, 1 reverse speed, fully automatic
Transmission gear ratio	1st	2.842
	2nd	1.573
	3rd	1.000
	4th	0.688
	Reverse	2.214
Final reduction ratio		4.212
Clutch		Multi-disc type (3 sets)
Brake		Multi-disc type (2 sets)
Manual control system		P-R-N-D (4 positions) + sport mode
Shift pattern control		Electronic control (INVECS-II)
Hydraulic control during shifting		Electronic control (Each clutch hydraulically independently controlled)

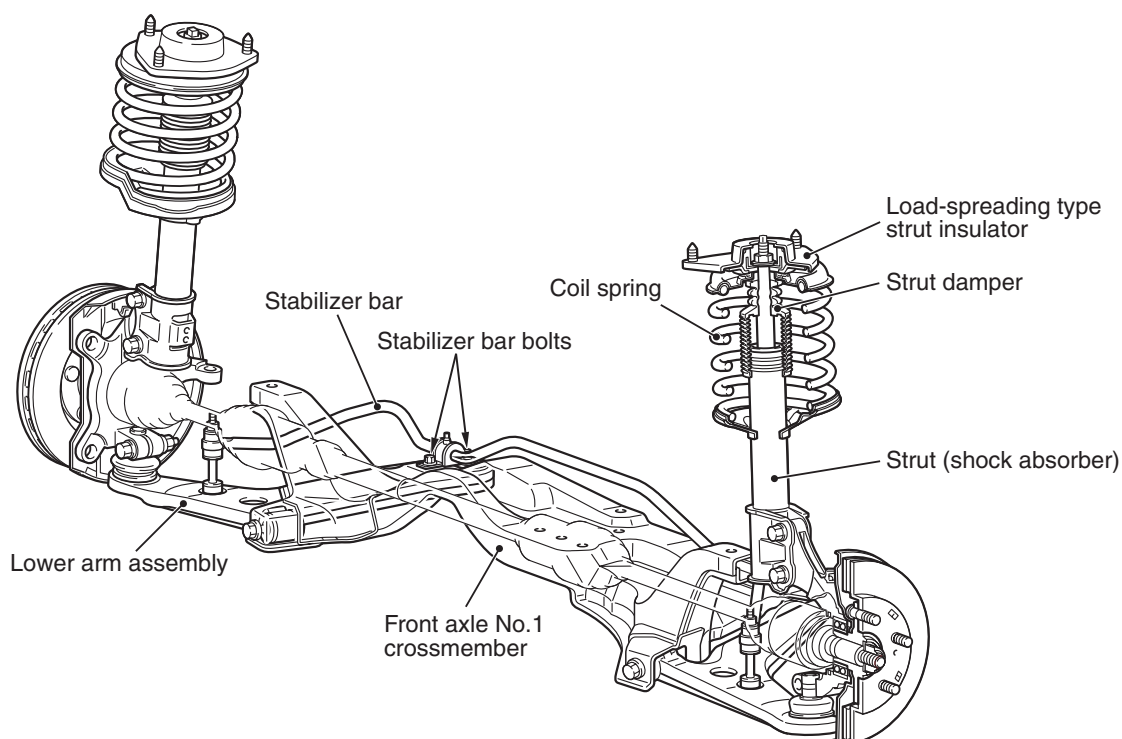
Item		Specification
Lock-up clutch control		Electronic control
Transmission fluid	Specified lubricants	ELC-4-SP3
	Quantity L	7.7

SUSPENSION

M2000023000363

FRONT SUSPENSION

The MacPherson strut type independent suspension has been adopted for the front suspension. At the same time, the crossmember has been flattened to increase the suspension rigidity as well as widening the tread and optimising the roll centre for improved steering stability and driving stability.



AC304022 AD

TARGETS AND FEATURES OF THE MAIN TECHNOLOGIES

The new suspension has been given the following features.

High Steering Stability

- Individual geometries such as tread expansion, linearisation of toe change are optimised for improvement of driving stability and ride feeling.

Weight reduction

- Various sections of the suspension have been streamlined for weight reduction.

Flattened Crossmember

- We have increased the rigidity of the suspension even reducing its weight.

- A crossmember brace has been added to the lower arm assembly mount sections to reduce vibrations and road noise.

Review of the anti-nosedive geometry

- Nosedive movement at braking is damped to secure stability.

Review of the roll centre

- The roll centre height has been optimised for improved adhesion, a roll feel, and linearity.

Increased rebound stroke

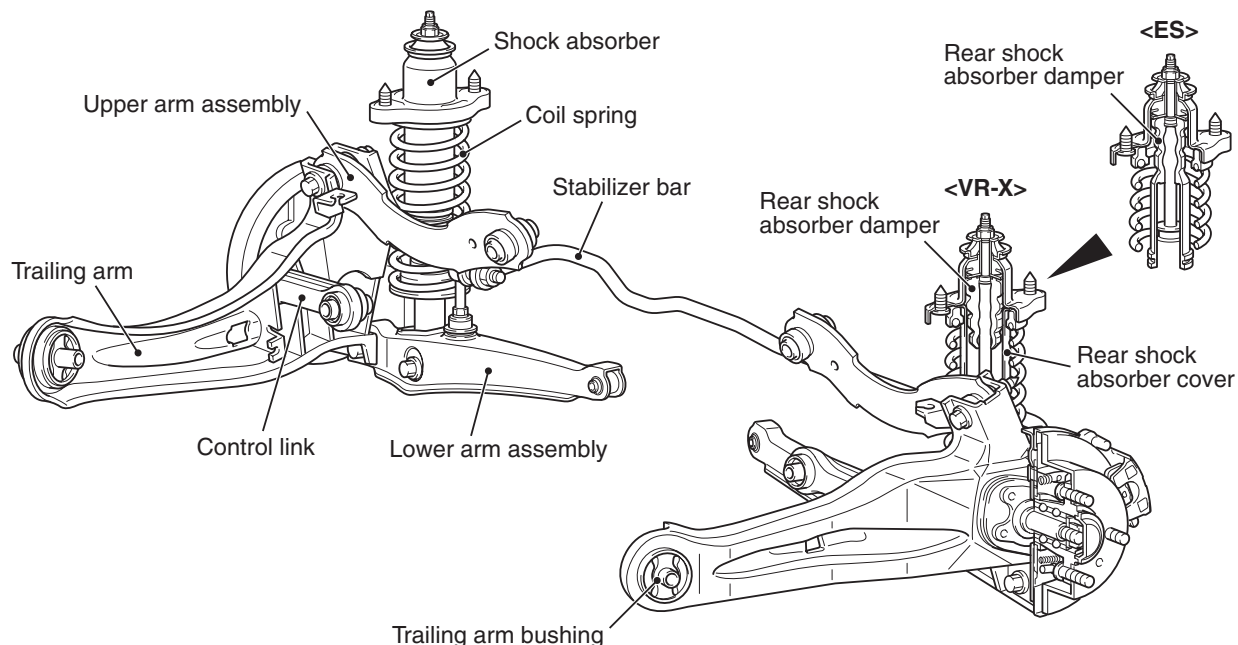
- The roadholding quality of the suspension has been improved by securing good adhesion even on bumpy, rough roads. Even shocks received when the vehicle negotiates bumps have been reduced.

Lower Arm Assembly

- Mounting bolts of larger sizes are used for improved reliability.
- The shape of the rear lower arm bushings has been improved so that they softly absorb large shocks caused by road surfaces but resist cornering force utilizing its hard directional spring characteristic, thereby achieving both good steering and riding comfort.
- The friction torque of the ball joints has been lowered for an improved steering feel and riding comfort.

REAR SUSPENSION

A trailing arm type multi-link suspension has been adopted as the rear suspension. Large cargo room space has been obtained by housing the rear shock absorbers and coil springs in the rear wheel houses.



AC403315AB

TARGETS AND FEATURES OF THE MAIN TECHNOLOGIES

The new suspension has been given the following features.

Suspension geometry

- The arm lengths have been changed to optimise alignment changes. This contributes to reduce the friction caused by the twists of the bushings.

Coil Spring

- The bottoms of the coil springs have been flattened to prevent noise.

Strut

- Input separation type strut insulators are installed to lower road noise transmission.
- The valve structures were overhauled, and a low friction and smooth damping characteristic has been achieved for improved steering stability and riding comfort at a high level.

Stabilizer Bar

- Two mounting bolts are used to prevent the noise caused by lateral displacements.

- We put some thought into the phases of both ends of the coils and have achieved a structure that prevents bending moments from acting on the shock absorbers, thereby reducing their friction.
- A spring lower pad (rubber) has been added to the lower ends of the coil springs to reduce vibrations and noise.

Shock Absorber

- We reviewed the shock absorber valve structure and the oil seal material properties and have successfully achieved low friction and smooth damping property.

Trailing Arm

- The shapes of the trailing arms have been optimised for weight reduction.
- The outer diameters of the trailing arm bushings have been increased.

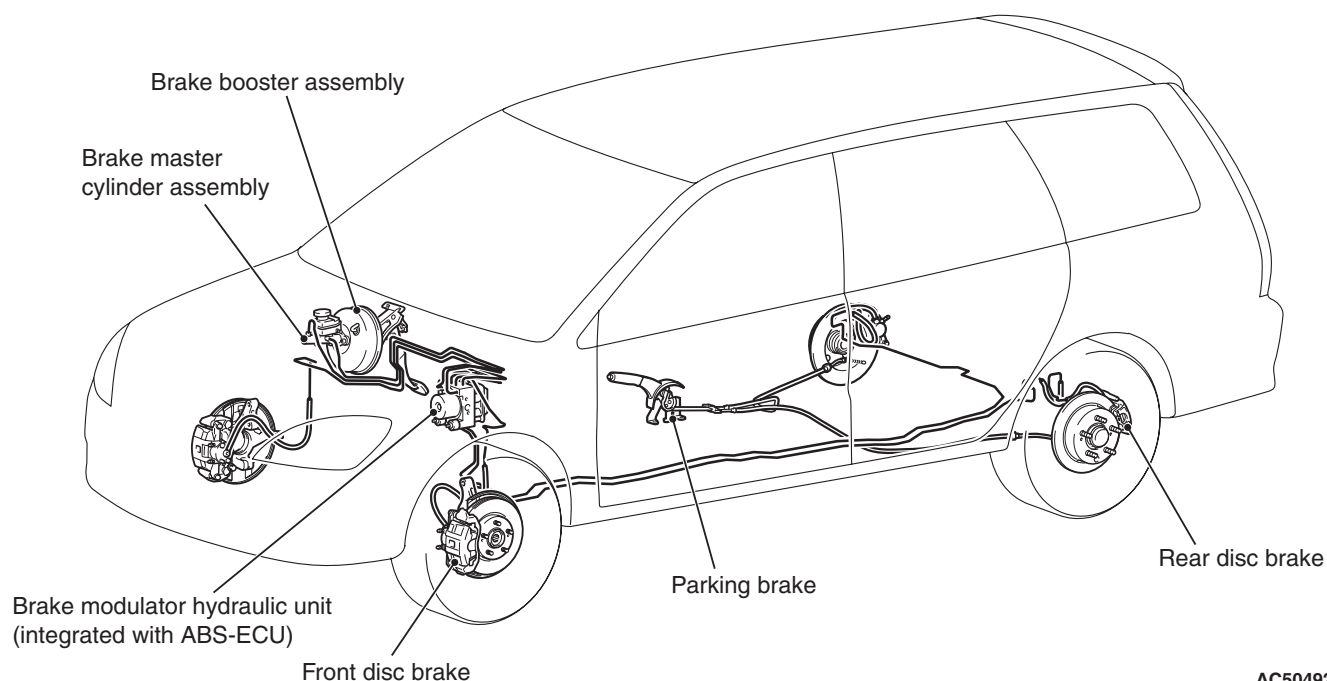
Stabilizer Bushing

- The mounting structure has been improved, and the bushing volume and slit positions have been adjusted to prevent lateral displacement.

BASIC BRAKE SYSTEM

M2000024000139

The brake system has been designed to give greater reliability and durability and to provide excellent braking performance.

CONSTRUCTION DIAGRAM

AC504929AB

IMPROVED BRAKING PERFORMANCE

1. A 10-inch brake booster has been adopted to provide large braking force with a small pedal depression force.
2. 15-inch front ventilated disc brakes, and 14-inch rear solid disc brakes have been adopted to provide stable braking force and fade-resistant characteristics.

2. An electronic brake-force distribution (EBD) makes it possible to maintain the maximum amount of braking force even when the vehicle's load is varied.
3. Front- and rear-wheel X-type brake line layout has been adopted.
4. Ventilated discs have been adopted for front brakes in order to improve anti-fading performance.

IMPROVED STABILITY

1. A 4-wheel anti-skid braking system (4ABS) has been adopted to prevent slipping caused by the vehicle wheels locking up, in order to maintain an appropriate braking distance, and also to maintain a stable vehicle posture and steering performance.

IMPROVED SERVICEABILITY

1. A diagnosis function has been adopted for the ABS system in order to make inspection easier.
2. For the front and rear disc brakes, an outer disc separated hub and rotor has been adopted to make removal and installation easier.
3. The brake fluid reservoir cap has been colored white to make identification easier.

4. The ABS-ECU and brake modulator hydraulic unit have been integrated to make them more compact and lighter.

PARKING BRAKE

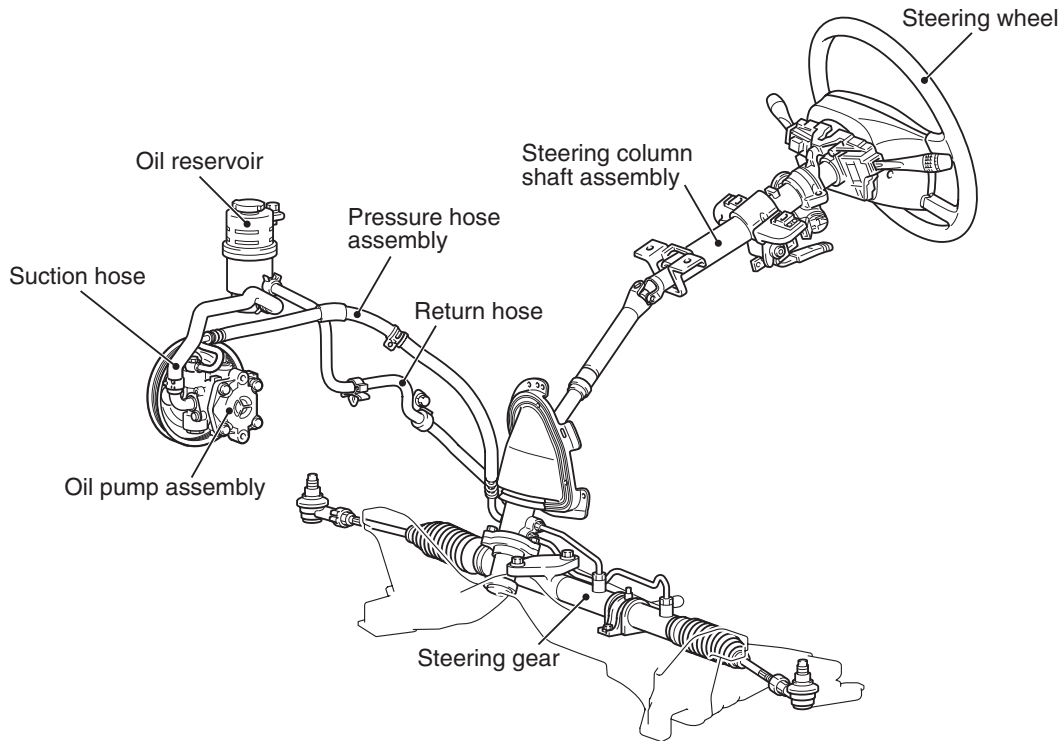
The parking brake is of a mechanical rear-wheel acting type, and its operation utilises a parking brake lever.

STEERING

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

CONSTRUCTION DIAGRAM



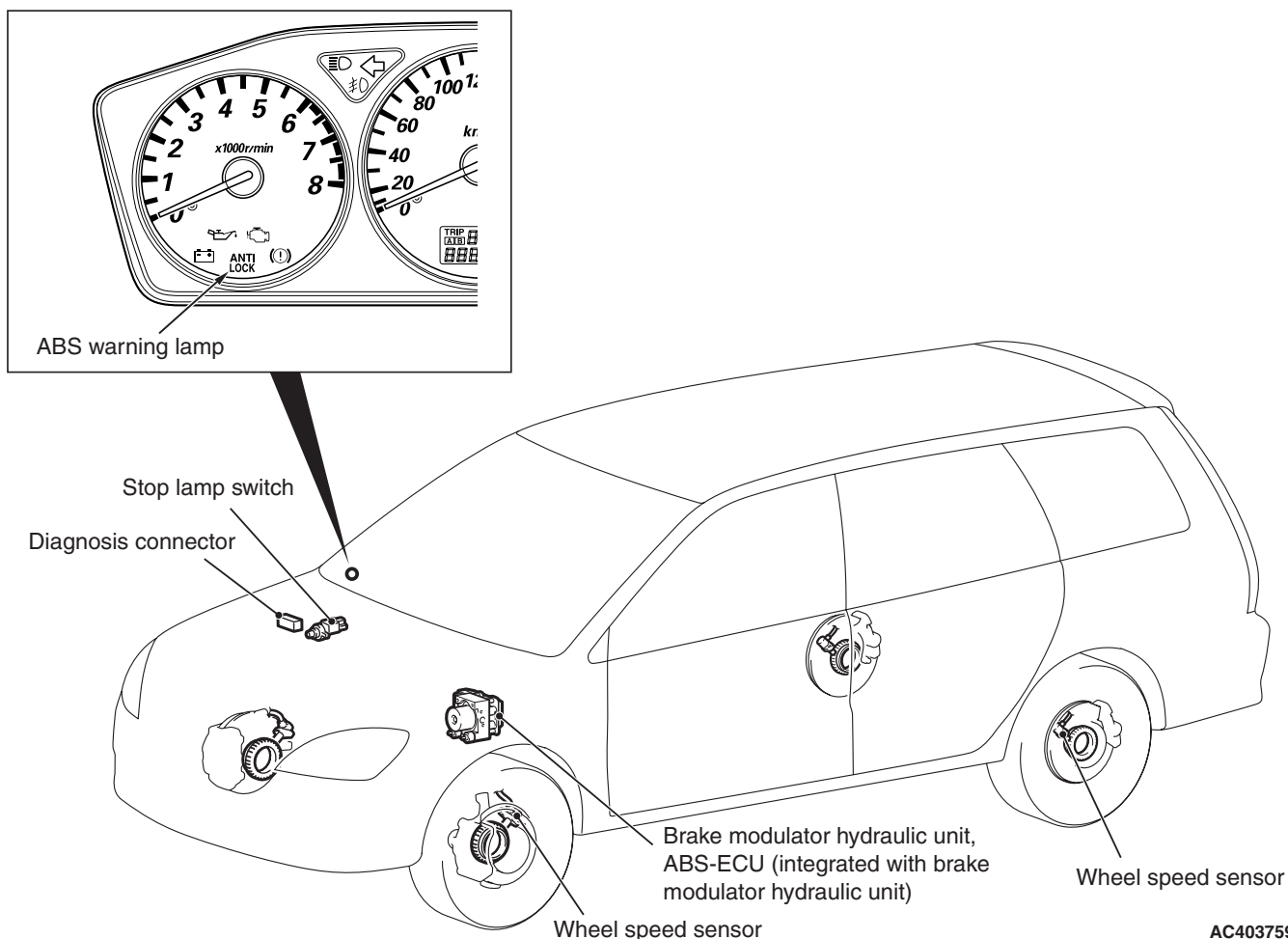
AC403475AB

FEATURES

- 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.

ACTIVE SAFETY

M2000031000379

ANTI-SKID BRAKE SYSTEM (ABS)
CONSTRUCTION DIAGRAM

FEATURES

The 4ABS ensures directional stability and controllability during hard braking.

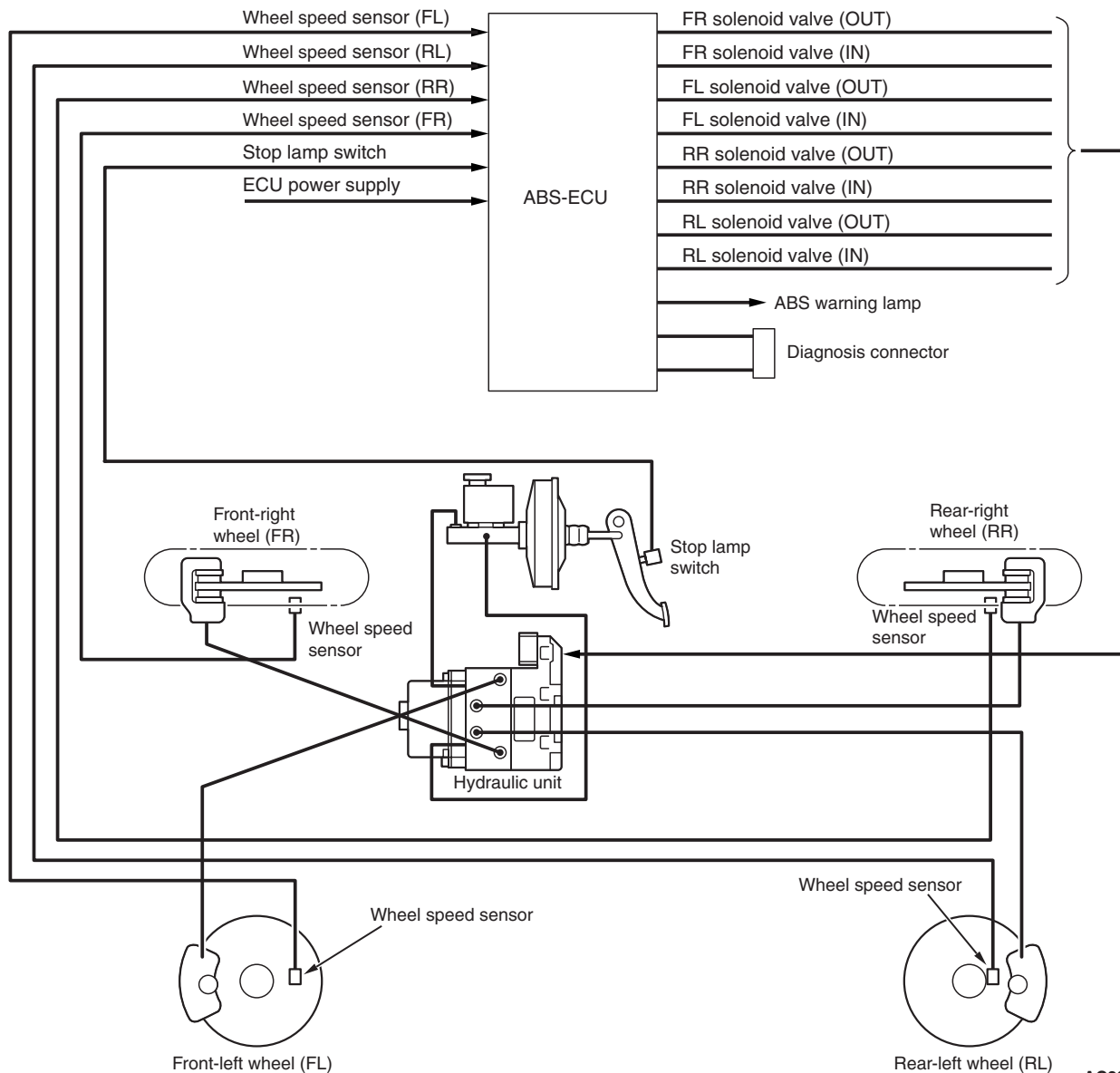
This ABS uses a 4-sensor 3-channel system that controls the right and left front wheels independently of each other and controls the rear wheels simultaneously (select low control*).

NOTE: *Select low control: Control system that compares the speeds of the right and left wheels and performs the same fluid pressure control on both wheels according to the speed of the wheel that is likely to be locked.

The system has the following features:

- EBD (Electronic Brake-force Distribution system) control has been added to provide the ideal braking force for the rear wheels.
- Fail-safe function which ensures that safety is maintained
- Diagnosis function which provides improved serviceability

EBD CONTROL SYSTEM CONFIGURATION DIAGRAM



AC304149AC

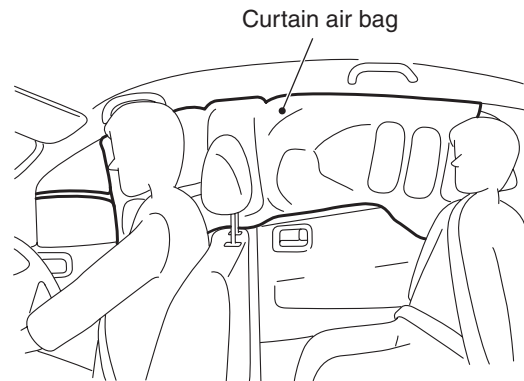
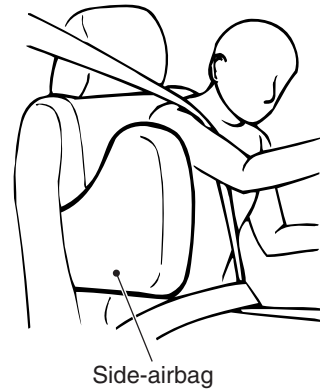
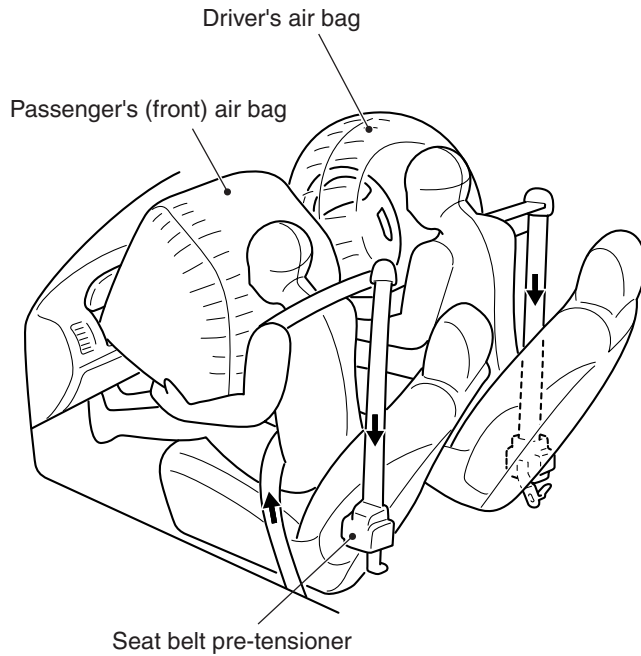
In ABS, electronic control is used so the rear wheel brake hydraulic pressure during braking is regulated by rear wheel control solenoid valves in accordance with the vehicle's rate of deceleration, and the front and rear wheel slippage which are calculated from the signals received from the various wheel speed sensors. EBD control provides a high level of control for both vehicle braking force and vehicle stability. The system has the following features:

- Because the system provides the optimum rear wheel braking force regardless of vehicle load conditions and the condition of the road surface, the system reduces the required pedal depression force, particularly when the vehicle is heavily loaded or driven on road surfaces with high frictional coefficients.
- Because the duty placed on the front brakes is reduced, the increases in pad temperature can be controlled during brake application to improve the wear resistance characteristics of the pad.
- Rear wheel hydraulic pressure control valves such as the proportioning valve are no required.

PASSIVE SAFETY

M2000032000372

SRS AIR BAGS

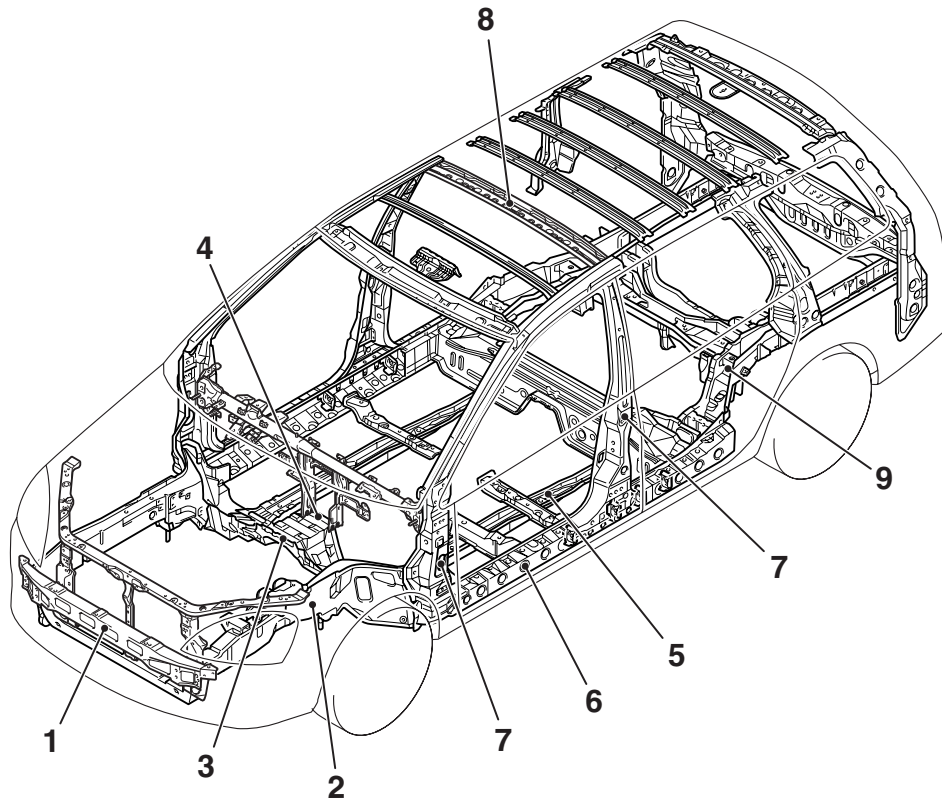


AC403384 AC

Dual Supplemental Restraint System (SRS) front air bags deploy only upon detection of frontal impact. When used in combination with the 3-point ELR seat belts, they significantly reduce head and upper torso injury to front-seat occupants. The seat belts with pre-tensioner work simultaneously with the SRS.

The pre-tensioner takes up seat slack immediately when a collision takes place by restraining the front passengers sooner than the SRS. This prevents the passengers from moving forwards. The side-airbags and curtain air bags on both driver's and front passenger's sides have been optional for added safety.

BODY CONSTRUCTION



AB400499AE

The body structure featuring a high-energy absorbing structure (front and rear) and high rigidity cabin structure combination reduces the chance of passenger injury, maintains cabin space and improves passenger rescue upon frontal, rear and side impact.

1. Application of front bumper reinforcement.
2. Application of enlarged and linear cross section of front side member.
3. Application of dash panel cross member.
4. Application of thicker dash panel lower.
5. Application of enlarged cross section of front floor side member.
6. Application of enlarged cross section of side sill outer reinforcement.
7. Application of thicker front pillar reinforcement and centre pillar reinforcement.

8. Application of enlarged cross section of roof bow.
9. Application of enlarged cross section of rear floor side member.

SAFETY-ENHANCED FRONT SEATS

The front seats are designed to minimize the risk of whiplash in a collision from the rear.

The head restraints have been ideally angled forward, while the seat frame was moved toward the rear.

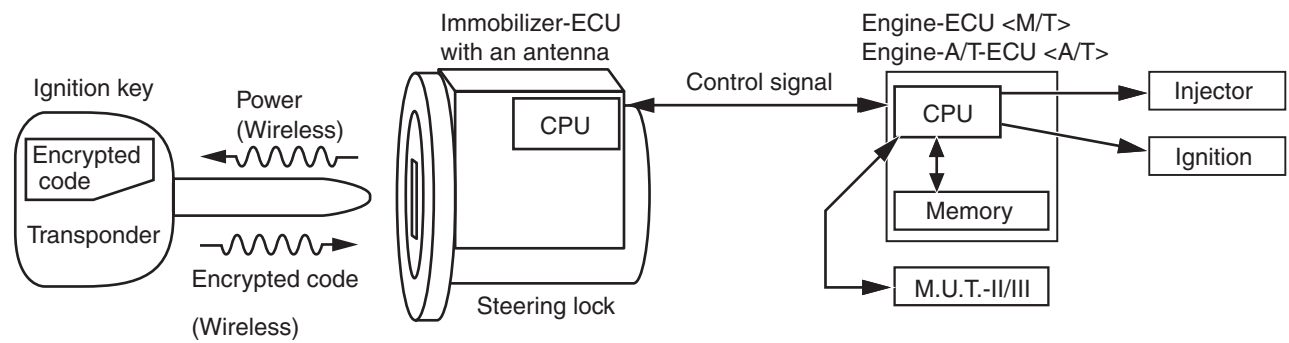
OTHER SAFETY FEATURES

- 3-point ELR seat belts.
- Front fog lamps. <VR-X>
- Child-protection rear door locks.

EQUIPMENTS

M2000026000340

IMMOBILIZER SYSTEM



AC304482 AF

This system lets the engine be started only when an encrypted code that is recorded in the ignition key is the same as an encrypted code that is recorded in the immobilizer-ECU.

ENVIRONMENTAL PROTECTION

M2000027000172

Mitsubishi has given careful consideration to protection of natural resources and the environment in the vehicle. Environmentally friendly features are shown below.

ITEMS DEALING WITH ENVIRONMENTAL PROTECTION

Prevention of atmospheric pollution	Parts name	Main detail
Air pollution control	Cylinder head gasket	Employment of metal materials reduces the volume of incomplete combustion generated between the cylinder block and cylinder head, and suppresses the level of unburned hydrocarbon (HC).
Reduction of hazardous waste	Fuel tank, radiator, heater core, battery cable terminal, fuel hose, air intake hose, glass ceramic print, harness and intake valve seat	Uses lead-free materials.
	Engine gaskets	Uses asbestos-free materials.
	Waterproofing film	Uses polyvinyl chloride (PVC) free materials.

Prevention of atmospheric pollution	Parts name	Main detail
Recycling	Hood weatherstrip, engine control vacuum hose, instrument panel, door trim, carpet, head restraint, bumper, radiator grille, door handle and door mirror	Easy recyclable.
	Air cleaner case, resonator, instrument panel, door trim, bumper and radiator grille	Uses material recycled in-plant.
Prevention of ozone layer depletion	Air-conditioner refrigerant	HFC is used.

SERVICEABILITY AND RELIABILITY

M2000028000175

MAINTENANCE-FREE FEATURES

Serpentine auxiliary belts and an auto-tensioner are adopted to eliminate the need for the adjustment of auxiliary belt tension.

ENHANCED DIAGNOSIS SYSTEM

Diagnosis functions have been included for the following systems, so that it is possible to use the M.U.T.-II/III to read the diagnosis codes and service data and to carry out actuator tests. In addition, it is also possible to read the diagnosis codes by the flashing of the warning lamp in some systems.

- MPI
- A/T
- ABS
- SRS air bag
- Immobilizer
- ETACS

VEHICLE IDENTIFICATION

M2000001001670

MODELS

Model code		Engine model	Price class	Transmission model	Fuel supply system
CS7W	LNDYR8	4G69-SOHC-MIVEC (2,378 mL)	ES	F5M42 <2WD, 5M/T>	MPI
	LRDYR8			F4A4B <2WD, 4A/T with sport mode>	
	LNHYR8		VR-X	F5M42 <2WD, 5M/T>	
	LRHYR8			F4A4B <2WD, 4A/T with sport mode>	

MODEL CODE

CS	7	W	L	N	D	Y	R	8
1	2	3	4	5	6	7	8	9

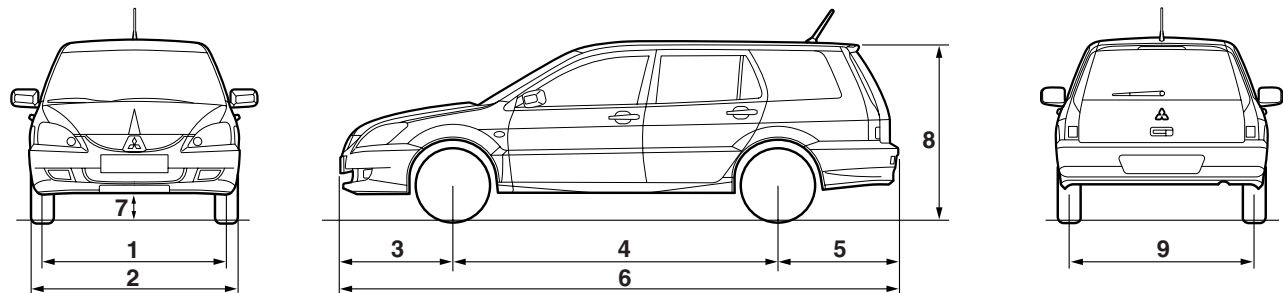
AC504621

No.	Item	Content
1	Development	CS: MITSUBISHI LANCER
2	Engine type	7: 2,378 mL (4G69)
3	Sort	W: Wagon

No.	Item	Content
4	Body style	L: 4-door with tailgate
5	Transmission type	N: 5-speed manual transmission R: 4-speed automatic transmission
6	Trim level	D: ES H: VR-X
7	Specification engine feature	Y: MPI-SOHC-MIVEC
8	Steering wheel location	R: Right hand
9	Destination	8: For Australia

MAJOR SPECIFICATIONS

M2000030000569



AC403509AB

Items			CS7W			
			LNDYR8	LRDYR8	LNHYR8	LRHYR8
Vehicle dimensions mm	Front track	1	1,470			
	Overall width	2	1,695			
	Front overhang	3	900		965	
	Wheel base	4	2,600			
	Rear overhang	5	975			
	Overall length	6	4,475		4,540	
	Ground clearance	7	150		135	
	Overall height	8	1,465		1,450	
	Rear track	9	1,470			
Vehicle weight kg	Kerb weight		1,340	1,360	1,355	1,375
	Max. gross vehicle weight		1,820			
	Max. axle weight rating-front		940			
	Max. axle weight rating-rear		890			
	Max. trailer weight	With brake	1,000			
		Without brake	400			
	Max. trailer-nose weight		100			
Seating capacity			5			
Engine	Model code		4G69			
	Total displacement mL		2,378			
	Maximum output kW/r/min		113/5,750			
	Maximum torque N·m/r/min		216/3,500			
Transmission	Model code		F5M42	F4A4B	F5M42	F4A4B
	Type		5-speed manual	4-speed automatic	5-speed manual	4-speed automatic
Fuel system	Fuel supply system		MPI			

Items			CS7W			
			LNDYR8	LRDYR8	LNHYR8	LRHYR8
Performance	Maximum speed km/h		213	204	211	202
	Minimum turning radius m	Body	5.5		5.8	
		Wheel	5.0		5.2	