## **GROUP 00**

# **GENERAL**

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## **HOW TO USE THIS MANUAL**

M2000029000628

#### **MODEL INDICATIONS**

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

DOHC. Indicates an engine with the double overhead camshaft.

MIVEC. Indicates Mitsubishi innovative valve timing electronic control system.

MPI. Indicates the multipoint injection.

M/T. Indicates the manual transmission.

CVT. Indicates the continuously variable transmission.

A/C. Indicates the air conditioner.

## TARGETS OF DEVELOPMENT

M2000004001066

#### **EXCEPT RALLIART Version-R**

The New COLT featuring "exciting feeling and freedom" has been developed for realising "safety, running, quality" and "free-to-select enjoyment" as well as "true convenience and economical efficiency." That makes NEW COLT a new generation compact car.

#### **RALLIART Version-R**

This "COLT RALLIART Version-R" has been developed as a hot version in which the Mitsubishi Motors' concept "Sporty–DNA" was further refined. In the midst of this recent wave of the sport model launches in the compact car class, COLT RALLIART Version-R has acquired users of the competitors and the younger generation, and has improved the overall image of the COLT series by appealing to the sport-oriented users as the only high-powered turbocharger vehicle in the class.

## PRODUCT FEATURES

M2000005000475

#### <Except RALLIART Version-R>

 COLT has been equipped with the new 1,500 mL aluminium die-cast engine (4A9-engine) for further refinements of comfort driving, excellent power performance, fuel economy, and ecology performance.

#### <RALLIART Version-R>

- The body and suspension of COLT RALLIART Version-R have been thoroughly tuned to increase the 4G1-engine output which enables dynamic driving.
- The robust image suited for the dynamic driving has been adopted for the appearance.

#### SPORTY AND STYLISH DESIGN

- Bucket-like front seats <Except RALLIART Version-R>
- Sport seats exclusive to the models with turbocharger <RALLIART Version-R>
- 15-inch aluminium wheel <VR-X>
- High-contrast combination meter <Except RALLI-ART Version-R, LS, VR-X (M/T) >
- Robust appearance by new shaped front bumper adaptation and rear bumper change <RALLIART Version-R>
- Black overfender <RALLIART Version-R>
- 16-inch aluminium wheel <RALLIART Version-R>

#### ACTIVE DRIVING AND HIGH QUALITY

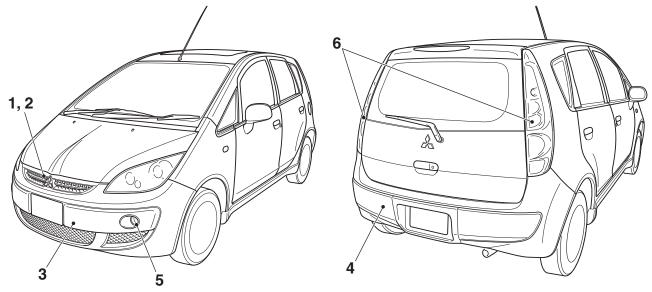
- For 4A9-engine, the aluminium die-cast cylinder block has been installed for weight reduction of the vehicle. <Except RALLIART Version-R>
- For 4G1-engine, turbo-charger model has been introduced to increase output and torque, enhancing sporty image. <RALLIART Version-R>
- Sporty driving has been ensured by the "GETRAG" 5-speed manual transmission (floor shift). <M/T>
- The suspension has been tuned to improve cornering and stability at high speed. <RALLIART Version-R>
- A strut tower bar has been adopted to improve the body rigidity. <RALLIART Version-R>
- Electric power steering system has been improved and EPS-ECU has been additionally equipped with the return control logic, resulting in superior steering wheel return control and better steering feel equal to or better than that for other models with hydraulic power steering.

## **TECHNICAL FEATURES**

#### **EXTERIOR**

<ES, LS, VR-X>

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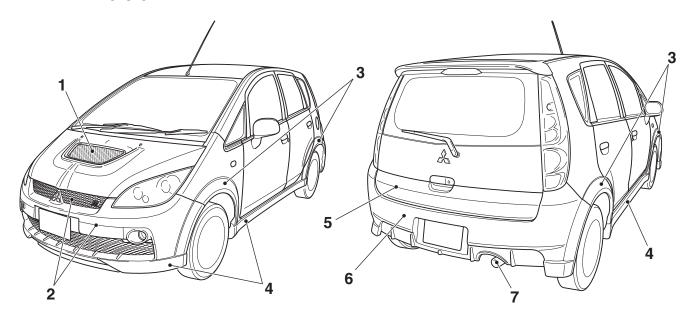


#### AC601279AB

#### **MAIN CHARACTERISTICS**

- 1. The radiator grille has been renewed in shape to provide the superior and high-quality design.
- 2. A chrome-plated embellisher has been installed to emphasize the feelings of luxury and sporty.
- 3. The front bumper has been renewed in shape to provide the superior and high-quality design.
- 4. The rear bumper has been renewed in shape to emphasize the sporty image in rear appearance together with modification in the tailgate glass and rear combination lamps.
- 5. Due to the change of the front bumper, the shape of front fog lamp has been changed.
- The design of the rear combination lamp assembly has been changed. In addition, the locations of the tail lamps have been moved upward to increase visibility.

#### <RALLIART Version-R>



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#### **DESIGN PURPOSE**

- Sporty hot hatchback with high quality and premium image resulting from the function-oriented styling
- Exterior design which attracts users to driving

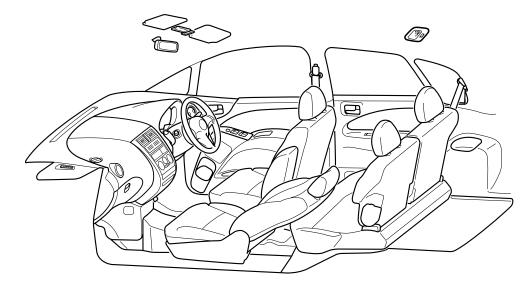
#### **MAIN CHARACTERISTICS**

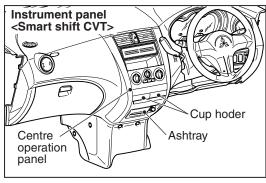
- 1. Air outlet garnish has been added.
- 2. Sporty-imaged front bumper and radiator grille dedicated to the RALLIART Version-R
- 3. The overfender which provides a sense of unity with the front bumper, side air dam, and rear bumper
- 4. Large side air dam design which provides a sense of unity with the overfender
- 5. The tailgate lower garnish dedicated to RALLI-ART Version-R
- 6. The rear bumper dedicated to RALLIART Version-R
- 7. Equipped large size muffler cutter

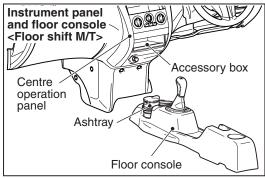
#### **INTERIOR**

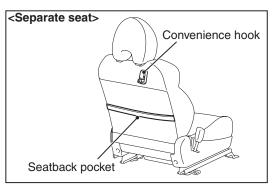
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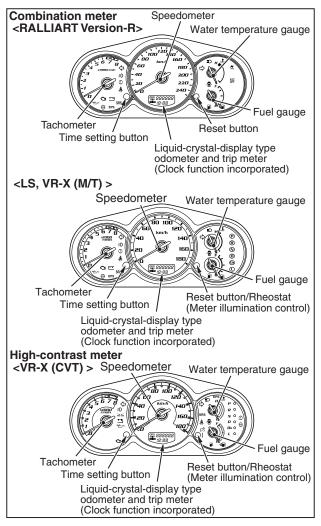
Functionality, interior comfort, and safety have been emphasised, providing the interior design with elegance and comfortable space. Various measures have been taken actively to protect the environment and recycle resources.











#### **FEATURES**

#### **Quality improvement**

- Full interior trim
- Two-tone interior
- Cloth covered part door trim

#### **Usability improvement**

- Movable ashtray <M/T>
- Front RECARO seat (Option)
- Cup holder of right/left separation type (for front seats) <M/T>
- Convenience hook (passenger's side) <LS>
- · Wide variety of seat arrangement
- · Reclining adjustment, slide adjustment
- Luggage hook
- High-contrast meter <LS, VR-X (M/T), Excpet RALLIART Version-R>
- Combination meter of 240km/h scale <RALLIART Version-R>

#### **Convenient boxes**

- Centre panel box
- Glove box
- Seatback pocket
- Bottle holder (front door trim)
- Door pocket (front door trim)

#### Safety improvement

- ELR three-point seat belt (front)
- Front seat belt with force limiter mechanism
- ELR three-point seat belt/child seat fastening mechanism (ALR) switching seat belt (rear)
- Floor carpet with heel stopper structure
- Instrument panel and trims which adopt fire-retarding materials

#### Consideration for the optimum driving position

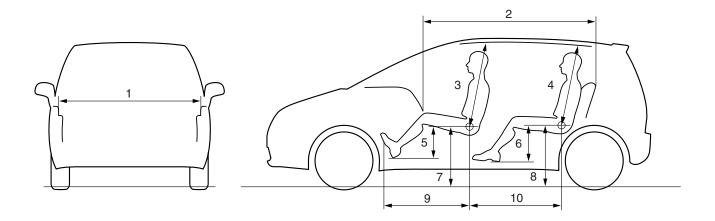
- Seat height adjustment (driver's seat)
- Head restraint with height adjustment (front, rear)
- One-touch adjustable seat belt anchor (front seat belt)

#### Measures for resource recycling

Aggressively use PP materials that are easy to recycle and easy to stamp material symbols on the plastic (resin) parts.

### **SPACIOUS CABIN**

M2000000400230



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- Spacious interior space leading the compact car field
- Seating ground clearance offering easy access

No.	Item		Dimension mm
1	Front shoulder room		1,340
2	Interior effective length		1,805
3	Head room	Front	920/875*
4		Rear	855/850*
5	Hip-point height	Front	325
6		Rear	375
7	Seating ground clearance	Front	600
8		Rear	650
9	Brake pedal room		900
10	Hip point couple		805

#### NOTE:

- \*:Vehicles with sunroof
- Refer to P.00-31 <CVT>, P.00-32 <M/T> for the body dimensions.

#### **ENGINE**

M2000020000579

#### <4A9>

The newly-developed 4A9 engine has been installed to realise small-size, light-weight, high-performance, and better fuel economy with the state-of-the-art technologies such as the aluminium die-cast cylinder block, direct attack driven-type DOHC MIVEC, timing chain-type cam drive, and rear exhaust.

#### **MAJOR SPECIFICATIONS**

Item		4A91	
Total displacement mL		1,499	
Bore × Stroke mm		75 × 84.8	
Compression ratio		10.0	
Compression chambe	r	Pentroof-type	
Valve timing	Intake opening	BTDC 31° – ATDC 19°	
	Intake closing	ABDC 21° – ABDC 71°	
	Exhaust opening	BBDC 39°	
Exhaust closing		ATDC 5°	
Maximum output kW (	(PS)/rpm	77 (105)/6,000	
Maximum torque N⋅m (kg⋅m)/rpm		141 (14.4)/4,000	
Fuel system		Electronically controlled multipoint fuel injection	
Ignition system		Electronic-controlled 4-coil	

#### <4G1>

Based on the 4G1 engine fitted on the existing COLT, the power performance leading the compact car field has been secured by Turbocharger.

#### **MAJOR SPECIFICATIONS**

Item		4G15 (with Intercooler Turbocharger)	
Total displacement r	nL	1,468	
Bore × Stroke mm		75 × 82.0	
Compression ratio		9.0	
Compression chamb	per	Pentroof-type	
Valve timing	Intake opening	BTDC 34° – ATDC 6°	
Intake closing Exhaust opening Exhaust closing		ABDC 30° – ABDC 70°	
		BBDC 50°	
		ATDC 10°	
Maximum output kW	/ (PS)/rpm	113 (154)/6,000	
Maximum torque N⋅m (kg⋅m)/rpm		210 (21.4)/3,500	
Fuel system		Electronically controlled multipoint fuel injection	
Ignition system		Electronic-controlled 4-coil	

#### **TRANSMISSION**

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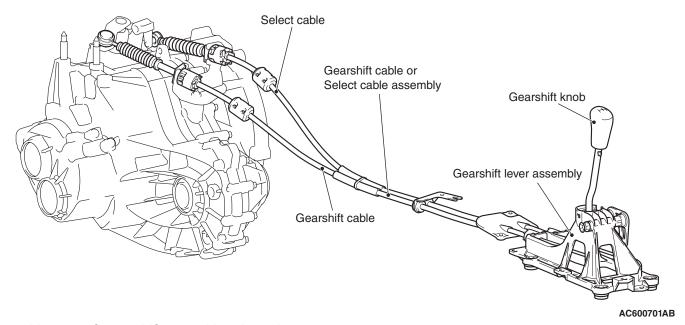
### **MANUAL TRANSMISSION**

Due to the addition of vehicles with M/T, a "GETRAG" F5MGA type <4A9 engine>, F5MGB type<4G1 engine> transmission has been adopted.

#### **SPECIFICATIONS**

Transmission model Engine model		F5MGA	F5MGB
		4A91	4G15
Transmission type		5-speed, floor-shift	
Transmission gear ratio	1st	3.308	3.538
	2nd	1.913	1.913
	3rd	1.258	1.344
4th		0.943	1.027
	5th	0.763	0.833
	Reverse	3.231	3.357
Final reduction ratio		4.158	3.737

#### **GEARSHIFT CONTROL**



The cable type of gear shift control is adopted.

## **CVT**

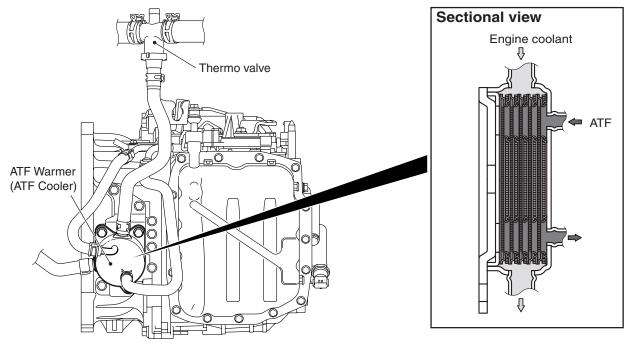
The F1C1A transmission is adopted for the CVT. This transmission is basically the same as conventional transmission.

The ATF warmer (ATF cooler) is adopted.

### **SPECIFICATIONS**

Item		Specification	
Transmission model		F1C1A	
Engine model		4A91	
Torque converter	Туре	3-element, 1-stage, 2-phase type	
	Lock-up	Provided	
	Stall torque ratio	2.0	
Transmission type	9	Forward automatic continuously variable (steel belt type), 1st in reverse	
Gear ratio	Forward	2.319 – 0.445	
	Reverse	2.588	
Clutch		A pair of multi-plate system	
Brake		A pair of multi-plate system	
Manual control sy	rstem	P-R-N-D-Ds-L (smart shift)	
Function	Variable speed control	Yes	
	Line pressure control	Yes	
	Direct engagement control	Yes	
	N-D/N-R control	Yes	
	Shift pattern control	Yes	
Self-diagnosis		Yes	
	Failsafe	Yes	
Oil pump	Туре	External gear pump	
	Configuration	Built-in (chain drive)	
Control method		Electronic control (INVECS-III)	
Solitioi method		Electronic control (INVECS-III)	

### ATF WARMER (ATF COOLER) <4A9>



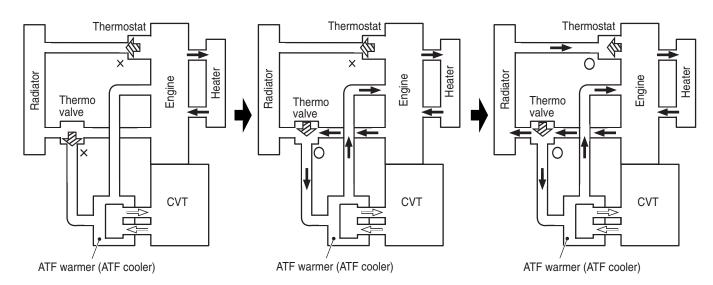
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O : Valve open 

★ : Engine coolant

× : Valve closed 

★ : ATF



<Engine coolant temperature: 75°C or less>

Engine coolant flows through the heater only.

<Engine coolant temperature: 75 – 85°C>

Engine coolant flows through the heater and the ATF warmer.

<Engine coolant temperature: 85°C or more>

Engine coolant flows through all the sections. AC403006AD

The ATF warmer (ATF cooler) is adopted for the models with 4A9 engine. (the ATF cooler incorporating the radiator is not adopted)

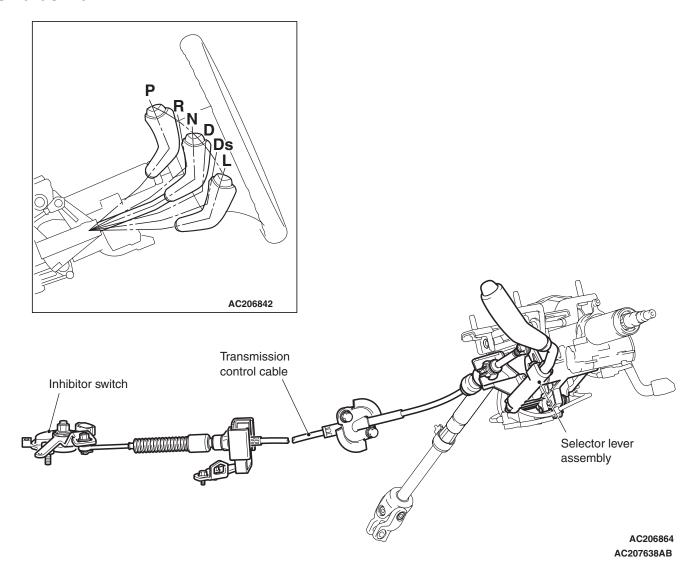
At the start of running, the temperature of the engine coolant rises earlier than that of the ATF. The ATF warmer utilizes this characteristic to raise the ATF temperature as early as possible to an appropriate level (70 -80 °C). It also controls fluid temperature

stably and reduces ATF agitation resistance to improve fuel consumption ratio.

In addition, a thermo-valve has been adopted to restrict the engine coolant supply to the ATF warmer (ATF cooler) until the engine coolant temperature reaches the appropriate temperature when low temperature start in winter, giving the priority to the heating performance.

### **GEARSHIFT CONTROL**

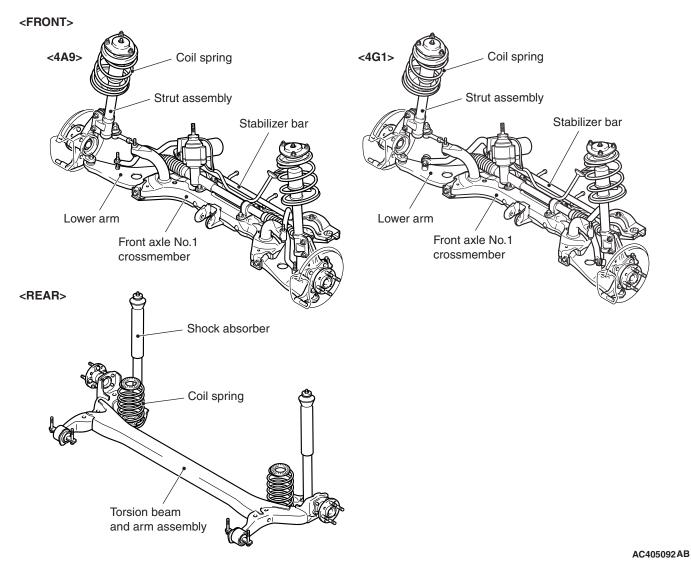
#### **Smart shift CVT**



- A smart shift type selector lever has been adopted in order to facilitate walkthrough between the seats.
- A gun grip type selector lever knob has been adopted for better operation and easier visual recognition of the switches arranged in the centre panel.
- The selector lever assembly has been a single unit made by aluminium die casting for better accuracy and fewer parts, resulting in the lightweight and compact structure.
- The selector lever has been designed to be compact and appropriately configured not to interfere with the energy absorbing mechanism on the steering column upon impact of the vehicle.
- In order to prevent abrupt start by erroneous operation of selector lever, a CVT erroneous operation prevention mechanism (the shiftlock mechanism and key interlock mechanism) has been adopted.

#### **SUSPENSION**

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 The MacPherson Strut suspension with compatible characteristics of high rigidity and light weight has been adopted for the front suspension to realise sufficient driving comfort.  H-shaped torsion beam type suspension has been introduced for the rear suspension. This suspension has large suspension stroke and provides sufficient driving comfort. With its compact design, specious interior space has been reserved.

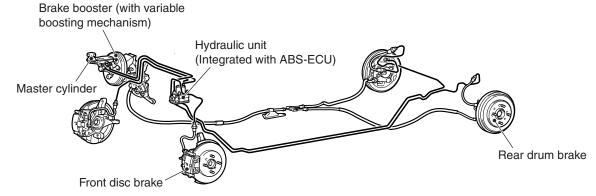
#### **BRAKE**

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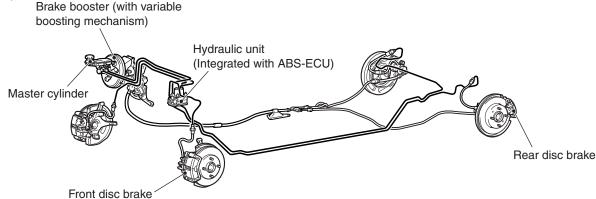
#### SERVICE BRAKE

Brake system with high reliability and durability have achieved distinguished braking performance.

<Front disc, Rear drum>



<Front disc, Rear disc>



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#### BRAKING PERFORMANCE

- Brake booster with 9-inch variable amplification ratio mechanism by which greater braking force can be obtained with a less pedal pressure has been installed (with brake assist function).
- 14-inch disc brake is installed on the front wheels.<LS, VR>
- 15-inch disc brake is installed on the front wheels.
   VR-X, RALLIART Version-R>
- 8-inch leading trailing type drum brake is installed on the rear wheels.<LS, VR>
- 14-inch disc brake is installed on the rear wheels.
   VR-X, RALLIART Version-R>

#### **STABILITY**

 4-wheel anti-skid braking system (4ABS) is adopted to prevent slipping caused by the vehicle wheels locking up, in order to maintain appropriate braking distance, and also to maintain vehicle stability and steering function.

- Electronic brake-force distribution (EBD) is adopted to maintain the maximum amount of rear braking force even when the vehicle's load is varied.
- Diagonal split (X-type) brake fluid line is adopted.
- Ventilated discs have been adopted to front brakes to improve anti-fading performance.
- A brake pedal retraction suppression structure that restrains the retraction of the brake pedal and reduces the shock to the feet of the driver in the event of a frontal collision has been adopted.

#### **SERVICEABILITY**

- Diagnosis function is adopted for the ABS system in order to make inspection easier.
- For the front disc brakes, brake disc separated front hub is adapted to make removal and installation easier.
- ABS-ECU and hydraulic unit have been integrated to make them more compact and lighter.

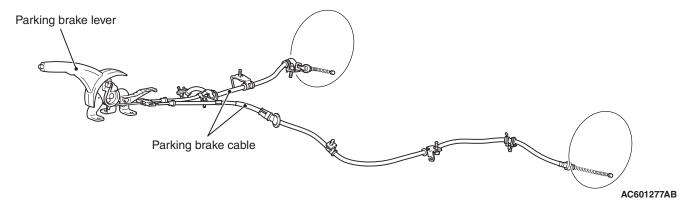
#### **BRAKE BOOSTER**

9-inch brake booster has been installed. The brake booster employs a variable amplification ratio mechanism that varies amplifications ratios so that even small pedal force can provide great breaking force.

#### **PARKING BRAKE**

### <M/T>

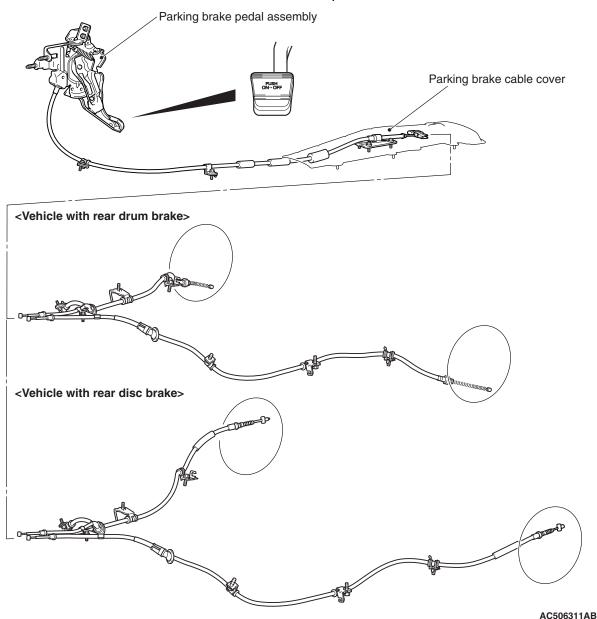
The parking brake is of a mechanical rear-wheel acting type, and its operation utilises a parking brake lever.



#### <CVT>

Employment of the parking brake pedal clears front centre space to allow a walk through design. PUSH-ON/PUSH-RELEASE type pedal has been installed for easier operation.

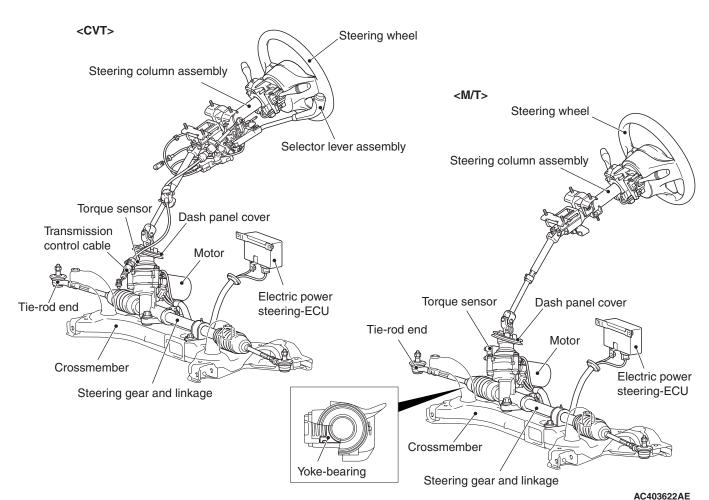
The parking brake pedal retreat suppression mechanism that restraints the retraction of the brake pedal during collision has been adopted in order to reduce the shock to the driver's feet. The mechanism of the parking brake pedal is basically the same as that of the brake pedal.



NOTE: For more information about brake pedal retreat suppression mechanism, refer to GROUP 35A, Brake Pedal P.35A-6.

#### **STEERING**





Pinion-driven electric power steering system (ESP\*) with further improvements has been adopted. EPS\* has been improved and EPS-ECU has been additionally equipped with the return control logic, resulting in superior steering wheel return control and better steering feel equal to or better than that for other vehicles with hydraulic power steering.

NOTE: \*EPS: Electronic Control Power Steering
For the models with turbo-charger, the quick steering
gear ratio and turbo-tuned assist characteristics
increase sporty taste.

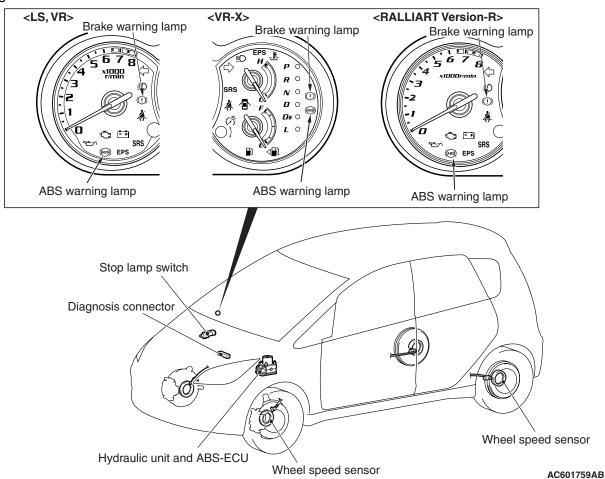
#### **ACTIVE SAFETY**

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#### **ANTI-SKID BRAKE SYSTEM (ABS)**

The ABS ensures directional stability and controllability during hard braking.

For vehicles with this type of ABS, 4 sensors are installed on front and rear wheels allowing independent left and right control.



#### CONSTRUCTION DIAGRAM

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.
- Magnetic encoder for wheel speed detection has been installed as a sensing device instead of the rotor.

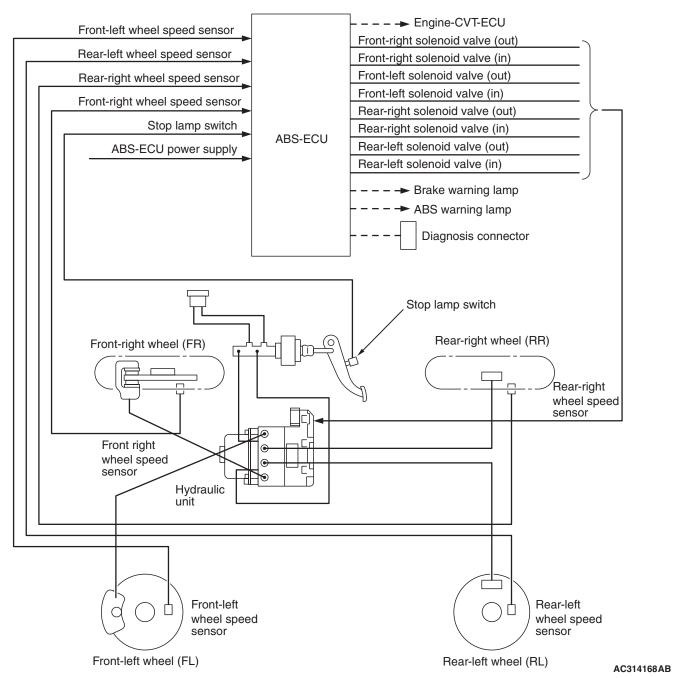
For wiring harness saving and secure data communication, CAN\* bus has been adopted as a tool of communication with another ECU.

NOTE: \*: For more information about CAN (Controller Area Network), refer to GROUP 54C, General Information P.54C-2.

## ELECTRONIC BRAKE FORCE DISTRIBU-TION SYSTEM (EBD) CONTROL

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.

#### SYSTEM CONFIGURATION DIAGRAM



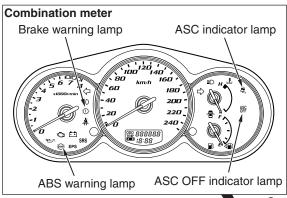
The system has the following features:

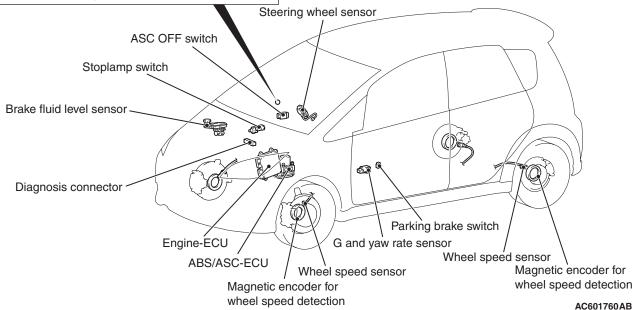
 Because the system provides the optimum rear wheel braking force regardless of vehicle load condition and the condition of the road surface, the system reduces the required pedal depression force, particularly when the vehicle is heavily loaded or driven on road surfaces with high frictional coefficients.

- Because the duty placed on the front brakes is reduced, the increase in pad temperature can be controlled during brakes application to improve the wear resistance characteristics of the pad.
- Control valves such as the proportioning valve are not required.

## ACTIVE STABILITY CONTROL SYSYEM (ASC) <RALLIART Version-R>

The active stability control system (ASC) has been installed to the M/T vehicle.



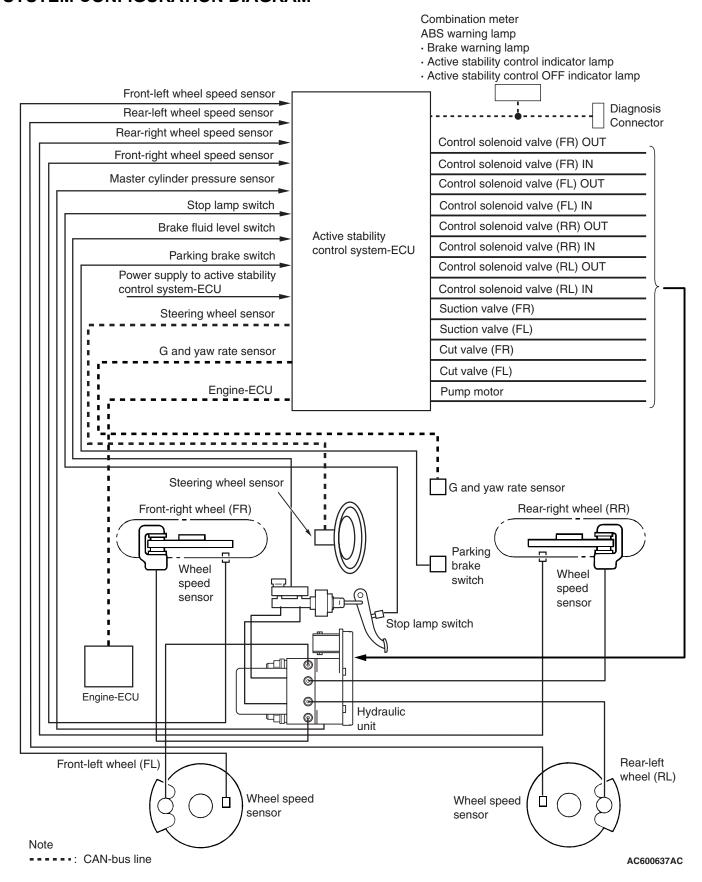


- The active stability control system (ASC) has the stability control and the traction control (TCL) functions. By the integrated control with the anti-lock brake system, the system stabilizes the vehicle attitude and at the same time secures the driving force.
- When the stability control function determines that the vehicle is in a dangerous condition, it reduces the engine output and applies brake force to four wheels independently to control the vehicle behaviour, avoiding the critical state.
- The traction control (TCL) function prevents the driving wheel slip on a slippery road surface, ensuring easy startup, and at the same time, secures proper driving force and improves steering performance during cornering acceleration.
- Fail-safe function assures the security.
- Serviceability improvement
- For wiring harness saving and secure data communication, the CAN<sup>\*</sup> communication has been adopted as a tool of communication with another ECU.

#### NOTE:

- \*For more information about CAN (Controller Area Network), refer to GROUP 54C P.54C-2.
- ABS and ASC are controlled by ASC-ECU.

#### SYSTEM CONFIGURATION DIAGRAM

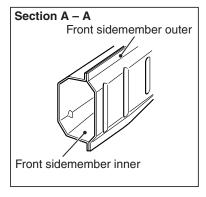


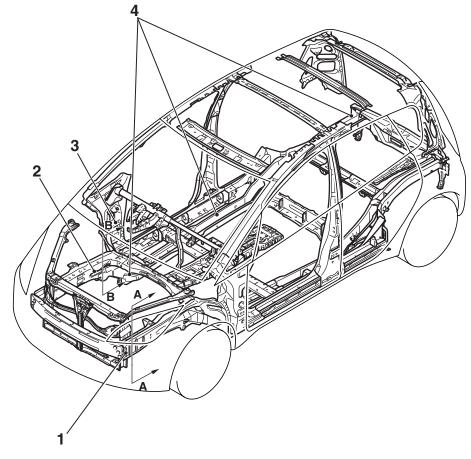
#### **PASSIVE SAFETY**

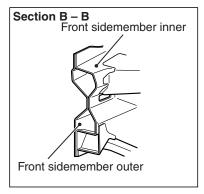
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### **IMPACT SAFETY BODY, RISE\***

NOTE: RISE\*: Reinforced Impact Safety Evolution
The front and rear structures to absorb high energy,
and the highly tough cabin structure reduce the risk
of passenger injuries at front-, rear-, and side-impact
collisions, secure the space for life protection, and
facilitate rescuing passengers.







- 1. The front side of the front sidemember, for which octagonal section structure is adopted, has been enlarged for improved rigidity.
- 2. The rear side of the front sidemember, for which 8-shape cross section structure is adopted, has been enlarged for improved rigidity.
- The dash side brace has been manufactured as an unit in order to strengthen the joint between the front sidemember and the front pillar, increasing the rigidity of the entire body.

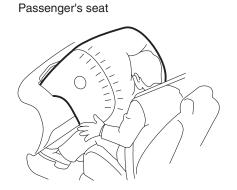
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4. The installation position of the steering gearbox has been lowered, and the sidemember from the front to the rear has been straightened in order to improve rigidity of the entire body.

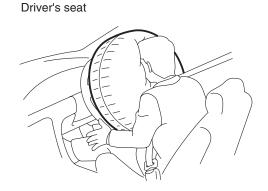
## SUPPLEMENTAL RESTRAINT SYSTEM (SRS\*)

NOTE: \*SRS: Supplemental Restraint System
The SRS is designed to supplement the front seat
belts. It eliminates or reduces injury to the front passenger(s) by deploying air bag(s) in case of a
head-on collision.

#### DRIVER'S SEAT/PASSENGER'S SEAT SRS AIR BAG



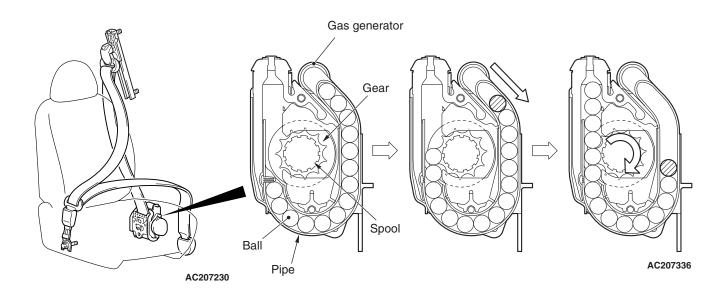
Driver's and passenger's SRS air bags have been installed to all the vehicles as standard to soften blows to the front passengers' head and chest areas



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during a frontal collision, increasing safety against an accident with a frontal collision.

#### **SEAT BELT WITH PRE-TENSIONER**

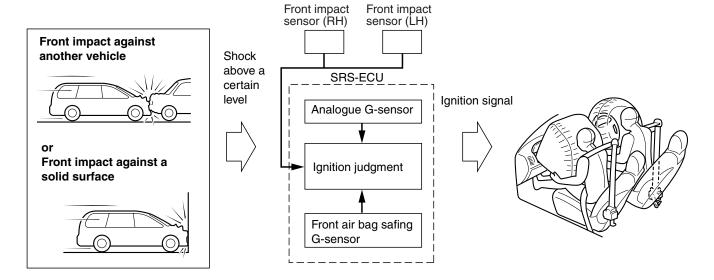


AC208129 AC

The seatbelt incorporating the pre-tensioner automatically winds the seatbelt upon front impact to reduce forward shifting of the passenger. Upon front impact the pre-tensioner ignites the gas generator and emits gas with the SRS-ECU signal when the front impact sensor, attached to the front of

the body, detects an impact that exceeds the permissible limit. By this gas pressure, a ball moves in the pipe and rotates the gear. This gear rotation operates the spool in the direction of retracting the belt, and the webbing is retracted.

#### SCHEMATIC DIAGRAM



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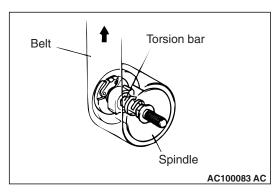
In case of a frontal collision, if the front impact sensor in the engine compartment, the analogue G-sensor in the SRS-ECU and the front air bag safing sensor simultaneously detect an impact that exceed a certain threshold (turn ON), the SRS-ECU sends an ignition signal to the air bag modules (squibs) and seat belt with pre-tensioners (squibs) on the driver and passenger sides, thus inflating the air bags and operating the seat belt with pre-tensioners.

## SEAT BELT RETRACTOR WITH FORCE LIMITER

The driver's/front passenger's seat belt retractor has been equipped with a force limiter. The force limiter is a device which operates when a predetermined force is applied, and limits the force.

#### **OPERATION**

 If collision energy is transmitted to the seat belt, the ELR mechanism will operate to lock the seat belt.



2. Then, if the energy increases to a predetermined value, the torsion bar will be distorted. As the spindle rotates together with the torsion bar, the

seat belt webbing is pulled out, reducing the impact against the occupants.

## REAR SEAT BELT WITH CHILD SEAT FIX-ING MECHANISM (ALR\*)

The child seat fixing mechanism has been adopted to easily and securely fix the child seat that is not compatible with ISO FIX.

NOTE: \*ALR: Automatic Locking Retractor

## STEERING SHAFT AND STEERING COL-UMN

The impact absorption mechanism in combination of retractable steering shaft and steering column disengagement mechanism has been adopted to alleviate the impact from the steering wheel to the driver.

## BRAKE PEDAL AND PARKING BRAKE PEDAL

The brake pedal backward movement restraint mechanism to restrain the backward movement of the brake pedal to the minimum at the time of frontal collision has been adopted so that the impact to the lower limbs of the driver can be alleviated.

## CHILD SEAT FIXING BAR COMPATIBLE WITH ISO FIX\*

The anchor bar has been equipped as standard for easily and securely fixing the child seat compatible with ISO FIX.

NOTE: \*ISO FIX: ISO (International Organization for Standardization) complied child seat fixing method

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### POWER WINDOW WITH SAFETY MECHA-NISM

The power window with safety mechanism has been adopted to automatically roll down and stop the door window glass as soon as the occurrence of jamming is detected at the time of rolling up the door window glass.

#### SUNROOF WITH SAFETY MECHANISM

The sunroof with safety mechanism has been adopted so that the roof lid glass can move in the reverse direction and stop when application of external force hinders the movement during the sliding to close or tilt down operation.

#### **EQUIPMENTS**

#### **IMMOBILIZER SYSTEM**

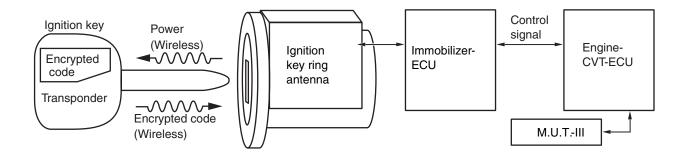
#### TRIMS AND HEADLINING

The head impact absorption structure has been adopted for the pillar trim, quarter trim, and headlining so that impact towards the head of a passenger can be reduced.

#### OTHER SAFETY FEATURES

- 3-point ELR seat belts
- Child-protection rear door locks
- Front fog lamps <COLT: Optional>

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All models are equipped with the engine immobilizer system as standard. The engine immobilizer system prevents the engine from starting and immobilizes the vehicle if a key other than the key registered for

that vehicle is used in an attempt to start the engine after forced entry. The engine immobilizer system consists of the ignition key, key ring antenna, immobilizer-ECU, and engine-CVT-ECU.

#### **ENVIRONMENTAL PROTECTION**

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

#### **IMPROVEMENT ON RECYCLING EFFICIENCY**

Classification	Main Components
Components made of recycled materials	Chip materials produced during manufacturing process has been reused as the following components: Door inside handle, bumper, radiator grille, instrument panel, door trims, or floor padding.
	Waste materials produced by other industries have been reused as the following components: Engine oil level gauge, air filter casing, and sound absorbing materials for dash panel
Components made of materials which	Thermoplastic resin has been utilised as the following components: Inside door handle, bumper, radiator grille, instrument panel, door trim
can be easily recycled	Thermoplastic resin has been utilised as the following components: Vacuum hose for engine control, air intake hose, hood weather strip, tailgate opening weather strip

#### REDUCTION OF MATERIAL BURDEN ON ENVIRONMENT

Item	Main Components
Elimination of environmental burden materials	Lead-free materials have been utilised as the following components: Radiator, fuel tank, power steering oil pressure hose, electrodeposition paint for body, glass ceramic print, heater core, battery terminals, wiring harness
	Non-asbestos material has been used for engine gaskets.
	PVC(polyvinyl chloride)-free materials have been used for the waterproofing film.
Prevention of ozone depletion	Air conditioner filled with new refrigerant (HFC 134a) has been installed.
Prevention of air pollution	Employment of a metal cylinder head gasket reduces the volume of incomplete combustion generated between the cylinder block and cylinder head, and suppresses the level of unburned hydrocarbon (HC).

#### SERVICEABILITY AND RELIABILITY

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## MULTI USE TESTER-III (M.U.T.-III) SUB ASSEMBLY

Comprehensive improvements have been made to the M.U.T.-II, a tester for diagnosing problems with the electronic control system. For easier servicing, the newly developed M.U.T.-III has greatly improved functions and is much easier to use. The M.U.T.-III expands the functions of the M.U.T.-II in the following ways:

- 1. CAN\* bus diagnosis
  - Auto diagnosis function for the CAN communications bus line is added.

NOTE: \*CAN: Controller Area Network (for further details, refer to GROUP 54C P.54C-2).

#### IMPROVED SERVICEABILITY

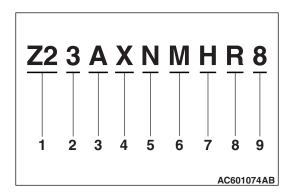
- Employment of an automatic hydraulic timing belt tensioner offers timing belt reliability, reduced operating noise, and better serviceability. <4G1>
- Wiring harness section of the crank angle sensor has been moulded integrally with the timing belt cover, improving serviceability and reliability.
   <4G1>
- Due to the adoption of the timing chain and the timing chain tensioner, maintenance-free and reliability have been improved. <4A9>
- Since adoption of unvolatile memory (EEPROM\*)
  helps the learned value not to be initialised when
  the battery terminal or connector of the control
  unit is disconnected, maintainability can be
  improved.
- NOTE: \*EEPROM: Electrical Erasable Programmable ROM (information to be memorised can be electronically written into and erased from ROM)
- Since the adoption of electric power steering makes hydraulic pipes and oil pumps unnecessary, maintainability can be improved.
- Employment of operative A/C piping layout and refrigerant leak detection system enhances serviceability.

## **VEHICLE IDENTIFICATION**

**MODELS** 

Model c	ode	Price class	Engine model	Transmission model	Fuel supply system
Z23A	XNMHR8	LS	4A91 DOHC MIVEC	F5MGA (5-speed M/T, floor	MPI
	XNXHR8	VR-X	(1,499 mL)	shift)	
	XSMHR8	LS		F1C1A (INVECS-III CVT, smart shift)	
	XSXHR8	VR-X			
Z27A	XNGFR8	RALLIART Version-R	4G15 DOHC MIVEC with Intercooler Turbocharger (1,468 mL)	F5MGB (5-speed M/T, floor shift)	

## **MODEL CODE**



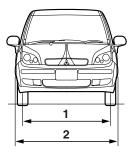
No.	Item		Content	
1	Development	Z2	MITSUBISHI COLT	
2	Engine type	3	1,499 mL petrol engine (4A91)	
		7	1,468 mL petrol engine (4G15)	

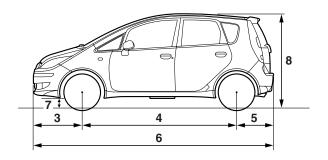
No.	Item		Content
3	Sort	Α	Passenger car
4	Body style	Х	4-door hatchback
5	Transmission	N	Floor shift M/T
	type	S	Smart shift CVT
6	Trim level	G	RALLIART Version-R
		М	LS
		Χ	VR-X
7	Specification	F	DOHC-MPI-MIVEC with
	engine feature		Intercooler Turbocharger
		Н	DOHC-MPI-MIVEC
8	Steering wheel	R	Right hand drive
	location		
9	Destination	8	For Australia and New
			Zealand

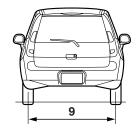
## **MAJOR SPECIFICATIONS**

<CVT>

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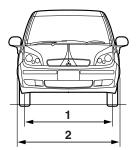
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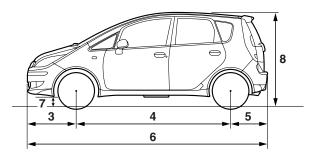
Item			Z23A		
			XSMHR8	XSXHR8	
			LS	VR-X	
Vehicle dimensions mm	Front track	1	1,460		
	Overall width	2	1,680		
	Front overhang	3	790		
	Wheel base	4	2,500		
	Rear overhang	5	595		
	Overall length	6	3,885		
	Ground clearance (unladen)	7	150		
	Overall height (unladen)	8	1,550		
	Rear track	9	1,445		
Vehicle weight kg	Kerb weight	L	1,050	1,065	
	Max. gross vehicle weight		1,490	1	
	Max. axle weight rating-front		810		
	Max. axle weight rating-rear		700		
Seating capacity			5		
Engine	Model code		4A91		
	Total displacement mL		1,499		
Transmission	Model code		F1C1A		
	Туре		Smart shift CVT		
Fuel system	Fuel supply system		MPI		

## GENERAL MAJOR SPECIFICATIONS

## <M/T>

#### M2000030000848







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Item			Z23A		Z27A	
			XNMHR8	XNXHR8	XNGFR8	
			LS	VR-X	RALLIART Version-R	
Vehicle dimensions	Front track	1	1,460		1,465	
mm	Overall width	2	1,680		1,695	
	Front overhang	3	790		815	
	Wheel base	4	2,500			
	Rear overhang	5	595		610	
	Overall length	6	3,885		3,925	
	Ground clearance (unladen)	7	150			
	Overall height (unladen)	8	1,550			
	Rear track	9	1,445		1,450	
Vehicle weight kg	Kerb weight		1,020	1,035	1,130	
	Max. gross vehicle weight		1,460		1,470	
	Max. axle weight rating-front		780		850	
	Max. axle weight rating-rear		700		640	
Seating capacity			5		4	
Engine	Model code		4A91		4G15 (with intercooler, turbocharger)	
	Total displacement mL		1,499		1,468	
Transmission	Model code		F5MGA		F5MGB	
	Туре		Floor shift M/T			
Fuel system	Fuel supply system	MPI				