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TECHNICAL INFORMATION MANUAL

LANCER EVOLUTION-IV EVOLUTION-V



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LANCER EVOLUTION-IV EVOLUTION-V

TECHNICAL INFORMATION MANUAL

FOREWORD

This manual was produced in accordance with vehicle specifications correct in July 1998. Owing to design revisions, the specifications of later vehicles may differ from those shown in this manual. Figures taken from registration documents are given in metric units only. All other figures are given in SI units with metric units in brackets.

July 1998

RALLIART INC.

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GENERAL

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EXTERNAL VIEW

LANCER EVOLUTION-V GSR



MODEL LINEUP

<LANCER EVOLUTION-IV>

Model	Variant	New for MY97	Grade	Engine model	Transmission model	Fuel system	
E-CN9A	SNDF	•	RS	4G63 (2.0-liter, DOHC,		Electronically controlled	
	SNGF	•	GSR	and intercooler)	(400, 5007)	system	

<LANCER EVOLUTION-V>

Model	Variant	New for MY98	Grade	Engine model	Transmission model	Fuel system
GF-CP9A	SNDF	•	RS	4G63 (2.0-liter, DOHC,	W5M51	MPI
	SNGF	•	GSR	and intercooler)	(400, 5007)	

Applicable Model and Production Numbers

E-CN9A: CN9A-0100001 and the following GF-CP9A: CP9A-0000001 and the following

MODEL AND VARIANT CODES

С	Ρ	9	Α	S	Ν	G	F
Т	Τ	Τ	Τ	Τ	Τ	Τ	Τ
1	2	3	4	5	6	7	8

No.	. Items		Description		
1	Car family series	С	LANCER		
2	Vehicle type	N	4-door; 4WD (wheelbase: 2,510 mm)		
		Р	4-door; 4WD (wheelbase: 2,510 mm, wide treads)		
3	Engine type	9	2,000 cc (4G63)		
4	Sort	А	Passenger car		
5	Body type	S	4-door sedan (Lancer)		
6	Transmission type	N	5M/T		
7	Equipment class	D	EVOLUTION-IV•V RS		
		G	EVOLUTION-IV•V GSR		
8	Engine specification	F	DOHC; MPI; turbocharger; intercooler		

AIMS OF DEVELOPMENT

The Evolution-IV was developed to offer even better performance than earlier Evolution generations and to enable Mitsubishi Motors to continue displaying its technological prowess in the World Rally Championship and other motorsports competitions.

The Evolution-V is based upon the Evolution-IV. With wider treads and 17-inch wheels, it offers enhanced handling stability and acceleration response. Plus, it features revised bumpers and aerodynamic body parts for an enhanced exterior design.

TECHNICAL FEATURES

EXTERIOR

<EVOLUTION-IV>

- (1) Aluminum hood
- (2) Integrated radiator grille and front bumper
- (3) Large rear spoiler (incorporating high-mount stop lamp) plus front, side, and rear airdams
- (4) Newly designed 16-inch aluminum wheels with 205/50R16 tires <standard on GSR; optional on RS>
- (5) Reflector-type foglamps <standard on GSR; optional on RS>



<EVOLUTION-V>

- (1) Wide front fenders and rear fender garnishes to match wider treads
- (2) Newly designed bumpers and aerodynamic body parts
- (3) Rear spoiler with adjustable attack angle
- (4) 17-inch wheels (225/45Z R17 + 7 1/2J J X 17) <standard on GSR; optional on RS>
- (5) Newly shaped exterior lamps (same as those of non-EVOLUTION MY98 LANCERS)





INTERIOR

- (1) Momo steering wheel (incorporates airbag in GSR)
- (2) Recaro front seats <GSR>

VEHICLE DIMENSIONS <EVOLUTION-IV>



0050111

No.	Item		EVOLUTION-IV	EVOLUTION-V
(1)	Overall length (mm)		4,330	4,345, 4,350* ¹
(2)) Overall width (mm)		1,690	1,770
(3)	Overall height (mm)		1,415	1,415
(4)) Wheelbase (mm)		2,510	2,510
(5)	Tread	Front	1,470	1,510* ² , 1,495* ³
		Rear	1,470	1,505 ^{*2} , 1,490 ^{*3}

NOTE:

*1: With front airdam

*2: With 17-inch wheels

*3: With 15-inch or 16-inch wheels

ENGINE PERFORMANCE <EVOLUTION-IV>

The engine is based on the 4G63 DOHC turbocharged engine used in the EVOLUTION-III. For higher power and durability, it incorporates the improvements shown below.

Improvements (newly adapted items only)	Aim			
improvements (newly adopted items only)	Higher performance	Higher reliability	Lower weight	
High-rigidity forged pistons	_	0	_	
High-rigidity connecting rods	-	0	-	
Steel flywheel	0	-	0	
Twin-scroll turbocharger	0	-	-	
Newly designed air flow sensor	0	-	-	
Secondary air system	0	-	-	
High-capacity water pump	_	0	-	

IMPROVED ENGINE PERFORMANCE <EVOLUTION-V>

Revision of the turbocharger and other items has yielded the improvement in engine performance shown below.

Item	EVOLUTION-IV	EVOLUTION-V	
Engine	4G63-DOHC-I/C, T/C	\leftarrow	
Max. output (PS/rpm)	280/6,500	←	
Max. torque (kgf·m/rpm)	36.0/3,000	38.0/3,000	

HANDLING STABILITY < EVOLUTION-IV>

Suspension System

The front suspension mechanism has the same MacPherson-strut design as that on the non-Evolution Lancers. In light of the Evolution-IV's higher performance, however, it has been optimized for greater lateral rigidity and roll stiffness. Also, the wheel alignment has been optimized. Together, these revisions enhance handling stability.

The rear suspension mechanism has a new multi-link design that was developed specifically for motorsports use. With a totally optimized structure and geometry, it realizes significantly better handling stability on various road surfaces than was possible with the previous design.



Active Yaw Control (AYC) System

Mitsubishi Motors' AYC system actively controls the difference in driving force between the left and right wheels, thereby adjusting the vehicle's yaw moment such that the tires perform to their maximum potential. As a result, the vehicle's cornering performance and safety are enhanced under a wide range of operating conditions.



Benefits of Control



IMPROVED HANDLING STABILITY AND ACCELERATION RESPONSE < EVOLUTION-V>

Handling stability and acceleration response are improved by the revisions shown below.

ltom	Revision			Applicable model		
nem		Revision	GSR	RS		
	Front suspension camber	Front cross member bar added	0	∆*		
	stiffness increased	Inverted front struts adopted	0	0		
	Front suspension wheel alignment improved	Steering gearbox mounting position lowered by approx. 10 mm	0	0		
	Front suspension re- bound stroke increased	Front strut rebound stroke increased by approx. 20 mm	0	0		
Handling stability	Wider treads	Front suspension lower arms lengthened		0		
		Body mounting positions of rear suspension upper and lower arms revised	0	0		
	Lateral rigidity increased	y increased Body mountings of rear differential support member stiffened		0		
		Toe control bar added	-	0		
	Tire performance increased	Front suspension camber adjustment mecha- nism adopted	0	0		
Acceleration response		17-inch wheels (225/45Z R17 + 7 1/2J J X 17) fitted	0	Δ		
	Suspension tuning	Front coil spring specifications revised	0	0		
	optimized	Rear shock absorber specifications revised	0	0		
	Engine roll decreased	Center member rigidly mounted	0	0		
		Diameter of engine rear roll stopper insula- tors reduced	0	0		

NOTE:

(1) O: Standard; \triangle : Maker option (2) *: Vehicles with 17-inch wheels

IMPROVED BRAKING PERFORMANCE < EVOLUTION-V>

- (1) Vehicles with 17-inch wheels have Brembo disc brakes (front: four-piston; rear: two-piston) with larger discs. This equipment enhances braking performance and the pedal feeling.
- (2) The antilock braking system (ABS) is supplemented by a lateral G sensor to enhance control during steering operations.



Brembo Two-Piston Rear Disc Brake



EVOLUTION-IV OVERVIEW

EVOLU	TION-IV	Base vehicle (non-EVOLUTION LANCER)		
E-CN9A	SNDF SNGF	LANCER 1800 GSR	E-CM5A	SNGF

The EVOLUTION-IV differs from the base vehicle (non-EVOLUTION LANCER) mainly in the areas shown below. For items not shown below, refer to Group 7, "Equipment".

Group	Main differences in EVOLUTION-IV from base vehicle	Reference page
Engine	 4G63 DOHC turbocharged engine Air-cooled engine oil cooler Twin-scroll turbocharger Intercooler spray system Secondary air system (enhances acceleration responsiveness after deceleration) 	1-2 1-6 1-10 1-8 1-22
Power train	 W5M51 manual transmission Rear mechanical limited-slip differential (vehicles without AYC system) AYC system 	2-3 2-7 2-9
Drive-control components	 Front strut tower bars New multi-link rear suspension 16-inch wheels and tires Power steering fluid cooler Two-piston front ventilated disc brakes Drum-in-disc rear ventilated disc brakes 	3-2 3-7 3-13 3-16 3-17 3-17
Body	 Aluminum hood Front end cross bar <rs></rs> 	4-3 4-3
Exterior	 Integrated radiator grille and bumper Large rear spoiler plus front, rear, and side airdams 	5-2 5-2
Interior	Recaro front seats with integrated headrests <gsr></gsr>	6-2
Equipment	PIAA foglamps <gsr></gsr>	7-2

EVOLUTION-V OVERVIEW

EVOLUTION-V		EVOLUTION-IV			
GF-CP9A	SNDF	RS	E-CN9A	SNDF	RS
	SNGF	GSR		SNGF	GSR

The EVOLUTION-V differs from the EVOLUTION-IV mainly in the areas shown below. For items not shown below, refer to Group 7, "Equipment".

Group	Main differences in EVOLUTION-V from EVOLUTION-IV	Reference page
Engine	 Engine performance improved (higher torque) Cooling performance of engine oil cooler improved (increased size) Cooling performance of radiator assembly improved Exhaust pipe temperature sensor and heat protectors eliminated in accordance with revision of safety regulations Diameter of engine rear roll stopper insulators revised and center roll member rigidly mounted to reduce engine roll 	1-3 1-6 1-7 1-11 1-12
Power train	 Clutch cover load setting increased to match increased engine performance Propeller shafts revised <rs></rs> Drive shafts lengthened in accordance with increased treads Rear differential reduction ratio revised <rs></rs> Rear differential support member rigidly mounted to improve torsional rigidity of body <rs></rs> 	2-2 2-4 2-5, 6 2-8 2-8
Drive-control equipment	 Front and rear treads widened Front cross member bar added to increase lateral rigidity of cross member vehicles with 17-inch wheels> Inverted design adopted to increase flexural rigidity of front struts Front camber adjustment mechanism added Front lower arms lengthened in accordance with wider tread Toe control bar added to increase rear lateral rigidity <rs></rs> Body mounting positions of rear suspension upper and lower arms revised in accordance with wider tread Steering gearbox mounting position lowered by approx. 10 mm to optimize front wheel alignment 17-inch tires (225/45Z R17 + 7 1/2J J X 17) fitted for improved tire performance <standard gsr;="" maker="" on="" option="" rs=""></standard> Brembo brake calipers with larger brake discs <vehicles 17-inch="" wheels="" with=""></vehicles> 	 3-2 3-6 3-5 3-8 3-17
Body	 Aluminum front wide fenders fitted to match wider tread and reduce weight Rear end cross bar fitted to increase rigidity of body's rear end <rs></rs> Front end cross bar eliminated <rs></rs> 	4-2 4-3 —
Exterior	 Shapes of bumpers and aerodynamic body parts revised Rear fender garnishes fitted to match wider tread Rear spoiler with adjustable attack angle fitted 	5-3 5-3 5-4
Interior	 Newly designed Recaro front seats <gsr></gsr> Sodium-azide-free airbag inflator <gsr></gsr> 	6-2 6-2

ENGINE

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ENGINE <4G6>

OVERVIEW

<EVOLUTION-IV>

The engine of the EVOLUTION-IV is based on the 4G63 DOHC turbocharged unit used in the EVOLUTION-III. Its right/left alignment has been reversed and its structure simplified and optimized. In addition, it incorporates the revisions shown below for increased output and durability.

	Aim (◯: Newly adopted item; ●: Item already adopted on other engines)				
Revision	Higher perfor- mance	Quieter operation	Cleaner exhaust emissions	Higher reliability	Lower weight
Revised engine mounting alignment		•			
Serpentine-belt-driven auxiliary devices				•	
Three-layer cylinder head metal gasket			•	•	
High-strength forged pistons				0	
High-strength connecting rods				0	
Steel flywheel	0				0
High-capacity water pump				0	
Straight-port intake manifold	•				
Twin-scroll turbocharger	0				
Throttle body with new type of ISC system	•			•	•
New type of compact throttle position sensor				•	•
New type of air flow sensor	0				
Secondary air system	0				
Low-noise fan alternator		•			
Crankshaft mounted crank angle sensor	•		•	•	
Plug-top ignition coils				•	

MAJOR SPECIFICATIONS < EVOLUTION-IV>

Items	4G63-DOHC-T/C	
Displacement (cc)	1,997	
Cylinder bore $ imes$ stroke (mm)	85.0 imes 88.0	
Compression ratio	8.8	
Valve mechanism	DOHC 16-valve	
Fuel	Unleaded premium gasoline	
Max. output (PS/rpm)	280/6,500	
Max. torque (kgf·m/rpm)	36.0/3,000	
Fuel supply	Electronically controlled MPI	
Ignition timing	Electronically controlled	

OVERVIEW

<EVOLUTION-V>

The engine of the EVOLUTION-V is based on the 4G63 DOHC turbocharged unit used in the EVOLUTION-IV. It incorporates the revisions shown below for increased output and durability.

Revision	Aim (◯: Newly adopted item; ●: Item already adopted on other engines)			
	Higher performance	Reduced exhaust emissions	Higher reliability	
Crankshaft pins induction hardened			0	
Three-piece crankshaft thrust bearings			•	
Lighter pistons	0		0	
Increased turbocharger nozzle area	0			
Higher maximum injector flow rate (MDL510 \rightarrow MDL560)	0			
Heater added to O ₂ sensor		•		
Divided connection of positive crankcase ventilation (PCV) system to intake manifold			•	

MAJOR SPECIFICATIONS < EVOLUTION-V>

Items	4G63-DOHC-T/C	
Displacement (cc)	1,997	
Cylinder bore $ imes$ stroke (mm)	85.0 × 88.0	
Compression ratio	8.8	
Valve mechanism	DOHC 16-valve	
Fuel	Unleaded premium gasoline	
Max. output (PS/rpm)	280/6,500	
Max. torque (kgf·m/rpm)	38.0/3,000	
Fuel supply	Electronically controlled MPI	
Ignition timing	Electronically controlled	

ENGINE PERFORMANCE CURVES









MAIN UNIT

PISTONS

- (1) A revised production method enhances the pistons' fatigue strength.
- (2) The No. 1 ring grooves are alumite-treated.

<EVOLUTION-V>

Reduced weight enhances engine responsiveness.

CONNECTING RODS

Shot blasting is performed again after coining, giving the connecting rods approximately 15% more fatigue strength than the connecting rods used in the EVOLUTION-III.



FLYWHEEL

For lightness, the flywheel is made from steel instead of the earlier cast iron.

LUBRICATION SYSTEM

ENGINE OIL COOLER

<EVOLUTION-IV>

A corrugated-fin-type air-cooled engine oil cooler is utilized.



<EVOLUTION-V>

The oil cooler core has increased dimensions, and an air duct has been added to the front bumper to improve the efficiency with which the engine oil is cooled.

Specifications

Item	Specification		
	EVOLUTION-IV	EVOLUTION-V	
Туре	Drawn-cup	\leftarrow	
Core dimensions (width \times height \times depth) (mm)	200 × 100 × 32	200 × 130 × 32	
Engine oil cooler oil capacity (cc)	160	210	
Heat release (kW {kcal/h})	4.7 {4,080}	5.1 {4,380}	

COOLING SYSTEM

As compared with the EVOLUTION-IV's cooling system, the EVOLUTION-V' system incorporates the following modifications for further enhancement of cooling performance:

- Revised radiator cap value opening pressure (88 kPa {0.9 kgf/cm²} \rightarrow 108 kPa {1.1 kgf/cm²})
- Modified radiator fan assembly
- Intercooler water spray system plus new radiator water spray system

RADIATOR FAN ASSEMBLY

For improved cooling performance, the radiator fan's shape has been modified and the motor specifications have been revised.

Specifications

Item		EVOLUTION-IV	EVOLUTION-V
Radiator fan motor	Manufacturer	Calsonic	\leftarrow
	Туре	Direct-current ferrite	\leftarrow
Rated load torque {kgf·m}) Speed (r/min) Current (A)	Rated load torque (Nm {kgf·m})	LOW: 43.1 {4.4}	LOW: 31.4 {3.2}
		HI: 53.2 {5.4}	HI: 53.9 {5.5}
	Speed (r/min)	LOW: 1,750 ± 250	LOW: 1,900 ± 250
		HI: 2,100 ± 250	HI: 2,200 ± 250
	Current (A)	LOW: 12.0 (or lower)	LOW: 13.3 (or lower)
		HI: 15.5 (or lower)	HI: 16.7 (or lower)

<EVOLUTION-IV>



<EVOLUTION-V>



04M0056

INTERCOOLER AND INTERCOOLER WATER SPRAY SYSTEM

A large intercooler is utilized to improve cooling performance. An intercooler water spray system sprays water from the washer tank onto the intercooler's front surface to lower the intercooler's temperature. The intercooler water spray system is basically the same as that used on the EVOLUTION-III.

Construction



INTERCOOLER AND RADIATOR WATER SPRAY SYSTEM <EVOLUTION-V>

The EVOLUTION-V is provided with a new radiator water spray system in addition to the intercooler water spray system.



18M0484



WATER PUMP

The water pump's inlet diameter and impeller diameter have been increased to improve cooling performance.

INTAKE AND EXHAUST SYSTEMS



TURBOCHARGER

Low-speed performance and responsiveness are improved by a twin-scroll turbocharger with a dual passage arrangement from the exhaust manifold to the turbine.

<EVOLUTION-V>

The nozzle cross-sectional area has been increased for improved performance at mid-range and high speeds.



1-10

EVOLUTION-IV

The exhaust pipe is constructed in three parts. It has the following key features:

- Large, sound-absorbing pre-mufflers that reduce the high-frequency components of exhaust noise;
- A stainless steel main muffler that is highly resistant to corrosion;
- A heat-retaining cover on the front pipe that enhances the catalytic converter's effectiveness.

Construction



05M0083

EVOLUTION-V

- In accordance with revised safety regulations, the high temperature sensor and heat protectors have been eliminated.
- In accordance with the addition of a front cross member bar (see "Suspension" in Group 3) the front exhaust pipe has been provided with an indent to prevent interference <vehicles with 17-inch wheels>.





MOUNTING

REAR ROLL STOPPERS < EVOLUTION-V>

The insulator diameter has been reduced from ϕ 70 mm to ϕ 60 mm to reduce engine roll.

CENTER MEMBER < EVOLUTION-V>

- Rigid mounting of the center member (achieved using added spacers) decreases engine roll.
- In accordance with the addition of a front cross member bar (see "Suspension" in Group 3) a bracket has been added to the lower reinforcement to protect the heads of the front cross member bar's mounting bolts and a front cross member bar mounting nut has been added <vehicles with 17-inch wheels>.

Center Member Mounting



NOTE:

This drawing shows the front mounting. The rear mounting is similar.



FUEL SYSTEM

The fuel system is basically the same as that of the 4G63 DOHC turbocharged engine used in the EVOLUTION-III.



03S0037

CONTROL SYSTEM

The control system is based on that of the 4G63 DOHC turbocharged engine used in the EVOLUTION-III. For enhanced torque and output, it incorporates the following improvements:

- (1) A new type of air flow sensor significantly reduces air intake resistance.
- (2) A flow-limiter-type idle speed control system provides superior control over the engine's idle speed during warm-up.
- (3) The crank angle sensor is attached directly to the crankshaft to enhance accuracy.
- (4) A stick-type cam position sensor is used.
- (5) The ignition system utilizes plug-top coils with built-in power transistors for enhanced ignition performance.
- (6) An alternator control system enhances fuel efficiency while the engine is idling.
- (7) A high/low two-speed fan control relay is utilized.
- (8) The engine control relay and fuel pump control relay are located separately to enable simpler circuitry.
- (9) A secondary air system has been added to enhance acceleration response.
- (10)The ignition timing adjustment connector has been eliminated.
- (11) The air conditioner refrigerant medium pressure switch has been eliminated.

1-14



<4G63 DOHC with Turbocharger>



6FU2647



SENSORS

Air Flow Sensor (Incorporating Atmospheric Pressure Sensor)

To reduce pressure losses and thus improve performance, Mitsubishi Motors developed a new air flow sensor known as MUKAS. In contrast with a conventional sensor, which senses Kármán vortices downstream of a vortex-inducing pillar using a pressure-sensitive element, the MUKAS sensor counts Kármán vortices in a bypass passage using a hot-wire arrangement.

Pressure losses reduced by 50%	Increased sensitivity at low air flow rates enables the use of a larger air inlet. Thus, pressure losses are re- duced.
Size and weight reduced by 20%	A more condensed circuit layout and a new, compact connector en- able a significant reduction in over- all length.
Improved resistance to contamination and noise	Only a small amount of air flows through the bypass passage, so contamination is greatly reduced. Also, Kármán vortices are mea- sured digitally in accordance with the difference in signals received from left and right hot-wire arrange- ments, so the sensor is resistant to noise and to changes in the compo- nents that occur over time.





ACTUATORS

Secondary Air Control Solenoid Valve

The secondary air control valve is an ON/OFF solenoid valve. It switches the pressure applied to the secondary air valve between the intake manifold vacuum pressure and the atmospheric pressure.

When the coil is not energized, continuity exists between the X-nipple and ambient air. When the coil is energized, continuity exists between the X-nipple and Y-nipple.

Secondary Air Valve

The secondary air valve turns ON and OFF the secondary air supply by opening and closing in accordance with the vacuum pressure applied to the diaphragm chamber.

FUEL INJECTION CONTROL





IDLE SPEED CONTROL



IGNITION TIMING AND ENERGIZATION TIME CONTROL



6FU2652

POWER SUPPLY AND FUEL PUMP CONTROL



6 F U 2 6 5 3

AIR CONDITIONER RELAY CONTROL; AIR FLOW SENSOR FILTER RESET CONTROL; FUEL PRESSURE CONTROL; BOOST PRESSURE CONTROL; EXHAUST TEMPERA-TURE WARNING LAMP CONTROL

The control arrangement is the same as that used with the 4G63 DOHC turbocharged engine of the EVOLU-TION-III.

ALTERNATOR CONTROL



1FU0907

ENGINE SPEED OUTPUT

Engine speed signals are issued in synchronization with crank angle sensor signals.



6 F U 2 6 5 4

FAN MOTOR RELAY (RADIATOR FAN; AIR CONDITIONER CONDENSER FAN) CONTROL



Air conditioner switch	Engine coolant temperature (°C)	Power transistor (low-speed side)	Power transistor (high-speed side)	Radiator fan operation	Condenser fan operation
OFF	Below approx. 95	OFF	OFF	Stationary	Stationary
	Approx. 95 to 105	ON	OFF	Low speed	Low speed
	Above approx. 105	ON	ON	High speed	Low speed
ON	Below approx. 105	ON	OFF	Low speed	Low speed
	Above approx. 105	ON	ON	High speed	High speed

SECONDARY AIR CONTROL

During deceleration from a high speed, secondary air is introduced upstream of the turbocharger. This operation prevents the turbine's speed from dropping and thus enhances responsiveness when the driver next wishes to accelerate. For maximum effectiveness, secondary air is introduced into the exhaust manifold immediately downstream of each cylinder.



6FU2655

Secondary air is introduced for approximately three minutes when both of the following conditions are satisfied:

- The engine speed is 4,000 rpm or higher.
- The engine speed drops sharply after at least three seconds of full-throttle acceleration.


FUEL PUMP DELIVERY RATE CONTROL

SELF-DIAGNOSIS SYSTEM

Engine Warning Lamp (Check Engine Lamp) Control

The engine warning lamp illuminates in the event of an abnormality in any of the items shown in the following table.

Air flow sensor	Atmospheric pressure sensor
Intake temperature sensor	Knock sensor
Throttle position sensor	Injectors
Coolant temperature sensor	Ignition coils; power transistor units
Crank angle sensor	Engine ECU
Cam position sensor	

Diagnosis Function

Diagnosis items are shown in the following table.

Code No.	Diagnosis item	Main fault(s) diagnosed	Dealer mode diagnosis
12	Air flow sensor	Open/short circuit in sensor-related circuitry	No
13	Intake temperature sensor	Open/short circuit in sensor-related circuitry	No
14	Throttle position sensor	Abnormal sensor output	No
21	Coolant temperature sensor	 Open/short circuit in sensor-related circuitry Increased contact resistance in connector 	No
22	Crank angle sensor	Abnormal sensor output	No
23	Cam position sensor	Abnormal sensor output	No
24	Vehicle speed sensor	Open/short circuit in sensor circuitry	No
25	Atmospheric pressure sensor	Open/short circuit in sensor-related circuitry	No
31	Knock sensor	Abnormal sensor output	No
41	Injectors	Open/short circuit in injector-related circuitry	No
44	Ignition coils; power transistor units	Abnormality in ignition system (failure in one out of two coils)	No
64	Alternator FR terminal	Open circuit in sensor circuitry	No
_	Normal state	—	_

Service Data Output

Service data output items are shown in the following table.

Item No.	Service data item	Unit
11	O ₂ sensor	mV
12	Air flow sensor output	Hz
13	Intake temperature sensor output	°C
14	Throttle position sensor output	mV
16	Battery voltage	V
18	Cranking signal (ignition switch ST terminal)	ON-OFF
21	Coolant temperature sensor output	°C
22	Crank angle sensor output	RPM
25	Atmospheric pressure sensor output	kPa
26	Idle switch	ON-OFF
27	Power steering fluid pressure switch	ON-OFF
28	Air conditioner switch	ON-OFF
41	Injector energization time	ms
44	Ignition advance angle	°BTDC, °ATDC
45	ISC stepper motor position	STEP
49	Air conditioner relay	ON-OFF

Actuator Tests

Actuator test items are shown in the following table.

Item No.	Actuator test item
01	No. 1 injector: OFF
02	No. 2 injector: OFF
03	No. 3 injector: OFF
04	No. 4 injector: OFF
07	Fuel pump: ON
09	Fuel pressure control valve: ON
12	Wastegate solenoid valve: ON
13	Fuel pump relay No. 2: ON (current supplied via resistor)
17*	Ignition timing: 5°BTDC
20	Radiator fan (high), air conditioner condenser fan (high): high-speed operation
21	Radiator fan (low), air conditioner condenser fan (low): low-speed operation
30*	ISC servo: locked in reference step during SAS adjustment

*: Continues for 27 minutes unless cancelled by depression of clear key.

EXHAUST EMISSION CONTROL SYSTEM

System Diagram



POWER TRAIN

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CLUTCH

<EVOLUTION-IV>

A clutch with a pull-type diaphragm spring is utilized to enhance the disengagement characteristics and lighten the pedal action during high-speed operation.

Specifications

Drive system	4WD
Engine	4G63 DOHC-T/C
Control system	Hydraulic
Clutch disc type	Dry; single
Clutch disc size (mm)	230 × 150
Clutch cover type	Diaphragm spring (pull-type)
Clutch cover load setting (N {kgf})	7,845 {800}
Release cylinder size (mm)	20.6
Flexible flywheel	No

<EVOLUTION-V>

The EVOLUTION-V's clutch is basically the same as the EVOLUTION-IV's clutch. In light of the engine's higher torque, however, the clutch cover set load has been increased.

Specifications

Item	EVOLUTION-IV	EVOLUTION-V
Clutch cover load setting (N {kgf})	7,845 {800}	8,826 {900}

MANUAL TRANSMISSION

The W5M51 transmission has been newly adopted.

Specifications

Model		W5M51 (Normal type) W5M51 (With super cross gea			uper cross gear)
Engine		4G63 DOHC-T/C			
Туре	Forward	5-speed, con		istant mesh	
	Reverse		One-speed, c	onstant mesh	
Gear ratios	1st		2.785	(39/14)	
(numbers of teeth)	2nd		1.960	(39/20)	
	3rd	1.407 (38/27)	1.444 ((39/27)
	4th	1.031 (33/32)	1.096 (34/31)	
	5th	0.761 (32/42)	0.825 (33/40)	
	Reverse		3.416	(41/12)	
Final reduction ratio	(numbers of teeth)	4.529 (77/17)		4.875 (78/16) or 4.529 (77/17)	
Transfer	Reduction ratio (numbers of teeth)	1/3.312 (16/53)			
	Limited-slip differential	ial VCU			
Reverse synchromesh		Yes			
Speedometer gear ratio		29/36	30/36	29/36	30/36
Front limited-slip differential		Helical-gear type			

TRANSMISSION CONTROL

The transmission control mechanism is basically the same as that of the previous model. However, the gear shift lever has a shorter stroke.

PROPELLER SHAFTS

<EVOLUTION-IV>

The propeller shafts are basically the same as those of EVOLUTION-III. However, the specifications of the rear propeller shaft have been revised as shown below.

Specifications

Item	Item RS GSR EVOL			EVOLUTION-III
Туре		Three-joint; multi-part		
Length $ imes$ diameter mm	Front	676.5 × 65		
	Center	505 imes 65		
	Rear	$666.5 \times 65 (684.5 \times 65)$ 684.5×65 666.5×65		

NOTE:

- (1) The length of each propeller shaft is given as the distance between the centers of the joints.
- (2) Figures in parentheses apply to vehicles fitted with the AYC system.

<EVOLUTION-V RS>

The joint between the rear propeller shaft and the rear differential has been changed from a Löbro joint (LJ) to a Cardan universal joint.



11M0010

FRONT AXLE

To match the high-performance engine, the front axle has been revised as follows:

- Unit ball bearings are used for the wheel bearings to enhance rigidity.
- For easier maintenance, the wheel bearings are bolted onto the knuckles.
- In light of the engine's higher output, the number of hub bolts has been increased from four to five.

Configuration



<EVOLUTION-V> DRIVE SHAFTS

In accordance with the wider tread, the joint-to-joint distances (see dimension "A" in the drawing) have been increased as shown in the following table.

Item		EVOLUTION-IV	EVOLUTION-V
Joint-to-joint distance (mm) Right-hand side		418	442
	Left-hand side	348	365



REAR AXLE

To match the high-performance engine, the rear axle has been revised as follows:

- For easier maintenance, the wheel bearings are bolted onto the knuckles.
- In light of the engine's higher output, the number of hub bolts has been increased from four to five.
- On ABS-equipped vehicles, wheel speed sensor rotors are fitted on the drive shafts and wheel speed sensors are fitted on the knuckles.

Configuration



<EVOLUTION-V> DRIVE SHAFTS

(1) In accordance with the wider tread, the joint-to-joint distances (see dimension "A" in the drawing) have been increased as shown in the following table.

ltem		EVOLUTION-IV		EVOLUTION-V	
		Without AYC system	With AYC system	Without AYC system	With AYC system
Joint-to-joint distance (mm)	Right-hand side	560	435	578	453
	Left-hand side	480	425	498	443

(2) On the GSR model, the joints closer to the differential have been changed from the double-offset type (DOJ) to the tripod type (TJ). (On the RS model, tripod joints were already used.)



DIFFERENTIAL

Vehicles without the AYC system are fitted with a mechanical LSD. The LSD is basically the same as that of the EVOLUTION-III.

NOTE

For details of the LSD fitted on vehicles with the AYC system, refer to page 2-14.

Specifications

Item		Mechanical LSD	
Reduction gear type		Hypoid gears	
Reduction ratio		3.312	
Differential gear (type $ imes$ quantity)	Side gear	Straight bevel gear $ imes$ 2	
	Pinion gear	Straight bevel gear $ imes$ 4	
Number of teeth	Drive gear	53	
	Drive pinion	16	
	Side gear	16	
	Pinion gear	10	
Bearing (outside diameter \times inside di-	Side	72 × 35	
ameter) (mm)	Front	62 imes 25	
	Rear	72 imes 35	

<EVOLUTION-IV>



11M0081

<EVOLUTION-V RS>

- The differential's reduction gear ratio has been revised from 3.312 to 3.307.
- The differential support member is joined to the body without insulators, yielding a stiff joint that enhances the body's torsional rigidity. Also, the differential support member is made from cast aluminum for lightness.

<EVOLUTION-V>



AYC SYSTEM

The active yaw control (AYC) system is available with the EVOLUTION-IV <standard on GSR; optional on RS>. The system actively controls the difference in driving force between the left and right rear wheels, thereby adjusting the vehicle's yaw moment such that all four tires perform to their maximum potential. As a result, safety is enhanced for all drivers.

[World-Leading Technology]

The AYC system incorporates a torque transfer differential. Newly developed by Mitsubishi Motors, this device allows torque to be transferred between the left and right wheels as required.

[Maximized Safety]

- (1) Even when the vehicle is driven near the edge of its performance envelope, the AYC system ensures that it responds faithfully and naturally to the driver's steering and accelerator inputs. Thus, controllability is optimized at all times.
- (2) By suppressing sudden changes in vehicle behavior during acceleration and deceleration, the AYC system provides superior stability.

System Configuration



Major Components

Component		Function	Reference page
AYC-ECU		Calculates direction and magnitude of required torque transfers in accordance with data from sensors and switches, and controls hydraulic unit accordingly	2-20
		Controls diagnosis and fail-safe functions	2-22
ABS-ECU		Monitors ABS operating status	—
Throttle po:	sition sensor	Informs AYC-ECU when engine is idling	2-16
		Provides AYC-ECU with data on throttle valve opening	
AYC warnir	ng lamp	Illuminates in event of system failure (also illuminates for 1.5 se- conds when ignition switch is turned to ON position)	2-22
Stop lamp	switch	Provides AYC-ECU with data to enable evaluation of brake operat- ing status	
Longitudina	al G sensor	Provides AYC-ECU with data on vehicle's rate of longitudinal ac- celeration	2-16
Lateral G sensor		Provides AYC-ECU with data on vehicle's rate of lateral accelera- tion	2-16
Steering wl	heel sensor	Provides AYC-ECU with data on steering wheel angle	2-16
		Informs AYC-ECU when steering wheel is in straight-ahead position	
Wheel speed sensor (one on each wheel)		Provides AYC-ECU with data on wheel speed	2-16
Hydraulic	Hydraulic switch	Provides AYC-ECU with data on accumulator pressure	2-17
unit	Electric pump	Produces hydraulic pressure for clutch actuation	
	Direction control valve	Determines whether hydraulic pressure is supplied to left-hand clutch or right-hand clutch	
Proportioning valve		Controls supply of hydraulic pressure to clutches	
Electric pump relay		Supplies power to electric pump	—
Torque transfer differential		Apportions torque to driven wheels	2-14

AYC System Configuration



NOTE *: Vehicles without ABS

ACTIVE YAW MOMENT CONTROL

PURPOSE OF ACTIVE YAW MOMENT CONTROL

Active control of the vehicle's yaw moment enables all four tires to perform to their maximum potential, resulting in enhanced cornering performance and safety under a wide range of operating conditions.

CORNERING MODEL WITH YAW MOMENT ADDED

The addition of a yaw moment (created by causing a difference in driving force or braking force between the left and right tires) causes the vehicle to turn inward. The front-wheel cornering force caused by the steering wheel angle thus becomes smaller than that of a conventional vehicle, so cornering on any given radius becomes possible with a smaller steering wheel angle. The loading applied to the front tires decreases, and the loading applied to the rear tires increases accordingly.

<Conventional vehicle>

<Vehicle with yaw moment added>



1110018





YAW MOMENT CREATION METHOD

The AYC system creates a yaw moment by using the torque transfer differential to control the difference in driving force between the left and right wheels.

STRUCTURE AND OPERATION

SYSTEM CONFIGURATION

The AYC system's main components are the torque transfer differential (this is a rear differential that incorporates a torque transfer mechanism), the hydraulic unit, and the AYC-ECU that controls them. The hydraulic unit incorporates an electric pump, a direction control valve, and a proportioning valve. It supplies hydraulic pressure to the torque transfer differential. The AYC-ECU monitors driver inputs and road conditions in accordance with data from various sensors and determines the optimum magnitude and direction of torque transfers accordingly.



(differential mechanism + speed increasing/decreasing gearing + two wet multi-disc clutches)

TORQUE TRANSFER DIFFERENTIAL

The torque transfer differential consists of a differential mechanism, speed increasing/decreasing gearing, and two wet multi-disc clutches. The differential mechanism is lubricated by hypoid gear oil, and the speed increasing/decreasing gearing and clutches (these constitute the torque transfer section) are lubricated by AYC fluid.



[Differential Mechanism]

During cornering maneuvers, the differential mechanism allows the vehicle's inside and outside wheels to turn at different speeds.

[Speed Increasing/Decreasing Gearing]

The speed increasing/decreasing gearing increases or decreases the speeds of the left- and right-hand wet multi-disc clutches relative to the speed of the right wheel.

[Wet Multi-Disc Clutches]

The wet multi-disc clutches transfer torque from the faster wheel to the slower wheel. When the left-hand clutch operates, the speed-reducing gear causes a torque transfer from the right wheel to the left wheel. When the right-hand clutch operates, the speed-increasing gear causes a torque transfer from the left wheel to the right wheel.

Device	Torque transfer differential	LSD
Components	Differential mechanism + speed increasing/de- creasing gearing + two wet multi-disc clutches	Differential mechanism + one wet multi-disc clutch or viscous coupling unit
Function	Permits transfer of torque in either direction and thus enables control of yaw moment.	Transfers torque from inside wheel (during cor- nering maneuver) or spinning wheel to wheel on opposite side.



Principle of Operation in Torque Transfer Differential

When two clutch plates with different rotational speeds are pressed against each other, torque is transferred from the faster disc to the slower disc. The amount of torque transferred is proportional to the force with which the discs are pressed together. In the torque transfer differential, these properties are utilized to allow torque to be transferred as required. The speed increasing/reducing gearing is permanently meshed. Relative to the input speed of the differential case, the left-hand clutch, which is meshed with the speed-reducing gear, turns more slowly and the right-hand clutch, which is meshed with the speed-increasing gear, turns more quickly. The housing of the left- and right-hand clutches is linked to the rear-right drive shaft, so activation of the left- or right-hand clutches permits torque to be transferred toward either side.



Flow of Torque (1) With Left-Hand Clutch Activated

When the left-hand clutch is activated to increase the torque applied to the left wheel, some of the torque applied to the right wheel is directed back to the differential case and thence to the left wheel. Thus, a rightward yaw moment is applied to the vehicle.



(2) With Right-Hand Clutch Activated

When the right-hand clutch is activated to increase the torque applied to the right wheel, additional torque is directed toward the right wheel from the differential case. Thus, a leftward yaw moment is applied to the vehicle.

SENSORS

Wheel Speed Sensors

The wheel speed sensors are the same as those used with ABSs. On an ABS-equipped vehicle, signals from the wheel speed sensors are transmitted to the AYC-ECU after being processed by the ABS-ECU.

Lateral G sensor



Longitudinal G Sensor

The longitudinal G sensor is the same as that used with the ABSs of earlier models. On an ABS-equipped vehicle, the sensor is shared by the AYC system and ABS.

Lateral G Sensor

The lateral G sensor is the same as the longitudinal G sensor. It is mounted at 90° to the longitudinal G sensor to enable sensing of lateral acceleration.

Steering Wheel Sensor

The steering wheel sensor senses the degree of steering wheel rotation and detects when the steering wheel is centered. It is incorporated into the column switch on the steering column.

Throttle Position Sensor

The throttle position sensor is used by the AYC system and for engine control purposes.

HYDRAULIC UNIT

The hydraulic unit consists of an accumulator section (this contains an electric pump, a hydraulic switch, and an accumulator) and a pressure control section (this contains a proportioning valve and a direction control valve).

In the accumulator section, the pump is activated intermittently to maintain the required level of control pressure in the accumulator. In the pressure control section, signals from the AYC-ECU cause the proportioning valve and direction control valve to supply pressure to the clutches in the torque transfer differential.



1110032

Item	Specification
Electric pump	Trochoid type
Hydraulic fluid	ATF-SPII
Proportioning valve	Current control type (direct-acting, electromagnetic, proportional pressure control valve)
Direction control valve	Voltage control type (spring-centered 4-port, 2-solenoid, 3-position valve)

[Operation]

(1) Proportioning Valve and Direction Control Valve OFF

The proportioning valve and direction control valve are both closed, so no hydraulic pressure is supplied to the differential.



(2) Proportioning Valve ON and Direction Control Valve OFF

The proportioning valve is opened as required to regulate the control pressure.



(3) Proportioning Valve ON and Direction Control Valve ON (L-Port Open)

Opening of the direction control valve's L-port allows the regulated hydraulic pressure to reach the left-hand clutch from the proportioning valve.



(4) Proportioning Valve ON and Direction Control Valve ON (R-Port Open)

Opening of the direction control valve's R-port allows the regulated hydraulic pressure to reach the right-hand clutch from the proportioning valve.





Proportioning Valve

The proportioning valve adjusts the control pressure in accordance with signals from the AYC-ECU.

Direction Control Valve

The direction control valve directs the control pressure to the left- and right-hand clutches in accordance with signals from the AYC-ECU.

Hydraulic Switch

The hydraulic switch issues signals to the AYC-ECU in accordance with the accumulator pressure. The AYC-ECU activates the electric pump in accordance with these signals.



AYC-ECU

The AYC-ECU evaluates the driving, vehicle, and road conditions using signals from various sensors and controls the hydraulic unit accordingly. Further, the AYC-ECU has a diagnosis function. When it identifies a fault using this function, it terminates the system's operation and illuminates the AYC warning lamp.



Benefits of Control

(1) Control During Simultaneous Acceleration and Cornering and When Steering Wheel Angle is Increased

Understeer tends to occur when a vehicle accelerates and corners simultaneously and when its steering wheel angle is increased. Therefore, the AYC system creates a yaw moment in the cornering direction by transferring torque to the outside wheel. As a result, the front wheels' cornering force load diminishes (in other words, the front wheels' lateral slip force decreases) such that understeer is suppressed. The overall benefits are linear response to steering inputs with higher levels of cornering acceleration G and accordingly enhanced controllability during cornering maneuvers.



(2) Control on Poor Road Surfaces

When the vehicle makes a standing start with its left and right wheels on surfaces with significantly different friction (μ) levels or is driven on a rough surface, the AYC system transfers torque to the wheel on the higher-friction side, thereby suppressing wheelspin on the lower-friction side. Effectively, the system functions as an LSD, thus enabling smooth acceleration and enhanced running performance on poor roads.





AYC Warning Lamp Control

The AYC warning lamp is illuminated at the following times:

- For approximately 1.5 seconds when the ignition switch is turned to the ON position (to enable the user to check whether the bulb has blown);
- (2) In the event of a fault in the AYC system (the lamp stays illuminated until the ignition switch is turned to the OFF position).

Diagnosis Functions

To facilitate inspection of the AYC system, the AYC-ECU has the following functions:

- Diagnosis code output
- Service data output
- Actuator test

All of these functions can be utilized using a MUT-II.

Diagnosis Codes

There are 23 diagnosis items. Diagnosis results are stored in a volatile memory. When the ignition switch is turned to the OFF position, a backup battery ensures that the memory's contents are retained. (The memory's contents are lost if the battery is disconnected.) Diagnosis codes can be read using a MUT-II or the AYC warning lamp. (The AYC warning lamp indicates codes by flashing.)

(1) Diagnosis Items

Code No.	Diagnosis item	Warning lamp: O: ON —: OFF	Meaning
12	Power supply voltage (bulb power supply)	_	Open/short circuit or voltage drop in power-supply-volt- age-related circuitry
21	Wheel speed sensor (front-right)	0	Open/short circuit in circuitry related to wheel speed sen- sor (front-right)
22	Wheel speed sensor (front-left)	0	Open/short circuit in circuitry related to wheel speed sen- sor (front-left)
23	Wheel speed sensor (rear-right)	0	Open/short circuit in circuitry related to wheel speed sen- sor (rear-right)
24	Wheel speed sensor (rear-left)	0	Open/short circuit in circuitry related to wheel speed sen- sor (rear-left)
25	Wheel speed sensor	_	Wheels of different diameters fitted
26	Wheel speed sensor	0	Fault in wheel speed sensor(s)
31	Steering wheel sensor	0	Open circuit in circuitry related to steering wheel sensor
32	Steering wheel sensor	0	Short circuit in circuitry related to steering wheel sensor
33	Steering wheel sensor	0	Steering wheel sensor stuck in H position
34	Steering wheel sensor	0	Short circuit in circuitry related to steering wheel sensor
41	Throttle position sen- sor	0	Open/short circuit in circuitry related to throttle position sensor
51	Longitudinal G sensor	0	Open/short circuit in circuitry related to longitudinal G sensor
52	Longitudinal G sensor	0	Longitudinal G sensor jammed
56	Lateral G sensor	0	Open/short circuit in circuitry related to lateral G sensor
61	Stop lamp switch	0	Open circuit in circuitry related to stop lamp switch
65	ABS	0	Open circuit in ABS output line; fault in ABS
71	Proportioning valve	0	Open/short circuit in circuitry related to proportioning valve
72	Direction control valve (right)	0	Open/short circuit in circuitry related to direction control valve (right)
73	Direction control valve (left)	0	Open/short circuit in circuitry related to direction conrol valve (left)
81	Electric pump relay	0	Open/short circuit in circuitry related to electric pump relay
82	Hydraulic switch	0	Open circuit in circuitry related to hydraulic pressure switch; pressure leak; fault in electric pump; fusible link of motor blown
83	Hydraulic switch	0	Open circuit in circuitry related to hydraulic pressure switch; electric pump relay contacts fused together

Indication of Diagnosis Codes Using AYC Warning Lamp



(2) Deletion of Diagnosis Codes from Memory

NOTE

- (1) It is not possible to delete diagnosis codes using a MUT-II unless the AYC-ECU is functioning normally.
- (2) The only way to check whether the memory contents have been deleted is to try displaying them again.
- (3) Commands can still be received from the MUT-II after the memory contents have been deleted. To confirm diagnosis codes, operate the MUT-II again.

<With MUT-II>

Delete the memory contents in accordance with messages displayed on the MUT-II. For details, refer to the MUT-II Reference Manual or Operating Instructions.

<Without MUT-II>

Delete the memory contents by disconnecting the battery for 10 seconds or longer. (The memory contents are cleared if the supply of backup power to the AYC-ECU is interrupted for 10 seconds or longer.)

Service Data Output

Service data output items are shown in the following table.

Item No.	Service data item	Unit
01	Wheel speed sensor (front-right)	km/h (indicated in increments of 1 km/h)
02	Wheel speed sensor (front-left)	km/h (indicated in increments of 1 km/h)
03	Wheel speed sensor (rear-right)	km/h (indicated in increments of 1 km/h)
04	Wheel speed sensor (rear-left)	km/h (indicated in increments of 1 km/h)
05	Wheel speed sensor (front-right) (0.2 km/h)	km/h (indicated in increments of 0.2 km/h)
06	Wheel speed sensor (front-left) (0.2 km/h)	km/h (indicated in increments of 0.2 km/h)
07	Wheel speed sensor (rear-right) (0.2 km/h)	km/h (indicated in increments of 0.2 km/h)
08	Wheel speed sensor (rear-left) (0.2 km/h)	km/h (indicated in increments of 0.2 km/h)
10	Vehicle speed	km/h
11	Battery voltage	V
15	Throttle position sensor	mV
19	G sensor (longitudinal)	V
20	G sensor (lateral)	V
22	Steering wheel angle	deg
23	Steering wheel angular velocity	deg/s
45	Idle switch	ON/OFF
46	Steering wheel sensor – STN terminal	ON/OFF
47	Steering wheel sensor – ST1 terminal	ON/OFF
48	Steering wheel sensor – ST2 terminal	ON/OFF
50	Stop lamp switch	ON/OFF
56	Pressure switch	High/Low
59	ABS monitor	ON/OFF

2-26

Actuator Tests

- (1) An actuator test can be performed only when the following conditions are all satisfied:
 - The speed indicated by each wheel speed sensor is 20 km/h or lower.
 - No system fault is detected.
 - The steering wheel angle is within 30° of the steering wheel's center position.

(2) Forced activation is cancelled if any of the following conditions exists:

- The speed indicated by any wheel speed sensor is higher than 20 km/h.
- A system fault is detected.
- The forced activation time elapses.
- The MUT-II is disconnected.
- The MUT-II's clear key is pressed.

Item No.	Meaning	Activation	Activation time	Remarks
10	Air bleed	Current supplied to proportioning valve in accordance with steering wheel angle; direction control valve activated	5 min.	Check that air does not emerge from bleeder plug on torque trans- fer differential.
11	Fluid volume check	Direction control valve activated leftward and rightward 20 times	Until end of operation	Check fluid level in reservoir tank
12	Electric pump operation check	Electric pump activated for 5 se- conds	Until end of operation	Check pump operation by listen- ing to pump's operating sound.
13	Clutch operation check (left-hand)	Direction control valve activated; maximum hydraulic pressure sup- plied to left-hand clutch	1 min.	With wheels raised, check opera- tion from speed difference be- tween rear wheels.
14	Clutch operation check (right-hand)	Direction control valve activated; maximum hydraulic pressure sup- plied to right-hand clutch	1 min.	With wheels raised, check opera- tion from speed difference be- tween rear wheels.
15	Control OFF	Electric pump relay turned OFF; AYC system deactivated		During on-road operation, check difference in behavior with AYC system switched ON and OFF.

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FRONT SUSPENSION

<EVOLUTION-IV>

To ensure the lateral rigidity and roll stiffness required by a high-performance vehicle and expand the suspension system's performance envelope, the following revisions have been made:

- The lower arm arrangement has been revised to optimize the front roll center height.
- The coil springs and shock absorbers have been optimally tuned.
- The stabilizer bar's diameter has been increased (\u03c616 mm on non-EVOLUTION LANCER → \u03c623 mm on EVOLUTION), and the stabilizer link mounting position has been revised (strut assembly → lower arm), resulting in an improved steering feeling.
- Forged lower arms have been adopted for greater rigidity.
- Thicker wall pipe has been utilized to increase the No. 2 cross member's rigidity.
- A strut tower bar has been adopted <standard on RS; optional on GSR>.
- Unit ball bearings have been adopted to increase the wheel bearings' rigidity.

NOTE

For information on the unit ball bearings, refer to "Front Axle" in Group 2.

<EVOLUTION-V>

The front suspension has been revised as follows:

- Inverted front struts have been adopted for greater camber stiffness.
- A revised structure permits either of two camber angles to be selected in accordance with operating conditions.
- A front cross member bar has been added for greater cross-member lateral rigidity <vehicles with 17-inch wheels>.
- Aluminum lower arms have been adopted for lightness.
- The lower arms have been lengthened in accordance with the wider tread.

Construction Diagram <EVOLUTION-IV>



<EVOLUTION-V>



Item			
Туре			

Specifications

Item		EVOLUTION-IV	EVOLUTION-V	
Туре		MacPherson strut		
Wheel	Camber	-1°00'	-1°00' or -2°00'	
alignment	Caster	3°54'		
	Kingpin inclination 13°18'		14°18'	
	Toe-in (mm)	0		
Coil	Wire diameter (mm)	14		
springs	Average diameter (mm)	155		
	Free length (mm)	RS: 302, GSR: 308	302	
Stabilizer bar		Provided		
Strut tower bar		Provided <standard gsr="" maker="" on="" option="" rs;=""></standard>		



LOWER ARMS

<EVOLUTION-IV>

- (1) The lower arms are forged for greater rigidity, and they are fitted with bushings that have inside and outside tubes for improved steering characteristics.
- (2) The lower arms' mounting positions have been revised to alter the wheel alignment for improved handling stability.

<EVOLUTION-V>

The lower arms' shape has been revised in accordance with the wider tread, and aluminum has been adopted for lightness.





STRUT ASSEMBLIES

<EVOLUTION-V>

An inverted strut layout (with the cylinder at the top and the piston at the bottom) has been adopted. This layout offers superior rigidity and consequent improved camber stiffness. Further, either of two camber angles can be selected in accordance with operating conditions. The camber angle is determined by the alignment of an eccentric bolt at the top of the joint between the strut assembly and knuckle. Vehicles leave the factory with a camber angle of -1° selected. (An arrow on the eccentric bolt is pointing toward the inside of the vehicle.) For a camber angle of -2° , the bolt must be fitted with its arrow pointing toward the outside of the vehicle.
REAR SUSPENSION

<EVOLUTION-IV>

For enhanced performance in competitions, the rear suspension mechanism has a new multi-link design that is based on a double-wishbone arrangement. Compared with the EVOLUTION-III's multi-link mechanism, which is based on a trailing-arm arrangement, the new mechanism is significantly different in terms of structure and geometry and offers higher rigidity and lower friction. The overall benefit is improved handling on various road surfaces.

Structure

Each knuckle is supported by an A-section upper arm (this is located on the inside of the wheel) and by three I-section members (a longitudinally aligned trailing arm, a laterally aligned lower arm, and a laterally aligned toe control arm). Each arm has a ball joint or pillow-ball bushing at its knuckle end and a rubber bushing or slide bushing at its body end. The arms are joined to the body via the cross member.

Construction Diagram



<EVOLUTION-V>

The rear suspension mechanism has been revised as follows:

- All body- and wheel-side suspension mounting points have been revised. The resulting geometry enhances toe stiffness and camber stiffness.
- The rear roll center has been lowered.
- Toe control bars, which link the toe control arms' body-side mounting brackets to the differential support member, have been added for greater lateral rigidity <RS>.

Construction Diagram



Specifications

Item		EVOLUTION-IV, V	Non-EVOLUTION LANCER (reference)	
Туре		Multi-link	Multi-link (trailing-arm type)	
Wheel	Camber	-1°00'	0°40'	
alignment	Toe-in (mm)	3		
Coil spring Wire diameter (mm)		11		
	Average diameter (mm)	79 – 87	88	
	Free length (mm)	281 – 289 374		
Stabilizer bar		Provided		



■STRUCTURE IMPROVED ROADHOLDING

The change in suspension type and adoption of pillow-ball bushings and other features ensure rigidity while reducing suspension friction during up/down strokes and improving the movement following characteristics of unsprung components.



OPTIMIZED TOE CONTROL

The rear suspension mechanism provides linear toe-change characteristics that are largely unaffected by external forces. As a result, the vehicle's stability is improved during cornering maneuvers and changes in vehicle attitude. 3-10

REDUCED CAMBER VARIATIONS

The upper arm, lower arm, and trailing arm form a double-wishbone arrangement. The arms' layout has been optimized to minimize camber variations on long strokes during cornering maneuvers, resulting in an expanded cornering performance envelope.



ANTI-SQUAT GEOMETRY

The upper and trailing arms are arranged such that squat is suppressed during acceleration. The vehicle's stability is consequently superior.

SUSPENSION COMPONENTS

Coil Springs and Shock Absorbers

Given that the vehicle is intended for use in competitions, the shock absorbers' damping characteristics during low-speed operation and the spring constant have been optimized to provide enhanced suspension performance over the entire operating range.



Stabilizer Bar

The stabilizer bar's mounting points have been moved from the lower arms to the upper arms, and the bar's specifications have been revised, resulting in optimized roll stiffness. Stability in the vehicle's attitude and behavior during cornering maneuvers is consequently superior.

Cross Member

The use of cast aluminum for the cross member has realized a reduction in weight while ensuring sufficient rigidity.



12M0072



Upper Arms

The use of forged aluminum for the upper arms has realized a reduction in weight while ensuring sufficient rigidity. Each arm is attached to the knuckle via a ball joint and to the body and cross member by rubber bushings. The bushing toward the rear is provided with a stopper for improved support rigidity. Further, each upper arm is provided with a mounting for the stabilizer link.



Lower Arms

The lower arms are forged for greater rigidity. They have pillow balls at their knuckle ends and rubber bushings at their crossmember ends.



Toe Control Arms

The toe control arms are forged for greater rigidity. They have ball joints at their knuckle ends and slide bushings at their body ends. This arrangement maximizes rigidity and reduces friction during suspension strokes.



Trailing Arms

The trailing arms are forged for greater rigidity. They have ball joints at their knuckle ends and rubber bushings at their body ends.



Adjustment of Alignment

As with the EVOLUTION-III, the toe and camber angles can be adjusted. Adjustment of the toe angle is performed at the toe control arm's body-end mounting point (labeled "A" in the drawing), and adjustment of the camber angle is performed at the lower arm's cross-member-end mounting point (labeled "B" in the drawing).



WHEELS AND TIRES

<EVOLUTION-IV>

- (1) Sixteen-inch tires have been adopted to complement the vehicle's improved handling stability and larger brakes <standard on GSR; optional on RS>.
- (2) Sixteen-inch aluminum wheels have been introduced specifically for EVOLUTION models <standard on GSR; optional on RS>.

NOTE

For the wheels' and tires' specifications, refer to "Major Accessories" in Group 8.

<EVOLUTION-V>

225/45 R17 tires and 7.5J J X 17 aluminum wheels are fitted on the GSR as standard and as a maker option on the RS.

NOTE

The Brembo front brakes of vehicles with 17-inch wheels are designed specifically for use with 17-inch wheels. Consequently, the 16-inch spare wheel cannot be fitted at the front.

3-14

STEERING SYSTEM

To improve the steering system's rigidity and responsiveness and enhance the steering feeling, the following revisions have been made:

- A Momo leather-covered steering wheel has been adopted <incorporates airbag on GSR>.
- The gear ratio of the steering gearbox has been increased.
- The steering gearbox's mounting bracket has been incorporated into the housing.
- The power steering fluid pump's basic delivery rate and other specifications have been revised.
- A power steering fluid cooler has been adopted.

<EVOLUTION-V>

- The steering gearbox's mounting position has been lowered for increased handling stability.
- A variable-capacity power steering fluid pump has been adopted, and the fluid cooler has been eliminated as a result.
- A proven, low-loss-design has been adopted for the power steering fluid pump to improve fuel efficiency.

Specifications

Item		Non- EVOLUTION LANCER (reference)	EVOLU- TION-IV RS	EVOLU- TION-IV GSR	EVOLU- TION-V RS	EVOLU- TION-V GSR	
Steering wheel	Туре	Momo three- spoke (leather- covered with built-in airbag)	Momo three-spoke (leather- covered)	Momo three- spoke (leather- covered with built-in airbag)	Momo three-spoke (leather- covered)	Momo three- spoke (leather- covered with built-in airbag)	
	Outside diameter (mm)	380	365	380	365	380	
	Max. turns	2.7	2.1	2.3	2.1	2.3	
Steering Tilt adjustment column mechanism		Provided					
Power steering type		Integral (engine-speed-sensitive)					
Steering	Gearbox type	Rack and pinion					
and	Gear ratio	45.74	62.89	57.18	62.89	57.18	
linkages	Rack stroke (mm)	124		1:	36		
Fluid Type pump		Vane type with fluid flow rate control system with fluid flow rate control system system			iable capacity) / rate control tem		
	Basic delivery rate (cm ³ /rev. {cc/rev.})	7.2 {7.2}	9.6 {9.6}		7.2	7.2 {7.2}	
	Relief pressure set- ting (MPa {kg/cm ² })	≥t- 2}) 8.8 {90}					
	Pressure switch	h Provided					
Steering	Inside wheel	33°	33° 33°20' 33°10'		10'		
angie	Outside wheel	29°	28°	28°20' 28°10'		10'	
Fluid cooler		Not provided	Provided		Not provided		



STEERING GEARBOX

The gear ratio has been increased to improve steering responsiveness. Also, the following revisions have been made to increase rigidity:

- The pinion-shaft-side mounting bracket of the steering • gearbox has been incorporated into the rack housing. The rack's diameter has been increased.
- •

3-16

POWER STEERING FLUID COOLER

<EVOLUTION-IV>

An air-cooled power steering fluid cooler is fitted behind the front bumper on the left-hand side. This arrangement improves fluid cooling performance.

Specifications

ltem	Specification	
Power steering fluid cooler	Туре	Drawn cup
	Capacity (dm ³ { <i>ℓ</i> })	0.15 {0.15}

Construction Diagram



13M0069

SERVICE BRAKES

<EVOLUTION-IV>

- To match the high-performance engine, the service brake system has been revised as follows:
- The front wheels are equipped with 16- or 15-inch, 2-piston, ventilated disc brakes. (Sixteen-inch brakes are standard on the GSR and optional on the RS. Fifteen-inch brakes are standard on the RS.)
- The rear wheels are equipped with 15-inch ventilated disc brakes with built-in parking-brake drums.
- The master cylinder's diameter has been increased (ϕ 23.8 mm on non-EVOLUTION LANCER $\rightarrow \phi$ 25.4 mm on EVOLUTION).
- A 7+8-inch tandem brake booster has been adopted.
- An ABS is fitted as standard <GSR>.

<EVOLUTION-V>

The service brake system has the following features:

- The front ventilated disc brakes, manufactured by Brembo, have four-opposed-piston calipers whose leading- and trailing-side pistons have different diameters <standard on GSR; maker option on RS>.
- The rear ventilated disc brakes, also manufactured by Brembo, have two-opposed-piston calipers <standard on GSR; standard on RS>.
- On vehicles with Brembo brakes, the master cylinder diameter has been increased from 25.4 mm to 26.9 mm).

Specifications

Item		Non-EVOLU-	EVOLU- TION-IV RS	EVOLU- TION-IV GSR	EVOLUTION-V		
		TION LANCER (reference)			RS: Standard equipment	GSR RS: Maker option	
Master	Туре	Tandem					
cylinder	Inside diameter (mm)	23.8	23.8 25.4				
Brake	Type (size)		Vacu	uum servo (7+8-i	nch)		
booster	Power cylinder effec- tive diameter (mm)			180+205			
	Boost rate	6.0		4	.5		
Fluid pres	ssure control valve type		Р	roportioning valv	'e		
Front brakes	Туре	Floating cali- per; one pis- ton; venti- lated disc (V4-S54)	Floating cali- per; two pis- tons; venti- lated disc (V5-W43 [V6-W43])	Floating cali- per; two pis- tons; venti- lated disc (V6-W43)	Floating cali- per; two pis- tons; venti- lated disc (V5-W43)	Brembo; four opposed pis- tons; venti- lated disc (V7-Z4046)	
	Disc dimensions (ef- fective diameter × thickness) (mm)	204×24	227×24 [246×24]	246×24	227×24	263×32	
	Wheel cylinder diame- ter (mm)	53.9		40.0×2, 46.0×2			
	Pad thickness (mm)			10.0			
	Clearance adjustment			Automatic			
Rear Type brakes		Floating cali- per; one pis- ton; solid disc (S4-S30P)	Floating caliper; one piston; ventilated disc (V5-S35) for; vent lated disc (V5-S35)		Floating cali- per; one pis- ton; venti- lated disc (V5-S35)	Brembo; two opposed pis- tons; venti- lated disc (V6-X40)	
	Disc dimensions (ef- fective diameter × thickness) (mm)	224×10	237×20			252×22	
	Wheel cylinder diame- ter (mm)	30.1	34.9			40.0×2	
	Pad thickness (mm)	9.5		10).0		
	Clearance adjustment	arance adjustment Automatic					

NOTE

Figures in brackets [] apply to vehicles with optional 16-inch wheels.

REAR DISC BRAKES < EVOLUTION-IV>

The rear wheels are equipped with V5-S35 one-piston ventilated disc brakes. These brakes are a drum-in-disc type; each incorporates a drum brake that forms part of the parking brake mechanism. The brake pad on the inside of the left wheel has an audible wear indicator.



14M0098

Drum brake used by parking brake mechanism



14M0097

3-20

DISC BRAKES <EVOLUTION-V>

The front wheels are equipped with Brembo V7-Z4046 four-opposed-piston ventilated disc brakes, and the rear wheels are equipped with Brembo V6-X40 two-opposed-piston ventilated disc brakes <standard on GSR; maker option on RS>.



NOTE

Brembo is an Italian component maker whose name and products are well known in the motorsports world. The Brembo logo is attached to the vehicle's body below the rear-left combination lamp.



Ignition switch (IG₂) Lateral Congitudinal Congitudina

ABS

WHEEL SPEED SENSORS

At each rear wheel, the speed sensor is attached to the knuckle and the rotor is attached to the drive shaft. The sensor-to-rotor clearance cannot be adjusted.

<EVOLUTION-V GSR>

Inputs provided to the ABS-ECU have been supplemented by data from the AYC system's lateral G sensor to enable better control during cornering maneuvers.



LATERAL G SENSOR < EVOLUTION-V>

The lateral G sensor, which is shared by the AYC system and 4ABS, is physically identical to the longitudinal G sensor. It is mounted at 90\$ to the longitudinal G sensor to enable sensing of lateral acceleration.



ABS-ECU

<EVOLUTION-IV GSR>

Owing to the incorporation of the AYC system, data necessary for control are transmitted between the ABS-ECU and AYC-ECU.

Transmitted Data

(1) Data provided to AYC-ECU:

- Output signals from wheel speed sensors
- ABS monitoring signals
- (2) Data issued by AYC-ECU:
 - AYC monitoring signals

Diagnosis Function

Certain diagnosis and data list items have been revised as shown below.

Diagnosis Items

Diagnosis No.	ABS
Diagnosis No.	Meaning
27	AYC monitor signal abnormality

Data List Items

No	ABS		
INO.	Service data item	AYC monitoring signal	
27	Indication	ON/OFF	

<EVOLUTION-V>

Owing to the addition of the lateral G sensor as an input sensor, certain diagnosis and service data items have been revised as shown below. The ECU connector's terminal layout has been revised accordingly.

Diagnosis Items

Diagnosis code No.	Meaning
71	Open/short circuit in lateral G sensor's signal wiring; or abnormality in signals from sensor

Service Data Items

Item No. 71 has been added, and item No. 27 (AYC monitoring signal) has been eliminated.

Item No.	Service data item	Lateral G sensor output voltage
71	Indication unit	V

PARKING BRAKE MECHANISM

For improved parking brake performance, mechanically activated drum-in-disc brakes are utilized on the rear wheels.



14M0096

BODY

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HOOD AND FENDERS 3	WIND
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REAR-END CROSS BAR <evolution-v rs=""> 4</evolution-v>
WINDOW GLASS <evolution-v> 4</evolution-v>

MAIN BODY

COLORING

Specifications

<LANCER>

Color	Color code	Color notation	Color (paint) number	Paint composition
STEEL SILVER	A34	XJ	AC11134	Metalic
SATELITE SILVER	A69	SC	AC11169	Metalic
IJSSERMEER BLUE	T73	ТТ	AC11173	Interference pearlescent
PYRENEE BLACK	X08	BF	AC11008	Colored pearlescent
SCOTIA WHITE	W83	2E	AC10983	Solid
PALMA RED	P85	JW	AC11185	Solid

<EVOLUTION-V>

Color	Color code	Color notation	Color (paint) number	Paint composition
DANDELION YELLOW	Y77	DY	AC10877	Solid

HOOD AND FENDERS

- Like the hood of the EVOLUTION-IV, the hood is made of aluminum. Its shape has been revised.
- Front wide fenders have been adopted to match the wider front tread. They are made of aluminum for lightness.



FRONT-END CROSS BAR <RS>

The front-end cross bar, which has a highly rigid pipe construction, links the left and right sides of the front-end cross member, thereby increasing the body's rigidity.



18M0346

REAR-END CROSS BAR < EVOLUTION-V RS>

The rear-end cross bar is fitted at the top of the rear floor pan to increase the body's rigidity.



WINDOW GLASS < EVOLUTION-V>

The window glass has been revised as follows:

	E	EVOLUTION-I	/	EVOLUTION-V					
Item	Туре	Tint color	Thickness (mm)	Туре	Type Tint color				
Windshield	Laminated glass	Green	5.2	Laminated glass	Green	4.4			
Front door window glass	Tempered		3.5	Tempered		3.1			
Rear door window glass	glass			glass					
Rear window glass									

EXTERIOR

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BUMPERS < EVOLUTION-IV>

The front bumper incorporates the radiator grille, which has been enlarged to match the larger intercooler. To improve the cooling performance of the engine oil cooler and power steering fluid cooler, the bumper incorporates air inlets on the left- and right-hand sides. And to enable more effective cooling of the brakes, the front air dam incorporates air inlets and ducts on the left- and right-hand sides.



AERODYNAMIC PARTS < EVOLUTION-IV>

- (1) A large rear spoiler, which incorporates a high-mount stop lamp, suppresses rear-end lift and thus enhances handling stability at high speeds.
- (2) Front, side, and rear air dams improve running stability at high speeds.
- (3) The bold styling of the large rear spoiler and of the front, side, and rear air dams accentuates the vehicle's sporty appearance.



BUMPERS AND AERODYNAMIC PARTS < EVOLUTION-V>

- The air dams and rear spoiler have been revised to enhance high-speed running stability.
- Rear fender garnishes have been added to match the wider rear tread.
- The new shapes of the bumpers, air dams, and rear spoiler and the added fender garnishes accentuate the vehicle's sporty appearance.



REAR SPOILER WITH ADJUSTABLE ATTACK ANGLE <EVOLUTION-V>

The rear spoiler, whose attack angle can be adjusted, has the following key features:The wing is made of aluminum for lightness.

5-4

The attack angle can be adjusted in four steps to enable the optimum setting for any driving conditions. •



18M0467

INTERIOR

CONTENTS

SEATS	• • •	••	••	• •	•	• •	• •	• •	• •	••	•	• •	• •	• •	•	• •	•	• •	• •	•••	2	
Front	Sea	at.																			. 2	

SRS AIRBAGS <EVOLUTION-V GSR> 2



SEATS

FRONT SEATS

<EVOLUTION-IV GSR>

The GSR's front seats are made by Recaro. They are basically the same as the Recaro front seats of the EVOLUTION-III.

<EVOLUTION-V GSR>

The shape of the Recaro seats has been revised.



SRS AIRBAGS < EVOLUTION-V GSR>

- (1) For environmental compatibility, sodium azide has been eliminated from the inflators of the driver's and front passenger's airbag modules. The inflator of the front passenger's airbag module is a hybrid type charged with high-pressure gas (mainly argon).
- (2) The wire colors and wire types (notably the locations of twisted wires) in the wiring harness have been made consistent with those in other vehicle models to facilitate maintenance.

<Harness Wire Diameters and Colors (New and Previous)>

Circuit		Letter on system circuit drawing	New wire diameter and color	Previous wire diameter and color			
IG ₁ (A) power supply		A	0.85B – Y	0.85B – W			
IG ₁ (B) power supply		В	0.85 B – W	0.85B – O			
Earth (1)		С	0.85B				
Earth (2)		D	0.85B				
Warning lamp		E	0.5G – Y	0.5L – Y			
Driver's airbag module (+)		F	<t> 0.85Y</t>	<t> 0.85R</t>			
(squib)	(–)	G	<t> 0.85Y – B</t>	<t> 0.85L</t>			
Front passenger's airbag	(+)	Н	<t> 0.85Y – G</t>	<t> 0.85W</t>			
module (squib)	(-)	I	<t> 0.85Y – R</t>	<t> 0.85G</t>			
Diagnosis connector termin	als	J	0.5Y	– В			

SRS System Circuit Drawing



19M0013

EQUIPMENT

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HEATER AND AIR CONDITIONER								2



DIAGNOSIS SYSTEM

In light of the AYC system's incorporation, AYC system inspection terminals have been added to the diagnosis connector to facilitate maintenance.

Diagnosis function				
Diagnosis code output				
Service data output				
Actuator test				
Substitutional means for	Flashing of warning lamp	0		
reading diagnosis codes	Deflection of needle on analog voltmeter			
Diagnosis code retention	Until battery disconnection	0		
	_			
Deletion of diagnosis codes	s using MUT-II	0		

*: Memory contents are retained unless deleted electrically.

DIAGNOSIS CONNECTOR

Terminal No.	Signals
7	AYC (added), MPI, ELC-4A/T, 4ABS



LAMPS

EXTERIOR LAMPS FOG LAMPS

The fog lamps are a reflector type made by PIAA <standard on GSR; optional on RS>.

Specifications

Item	Specification
Fog lamp (PIAA)	55W

HEATER AND AIR CONDITIONER

The RS is equipped with only a manual heater. The GSR is equipped with a fully automatic air conditioner as standard. Each system is basically the same as that used in the previous model.

REFERENCE DATA

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DIMENSIONAL VIEWS

<LANCER EVOLUTION-IV>

For the mounting positions of lamps, refer to the "Lamp Mounting Positions" table.



Unit: mm

Lamp Mounting Positions

(Unit: mm)

		Model	EVOLUTION-IV
Item			
Low beam headlamp	Mounting height	Top edge	675
		Bottom edge	575
	Distance from vehicle's outermost point		250
Front fog lamp	Mounting height	Top edge	465
		Bottom edge	315
	Distance from vehicle's outermost point		300
Position lamp	Mounting height	Top edge	675
		Bottom edge	575
	Distance from vehicle's outermost point		250
Tail lamp	Mounting height	Top edge	975
		Bottom edge	850
	Distance from vehicle's outermost point		130
Rear reflector	Mounting height	Top edge	775
		Bottom edge	740
	Distance from vehicle's outermost point		195
Brake lamp	Mounting height	Top edge	975
		Bottom edge	850
	Distance from vehicle's outermost point		130
Auxiliary brake lamp (fitted inspoiler)	Mounting height	Bottom edge	1,030
	Distance from bottom of window		Not lower than bottom of window
	Distance from vehicle's center (as seen from rear)		0
Turn signal lamp/hazard warning lamp (front)	Mounting height	Top edge	675
		Bottom edge	585
	Distance between inside edges		1,310
	Distance from vehicle's outermost point		100
Turn signal lamp/hazard warning lamp (side)	Mounting height	Top edge	675
		Bottom edge	635
	Distance from vehicle's frontmost point		1,200
Turn signal lamp/hazard warning lamp (rear)	Mounting height	Top edge	840
		Bottom edge	780
	Distance between inside edges		1,140
	Distance from vehicle's outermost point		115

center

seat

865

845 High-back

Auxiliary brake lamp (fitted in spoiler; LED type) 840 850 License plate lamp Tail lamp/brake lamp Rear turn signal lamp/ Ø hazard warning lamp dt) 1315 Reversing lamp 1005 Rear reflector terior 525 535 520 (Tread) 1505 ¥1490 (Overall width) 1770 With rear spoiler

20

785

(Driver's seat) 755 490 (Front passenger's seat) ◆480 780 1080

(Left/right seat) 1970

(Center seat) 450 #445

270±120

(Wheelbase) 2510 (Overall length) 4345 \$4350

27☆ ±120

Left/right seat) 470

900



(Tread) 1510

¥1495 (Overall width) 1770

Front fog lamp

(Overall width) 1415

8-4 4

Lamp Mounting Positions

(Unit: mm)

		EVOLUTION-V	
Item			
Low beam headlamp	Mounting height	Top edge	665
		Bottom edge	575
	Distance from vehicle's outermost point		300
Front fog lamp	Mounting height	Top edge	465
		Bottom edge	315
	Distance from vehicle's outermost point		330
Position lamp	Mounting height	Top edge	665
		Bottom edge	575
	Distance from vehicle's outermost point		300
Tail lamp	Mounting height	Top edge	845
		Bottom edge	740
	Distance from vehicle's outermost point		135
Rear reflector	Mounting height	Top edge	835
		Bottom edge	740
	Distance from vehicle's outermost point		310
Brake lamp	Mounting height	Top edge	845
		Bottom edge	740
	Distance from vehicle's outermost point		135
Auxiliary brake lamp (fitted in spoiler)	Mounting height	Bottom edge	1,030
	Distance from bottom of window		Not lower than bottom of window
	Distance from vehicle's center (as seen from rear)		0
Turn signal lamp/hazard warning lamp (front)	Mounting height	Top edge	670
		Bottom edge	580
	Distance between inside edges		1,310
	Distance from vehicle's outermost point		110
Turn signal lamp (side/ front)	Mounting height	Top edge	705
		Bottom edge	675
	Distance from vehicle's frontmost point		1,210, 1,215*
Turn signal lamp/hazard warning lamp (rear)	Mounting height	Top edge	975
		Bottom edge	850
	Distance between inside edges		1,110
	Distance from vehicle's outermost point		170

*: With front air dam

PERFORMANCE CURVES

<LANCER EVOLUTION-IV (E-CN9A-SNDF, SNGF)>


<LANCER EVOLUTION-IV (E-CN9A-SNDF)>



<LANCER EVOLUTION-IV (E-CN9A-SNDF)>



<LANCER EVOLUTION-V (GF-CP9A-SNDF, SNGF)>



<LANCER EVOLUTION-V (GF-CP9A-SNDF)>



<LANCER EVOLUTION-V (GF-CP9A-SNDF)>



MAJOR SPECIFICATIONS

<EVOLUTION-IV>

Vehicle designation and model	Mitsubishi E-CN9A
Chassis designation and model	Mitsubishi CN9A
Name of manufacturer	Mitsubishi Motors Corporation
Category	Compact
Purpose	Passengers
Body type	Sedan
Engine model	4G63
Displacement (cc)	1,997

		Model	E-Cl	N9A			
Item			SNDF	SNGF			
Ту	/pe classification numb	er	001, 002, 009, 010 028, 032				
Dimensions	Overall length	n (mm)	4,3	30			
	Overall width	(mm)	1,6	90			
	Overall heigh	t (mm)	1,4	15			
	Wheelbase	(mm)	2,5	10			
	Tread (mm)	Front	1,470				
		Rear	1,470				
	Interior dimensions	Length	1,805				
	(mm)	Width	1,430				
		Height	1,175,	1,140*			
	Weight		See "Weig	ght" table			
Perfor-	Max. stable	Leftward	51	0			
mance	inclination angle	Rightward	51	0			
Other	Wheel arrang	ement	Front: two drive wheels;	rear: two drive wheels			
	Tire size	e	205/60R15 91R 205/50R16 87V				

Weight

		Model			E-CI	N9A		
Item	Item			SN	DF		SN	GF
Туре	e classification	number	001 (P)	002 (P, A)	009 (P, C)	010 (P, A, C)	028 (P, A, B, C)	032 (P, A, B, S, C)
Weight	Vehicle weight (kg)	Front axle weight	780	800	780	800	820	830
		Rear axle weight	48	480		500		30
		Total	1,260	1,280	1,280	1,300	1,350	1,370
	Max. occ	cupants	5					
	Gross vehicle	Front axle weight	875	895	875	895	915	925
	weight (kg)	Rear axle weight	66	50	68	30	7'	10
		Total	1,535	1,5	555	1,575	1,625	1,645

NOTE

(1) See "Weight" table for correspondence between type classification number and equipment specification.

(2) *: Vehicle with sunroof

- (3) Letters with type classification numbers indicate installation of the following equipment:
 - P: Power steering
 - A: Air conditioner
 - B: ABS

 - S: Sunroof C: AYC system

<EVOLUTION-V>

Vehicle designation and model	Mitsubishi GF-CP9A
Chassis designation and model	Mitsubishi CP9A
Name of manufacturer	Mitsubishi Motors Corporation
Category	Ordinary-sized
Purpose	Passengers
Body type	Sedan
Engine model	4G63
Displacement (cc)	1,997

		Model	GF-C	P9A		
Item			SNDF	SNGF		
Ту	vpe classification numb	er	001 to 016 028, 032			
Dimensions	Overall length	n (mm)	4,345, 4	4,350* ¹		
	Overall width	(mm)	1,7	70		
	Overall heigh	t (mm)	1,4	15		
	Wheelbase	(mm)	2,5	10		
	Tread (mm)	Front	1,510* ² ,	1,495* ³		
		Rear	1,505* ² , 1,490* ³			
	Interior dimensions	Length	1,805			
	(mm)	(mm) Width 1,430		30		
		Height	1,175, 1	1,140 ^{*4}		
	Weight		See "Weig	ght" table		
Perfor-	Max. stable	Leftward	51	0		
mance	Inclination angle	Rightward	51	0		
Other	Wheel arrangement		Front: two drive wheels	; rear: two drive wheels		
	Tire size		205/60R	15 91H		
			205/55R 205/50R	216 89V 216 87V		
			225/45	5ZR17		

NOTE

(1) See "Weight" table for correspondence between type classification numbers and equipment specification.
(2) *1: Vehicle with front air dam
(3) *2: Vehicle with 17-inch wheels
*3: Vehicle with 15-inch or 16-inch wheels
(4) *4: Vehicle with sunroof

Weight

		Model	GF-CP9A							
Item			SNDF							
Type classification number		001 (P)	002 (P, A)	003 (P, B)	004 (P, A, B)	005 (P, A/F)	006 (P, A, A/F)	007 (P, B, A/F)	008 (P, A, B, A/F)	
Weight	Vehicle weight (kg)	Front axle weight	770	790	780	800	770	790	780	800
		Rear axle weight		490						
		Total	1,260	1,280	1,270	1,290	1,260	1,280	1,270	1,290
	Max. oc	cupants				5	5		·	
	Gross vehicle	Front axle weight	685	885	875	895	865	885	875	895
	weight (kg)	Rear axle weight	670							
		Total	1,535	1,555	1,545	1,565	1,535	1,555	1,545	1,565

		Model				GF-C	P9A			
Item	Item			SNDF						
Type classification number		009 (P, C)	010 (P, A, C)	011 (P, B, C)	012 (P, A, C)	013 (P, C, A/F)	014 (P, A, C, A/F)	015 (P, B, C, A/F)	016 (P, A, B, C, A/F)	
Weight	Vehicle weight (kg)	Front axle weight	770	790	780	800	770	790	780	800
	Rear axle weight					51	10			
		Total	1,280	1,300	1,290	1,310	1,280	1,300	1,290	1,310
	Max. oc	cupants		5						
	Gross vehicle	Front axle weight	865	885	875	895	865	885	875	895
	weight (kg)	Rear axle weight	690							
		Total	1,555	1,575	1,565	1,585	1,555	1,575	1,565	1,585

NOTE

(1) Letters with type classification numbers indicate installation of the following equipment:P: Power steering

A: Air conditioner

B: ABS

S: Sunroof C: AYC system A/F: Front air dam

REFERENCE DATA – Major Specifications

		Model	GF-C	CP9A
Item			SN	GF
Туре	classification	number	028 (P, A, B, C, A/F)	032 (P, A, B, S, C, A/F)
Weight	Vehicle weight (kg)	Front axle weight	820	830
		Rear axle weight	540	550
		Total	1,360	1,380
	Max. oc	cupants	5	5
	Gross vehicle	Front axle weight	915	925
	weight (kg)	Rear axle weight	720	730
		Total	1,635	1,655

DETAILED SPECIFICATIONS

<EVOLUTION-IV>

			Model	E-CN9A				
Item					SNDF		SNGF	
	Min. ground o	clearance (m)			0.15	55		
Perfor-	Max. sp	eed (estimated) (kn	n/h)		180)		
mance	Fuel con-	Constant speed (Constant speed (60 km/h)		16.0	0	17.4	
	(km/ℓ)	10-15-mode		10.2* ¹ , 9.7* ²	9.7* ¹ , 9	9.2* ²	10.2* ¹ , 9.7* ²	
	Braking di (i	stance to complete nitial speed) (m)	stop		60.0 (100) [5	56.0 (100)]		
	Min.	turning radius (m)			5.5	5		
Engine	Во	re $ imes$ stroke (mm)			85.0 ×	88.0		
	C	ompression ratio		8.8 (\	with unleaded p	oremium gaso	line)	
	Compressi	on pressure (kg/cm	² -rpm)		11.5 –	250		
	Max	x. output (PS/rpm)			280/6,00	0 (net)		
	Max.	torque (kgf·m/rpm)			36.0/3,00	00 (net)		
	Valve/port	Intake	Open		BTDC 21°			
	opening/ closing		Close	ABDC 59°				
	timing	Exhaust	Open	BBDC 58°				
			Close	ATDC 18°				
		Oil capacity (ℓ)		5.1				
	Со	olant capacity (ℓ)		6				
	Fuel tank c	capacity (ℓ)		50				
Electrical devices	Ignition ad	dvance device type performance	and	Electi	ronic: –10° to 48	5° (in crank aı	ngle)	
	S	park plug model		PG	R7A, PGR6A, I	P22PR, P20F	PR	
	Bat	ttery capacity (Ah)		24 (5), 2	7 (5), 34 (5), 36	6 (5), 48 (5), c	or 52 (5)	
	Alte	rnator output (V-A)			12–90 o	or 100		
Power train	Transmis-	Gear ratios	1st		2.78	35		
	51011	of M/T have	2nd		1.95	50		
		synchronizers)	3rd	1.407	1.44	14	1.407	
			4th	1.031	1.09	96	1.031	
			5th	0.761	0.82	25	0.761	
			Reverse		3.41	6		
	Differential	Reduction ratio	First	4.5	29	4.875	4.529	
			Second		Rear: 3	3.312		
	Tra	ansfer	Reduc- tion ratio	3.312				

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REFERENCE DATA – Detailed Specifications

		Model	E-CN9A				
ltem			SNDF	SNGF			
Chassis		Service brakes	Hydraulic Front: disc Rear: disc				
	Parkir	ng brake mechanism	Mechanically activated; acts upon wheels				
	Suspension	Front/rear	MacPherson strut/multilink				
Exhaust	Exhaust gas	Unloaded	CO: 0.1%, HC: 200 ppm				
control per- centration		10–15-mode (g/km)	CO: 1.38, HC: 0.17, NO _x :0.20)			
formance		11-mode (g/test)	CO: 45.7, HC: 5.08, NO _x : 3.41				

NOTE

- (1) Figures in brackets [] apply to vehicles with ABS.
 (2) *1: Vehicles with weight of 1,265 kg or less
 *2: Vehicles with weight of 1,266 to 1,515 kg

REFERENCE DATA – Detailed Specifications

			Model	GF-CP9A				
Item				SNDF SNGF				
	Min. ground o	clearance (m)	0.150					
Perfor-	Max. sp	eed (estimated) (kn		18	60			
mance	Fuel	Flat surface (60 km/h)		17.4	16	.0	17.4	
	consumption (km/ℓ)	10-15-mo	de	10.2* ¹ , 9.7* ²	9.7* ¹ ,	9.2* ²	10.2* ¹ , 9.7* ²	
	Braking di (i	stance to complete nitial speed) (m)	stop	60.0 (100) [56.0 (100) with ABS]				
	Min.	turning radius (m)			5.	5		
Engine	Bo	re $ imes$ stroke (mm)			85.0 ×	88.0		
	C	ompression ratio		9.8 (י	with unleaded	premium gaso	oline)	
	Max	k. output (PS/rpm)			280/6,50	00 (net)		
	Max.	torque (kgf·m/rpm)			38.0/3,0	00 (net)		
	Valve/port	Intake	Open		BTDC	C 21°		
	opening/ closing		Close	ABDC 59°				
	timing	Exhaust	Open	BBDC 58°				
			Close	ATDC 18°				
	Fuel tank capacity (ℓ)				50			
Electrical devices	Ignition ad	dvance device type performance	and	Electronic: -10°to45° (in crank angle)				
	S	park plug model		PGR6A, PGR7A, P20PR-P8, or P22PR-P8				
	Bat	tery capacity (Ah)		24 (5), 27 (5), 34 (5), 36 (5), 48 (5), 52 (5)				
	Alte	rnator output (V-A)		12–90 or 100				
Power train	Transmis-	Gear ratios	1st		2.7	85		
	SION		2nd		1.9	50		
			3rd	1.407	1.4	44	1.407	
			4th	1.031	1.0	96	1.031	
			5th	0.761	0.8	25	0.761	
			Reverse		3.4	16	1	
	Differential	Reduction r	atio	Front:	Front: 4.529 Front: Front 4.875 4.529		Front: 4.529	
				Rear: 3.312 or 3.307				
	Tra	ansfer	Reduc- tion ratio		3.3	12		
Chassis		Service brakes			Hydra Front: disc,	aulic, Rear: disc		
	Parkir	ng brake mechanisr	n	Mecha	nically activate	ed; acts upon v	wheels	
	Suspension	Front/rea	ar	MacPherson strut/multilink				

REFERENCE DATA – Detailed Specifications

Mode		Model	GF-CP9A		
Item			SNDF	SNGF	
Exhaust Exhaust gas	Unloaded	CO: 1.0%, HC: 100 ppm			
reduction	concentra-	10-15-mode (g/km)	CO: 1.38, HC: 0.17, NO _x : 0.20)	
equipment	tion	11-mode (g/test)	CO: 45.7, HC: 5.08, NO _x : 3.41		

NOTE *1: Vehicles with weight of 1,265 kg or less *2: Vehicles with weight of 1,266 kg or more

MAJOR EQUIPMENT

<LANCER EVOLUTION-IV>

•: Standard equipment; \triangle : Maker option

Equipment specifications may vary depending on time of production.

		LANCER EV	OLUTION-IV		
		4V	VD		
		2,000 DC	DHC-T/C		
Item				RS	GSR
Engine	Engine oil cooler		Air-cooled	•	•
			Water-cooled		
	Intercooler		Air-cooled	•	•
			Water spray	•	•
	Turbocharger			•	•
Power train	Clutch control		Hydraulic	•	•
	Super cross ratio	5M/T (Hi)		Δ	
	Super cross ratio	5M/T (Lo)	Δ		
	Full-time 4WD		•	•	
	Transfer		Center differential + HCU		
			Center differential + VCU	•	•
	Front LSD (helica	I-gear type) <m t=""></m>		\bigtriangleup	
	AYC			\bigtriangleup	•
	Rear LSD		Helical-gear type		
			Mechanical	•	
Drive-	Front strut tower b	bar		•	Δ
control	Tires		205/60R15 91H	●*1	
			205/50R16 87H	\bigtriangleup	•
	Wheels (46 mm)	Steel	15 × 6 JJ [114.3 mm]	●*1	
		Aluminum	15 × 6 JJ [114.3 mm]	*1	
			$16 \times 6^{1/2}$ JJ [114.3 mm]	\bigtriangleup	•
	Spare wheel	Temporary wheel	T125/70D16	•	•

NOTE

- (1) On wheel lines, figure in parentheses () indicates wheel offset value and figures in brackets [] indicate pitch circle diameters of wheel mounting holes.
- (2) *1: When 16-inch aluminum wheels are fitted as maker option, front brakes designed specifically for 16-inch wheels are fitted. Thus, 15-inch wheels and tires cannot be fitted.
- (3) On tire and wheel lines, \Box symbol indicates tires and wheels that can be fitted.

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REFERENCE DATA – Major Equipment

		LANCER EVOLUTION-IV			
			4\	VD	
				2,000 D	OHC-T/C
Item				RS	GSR
Drive-	Center cap			•	
control compornent	Steering wheel	3-spoke (Momo)		•	
		3-spoke (Momo; le	eather-covered; with airbag)	\bigtriangleup	•
	Power steering			•	•
	Tilt-adjustable ste	ering column		•	•
	Power steering flu	uid cooler (air-coole	(b	•	•
	Brakes	Brake booster	7+8-inch tandem	•	•
	Brakes	Front	15-inch ventilated disc	•	
			16-inch ventilated disc	\bigtriangleup	•
		Rear	15-inch ventilated disc (with built-in drum)	•	•
		4ABS			•
		4ABS-less			
		Parking brake mechanism	Lever-operated	•	•
		Auxiliary brake sy	stem		
Body	Fluorocarbon resi	n clear coating *2			Δ
	Central door locki	ng			•
	Radio-type keyles	s entry system		•	
	Childproof locks			•	•
	Power windows w	vith anti-entrapment		•	
	Windshield (lamin	ated glass; green-ti			
	Front door window	v glass (tempered;	green-tinted)	•	•
	Rear door window	v glass (tempered; g	green-tinted)		
	Rear window glass	Reinforced; gree wires	n-tinted; printed heating	•	•
		Reinforced; gree wires with timer	n-tinted; printed heating		
	Sunroof glass (ter	mpered; green-tinte	d)		
	Electrically power	ed slide-and-tilt glas	ss sunroof		Δ
	Aluminum hood			•	•
Exterior	Bumpers	Large, shock-abso	orbing, urethane bumpers		
parts		Front bumper inco	orporating radiator grille	•	•
		Black			
		Body color		•	•

NOTE *2: Fluorocarbon resin clear coating cannot be applied if body color is Scotia White or Palma Red.

	_				Vehicle model	LANCER EV	OLUTION-IV
						4V	/D
				2,000 DC	DHC-T/C		
Item						RS	GSR
Exterior	Do	or r	mirrors	Manual (black)		•	
parts				Electric remote-	Black		
				controlled	Body color		
				Electric remote (body color)	-controlled retractable		•
	Fe	nde	r mirrors	Manual			
	(bl	(black)		Electric remote-controlled			
	М	oldir	ngs (black)	Windshield			
				Rear window		•	•
				Pillar roof drip		•	•
				Belt line			
	Re	ear p	anel garnish	(red)			•
	Ae	rod	ynamic	Front air dam			
	pa	rts		Side air dams		• •	•
				Rear air dam			
				Air-dam-less		\bigtriangleup	
				Rear spoiler			
Interior		Se	at type	Low-back seat		•	
parts				Low-back luxury s	seat		
				Recaro seat	Low-back type		
					High-back type		•
			Adjustment	Slide adjustment		•	•
		seat	mechanism	Recline adjustmer	nt	•	•
		er's s		Height adjustmen	t		
	seat	Drive	2-way power	seat			
	ront		Seatback po	cket			
	Ē	seat	Adjustment mechanism	Slide adjustment		•	•
		nger's		Recline adjustme	nt	·	•
		t passe		Height adjustmen	t		
		Front		Lumbar support			

		Vehicle model	LANCER EV	OLUTION-IV
			4V	VD
			2,000 D0	DHC-T/C
Item			RS	GSR
Interior	Rear seat	Low-back bench seat (fixed)	•	
parts		High-back bench seat (fixed)		
		Center armrest		•
	Seat covering	Vinyl		
		Fabric front surface	•	
		Fabric		
		Fabric (sports)		
		Fabric (special)		•
	Front seatbelts	3-point ELR seatbelt \times 2	_	_
		Adjustable shoulder belt anchors	•	•
		Electric tension reducer (front passenger's side)		
	Rear seatbelts	3-point ELR seatbelt × 2 + 2-point lapbelt × 1	•	•
	Front door trim	Molded type (soft)		
		Fabric upholstery		•
		Door pockets (both sides)	•	
	Rear door trim	Molded type (soft)	•	•
		Fabric upholstery		•
	Trunk trim			•
	Floor carpet (need	dle punch)		
	Trunk floor mat (n	eedle punch)	•	
	Sun visor	Driver's side + front passenger's side	•	•
		Ticket holder (driver's side)		
		Vanity mirror with cover (front passenger's side)		•
	Rearview mirror	Day/night type (bonded onto windshield)	•	•
	Upper glove box (vehicle without passenger-side SRS airbag)		
	Large glove box		•	•
	Ashtray	In instrument panel	•	•
		In rear		•
	Floor console	Tray type	•	
	DOX	Small type with lid		•
		Large type with lid (cloth-covered)		

			Vehicle model	LANCER EV	OLUTION-IV
				4W	/D
				2,000 DC	OHC-T/C
Item				RS	GSR
Interior	Pu	ll-out cup holder			•
parts	Gu	ım pocket			
	Pe	rsonal pockets		•	•
	Re	tractable hands-	Front passenger's seat		
	tra	р	Front passenger's seat + rear seats (\times 2)	•	•
	Fo	otrest	Driver's seat	•	•
			Front passenger's seat		
	SF	S airbag	Driver's seat		
			Driver's seat + front passenger's seat		•
Equipment	Ba	ttery	28B19L		
			34B19L		
			44B20L	•	•
			95D31L		
	lgr	nition switch lamp ti	mer		•
		Specially shaped headlamps	Halogen bulbs		
	sdu		Position lamps	•	•
	or la	Front fog lamps	PIAA reflector type	Δ	•
	xteri	High-mount stop	Fitted on rear shelf		
	–	lamp	Fitted in rear spoiler	•	•
		Interior lamp		•	•
	s	Map lamp			•
	amp	Foot lamp			
	erior I	Interior lamp with	built-in map lamp (vehicle with sunroof)		\triangle
	Inte	Engine compartm	ent inspection lamp		
		Trunk lamp			•
	Re	d-on-white meters		•	•
	Ba	cklighting			
	Me	eters/gauges	Electric speedometer	•	•
			Tachometer	•	•
			Tripmeter (LCD type)		
			Fuel gauge	•	•
			Water temperature gauge		

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Vehicle model				LANCER EV	OLUTION-IV
			-	4	VD
				2,000 D	OHC-T/C
Item				RS	GSR
Equipment	Warning/in-	Fuel leve	I warning		
	dicator lamps	Oil press	ure warning		
		Charging	warning		
		Parking b	prake warning	•	•
		Brake flu	id level warning		
		Door ajar	warning		
		Seatbelt	warning		
		Engine c	heck warning	•	•
		Fuel filter	warning		
		ABS war	ning		•
		ABS-war	ning-less		
		SRS war	ning		•
		AYC war	ning	\bigtriangleup	•
		A/T position indicator			
		Glow ind	cator		
	Warning	Ignition key removal reminder		_	_
	buzzer	Lighting r	nonitor warning	•	•
		R (revers	e) position warning		
	Windshield	Two-speed wipe		•	•
	wipers and washers	Intermittent wipe (fixed interval)		•	
		Intermittent wipe (variable interval)			•
		Mist wipe	•	•	•
		Fins (driv	er's side)	•	•
		Wipe upo	on washer operation	•	•
	Rear wiper and washer	Intermitte	ent wipe (fixed interval)	Δ	•
	Audio	Electronic	ally tuned AM radio with one built-in speaker		
		Туре А	Full-logic cassette player with electronically tuned AM/FM radio (AM stereo) + four speakers (compatible with CD player)		
		Туре В	Full-logic cassette player with electronically tuned AM/FM radio (AM stereo) + six speakers + rear window glass diversity an- tenna (compatible with CD autochanger)		Δ
		Туре С	Full-logic cassette player with electronically tuned AM/FM radio (AM stereo) + six speakers + rear window glass diversity an- tenna (compatible with CD autochanger)		

		LANCER EVOLUTION-IV			
				4V	VD
			2,000 D0	DHC-T/C	
Item				RS	GSR
Equipment	Audio	Pole ante	enna	•	
		Rear win	dow glass antenna		•
	Digital clock				•
	Multi display	(clock, cal	endar, electronic compass)		
	Air conditioning	Heater	Standard (manual)	•	
		Manual a	ir conditioner		
	Fully automatic air conditioner				•
		Air-condi	tioner-less		

<LANCER EVOLUTION-V>

•: Standard equipment; \triangle : Maker option Equipment specifications may vary depending on time of production.

		Vehicle model	LANCER EV	OLUTION-V
		4V	4WD	
			2,000 D0	DHC-T/C
Item			RS	GSR
Engine	Engine oil cooler	Air-cooled		
	Intercooler	Air-cooled		
	Intercooler water spray syster	n	•	•
	Turbocharger			
Power train	Clutch control	Hydraulic		
	Super close ratio 5M/T	Hi	Δ	
		Lo		
	Full-time 4WD	Center differential + VCU	•	•
	Front LSD	Helical-gear type	\triangle	•
	AYC		•	
	Rear LSD	Mechanical	•	

			Vehicle model	LANCER EV	OLUTION-V
				4V	/D
		2,000 DOHC-T/C			
Item		RS	GSR		
Drive-	Front suspensio	n	Inverted strut		
control compo- nents			Two-step camber adjustment mechanism	•	•
			Front strut tower bar	•	\bigtriangleup
			Front cross member bar	∆*1	•
	Rear suspension	n	Toe control bar	•	
	Tires		205/60R15 91H	•* ²	
			205/55R16 89V	□*2	
			205/50R16 87V		
			225/45ZR17	\bigtriangleup	•
	Wheels	Steel	15 × 6JJ (46 mm) [114.3 mm]	•*2	
		Aluminum	15 × 6JJ (46 mm) [114.3 mm]	□*2	
			$16 \times 6^{1/2}$ JJ (46 mm) [114.3 mm]	_*2	
			$17 \times 7 \frac{1}{2}$ JJ (38 mm) [114.3 mm]	Δ	•
	Spare wheel *3	Temporary wheel	T125/70D16	•	•
	Center cap			•	
	Steering wheel		3-spoke (Momo; leather-covered)	•	
			3-spoke (Momo; leather-cov- ered; with airbag)	Δ	•
	Power steering				
	Tilt-adjustable s	teering columr	ı	•	•
	Brake booster		7+8-inch tandem		
	Brakes	Front	15-inch ventilated disc (2-piston)	•	
			17-inch ventilated disc (Brembo; 4-piston)	∆*1	•
		Rear	15-inch ventilated disc	٠	
			16-inch ventilated disc (Brembo; 2-piston)	∆ *1	•

NOTE

- (1) On tire and wheel lines, \Box symbol indicates tires and wheels that can be fitted.
- (2) On wheel lines, figures in parentheses () indicates wheel offset values and figures in brackets [] indicate pitch circle diameters of wheel mounting holes.
- (3) *1: Fitted when 17-inch aluminum wheels and tires are fitted as maker option
- (4) *²: 15-inch or 16-inch wheels and tires cannot be fitted when 17-inch aluminum wheels and tires are fitted as maker option.
- (5) On vehicle with 17-inch wheels <standard on GSR; optional on RS>, spare wheel cannot be fitted at front.

		LANCER EV	OLUTION-V	
			4V	VD
			2,000 DOHC-T/C	
Item		RS	GSR	
Drive-	4ABS			•
compo- nents	Parking brake mechanism	Lever-operated	•	•
Body	Fluorocarbon r	resin clear coating *4		Δ
	Central door lo	ocking		
	Radio-type key	/less entry system		•
	Child protectio	n	•	•
	Power window	s with anti-entrapment mechanism		•
	Windshield (la	minated glass; green-tinted)		
	Front door win	dow glass (reinforced; green-tinted)	•	
	Rear door wind	dow glass (reinforced; green-tinted)	·	•
	Rear window g	lass (reinforced; green-tinted; printed heating wires)		
	Sunroof glass	(reinforced; green-tinted)		~
	Electrically pov	wered slide-and-tilt glass sunroof		
	Aluminum hoo	d and fenders	•	•
	Rear end cross	s bar	•	
Exterior	Bumpers	Front bumper incorporating radiator grille	•	•
pans		Body color	-	•
	Door mirrors	Manual (black)	•	
		Electric remote-controlled retractable (body color)		•
	Moldings	Windshield		
	(DIACK)	Rear window	•	•
		Pillar roof drip	C C	
		Belt line		
	Rear panel ga	rnish (red)		•
	Aerodynam-	Front air dam		
	ic parts	Side air dams	•	•
		Rear air dam	2	
		Rear spoiler with adjustable attack angle		
		Aerodynamic-parts-less *5	\triangle	

NOTE

(1) *4: Fluorocarbon resin clear coating cannot be applied if body color is Scotia White, Palma Red, or (2) *⁵: Front air dam, rear air dam, and rear spoiler are not fitted.

				Vehicle model	LANCER EV	OLUTION-V
			4V	VD		
					2,000 D0	OHC-T/C
Item					RS	GSR
Exterior	Re	ar panel gar	nish		•	•
parts	Bra	ake air ducts	s (front)		•	•
	Th	in-sheet boo	ly * ⁶		\bigtriangleup	
Interior		Seat type		Low-back seat	•	
parts	ats			Recaro seat (high-back type)		•
	nt se	Adjust-	Driver's	Slide adjustment	•	
	Fro	ment functions	seat; front	Recline adjustment		•
			ger's seat	Thigh support adjustment		•
	Re	ar seat	-	Low-back bench seat (fixed)	•	
				High-back bench seat (fixed)		
				Center armrest		•
	Se	at covering		Fabric front surface covering	•	
				Fabric (special)		•
	Fro	ont seatbelts	;	3-point ELR seatbelt \times 2		
				Adjustable shoulder belt anchors	•	•
	Re	ar seatbelts		3-point ELR seatbelt \times 2 + 2-point lapbelt \times 1		
	Fro	ont door trim		Molded type (soft)	•	•
				Fabric upholstery		•
				Door pockets (both sides)	•	
	Re	ar door trim		Molded type (soft)	•	•
				Fabric upholstery		
	Τrι	unk trim				•
	Flo	oor carpet (n	eedle punch)			
	Τrι	unk floor ma	t (needle punc	h)		
	Su	n visor		Driver's side + front passenger's side	•	•
				Ticket holder (driver's side)		
				Vanity mirror with cover (both sides)		•
	Rearview mirror			Day/night type (bonded onto windshield)		
	La	rge glove bo	x		•	•
	As	htray		In instrument panel		
				In rear		•

*6: Roof panel and trunk lid panel are made of thinner material, and side impact bars are not fitted.

			Vehicle model	LANCER EV	/OLUTION-V
				4۷	VD
				2,000 D	OHC-T/C
ltem				RS	GSR
Interior	Flo	oor console box	Standard type	•	
parts			Large lid type		
	Pu	Ill-out cup holder			•
	Gι	um pocket			
	Pe	ersonal pockets		_	
	Re	etractable handstrap	Front passenger's seat + rear seats $\times 2$	•	•
	Fo	otrest	Driver's seat		
	SF	RS airbag	Driver's seat + front passenger's seat		•
Equipment	Ва	attery	44B20L	•	•
	lgr	nition switch lamp tim	er		•
	s	Specially shaped	Halogen bulbs	_	
	amp	headlamps	Position lamps	•	•
	rior	Front fog lamps	PIAA reflector type		•
L	Exte	High-mount stop lamp	Fitted in rear spoiler		
	sdi	Interior lamp	·	•	•
	lam	Map lamp			
	erior	Interior lamp with bu	uilt-in map lamp (vehicle with sunroof)		Δ
	<u>l</u>	Trunk lamp			
	Re	ed-on-white meters			
	Ва	acklighting			
	Me	eters/gauges	Speedometer (electric)		
			Tachometer	•	•
			Tripmeter (LCD)		
			Fuel gauge		
			Water temperature gauge		
	Wa	arning/indicator	Fuel level warning		
	lar	nps	Oil pressure warning		
			Charging warning		
			Parking brake warning	•	
			Brake fluid level warning	•	
			Door ajar warning		
			Seatbelt warning		
			Engine check warning		
			ABS warning		•

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		_	LANCER EVOLUTION-V		
			4WD		
			2,000 DOHC-T/C		
Item				RS	GSR
Equipment	uipment Warning/indica		SRS warning		
	lar	nps	AYC warning		•
	Wa	arning buzzer	Ignition key removal reminder		
			Lighting monitor warning	• •	
	Windshield wipers and washers		Two-speed wipe		
			Intermittent wipe (fixed interval)	•	
			Intermittent wipe (variable interval)		•
			Mist wipe		
			Fins (driver's side)	•	•
			Wipe upon washer operation		
	Re	ar wiper and washer	Intermittent wipe (fixed interval)	\bigtriangleup	•
	Audio	Audio fitting kit	For two speakers	•	
		(antenna, harness, audio bracket)	For four speakers		•
		Full-logic cassette player with electronically tuned AM/FM ra- dio (AM stereo) + six speakers + rear window glass diversity antenna (compatible with CD autochanger)			Δ
		Pole antenna		•	
		Rear window glass	antenna		•
	Dię	gital clock		•	
	Cię	garette lighter		·	•
	Air conditioning	Heater	Automatic		•
			Manual	•	
		Fully automatic air c	conditioner		•

COLD-AREA SPECIFICATIONS

<LANCER EVOLUTION-IV>

 \triangle : Maker option

Equipment specifications may vary depending on time of production.

	Vehicle model	LANCER EVOLUTION-IV		
	4WD 2,000 DOHC-T/C			
Item		RS	GSR	
Starter (kW)	$0.7 \rightarrow 0.9 < M/T >$			
	$0.9 \rightarrow 1.0 < A/T >$			
	$2.0 \rightarrow 2.2 \text{ }$			
Alternator (V-A)	12–100 → 12–120			
Throttle knob				
Weather strip silicone coating		Δ	\bigtriangleup	
Battery	$28B19L \rightarrow 55D23L$			
	$34B19L \rightarrow 55D23L$			
	$44B20L \rightarrow 55D23L$			
	$44B20L \rightarrow 55B24L$	\bigtriangleup	\bigtriangleup	
Wiper circuit breaker	Δ	\bigtriangleup		
Heavy-duty heater	\triangle	\triangle		
Rear seat heater duct	Δ			
Cold-zone specification label	Δ	Δ		
Electrically retractable door mirrors with		\triangle		

<LANCER EVOLUTION-V>

	Vehicle model	LANCER EV	OLUTION-V
		4V	/D
		2,000 DC	DHC-T/C
Item		RS	GSR
Weather strip silicone coating			
Battery	$44B20L \rightarrow 55B24L$		
Wiper circuit breaker	Λ	Δ	
Heavy-duty heater			
Rear seat heater duct			
Cold-zone specification label			
Electrically retractable door mirrors with		\bigtriangleup	

PERIODIC INSPECTIONS

<EVOLUTION-IV>

The items shown below have been revised. Other items are the same as for the base vehicle or previous model.

■PERIODIC INSPECTION ITEMS

Evaluation Criteria Table

Insp	ection/maintenar	nce item					
Inspection location		Inspection item	Evaluation criteria				
Steering system	Steered wheels	Wheel alignment	Toe-in: -3 to 3 mm <e-cn9a> Camber: $-1^{\circ}00' \pm 30'$ <e-cn9a> Caster: $3^{\circ}50' \pm 30'$ <e-cn9a></e-cn9a></e-cn9a></e-cn9a>				
	Power steer- ing system	Belt looseness and damage	4G63	53 Indicator on arm of autom within range shown on spi drawing on right).		automatic tensioner must be on spindle bracket (see "A" in	
Braking system	Brake drums and shoes	Drum-to-lin- ing clearance	Use adjuster to pre back by five notche	ess linings lightly es <e-cn9a>.</e-cn9a>	against drum, the	en turn adjuster	
		Wear on rub- bing surfaces and linings of	Applicable vehicle model		Standard thickness (rear wheel)	Service limit (rear wheel)	
		shoes	E-CN9A		2.8 mm	1.0 mm	
		Drum wear and damage	Applicable vehicle model		Standard diameter (rear wheel)	Service limit (rear wheel)	
			E-CN9A		168.0 mm	169.0 mm	
	Brake discs and pads	discs s Pad wear Disc wear and damage	Applicable vehicle model		E-CN9A	E-CK6A	
			Standard thickness	Front wheel	10.0	mm	
				Rear wheel	9.5	mm	
			Service limit	Front wheel	2.0 mm		
				Rear wheel	2.0 mm		
			Applicable vehicle model		E-C	N9A	
			Standard thickness	Front wheel	24.0 mm		
				Rear wheel	20.0	mm	
			Service limit	Front wheel	22.4	mm	
				Rear wheel	18.4	mm	
Drive-	Wheels	/heels Tire pressures	Tire specification	Vehicle model	Front wheel	Rear wheel	
compo- nents			205/60R15 91H, 205/50R16 87V, 205/55R16 89V	E-CN9A	2.2 kg/cm ²	1.9 kg/cm ²	

Insp	ection/maintenar	nce item			
Inspecti	on location	Inspection item		Evaluation criteria	
Power train	Differentials	Oil leakage and level	Normal differential Must be 0 to 8 n Torque transfer diffe Must be 0 to 6 n Torque transfer diffe Must reach botte Torque transfer diffe Make sure level hicle has been o engine and wait ambient temper	oil level: nm below bottom of filler p erential oil level: nm below bottom of filler p erential clutch lubricating om of filler plug hole. erential hydraulic unit fluic in reservoir is between MA driven in ambient tempera five minutes before chec ature is higher.	blug hole. blug hole. oil level: AX and MIN marks. If ve- ture of 10 to 30°C, stop king level. Wait longer if
Electrical	Ignition	Ignition timing	Engine category	Idling	Regulated
system	system		2.0L-DOHC	5/850 BTDC°/rpm	5/850 BTDC°/rpm
Engine	Engine main	Low-speed	Idling speed		
	unit	tion condition	Engine category	Spe	ed
			2.0L-DOHC	850 rpm	
			Automatic transmission: N range		
		Cylinder head and manifold tightness Compression pressure Valve	Tightening torques: Cylinder head bo ened by torque- Manifold bolts: Intake: 17 to 22 Exhaust: 26 to 3 44 to 5	: olts (cold): Unnecessary to to-yield method. Nm {1.7 to 2.2 kgf·m} (2.0 32 Nm {2.7 to 3.3 kgf·m} (1 54 Nm {4.5 to 5.5 kgf·m} (1	o check as bolts are tight- DL-DOHC) M8 bolts: 2.0L-DOHC) M10 bolts: 2.0L-DOHC)
			Engine category	Compression pressure limit	Cylinder-to-cylinder difference
				4 cyl.	
			2.0L-DOHC	9.7 – 250 kg/cm ² -rpm	Max. 1.0 kg/cm ²
			All values apply to hot engine.		
		clearance	Engine category	Intake	Exhaust
			2.0L-DOHC	0 mm	0 mm
			Valve clearances in engines not shown here are automatically adjusted and unnecessary to be inspected.		
	Cooling	Fan belt	Data apply to alternator belt		
	system	and damage	4G6	Indicator on arm of automatic tensioner must be within range shown on spindle bracket (see "A" drawing on right).	

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<EVOLUTION-V>

The items shown below have been revised. Other items are the same as for the EVOLUTION-IV.

■PERIODIC INSPECTION ITEMS

Evaluation Criteria Table

Inspection/maintenance item						
Inspec	tion location	Inspection item	Evaluation criteria			
Steering system	Steered wheels	Wheel alignment	Toe-in: $0 \pm 3 \text{ mm}$ Camber (adjustable in two stages): $-1^{\circ}00' \pm 30'$ (factory setting) $-2^{\circ}00' \pm 30'$ Caster: $3^{\circ}54' \pm 30'$			
Braking	Brake discs	Pad wear	Standard thickness	Front wheel	10.0 mm	
system	and pads			Rear wheel	9.5 mm (15-inch)	
					9.0 mm (16-inch)	
			Service limit	Front wheel	2.0 mm	
				Rear wheel	2.0 mm	
		Disc wear and	Standard thickness	Front wheel	24.0 mm (15/16-inch)	
		damage			32.0 mm (17-inch)	
				Rear wheel	20.0 mm (15-inch)	
					22.0 mm (16-inch)	
			Service limit	Front wheel	22.4 mm (15/16-inch)	
					29.8 mm (17-inch)	
				Rear wheel	18.4 mm (15-inch)	
					20.4 mm (16-inch)	
Drive- control	Wheels	Tire pressures	205/60R15 91H, 205/55R16 89V,	Front wheel	2.2 kgf/cm ²	
compo- nents			205/50R16 87V, 225/45ZR17	Rear wheel	1.9 kgf/cm ²	
Power train	Differentials	Oil leakage and level	Oil level in differential Must be 0 to 8 mm Oil level in torque tran Must be 0 to 5 mm Torque transfer differe Must reach bottom Torque transfer differe Make sure level in n hicle has been driv engine and wait fiv ambient temperatu	n differential other than torque transfer differential: be 0 to 8 mm below bottom of filler plug hole. in torque transfer differential: be 0 to 5 mm below bottom of filler plug hole. ansfer differential clutch lubricating oil level: reach bottom of filler plug hole. ansfer differential hydraulic unit fluid level: sure level in reservoir is between MAX and MIN marks. If has been driven in ambient temperature of 10 to 30°C, s e and wait five minutes before checking level. Wait longe ent temperature is higher.		
Engine	Engine main unit	Cylinder head and manifold tightness	Tightening torques: Cylinder head bolts (cold): Unnecessary to check as bolts are tight- ened by torque-to-yield method. Manifolds bolts: Intake: 17 to 22 Nm {1.7 to 2.2 kgf·m} (M8) 29 to 41 Nm {3.0 to 4.2 kgf·m} (M10) Exhaust: 26 to 32 Nm {2.7 to 3.3 kgf·m} (M8) 44 to 54 Nm {4.5 to 5.5 kgf·m} (M10)			

Insp	ection/maintenar	nce item	
Inspection location liter		Inspection item	Evaluation criteria
Engine Cooling system		Radiator cap functionality	Valve opening pressure: 83 to 123 kPa {0.85 to 1.25 kgf/cm ² }

■PERIODIC REPLACEMENTS

NOTE

Replacement is performed at indicated interval or after indicated distance, whichever is sooner.

Periodic replacement item	Vehicle for special application or rental use		Vehicle for private passenger use		Remarks
	Replacement interval (years)	Replacement interval (×1,000 km)	Replacement interval (years)	Replacement interval (×1,000 km)	
Oil in differential left/right torque transfer mechanism		40		40	