TECHNICAL INFORMATION MANUAL

LANCER
EVOLUTION-IV
EVOLUTION-V

Pub. No. N9806CNCP9

RALLIART

IMPROVED HANDLING STABILITY AND ACCELERATION RESPONSE <EVOLUTION-V>

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

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

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

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 valve opening pressure (88 kPa {0.9 kgf/cm^2} → 108 kPa {1.1 kgf/cm^2})
- Modified radiator fan assembly
- Intercooler water spray system plus new radiator water spray system

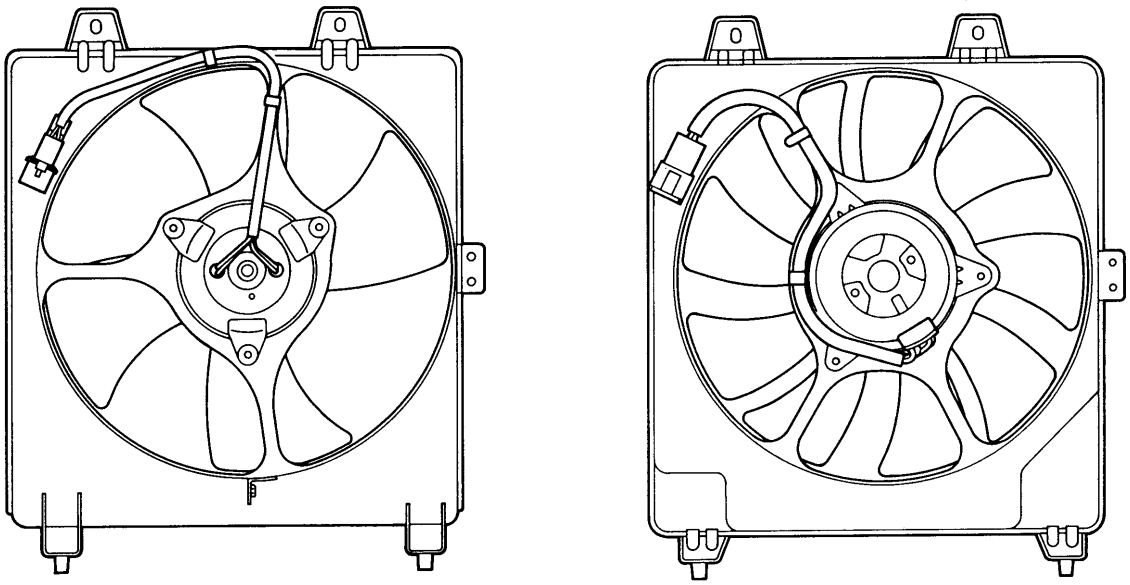
RADIATOR FAN ASSEMBLY

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	←
	Type	Direct-current ferrite	←
	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>**



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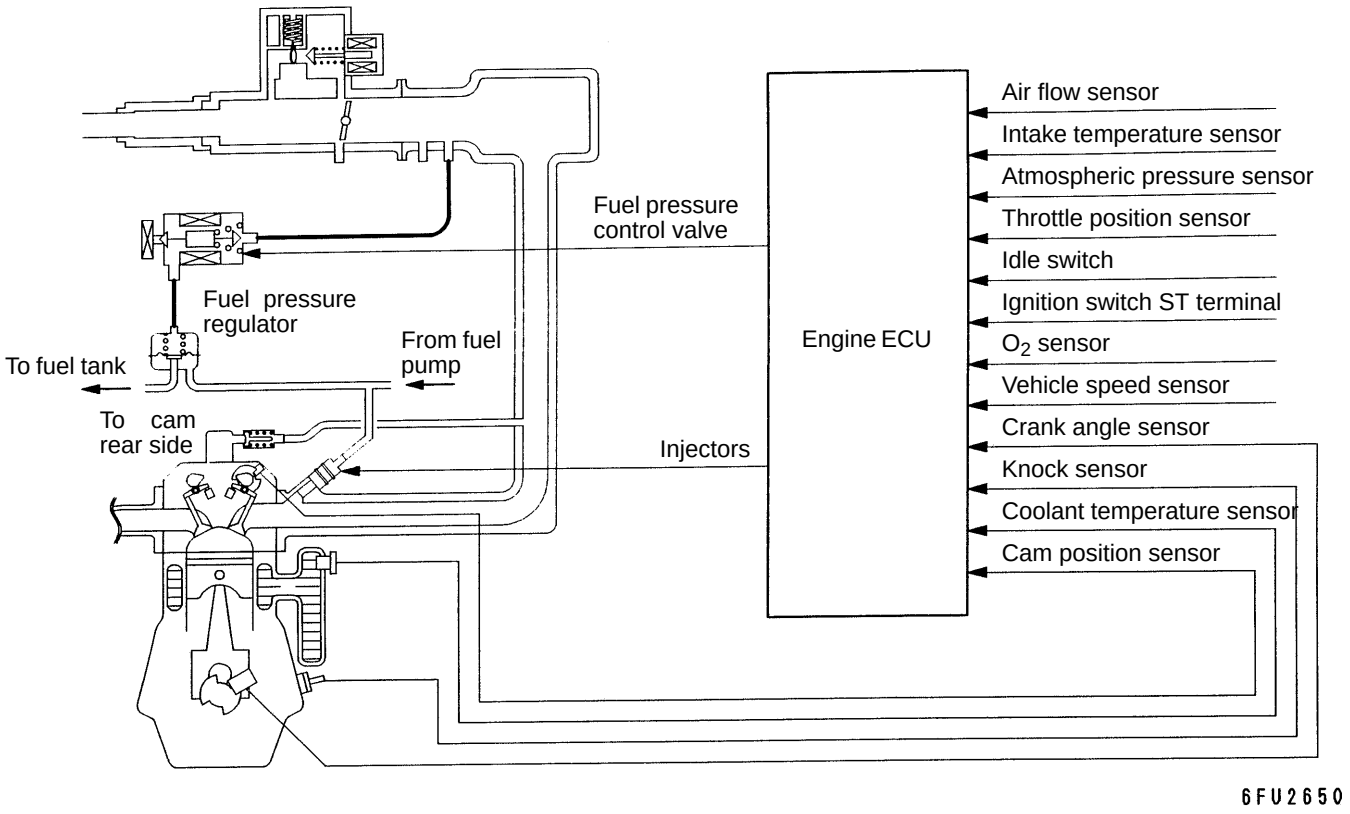
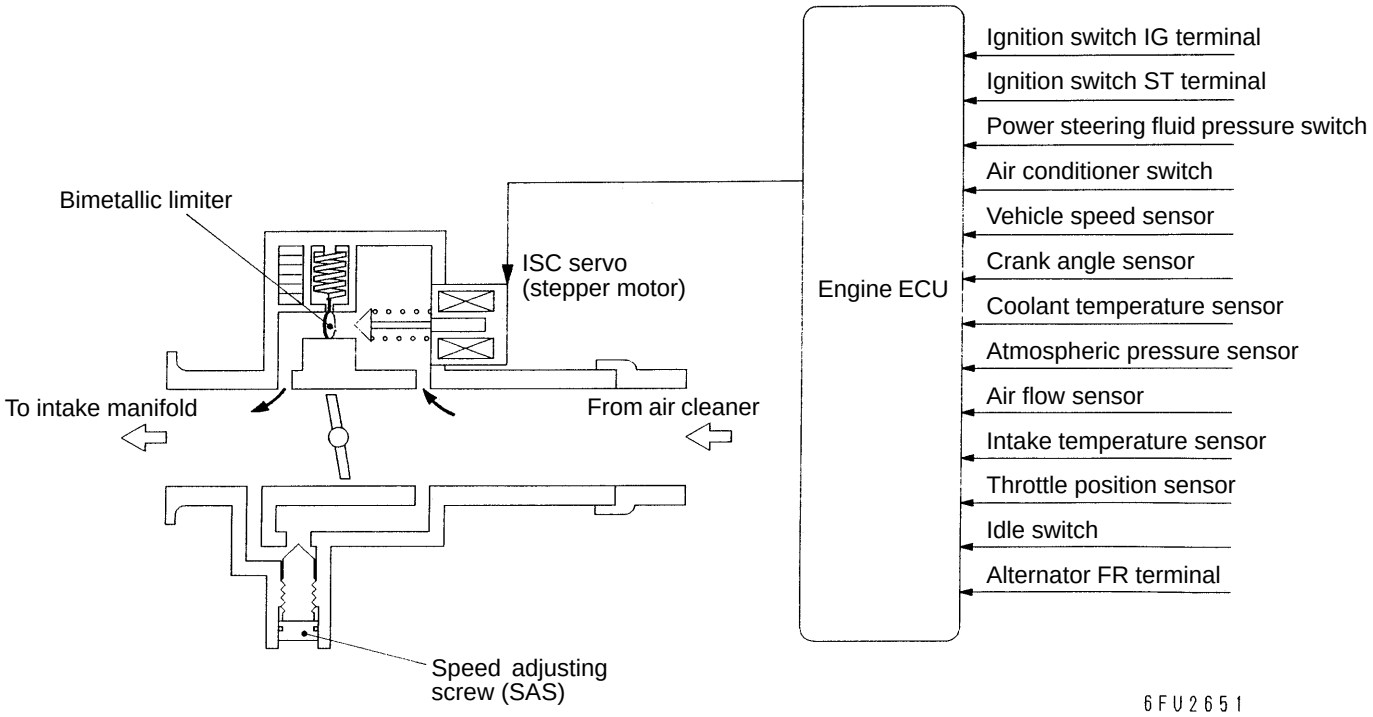
FUEL INJECTION CONTROL



IDLE SPEED CONTROL



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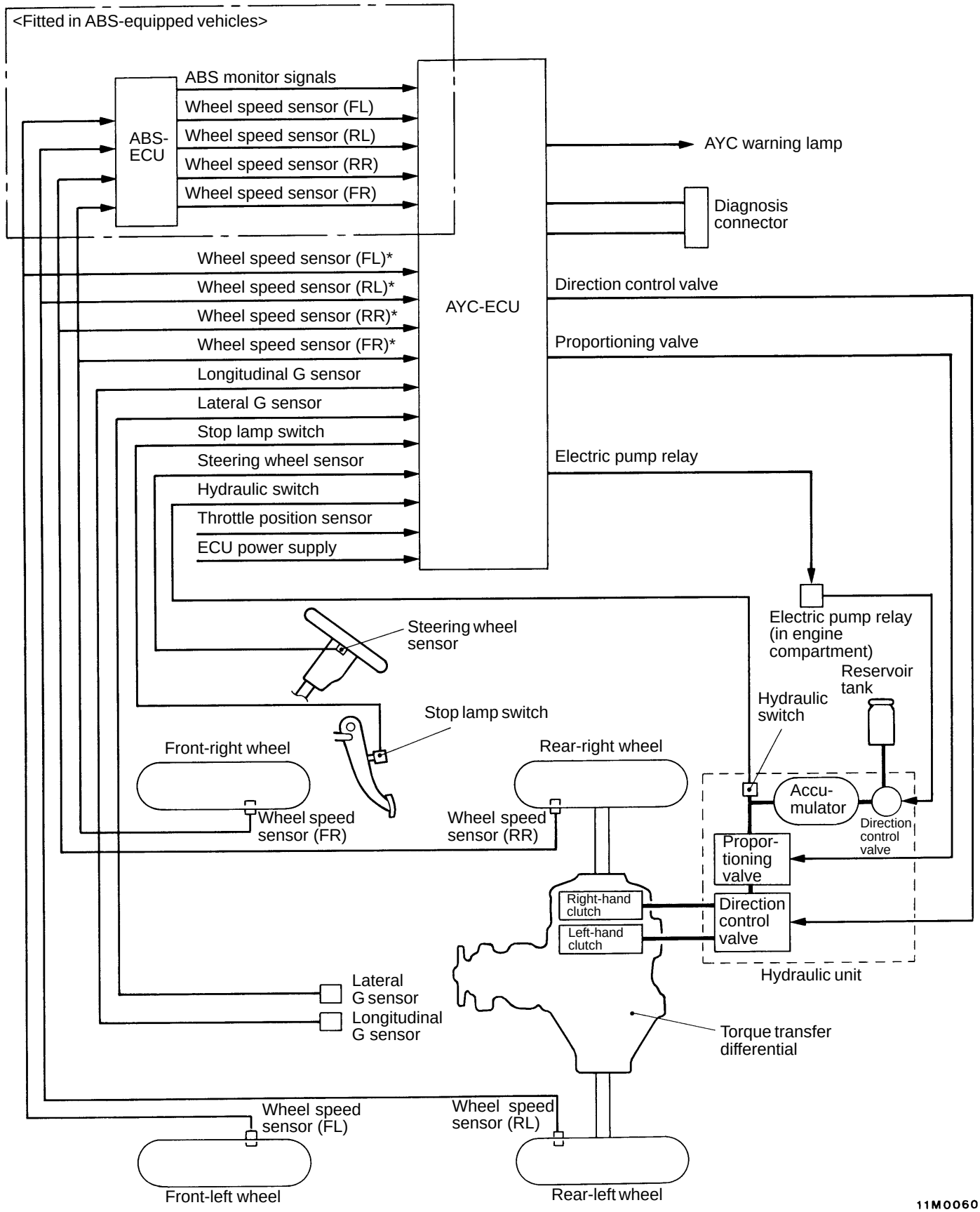
AYC System Configuration

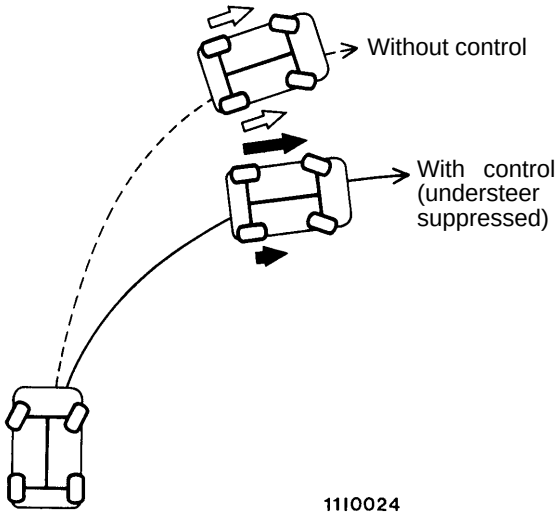


NOTE
*: Vehicles without ABS

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.



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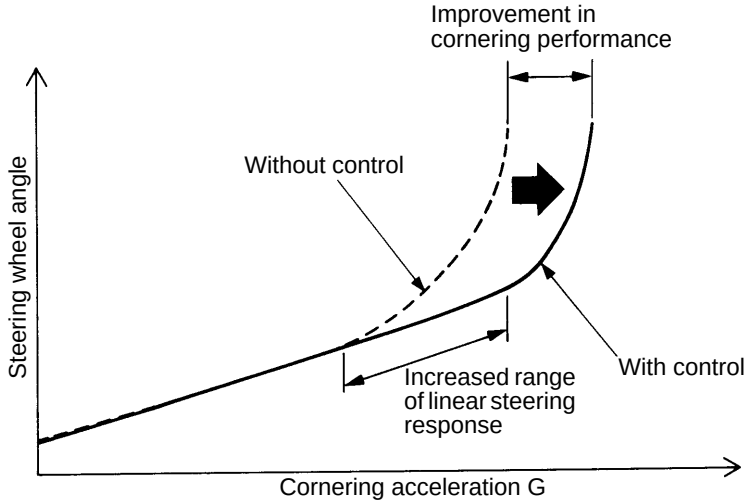

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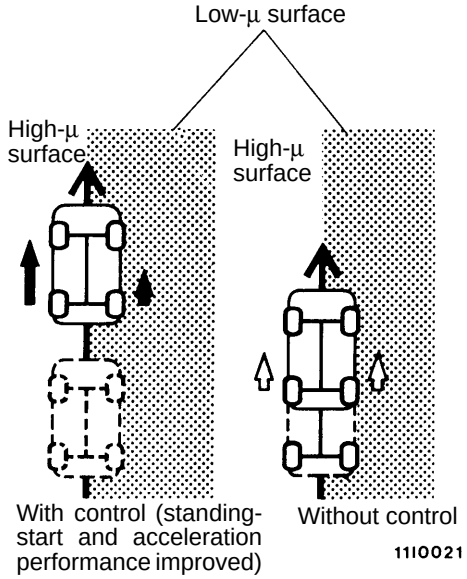
(2) Control on Poor Road Surfaces

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.



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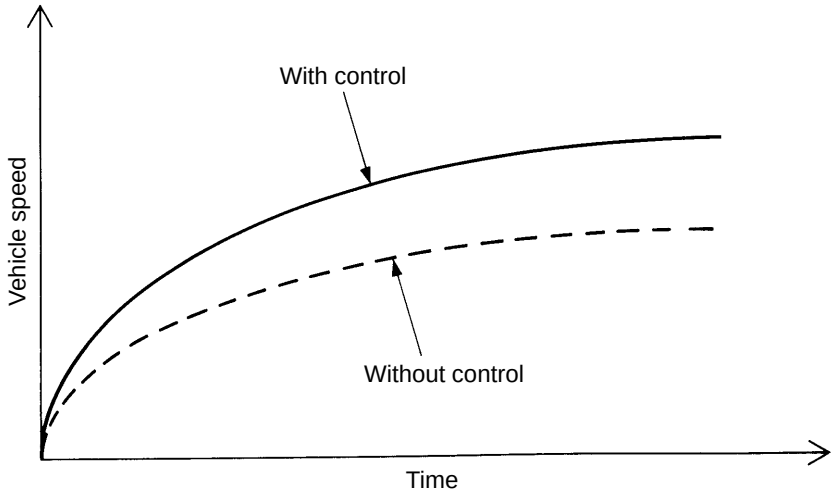

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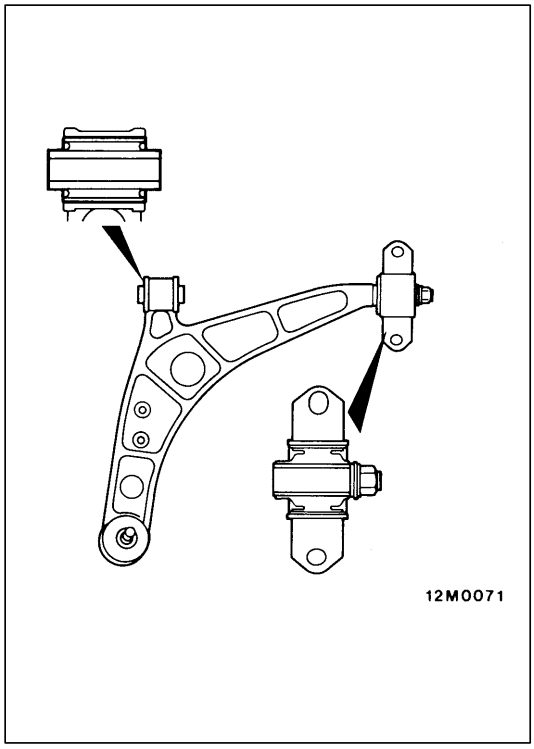
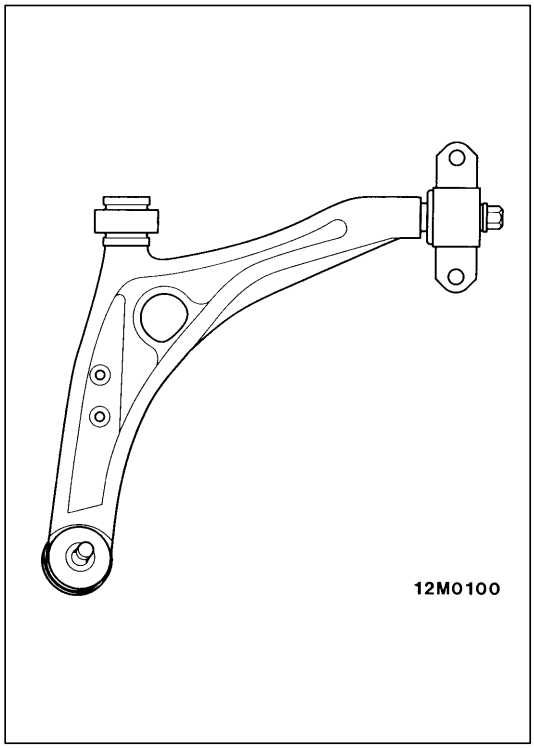


LOWER ARMS

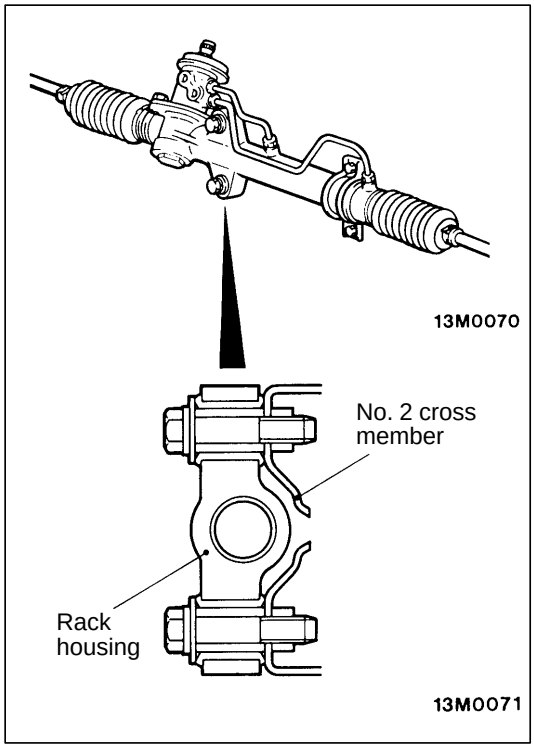
<EVOLUTION-IV>

(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.



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.

MAIN BODY

COLORING

Specifications

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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	TT	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

EQUIPMENT

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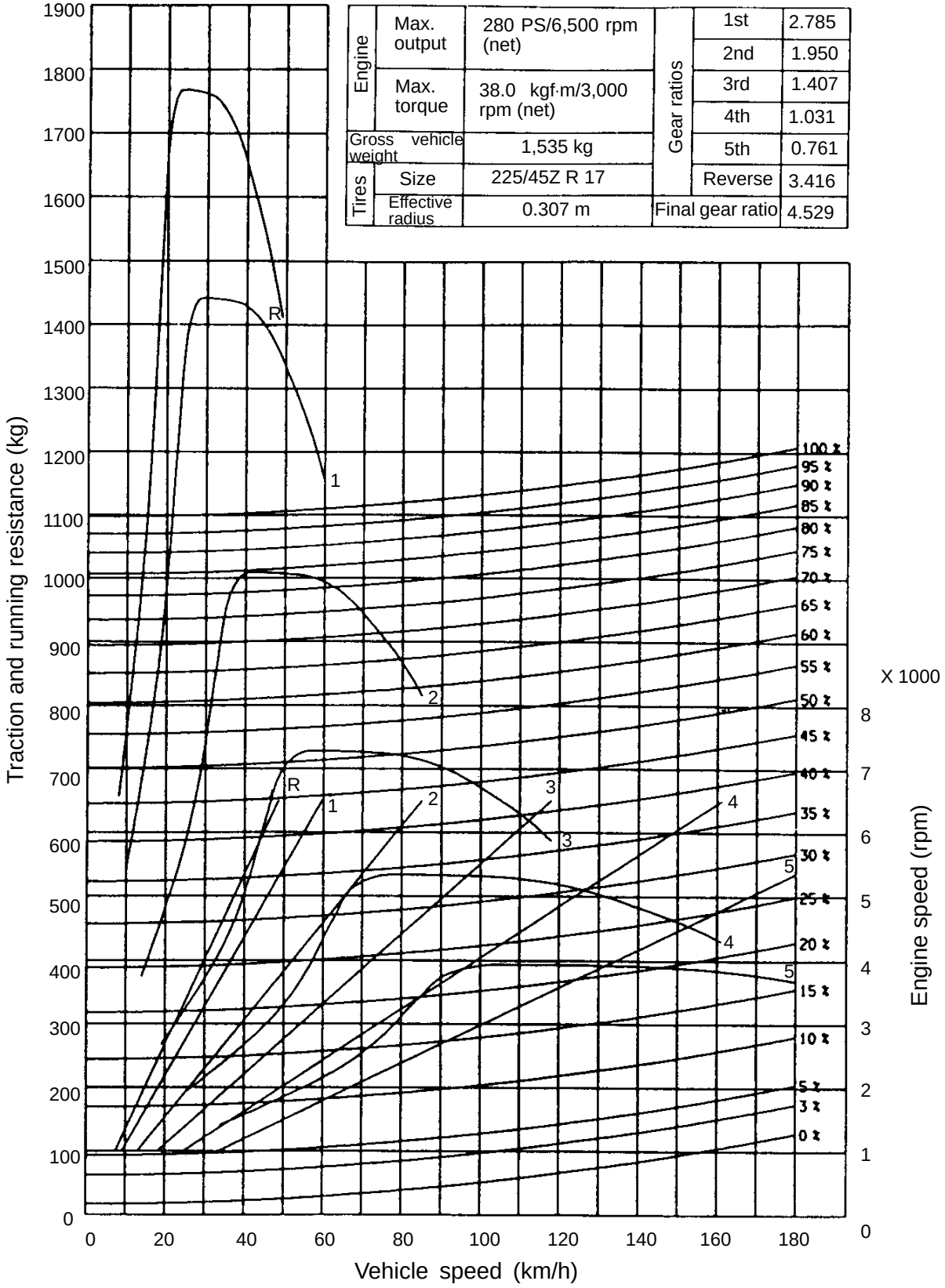
<LANCER EVOLUTION-V (GF-CP9A-SNDF, SNGF)>



Item \ Model				GF-CP9A		
				SNDF		SNGF
Min. ground clearance (m)				0.150		
Performance	Max. speed (estimated) (km/h)			180		
	Fuel consumption (km/ℓ)	Flat surface (60 km/h)		17.4	16.0	17.4
		10-15-mode		10.2*1, 9.7*2	9.7*1, 9.2*2	10.2*1, 9.7*2
	Braking distance to complete stop (initial speed) (m)			60.0 (100) [56.0 (100) with ABS]		
	Min. turning radius (m)			5.5		
Engine	Bore × stroke (mm)			85.0 × 88.0		
	Compression ratio			8.8 (with unleaded premium gasoline)		
	Max. output (PS/rpm)			280/6,500 (net)		
	Max. torque (kgf·m/rpm)			38.0/3,000 (net)		
	Valve/port opening/closing timing	Intake	Open	BTDC 21°		
			Close	ABDC 59°		
		Exhaust	Open	BBDC 58°		
			Close	ATDC 18°		
Fuel tank capacity (ℓ)				50		
Electrical devices	Ignition advance device type and performance			Electronic: –10°to45° (in crank angle)		
	Spark plug model			PGR6A, PGR7A, P20PR-P8, or P22PR-P8		
	Battery capacity (Ah)			24 (5), 27 (5), 34 (5), 36 (5), 48 (5), 52 (5)		
	Alternator output (V-A)			12–90 or 100		
Power train	Transmission	Gear ratios	1st	2.785		
			2nd	1.950		
			3rd	1.407	1.444	1.407
			4th	1.031	1.096	1.031
			5th	0.761	0.825	0.761
			Reverse	3.416		
	Differential	Reduction ratio		Front: 4.529	Front: 4.875	Front: 4.529
				Rear: 3.312 or 3.307		
	Transfer		Reduction ratio	3.312		
Chassis	Service brakes			Hydraulic, Front: disc, Rear: disc		
	Parking brake mechanism			Mechanically activated; acts upon wheels		
	Suspension	Front/rear		MacPherson strut/multilink		