

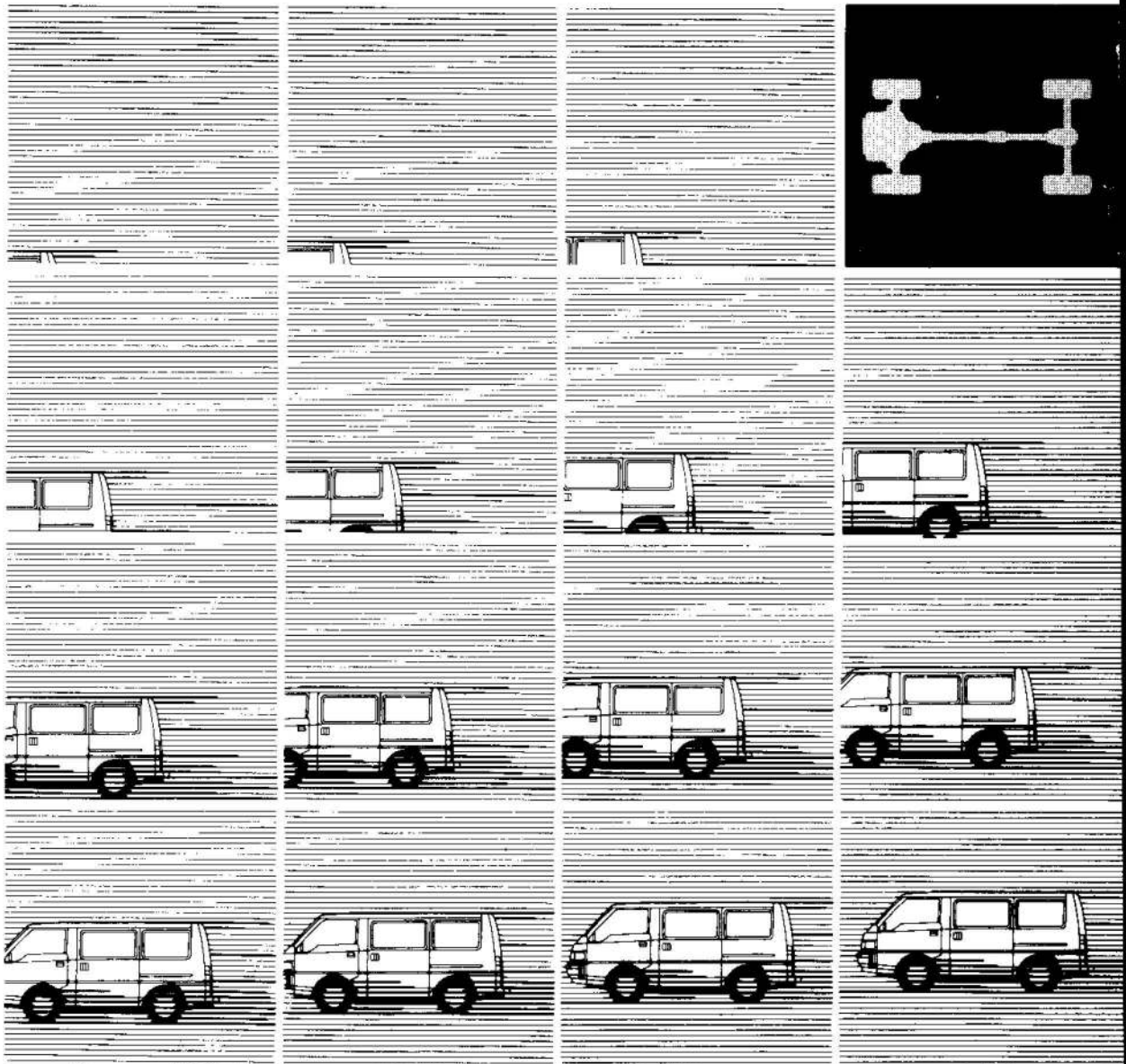


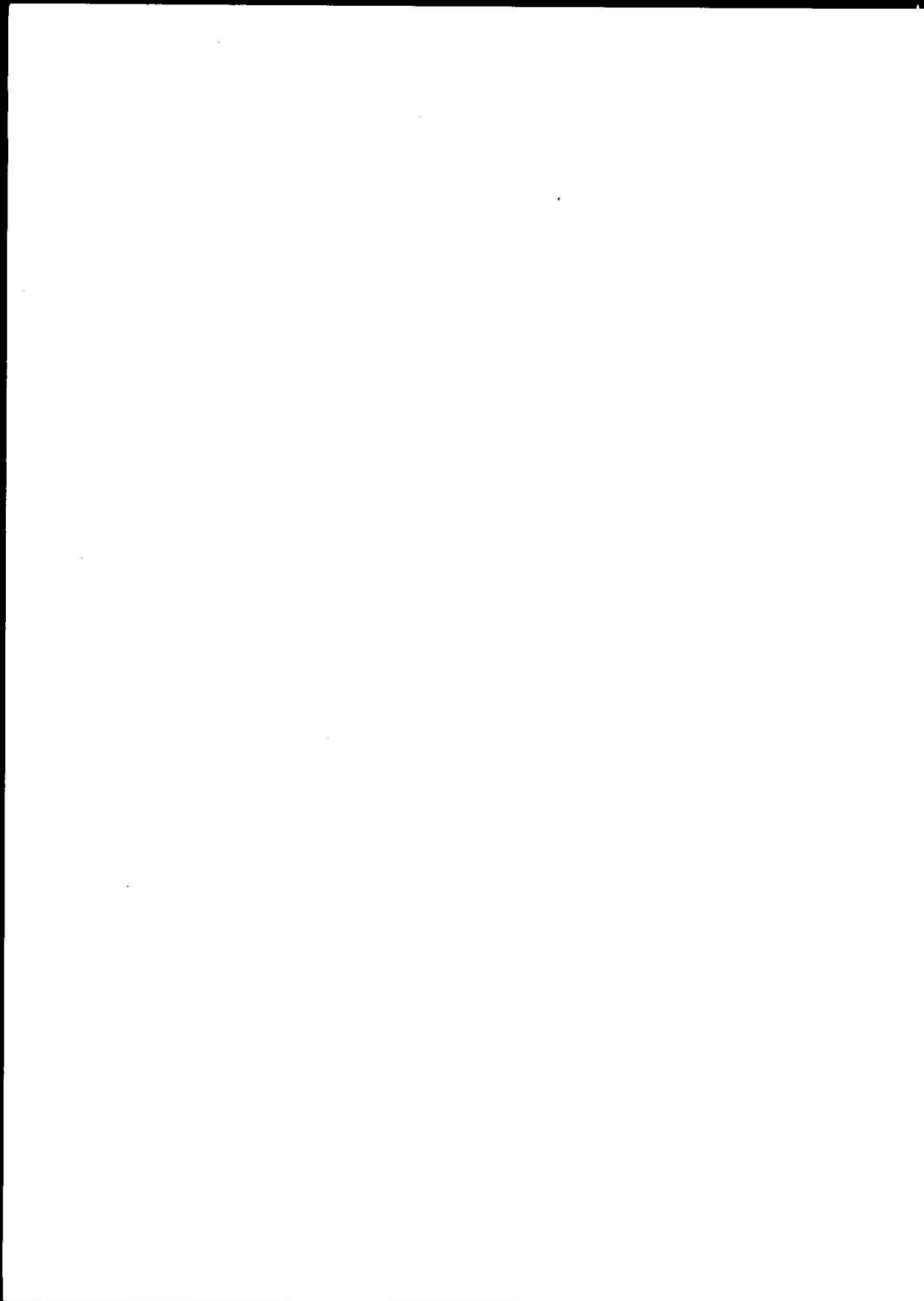
Workshop Manual

chassis

SUPPLEMENT

L300 '97





MITSUBISHI L300

WORKSHOP MANUAL SUPPLEMENT

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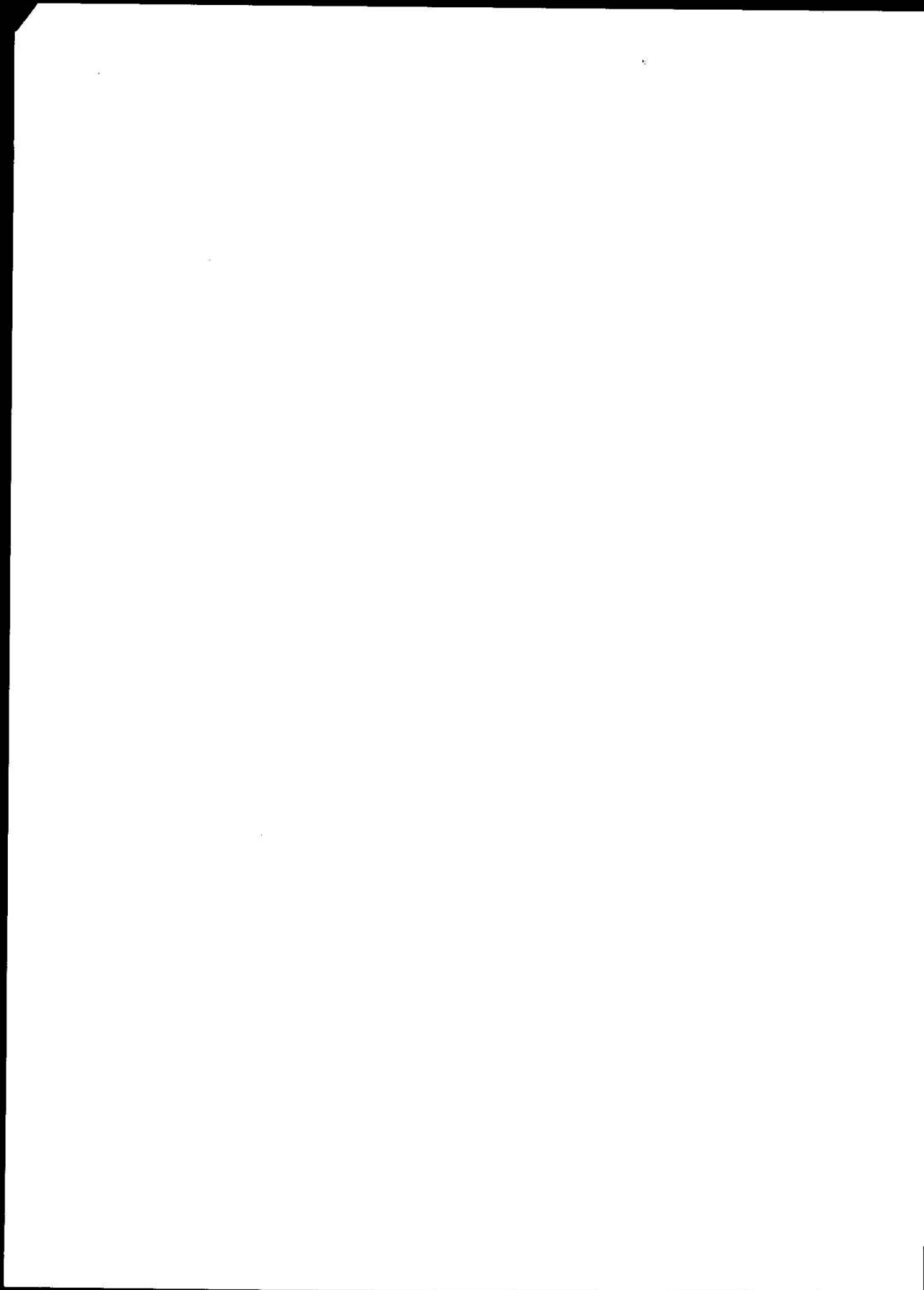
FOREWORD

This Workshop Manual contains procedures for removal, disassembly, inspection, adjustment, reassembly and installation, etc. for service mechanics. Use the following manuals in combination with this manual required.

WORKSHOP MANUAL CHASSIS GROUP	PWWE8608 (Looseleaf edition)
ENGINE GROUP	PWWE9409 PWEE□□□□ (Looseleaf edition)
WIRING HARNESS	PHWE8604□ PHWE8907□ PHWE9022□
PARTS CATALOGUE	B603180□A□ B803180□A□ BFA3180□A□

All information, illustrations and product descriptions contained in this manual are current as at the time of publication. We, however, reserve the right to make changes at any time without prior notice or obligation.





GENERAL

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VEHICLE IDENTIFICATION

MODELS

Vehicles for Europe

Model code		Engine model	Transmission model	Fuel supply system	Body type
P03V	LZEL6	4G63 -16VALVE	R5M21 (2WD-5MT) <Column shift>	MPI	Window van
	GLZEL6/R6				Panel van
P13V	HLZEL6	4D56	R5M21 (2WD-5MT) <Column shift>	MPI	Window van, High roof, Long body
	JLZEL6/R6				Panel van, High roof, Long body
P05V	LZL6	4D56	R5M21 (2WD-5MT) <Column shift>	Diesel fuel injection	Window van
	GLZL6/R6				Panel van
P15V	HLZL6	4D56	R5M21 (2WD-5MT) <Column shift>	Diesel fuel injection	Window van, High roof, Long body
	JLZL6/R6				Panel van, High roof, Long body
P25V	GLNLT6	4D56 with turbocharger	V5M21 (4WD-5MT) <Floor shift>	Diesel fuel injection	Panel van
P45V	JLNLT6				Panel van, High roof, Long body
P03W	LZXEL6	4G63 -16VALVE	R5M21 (2WD-5MT) <Column shift>	MPI	Minibus
P05W	LZXL6	4D56	R5M21 (2WD-5MT) <Column shift>	Diesel fuel injection	

Vehicles for General Export

Model code		Engine model	Transmission model	Fuel supply system	Body type
P13V	JLNEL	4G63 -16VALVE	R5M21 (2WD-5MT) <Floor shift>	MPI	Panel van, High roof, Long body
P15V	JLNL/R	4D56		Diesel fuel injection	
P06V	GLNL/R	4G92 -16VALVE	R5M21 (2WD-5MT) <Floor shift>	Conventional Carburettor	Panel van
	GLNAR1D			Electronic Controlled Carburettor	
P16V	JLNL/R	4D56	R5M21 (2WD-5MT) <Floor shift>	Conventional Carburettor	Panel van, High roof, Long body
	JLNAR1D			Electronic Controlled Carburettor	

Model code		Engine model	Transmission model	Fuel supply system	Body type
P03W	SNUL	4G63 -16VALVE	P5M21 (2WD-5MT) <Floor shift>	Conventional Carburettor	Minibus
P13W	HLNL/R	4G63 -16VALVE			Minibus, High roof, Long body
P23W	SNUL	4G63 -16VALVE	V5M21 (4WD-5MT) <Floor shift>		Minibus
P15W	HLNL/R	4D56	R5M21 (2WD-5MT) <Floor shift>	Diesel fuel injection	Minibus, High roof, Long body

Vehicles for GCC

Model code		Engine model	Transmission model	Fuel supply system	Body type
P03V	GLNLW	4G63 -16VALVE	R5M21 (2WD-5MT) <Floor shift>	Conventional Carburettor	Panel van
P13V	JLNLW				Panel van, High roof, Long body
P15V	JLNLW	4D56		Diesel fuel injection	
P03W	SNULW	4G63 -16VALVE	R4AW2 (2WD-4AT) <Floor shift>	Conventional Carburettor	Minibus
	SRULW				
P13W	HLNLW	4G63 -16VALVE	R5M21 (2WD-5MT) <Floor shift>		Diesel fuel injection
P15W	HLNLW	4D56		Diesel fuel injection	

Vehicles for Australia

Model code		Engine model	Transmission model	Fuel supply system	Body type	
P03V	GSRN8	4G63 -16VALVE	R5M21 (2WD-5MT) <Floor shift>	Conventional Carburettor	Panel van	
	GSRR8		R4AW2 (2WD-4AT) <Floor shift>			
	SNR8		R5M21 (2WD-5MT) <Floor shift>			Window van
	SRR8		R4AW2 (2WD-4AT) <Floor shift>			
P14V	JLNER8	4G64 -16VALVE	R5M21 (2WD-5MT) <Floor shift>	MPI	Panel van, Long body	
	JLRER8		R4AW2 (2WD-4AT) <Floor shift>			
P24V	GSNER8		V5M21 (4WD-5AT) <Floor shift>			Panel van

Model code		Engine model	Transmission model	Fuel supply system	Body type
P05V	GSR8	4D56	R5M21 (2WD-5MT) <Floor shift>	Diesel fuel injection	Panel van
P15V	JLNR8		R5M21 (2WD-5MT) <Floor shift>		Panel van, Long body
P03W	SNR8	4G63 -8VALVE	R5M21 (2WD-5MT) <Floor shift>	Conventional Carburettor	Minibus
	SRR8		R4AW2 (2WD-4AT) <Floor shift>		

NEW VEHICLES

New vehicles have been added as shown below. Each of the new vehicles has been developed from the respective basic vehicles.

Specifications show only a particular part of the new vehicles. For the remaining part, refer to specifications for basic vehicles.

VEHICLES FOR EUROPE

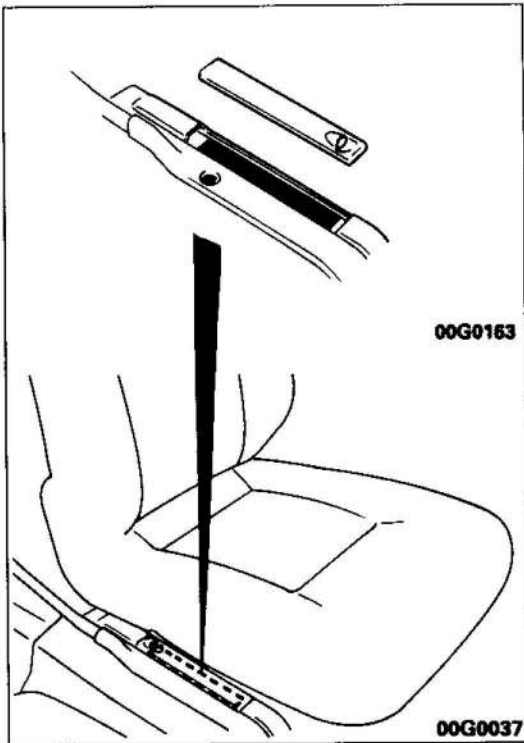
New vehicle	Basic vehicle	Note
P03WLZXEL6	P04WLZXAL6	1997 models

VEHICLES FOR GENERAL EXPORT

New vehicle	Basic vehicle	Note
P13VJLNEL	P13VJLZEL	Shift lever location has been changed from column to floor.
P15VJLNL/R	P15VJLZL/R	
P06VGLNL/R	P06VGLZL/R	
P06VGLNAR1D	P06VGLZAR1D	
P16VJLNL/R	P16VJLZL/R	
P16VJLNAR1D	P16VJLZAR1D	
P03WSNUL	P03WSZUL	
P13WHLNL/R	P13WHLZL/R	
P15WHLNL/R	P15WHLZL/R	

VEHICLES FOR GCC

New vehicle	Basic vehicle	Note
P03VGLNLW	P03VGLZLW	Shift lever location has been changed from column to floor.
P13VJLNLW	P13VJLZLW	
P15VJLNLW	P15VJLZLW	
P03WSNULW	P03WSZULW	
P13WHLNLW	P13WHLZLW	
P15WHLNLW	P15WHLZLW	



CHASSIS NUMBER

The chassis number is stamped on the floor pan (B).

NOTE

The Mitsubishi symbol at both ends of the chassis number is only on vehicle destined for Europe and Australia.

<Vehicles for General Export and GCC>

D G N P O 5 V V A 00001
 3 4 5 6 7 8 9 10 11 13

<Vehicles for Australia>

J M F G N P O 5 V V A 000001
 1 2 3 4 5 6 7 8 9 10 11 13

<Vehicles for Europe>

J M B G Z P O 5 V V A 0 00001
 1 2 3 4 5 6 7 8 9 10 11 12 13

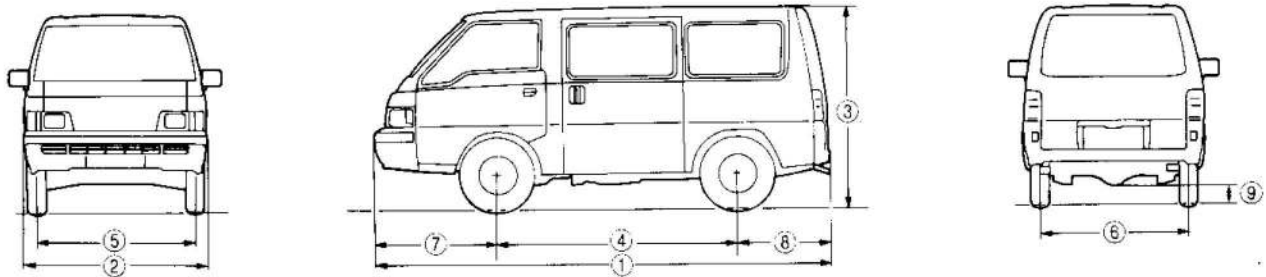
No.	Items		Contents
1	Fixed figure <Vehicles for Europe and Australia>	J	Asia
2	Distribution channel <Vehicles for Europe and Australia>	M	Japan channel

No.	Items		Contents
3	Destination	A	For Europe, right hand drive
		B	For Europe, left hand drive
		C	For General Export, right hand drive
		D	For General Export or GCC, left hand drive
		F	For Australia, right hand drive
4	Body style	G	Standard roof (Dark window)
		H	High roof (Clear window)
		J	High roof (Dark window)
		L	Minibus (5 door)
		S	Minibus (4 door)
5	Transmission type	C	4-speed manual transmission (Column shift)
		N	5-speed manual transmission (Floor shift)
		R	Automatic transmission
		Z	5-speed manual transmission (Column shift)
6	Vehicle line	P	New L300
7	Chassis type	0	Standard wheelbase <2WD>
		1	Long wheelbase <2WD>
		2	Standard wheelbase <4WD>
		4	Long wheelbase <4WD>
8	Development order	1	1,439 m ^l , Petrol engine
		2	1,597 m ^l , Petrol engine <4G32>
		3	1,997 m ^l , Petrol engine
		4	2,351 m ^l , Petrol engine
		5	2,476 m ^l , Diesel engine
		6	1,597 m ^l , Petrol engine <4G92>
9	Body type	V	Panel van
		W	Minibus
10	Model year	V*	1997
11	Plant	A	Mizushima Motor Vehicle Works
		Z	Okazaki Plant of Nagoya Motor Vehicle Works
		Y, P, J	Ooe Plant of Nagoya Motor Vehicle Works
12	Exhaust emission specification (Vehicles for Europe)	0	ECE15-04
		1	A10 for S and CH
13	Serial number	-	-

NOTE

* indicates change.

MAJOR SPECIFICATIONS



00G0219

VEHICLE FOR EUROPE

- Vehicles, which are not described, have not been changed.

Items			P05VLZL6	P05VGLZL6 P05VGLZR6	P15VHLZL6	P15VJLZL6 P15VJLZR6
Vehicle dimensions mm	Overall length	①	4,285	4,285	4,685	4,685
	Overall width	②	1,690	1,690	1,690	1,690
	Overall height (unladen)	③	1,845	1,845	1,960	1,960
	Wheelbase	④	2,235	2,235	2,435	2,435
	Tread-Front	⑤	1,445	1,445	1,445	1,445
	Tread-Rear	⑥	1,380	1,380	1,380	1,380
	Overhang-Front	⑦	1,160	1,160	1,160	1,160
	Overhang-Rear	⑧	890	890	1,090	1,090
	Ground clearance (unladen)	⑨	195	195	195	195
Vehicle weight kg	Kerb weight		1,425/ 1,445 *	1,365/ 1,385 *	1,490/ 1,510 *	1,385/ 1,405 *
	Maximum vehicle weight		2,275	2,275	2,505	2,505
Seating capacity			6	3	6	3
Performance	Maximum speed km/h		130	130	126	126
	Maximum climbing ability tanθ		0.50	0.42	0.42	0.42
	Minimum turning radius m		4.5	4.5	4.9	4.9
Engine	Model		4D56	4D56	4D56	4D56
	Total displacement m ³		2,477	2,477	2,477	2,477

NOTE

* The figure before the / is the figure that is applicable without options; the figure following the / is the figure that is applicable with all options.

Items		P05VLZL6	P05VGLZL6 P05VGLZR6	P15VHLZL6	P15VJLZL6 P15VJLZR6
Fuel system	Carburettor	Fuel injection	Fuel injection	Fuel injection	Fuel injection
	Fuel pump type	Vane type	Vane type	Vane type	Vane type
	Fuel tank capacity lit	55	55	55	55
Coolant quantity *1 lit		8.7 (9.2)	8.7 (9.2)	8.7 (9.2)	8.7 (9.2)
Clutch type		Dry single-disc clutch with hydraulic actuation			
Transmission	Model	R5M21	R5M21	R5M21	R5M21
	Type	5-speed manual	5-speed manual	5-speed manual	5-speed manual
Rear axle	Type	Banjo type axle housing semi-floating type axle shaft, hypoid gear differential			
	Final gear ratio	3.909	3.909	3.909	3.909
Wheel	Front tyre size	185R14C-8PR	185R14C-8PR	185R14C-8PR	185R14C-8PR
	Rear tyre size	185R14C-8PR	185R14C-8PR	185R14C-8PR	185R14C-8PR
	Disc wheel size	14×5J	14×5J	14×5J	14×5J
Suspension	Front	Independent double wishbone with torsion bar and telescopic shock absorber			
	Rear	Semi-elliptic leaf spring with telescopic shock absorber			
Steering system		Rack and pinion with power assist *2			
Service brakes	Type	Double-circuit hydraulic brake system, brake servo			
	Front	Discs			
	Rear	Drums (Leading, trailing)			
Parking brake type		Mechanical, internal-expansion type, acting on rear wheels			
Electrical system	Battery type	95D31R, 80D26R × 2 *2	95D31R, 80D26R × 2 *2	95D31R, 80D26R × 2 *2	95D31R, 80D26R × 2 *2
	Battery capacity (5HR) Ah	64, 52 × 2 *2	64, 52 × 2 *2	64, 52 × 2 *2	64, 52 × 2 *2

NOTE

- (1) *1 () indicates vehicles with rear heater.
(2) *2 indicates optional.

GENERAL – Major Specifications

01-9

Items			P45VJLNTL6	P03WLZXEL6	P05WLZXL6
Vehicle dimensions mm	Overall length	①	4,775	4,285	4,285
	Overall width	②	1,690	1,690	1,690
	Overall height (unladen)	③	2,105	1,835	1,835
	Wheelbase	④	2,440	2,235	2,235
	Tread-Front	⑤	1,430	1,445	1,445
	Tread-Rear	⑥	1,415	1,380	1,380
	Overhang-Front	⑦	1,160	1,160	1,160
	Overhang-Rear	⑧	1,175	890	890
	Ground clearance (unladen)	⑨	215	195	195
Vehicle weight kg	Kerb weight		1,690/ 1,710 *1	1,425/ 1,470 *1	1,460/ 1,505 *1
	Maximum vehicle weight		2,505	2,505	2,260
Seating capacity			2	9	9
Performance	Maximum speed km/h		125	150	130
	Maximum climbing ability tanθ		0.70	0.53	0.47
	Minimum turning radius m		5.4	4.4	4.5
Engine	Model		4D56	4G63	4D56
	Total displacement m ³ /		2,477	1,997	2,477
Fuel system	Carburettor		Fuel injection	M.P.I.	Fuel injection
	Fuel pump type		Vane type	Electrical fuel pump	Vane type
	Fuel tank capacity lit		60	55	55
Coolant quantity *2 lit			9.7 (10.2)	8.0 (8.5)	8.7 (9.2)
Clutch type			Dry single-disc clutch with hydraulic actuation	Dry single-disc clutch with cable actuation	Dry single-disc clutch with cable actuation
Transmission	Model		V5M21	R5M21	R5M21
	Type		5-speed manual Part time 2-speed direct-couple	5-speed manual	5-speed manual

NOTE

(1) *1 The figure before the / is the figure that is applicable without options; the figure following the / is the figure that is applicable with all options.

(2) *2 () indicates vehicles with rear heater.

Items		P45VJLNTL6	P03WLZXEL6	P05WLZXL6
Front axle	Type	Full-floating type drive shaft, hypoid gear differential	–	–
	Final gear ratio	4,875	–	–
Rear axle	Type	Banjo type axle housing semi-floating type axle shaft, hypoid gear differential		
	Final gear ratio	4,875	4,222	3,909
Wheel	Front tyre size	215R15100Q	185R14C-8PR	185SR14
	Rear tyre size	215R15100Q	185R14C-8PR	185SR14
	Disc wheel size	15 × 5.5JJ, 15 × 6JJ *	14 × 5J	14 × 5J
Suspension	Front	Independent double wishbone with torsion bar and telescopic shock absorber		
	Rear	Semi-elliptic leaf spring with telescopic shock absorber		
Steering system		Rack and pinion with power assist *		
Service brakes	Type	Double-circuit hydraulic brake system, brake servo		
	Front	Discs		
	Rear	Drums (Leading, trailing)		
Parking brake type		Mechanical, internal-expansion type, acting on rear wheels		
Electrical system	Battery type	95D31R, 80D26R × 2 *	65D23R	95D31R, 80D26R × 2 *
	Battery capacity (5HR) Ah	64, 52 × 2 *	52	64, 52 × 2 *

NOTE

* indicates optional.

Vehicles for General Export

- Vehicles, which are not described, have not been changed.

Items			P13VJLNEL	P15VJLNL P15VJLNR	P06VGLNL P06VGLNR	P06VGLNAR1D
Vehicle dimensions mm	Overall length	①	4,590	4,590	4,190	4,190
	Overall width	②	1,690	1,690	1,690	1,690
	Overall height (unladen)	③	1,970	1,970	1,850	1,850
	Wheelbase	④	2,435	2,435	2,235	2,235
	Tread-Front	⑤	1,445	1,445	1,445	1,445
	Tread-Rear	⑥	1,380	1,380	1,380	1,380
	Overhang-Front	⑦	1,150	1,150	1,150	1,150
	Overhang-Rear	⑧	1,180	1,180	980	980
	Ground clearance (unladen)	⑨	205	205	195	195
Vehicle weight kg	Kerb weight		1,420	1,340	1,160	1,160
	Maximum vehicle weight		2,505	2,505	2,205	2,205
Seating capacity			3	3	3	3
Performance	Maximum speed km/h		150	120	135	135
	Maximum climbing ability tanθ		0.32	0.30	0.41	0.41
	Minimum turning radius m		4.9	4.9	4.5	4.5
Engine	Model		4G63	4D56	4G92	4G92
	Total displacement m ³		1,997	2,477	1,597	1,597
Fuel system	Carburettor		M.P.I.	Fuel injection	Conventional carburettor	Electronic controlled-carburettor
	Fuel pump type		Electrical fuel pump	Vane type	Electrical fuel pump	Electrical fuel pump
	Fuel tank capacity lit		55	55	55	55
Coolant quantity *2 lit			8.0	8.7 (9.2)	6.0	6.0
Clutch type			Dry single-disc clutch with cable actuation	Dry single-disc clutch with hydraulic actuation	Dry single-disc clutch with cable actuation	Dry single-disc clutch with cable actuation
Transmission	Model		R5M21	R5M21	R5M21	R5M21
	Type		5-speed manual	5-speed manual	5-speed manual	5-speed manual

Items		P13VJLNEL	P15VJLNL P15VJLNR	P06VGLNL P06VGLNR	P06VGLNAR1D
Rear axle	Type	Banjo type axle housing semi-floating type axle shaft, hypoid gear differential			
	Final gear ratio	4,875	4,222	5,285	5,285
Wheel	Front tyre size	6.00-14-6PRLT	6.00-14-6PRLT	6.00-14-6PRLT	6.00-14-6PRLT
	Rear tyre size	6.00-14-8PRLT	6.00-14-8PRLT	6.00-14-8PRLT	6.00-14-8PRLT
	Disc wheel size	14×5J	14×5J	14×5J	14×5J
Suspension	Front	Independent double wishbone with torsion bar and telescopic shock absorber			
	Rear	Semi-elliptic leaf spring with telescopic shock absorber			
Steering system		Rack and pinion with power assist *			
Service brakes	Type	Double-circuit hydraulic brake system, brake servo			
	Front	Discs			
	Rear	Drums (Leading, trailing)			
Parking brake type		Mechanical, internal-expansion type, acting on rear wheels			
Electrical system	Battery type	34B19R, 55D23R *	95D31R, 80D26R×2 *	34B19R, 55D23R *	34B19R, 55D23R *
	Battery capacity (5HR) Ah	27, 48 *	64, 52×2 *	27, 48 *	27, 48 *

NOTE

* indicates optional.

Items			P16VJLNL P16VJLNR	P16VJLNAR1D	P03WSNUL	P13WHLNL P13WHLNR
Vehicle dimensions mm	Overall length	①	4,590	4,590	4,285	4,590
	Overall width	②	1,690	1,690	1,695	1,690
	Overall height (unladen)	③	1,970	1,970	1,855	1,970
	Wheelbase	④	2,435	2,435	2,235	2,435
	Tread-Front	⑤	1,445	1,445	1,445	1,445
	Tread-Rear	⑥	1,380	1,380	1,380	1,380
	Overhang-Front	⑦	1,150	1,150	1,150	1,150
	Overhang-Rear	⑧	1,180	1,180	980	1,180
	Ground clearance (unladen)	⑨	205	205	205	205
Vehicle weight kg	Kerb weight		1,270	1,320	1,390	1,380
	Maximum vehicle weight		2,505	2,495	2,205	2,400
Seating capacity			3	3	9	12
Performance	Maximum speed km/h		130	130	140	135
	Maximum climbing ability tan θ		0.41	0.41	0.50	0.33
	Minimum turning radius m		4.9	4.9	4.5	4.9
Engine	Model		4G92	4G92	4G63	4G63
	Total displacement m ³		1,597	1,597	1,997	1,997
Fuel system	Carburettor		Conventional carburettor	Electronic controlled-carburettor	Conventional carburettor	Conventional carburettor
	Fuel pump type		Electrical fuel pump	Electrical fuel pump	Electrical fuel pump	Electrical fuel pump
	Fuel tank capacity lit		55	55	55	55
Coolant quantity * lit			0	6.0	7.35 (7.85)	8.0
Clutch type			Dry single-disc clutch with cable actuation	Dry single-disc clutch with cable actuation	Dry single-disc clutch with cable actuation	Dry single-disc clutch with cable actuation
Transmission	Model		R5M21	R5M21	R5M21	R5M21
	Type		5-speed manual	5-speed manual	5-speed manual	5-speed manual

NOTE

* () indicates vehicles with rear heater.

Items		P16VJLNL P16VJLNR	P16VJLNARD1	P03WSNUL	P13WHLNL P13WHLNR
Rear axle	Type	Banjo type axle housing semi-floating type axle shaft, hypoid gear differential			
	Final gear ratio	5,285	5,285	4,625	4,875
Wheel	Front tyre size	6.00-14-6PRLT	185R14C-8PR	6.00-14-6PRLT	6.00-14-6PRLT
	Rear tyre size	6.00-14-8PRLT	185R14C-8PR	6.00-14-8PRLT	6.00-14-8PRLT
	Disc wheel size	14×5J	14×5J	14×5J	14×5J
Suspension	Front	Independent double wishbone with torsion bar and telescopic shock absorber			
	Rear	Semi-elliptic leaf spring with telescopic shock absorber			
Steering system		Rack and pinion with power assist *			
Service brakes	Type	Double-circuit hydraulic brake system, brake servo			
	Front	Discs			
	Rear	Drums (Leading, trailing)			
Parking brake type		Mechanical, internal-expansion type, acting on rear wheels			
Electrical system	Battery type	34B19R, 55D23R *	34B19R, 55D23R *	34B19R, 55D23R *	34B19R, 55D23R *
	Battery capacity (5HR) Ah	27, 48 *	27, 48 *	27, 48 *	27, 48 *

NOTE

* indicates optional.

GENERAL – Major Specifications

01-15

Items		P15WHLNL P15WHLNR
Vehicle dimensions mm	Overall length ①	4,590
	Overall width ②	1,690
	Overall height (unladen) ③	1,970
	Wheelbase ④	2,435
	Tread-Front ⑤	1,445
	Tread-Rear ⑥	1,380
	Overhang-Front ⑦	1,160
	Overhang-Rear ⑧	1,175
	Ground clearance (unladen) ⑨	205
Vehicle weight kg	Kerb weight	1,450
	Maximum vehicle weight	2,400
Seating capacity		12
Performance	Maximum speed km/h	120
	Maximum climbing ability tanθ	0.30
	Minimum turning radius m	4.9
Engine	Model	4D56
	Total displacement m ³	2,477
Fuel system	Carburettor	Fuel injection
	Fuel pump type	Vane type
	Fuel tank capacity lit	55
Coolant quantity * lit		8.7 (9.2)
Clutch type		Dry single-disc clutch with hydraulic actuation
Transmission	Model	R5M21
	Type	5-speed manual
Rear axle	Type	Banjo type axle housing semi-floating type axle shaft, hypoid gear differential
	Final gear ratio	4,222

NOTE

* () indicates vehicles with rear heater.

Items		P15WHLNL P15WHLNR
Wheel	Front tyre size	6.00-14-6PRLT
	Rear tyre size	6.00-14-8PRLT
	Disc wheel size	14×5J
Suspension	Front	Independent double wishbone with torsion bar and telescopic shock absorber
	Rear	Semi-elliptic leaf spring with telescopic shock absorber
Steering system		Rack and pinion with power assist *
Service brakes	Type	Double-circuit hydraulic brake system, brake servo
	Front	Discs
	Rear	Drums (Leading, trailing)
Parking brake type		Mechanical, internal-expansion type, acting on rear wheels
Electrical system	Battery type	95D31R, 80D26R×2 *
	Battery capacity (5HR) Ah	64, 52×2 *

NOTE

* indicates optional.

Vehicles for GCC

- Vehicles, which are not described, have not been changed.

Items			P03VGLNLW	P13VJLNLW	P15VJLNLW
Vehicle dimensions mm	Overall length	①	4,190	4,590	4,590
	Overall width	②	1,690	1,690	1,690
	Overall height (unladen)	③	1,855	1,970	1,970
	Wheelbase	④	2,235	2,435	2,435
	Tread-Front	⑤	1,445	1,445	1,445
	Tread-Rear	⑥	1,380	1,380	1,380
	Overhang-Front	⑦	1,160	1,160	1,160
	Overhang-Rear	⑧	890	1,175	1,175
	Ground clearance (unladen)	⑨	205	205	205
Vehicle weight kg	Kerb weight		1,240	1,300	1,270
	Maximum vehicle weight		2,260	2,505	2,505
Seating capacity			3	3	3
Performance	Maximum speed km/h		140	135	120
	Maximum climbing ability tan θ		0.36	0.32	0.30
	Minimum turning radius m		4.5	4.9	4.9
Engine	Model		4G63	4G63	4D56
	Total displacement m ³		1,997	1,997	2,477
Fuel system	Carburettor		Conventional carburettor	Conventional carburettor	Fuel injection
	Fuel pump type		Electrical fuel pump	Electrical fuel pump	Vane type
	Fuel tank capacity lit		55	55	55
Coolant quantity * lit			8.0	8.0	8.7 (9.2)
Clutch type			Dry single-disc clutch with cable actuation	Dry single-disc clutch with cable actuation	Dry single-disc clutch with hydraulic actuation
Transmission	Model		R5M21	R5M21	R5M21
	Type		5-speed manual	5-speed manual	5-speed manual

NOTE

() indicates vehicles with rear heater.

Items		P03VGLNLW	P13VJLNLW	P15VJLNLW
Rear axle	Type	Banjo type axle housing semi-floating type axle shaft, hypoid gear differential		
	Final gear ratio	4,875	4,875	4,222
Wheel	Front tyre size	6.00-14-6PRLT	6.00-14-6PRLT	6.00-14-6PRLT
	Rear tyre size	6.00-14-8PRLT	6.00-14-8PRLT	6.00-14-8PRLT
	Disc wheel size	14×5J	14×5J	14×5J
Suspension	Front	Independent double wishbone with torsion bar and telescopic shock absorber		
	Rear	Semi-elliptic leaf spring with telescopic shock absorber		
Steering system		Rack and pinion with power assist *		
Service brakes	Type	Double-circuit hydraulic brake system, brake servo		
	Front	Discs		
	Rear	Drums (Leading, trailing)		
Parking brake type		Mechanical, internal-expansion type, acting on rear wheels		
Electrical system	Battery type	34B19R, 55D23R *	34B19R, 55D23R *	95D31R, 80D26R × 2 *
	Battery capacity (5HR) Ah	27, 48 *	27, 48 *	64, 52 × 2 *

NOTE

* indicates optional.

GENERAL – Major Specifications

01-19

Items			P03WSNULW	P13WHLNLW	P15WHLNLW
Vehicle dimensions mm	Overall length	①	4,285	4,590	4,590
	Overall width	②	1,695	1,690	1,690
	Overall height (unladen)	③	1,855	1,970	1,970
	Wheelbase	④	2,235	2,435	2,435
	Tread-Front	⑤	1,445	1,445	1,445
	Tread-Rear	⑥	1,380	1,380	1,380
	Overhang-Front	⑦	1,160	1,160	1,160
	Overhang-Rear	⑧	890	1,175	1,175
	Ground clearance (unladen)	⑨	205	205	205
Vehicle weight kg	Kerb weight		1,380	1,400	1,380
	Maximum vehicle weight		2,205	2,400	2,400
Seating capacity			9	12	12
Performance	Maximum speed km/h		140	135	120
	Maximum climbing ability tanθ		0.50	0.33	0.31
	Minimum turning radius m		4.5	4.9	4.9
Engine	Model		4G63	4G63	4D56
	Total displacement m ³ /l		1,997	1,997	2,477
Fuel system	Carburettor		Conventional carburettor	Conventional carburettor	Fuel injection
	Fuel pump type		Electrical fuel pump	Electrical fuel pump	Vane type
	Fuel tank capacity lit		55	55	55
Coolant quantity * lit			7.35 (7.85)	8.0	8.7 (9.2)
Clutch type			Dry single-disc clutch with cable actuation	Dry single-disc clutch with cable actuation	Dry single-disc clutch with hydraulic actuation
Transmission	Model		R5M21	R5M21	R5M21
	Type		5-speed manual	5-speed manual	5-speed manual

NOTE

() indicates vehicles with rear heater.

Items		P03WSNULW	P13WHLNLW	P15WHLNLW
Rear axle	Type	Banjo type axle housing semi-floating type axle shaft, hypoid gear differential		
	Final gear ratio	4,625	4,875	4,222
Wheel	Front tyre size	6.00-14-6PRLT	6.00-14-6PRLT	6.00-14-6PRLT
	Rear tyre size	6.00-14-8PRLT	6.00-14-8PRLT	6.00-14-8PRLT
	Disc wheel size	14×5J	14×5J	14×5J
Suspension	Front	Independent double wishbone with torsion bar and telescopic shock absorber		
	Rear	Semi-elliptic leaf spring with telescopic shock absorber		
Steering system		Rack and pinion with power assist *		
Service brakes	Type	Double-circuit hydraulic brake system, brake servo		
	Front	Discs		
	Rear	Drums (Leading, trailing)		
Parking brake type		Mechanical, internal-expansion type, acting on rear wheels		
Electrical system	Battery type	34B19R, 55D23R *	34B19R, 55D23R *	95D31R, 80D26R×2 *
	Battery capacity (5HR) Ah	27, 48 *	27, 48 *	64, 52×2 *

NOTE

* indicates optional.

GROUP 11

ENGINE (4G63)

GENERAL

OUTLINE OF CHANGE

- A high altitude compensator (HAC) has been introduced to 4G63 conventional carburettor engines for high altitude countries (altitude approx. 2,000 m or more) in General Export. Due to this, a good driveability can be obtained in both high and low altitudes. Moreover, the HAC of this engine operates at an altitude of approx. 1,200 m whereas the previous engine (for Columbia and South America-high altitude) operates at an altitude of approx. 1,800 m.
- The 4G63 SOHC 16-valve engine has been introduced to automatic transmission models for GCC. The service procedures for this engine is the same as that for the previous 16-valve engine.

SERVICE ADJUSTMENT PROCEDURES

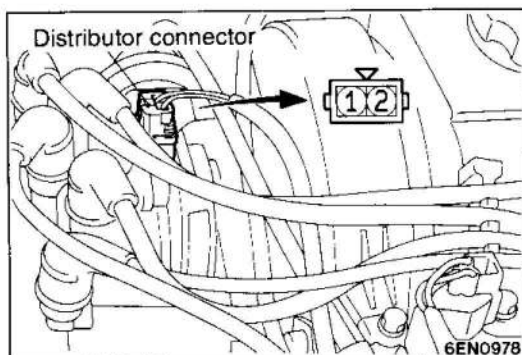
IGNITION TIMING CHECK AND ADJUSTMENT

<Vehicles with high altitude compensation system>

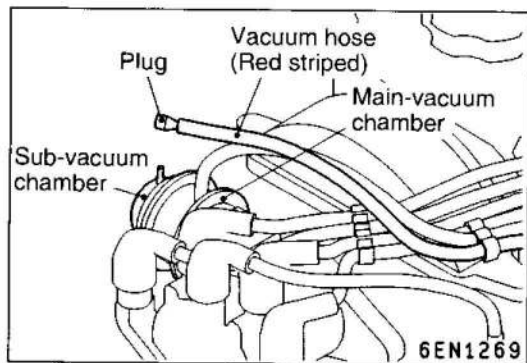
NOTE

The altitude will not have any effect on ignition timing inspection and adjustment procedures.

1. Before inspection and adjustment, set vehicle in the following condition.
 - Engine coolant temperature: 80 – 95°C
 - Lamps and all accessories: OFF
 - Transmission: Neutral (P range on vehicles with A/T)



2. Disconnect the distributor connector, and then connect the special tool (MB991348) between the disconnected connectors. (Connect all terminals.)
3. Connect a primary-voltage-detection type tachometer to the terminal No. 2 of the distributor connector.



4. Disconnect the vacuum hose (red striped) from the sub-vacuum chamber of the distributor, and then plug the end of the vacuum hose.
5. Set up a timing light.
6. Start the engine and run it at idle.
7. Check that engine-speed is at 600 – 900 r/min.
8. Check that basic ignition timing is within the standard value.

Standard value: $0^{\circ}\text{BTDC} \pm 2^{\circ}$

Caution

If the problem for knocking occurs when gasoline with an octane rating of 87 – 89 RON is used, it can be handled by retarding the basic ignition timing by about 2 degrees.

However, the basic ignition timing can be retarded only if exhaust emission regulations have not been established.

9. If not within the standard value loosen distributor mounting bolt and adjust by rotating distributor body.
10. Tighten the mounting bolt after adjusting.

Tightening torque: 12 Nm

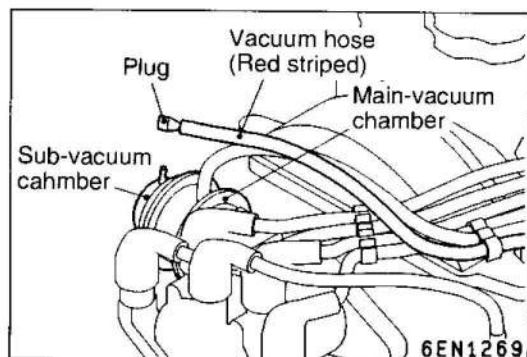
11. Connect a hand vacuum pump to the nipple of the sub-vacuum chamber, and then apply a vacuum of more than 27 kPa.
12. Check that ignition timing is at the standard value at this time.

Standard value: $9^{\circ}\text{BTDC} \pm 4^{\circ}$

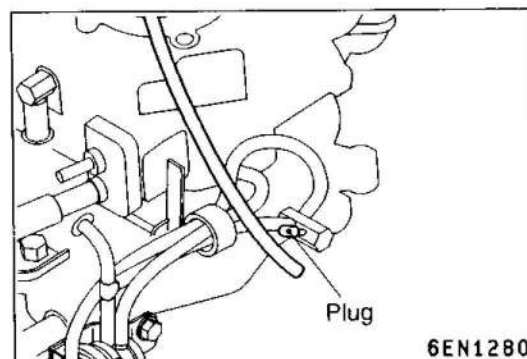
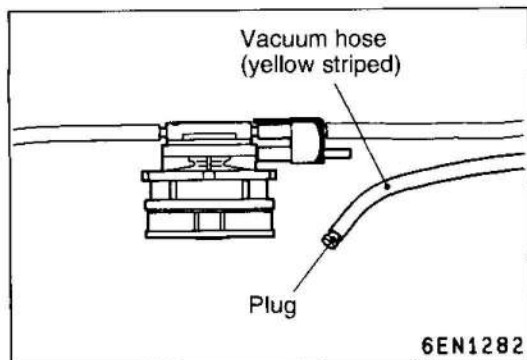
13. Remove the hand vacuum pump, and connect the vacuum hose to the sub-vacuum chamber.

IDLE SPEED AND MIXTURE CHECK AND ADJUSTMENT <Vehicles with high altitude compensation system>

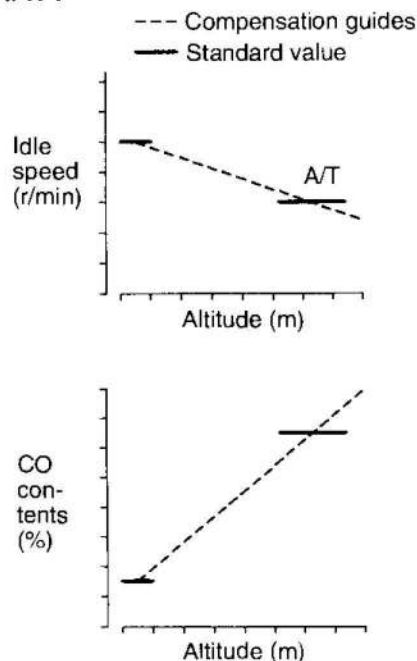
1. Before inspection and adjustment, set vehicle in the following condition.
 - Engine coolant temperature: 80 – 95°C
 - Lamps and all accessories: OFF
 - Transmission: Neutral (P range on vehicles with A/T)



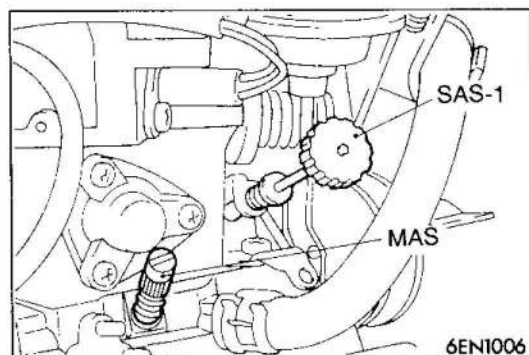
2. Set up a timing light and tachometer.
3. Disconnect the vacuum hose (red stripe) from the sub-vacuum chamber of the distributor, and then plug the end of the vacuum hose.



GRAPH 1



6EN1272



4. Disconnect the vacuum hose (yellow stripe) from the high altitude compensator, and then plug the end of the vacuum hose.
5. Start the engine and run it at idle.
6. Check the basic ignition timing. Adjust if necessary.

Standard value: $0^{\circ}\text{BTDC} \pm 2^{\circ}$

7. Set up a CO tester.
8. Disconnect the vacuum joint to air cleaner vacuum hose at the vacuum joint side.
9. Plug the nipple, which the vacuum hose has been disconnected from.
10. Race the engine two or three times at an engine speed of 2,000 – 3,000 r/min.

11. When the CO tester reading has stabilized, check the idle speed and CO contents.

Standard value:

Idle speed

At 0 – 500 m above sea level

800 ± 50 r/min

At 2600 – 3700 m above sea level

750 ± 50 r/min

CO contents

At 0 – 500 m above sea level $0.5 \pm_{-0.2}^{0.5}$ %

At 2600 – 3700 m above sea level 5.5 ± 0.5 %

NOTE

When the idle speed and CO contents are inspected and adjusted in places which are not at altitudes listed above, compensation will be necessary so that they are within the standard value range when measuring them at specified altitude.

Refer to the graph 1 at left for a guide to how much compensation to add.

12. If they are not within the standard value ranges, adjust the curb idle speed and CO contents to the standard values with the speed adjusting screw-1 (SAS-1) and mixture adjusting screw (MAS).

NOTE

Adjustment should be made skillfully, without taking too much time.

GROUP 13

FUEL

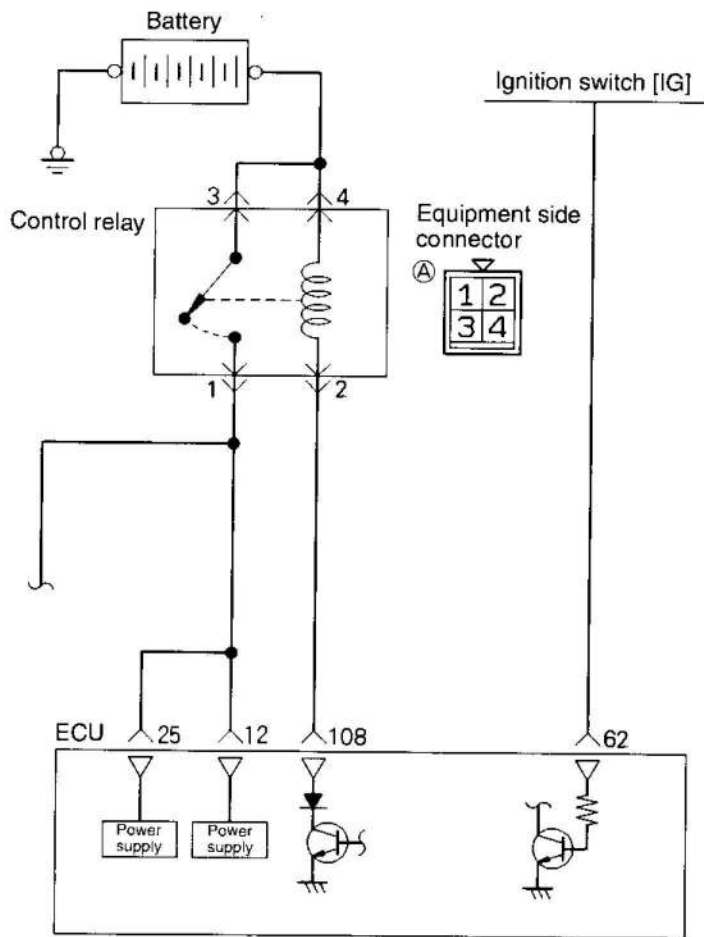
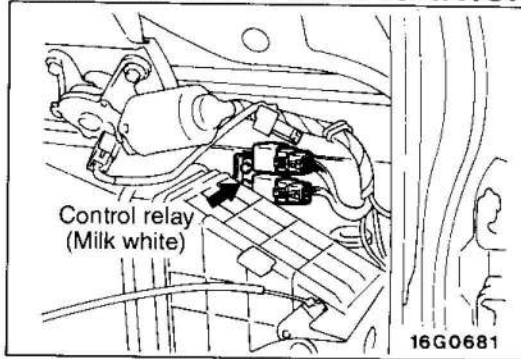
GENERAL

OUTLINE OF CHANGE

- The control relay and fuel pump relay have been separated.

SERVICE ADJUSTMENT PROCEDURES (MPI)

POWER SUPPLY AND IGNITION SWITCH – IG

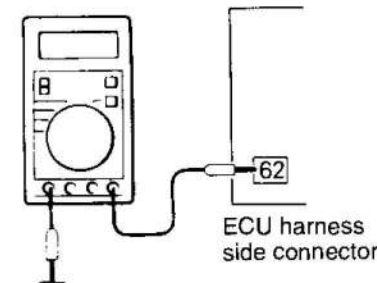


ECU connector

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72
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HARNESS INSPECTION

1



ECU harness side connector

01L0427

Measure input voltage from the ignition switch-IG terminal.

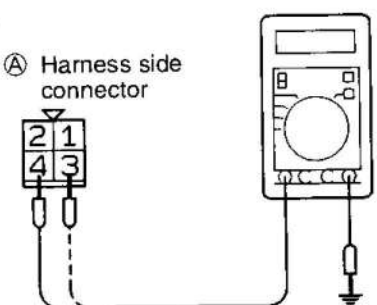
- ECU connector: Disconnected

Ignition switch	Voltage (V)
OFF	0 - 1
ON	Battery voltage

OK → **2**

✗ → Repair harness (ignition switch - 62) or check ignition switch.

2



Ⓐ Harness side connector

7FU1928

Measure power supply to the control relay.

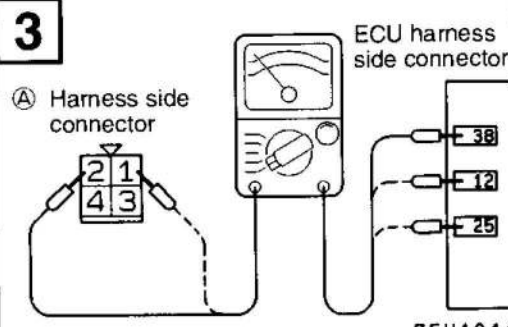
- Ignition switch: OFF
- Control relay connector: Disconnected

Voltage (V)
Battery voltage

OK → **3**

✗ → Repair harness (Battery - Ⓐ 3, Battery - Ⓐ 4)

3



Ⓐ Harness side connector

ECU harness side connector

7FU1944

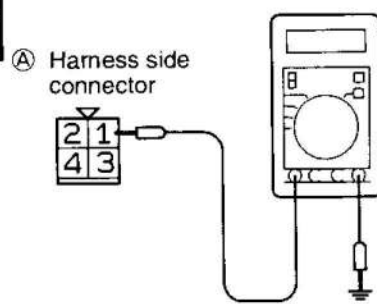
Check open or short circuit between the ECU and control relay.

- Control relay connector: Disconnected
- ECU connector: Disconnected

OK → **4**

✗ → Repair harness (Ⓐ 2 - 108) (Ⓐ 1 - 12 25)

4



Ⓐ Harness side connector

7FU1930

Measure power supply voltage to the actuator.

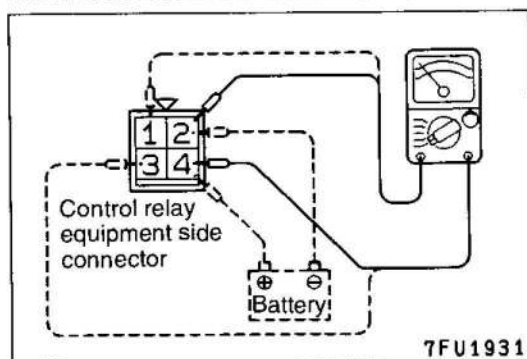
- Control relay connector: Connected
- ECU connector: Connected

Engine	Voltage (V)
Cranking	8V or more
Racing	Battery voltage

OK → **STOP**

✗ → Control relay or ECU is defective.

CONTROL RELAY INSPECTION

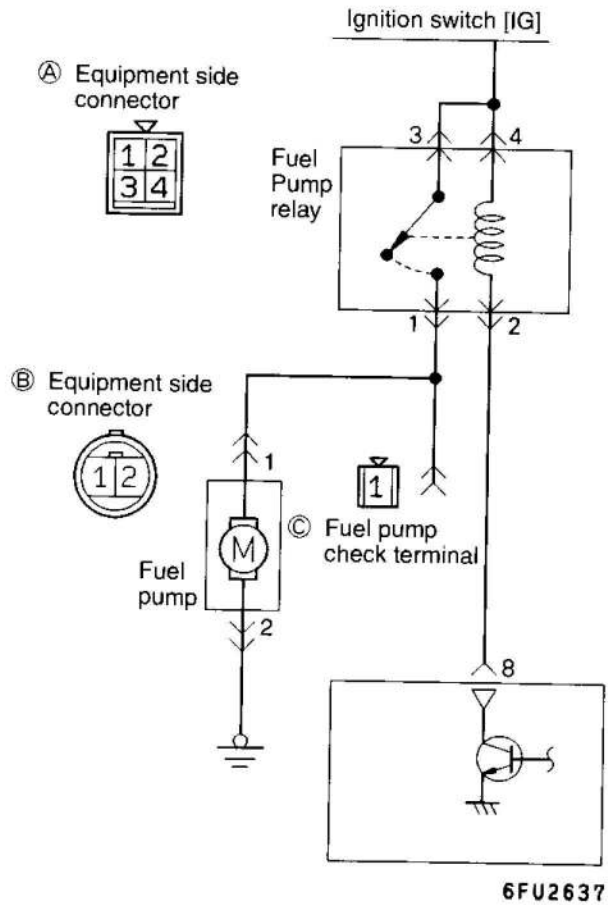
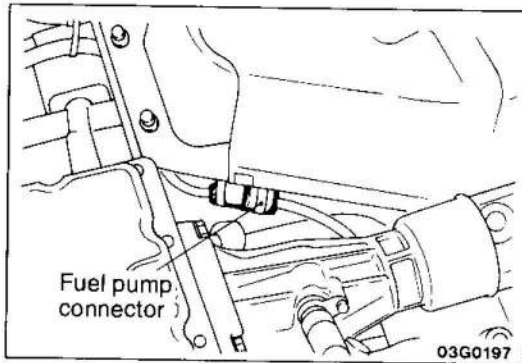
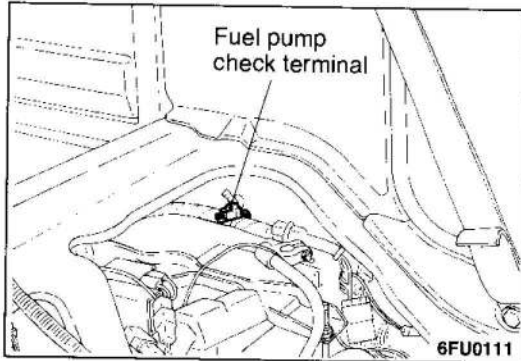
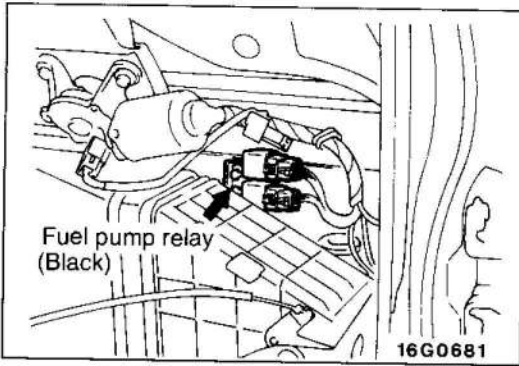


(1) Check continuity between the control relay terminals.

Battery voltage	Terminal number			
	1	2	3	4
Applied		○	—	○
Not applied	○	—	○	—
		⊖		⊕

(2) Replace the control relay if it is defective.

FUEL PUMP

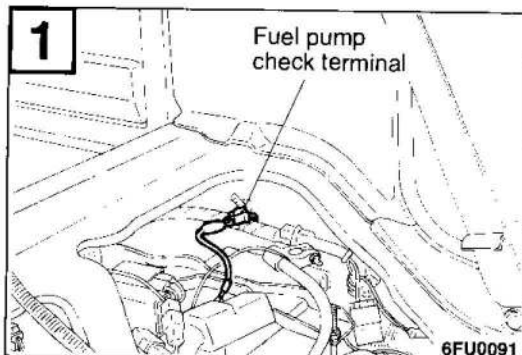


ECU connector

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72
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7FU0653

HARNESS INSPECTION



Check the fuel pump.

- Apply battery voltage to the fuel pump check terminal, and operate the fuel pump.

OK



4

OK



2

2 **B** Harness side connector

6FU1314

Check continuity in the fuel pump earth circuit.

- Fuel pump connector: Disconnected

OK → **3**

✗ → Repair harness (B 2 – earth).

3 **B** Harness side connector

6FU1391

Check open or short circuit between the fuel pump and fuel pump check terminals.

- Fuel pump connector: Disconnected
- Fuel pump relay connector: Disconnected

OK → **4**

✗ → Repair harness. (B 1 – C 1).

4 **A** Harness side connector

7FU1928

Measure power supply voltage to the fuel pump relay.

- Fuel pump relay connector: Disconnected

Ignition switch	Voltage (V)
OFF	0 – 1
ON	Battery voltage

OK → **5**

✗ → Repair harness (Ignition switch – A 3 4), or check ignition switch.

5 **A** Harness side connector

7FU1945

Check open or short circuit between the fuel pump relay and ECU.

- Fuel pump relay connector: Disconnected
- ECU connector: Disconnected

OK → **6**

✗ → Repair harness. (A 2 – 8).

6 **A** Harness side connector

7FU1934

Check continuity between the fuel pump relay and fuel pump check terminal.

- Fuel pump connector: Disconnected
- Fuel pump relay connector: Disconnected

OK → **7**

✗ → Repair harness. (A 11 – C 1).

7

Ⓐ Harness side connector

Ⓑ Harness side connector

6FU2622

Check open or short circuit between the fuel pump relay and fuel pump.

- Fuel pump connector: Disconnected
- Fuel pump relay connector: Disconnected

OK → **8**

✗ → Repair harness. (Ⓐ 1 – Ⓑ 1).

8

Ⓐ Harness side connector

7FU1930

Measure power supply voltage to the fuel pump.

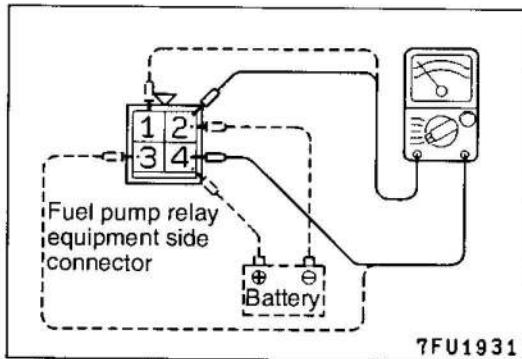
- Fuel pump relay connector: Connected
- ECU connector: Connected

Engine	Voltage (V)
Cranking	8 V or more
Racing	Battery voltage

OK → **STOP**

✗ → Fuel pump relay or ECU is defective.

FUEL PUMP RELAY INSPECTION



(1) Check continuity between the fuel pump relay terminals.

Battery voltage	Terminal number			
	1	2	3	4
Applied		○	○	○
Not applied	○		○	
		○		○
			○	○

(2) Replace the fuel pump relay if it is defective.

**AIR FLOW SENSOR
HARNESS INSPECTION**

1

Control relay harness side connector

① Harness side connector

6FU2623

Check for continuity between air flow sensor and control relay.

- Control relay connector: Disconnected
- Air flow sensor connector: Disconnected

NOTE
Touch the circuit tester probes to both ends of the harness.

OK → **2**

✗ → Repair the harness.
(A 2 - B 1)

2

① Harness side connector

01R0202

Check for continuity of the earth circuit.

- Air flow sensor connector: Disconnected

OK → **3**

✗ → Repair the harness.
(A 4 - 72)

3

① Harness side connector

Engine control unit harness side connector

6FU2304

Check for open-circuit, or short-circuit to earth, between air flow sensor and engine control unit.

- Air flow sensor connector: Disconnected
- Engine control unit connector: Disconnected

OK → **4**

✗ → Repair the harness.
(A: 1 - 70)

4

① Harness side connector

01A0900

Measure the impressed voltage.

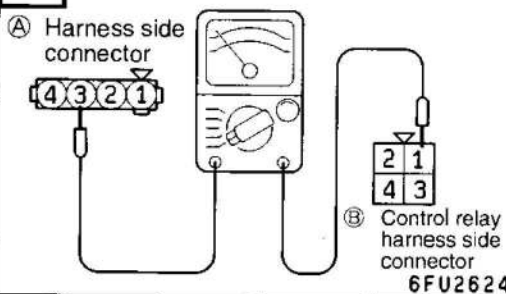
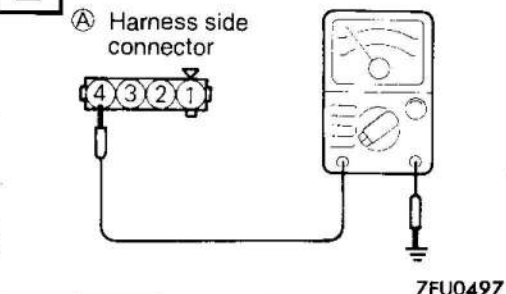
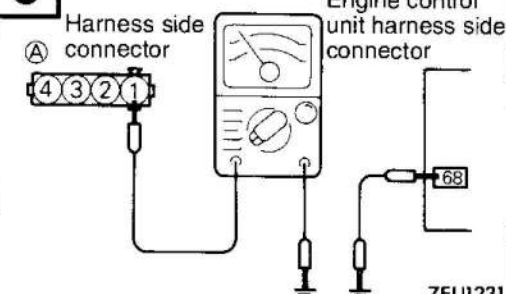
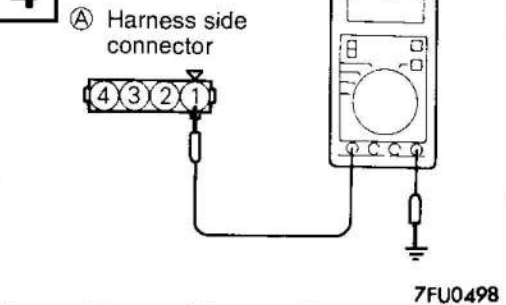
- Air flow sensor connector: Disconnected
- Engine control unit connector: Connected
- Ignition switch: ON

Voltage (V)
4.8 - 5.2

OK → STOP

✗ → Replace the engine control unit.

**TOP DEAD CENTRE SENSOR
HARNESS INSPECTION**

<p>1</p>  <p>Ⓐ Harness side connector</p> <p>Ⓑ Control relay harness side connector 6FU2624</p>	<p>Check for continuity between top dead centre sensor and control relay.</p> <ul style="list-style-type: none"> • Distributor connector: Disconnected • Control relay connector: Disconnected <p>NOTE Touch the circuit tester probes to both ends of the harness.</p>	<p>OK → 2</p> <p>✗ → Repair the harness. (Ⓐ 3 – Ⓑ 1)</p>		
<p>2</p>  <p>Ⓐ Harness side connector</p> <p>7FU0497</p>	<p>Check for continuity of the earth circuit.</p> <ul style="list-style-type: none"> • Distributor connector: Disconnected 	<p>OK → 3</p> <p>✗ → Repair the harness. (Ⓐ 4 – Earth)</p>		
<p>3</p>  <p>Ⓐ Harness side connector</p> <p>Engine control unit harness side connector</p> <p>7FU1231</p>	<p>Check for open-circuit, or short-circuit to earth, between air flow sensor and engine control unit.</p> <ul style="list-style-type: none"> • Engine control unit connector: Disconnected • Distributor connector: Disconnected 	<p>OK → 4</p> <p>✗ → Repair the harness. (Ⓐ 1 – 68)</p>		
<p>4</p>  <p>Ⓐ Harness side connector</p> <p>7FU0498</p>	<p>Measure the impressed voltage.</p> <ul style="list-style-type: none"> • Distributor connector: Disconnected • Engine control unit connector: Connected • Ignition switch: ON <table border="1" data-bbox="730 1606 1177 1692"> <tr> <td style="text-align: center;">Voltage (V)</td> </tr> <tr> <td style="text-align: center;">4.8 – 5.2</td> </tr> </table>	Voltage (V)	4.8 – 5.2	<p>OK → STOP</p> <p>✗ → Replace the engine control unit.</p>
Voltage (V)				
4.8 – 5.2				

**CRANK ANGLE SENSOR
HARNESS INSPECTION**

1

Ⓐ Harness side connector

Ⓑ Control relay harness side connector

6FU2624

Check for continuity between crank angle sensor and control relay.

- Distributor connector: Disconnected
- Control relay connector: Disconnected

NOTE
Touch the circuit tester probes to both ends of the harness.

OK → **2**

✗ → Repair the harness.
(Ⓐ 3 – Ⓑ 1)

2

Ⓐ Harness side connector

7FU0497

Check for continuity of the earth circuit.

- Distributor connector: Disconnected

OK → **3**

✗ → Repair the harness.
(Ⓐ 4 – Earth)

3

Ⓐ Harness side connector

Engine control unit harness side connector

7FU1232

Check for open-circuit or short-circuit to earth, between top dead centre sensor and engine control unit.

- Engine control unit connector: Disconnected
- Distributor connector: Disconnected

OK → **4**

✗ → Repair the harness.
(Ⓐ 2 – 69)

4

Ⓐ Harness side connector

7FU0489

Measure the impressed voltage.

- Distributor connector: Disconnected
- Engine control unit connector: Connected
- Ignition switch: ON

Voltage (V)
4.8 – 5.2

OK → STOP

✗ → Replace the engine control unit.

OXYGEN SENSOR <4G63>

HARNESS INSPECTION

<p>1</p> <p>Control relay harness side connector</p> <p style="text-align: right;">6FU2625</p>	<p>Check for continuity between oxygen sensor and control relay.</p> <ul style="list-style-type: none"> • Oxygen sensor connector: Disconnected • Control relay connector: Disconnected <p>NOTE Touch the circuit tester probes to both ends of the harness.</p>	<p>OK → 2</p> <p>✗ → Repair the harness. (A 1 - B 1)</p>
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<p>2</p> <p>Harness side connector</p> <p>Engine control unit harness side connector</p> <p style="text-align: right;">6FU2312</p>	<p>Check for an open-circuit, or a short-circuit to earth, between the engine control unit and the oxygen sensor.</p> <ul style="list-style-type: none"> • Oxygen sensor connector: Disconnected • Engine control unit connector: Disconnected 	<p>OK → 3</p> <p>✗ → Repair the harness. (A 3 - 105) (A 4 - 56)</p>
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<p>3</p> <p>Harness side connector</p> <p style="text-align: right;">6FU2313</p>	<p>Check for continuity of the earth circuit.</p> <ul style="list-style-type: none"> • Oxygen sensor connector: Disconnected 	<p>OK → STOP</p> <p>✗ → Repair the harness. (A 2 - 72)</p>
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**INJECTOR
HARNESS INSPECTION**

<div style="border: 1px solid black; padding: 2px; display: inline-block; font-weight: bold; font-size: 1.2em;">1</div> <p>①②③④ Harness side connector</p> <p style="text-align: right;">⑤ Control relay harness side connector</p> <p style="text-align: right;">6FU2645</p>	<p>Check for continuity between the control relay and the injector.</p> <ul style="list-style-type: none"> • Injector connector: Disconnected • Control relay connector: Disconnected 	<div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">OK</div> <div style="margin: 5px 0;">→</div> <div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">2</div>	<p>Repair the harness. (A B C D 2 - E 1)</p>
---	---	--	--

<div style="border: 1px solid black; padding: 2px; display: inline-block; font-weight: bold; font-size: 1.2em;">2</div> <p>①②③④ Harness side connector</p> <p style="text-align: right;">Engine control unit harness side connector</p> <p style="text-align: right;">No.1, 3 No.2, 4</p> <p style="text-align: right;">6FU2646</p>	<p>Check for an open-circuit, or a short-circuit to earth between the engine control unit and the injector.</p> <ul style="list-style-type: none"> • Engine control unit connector: Disconnected • Injector connector: Disconnected 	<div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">OK</div> <div style="margin: 5px 0;">→</div> <div style="border: 1px solid black; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">STOP</div>	<p>Repair the harness. (A B C D 1 - 14)</p>
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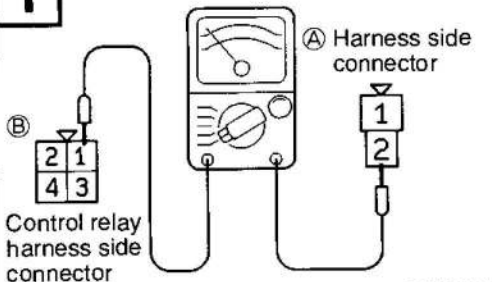
**IDLE SPEED CONTROL SERVO (STEPPER MOTOR)
HARNESS INSPECTION**

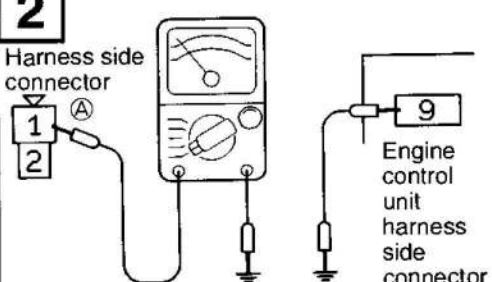
<p>1</p> <p>Control relay harness side connector</p> <p>Harness side connector</p> <p>6FU2627</p>	<p>Check for continuity between the idle speed control servo and the control relay.</p> <ul style="list-style-type: none"> Idle speed control servo connector: Disconnected Control relay connector: Disconnected <p>NOTE Touch the ohmmeter probes to both ends of the harness.</p>	<p>OK →</p> <p>✗ →</p>	<p>2</p> <p>Repair the harness. (A 2 5 - B 1)</p>
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<p>2</p> <p>Harness side connector</p> <p>Engine control unit harness side connector</p> <p>01L0397</p>	<p>Check for an open-circuit, or a short-circuit to earth between the engine control unit and the idle speed control servo.</p> <ul style="list-style-type: none"> Engine control unit connector: Disconnected Idle speed control servo connector: Disconnected 	<p>OK →</p> <p>✗ →</p>	<p>STOP</p> <p>Repair the harness. (A 1 - 4) (A 3 - 17) (A 4 - 5) (A 6 - 18)</p>
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PURGE CONTROL SOLENOID VALVE <4G63>

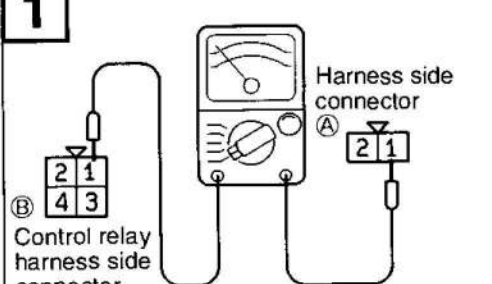
HARNESS INSPECTION

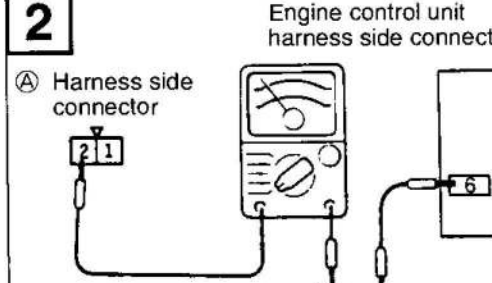
<p>1</p>  <p>Control relay harness side connector</p> <p style="text-align: right;">A Harness side connector</p> <p style="text-align: right;">6FU2628</p>	<p>Check for continuity between purge control solenoid valve and control relay.</p> <ul style="list-style-type: none"> • Purge control solenoid valve connector: Disconnected • Control relay connector: Disconnected <p>NOTE Touch the circuit tester probes to both ends of the harness.</p>	<p style="text-align: center;">OK → 2</p> <p style="text-align: center;">✗ → Repair the harness. (A 2 - B 1)</p>
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<p>2</p>  <p>Harness side connector</p> <p style="text-align: right;">A</p> <p style="text-align: right;">Engine control unit harness side connector</p> <p style="text-align: right;">6FU2629</p>	<p>Check for an open-circuit, or a short-circuit to earth, between the purge control solenoid valve and the engine control unit.</p> <ul style="list-style-type: none"> • Purge control solenoid valve connector: Disconnected • Engine control unit connector: Disconnected 	<p style="text-align: center;">OK → STOP</p> <p style="text-align: center;">✗ → Repair the harness. (A 1 - 9)</p>
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EGR CONTROL SOLENOID VALVE <4G63>

HARNESS INSPECTION

<p>1</p>  <p>Control relay harness side connector</p> <p style="text-align: right;">A Harness side connector</p> <p style="text-align: right;">6FU2630</p>	<p>Check for continuity between EGR control solenoid valve and control relay.</p> <ul style="list-style-type: none"> • EGR control solenoid valve connector: Disconnected • Control relay connector: Disconnected <p>NOTE Touch the circuit tester probes to both ends of the harness.</p>	<p style="text-align: center;">OK → 2</p> <p style="text-align: center;">✗ → Repair the harness. (A 1 - B 1)</p>
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<p>2</p>  <p>A Harness side connector</p> <p style="text-align: right;">Engine control unit harness side connector</p> <p style="text-align: right;">61A0888</p>	<p>Check for an open-circuit, or a short-circuit to earth, between the EGR control solenoid valve and the engine control unit.</p> <ul style="list-style-type: none"> • EGR control solenoid valve connector: Disconnected • Engine control unit connector: Disconnected 	<p style="text-align: center;">OK → STOP</p> <p style="text-align: center;">✗ → Repair the harness. (A 2 - 6)</p>
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GROUP 17

EMISSION CONTROL

GENERAL

OUTLINE OF CHANGES

- A high altitude compensator (HAC) has been introduced to 4G63 conventional carburetor engines for high altitude countries (altitude approx. 2,000 m or more) in General Export. Due to this, a good driveability can be obtained in both high and low altitudes. Moreover, the HAC of this engine operates at an altitude of approx. 1,200 m whereas the previous engine (for Columbia and South America-high altitude) operates at an altitude of approx. 1,800 m. Moreover, the HAC of this engine operates at an altitude of approx. 1,200 m whereas the previous engine operates at an altitude of approx. 1,800 m.

SERVICE ADJUSTMENT PROCEDURES (4G92, 4G63 ENGINES)

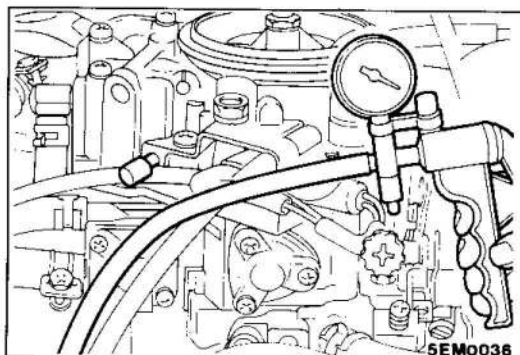
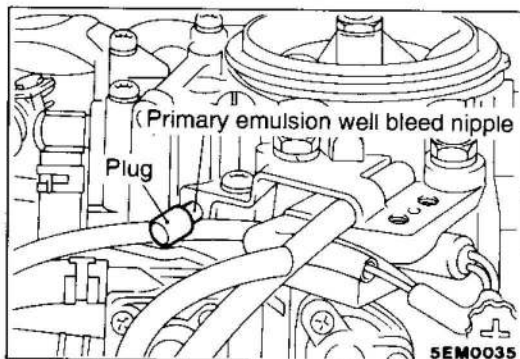
CHECKING OF HIGH ALTITUDE COMPENSATION SYSTEM

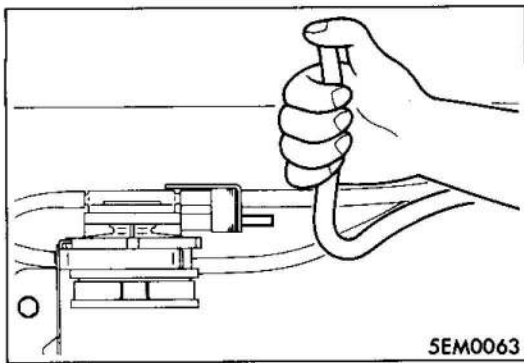
NOTE

1. The range between altitudes of 700 m and 1,700 m is the range where the high altitude compensator (HAC) switches from operating to not operating. Thus the operation in this range of altitude will be unstable. Accordingly, do not check the operation of the HAC within this range of altitude. Move the vehicle to an altitude of either 700 m or below, or to an altitude of 1,700 m or above before checking.
2. When disconnecting the vacuum hose, put a mark on the hose so that it may be reconnected at original position.

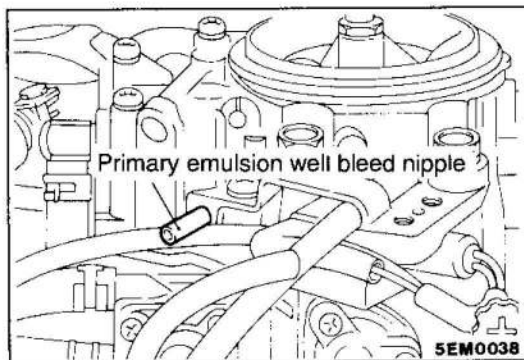
Inspection at altitude below approx. 700 m

- (1) Remove the air horn
- (2) Disconnect the vacuum hose (black) from the carburettor primary emulsion well bleed nipple and plug the nipple.
- (3) Connect a hand vacuum pump to the vacuum hose and check that vacuum is held when applied while running the engine at idle.
- (4) Connect the disconnected vacuum hose to original position.



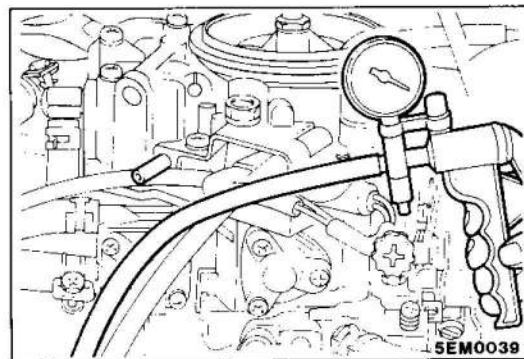


- (5) While running the engine at idle, disconnect the vacuum hose (yellow stripe) from the HAC and hold a finger at the hose end to check that vacuum is felt.
- (6) Connect the disconnected vacuum hose to original position.
- (7) Run the engine at approximately 3,000 r/min with no load, and check that the engine runs normally.

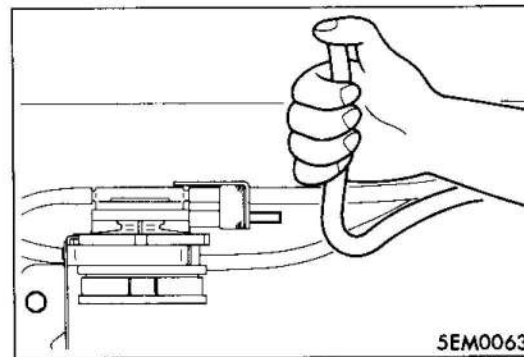


Inspection at altitude above approx. 1,700 m

- (1) Remove the air horn.
- (2) Disconnect the vacuum hose (black) from the carburettor primary emulsion well bleed nipple.



- (3) Connect a hand vacuum pump to the vacuum hoses and while running the engine at idle, apply vacuum from the vacuum pump to check that vacuum leaks and does not build up.
- (4) Connect the disconnected vacuum hose to original position.



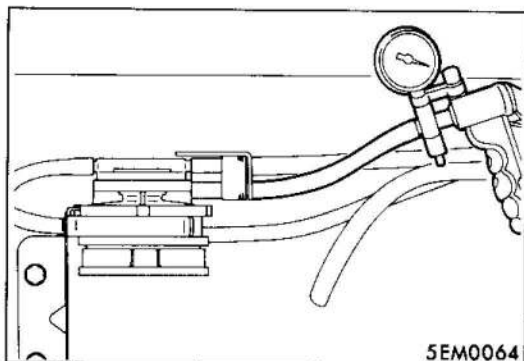
- (5) While running the engine at idle, disconnect the vacuum hose (yellow stripe) from the HAC and hold a finger at the hose end to check that vacuum is felt.
- (6) Connect the disconnected vacuum hose to original position.
- (7) Run the engine at approximately 3,000 r/min with no load, and check that the engine runs normally with no black smoke being emitted.

CHECKING OF HIGH ALTITUDE COMPENSATOR

NOTE

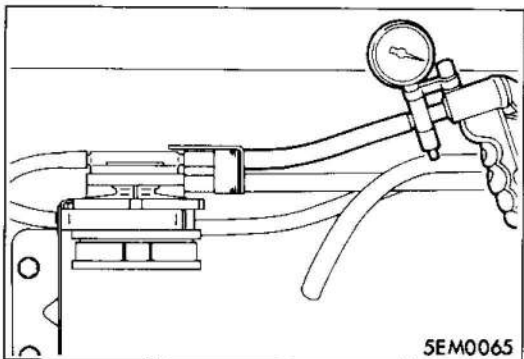
1. The range between altitudes of 700 m and 1,700 m is the range where the high altitude compensator (HAC) switches from operating to not operating. Thus the operation in this range of altitude will be unstable. Accordingly, do not check the operation of the HAC with-in this range of altitude. Move the vehicle to an altitude of either 700 m or below, or to an altitude of 1,700 m or above before checking.
2. When disconnecting the vacuum hose, put a mark on the hose so that it may be reconnected at original position.

17-3 EMISSION CONTROL -- Service Adjustment Procedures (4G92, 4G63 engines)

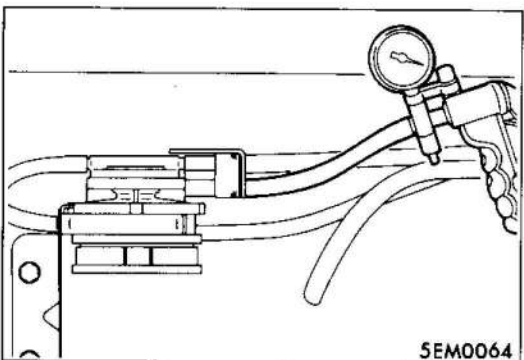


Inspection at altitude below approx. 700 m

- (1) Disconnect the vacuum hose (yellow stripe) from the HAC and connect a hand vacuum pump to the HAC nipple.
- (2) Apply vacuum and check that it leaks and does not hold.
- (3) Connect the disconnected vacuum hose to original position.

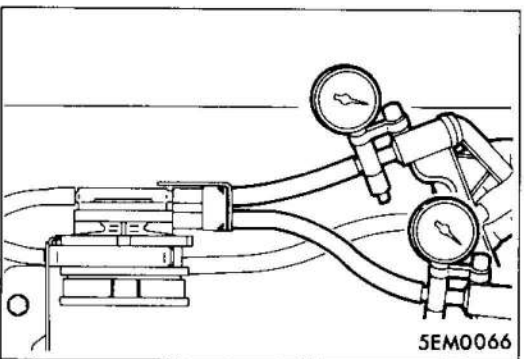


- (4) Disconnect the vacuum hose (black) from the HAC and connect a hand vacuum pump to the HAC nipple.
- (5) Check that vacuum holds when applied.
- (6) Connect the disconnected vacuum hose to original position.



Inspection at altitude above approx. 2,500 m (8,202 ft.)

- (1) Disconnect the vacuum hose (yellow stripe) from the HAC and connect a hand vacuum pump to the HAC nipple.
- (2) Check that vacuum holds when applied.



- (3) Disconnect the vacuum hose (black) from the HAC and connect another hand vacuum pump to the HAC nipple.
- (4) Holding the vacuum applied in procedure 2, apply vacuum and check that it leaks and does not hold.
- (5) Connect the disconnected vacuum hose to original position.

GROUP 27 REAR AXLE

GENERAL

OUTLINE OF CHANGES

- Final reduction gear ratio of the rear axle has been changed from 4.222 to 3.909. <Vehicles for Europe – P05V, P15V, P05W>

SPECIFICATIONS

GENERAL SPECIFICATIONS

Items	P05V, P15V, P05W	
Drive gear type	Hypoid gear	
Reduction ratio	3,909	
Differential gear type (type × No. of teeth)	Side gear	Straight bevel gear × 2
	Pinion gear	Straight bevel gear × 2 (Straight bevel gear × 4)
Number of teeth	Drive gear	43
	Drive pinion	11
	Side gear	14 (16)
	Pinion gear	10

NOTE

(): Vehicles with limited slip differential

GROUP 52A

INTERIOR

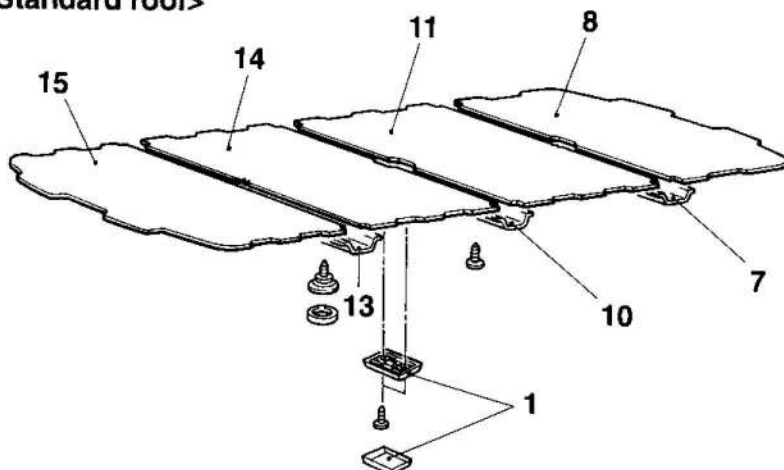
GENERAL

- Hanging type headlining has been used. Due to this, the following service procedures have been added. <Panel van, window van>

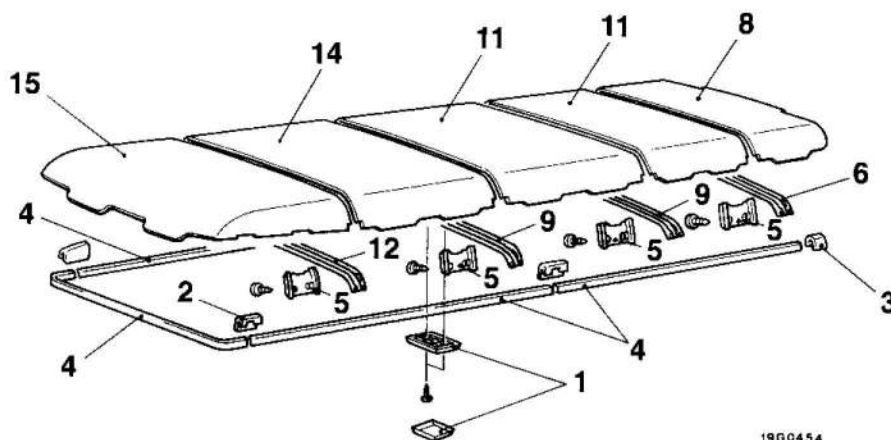
HEADLINING

REMOVAL AND INSTALLATION

<Standard roof>



<High roof>



Removal steps

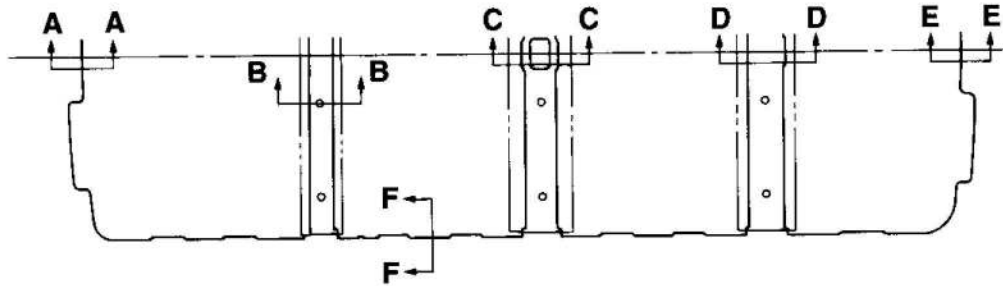
- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Room lamp assembly 2. Roof rail joint <High roof> 3. Edge trim <High roof> 4. Roof rail trim <High roof> 5. Bracket cover <High roof> 6. Rear roof bow <High roof> 7. Rear roof bow cover <Standard roof> ▶A◀ 8. Rear headlining 9. Center roof bow <High roof> 10. Center roof bow cover <Standard roof> | <ol style="list-style-type: none"> ▶A◀ 11. Center headlining 12. Front roof bow <High roof> 13. Front roof bow cover <Standard roof> ▶A◀ 14. Center headlining ▶A◀ 15. Front headlining |
|---|--|

INSTALLATION SERVICE POINT

▶◀ FRONT HEADLINING/CENTER HEADLINING/REAR HEADLINING INSTALLATION

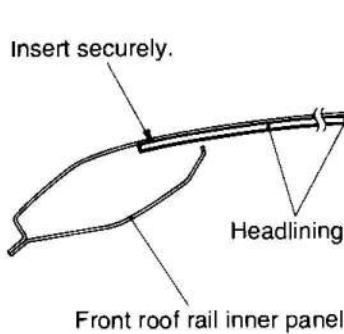
Insert the headlining between the roof panel and roof rail inner panel as shown in the figure.

<Standard roof>



19G0447

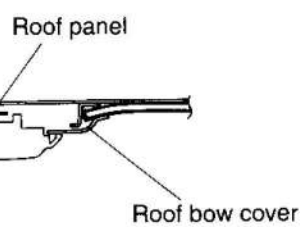
Cross-section A – A



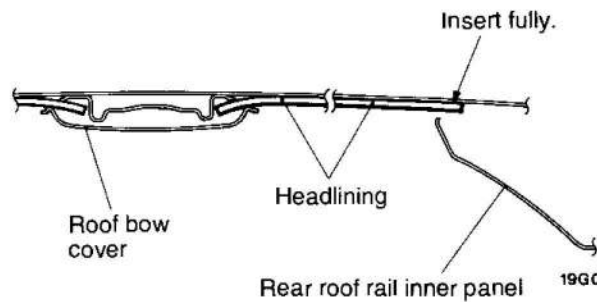
Cross-section B – B



Cross-section C – C

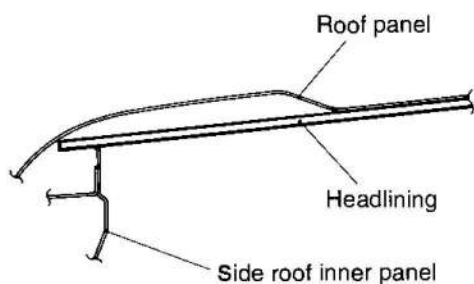


Cross-section D – D



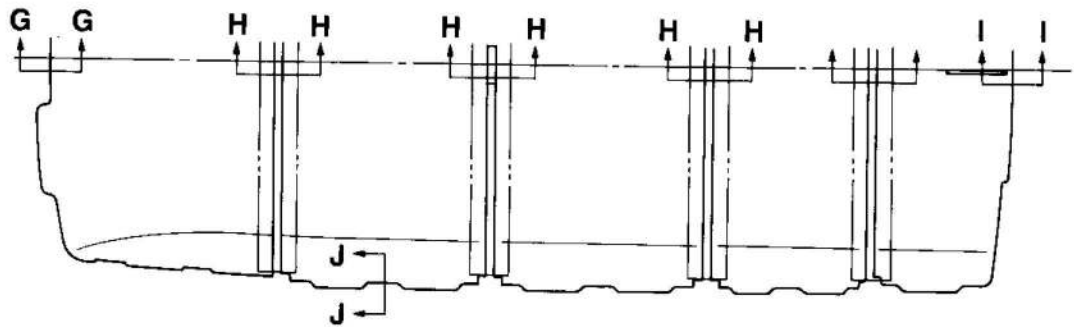
19G0450

Cross-section F – F



19G0451

<High roof>

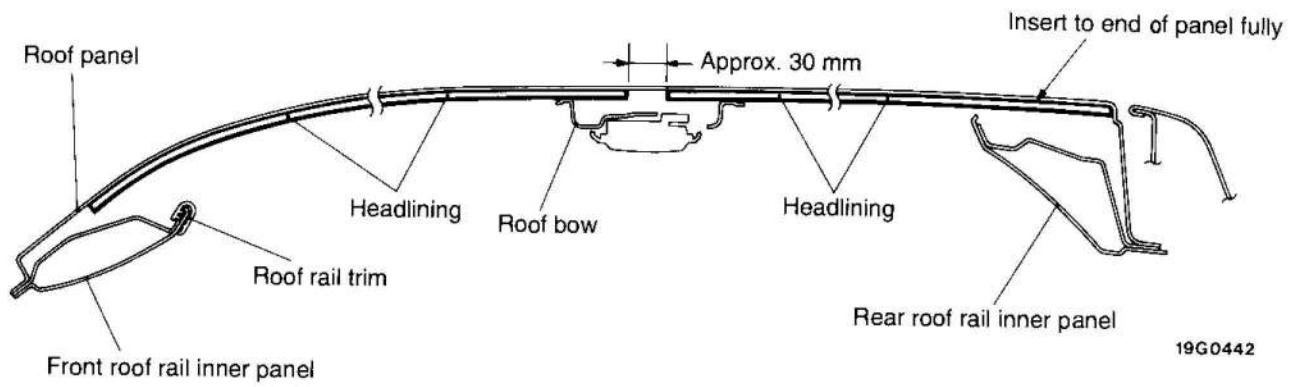


19G0448

Cross-section G – G

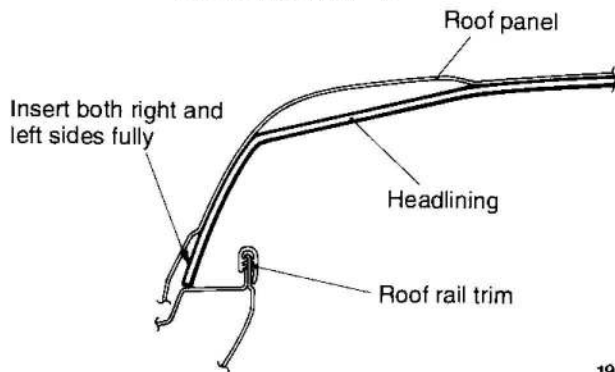
Cross-section H – H

Cross-section I – I



19G0442

Cross-section J – J



19G0443