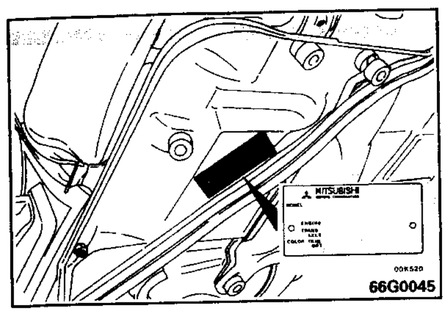


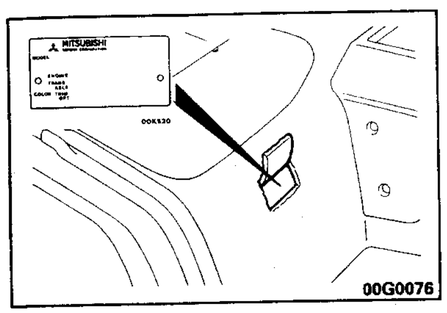
66G0045

VEHICLE IDENTIFICATION

VEHICLE INFORMATION CODE PLATE E01DD--

VEHICLES FOR EUROPE

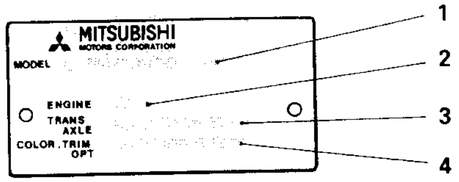
Vehicle identification plate is riveted to the back of passenger's seat pan. The plate shows model code, engine model, transmission model and body color code.



00G0076

VEHICLES FOR GENERAL EXPORT AND AUSTRALIA

Vehicle identification plate is riveted to the front floor pan (B.).



00K520

1. MODEL **P03W LZXL6**
   - Model series
   - Vehicle model
2. ENGINE **4G63**
   - Engine model
3. TRANSAXLE **KM135**
   - Transmission model
4. COLOR, TRIM OPT. **G82**
   - Monotone exterior color code

   H9HH43H39
   - Color codes
   - Two-tone exterior color code

Two-tone exterior coloring is identified by the code "H9H" followed by two color codes.

MODEL E01DA--

VEHICLES FOR EUROPE

Model code	Engine model	Transmission model	Body type
P02VGLZL6	4G32	KM135	Panel van
P02VGLZR6	4G32	KM135	Panel van
P02VLZL6	4G32	KM135	Window van
P03VGLZAL6	G63B	KM135	Panel van
P03VLZAL6	G63B	KM135	Window van
P03WLZXL6	4G63	KM135	Mini-bus
P03WLZXAL6	G63B	KM135	Mini-bus
P05VGLZL6	4D56	KM135	Panel van
P05VGLZR6	4D56	KM135	Panel van
P05WLZXL6	4D56	KM135	Mini-bus
P12VJLZL6	4G32	KM135	Panel van (Long body)
P12VJLZR6	4G32	KM135	Panel van (Long body)
P13VJLZAL6	G63B	KM135	Panel van (Long body)
P15VJLZL6	4D56	KM135	Panel van (Long body)
P15VJLZR6	4D56	KM135	Panel van (Long body)
P23VLNL6	4G63	KM147	Window van (4WD)
P23WLNXL6	4G63	KM147	Mini-bus (4WD)
P24VLNAL6	G64B	KM147	Window van (4WD)
P24WLNXAL6	G64B	KM147	Mini-bus (4WD)

VEHICLES FOR GENERAL EXPORT

Model code	Engine model	Transmission model	Body type
P01VGLCL	4G33	KM117	Panel van
P01VGLCR	4G33	KM117	Panel van
P01VLCR	4G33	KM117	Window van
P01WSCL	4G33	KM117	Mini-bus
P01WSCR	4G33	KM117	Mini-bus
P03WSZUL	4G63	KM135	Mini-bus
P05VGLZL	4D56	KM135	Panel van
P05VGLZR	4D56	KM135	Panel van
P05VLZR	4D56	KM135	Window van
P12VJLCL	4G32	KM131	Panel van (Long body)
P12VJLCR	4G32	KM131	Panel van (Long body)
P12WHLCL	4G32	KM131	Mini-bus (Long body)
P12WHLCR	4G32	KM131	Mini-bus (Long body)
P15VJLZL	4D56	KM135	Panel van (Long body)
P15VJLZR	4D56	KM135	Panel van (Long body)
P15WHLZL	4D56	KM135	Mini-bus (Long body)
P15WHLZR	4D56	KM135	Mini-bus (Long body)
P23WSNUL	4G63	KM147	Mini-bus (4WD)
P23WSNUR	4G63	KM147	Mini-bus (4WD)

Items	P12VJLCL P12VJLCR	P12WHLCL P12WHLCR	P15VJLZL P15VJLZR	P15WHLZL P15WHLZR	P23WSNUL P23WSNUR
Dimensions mm (in.)					
Overall length	4,590 (180.7)	4,590 (180.7)	4,590 (180.7)	4,590 (180.7)	4,460 (175.6)
Overall width	1,690 (66.5)	1,690 (66.5)	1,690 (66.5)	1,690 (66.5)	1,695 (66.7)
Overall height	1,970 (77.6)	1,970 (77.6)	1,970 (77.6)	1,970 (77.6)	1,975 (77.8)
Wheelbase	2,435 (95.9)	2,435 (95.9)	2,435 (95.9)	2,435 (95.9)	2,240 (88.2)
Track-front	1,445 (56.9)	1,445 (56.9)	1,445 (56.9)	1,445 (56.9)	1,430 (56.3)
Track-rear	1,380 (54.3)	1,380 (54.3)	1,380 (54.3)	1,380 (54.3)	1,415 (55.7)
Ground clearance	205 (8.1)	205 (8.1)	205 (8.1)	205 (8.1)	210 (8.3)
Weights kg (lbs.)					
Kerb weight	1,235 (2,722)	1,325 (2,920)	1,325 (2,920)	1,415 (3,119)	1,615 (3,560)
Front	685 (1,510)	715 (1,576)	760 (1,675)	790 (1,742)	930 (2,050)
Rear	550 (1,212)	610 (1,344)	565 (1,245)	625 (1,378)	685 (1,510)
Max. gross vehicle weight	2,505 (98.6)	2,400 (94.5)	2,505 (98.6)	2,400 (94.5)	2,400 (94.5)
Seating capacity	3	12	3	12	8
Performance					
Max. speed km/h (mph)	125 (78.1)	125 (78.1)	120 (75.0)	120 (75.0)	130 (81.3)
Max. climbing ability tan θ	0.31	0.31	0.30	0.30	0.60
Min. turning radius m (ft.)	4.9 (16.1)	4.9 (16.1)	4.9 (16.1)	4.9 (16.1)	5.0 (16.4)
Engine					
Model	4G32	4G32	4D56	4D56	4G63
Total displacement cc (cu.in.)	1,597 (97.4)	1,597 (97.4)	2,477 (151.1)	2,477 (151.1)	1,997 (121.8)
Fuel System					
Carburetor	Single manual choke	Single manual choke	Fuel injection	Fuel injection	Single manual choke
Fuel pump type	Mechanical type with a diaphragm	Mechanical type with a diaphragm	Vane type	Vane type	Mechanical type with a diaphragm
Fuel tank capacity lit. (U.S.gal., Imp.gal.)	55 (14.5, 12.1)	55 (14.5, 12.1)	55 (14.5, 12.1)	55 (14.5, 12.1)	60 (15.8, 13.2)
Cooling System					
Coolant quantity lit. (U.S.qts., Imp.qts.)	7.5 (7.92, 6.60) [8.0 (8.45, 7.04)]	7.5 (7.92, 6.60) [8.0 (8.45, 7.04)]	8.7 (9.19, 7.65) [9.2 (9.72, 8.10)]	8.7 (9.19, 7.65) [9.2 (9.72, 8.10)]	7.5 (7.92, 6.60) [8.0 (8.45, 7.04)]
Clutch					
Type	Dry single disc clutch with cable actuation	Dry single disc clutch with cable actuation	Dry single disc clutch with hydraulic actuation	Dry single disc clutch with hydraulic actuation	Dry single disc clutch with cable actuation
Transmission and Transfer					
Model	KM131	KM131	KM135	KM135	KM147
Transmission type	4-speed manual	4-speed manual	5-speed manual	5-speed manual	5-speed manual
Transfer type	–	–	–	–	Part time 2-speed direct-coupled

NOTE
[ ] indicates vehicles with rear heater.

Items	P12VJLCL P12VJLCR	P12WHLCL P12WHLCR	P15VJLZL P15VJLZR	P15WHLZL P15WHLZR	P23WSNUL P23WSNUR
Front Axle					
Type	–	–	–	–	Full-floating type drive shaft, hypoid gear differential
Final gear ratio					5.285
Rear Axle					
Type	Banjo type axle housing semi-floating type axle shaft, hypoid gear differential				
Final gear ratio	4.875	4.875	4.222	4.222	5.285
Wheel					
Tyre size					
Front	6.00-14-6PRLT	6.00-14-6PRLT	6.00-14-6PRLT	6.00-14-6PRLT	215SR15
Rear	6.00-14-8PRLT	6.00-14-6PRLT	6.00-14-8PRLT	6.00-14-6PRLT	215SR15
Disc wheel size	5-J×14	5-J×14	5-J×14	5-J×14	5.5-JJ×15 *2 6-JJ×15
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 *1 with a power assist				
Service Brakes					
Type	Double-circuit hydraulic brake system, brake servo				
Front	AD-type discs				
Rear	Drums (Leading, trailing)				
Parking Brake					
Type	Mechanical, internal-expansion type, acting on rear wheels				
Electrical System					
Battery type-Voltage-Capacity V-Ah (5HR)	34B19R	34B19R	95D31R	95D31R	34B19R
	*2 55D23R	*2 55D23R	*2 80D26R×2	*2 80D26R×2	*2 55D23R
	27 *2 48	27 *2 48	64 *2 55	64 *2 55	27 *2 48

NOTE
*1 indicates optional (P23WSNUL, P23WSNUR).
*2 indicates optional.

ENGINE <6G7>

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11109000849

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ENGINE ASSEMBLY 36

IGNITION TIMING CHECK

11100170488

1. Before inspection, set the vehicle to the pre-inspection condition.
2. Connect the MUT-II to the diagnosis connector.
3. Set up a timing light.
4. Start the engine and run at idle.
5. Check that engine idle speed is within the standard value.

   Standard value: 700 ± 100 r/min

6. Select No. 17 of the MUT-II Actuator test.
7. Check that basic ignition timing is within the standard value.

   Standard value: 5° BTDC ± 3°

8. If the basic ignition timing is outside the standard value, inspect the MPI system while referring to GROUP 13A – Troubleshooting.
9. Press the MUT-II clear key (Select a forced driving cancel mode) to release the Actuator test.

   Caution
   If the test is not cancelled, a forced driving will continue for 27 minutes. Driving under this condition may damage the engine.

10. Check that ignition timing is at the standard value.

    Standard value: approx. 15° BTDC

    NOTE
    (1) Ignition timing is variable within about ± 7°, even under normal operating.
    (2) And it is automatically further advanced by about 5° from standard value at higher altitudes.

IDLE SPEED CHECK

11100190590

1. Before inspection, set the vehicle to the pre-inspection condition.
2. Turn the ignition switch to OFF and connect the MUT-II to the diagnosis connector.
3. Check the basic ignition timing. Adjust if necessary.

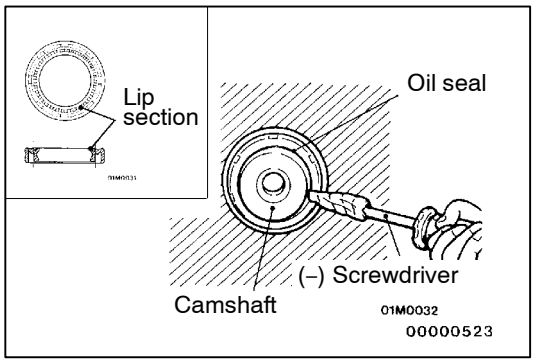
   Standard value: 5° BTDC ± 3°

4. Run the engine at idle for 2 minutes.
5. Check the idle speed. Select item No. 22 and take a reading of the idle speed.

   Curb idle speed: 700 ± 100 r/min

   NOTE
   The idle speed is controlled automatically by the idle speed control (ISC) system.

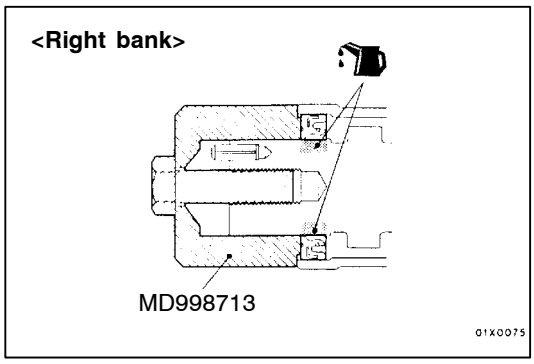
6. If the idle speed is outside the standard value, inspect the MPI components by referring to GROUP 13A – Troubleshooting.

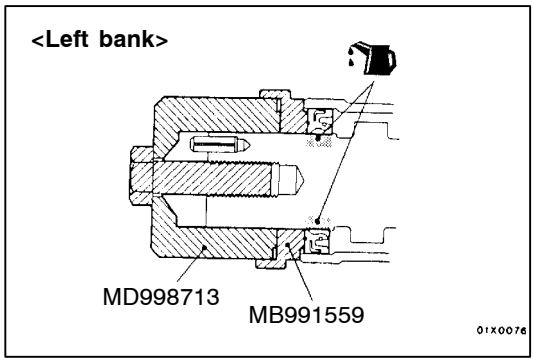


◀B▶ CAMSHAFT OIL SEAL REMOVAL

1. Make a notch in the oil seal lip section with a knife, etc.
2. Cover the end of a flat-tipped screwdriver with a shop towel and insert into the notched section of the oil seal, and pry out the oil seal to remove it.

Caution
Be careful not to damage the camshaft and the cylinder head.





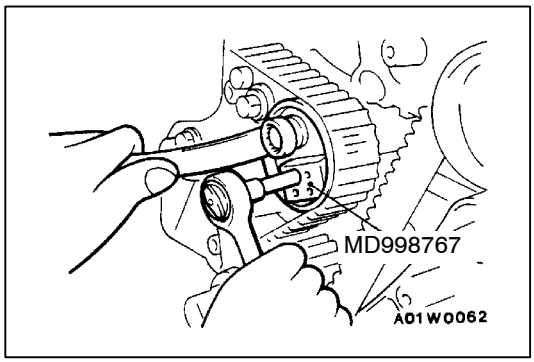
INSTALLATION SERVICE POINTS

▶A◀ CAMSHAFT OIL SEAL INSTALLATION

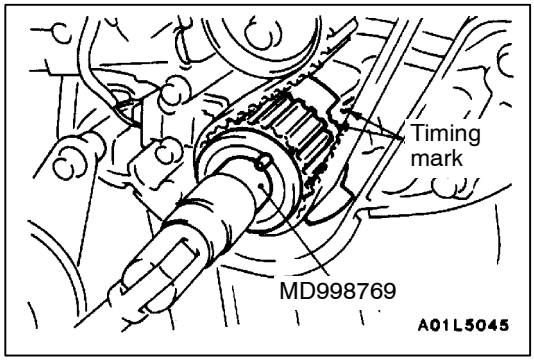
1. Apply engine oil to the camshaft oil seal lip.
2. Use special tools to press-fit the camshaft oil seal.

▶B◀ CAMSHAFT SPROCKET INSTALLATION

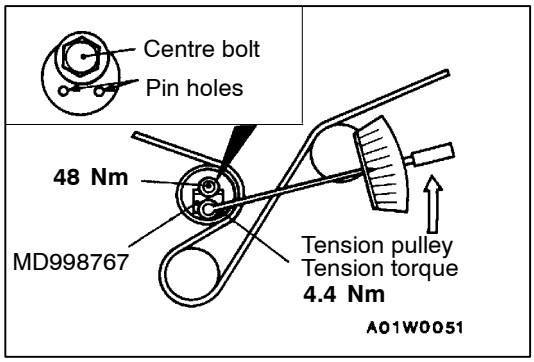
Use special tools in the same way as during removal to install the camshaft sprocket.



4. Use special tool to push the tensioner pulley into the timing belt, and then temporarily tighten the centre bolt.



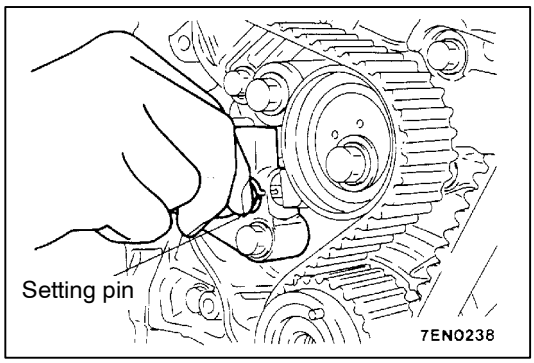
5. Use special tool to turn the crankshaft 1/4 turn counterclockwise and then turn it again clockwise until the timing marks are aligned.



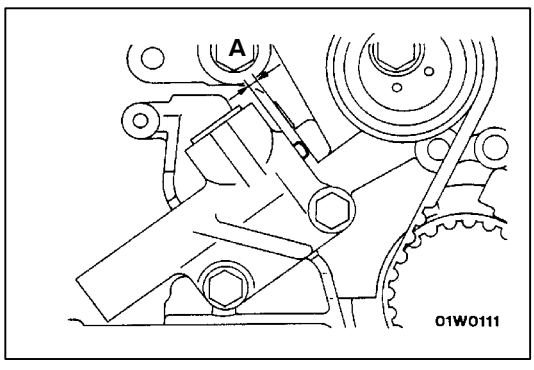
6. Loosen the centre bolt of the tensioner pulley. Use special tool and a torque wrench to apply the standard torque to the timing belt as shown in the illustration. Then tighten the centre bolt to the specified torque.

   Standard value: 4.4 Nm
   <Timing belt tension torque>

   Caution
   When tightening the centre bolt, be careful that the tensioner pulley does not turn with the bolt.



7. Remove the setting pin that has been inserted into the auto-tensioner.
8. Turn the crankshaft two turns clockwise to align the timing marks.



9. Wait for at least five minutes, and then check that the auto-tensioner pushrod extends within the standard value.

   Standard value (A): 3.8 – 5.0 mm

10. If no, repeat the operation in steps (5) to (9) above.
11. Check again that the timing marks of each sprocket are aligned.

GENERAL INFORMATION

11100010339

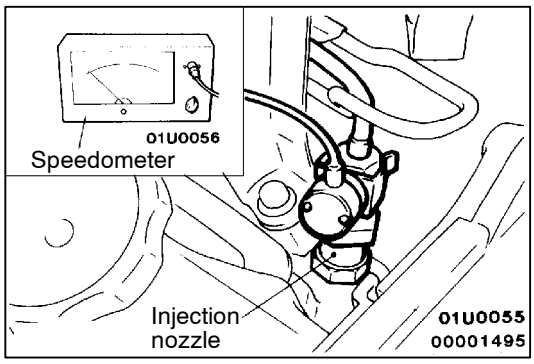
Items		4D56
Total displacement mL		2,477
Bore x Stroke mm		91.1 x 95.0
Compression ratio		21
Combustion chamber		Vortex chamber type
Camshaft arrangement		SOHC
Number of valve	Intake	4
	Exhaust	4
Valve timing	Intake	Opening BTDC 20°, Closing ABDC 49°
	Exhaust	Opening BBDC 55°, Closing ATDC 22°
Fuel system		Distribution type injection pump
Rocker arm		Roller type
Adjusting screw		Elephant foot type

IDLE SPEED CHECK AND ADJUSTMENT

11100190347

NOTE
Check that the injection timing is normal

1. Before inspection, set the vehicle to the pre-inspection condition.

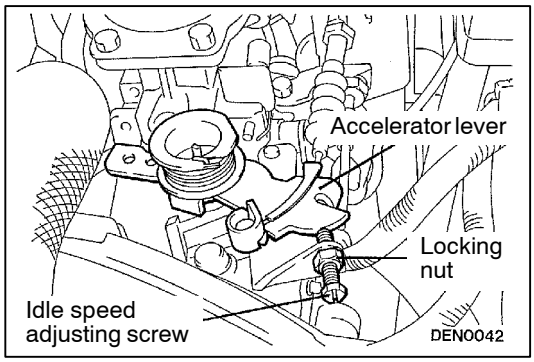


2. Connect the speedometer to the injection nozzle or the injection pipe.

   Caution
   When the speedometer is connected to the injection pipe, the pipe mounting clamps should all be removed.

3. Start the engine and run it at idle.
4. Check the idle speed.

   Standard value: 750 ± 100 r/min



5. If not within the standard value, loosen idle adjusting screw lock nut and adjust the idle speed by rotating adjusting screw. And tighten locking nut.

IDLE-UP MECHANISM CHECK AND ADJUSTMENT-FOR A/C

11100230032

Refer to GROUP 55 – On-vehicle Service.

Caution
The use of a screwdriver or chisel in place of the special tool can damage the gasket seat surface and cause oil leakage.

INSTALLATION SERVICE POINTS

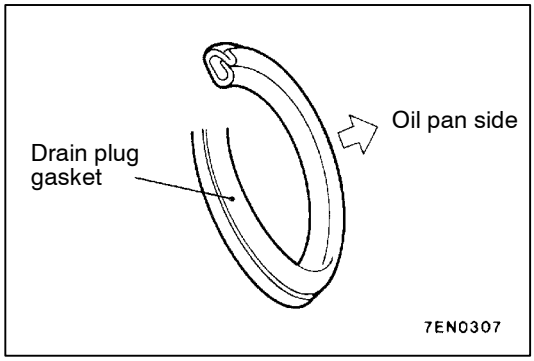
▶A◀ OIL PAN INSTALLATION

1. Remove sealant from oil pan and cylinder block mating surfaces.
2. Degrease the sealant-coated surface and the engine mating surface.
3. Apply the specified sealant around the gasket surface of oil pan.

   Specified sealant:
   MITSUBISHI GENUINE PART No. MD970389 or equivalent

   NOTE
   The sealant should be applied in a continuous bead approximately 4 mm in diameter.
4. Assemble oil pan to cylinder block within 15 minutes after applying the sealant.

   Caution
   After installing the oil pan, wait at least 1 hour before starting the engine.

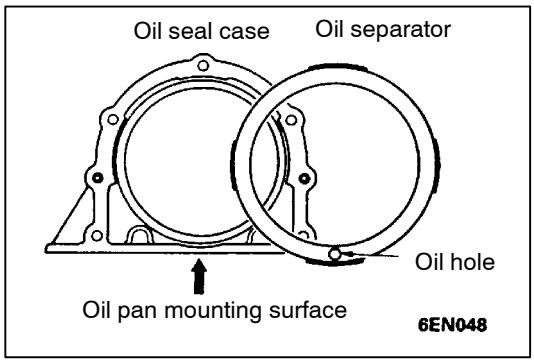


▶B◀ DRAIN PLUG GASKET INSTALLATION

Install a new gasket in the direction so that it faces as shown in the illustration.

INSPECTION 11200260041

- Check oil pan for cracks.
- Check oil pan sealant-coated surface for damage and deformation.
- Check oil screen for cracked, clogged or damaged wire net and pipe.



▶B◀ OIL SEPARATOR INSTALLATION

Install the oil separator in such a way that its oil hole come at the case bottom (indicated by an arrow in the illustration).

▶C◀ FLYWHEEL ASSEMBLY INSTALLATION

Use the special tool in the same way as during removal to stop the flywheel assembly from turning, and then tighten the bolt to the specified torque.

Tightening torque: 127 – 137 Nm

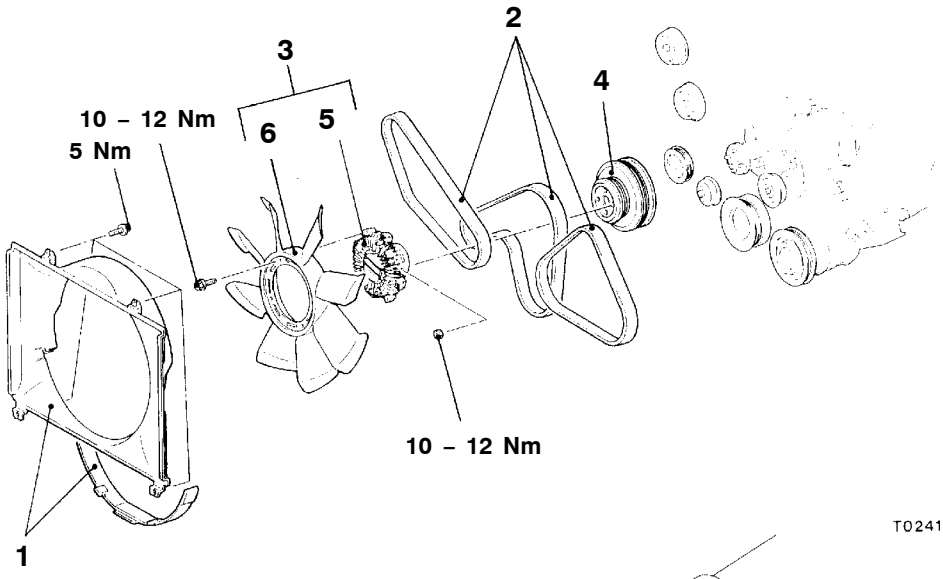
COOLING FAN

14100210082

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation
- Engine Coolant Draining and Supplying (Refer to P.14-3.)
- Radiator Upper Hose Removal and Installation (Refer to P.14-12.)

<6G7>



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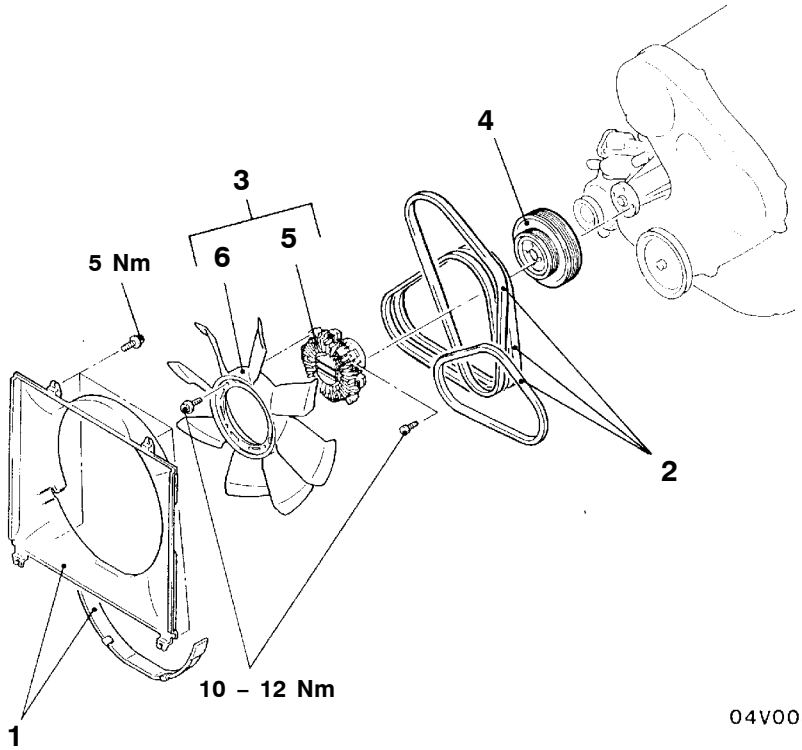


04V0037

00009209

Removal steps

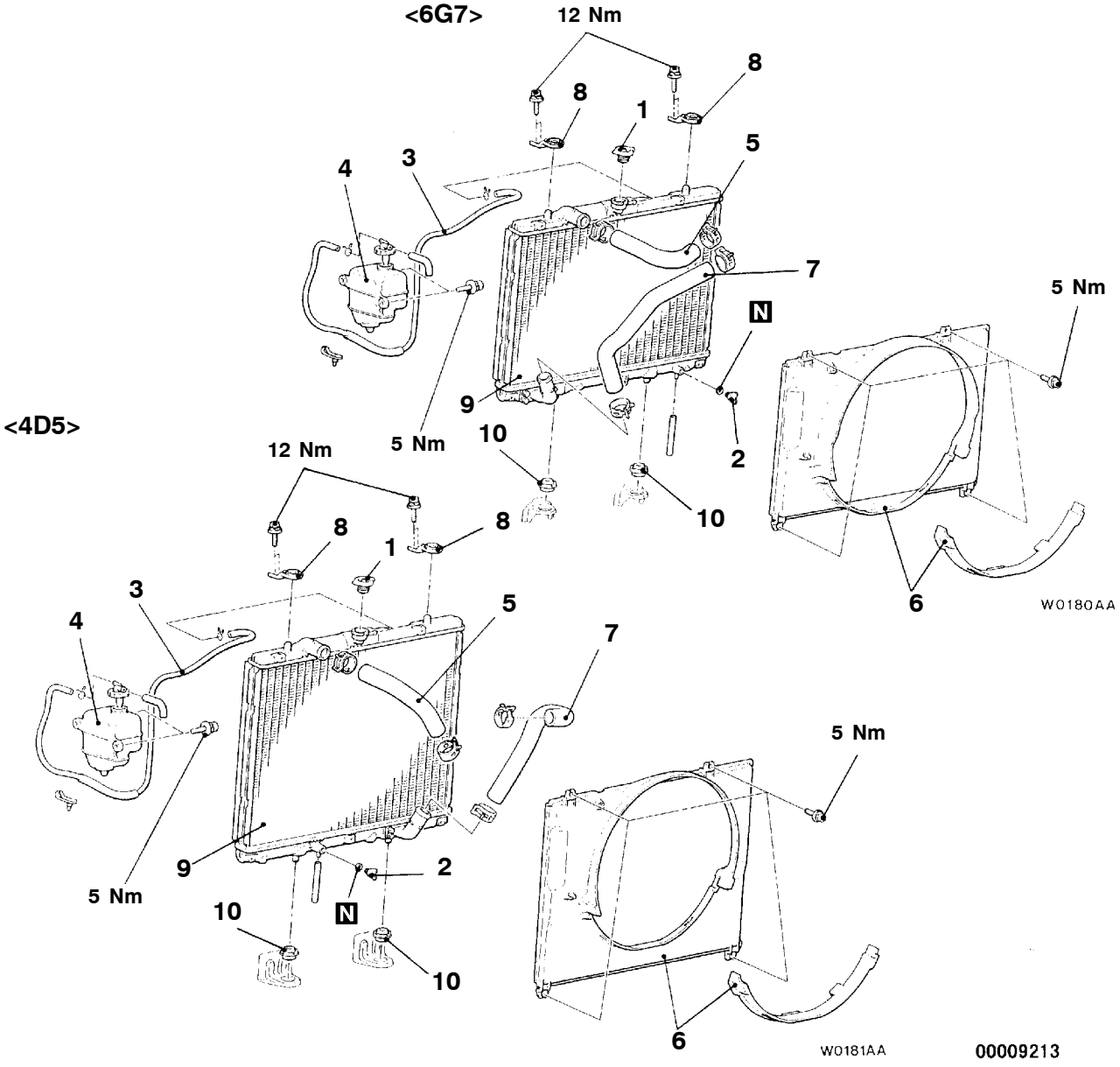
1. Shroud assembly
2. Drive belts
3. Cooling fan and fan clutch assembly
4. Pulley
5. Fan clutch
6. Cooling fan

RADIATOR

14100150421

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation
- Under Cover and Skid Plate Removal and Installation
- Engine Coolant Draining and Supplying (Refer to P.14-3)
- Intercooler Removal and Installation <4D56> (Refer to GROUP 15 – Intercooler)



Removal steps

1. Radiator cap
2. Drain plug
3. Rubber hose connection
4. Reserve tank assembly

◀A▶ ▶A◀ 5. Radiator upper hose

6. Shroud assembly

◀A▶ ▶A◀ 7. Radiator lower hose

8. Radiator support
9. Radiator
10. Lower insulator

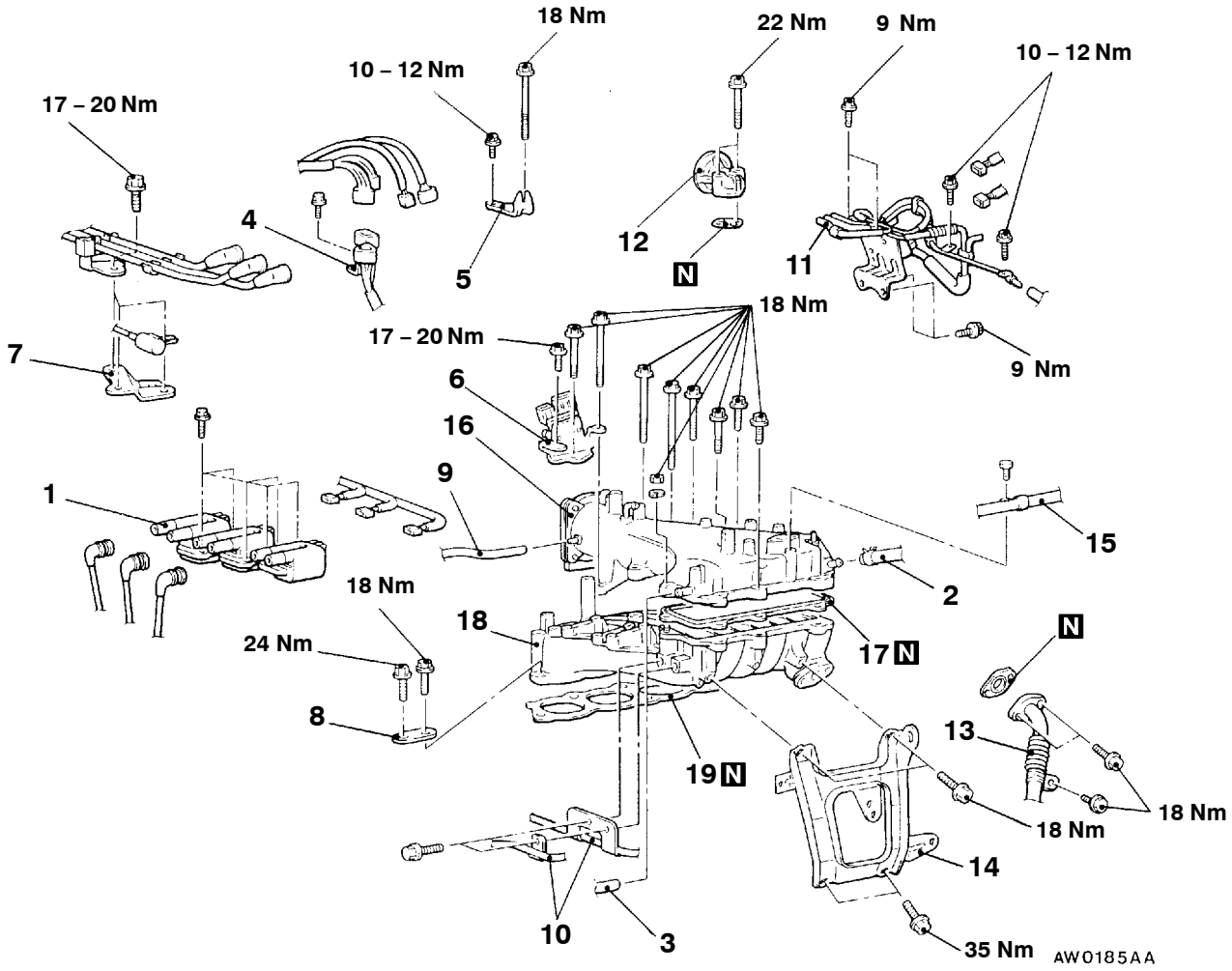
INTAKE MANIFOLD <6G7>

15100300663

REMOVAL AND INSTALLATION

Pre-removal Operation
- Fuel Discharge Prevention (Refer to GROUP 13A – On-vehicle Service.)
- Throttle Body Removal (Refer to GROUP 13A – Throttle Body.)

Post-installation Operation
- Throttle Body installation (Refer to GROUP 13A – Throttle Body.)



Removal steps

1. Ignition coils
2. Brake booster vacuum hose connection
3. PCV hose connection
4. Crankshaft position sensor and cam position sensor connector
5. Accelerator cable bracket
6. Ignition power transistor
7. Water outlet fitting bracket
8. Water pump stay
9. Vacuum hose connection
10. Fuel pipe connection
11. Solenoid valve and vacuum hose assembly
12. EGR valve
13. EGR pipe connection
14. Surge tank stay
15. Throttle cable connection
16. Air intake fitting
17. Air intake fitting gasket
18. Upper intake manifold

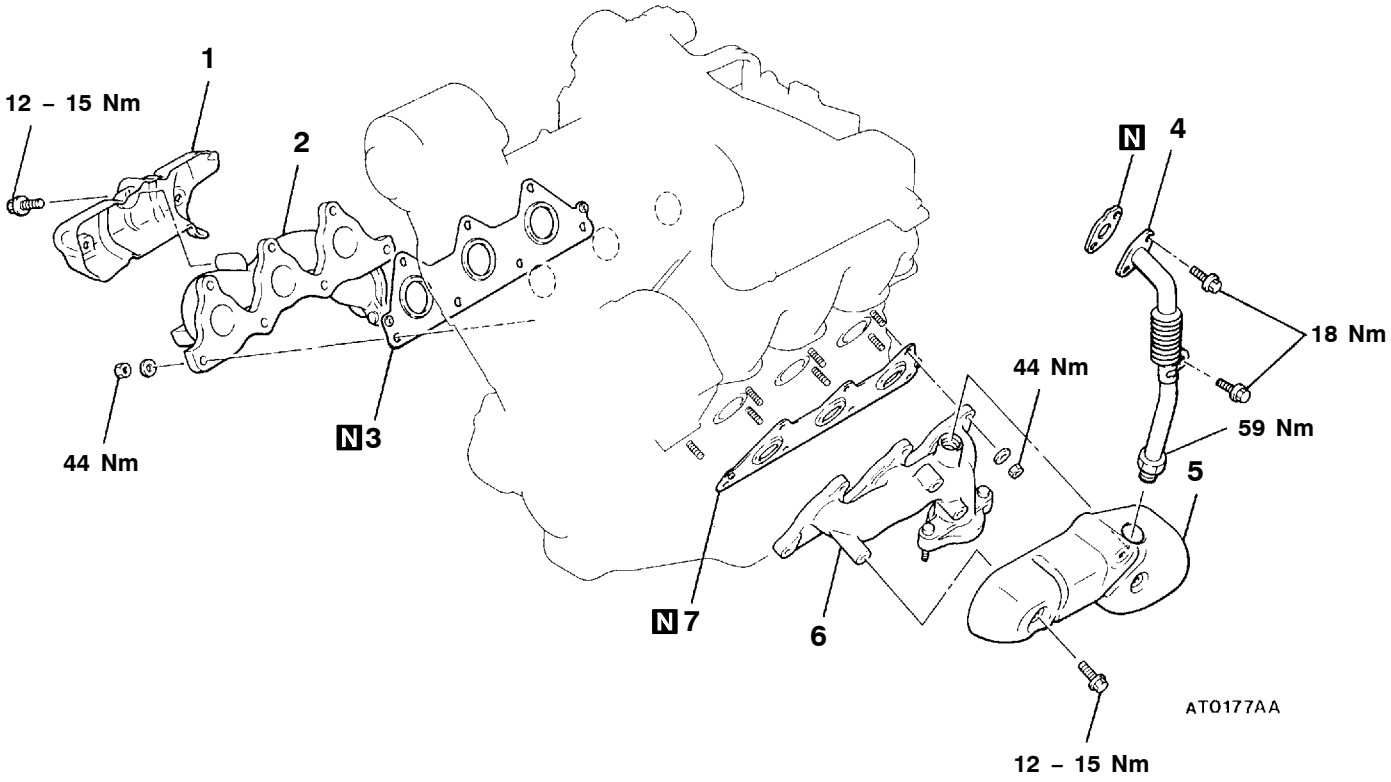
▶D◀ 19. Surge tank gasket

EXHAUST MANIFOLD <6G7>

15100330587

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation
- Front Exhaust Pipe Removal and Installation (Refer to P.15-19.)
- Air Cleaner Removal and Installation (Refer to P.15-4.)
- Battery and Battery Tray Removal and Installation
- Engine Oil Dipstick Guide Removal and Installation



Removal steps

1. Heat protector (R.H.)
2. Exhaust manifold (R.H.)
3. Exhaust manifold gasket (R.H.)
4. EGR pipe
5. Heat protector (L.H.)
6. Exhaust manifold (L.H.)
7. Exhaust manifold gasket (L.H.)

INSPECTION

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Check the following points; replace the part if a problem is found.

EXHAUST MANIFOLD CHECK

1. Check for damage or cracking of any part.
2. Using a straight edge and a feeler gauge, check for distortion of the cylinder head installation surface.

   Standard value: 0.15 mm or less

   Limit: 0.20 mm