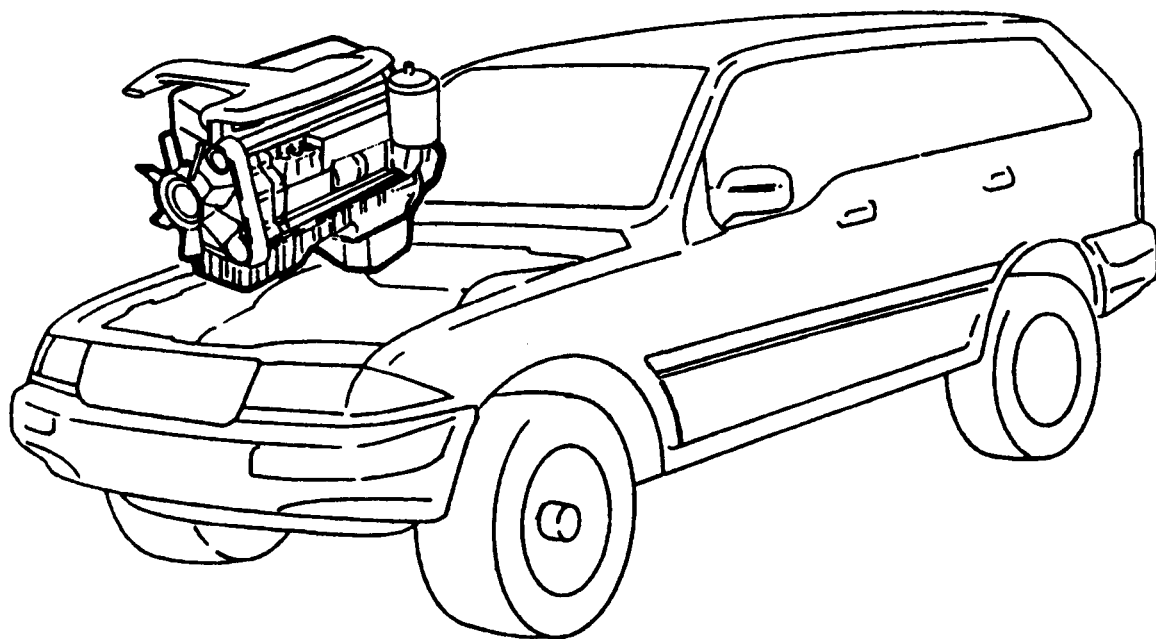


## MAINTENANCE AND REPAIR ON-VEHICLE SERVICE

### ENGINE ASSEMBLY

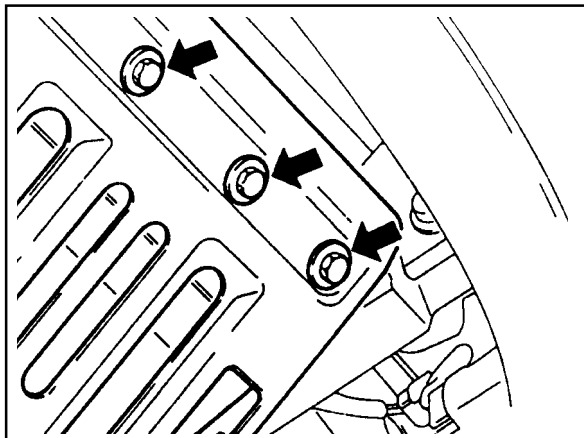


**Removal & Installation Procedure**

1. Disconnect the negative terminal of battery.
2. Remove the hood.
3. Remove the skid plate.

**Installation Notice**

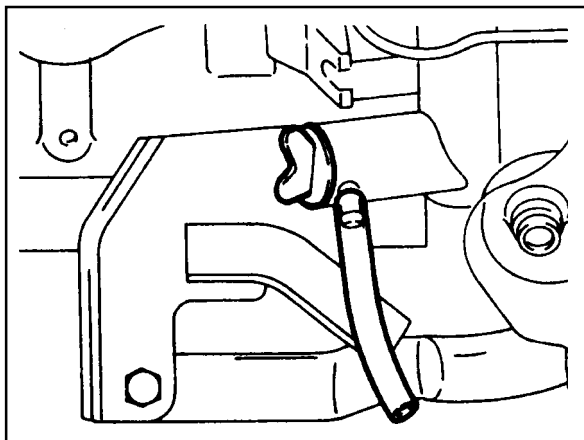
Tightening Torque	28 - 47 Nm
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4. Remove the radiator drain cock and drain the coolant.

**Notice**

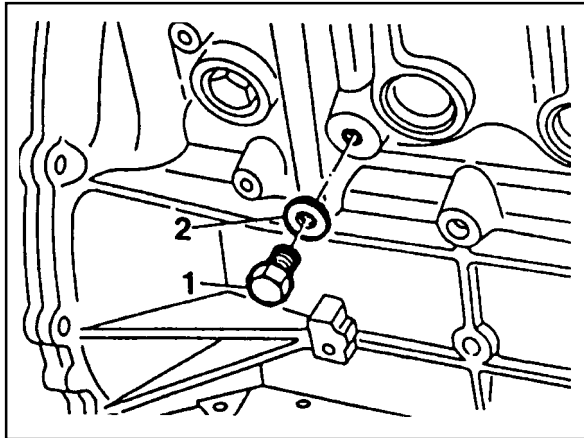
Open the coolant reservoir tank cap.



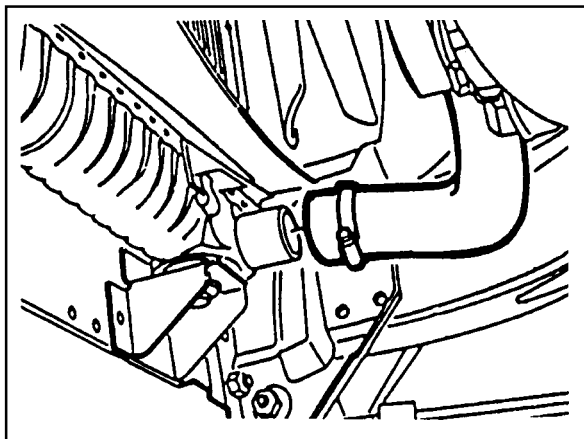
5. Remove the drain plug (1) and seal (2) from the cylinder block and drain the coolant completely.
6. After draining, replace the seal and reinstall the drain plug.

**Installation Notice**

Tightening Torque	30 Nm
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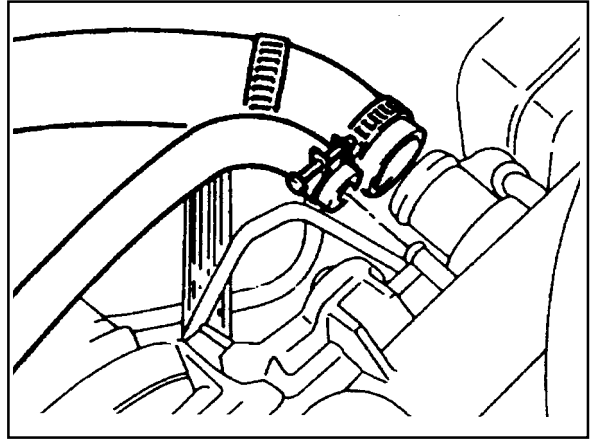


7. Disconnect the lower coolant hose from the radiator.



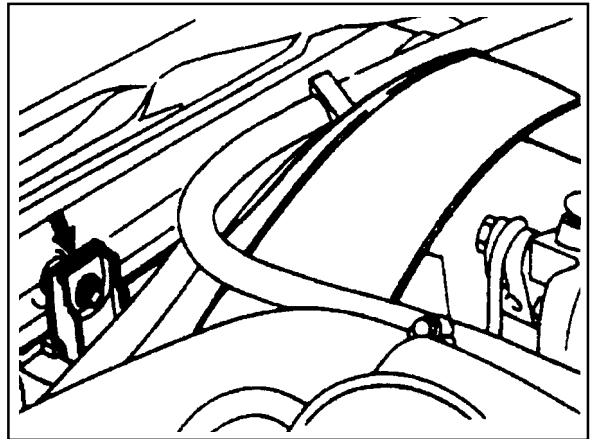
## 1B3-14 OM600 ENGINE MECHANICAL

8. Disconnect the upper coolant hose from the radiator.



9. Loosen the bolt and remove the coolant pipe and cooling fan shroud.

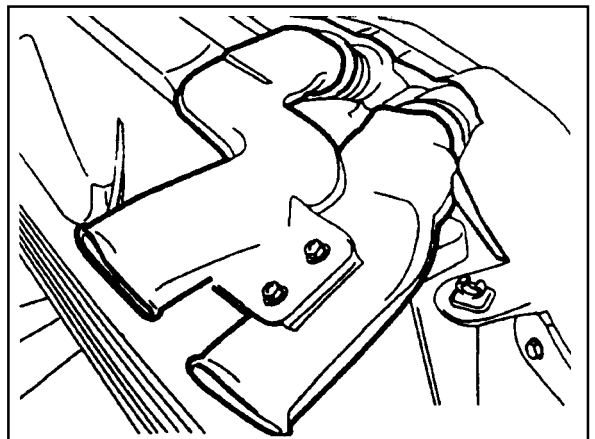
Tightening Torque	3 -7 Nm
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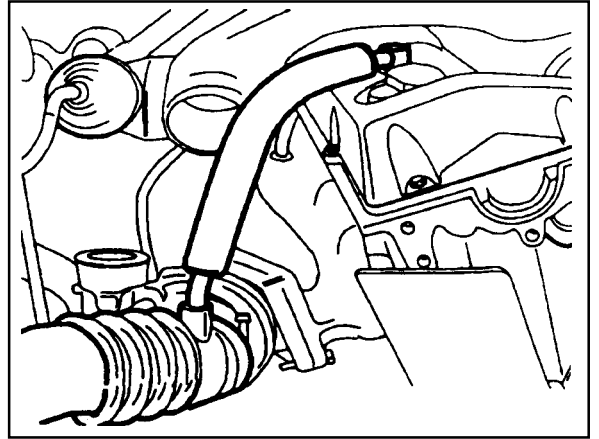
10. Remove the hoses (air intake to intercooler, intercooler to intake duct).



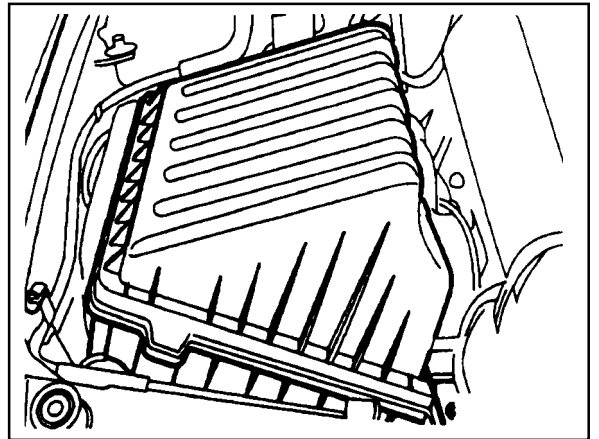
11. Remove the pipes connected to intercooler.



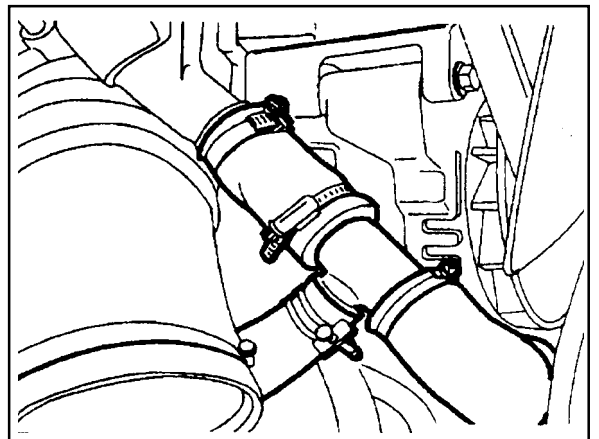
12. Remove the hose(air cleaner to turbocharger) with blow by hose.



13. Disconnect the air cleaner intake hose and remove the air cleaner cover and element.



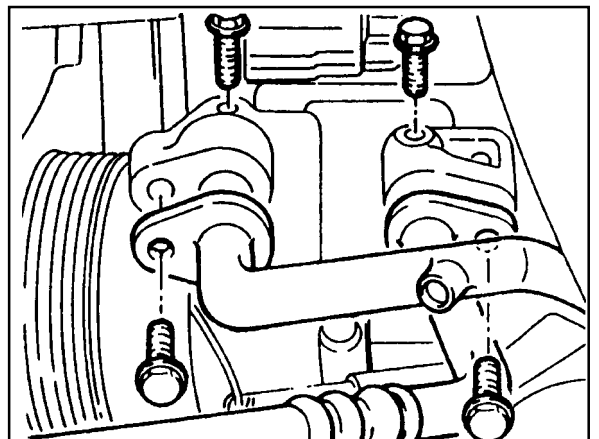
14. Disconnect the coolant hose from the water inlet.



15. Remove the air-conditioner lines from the compressor.

**Notice**

Evacuate the refrigerant before removal.

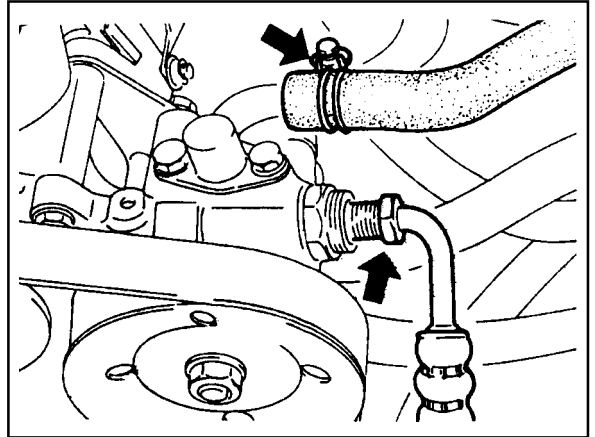


## 1B3-16 OM600 ENGINE MECHANICAL

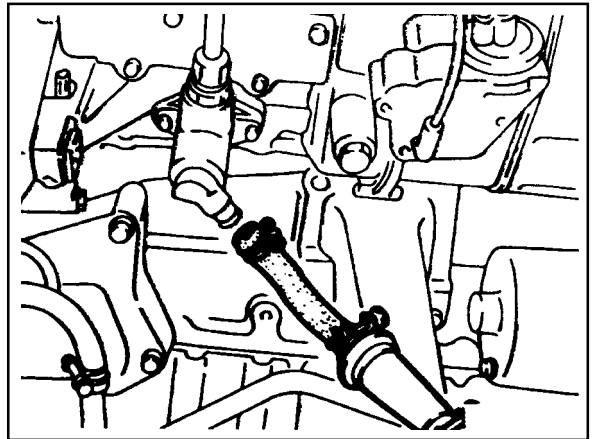
16. Remove the power steering pump lines.

**Notice**

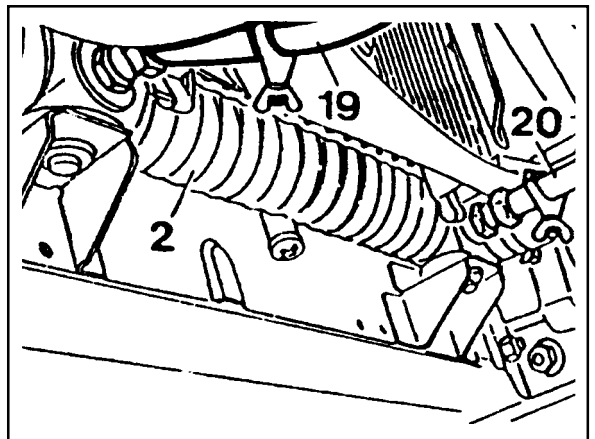
Completely drain the fluid.



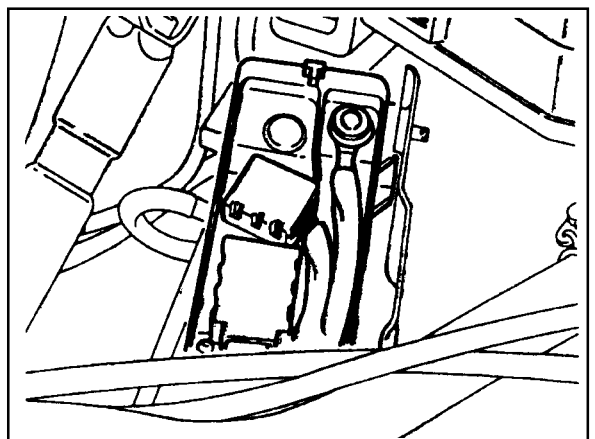
17. Disconnect the fuel feed line with prefilter from the feed pump on injection pump.



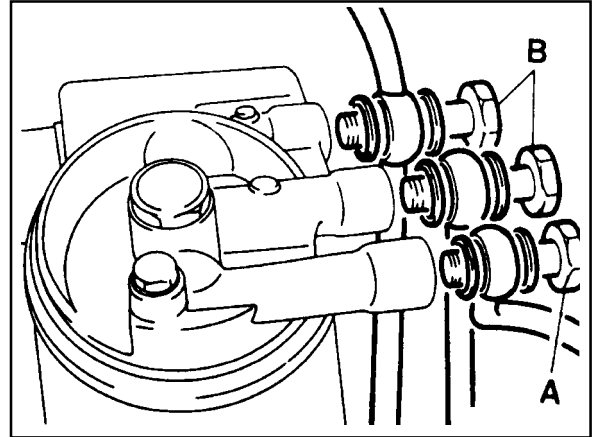
18. Vehicle with automatic transmission.  
Remove the hydraulic lines (19, 20) from oil cooler (2).



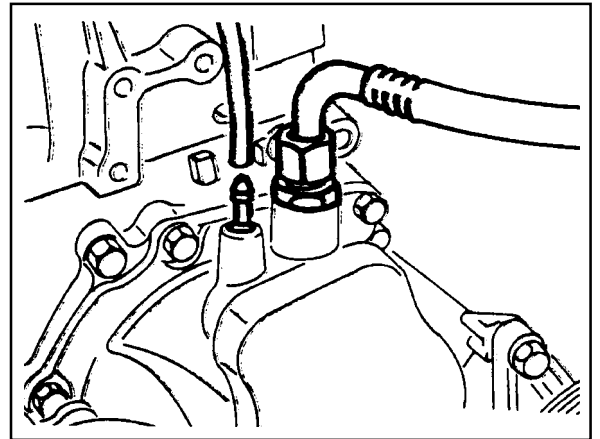
19. Disconnect the engine harness.  
20. Disconnect the preheating time relay cable.



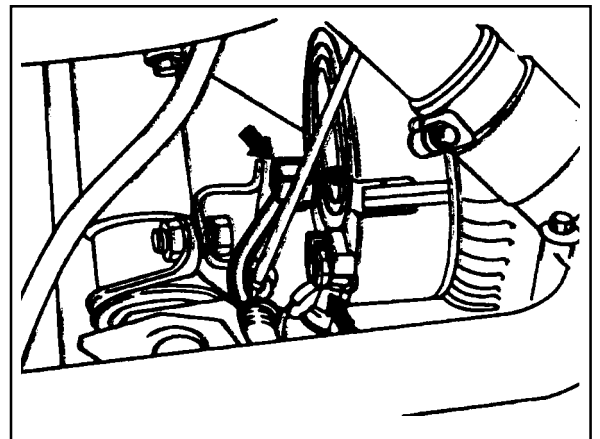
21. Remove the fuel lines from the fuel filter and cover the filter with plug.



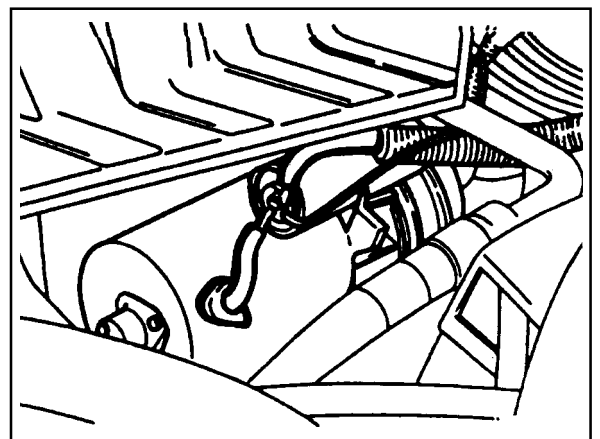
22. Disconnect the brake booster hose from vacuum pump.  
 23. Disconnect the other vacuum lines.



24. Disconnect the ground cable.  
 25. Disconnect the alternator wires.

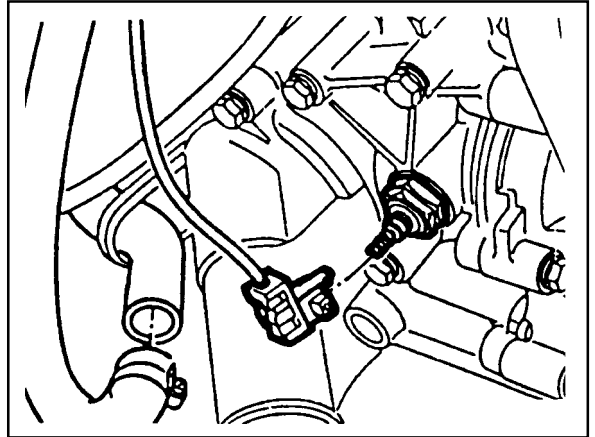


26. Disconnect the starter motor wires and remove the starter motor.

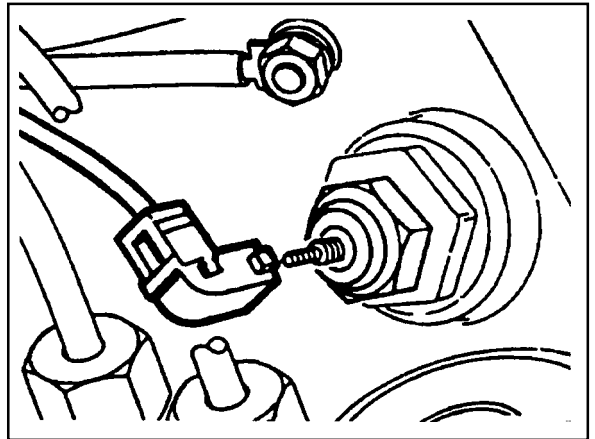


## 1B3-18 OM600 ENGINE MECHANICAL

27. Disconnect the preheating time relay sensor plug.



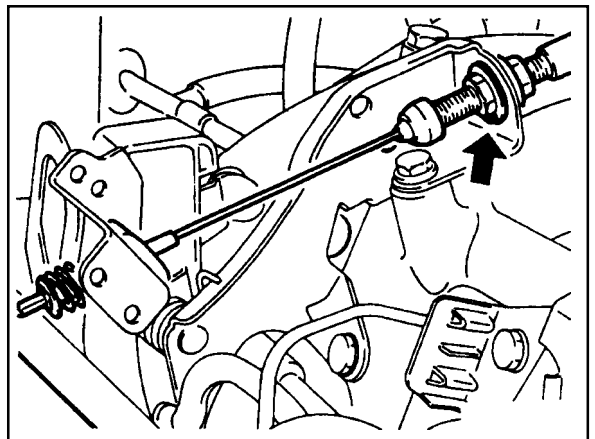
28. Disconnect the coolant temperature sensor plug.



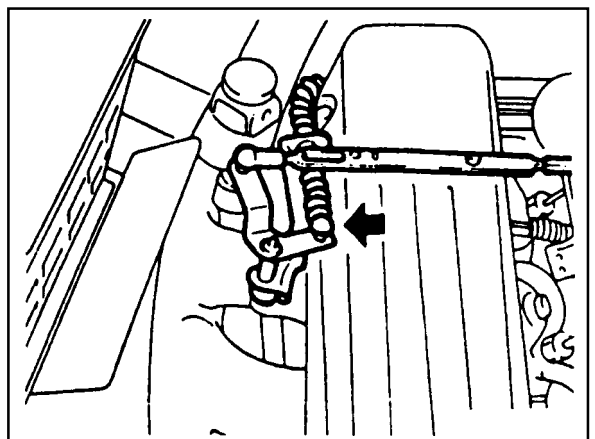
29. Disconnect the accelerator cable from the control linkage.

### Installation Notice

Tightening Torque	8 - 18 Nm
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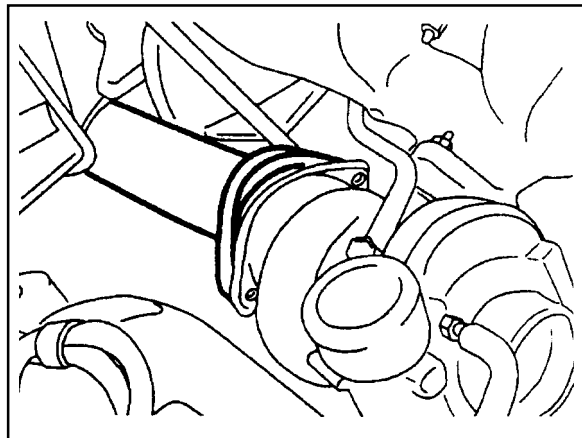
30. Loosen the connection of control pressure cable (an arrow used in auto transmission).



31. Separate the exhaust pipe flange from the turbo charger.

**Installation Notice**

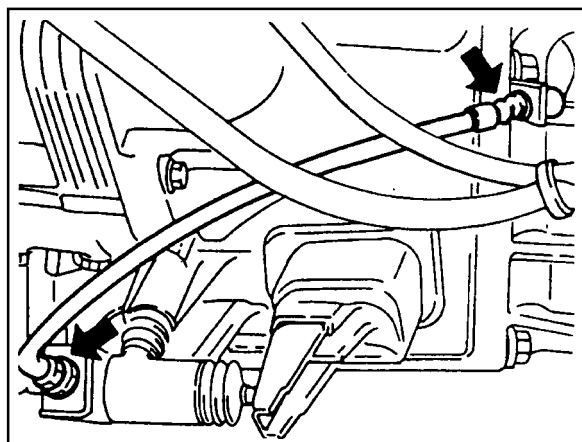
Tightening Torque	30 Nm
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32. Loosen the installing bolt of clutch release cylinder and remove the clutch release cylinder.

**Installation Notice**

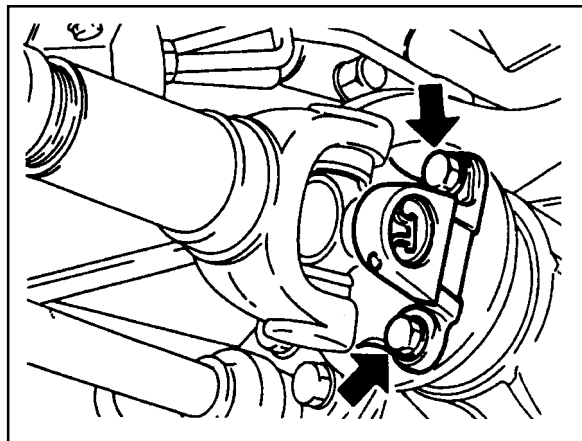
Tightening Torque	20 - 34 Nm
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33. Disconnect the exhaust pipe flange from the exhaust manifold.

**Installation Notice**

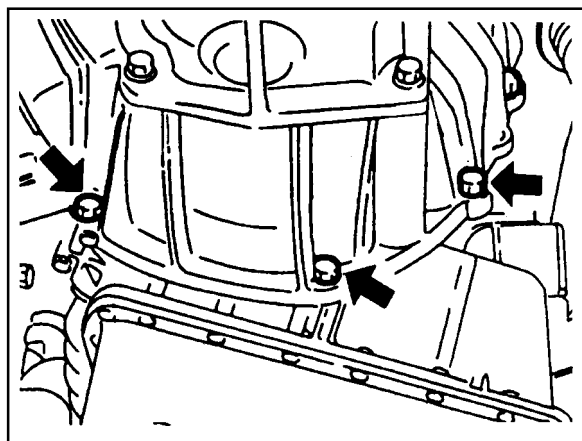
Tightening Torque	30 Nm
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34. Remove the propeller shaft from the transmission.

**Installation Notice**

Tightening Torque	Axle 70 ~ 80 Nm
	T/C 81 ~ 89 Nm



35. Remove the shift control cable.

36. Remove the transmission.

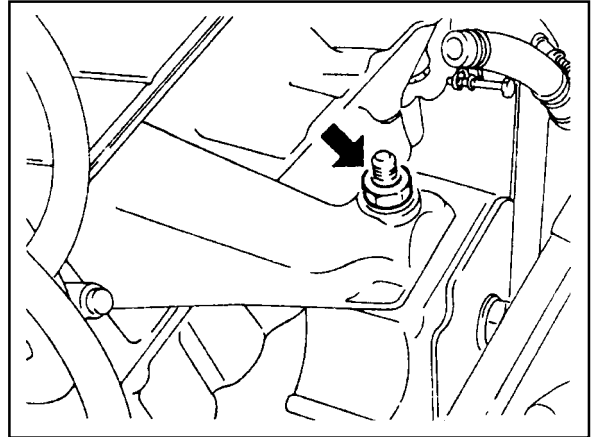


## 1B3-20 OM600 ENGINE MECHANICAL

37. Loosen the engine mounting bracket nut.

### Installation Notice

Tightening Torque	50 - 75 Nm
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38. Remove the engine assembly from the vehicle by using a hoist or crane.

39. Installation should follow the removal procedure in the reverse order.

