

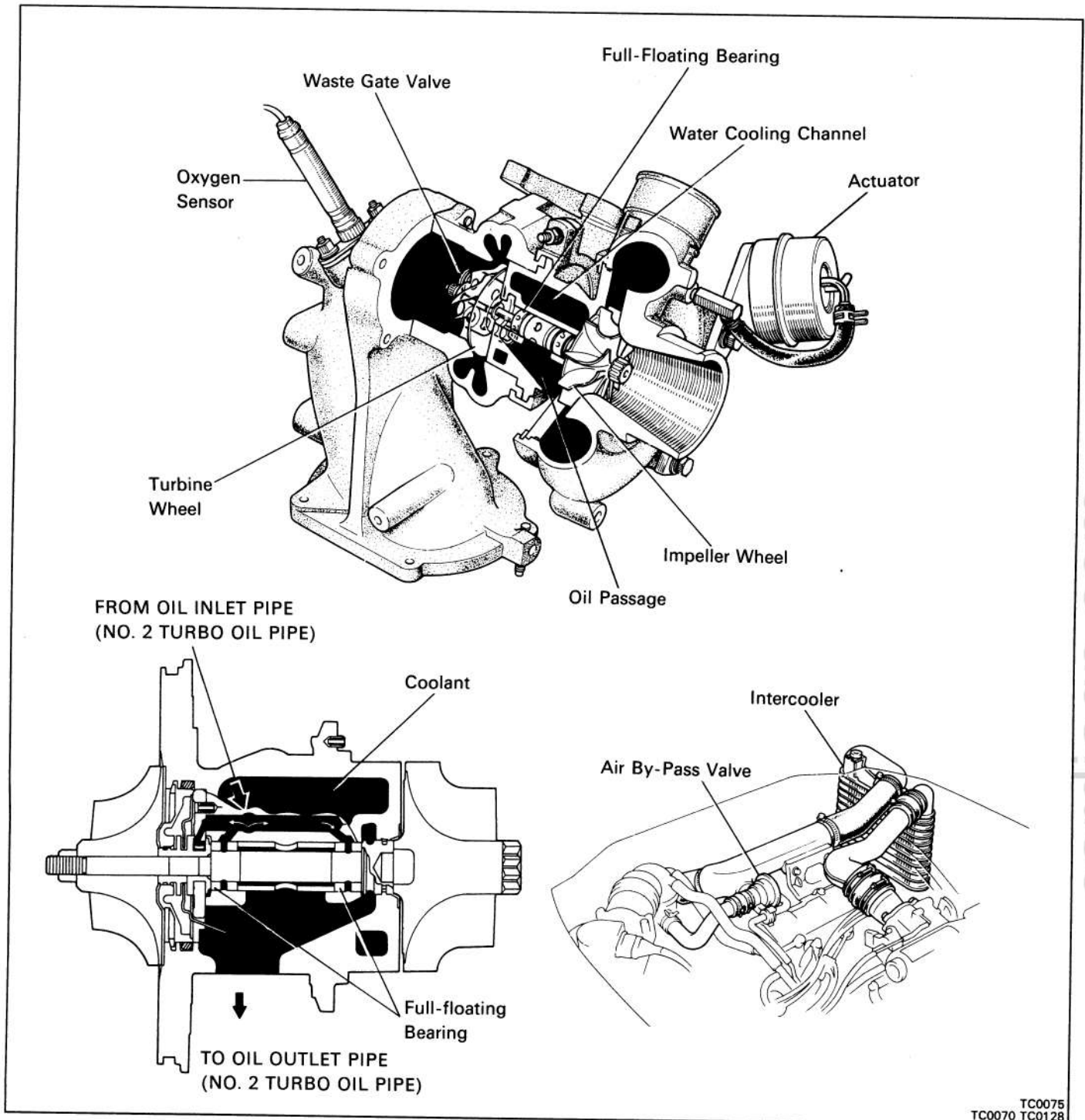
TURBOCHARGER

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TC

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DISCRIPTION

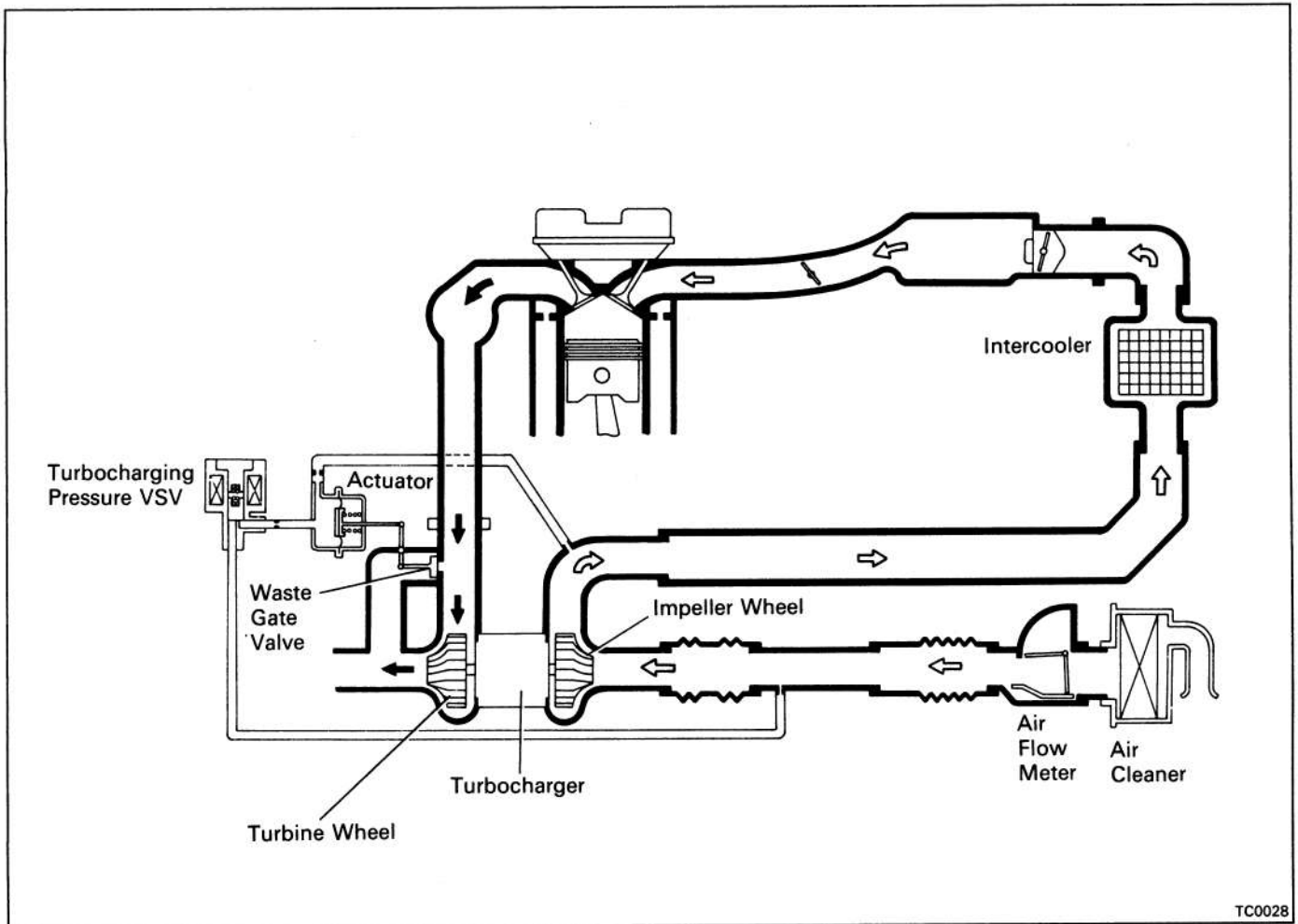


Systems which increase the amount of air sent to the engine are either turbocharger type (using exhaust gas to turn the turbine) or supercharger type (using the engine crankshaft, etc. to mechanically turn the pump, etc.). For MR2 3S-GTE engine, the turbocharger type has been adopted.

The turbocharger is a device which increases engine output by sending a greater amount of air-fuel mixture to the engine than under normal conditions.

Engine output depends upon the volume of the air-fuel mixture ignited per unit of time. Therefore, to increase engine output, the most effective method is to send a greater amount of air-fuel mixture into the cylinder.

In other words, by installing a special turbocharger and providing a higher air-fuel mixture than usual, engine output can be increased by increasing the average combustion pressure without increasing the engine speed.



Operation of Turbocharger

Exhaust gas acts on the turbine wheel inside the turbine housing, causing it to revolve. When the turbine wheel revolves, the impeller which is located on the same shaft also revolves, compressing the intake air which has passed through the air flow meter from the air cleaner. When expelled from the compressor housing the compressed air is supplied to the cylinders. When the engine speed increases, the exhaust gas volume increases and the turbine wheel revolutions increase (approx. 20,000 – 110,000 rpm), thus the turbocharged air pressure grows greater and engine output increases.

Waste Gate Valve

Although on the one hand high output is achieved by turbo-charging, if the turbocharged air pressure becomes too high, knocking occurs and, on the contrary, a reduction in engine output is caused. If the turbocharged air pressure exceeds the prescribed air pressure, the flow of exhaust gas by-passes the turbine, controlling turbine wheel revolutions and turbocharged air pressure. This by-pass valve which controls the quantity of exhaust gas flowing to the turbine is called the waste gate valve. When the turbocharged air pressure exceeds the prescribed pressure, the actuator operates, the waste gate valve opens and part of the exhaust gas by-passes the turbine. This causes a drop in the turbine revolution rate and controls the turbocharged air within the prescribed limits.

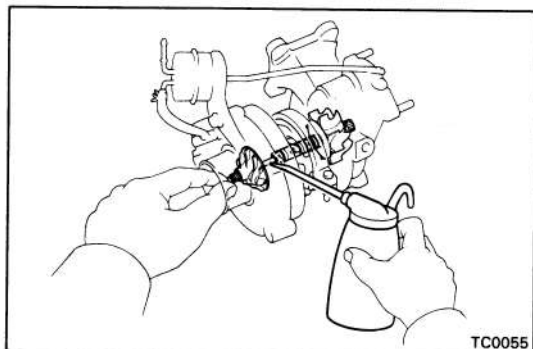
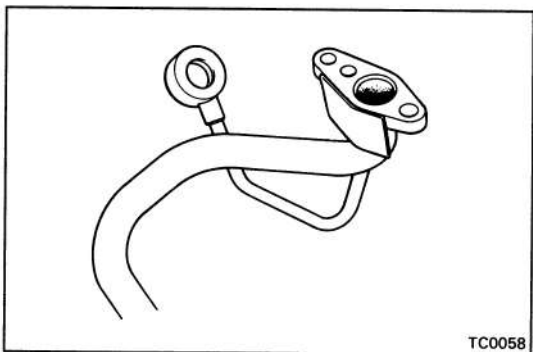
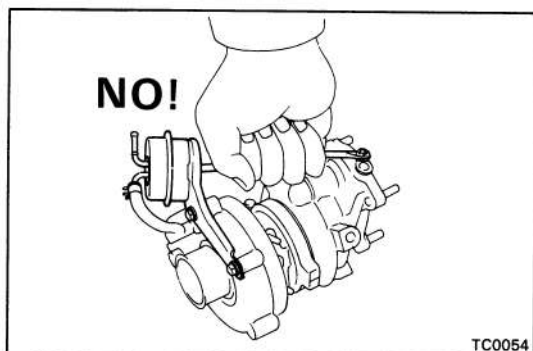
Intercooler

The intercooler cools the turbocharged air (intake air) put out by the turbocharger, thereby increasing the air density. As the intake air temperature decreases, the gas temperature in the combustion chamber falls and the occurrence of knocking is suppressed, giving an increase in engine output.

The Celica MR2 intercooler is an air cooling type located at the top of the engine, utilizing the vehicle windstream to cool the turbocharged air.

PRECAUTIONS

1. Do not stop the engine immediately after pulling a trailer or high speed or uphill driving. Idle the engine for 20 – 120 seconds, depending on the severity of the driving condition.
2. Avoid sudden racing or acceleration immediately after starting a cold engine.
3. If the engine is run with the air cleaner removed, foreign material entering will damage the wheels which run at extremely high speed.
4. If the turbocharger is defective and must be replaced, first check for the cause of the defect in reference to the following items and replace parts if necessary:
 - Engine oil level and quality
 - Conditions under which the turbocharger was used
 - Oil lines leading to the turbocharger



5. Use caution when removing and reinstalling the turbocharger assembly. Do not drop it or bang it against anything or grasp it by easily-deformed parts, such as the actuator or rod, when moving it.
6. Before removing the turbocharger, plug the intake and exhaust ports and oil inlet to prevent entry of dirt or other foreign material.
7. If replacing the turbocharger, check for accumulation of sludge particles in the oil pipes, and if necessary, replace the oil pipes.
8. Completely remove the gasket adhered to the lubrication oil pipe flange and turbocharger oil flange.
9. If replacing bolts or nuts, do so only with the specified new ones to guard against breakage or deformation.
10. If replacing the turbocharger, put 20 cc (1.2 cu in.) of oil into the turbocharger oil inlet and turn the impeller wheel by hand to spread oil to the bearing.
11. If overhauling or replacing the engine, cut the fuel supply after reassembly and crank the engine for 30 seconds to distribute oil throughout the engine. Then allow the engine to idle for 60 seconds.

TROUBLESHOOTING

HINT: Before troubleshooting the turbocharger, first check the engine itself. (Valve clearance, engine compression, ignition timing etc.)

INSUFFICIENT ACCELERATION, LACK OF POWER OR EXCESSIVE FUEL CONSUMPTION

(Possible Cause)	(Check Procedure and Correction Method)
1. TURBOCHARGING PRESSURE TOO LOW	Check turbocharging pressure. (See Page TC-7) Turbocharging pressure: 0.50 – 0.83 kg/cm² (7.1 – 11.8 psi, 49 –81 kps) If the pressure is below specification, begin diagnosis from item 2.
2. RESTRICTED INTAKE SYSTEM	Check intake air system, and repair or replace parts as necessary. (See page TC-9)
3. LEAK IN INTAKE AIR SYSTEM	Check intake air system, and repair or replace parts as necessary. (See page TC-9)
4. RESTRICTED EXHAUST SYSTEM	Check exhaust system, and repair or replace parts as necessary. (See page TC-9)
5. LEAK IN EXHAUST SYSTEM	Check exhaust system, and repair or replace parts as necessary. (See page TC-9)
6. ERRATIC TURBOCHARGER OPERATION	Check rotation of impeller wheel. If it does not turn or turn with a heavy drag, replace the turbocharger assembly. Check axial and radial plays of impeller wheel. (See page TC-13) Axial play: 0.13 mm (0.0051 in.) or less Radial play: 0.18 mm (0.0071 in.) or less If not within specification, replace the turbocharger assembly.

ABNORMAL NOISE**(Possible Cause)****(Check Procedure and Correction Method)****1. TURBOCHARGING HEAT INSULATOR RESONANCE**

Check for loose, improperly installed or deformed insulator mount bolts, and repair or replace as necessary.

2. EXHAUST PIPE LEAKING OR VIBRATING

Check for deformed exhaust pipe, loose mount bolts or damaged gasket, and repair or replace as necessary.

3. ERRATIC TURBOCHARGER OPERATION

Refer to Item 6 of INSUFFICIENT ACCELERATION, LACK OF POWER OR EXCESSIVE FUEL CONSUMPTION.

EXCESSIVE OIL CONSUMPTION OR WHITE EXHAUST**(Possible Cause)****(Check Procedure and Correction Method)****FAULTY TURBOCHARGER SEAL**

Check for oil leakage in exhaust system.

- Remove the turbine elbow from the turbocharger and check for excessive carbon deposits on the turbine wheel. Excessive carbon deposits indicate a faulty turbocharger.

Check for oil leakage in intake air system.

- Check for axial and radial plays in impeller wheel, and replace the turbocharger if necessary.
(See page TC-13)

Axial play: 0.13 mm (0.0051 in.) or less

Radial play: 0.18 mm (0.0071 in.) or less

NOTICE: There is some oil mist from the PCV in the blowby gas so care must be taken not to diagnosis this as oil leakage from the turbocharger.

TURBOCHARGER

ON-VEHICLE INSPECTION OF TURBOCHARGER

1. INSPECT INTAKE AIR SYSTEM

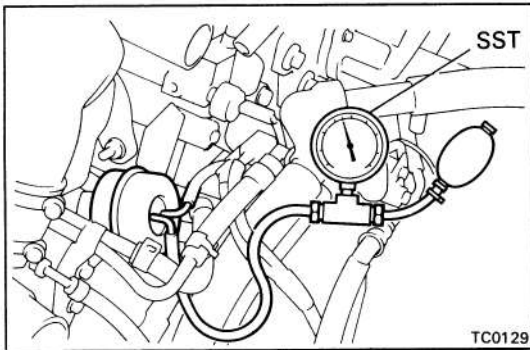
Check for leakage or clogging between the air cleaner and turbocharger inlet and between the turbocharger outlet and cylinder head.

- Clogged air cleaner . . . Clean or replace element
- Hoses collapsed or deformed . . . Repair or replace
- Leakage from connections . . . Check each connection and repair
- Cracks in components . . . Check and replace

2. INSPECT EXHAUST SYSTEM

Check for leakage or clogging between the cylinder head and turbocharger inlet and between the turbocharger outlet and exhaust pipe.

- Deformed components . . . Repair or replace
- Foreign material in passages . . . Remove
- Leakage from components . . . Repair or replace
- Cracks in components . . . Check and replace



3. INSPECT ACTUATOR OPERATION

- (a) Disconnect the actuator hose.
- (b) Using SST (turbocharger pressure gauge), apply approx. 0.66 kg/cm^2 (9.4 psi, 65 kPa) of pressure to the actuator and check that the rod moves.

If the rod does not move, replace the turbocharger assembly.

SST 09992-00241

NOTICE: Never apply more than 0.83 kg/cm^2 (11.8 psi, 81 kPa) of pressure to the actuator.

4. CHECK TURBOCHARGING PRESSURE

- (a) Using a 3-way connector, connect SST (turbocharger pressure gauge) to the hose between the intake manifold and turbocharging pressure sensor.

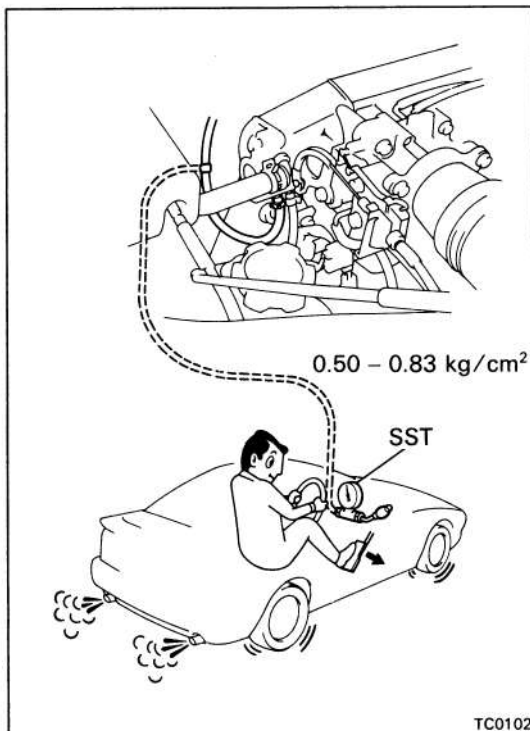
SST 09992-00241

- (b) While driving with the engine running at 2,800 rpm or more with the throttle valve fully open in the 3rd gear, check the turbocharging pressure.

Standard pressure: $0.50 - 0.83 \text{ kg/cm}^2$
(7.1 – 11.8 psi, 49 – 81 kPa)

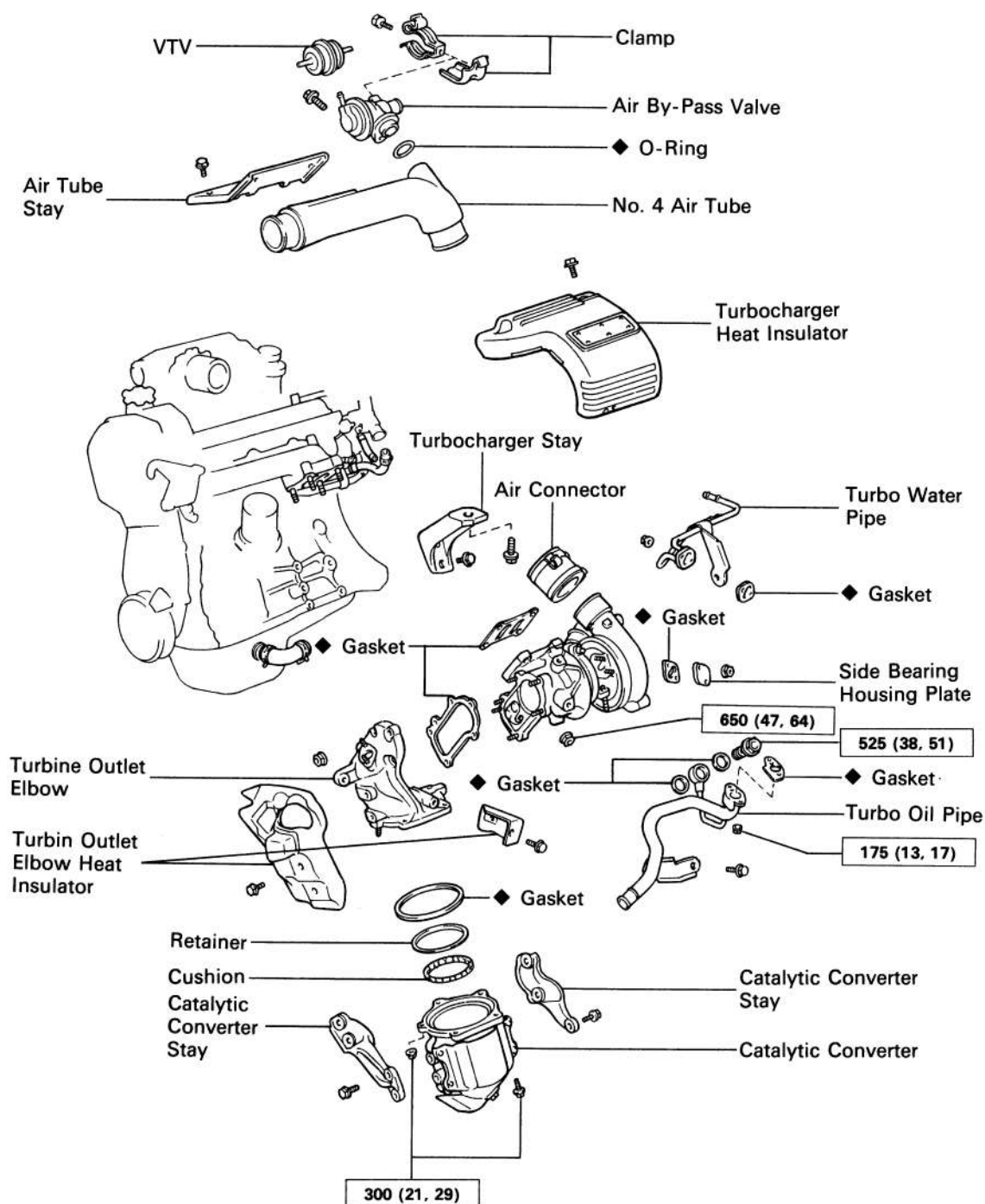
If the pressure is less than that specified, check the intake air and exhaust systems for leakage. If there is no leakage, replace the turbocharger assembly.

If the pressure is above specification, check if the actuator hose is disconnected or cracked. If not, replace the turbocharger assembly.



5. INSPECT IMPELLER WHEEL ROTATION
(See step 1 on page TC-13)
6. INSPECT TURBOCHARGING PRESSURE VSV
(See page FI-165)
7. INSPECT TURBOCHARGING PRESSURE SENSOR
(See page FI-171)

COMPONENTS

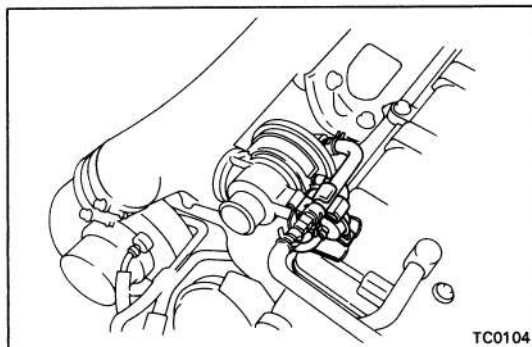


REMOVAL OF TURBOCHARGER

1. **DISCONNECT CABLE FROM NEGATIVE TERMINAL OF BATTERY**

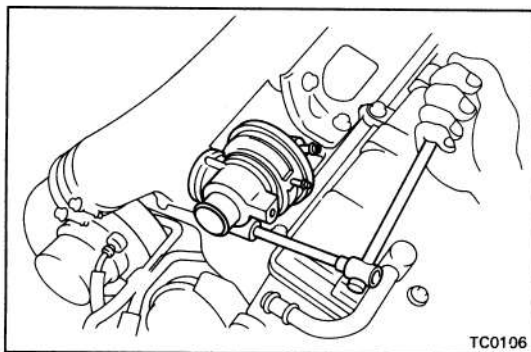
CAUTION: Work must be started after approx. 20 seconds or longer from the time the ignition switch is turned to the "LOCK" position and the negative (-) terminal cable is disconnected from the battery.

2. **DRAIN ENGINE COOLANT (See page CO-6)**
3. **REMOVE ENGINE UNDER COVERS**
4. **REMOVE LH ENGINE HOOD SIDE PANEL**
5. **REMOVE SUSPENSION UPPER BRACE (See step 8 on page EM-134)**
6. **REMOVE AIR CLEANER (See step 9 on page EM-134)**
7. **REMOVE NO.1 AND NO.2 AIR INTAKE CONNECTORS (See steps 4 and 5 on page TC-20)**
8. **DISCONNECT TRANSAXLE CONTROL CABLES (See step 29 on page EM-138)**
9. **REMOVE FRONT EXHAUST PIPE (See steps 30 and 31 on pages EM-138 and 139)**
10. **REMOVE IDLER PULLEY BRACKET AND A/C COMPRESSOR (See steps 10 to 12 on page TC-21 and 22)**
11. **REMOVE FRONT ENGINE MOUNTING INSULATOR (See step 38 on page EM-141)**
12. **REMOVE FRONT MOUNTING BRACKET AND CLUTCH RELEASE CYLINDER (See step 39 on page EM-141)**
13. **REMOVE ENGINE COMPARTMENT COOLING FAN (See steps 4 and 5 on page CO-34)**
14. **REMOVE CATALYTIC CONVERTER (See step 14 on page EM-64)**

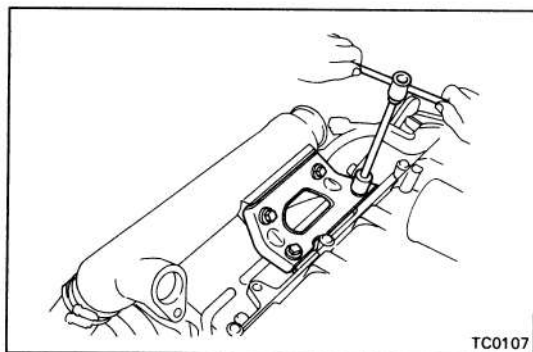


15. **DISCONNECT AIR BY-PASS HOSES**
 - (a) Disconnect the hose and VTV from the clamp.
 - (b) Disconnect the two air by-pass hoses.
16. **REMOVE CLAMPS OF AIR BY-PASS HOSE AND VTV**

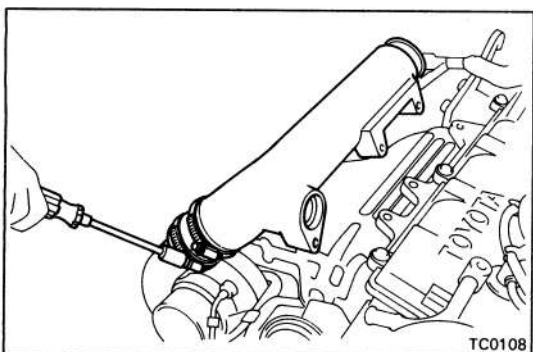
Remove the bolt and two clamps.

**17. REMOVE AIR BY-PASS VALVE**

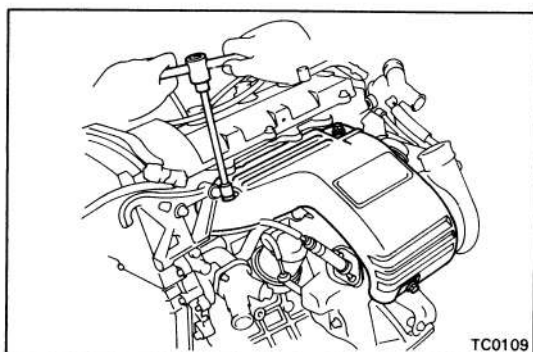
- (a) Remove the bolt and air by-pass valve.
- (b) Remove the O-ring from the air by-pass valve.

**18. REMOVE NO.4 AIR TUBE**

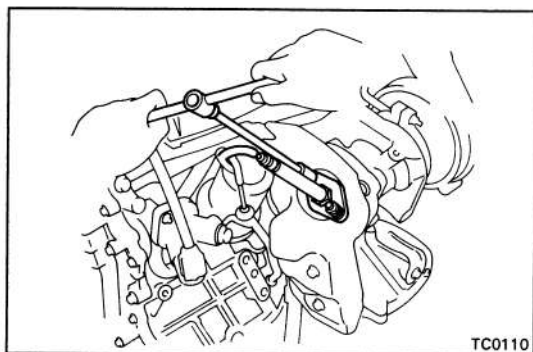
- (a) Remove the four bolts and air tube stay.



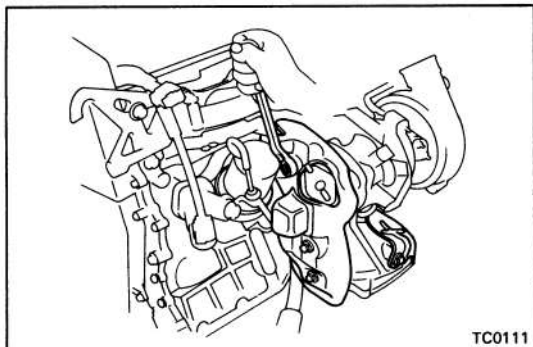
- (b) Loosen the hose clamp, and remove the air tube.

**19. REMOVE TURBOCHARGER HEAT INSULATOR**

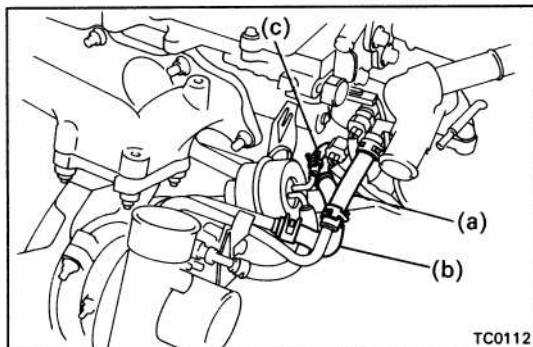
Remove the three bolts and heat insulator.

**20. REMOVE OXYGEN SENSOR**

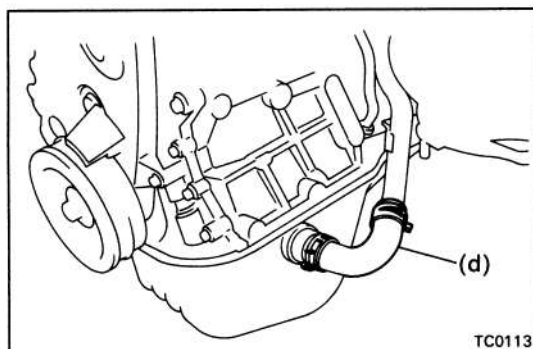
- (a) Disconnect the oxygen sensor connector.
- (b) Remove the two nuts, oxygen sensor and gasket.

**21. REMOVE HEAT INSULATORS OF TURBINE OUTLET ELBOW**

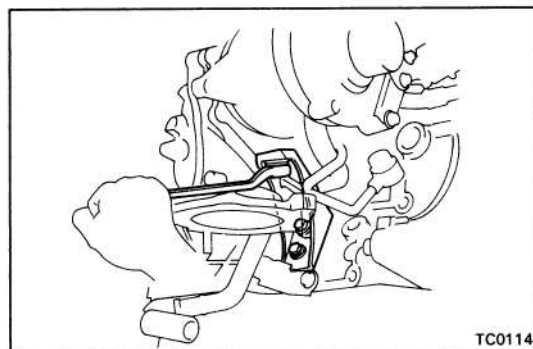
- (a) Remove the oil dipstick.
- (b) Remove the three bolts and RH heat insulator.
- (c) Remove the two bolts and LH heat insulator.

**22. DISCONNECT HOSES**

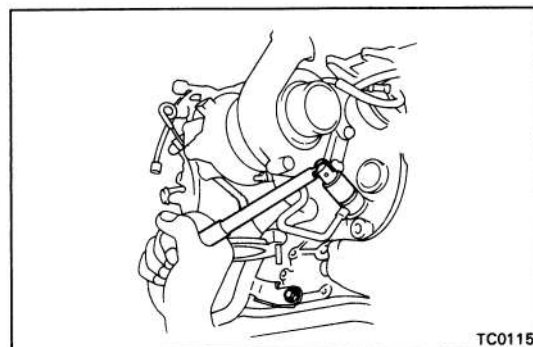
- (a) Water hose from water inlet housing
- (b) Water by-pass hose from water by-pass pipe
- (c) Vacuum hose from actuator



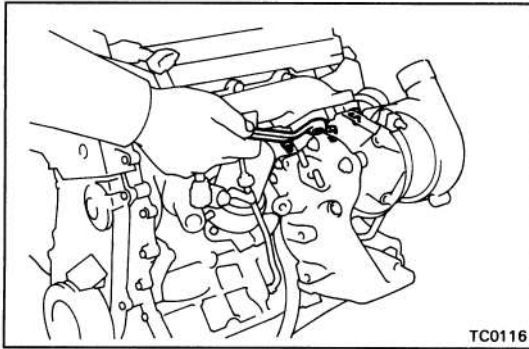
- (d) Oil hose from turbo oil pipe

**23. REMOVE TURBOCHARGER STAY**

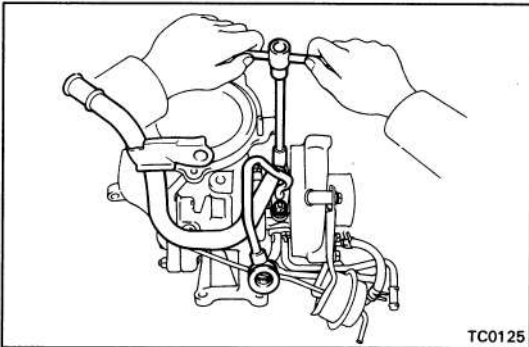
Remove the three bolts and turbocharger stay.

**24. REMOVE TURBOCHARGER**

- (a) Remove the bolt and union bolt holding the No.1 turbo oil pipe to the cylinder block. Remove the two union bolt gaskets.

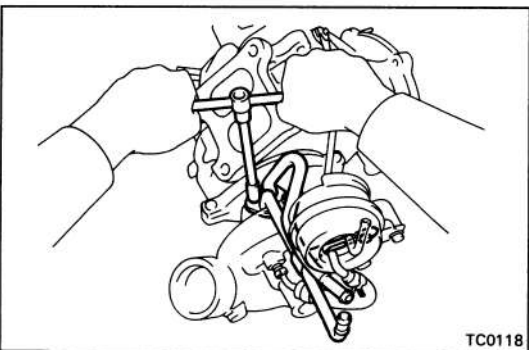


(b) Remove the four nuts, turbocharger and gasket.



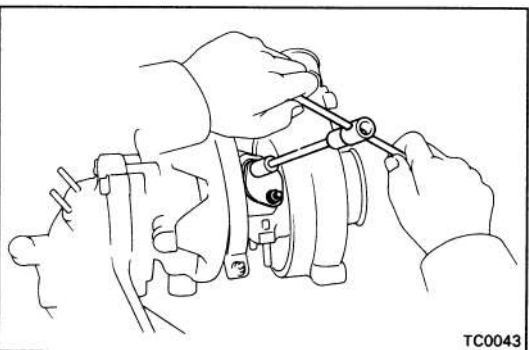
25. REMOVE TURBO OIL PIPE

Remove the two nuts, oil pipe and gasket.



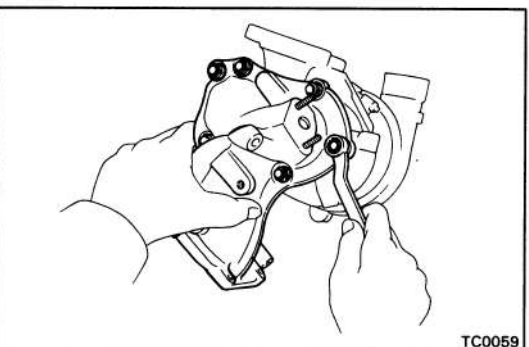
26. REMOVE TURBO WATER PIPE

Remove the two nuts, two bolts, water pipe and gasket.



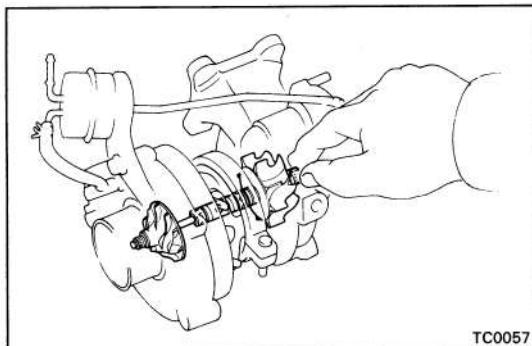
27. REMOVE SIDE BEARING HOUSING PLATE

Remove the two nuts, housing plate and gasket.



28. REMOVE TURBINE OUTLET ELBOW

Remove the six nuts, outlet elbow and gasket.

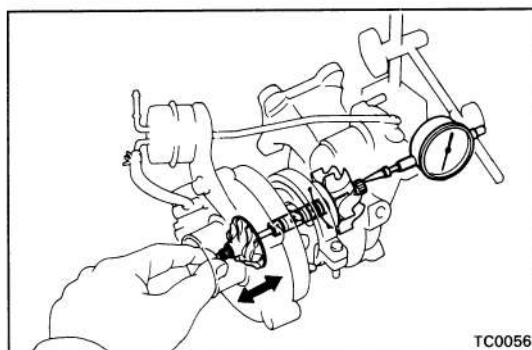


INSPECTION OF TURBOCHARGER

1. INSPECT IMPELLER WHEEL ROTATION

Grasp the edge of the turbine wheel and turn it. Check that the impeller wheel turns smoothly.

If the impeller wheel does not turn or if it turns with a drag, replace the turbocharger assembly.

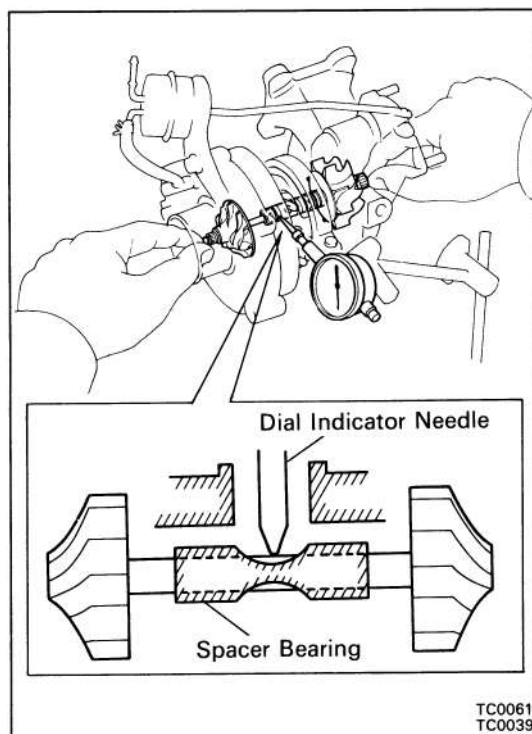


2. INSPECT AXIAL PLAY OF IMPELLER WHEEL

Insert a dial indicator into the intake side hole the turbine wheel edge by and check the axial play.

Standard clearance: 0.13 mm (0.0051 in.) or less

If the axial play is not as specified, replace the turbocharger assembly.



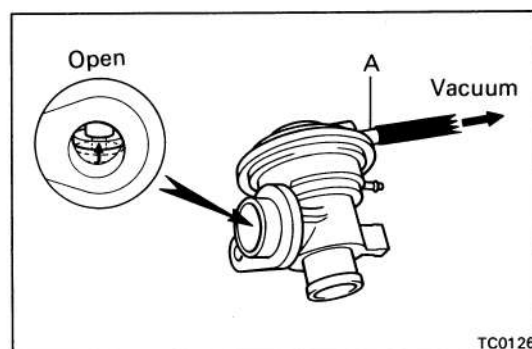
3. INSPECT RADIAL PLAY OF IMPELLER WHEEL

(a) From oil outlet hole, insert a dial indicator through the hole in the spacer bearing and set it in the center of the impeller shaft.

(b) Move the impeller shaft in a radial direction, measure the radial play of the impeller shaft.

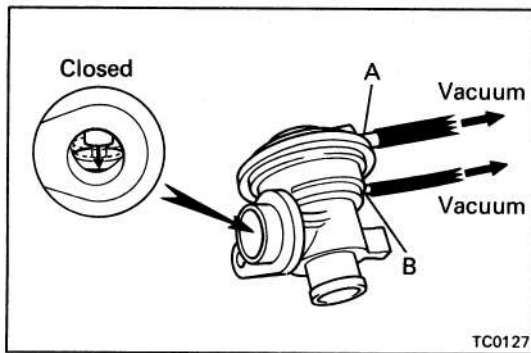
Standard clearance: 0.18 mm (0.0071 in.) or less

If the radial play is not as specified, replace the turbocharger assembly.



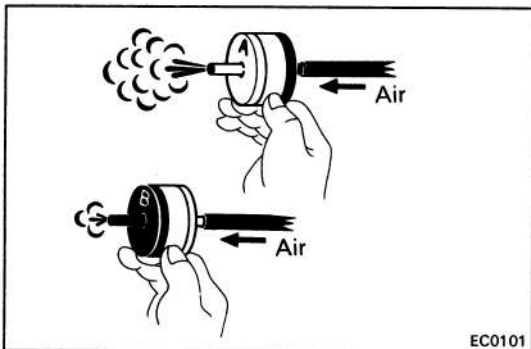
4. INSPECT AIR BY-PASS VALVE

(a) Apply vacuum to port A, and check that the valve is open.



(b) In the preceding condition, apply vacuum to port B, and check that the valve is closed.

If operation is not as specified, replace the air by-pass valve.

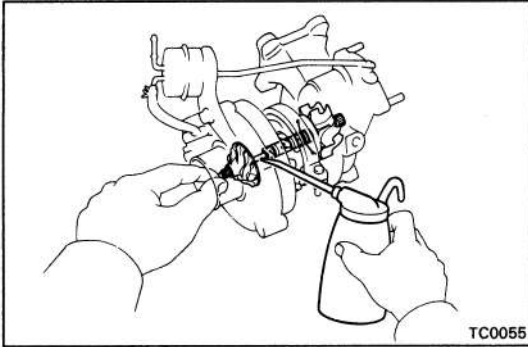


5. INSPECT VTV (FOR AIR BY-PASS VALVE)

(a) Check that air flows without resistance from ports "B" to "A".

(b) Check that air flows without difficulty from ports "A" to "B".

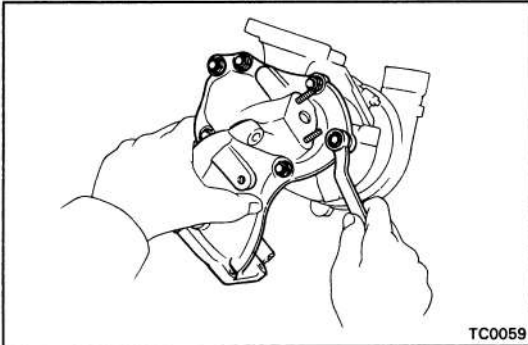
If operation is not as specified, replace the VTV.



INSTALLATION OF TURBOCHARGER

(See page TC-8)

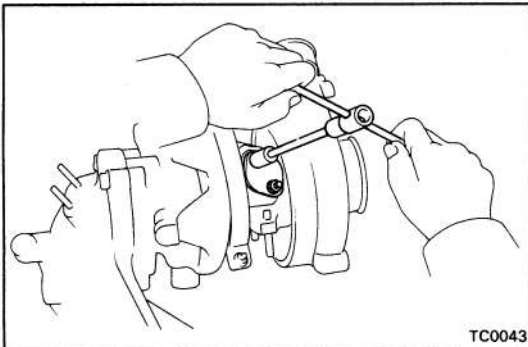
NOTICE: After replacing the turbocharger assembly, pour approx. 20 cc (1.2 cu in.) of new oil into the oil inlet and turn the impeller wheel by hand to splash oil on the bearing.



1. INSTALL TURBINE OUTLET ELBOW

Install a new gasket and the outlet elbow with the six nuts.

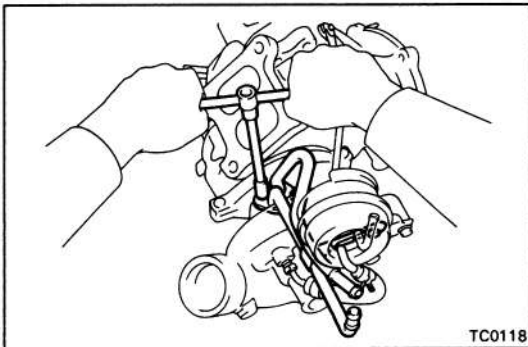
Torque: 650 kg-cm (47 ft-lb, 64 N·m)



2. INSTALL SIDE BEARING HOUSING PLATE

Install a new gasket and the housing plate with the two nuts.

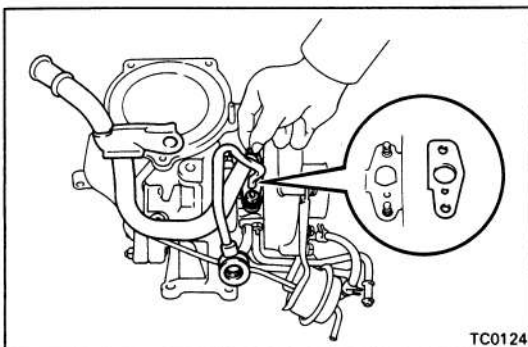
Torque: 120 kg-cm (9 ft-lb, 11 N·m)



3. INSTALL TURBO WATER PIPE

Install a new gasket and the water pipe with the two nuts and two bolts.

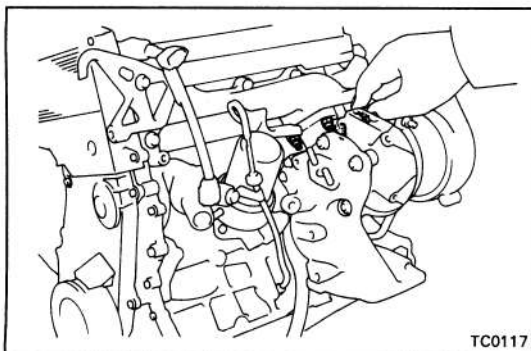
Torque: 120 kg-cm (9 ft-lb, 11 N·m)



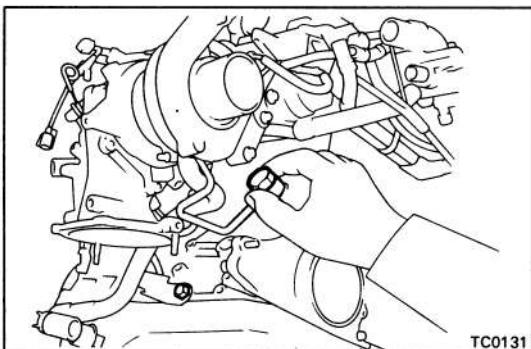
4. INSTALL TURBO OIL PIPE

(a) Align the oil holes of the a new gasket and the turbocharger housing.

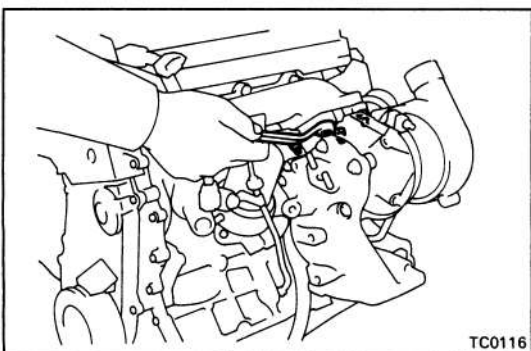
(b) Install the gasket and oil pipe with the two nuts. Do not torque the nuts yet.

**5. INSTALL TURBOCHARGER**

- (a) Install a new gasket and the turbocharger with the four nuts. Do not torque the nuts.

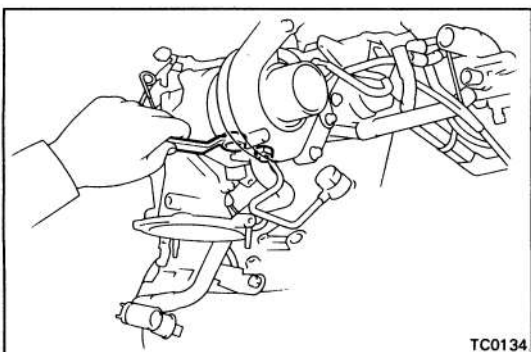


- (b) Install the oil pipe with the bolt, two new gaskets and union bolt. Do not torque the bolt and union bolt.



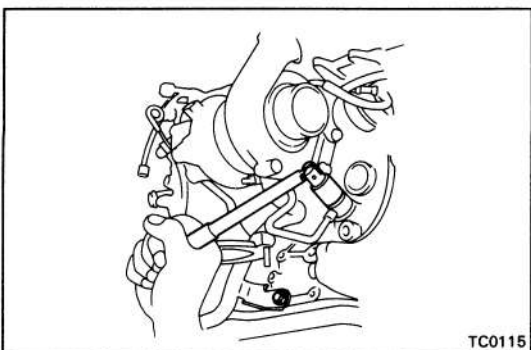
- (c) Tighten the four nuts holding the turbocharger to the exhaust manifold.

Torque: 650 kg-cm (47 ft-lb, 64 N·m)



- (d) Tighten the two nuts holding the oil pipe to the turbocharger.

Torque: 175 kg-cm (13 ft-lb, 17 N·m)

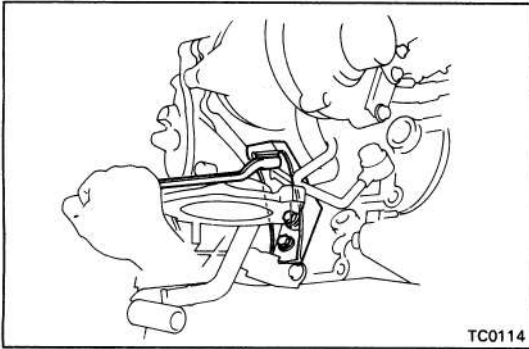


- (e) Tighten the union bolt holding the oil pipe to the cylinder block.

Torque: 525 kg-cm (38 ft-lb, 51 N·m)

- (f) Tighten the union bolt holding the oil pipe to the cylinder block.

Torque: 440 kg-cm (32 ft-lb, 43 N·m)



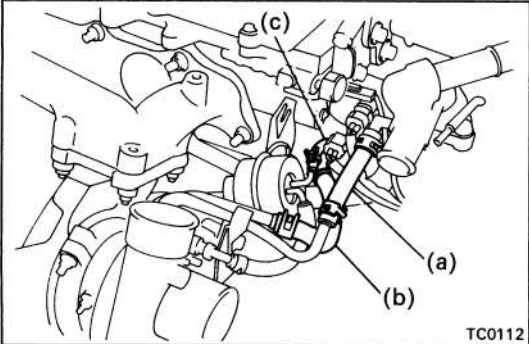
TC0114

6. INSTALL TURBOCHARGER STAY

Install the turbocharger stay with the three bolts.

Torque:

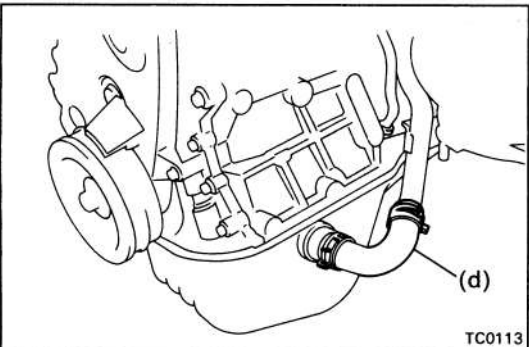
To turbocharger	705 kg-cm (51 ft-lb, 69 N·m)
To cylinder block	600 kg-cm (43 ft-lb, 59 N·m)



TC0112

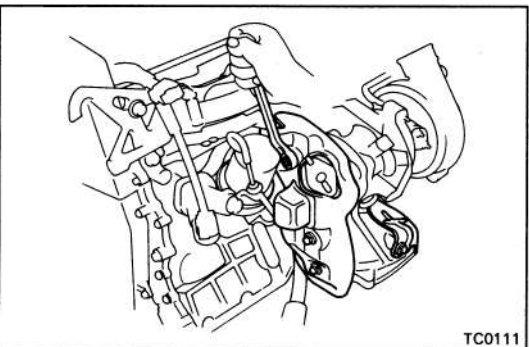
7. CONNECT HOSES

- (a) Water hose from water inlet housing
- (b) Water by-pass hose from water by-pass pipe
- (c) Vacuum hose from actuator



TC0113

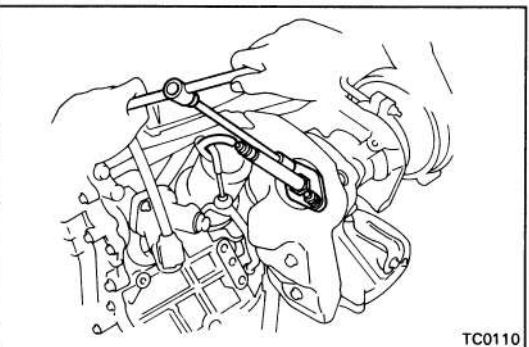
- (d) Oil hose from turbo oil pipe



TC0111

8. INSTALL HEAT INSULATORS OF TURBINE OUTLET ELBOW

- (a) Install the RH heat insulator with the three bolt.
- (b) Install the LH heat insulator with the two bolt.
- (c) Install the oil dipstick gauge.



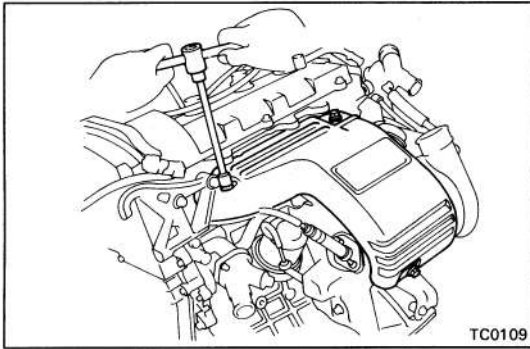
TC0110

9. INSTALL OXYGEN SENSOR

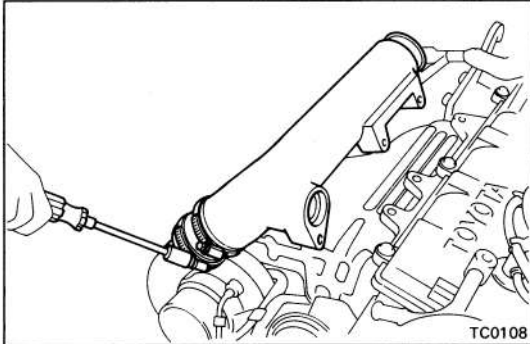
- (a) Install a new gaskets and the oxygen sensor with the two nuts.

Torque: 450 kg-cm (33 ft-lb, 44 N·m)

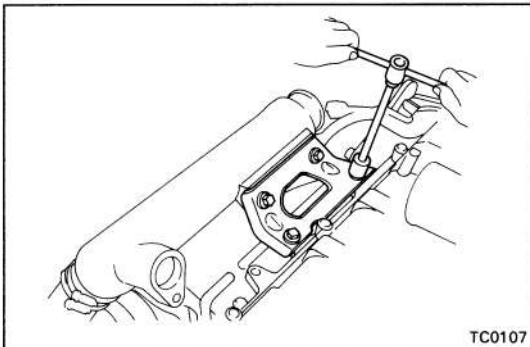
- (b) Connect the oxygen sensor connector.

**10. INSTALL TURBOCHARGER HEAT INSULATOR**

Install the heat insulator with the three bolt.

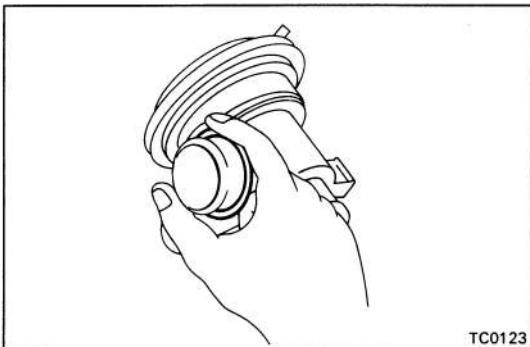
**11. INSTALL NO.4 AIR TUBE**

(a) Connect the air connector and air tube to the turbocharger.



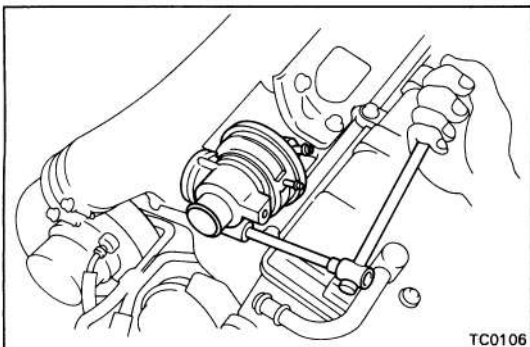
(b) Install the air tube stay with the four bolts.

Torque: 195 kg-cm (14 ft-lb, 19 N·m)

**12. INSTALL AIR BY-PASS VALVE**

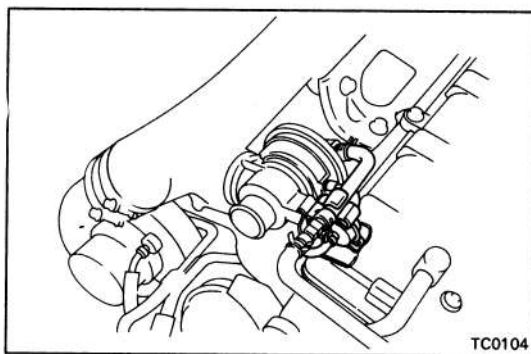
(a) Install a new O-ring to the air by-pass valve.

(b) Apply soapy water on the O-ring.



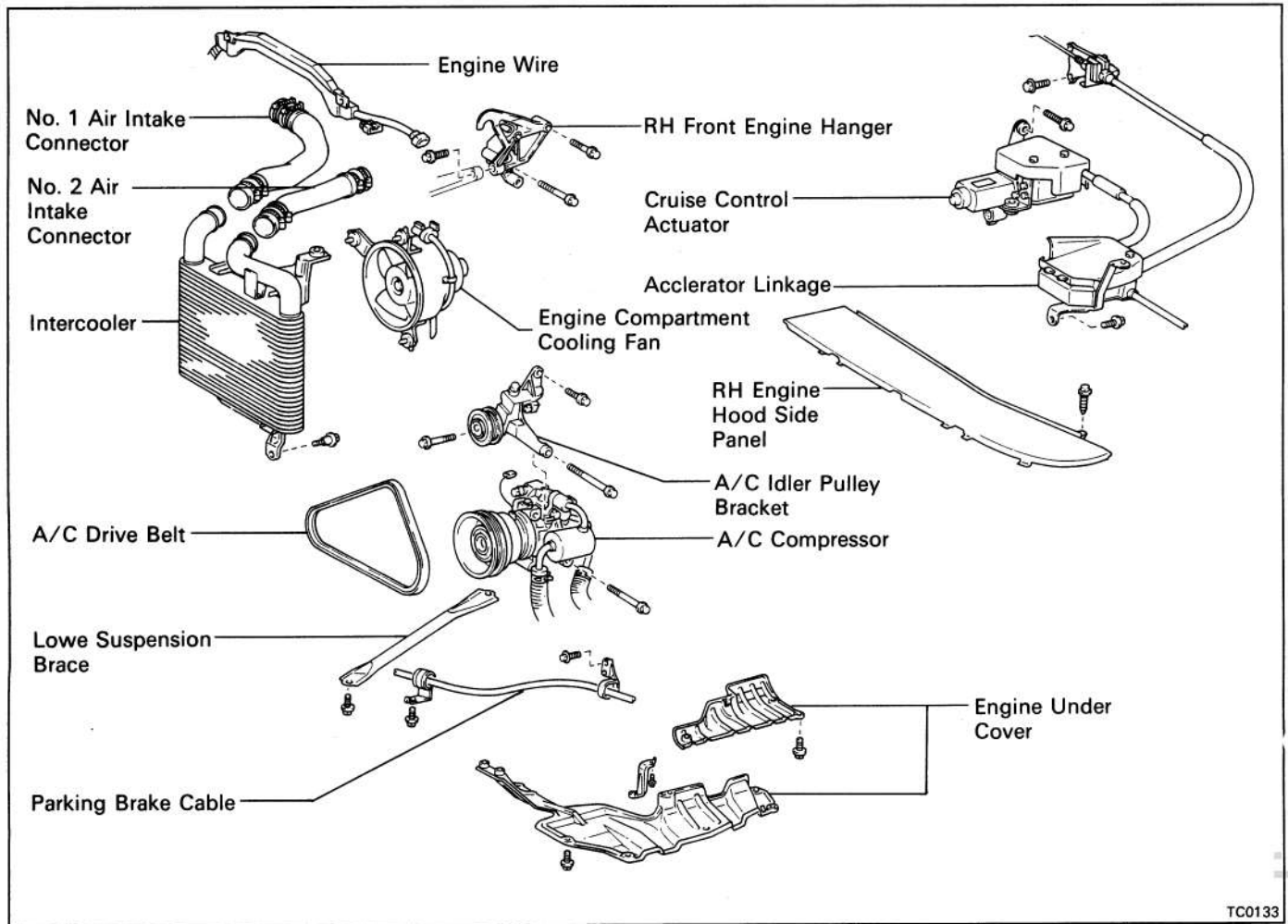
(c) Install the air by-pass valve with the bolt.

Torque: 195 kg-cm (14 ft-lb, 19 N·m)



- 13. INSTALL CLAMPS OF AIR BY-PASS HOSE AND VTV**
Install the two clamps with the bolt.
- 14. CONNECT AIR BY-PASS HOSES**
 - (a) Connect the two air by-pass hoses.
 - (b) Install the air by-pass hose and VTV to the clamps.
- 15. INSTALL CATALYTIC CONVERTER**
(See step 28 on page EM-94)
- 16. INSTALL ENGINE COMPARTMENT COOLING FAN**
(See steps 1 and 2 on page CO-36)
- 17. INSTALL FRONT MOUNTING BRACKET AND CLUTCH RELEASE CYLINDER**
(See step 9 on pages EM-171 and 172)
- 18. INSTALL FRONT ENGINE MOUNTING INSULATOR**
(See step 10 on page EM-172)
- 19. INSTALL A/C COMPRESSOR AND IDLER PULLEY BRACKET**
(See steps 3 to 5 on pages TC-23 and 24)
- 20. INSTALL FRONT EXHAUST PIPE**
(See steps 18 and 19 on pages EM-174 and 175)
- 21. CONNECT TRANSAXLE CONTROL CABLES**
(See step 20 on page EM-175)
- 22. INSTALL NO.1 AND NO.2 AIR INTAKE CONNECTORS**
(See steps 10 and 11 on page TC-25)
- 23. INSTALL AIR CLEANER**
(See step 40 on page EM-179)
- 24. INSTALL SUSPENSION UPPER BRACE**
(See step 41 on page EM-179)
- 25. FILL ENGINE WITH COOLANT (See page CO-7)**
Capacity (w/ Heater):
13.6 liters (14.4 US qts, 12.0 Imp. qts)
- 26. CONNECT CABLE TO NEGATIVE TERMINAL OF BATTERY**
- 27. START ENGINE AND CHECK FOR LEAKS**
- 28. CHECK ENGINE OIL LEVEL**
- 29. INSTALL LH ENGINE HOOD SIDE PANEL**
- 30. INSTALL ENGINE UNDER COVERS**

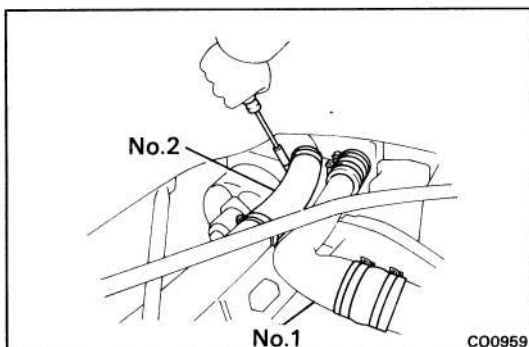
INTERCOOLER COMPONENTS



1. **DISCONNECT CABLE FROM NEGATIVE TERMINAL OF BATTERY**

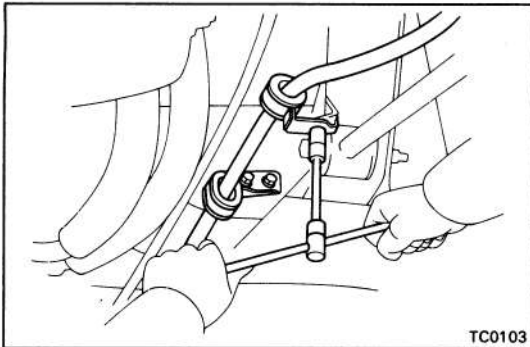
CAUTION: Work must be started after approx. 20 seconds or longer from the time the ignition switch is turned to the "LOCK" position and the negative (-) terminal cable is disconnected from the battery.

2. **REMOVE ENGINE UNDER COVERS**
3. **REMOVE RH ENGINE HOOD SIDE PANEL**

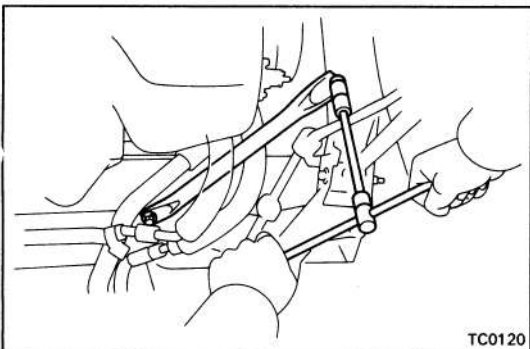


4. **REMOVE NO.1 AIR INTAKE CONNECTOR**
5. **REMOVE NO.2 AIR INTAKE CONNECTOR**
6. **REMOVE CRUISE CONTROL ACTUATOR (w/ CRUISE CONTROL SYSTEM) AND ACCELERATOR LINKAGE (See step 13 on page EM-135)**

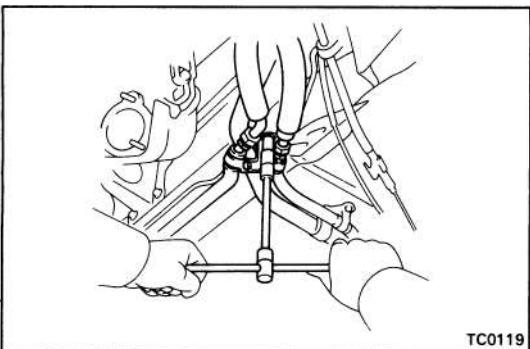
7. **REMOVE ENGINE COMPARTMENT COOLING FAN**
(See steps 4 and 5 on page CO-34)
8. **DISCONNECT ENGINE WIRE CLAMPS FROM MOUNT BOLTS OF NO.2 TIMING BELT COVER**
(See step 12 (a) on page FI-111)
9. **REMOVE RH FRONT ENGINE HANGER**
(See step 11 on page EM-64)



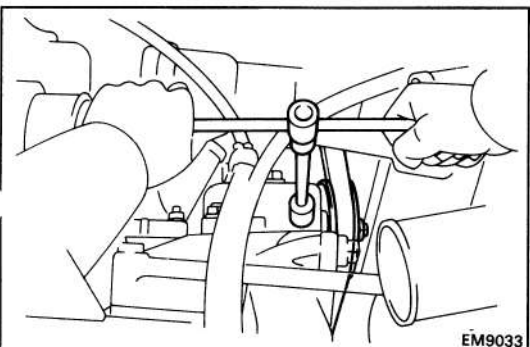
10. **DISCONNECT PARKING BRAKE CABLE FROM BODY**
Remove the three clamp bolts, and disconnect the parking brake cable.



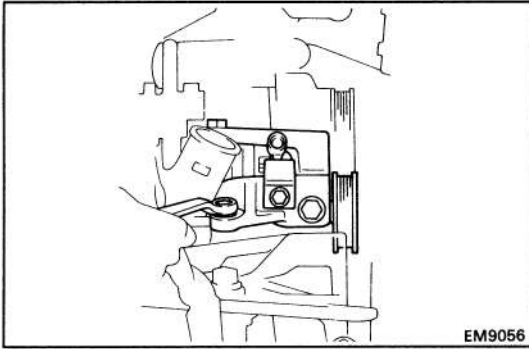
11. **REMOVE LOWER SUSPENSION BRACE**
Remove the two bolts and suspension brace.



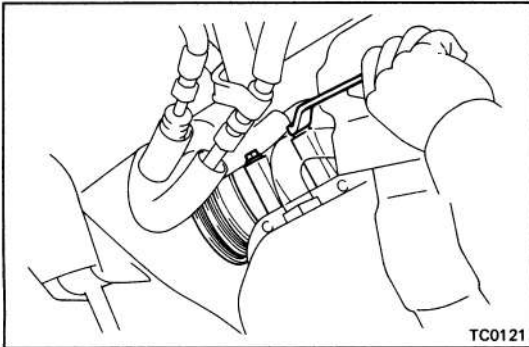
12. **REMOVE IDLER PULLEY BRACKET AND A/C COMPRESSOR**
 - (a) Remove the clamp nut, and disconnect the A/C hoses.



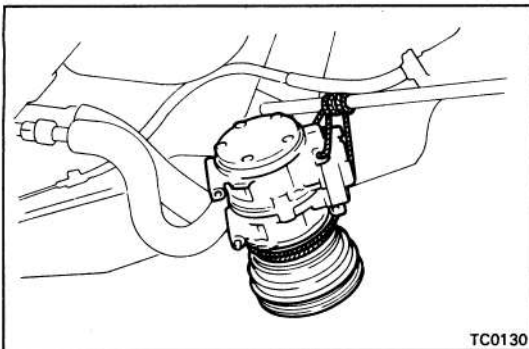
- (b) Loosen the idler pulley nut and adjusting bolt, and remove the drive belt.



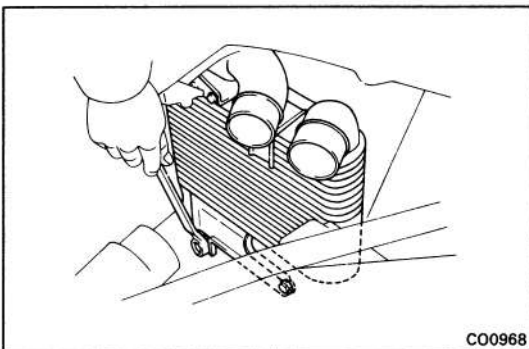
- (c) Disconnect the A/C compressor connector.
- (d) Remove the bolt and connector clamp of the A/C compressor.
- (e) Remove the three bolts and idler pulley bracket.



- (f) Remove the two bolts, and disconnect the A/C compressor from the engine.

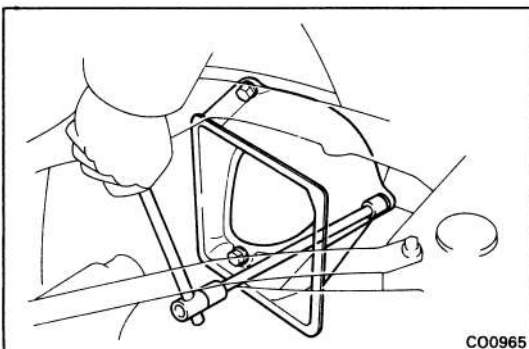


HINT: Suspend the compressor to the strut rod with a string.



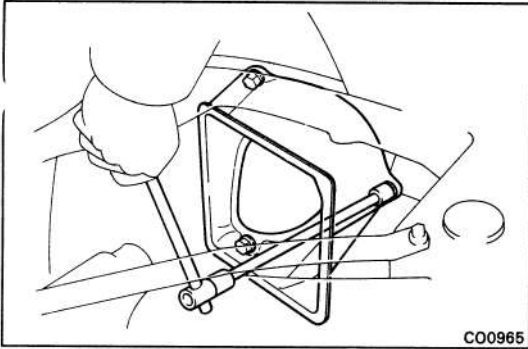
13. REMOVE INTERCOOLER

Remove the three bolts and intercooler.



14. REMOVE COOL AIR INLET

Remove the three bolts and air inlet.

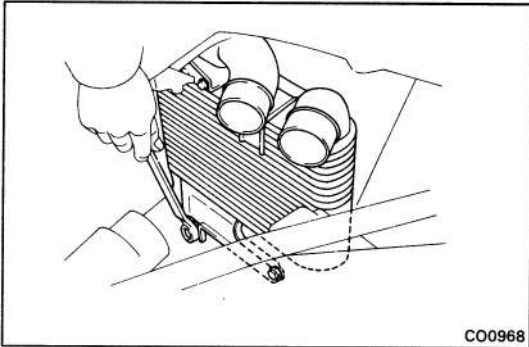


INSTALLATION OF INTERCOOLER

(See page TC-20)

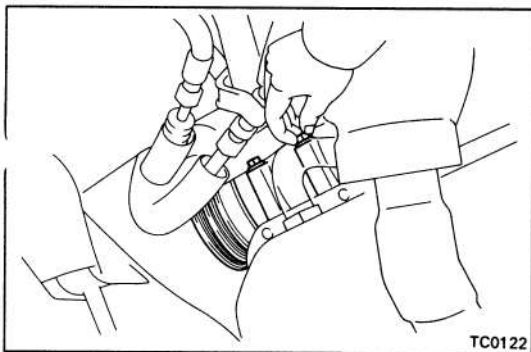
1. INSTALL COOL AIR INLET

Install the air inlet with the three bolts.



2. INSTALL INTERCOOLER

Install the intercooler with the three bolts.



3. INSTALL A/C COMPRESSOR AND IDLER PULLEY BRACKET

(a) Temporarily install the A/C compressor with the two bolts.

(b) Install the idler pulley bracket with three bolts.

Torque: A 275 kg-cm (20 ft-lb, 27 N·m)

B 375 kg-cm (27 ft-lb, 37 N·m)

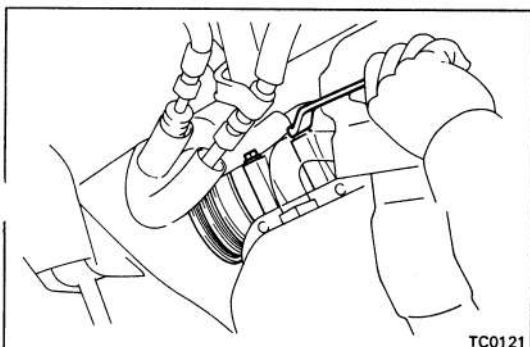
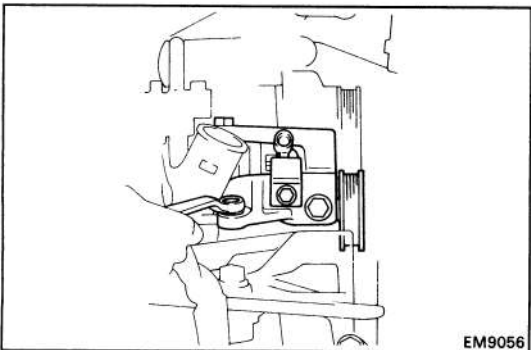
C 250 kg-cm (18 ft-lb, 25 N·m)

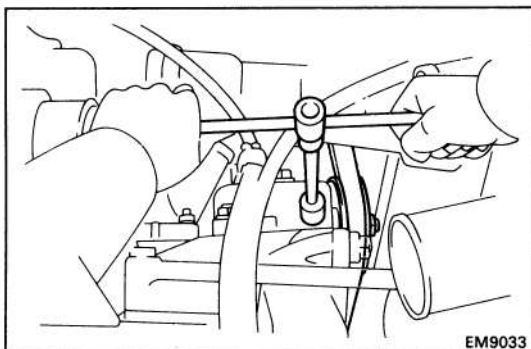
(c) Install the connector clamp of the A/C compressor with the bolt.

(d) Connect the A/C compressor connector.

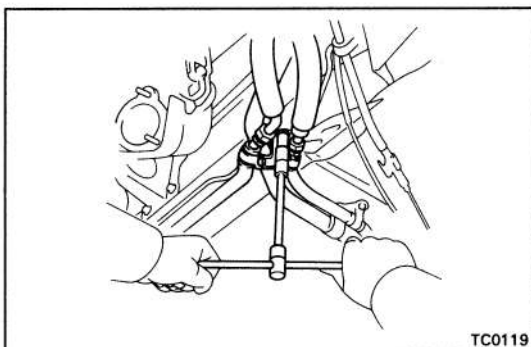
(e) Tighten the two bolts of the lower side holding the A/C compressor to the cylinder block.

Torque: 250 kg-cm (18 ft-lb, 25 N·m)

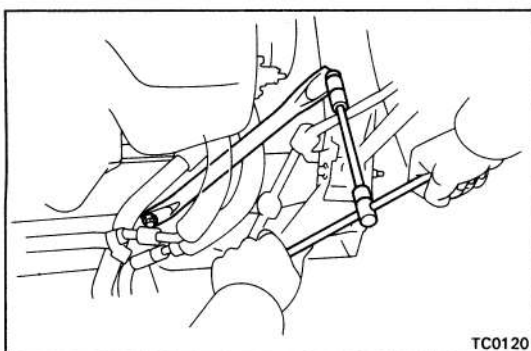




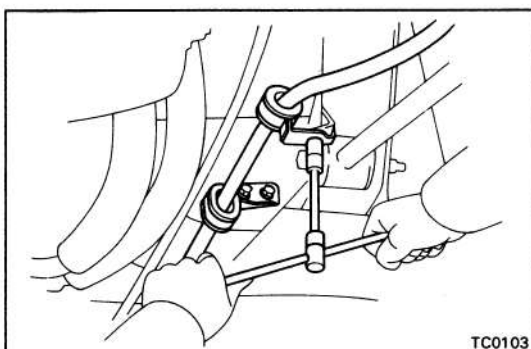
- (f) Install the drive belt with the idler pulley nut and adjusting bolt.



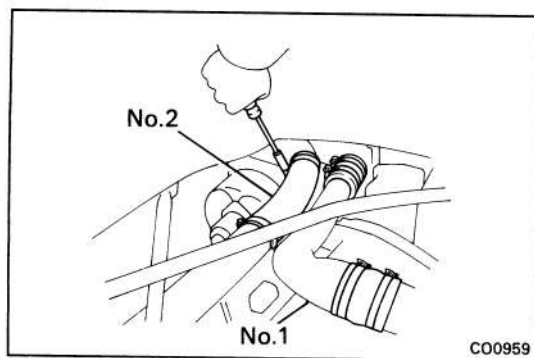
- (g) Install the A/C hoses with the nut.



- 4. INSTALL LOWER SUSPENSION BRACE**
Install the suspension brace with two bolts.
Torque: 740 kg-cm (54 ft-lb, 73 N-m)



- 5. INSTALL PARKING BRAKE CABLE**
Install the parking brake cable with the two clamps and three bolts.
- 6. INSTALL RH FRONT ENGINE HANGER**
(See step 31 on page EM-95)
- 7. INSTALL ENGINE WIRE CLAMPS TO MOUNT BOLTS OF NO.2 TIMING BELT COVER**
(See step 5 (b) on page FI-118)
- 8. INSTALL ENGINE COMPARTMENT COOLING FAN**
(See steps 1 and 2 on page CO-36)
- 9. INSTALL CRUISE CONTROL ACTUATOR (w/ CRUISE CONTROL SYSTEM) AND ACCELERATOR LINKAGE**
(See step 36 on page EM-178)



10. INSTALL NO.1 AIR INTAKE CONNECTOR

11. INSTALL NO.2 AIR INTAKE CONNECTOR

12. CONNECT CABLE TO NEGATIVE TERMINAL OF BATTERY

13. ADJUST A/C DRIVE BELT

Drive belt tension: New belt 160 ± 25 lb
Used belt 100 ± 20 lb

14. INSTALL RH ENGINE HOOD SIDE PANEL

15. INSTALL ENGINE UNDER COVERS

