EMISSION CONTROL

EMISSION CONTROL SYSTEM ............ EC–1
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(TWC) SYSTEM ............................ EC–10
EMISSION CONTROL SYSTEM

PURPOSE

The emission control systems are installed to reduce the amount of CO, HC and NOx exhausted from the engine ((3) and (4)), to prevent the atmospheric release of blow–by gas–containing HC (1) and evaporated fuel containing HC being released from the fuel tank (2).

The function of each system is shown in these table.

<table>
<thead>
<tr>
<th>System</th>
<th>Abbreviation</th>
<th>Function</th>
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</thead>
<tbody>
<tr>
<td>(1) Positive Crankcase Ventilation</td>
<td>PCV</td>
<td>Reduces HC</td>
</tr>
<tr>
<td>(2) Evaporative Emission Control</td>
<td>EVAP</td>
<td>Reduces evaporated HC</td>
</tr>
<tr>
<td>(3) Three–Way Catalytic Converter</td>
<td>TWC</td>
<td>Reduces HC, CO and NOx</td>
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<tr>
<td>(4) Electronic Fuel injection*</td>
<td>EFI</td>
<td>Injects a precisely timed, optimum amount of fuel for reduced exhaust emissions</td>
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</table>

Remark: * For inspection and repair of the EFI system, refer to the FI section of this manual.
POSITIVE CRANKCASE VENTILATION (PCV) SYSTEM INSPECTION

1. REMOVE PCV VALVE
   (a) Disconnect the PCV hose from the PCV valve.
   (b) Remove the PCV valve.

2. INSTALL CLEAN HOSE TO PCV VALVE

3. INSPECT PCV VALVE OPERATION
   (a) Blow air into the cylinder head side, and check that air passes through easily.
   **CAUTION:**
   Do not suck air through the valve.
   Petroleum substances inside the valve are harmful.

   (b) Blow air into the intake manifold side, and check that air passes through with difficulty.
   If operation is not as specified, replace the PCV valve.

4. REMOVE CLEAN HOSE FROM PCV VALVE

5. REINSTALL PCV VALVE

6. VISUALLY INSPECT HOSES, CONNECTIONS AND GASKETS
   Check for cracks, leaks or damage.
EVAPORATIVE EMISSION (EVAP) CONTROL SYSTEM

INSPECTION

1. VISUALLY INSPECT LINES AND CONNECTORS
   Look for loose connections, sharp bends or damage.

2. VISUALLY INSPECT FUEL TANK FILLER PIPE
   Look for deformation, cracks or fuel leakage.

3. VISUALLY INSPECT FUEL TANK CAP
   Check if the cap and/or gasket are deformed or damaged. If necessary, repair or replace the cap.

4. REMOVE CHARCOAL CANISTER ASSEMBLY
   Disconnect the 2 hoses and pull up the canister.

5. INSPECT CHARCOAL CANISTER
   (a) Remove the charcoal canister cap.
   (b) Visually check the charcoal canister for cracks or damage.
   (c) While holding port C closed, using low pressure compressed air (4.9 kPa (50 gf/cm², 0.71 psi)), blow into port A and check that air flows without resistance from the port B.
   (d) Using low pressure compressed air (4.9 kPa (50 gf/cm², 0.71 psi)), blow into port A and check that air flows without resistance from the other ports.
(e) Apply vacuum (1.96 kPa (20 gf/cm$^2$, 0.28 psi)) to port A, check that the vacuum does not decrease when port B and C are closed, and check that the vacuum decreases when port B is opened.

If a problem is found, replace the charcoal canister.

6. CLEAN FILTER IN CANISTER

Clean the filter by blowing 19.6 kPa (0.2 kgf/cm$^2$, 2.8 psi) of compressed air into port B while holding port A closed.

**NOTICE:**
- Do not attempt to wash the canister.
- No activated carbon should come out.

7. REINSTALL CHARCOAL CANISTER
WARM UP THREE–WAY CATALYTIC CONVERTER (WU–TWC) SYSTEM

ON–VEHICLE INSPECTION

1. INSPECT EXHAUST PIPE ASSEMBLY
   (a) Check the connections for looseness or damage.
   (b) Check the clamps for weakness, cracks or damage.

2. INSPECT WU–TWC
   Check for dents or damage.
   If any part of the protector is damaged or dented to the extent that it contacts the WU–TWC, repair or replace it.

3. INSPECT WU–TWC HEAT INSULATOR
   (a) Check the heat insulator for damage.
   (b) Check for adequate clearance between the catalytic converter and heat insulator.
COMPONENTS

WU–TWC for Bank 1

N·m (kgf·cm, ft·lbf) : Specified torque
◆ Non–reusable part

Front Exhaust Pipe
Compression Spring
Gasket
Gasket

48 (490, 36)
62 (630, 46)
56 (570, 41)
**WU–TWC for Bank 2**

- **N·m (kgf·cm, ft·lbf)**: Specified torque
- **Non–reusable part**

- **Engine Under Cover**
- **WU–TWC (for Bank 2)**
- **Gasket**

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**LEXUS RX300 (RM785E)**
THREE-WAY CATALYTIC CONVERTER (TWC) SYSTEM

ON-VEHICLE INSPECTION

1. INSPECT EXHAUST PIPE ASSEMBLY
   (a) Check the connections for looseness or damage.
   (b) Check the clamps for weakness, cracks or damage.

2. INSPECT TWC
   Check for dents or damage.
   If any part of the protector is damaged or dented to the extent that it contacts the TWC, repair or replace it.

3. INSPECT TWC HEAT INSULATOR
   (a) Check the heat insulator for damage.
   (b) Check for adequate clearance between the catalytic converter and heat insulator.