To reduce CO, HC and NOx emissions, they are oxidized, reduced and converted to carbon dioxide (CO2), water (H2O) and nitrogen (NO) by the three-way catalytic converter.

<table>
<thead>
<tr>
<th>Exhaust Port</th>
<th>TWC (Front)</th>
<th>TWC (Rear)</th>
<th>Exhaust Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO</td>
<td>OXIDATION AND REDUCTION</td>
<td>OXIDATION AND REDUCTION</td>
<td>CO2, H2O, N2</td>
</tr>
<tr>
<td>HC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOx</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**INSPECTION OF EXHAUST PIPE ASSEMBLY**

1. INSPECT CONNECTIONS FOR LOOSENESS OR DAMAGE
2. INSPECT CLAMPS FOR WEAKNESS, CRACKS OR DAMAGE

**INSPECTION OF THREE–WAY CATALYTIC CONVERTER**

*(Three–Way Catalytic Converter–Rear)*

INSPECT FOR DENTS OR DAMAGE

If any part of the protector is damaged or dented to the extent that it contacts the three-way catalytic converter, repair or replace it.
INSPECTION OF HEAT INSULATOR
(Three–Way Catalytic Converter–Rear)
1. INSPECT HEAT INSULATOR FOR DAMAGE
2. INSPECT FOR ADEQUATE CLEARANCE BETWEEN
   THREE–WAY CATALYTIC CONVERTER AND HEAT
   INSULATOR

REPLACEMENT OF THREE–WAY
CATALYTIC CONVERTER
(Three–Way Catalytic Converter–Front)
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 (–) ter-
   minal cable is disconnected from the battery.
2. REMOVE ENGINE UNDER COVERS
3. REMOVE FRONT EXHAUST PIPE
   (See step 2 on page EC–30)
4. REMOVE GENERATOR (See page CH–7)
5. REMOVE IDLER PULLEY BRACKET AND A/C
   COMPRESSOR WITHOUT DISCONNECTING HOSES
   (See step 40 on page EM–229)

6. REMOVE THREE–WAY CATALYTIC CONVERTER (Front)
   (a) Check that the three–way catalytic converter is
       cool.
   (b) Remove the four bolts and RH three–way catalytic
       converter stay.
   (c) Remove the three bolts and LH three–way catalytic
       converter stay.
(d) Remove the three bolts, two nuts, the three-way catalytic converter, gasket, retainer and cushion. 
(e) Remove the nine bolts and two heat insulators from the three-way catalytic converter.

7. REINSTALL THREE–WAY CATALYTIC CONVERTER (FRONT)
(a) Install the two heat insulators to a new three-way catalytic converter with the nine bolts.

(b) Place the cushion, retainer and a new gasket or the three-way catalytic converter.

(c) Install the three-way catalytic converter with the three bolts and two new nuts. 
**Torque: 29 N–m (300 kgf–cm, 21 ft–lbf)**

(d) Install the RH three-way catalytic converter stay with the four bolts. 
**Torque: 59 N–m (600 kgf–cm, 43 ft–lbf)**
8. REINSTALL IDLER PULLEY BRACKET AND A/C COMPRESSOR WITHOUT DISCONNECTING HOSES
   (See step 12 on page EM–261)
9. REINSTALL GENERATOR (See page CH–23)
10. REINSTALL FRONT EXHAUST PIPE
    (See step 3 on page EC–30)
11. REINSTALL ENGINE UNDER COVERS
12. CONNECT CABLE TO NEGATIVE TERMINAL OF BATTERY

(e) Install the LH three–way catalytic converter stay with the three bolts.
   Torque: 59 N–m (600 kgf–cm, 43 ft–lbf)
(Three–Way Catalytic Converter–Rear)

1. REMOVE RH ENGINE UNDER COVER

2. REMOVE FRONT EXHAUST PIPE (THREE–WAY CATALYTIC CONVERTER–REAR)
   (a) Loosen the bolt, and disconnect the clamp from the bracket.
   (b) Remove the two bolts and nuts holding the front exhaust pipe to the center exhaust pipe.
   (c) Using a 14 mm deep socket wrench, remove the three nuts holding the front exhaust pipe to the three–way catalytic converter (front).
   (d) Disconnect the support hook on the front exhaust pipe from the support bracket, and remove the front exhaust pipe and two gaskets.

3. REINSTALL FRONT EXHAUST PIPE (THREE–WAY CATALYTIC CONVERTER–REAR)
   (a) Install the support hook on the front exhaust pipe to the support bracket
   (b) Place the two new gaskets on the front and rear of the front exhaust pipe.
   (c) Temporarily install the two bolts and two new nuts holding the front exhaust pipe to the center exhaust pipe.
   (d) Using a 14 mm deep socket wrench, install the three nuts holding the front exhaust pipe to the three–way catalytic converter (front).
   Torque: 62 N–m (630 kgf–cm, 46 ft–lbf)
   (e) Tighten the two bolts and nuts holding the front exhaust pipe to the center exhaust pipe.
   Torque: 43 N–m (440 kgf–cm, 32 ft–lbf)
   (f) Install the clamp with the bolt.

4. REINSTALL RH ENGINE UNDER COVER