EMISSION SYSTEM LOCATION INDEX [LF]

ENGINE COMPARTMENT SIDE

Fig. 1: Identifying Location Of Emission System Engine Compartment Side Components
Courtesy of MAZDA MOTORS CORP.

EXHAUST SYSTEM
Fig. 2: Identifying Location Of Exhaust System Components
Courtesy of MAZDA MOTORS CORP.

FUEL TANK SIDE

Fig. 3: Identifying Location Of Fuel Tank Side Components
Courtesy of MAZDA MOTORS CORP.

FUEL-FILLER CAP INSPECTION [LF]

LEAKAGE INSPECTION
1. Perform the following SST (Evaporative Emission System Tester 134-01049) self-test:

   **NOTE:**
   - If the tester does not work correctly during self-test, refer to the tester operators manual for more detailed procedures.

   1. Verify the gas cylinder valve is closed and the control valve located on the tester is in the TEST position. All tester display should be off at this time.
   2. Connect the long hose (part of SST) to the tester.
   3. Connect the manifold assembly (part of SST) to the long hose as shown in Fig. 4.

   ![Fig. 4: Connecting Manifold Assembly To Long Hose](image)
   
   Courtesy of MAZDA MOTORS CORP.

   4. Open the gas cylinder valve and verify the gas cylinder regulator left gauge reads **10 to 12 psi** (preset at factory).
      - If not, refer to the tester operators manual to contact tester manufacturer.
   5. Press the ON/OFF switch to turn on the SST and make sure the left display reads **0.0**.
   6. Turn the control valve on the tester to the FILL position.
   7. Verify the left display reading is **within 13.9 to 14.0 in of water**.
      - If not, adjust the pressure using the regulator knob located on the right side of the tester.
   8. Turn the control valve to TEST position and press the START switch.
9. After the **2-min** countdown (left display) is completed, the right display shows the total pressure loss for that period. A **0.5 in of water** loss is acceptable on the self-test.
   - If the loss is **more than 0.5 in of water**, do one or more self-test. If the failed test repeats, check for leak using the ultrasonic leak detector (part of SST).

2. Press the RESET switch to set the left display reading to **0.0**.

3. Connect the fuel cap receiver assembly (part of SST) to the manifold assembly and fuel-filler cap from the vehicle.
   - If the fuel-filler cap is not a genuine part, replace it.

---

**Fig. 5: Connecting Fuel Cap Receiver Assembly**

*Courtesy of MAZDA MOTORS CORP.*

4. Turn the control valve to the FILL position.

5. Wait (**maximum 20s**) until the left display reads **13.9 to 14 in** of water.
   - If the reading is slightly below, adjust it using the regulator knob.
   - If the reading is far below, the fuel-filler cap has leak. Replace it.

6. Turn the control valve to the TEST position and press the START switch.

7. After the **2-min** countdown (left display) is completed, check the test result (the failed/passed light on the tester).
   - If the green light turns on, the fuel-filler cap is OK.
If the red light turns on, the fuel-filler cap has leakage. Replace it.

8. Close the gas cylinder valve.
9. Turn the control valve to the FILL position.
10. Press the ON/OFF switch to turn off the tester.

**EMISSION SYSTEM DIAGRAM [LF]**

![Emission System Diagram]

**Fig. 6: Identifying Emission System Diagram [LF]**
Courtesy of MAZDA MOTORS CORP.

**AIR FILTER REMOVAL/INSTALLATION [LF]**

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
3. Disconnect the evaporative hose from the air filter.
4. Cover the evaporative hose with vinyl sheets or the like to prevent them from being scratched or contaminated with foreign material.
5. Remove the air filter.
6. Install in the reverse order of removal.
Fig. 8: Removing Air Filter (With Torque Specifications)
Courtesy of MAZDA MOTORS CORP.

AIR FILTER INSPECTION [LF]

1. Remove the air filter. (See AIR FILTER REMOVAL/INSTALLATION [LF] ).
2. Blow from port A and verify that there is airflow from port B.
   • If not as specified, replace the air filter.
3. Blow from port B and verify that there is airflow from port A.
   • If not as specified, replace the air filter. (See AIR FILTER REMOVAL/INSTALLATION [LF] ).
CHARCOAL CANISTER REMOVAL/INSTALLATION [LF]

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
3. Remove in the order indicated in Fig. 10.
4. Install in the reverse order of removal.
Fig. 10: Identifying Charcoal Canister Components (With Torque Specifications)
Courtesy of MAZDA MOTORS CORP.

**EVAPORATIVE HOSE INSTALLATION NOTE**

1. Fit the evaporative hose onto the respective fittings, and install clamps as shown in Fig. 11.
   1. Insert the evaporative hose securely to the nipple.
   2. Inspect the evaporative hose for damage and deformation.
**CHARCOAL CANISTER INSPECTION [LF]**

1. Remove the charcoal canister. (See CHARCOAL CANISTER REMOVAL/INSTALLATION [LF]).
2. Plug the EVAP leak detection pump side and purge solenoid valve side of the charcoal canister.
3. Inspect for air leakage when blowing air by mouth from the fuel tank side.
   - If air leaks, replace the charcoal canister. (See CHARCOAL CANISTER REMOVAL/INSTALLATION [LF]).
Fig. 12: Identifying Charcoal Canister
Courtesy of MAZDA MOTORS CORP.

EVAPORATIVE EMISSION (EVAP) SYSTEM LEAK DETECTION PUMP REMOVAL/INSTALLATION [LF]

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
3. Disconnect the EVAP system leak detection pump connector.
4. Disconnect the evaporative hose from the EVAP system leak detection pump.
5. Cover the evaporative hose with vinyl sheets or the like to prevent them from being scratched or contaminated with foreign material.
6. Remove the EVAP system leak detection pump with the bracket.
Fig. 13: Identifying Evaporative Emission System Leak Detection Pump And Evaporative Hose (With Torque Specifications)
Courtesy of MAZDA MOTORS CORP.

7. Remove the bracket from the EVAP system leak detection pump.
Fig. 14: Removing Bracket From EVAP System Leak Detection Pump
Courtesy of MAZDA MOTORS CORP.

8. Install in the reverse order of removal.

EVAPORATIVE HOSE INSTALLATION NOTE

1. Fit the evaporative hose onto the respective fittings, and install clamps as shown in Fig. 15.
   1. Insert the evaporative hose securely to the nipple.
   2. Inspect the evaporative hose for damage and deformation.
EVAPORATIVE EMISSION (EVAP) SYSTEM LEAK DETECTION PUMP INSPECTION [LF]

NOTE: Perform the following procedure only when directed.

AIRFLOW INSPECTION

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
3. Remove the EVAP system leak detection pump. (See EVAPORATIVE EMISSION (EVAP) SYSTEM LEAK DETECTION PUMP REMOVAL/INSTALLATION [LF].)
4. Blow air into port A and verify that there is airflow from port B.
   - If not as specified, replace the EVAP system leak detection pump. (See EVAPORATIVE EMISSION (EVAP) SYSTEM LEAK DETECTION PUMP REMOVAL/INSTALLATION [LF].)
5. Blow air into port B and verify that there is airflow from port A.
   - If not as specified, replace the EVAP system leak detection pump. (See EVAPORATIVE
EMISSION (EVAP) SYSTEM LEAK DETECTION PUMP REMOVAL/INSTALLATION

- If as specified, perform the following "RESISTANCE INSPECTION".

Fig. 16: Identifying Evaporative Emission System Leak Detection Pump Ports
Courtesy of MAZDA MOTORS CORP.

RESISTANCE INSPECTION

1. Inspect resistance of the EVAP system leak detection pump.
   - If not as specified, replace the EVAP system leak detection pump. (See EVAPORATIVE EMISSION (EVAP) SYSTEM LEAK DETECTION PUMP REMOVAL/INSTALLATION [LF]).
   - If as specified, carry out the CIRCUIT OPEN/SHORT INSPECTION.

EVAP SYSTEM LEAK DETECTION PUMP TERMINALS RESISTANCE SPECIFICATIONS

<table>
<thead>
<tr>
<th>Terminals</th>
<th>Resistance (ohm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-B</td>
<td>20-50</td>
</tr>
<tr>
<td>A-C</td>
<td>26.6-32.4</td>
</tr>
<tr>
<td>A-D</td>
<td>MAX. 118</td>
</tr>
</tbody>
</table>
CIRCUIT OPEN/SHORT INSPECTION

1. Disconnect the PCM connector. (See PCM REMOVAL/INSTALLATION [LF] .)
2. Inspect the following wiring harness for open or short circuit (continuity check).

Open Circuit

- If there is no continuity, there is an open circuit. Repair or replace the wiring harness.
  - EVAP system leak detection pump terminal C and PCM terminal 1V
  - EVAP system leak detection pump terminal D and PCM terminal 1U
- EVAP system leak detection pump terminal A and main relay
- EVAP system leak detection pump terminal B and body ground

**Short Circuit**

- If there is continuity, there is a short circuit. Repair or replace the wiring harness.
  - EVAP system leak detection pump terminal C and body ground
  - EVAP system leak detection pump terminal D and body ground
  - EVAP system leak detection pump terminal C and power supply
  - EVAP system leak detection pump terminal D and power supply
  - EVAP system leak detection pump terminal A and body ground
  - EVAP system leak detection pump terminal B and power supply
Fig. 18: Identifying PCM Wiring Harness-Side Connector
Courtesy of MAZDA MOTORS CORP.

PURGE SOLENOID VALVE REMOVAL/INSTALLATION [LF]

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
3. Disconnect the purge solenoid valve connector.
4. Disconnect the vacuum hose from the purge solenoid valve.
5. Remove the purge solenoid valve from the air hose.
6. Install in the reverse order of removal.

PURGE SOLENOID VALVE INSPECTION [LF]

NOTE:  
- Perform the following procedure only when directed.

AIRFLOW INSPECTION

1. Remove the purge solenoid valve without disconnecting the evaporative hose. (See PURGE SOLENOID VALVE REMOVAL/INSTALLATION [LF].)
2. Verify that the airflow is as indicated in PURGE SOLENOID VALVE AIRFLOW REFERENCE TABLE.
   - If as specified in PURGE SOLENOID VALVE AIRFLOW REFERENCE TABLE, perform the CIRCUIT OPEN/SHORT INSPECTION.
   - If not as specified in PURGE SOLENOID VALVE AIRFLOW REFERENCE TABLE, inspect the purge solenoid valve. (See PURGE SOLENOID VALVE REMOVAL/INSTALLATION [LF].)

PURGE SOLENOID VALVE AIRFLOW REFERENCE TABLE
### Measured condition

<table>
<thead>
<tr>
<th>Continuity between A-B</th>
<th>Measured condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>No airflow</td>
<td>When voltage is not applied between terminals A and B</td>
</tr>
<tr>
<td>Airflow detected</td>
<td>When voltage is applied between terminals A and B</td>
</tr>
</tbody>
</table>

---

**Fig. 20: Inspecting Airflow**

*Courtesy of MAZDA MOTORS CORP.*

**CIRCUIT OPEN/SHORT INSPECTION**

1. Disconnect the PCM connector. (See [PCM REMOVAL/INSTALLATION [LF]].)
2. Inspect the following wiring harnesses for open or short circuit (continuity check).
Open Circuit

- If there is no continuity, there is an open circuit. Repair or replace the wiring harness.
  - Purge solenoid valve terminal A and PCM terminal 2C
  - Purge solenoid valve terminal B and main relay

Short Circuit

- If there is continuity, there is a short circuit. Repair or replace the wiring harness.
  - Purge solenoid valve terminal A and power supply
  - Purge solenoid valve terminal A and body ground
  - Purge solenoid valve terminal B and body ground

**EGR VALVE REMOVAL/INSTALLATION [LF]**

1. Remove the plug hole plate. (See **PLUG HOLE PLATE REMOVAL/INSTALLATION [LF]**)
2. Remove the battery cover.
3. Disconnect the negative battery cable. (See **BATTERY REMOVAL/INSTALLATION [LF]**)
4. Drain the engine coolant from the radiator. (See ENGINE COOLANT REPLACEMENT [LF] .)
5. Remove the service hole cover.
   1. Remove the suspension tower bar (joint), (right side) and (left side). (See FRONT SUSPENSION TOWER BAR REMOVAL/INSTALLATION .)
   2. Remove the wiper arm: (See WIPER ARM AND BLADE REMOVAL/INSTALLATION .)
   3. Remove the cowl grille. (See COWL GRILLE REMOVAL/INSTALLATION .)
   4. Remove the side cowl grille. (See SIDE COWL GRILLE REMOVAL/INSTALLATION .)
   5. Move the cooler pipe No.3 and heater pipe slightly out of the way.

Fig. 22: Identifying Heater Pipe & Cooler Pipe No. 3
Courtesy of MAZDA MOTORS CORP.

6. Remove the service hole cover.
Fig. 23: Removing Service Hole Cover (With Torque Specifications)
Courtesy of MAZDA MOTORS CORP.

6. Remove the harness bracket.
7. Disconnect the heater hose and move the heater pipe slightly out of the way.
8. Disconnect the EGR valve connector.
9. Set the SST to the EGR valve installation bolt.
10. Remove both EGR valve installation bolts.
11. Remove the EGR valve with the engine coolant hose.
12. Disconnect the engine coolant hose from the EGR valve.
13. Replace the EGR valve gasket.

EGR VALVE INSPECTION [LF]

NOTE: 
- Perform the following procedure only when directed.

ON-VEHICLE INSPECTION

1. Verify that the buzzing sound (valve operation sound) is heard from the EGR valve when engine cranking.
   - If the buzzing sound is not heard, perform the resistance inspection.

RESISTANCE INSPECTION

1. Remove the plug hole plate. (See PLUG HOLE PLATE REMOVAL/INSTALLATION [LF].)
2. Disconnect the battery cover.
3. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
4. Disconnect the EGR valve connector. (See EGR VALVE REMOVAL/INSTALLATION [LF]).

5. Measure the resistance between the EGR valve terminals.
   - If within the specification, perform out the CIRCUIT OPEN/SHORT INSPECTION.
   - If not within the specification, replace the EGR valve. (See EGR VALVE REMOVAL/INSTALLATION [LF]).

### STANDARD RESISTANCE SPECIFICATIONS

<table>
<thead>
<tr>
<th>Terminal</th>
<th>Resistance (ohm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-E</td>
<td>12-16</td>
</tr>
<tr>
<td>C-A</td>
<td></td>
</tr>
<tr>
<td>D-B</td>
<td></td>
</tr>
<tr>
<td>D-F</td>
<td></td>
</tr>
</tbody>
</table>

Fig. 28: Identifying EGR Valve Connector Terminals
Courtesy of MAZDA MOTORS CORP.
CIRCUIT OPEN/SHORT INSPECTION

1. Disconnect the PCM connector. (See PCM REMOVAL/INSTALLATION [LF].)

2. Inspect the following wiring harnesses for open or short circuit (continuity check).

Open Circuit

- If there is no continuity, there is an open circuit. Repair or replace the wiring harness.
  - EGR valve terminal A and PCM terminal 2G
  - EGR valve terminal B and PCM terminal 2L
  - EGR valve terminal E and PCM terminal 2K
  - EGR valve terminal F and PCM terminal 2H
  - EGR valve terminal C and main relay
  - EGR valve terminal D and main relay

Short Circuit

- If there is continuity, there is a short circuit. Repair or replace the wiring harness.
  - EGR valve terminal A and body ground
  - EGR valve terminal A and power supply
  - EGR valve terminal B and body ground
  - EGR valve terminal B and power supply
  - EGR valve terminal C and body ground
  - EGR valve terminal D and body ground
  - EGR valve terminal E and body ground
  - EGR valve terminal E and power supply
  - EGR valve terminal F and body ground
  - EGR valve terminal F and power supply
POSITIVE CRANKCASE VENTILATION (PCV) VALVE INSPECTION [LF]

1. Remove the intake manifold. (See INTAKE-AIR SYSTEM REMOVAL/INSTALLATION [LF].)
2. Remove the PCV valve.
3. Verify that there is no airflow when pressure is applied to port A.
   - If there is airflow, replace the PCV valve.
4. Verify that there is airflow when vacuum is applied to port A.
If there is no airflow, replace the PCV valve.

Fig. 30: Identifying PCV Valve
Courtesy of MAZDA MOTORS CORP.

WARM-UP THREE-WAY CATALYTIC CONVERTER (WU-TWC) INSPECTION

NOTE:
- Make sure that no HO2S DTCs have been detected. If detected, this inspection is not applicable for WU-TWC inspection.

1. Connect the M-MDS or equivalent and monitor PIDs as following.
   - Monitor the WU-TWC using O2S11 PID for upstream HO2S and O2S12 PID for downstream HO2S.
2. Monitor the appropriate PIDs.
3. Drive the vehicle for 10 min at 65-96 km/h {40-60 mph} to allow the front catalytic converter to reach operating temperature.
4. Stop the vehicle and leave it in a safe place.
5. Idle the engine.
6. Record PIDs for 1 min.
7. Select the appropriate PIDs and read the graph.
8. Count the number of times (inversions) that the upstream HO2S graph line actually crosses the 0.5 V line.

**Fig. 31: Identifying HO2S Graph Line (5 Inversions)**
Courtesy of MAZDA MOTORS CORP.

9. Count the number of times (inversions) that the downstream HO2S graph line actually crosses the 0.5 V line.

**NOTE:**
- Do not count the number of peaks. Refer to Fig. 31.

10. Using the following equation, calculate the value of ratio.

**Equation**

\[
RATIO = \frac{\text{Upstream HO2S inversion}}{\text{downstream HO2S inversion}}
\]
- If the ratio is **1.5 or more** or there is no downstream HO2S inversion, the WU-TWC is functioning properly.
- If the ratio is **less than 1.5**, the WU-TWC is not functioning properly. Replace the WU-TWC.

**Upstream HO2S Graph Line Example**

![Graph Image]

**Equation**

$$ \text{RATIO} = \frac{30 \text{ inversions (upstream HO2S inversions)}}{5 \text{ inversions (downstream HO2S inversions)}} = 6.0 \text{ (good WU-TWC)}$$

**Fig. 32: Upstream HO2S Graph Line Example**

*Courtesy of MAZDA MOTORS CORP.*

**Downstream HO2S Graph Line Example**

**Equation**

$$ \text{RATIO} = \frac{30 \text{ inversions (upstream HO2S inversions)}}{5 \text{ inversions (downstream HO2S inversions)}} = 6.0 \text{ (good WU-TWC)}$$
Fig. 33: Downstream HO2S Graph Line Example 1
Courtesy of MAZDA MOTORS CORP.

Fig. 34: Downstream HO2S Graph Line Example 2
Downstream HO2S Graph Line Example 3

Equation

\[ \text{RATIO} = \frac{30 \text{ inversions (upstream HO2S inversions)}}{27 \text{ inversions (downstream HO2S inversions)}} = 1.1 \text{ (bad WU-TWC)} \]

Fig. 35: Downstream HO2S Graph Line Example 3
Courtesy of MAZDA MOTORS CORP.

ROLLOVER VALVE REMOVAL/INSTALLATION [LF]

NOTE:
- The rollover valve cannot be removed as it is built into the fuel tank.

ROLLOVER VALVE INSPECTION [LF]

NOTE:
- The rollover valve cannot be removed and inspected as it is built into the fuel tank.

1. Perform the fuel tank inspection. (See FUEL TANK INSPECTION [LF].)

FUEL SHUT-OFF VALVE REMOVAL/INSTALLATION [LF]
FUEL SHUT-OFF VALVE INSPECTION [LF]

NOTE:
- The fuel shut-off valve cannot be removed and inspected as it is built into the fuel tank.

1. Perform the fuel tank inspection. (See FUEL TANK INSPECTION [LF].)

EVAPORATIVE CHAMBER REMOVAL/INSTALLATION [LF]

1. Remove the battery cover.
2. Disconnect the negative battery cable. (See BATTERY REMOVAL/INSTALLATION [LF].)
3. Disconnect the evaporative hose.
4. Remove the evaporative chamber.
5. Cover the evaporative hose with vinyl sheets or the like to prevent them from being scratched or contaminated with foreign material.
6. Install in the reverse order of removal.

NOTE:
- The fuel shut-off valve cannot be removed as it is built into the fuel tank.

Fig. 36: Identifying Evaporative Chamber And Evaporative Hose
Courtesy of MAZDA MOTORS CORP.
EVAPORATIVE CHAMBER INSPECTION [LF]

1. Remove the evaporative chamber.
2. Blow from port A and verify that there is airflow from port B.
   - If not as specified, replace the evaporative chamber.

Fig. 37: Inspecting Evaporative Chamber Ports
Courtesy of MAZDA MOTORS CORP.

QUICK RELEASE CONNECTOR (EMISSION SYSTEM) REMOVAL/INSTALLATION [LF]

QUICK RELEASE CONNECTOR TYPE

CAUTION: There are four types of quick release connectors. Verify the type and location, and install/remove properly.
Fig. 38: Identifying Location Of Different Types Of Quick Release Connectors
Courtesy of MAZDA MOTORS CORP.

TYPE A REMOVAL

CAUTION: • The quick release connector may be damaged if the release tab is bent excessively. Do not expand the release tab over the stopper.

NOTE: • The evaporative hose can be removed by pushing it to the joint port side to release the lock.

1. Rotate the release tab on the quick release connector to the stopper position.

NOTE: • The retainer is attached to the pipe even after the connector is disconnected.
2. Pull out the evaporative hose straight from the joint port and disconnect it.

3. Cover the disconnected quick release connector and joint port with vinyl sheeting or a similar material to prevent it from scratches or dirt.
Fig. 41: Covering Disconnected Quick Release Connector
Courtesy of MAZDA MOTORS CORP.

TYPE B REMOVAL

1. Squeeze the release tab until the locks are released.

   **NOTE:**
   - The retainer has two internal locking tabs which retain the joint port. Be sure that the squeezing place on the retainer is squeezed until it can be released from the joint port.

2. Pull the quick release connector straight outward.

   **NOTE:**
   - The retainer is attached to the pipe even after the connector is disconnected.
Fig. 42: Removing Type B Components
Courtesy of MAZDA MOTORS CORP.

3. Cover the disconnected quick release connector and joint port with vinyl sheeting or a similar material to prevent it from becoming scratched or dirty.

TYPE C REMOVAL

CAUTION:  • Be careful not to damage the pipe when unlocking the retainer.

NOTE:  • If the quick release connector is removed, replace the retainer with a new one.

1. Follow "BEFORE SERVICE PRECAUTION" and remove dirt from the connecting surfaces before performing any work operations.

NOTE:  • The retainer is attached to the pipe even after the connector is disconnected.

2. Set the SST parallel to the quick release connector.

NOTE:  • The quick release connector can be removed by pushing the center of the retainer tabs.
Fig. 43: Disconnecting Quick Release Connector
Courtesy of MAZDA MOTORS CORP.

3. Hold the center of the retainer tabs with the SST ends and press the retainer.
4. Pull the connector side and disconnect the quick release connector.
5. Raise a retainer tab using the SST and remove the retainer.
6. Cover the disconnected quick release connector and joint port with vinyl sheeting or a similar material to prevent it from becoming scratched or dirty.

**TYPE D REMOVAL**

**CAUTION:**
- When releasing the retainer locks, take extreme care not to damage the evaporative hose.

1. Release the locks between the retainer and joint port by pressing each retainer lock one by one using a flathead screwdriver or a similar tool.
2. Pull out the hose straight from the joint port and disconnect it.

**NOTE:**
- The retainer is attached to the pipe even after the connector is disconnected.

3. Cover the disconnected quick release connector and joint port with vinyl sheeting or a similar material to prevent it from becoming scratched or dirty.

**TYPE A INSTALLATION**

**NOTE:**
- If the quick release connector O-ring is damaged or has slipped, replace the evaporative hose.
- A checker tab is integrated with the quick release connector for new evaporative hoses. Remove the checker tab from the quick release connector after the connector is completely engaged with the joint port.
1. Inspect the evaporative hose and joint port sealing surface for damage and deformation.
   - If there is any malfunction, replace it with a new one.
2. Apply a small amount of clean engine oil to the sealing surface of the joint port.
3. Reconnect the evaporative hose straight to the joint port until a click is heard.
4. Lightly pull and push the quick release connector a few times by hand, and then verify that it can move 2.0-3.0 mm \(0.08-0.12\) in\} and is connected securely.

**NOTE:**
- If the quick release connector does not move at all, disconnect it, verify that the O-ring is not damaged or has not slipped, and then reconnect the quick release connector.

4. Lightly pull and push the quick release connector a few times by hand, and then verify that it can move 2.0-3.0 mm \{0.08-0.12 in\} and is connected securely.

**TYPE B INSTALLATION**

**NOTE:**
- If the quick release connector O-ring is damaged or has slipped, replace the evaporative hose.
- When replacing with a new evaporative hose, disengage the release tabs from the joint port.
- A checker tab is integrated with the quick release connector for new evaporative hoses. Remove the checker tab from the quick release connector after the connector is completely engaged with the joint port.

Fig. 47: Removing Checker Tab From Quick Release Connector Completely Engaged With Joint Port Courtesy of MAZDA MOTORS CORP.

1. When newly replacing the quick release connector, remove the release tab using the following procedure.
   1. Widen the retainer lock using a flathead screwdriver, then pull out the release tab from the joint
port and remove it.

2. Inspect the quick release connector and joint port sealing surface for damage and deformation.
   - If there is any malfunction, replace it with a new one.

3. Apply a small amount of clean engine oil to the sealing surface of the joint port.

4. Reconnect the quick release connector straight to the joint port until a click is heard.

**Fig. 48: Removing Tab From Joint Port**
Courtesy of MAZDA MOTORS CORP.

**NOTE:**

- If the quick release connector does not move at all, disconnect it, verify that the O-ring is not damaged or has not slipped, and then reconnect the quick release connector.

5. Lightly pull and push the quick release connector a few times by hand, and then verify that it is connected securely.

**TYPE C INSTALLATION**

**NOTE:**

- If the quick release connector O-ring is damaged or has slipped, replace the piping component.
- A checker tab is integrated with the quick release connector for new fuel hoses and evaporative hoses. Remove the checker tab from the quick release connector after the connector is completely engaged with the fuel.
1. Install a new retainer to the quick release connector.

CAUTION: • Be sure to replace the retainer with a new one to prevent gas leakage.
2. Reconnect the hose straight to the pipe until a click is heard.
3. Lightly pull and push the quick release connector a few times by hand, and then verify that it is connected securely.

**TYPE D INSTALLATION**

**NOTE:**
- If the quick release connector O-ring is damaged or has slipped, replace the evaporative hose.
- When replacing with a new evaporative hose, disengage the release tabs from the join port.
- A checker tab is integrated with the quick release connector for new evaporative hoses. Remove the checker tab from the quick release connector after the connector is completely engaged with the joint port.
1. When newly replacing the quick release connector, remove the release tab using the following procedure.

   1. Widen the retainer lock using a flathead screwdriver, then pull out the release tab from the joint port and remove it.

Fig. 50: Removing Checker Tab From Quick Release Connector After Connector Completely Engaged With Joint Port

Courtesy of MAZDA MOTORS CORP.
2. Inspect the quick release connector and joint port sealing surface for damage and deformation.
   - If there is any malfunction, replace it with a new one.
3. Apply a small amount of clean engine oil to the sealing surface of the joint port.
4. Reconnect the quick release connector straight to the joint port until a click is heard.

**NOTE:**
- If the quick release connector does not move at all, disconnect it, verify that the O-ring is not damaged or has not slipped, and then reconnect the quick release connector.

5. Lightly pull and push the quick release connector a few times by hand, and then verify that it is connected securely.