

Group:	Service Manual Update
Bulletin No.:	SB-15-014
Issue Date:	1/30/2015

SERVICE INFORMATION BULLETIN

**Subject: CORRECTION OF WORKSHOP MANUAL FOR 2011MY-2014MY
(ADDITION AND CORRECTION OF BURNER SYSTEM)**

The following is to inform you of the above caption. This service data should be attached to the relevant pages of the workshop manuals for maintenance and to use for servicing.

RELEVANT MODEL:

2011MY-2014MY (HINO 238, 258, 268, 338, 358)

CONTENTS:

Addition and correction of burner system
 Addition of burner related memory reset procedure
 Correction of inspection of burner combustor orifice clogging

RELEVANT MANUALS:

Model Year	MANUAL No.	CHAPTER	Page No.
2011MY	S5-UJ08E07B	EMISSION CONTROL (J08E)	EN10-29, 31, 34, 35, 38
2012MY	S5-UJ08E08A	EMISSION CONTROL (J08E)	EN10-29, 31, 34, 35, 38
2013MY	S5-UJ08E09A	EMISSION CONTROL (J08E)	EN10-29, 31, 34, 35, 38
2014MY	S5-UJ08E10A	EMISSION CONTROL (J08E)	EN10-30, 32, 35, 36, 39

SERVICE INFORMATION BULLETIN

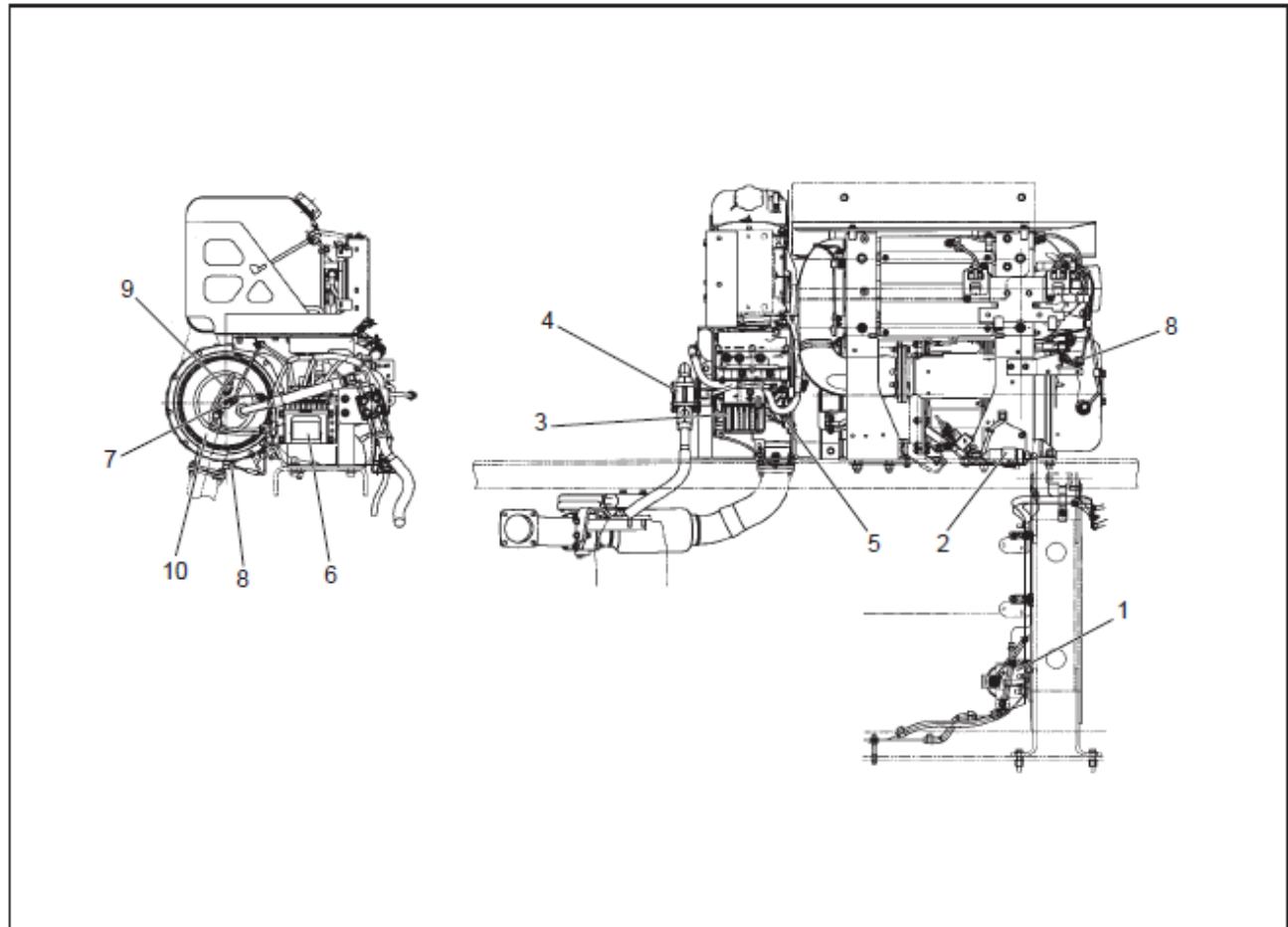
EMISSION CONTROL (J08E)

EN10-27

BURNER SYSTEM

COMPONENT LOCATOR

EN0110610J100004



SHFS011061000063

1 Fuel filter	6 Burner control unit
2 Fuel pump	7 Nozzle
3 Atomizer	8 Flame temperature sensor
4 Combustion air valve	9 Ignition plug
5 Ignition coil	10 Combination chamber

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EMISSION CONTROL (J08E)

BURNER SYSTEM WARNING AND CAUTION

EN0110610A100001

BEFORE YOU BEGIN

Read and understand all instructions and procedures before you begin to service components.

Read and observe all Warning and Caution hazard alert messages in this publication. They provide information that can help prevent serious personal injury, damage to components, or both.

Follow your company's maintenance and service, installation, and diagnostics guidelines.

Use special tools when required to help avoid serious personal injury and damage to components.

HAZARD ALERT MESSAGES

WARNING

A Warning alerts you to an instruction or procedure that you must follow exactly to avoid serious personal injury and damage to components.

CAUTION

A Caution alerts you to an instruction or procedure that you must follow exactly to avoid damage to components.

HAZARD ALERT MESSAGES

Read and observe all Warning and Caution hazard alert messages in this publication. They provide information that can help prevent serious personal injury, damage to components, or both.

DANGER

During engine "ON", the burner system may use an ignition coil to increase voltage to 40,000-50,000 volts. Do not touch the ignition coil during engine "ON". Death or serious personal injury, and damage to components can result.

The burner system uses a high voltage arc to ignite the injected fuel. A coil located near the muffler unit provides extremely high voltage. Two ignition cable connect the coil to two ignition plugs. Turn the vehicle OFF and disconnect the battery before you service these components to prevent death or serious personal injury, and damage to components.

The burner system oxidizes and releases heat into the exhaust outlet.

Depending on the amount of soot, exhaust outlet temperatures during regeneration can exceed 1,290°F (700°C). Do not touch the exhaust outlet. Do not park a vehicle under objects, such as trees and awnings, which can ignite from the extremely high exhaust outlet temperature. Death or serious personal injury, and damage to components can result.

If your vehicle has the stack tail pipe. Do not park a vehicle on ignitable objects, such as grass.

WARNING

To prevent serious eye injury, always wear safe eye protection when you perform vehicle maintenance or service procedures.

The burner system operates at an extremely high temperature of about 1,832°F (1,000°C) inside the combustion chamber. The skin temperature of a unit can reach 572°F (300°C) during operation. Even higher temperatures can occur at the flange; the exhaust outlet; and the filter, which remains hot for a longer period of time than other system components. Before you service the burner unit, all system components must be at ambient temperature to prevent serious personal injury.

An original equipment-mounted exhaust outlet is not insulated. The skin temperature of a non-insulated exhaust outlet can exceed 1,292°F (700°C) during operation. Before you service the thermal regenerator unit, all system components must be at ambient temperature to prevent serious personal injury.

When you work on an electrical system, the possibility of electrical shock exists, and sparks can ignite flammable substances. You must always disconnect the battery ground cable before you work on an electrical system to prevent serious personal injury and damage to components.

SERVICE INFORMATION BULLETIN

EMISSION CONTROL (J08E)

EN10-29

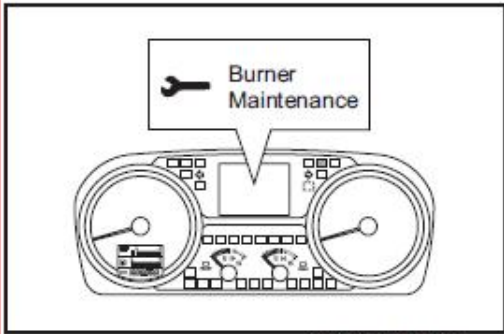
BURNER MAINTENANCE LIGHT

EN01Z0010A100001

- If "Burner Maintenance" is displayed on the information display, burner maintenance is required.

1. NOTIFICATION TO DRIVER

- (1) It informs with the burner maintenance light.

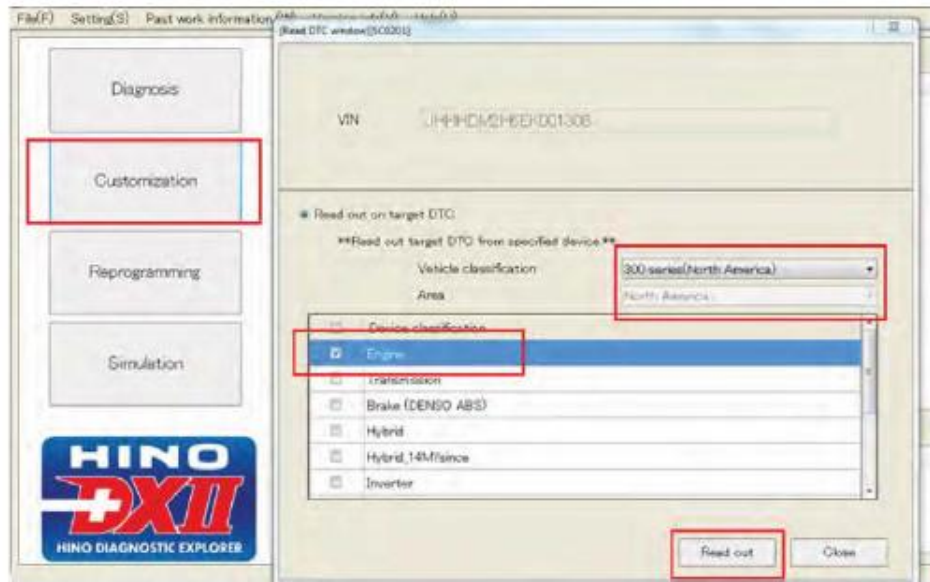


SAPH01Z001000001

2. BURNER RELATED MEMORY RESET PROCEDURE

- (1) The VIN # will populate in the window, select the correct vehicle depending on what you are working on from the drop down boxes. Place a check next to the [Engine] selection and select [Read Out].

Example



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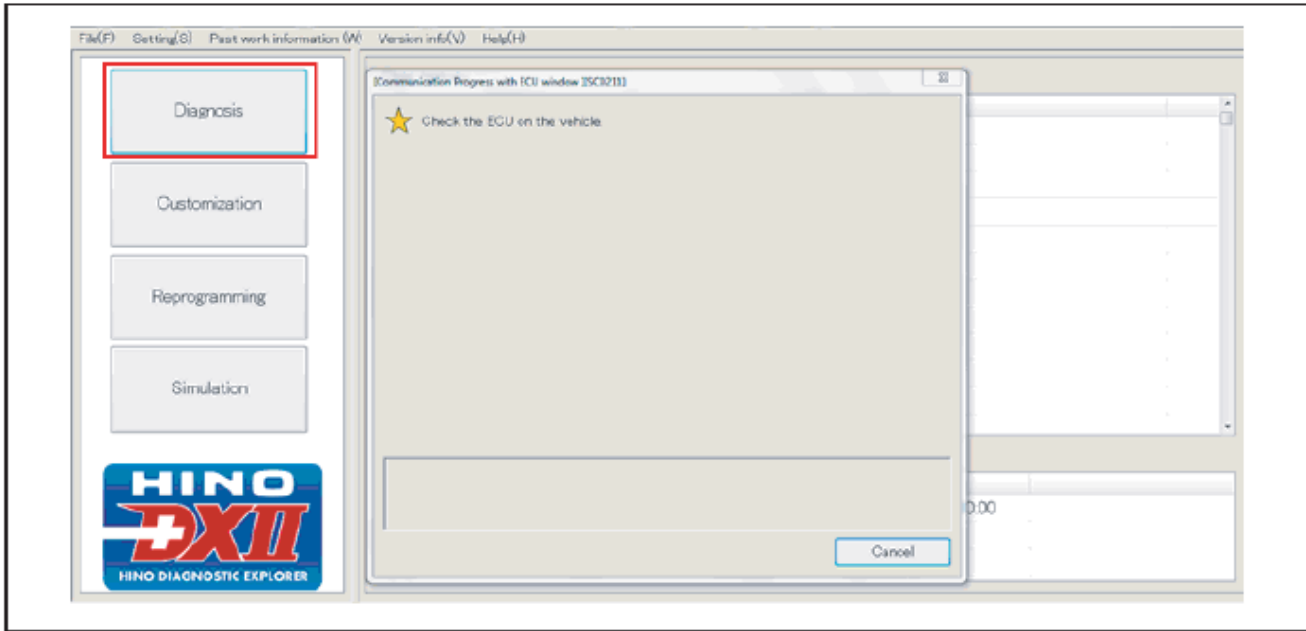
ADDITION

SERVICE INFORMATION BULLETIN

EN10-30

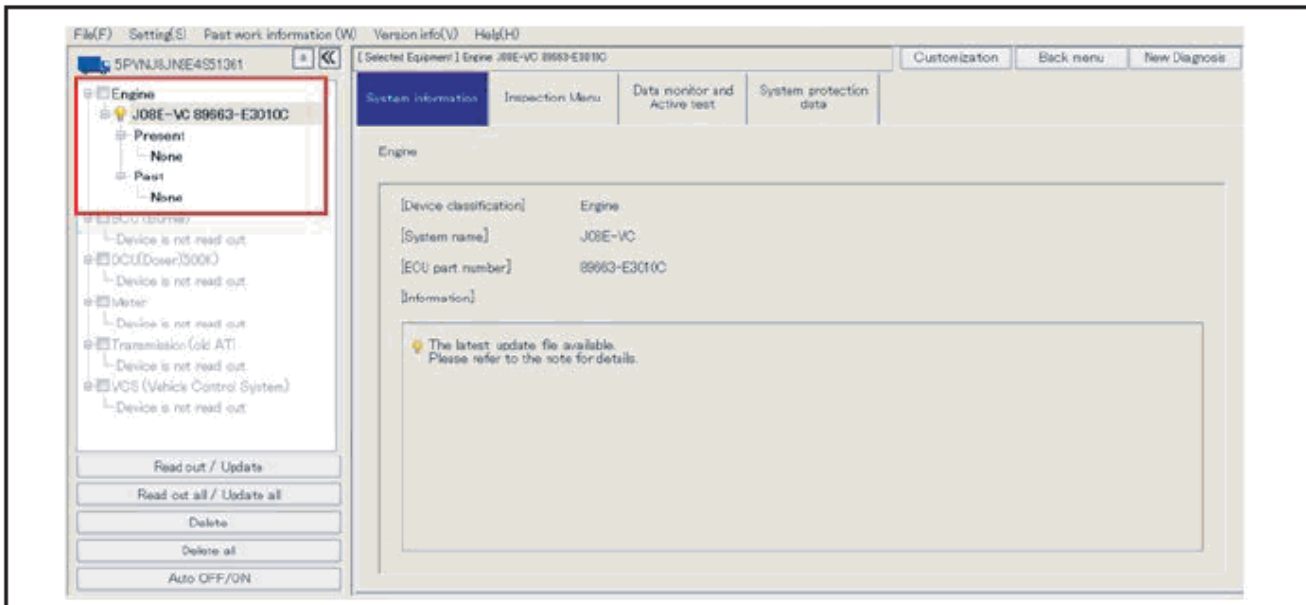
EMISSION CONTROL (J08E)

(2) Select [Diagnosis] on the left side of the screen.



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(3) Select the [ECU] on the left side of the screen.



SAPH01Z00100009

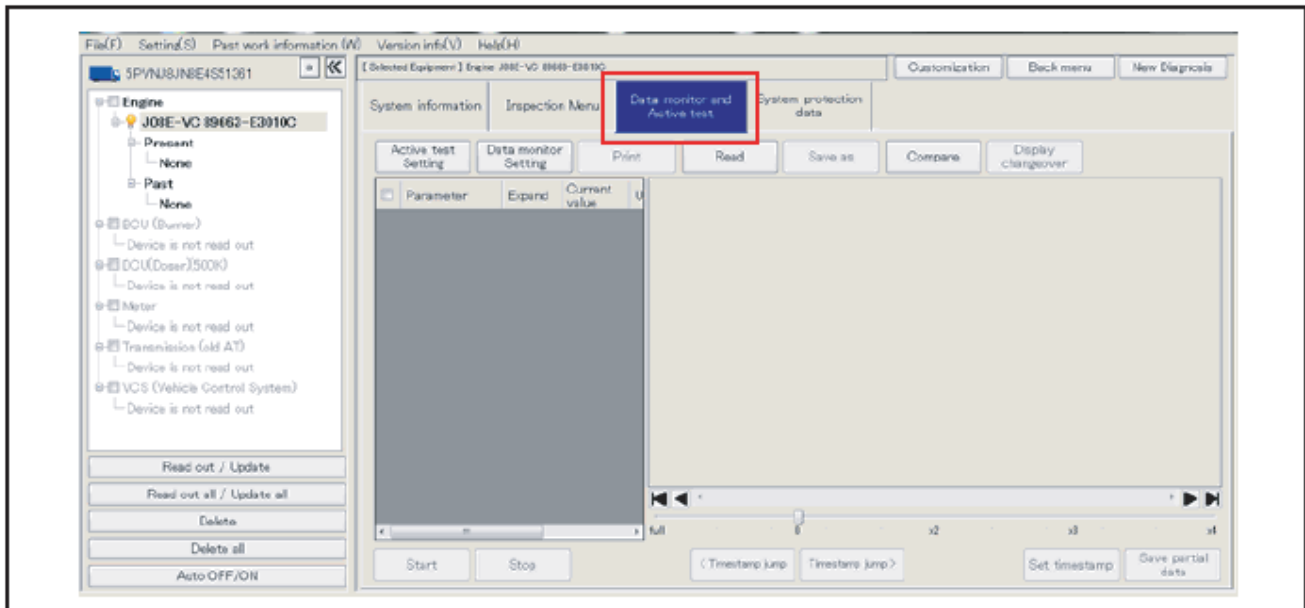
ADDITION

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EMISSION CONTROL (J08E)

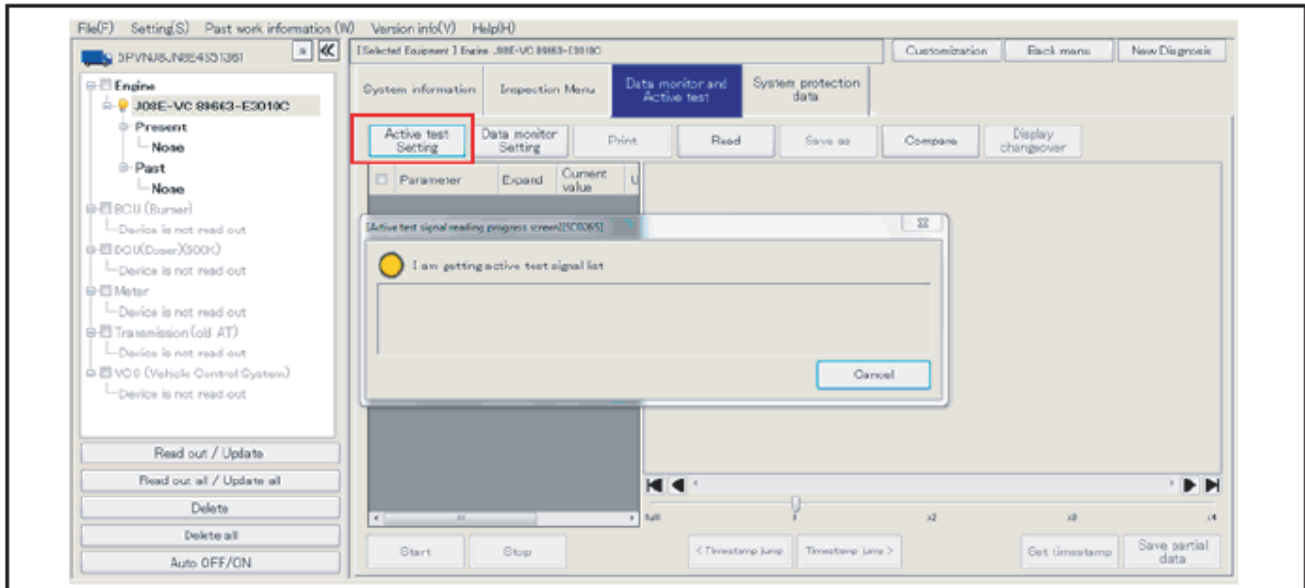
EN10-31

(4) Select the [Data monitor and Active test] tab.



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(5) Select the [Active test setting] tab.



SAPH01Z001000011

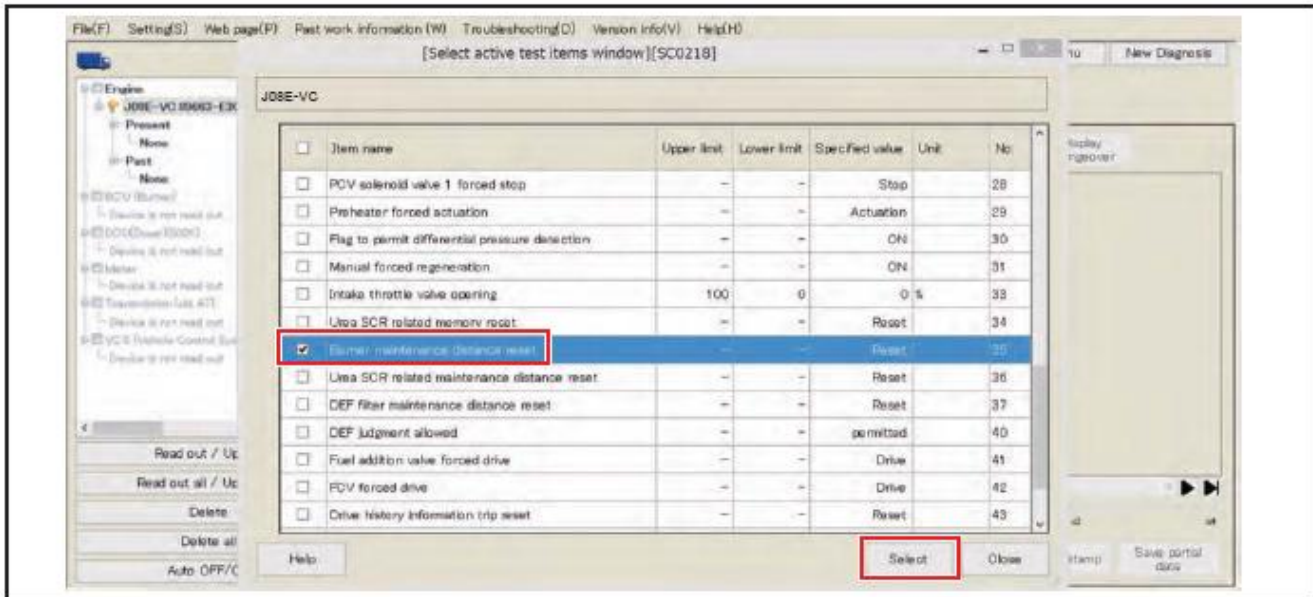
ADDITION

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EN10-32

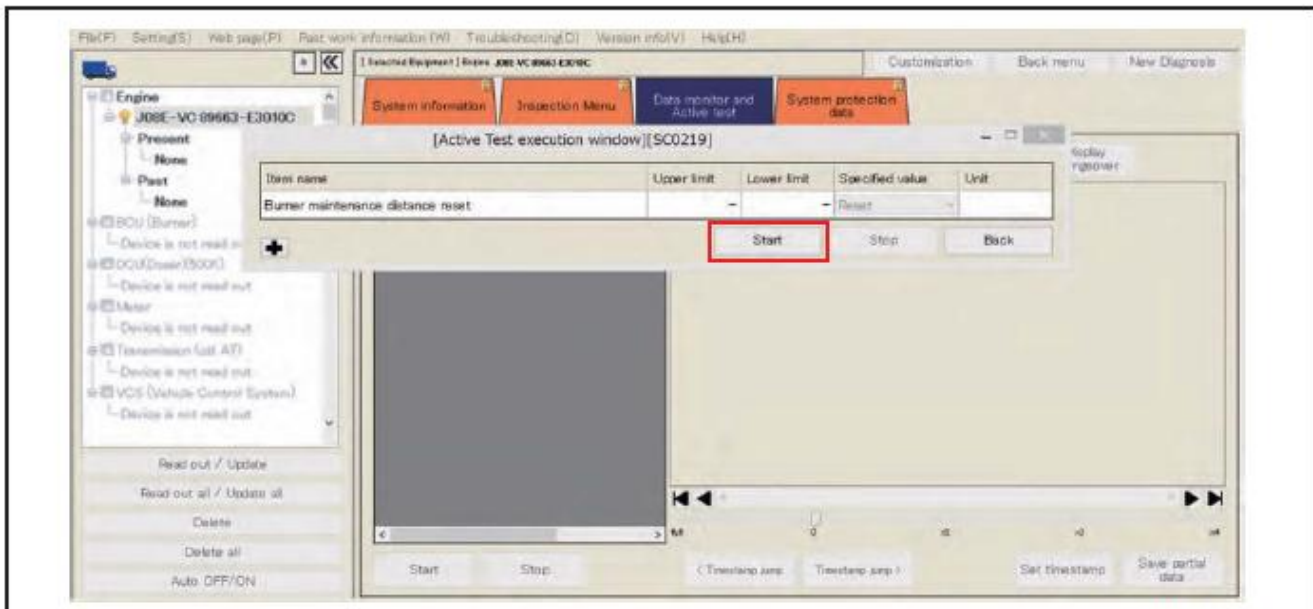
EMISSION CONTROL (J08E)

(6) Check the box for [Burner maintenance distance reset] on the active test items window and [Select].



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(7) Select the [Start] box in the test execution window. Once completed, the [Burner maintenance distance reset] text will be highlighted purple to confirm that it has been reset.



SAPH01Z00100013

ADDITION

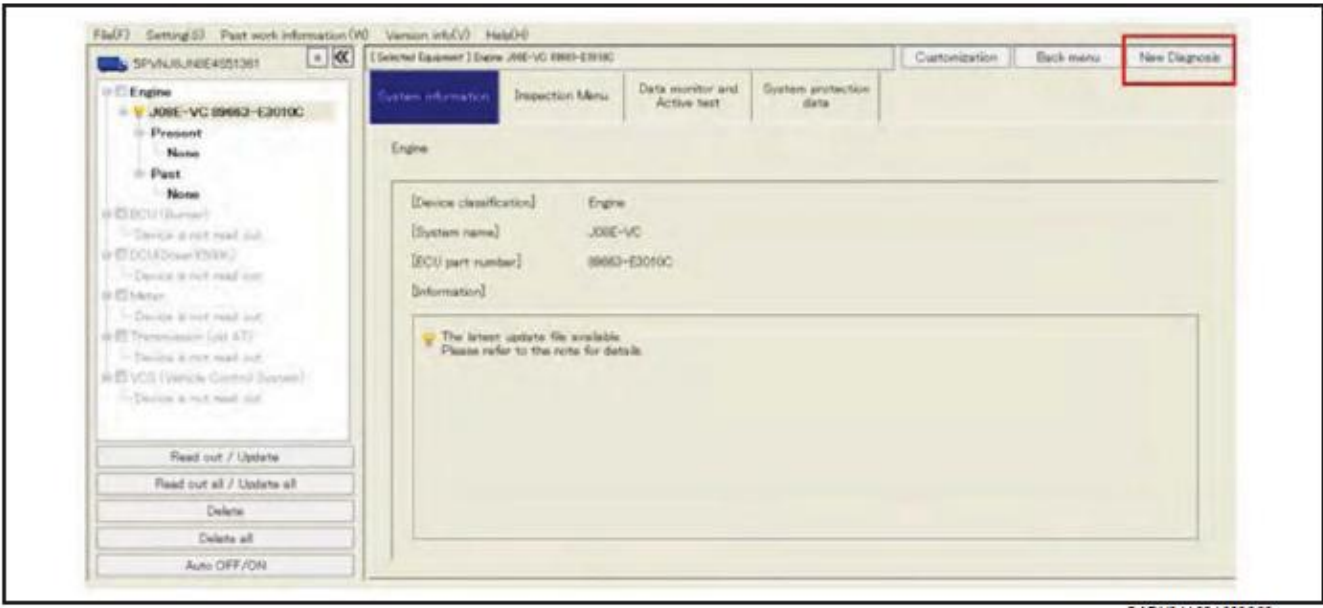
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(8) Select [New Diagnosis] and let the DX software fully disconnect from the truck before disconnecting the interface.



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ADDITION

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EMISSION CONTROL (J08E)

DISMOUNTING AND MOUNTING

EN0110610H100002

1. PREPARATION

WARNING

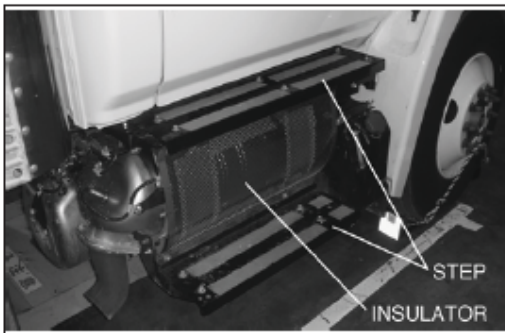
Do not touch the exhaust pipe and muffler unit when it could be hot. You can be severely burned.

- (1) Disconnect the battery ground terminal.

CAUTION

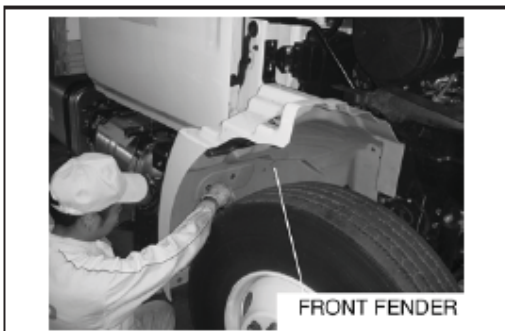
- Be sure to disconnect the battery terminals from the battery in accordance with the procedures in this manual and never use the battery disconnect switch when it is necessary to break the supply of electricity completely. Otherwise, electricity may remain supplied from the battery by the circuit that bypasses the battery disconnect switch and you may get burns or injury from the electricity.

- (2) Dismount the steps (top and bottom) and insulator on the right side of the vehicle.



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- (3) Dismount the front fender.

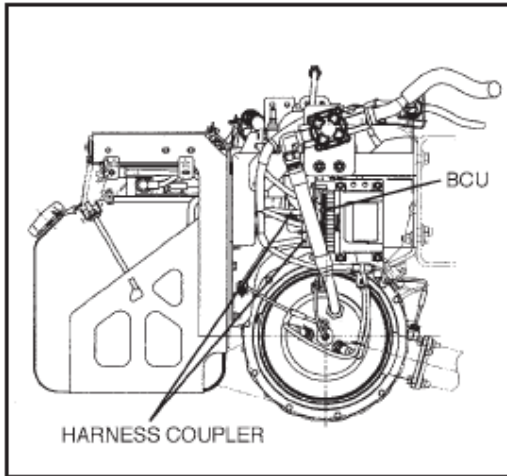


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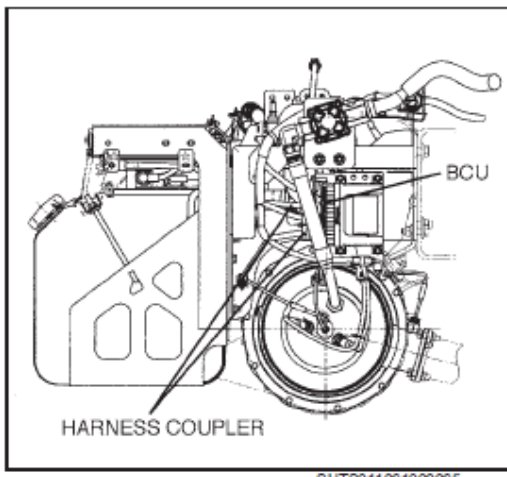
SERVICE INFORMATION BULLETIN

EMISSION CONTROL (J08E)

EN10-35



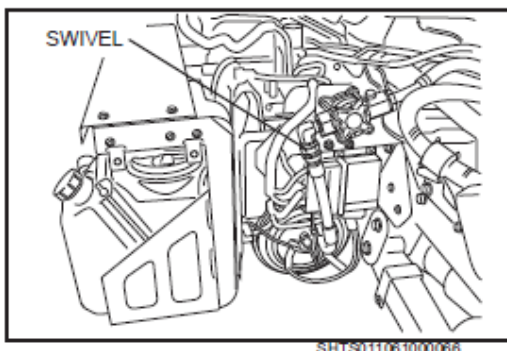
2. **BURNER CONTROL UNIT (BCU)**
- (1) **IMPORTANT POINT - DISMOUNTING**
 - a. Disconnect the harness coupler.
 - b. Remove the BCU.



- (2) **IMPORTANT POINT - MOUNTING**
 - a. Mount the BCU.

Tightening Torque:
6 N·m {62 kgf·cm, 4.4 lbf·ft}

 - b. Connect the harness coupler.



3. **COMBUSTION AIR VALVE**
- (1) **IMPORTANT POINT - DISMOUNTING**
 - a. Disconnect the harness wire connector from the combustion air valve.
 - b. Remove the air hose on the engine side.
 - c. Remove the air hose on the combustion chamber side.
 - d. Remove the bolts and then dismount the combustion air valve.

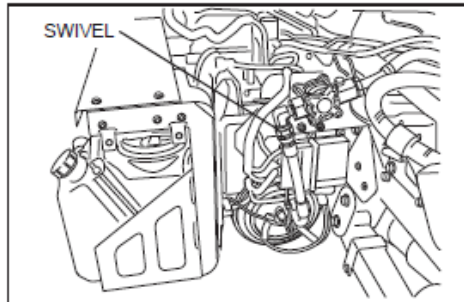
NOTICE

- **When removing, be sure to remove the swivel on the vehicle upper side.**
- **After removal, be careful to avoid entry of foreign matter into the pipe.**

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EMISSION CONTROL (J08E)



- (2) IMPORTANT POINT - MOUNTING
 - a. Connect the air hose on the combustion chamber side.

NOTICE

- Mount it without bending the hose with the combustion air valve free.
- When tightening, fold the hexagonal part under the swivel with the wrench.

- b. Mount the combustion air valve.

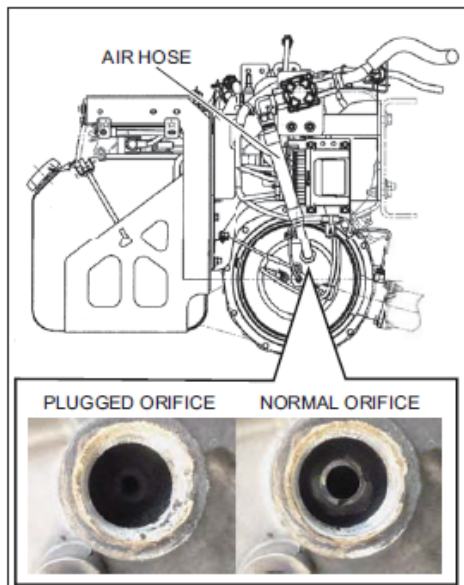
Tightening Torque:

41-61 N·m {418-622 kgf·cm, 31-45 lbf·ft}

- c. Connect the air hose on the engine side.

- d. Connect the harness wire connector to the combustion air valve.

ADDITION



4. INSPECTION OF BURNER COMBUSTOR ORIFICE CLOGGING (EVERY 150,000 MILES)

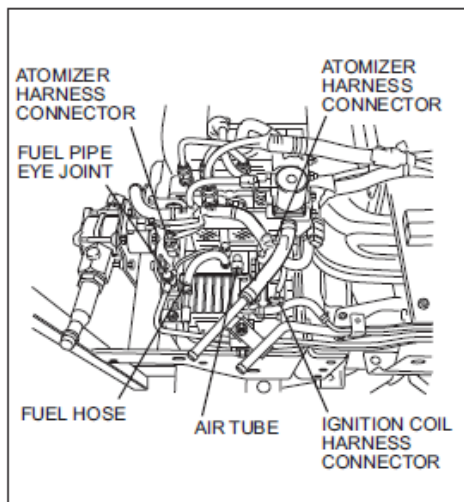
- (1) IMPORTANT POINT - INSPECTION
 - a. Clean the burner combustor orifice every 150,000 miles, using brake cleaner and a wire brush.

Standard value:

11.25 - 11.75 mm {0.44 - 0.46 in.}

NOTICE

- Be careful that soot does not infiltrate the combustor interior.
- Blowby contained in the combustion air supplied from the turbo is assumed to carbonize and gradually build up.
- Mixing of blowby oil in the combustion air is normal, and most of the oil is conveyed into the combustor interior.
- The part that sticks to the orifice can carbonize and cause the orifice opening to gradually shrink, reducing the amount of combustion air flow.
- This phenomenon may occur in any vehicle.



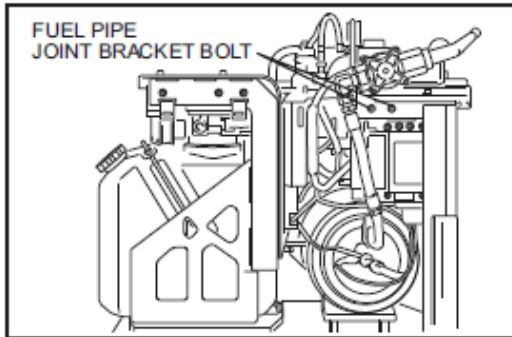
5. ATOMIZER

- (1) IMPORTANT POINT - DISMOUNTING
 - a. Disconnect the BCU harness connector.
 - b. Remove the solenoid valve.
Refer to "SOLENOID VALVE" for details.
 - c. Disconnect the atomizer harness connectors (2 places).
 - d. Disconnect the ignition coil harness connector.
 - e. Remove the fuel pipe eye joint.
 - f. Disconnect the fuel hose.
 - g. Disconnect the air tube.
 - h. Remove the atomized fuel line on the front of the combustion chamber.
 - i. Detach the ignition cable on the front of the combustion chamber.

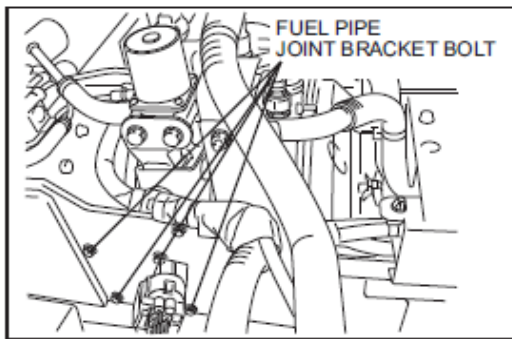
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- j. Remove the fuel pipe joint bracket bolts (2 places).



- k. Remove the atomizer mounting bolt from the burner accessory module bracket (atomizer back, 4 places) and remove the atomizer.

NOTICE

After removal, be careful to avoid entry of foreign matter into the removed pipe and harness connector.

(2) **IMPORTANT POINT - MOUNTING**

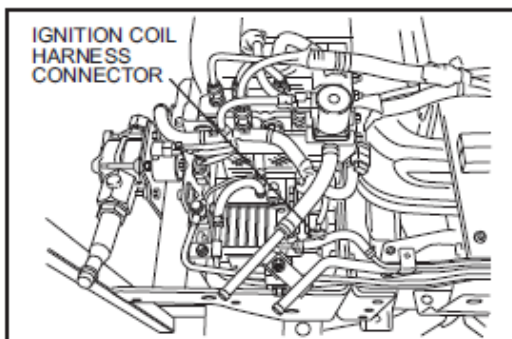
- a. Its installation is the reversal of the removal.

Tightening Torque:

18-26 N·m {184-265 kgf·cm, 14-19 lbf·ft} (Atomizer)

NOTICE

When reassembling the ignition cable, apply grease.



6. IGNITION COIL

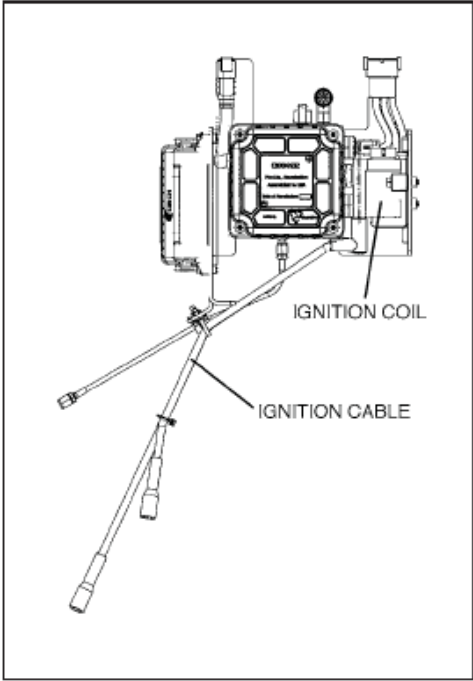
(1) **IMPORTANT POINT - DISMOUNTING**

- a. Remove the solenoid valve.
Refer to "SOLENOID VALVE" for details.
- b. Disconnect the ignition coil harness connector.
- c. Disconnect the ignition cable.

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EMISSION CONTROL (J08E)

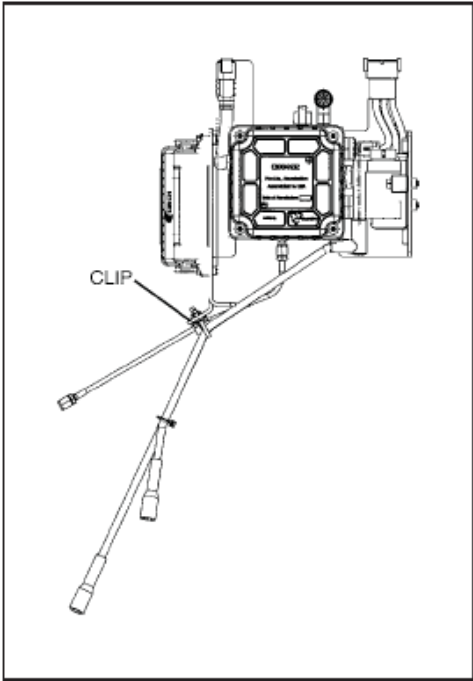


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- d. Remove the ignition coil mounting bolt from the burner accessory module bracket (2 places) and remove the ignition coil.

- (2) IMPORTANT POINT - MOUNTING
 - a. Installation is the reversal of the removal.

Tightening Torque:
9 N·m (92 kgf·cm, 6.6 lbf·ft) (Ignition coil)



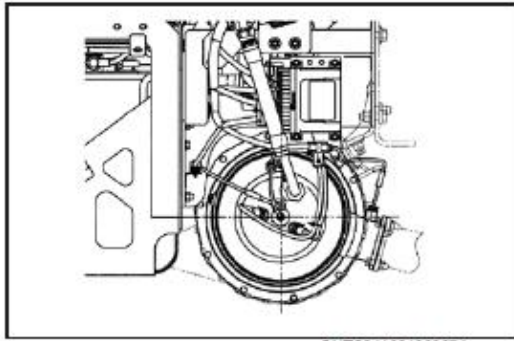
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- 7. ATOMIZED FUEL PIPE
 - (1) IMPORTANT POINT - DISMOUNTING
 - a. Remove the clip.
 - b. Remove the pipe (use the wrench to avoid looseness of the base connector).

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EMISSION CONTROL (J08E)

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NOTICE

- After removal, be careful to avoid entry of foreign matter into the removed pipe.
- If rust is gathered around the nut on the front of the combustion chamber, blow air before removal to avoid rust from getting into the combustion chamber.

(2) IMPORTANT POINT - MOUNTING

- a. Installation is the reversal of the removal.

Tightening Torque:

6 N·m {62 kgf·cm, 4.4 lbf·ft} (Fuel pipe clip)

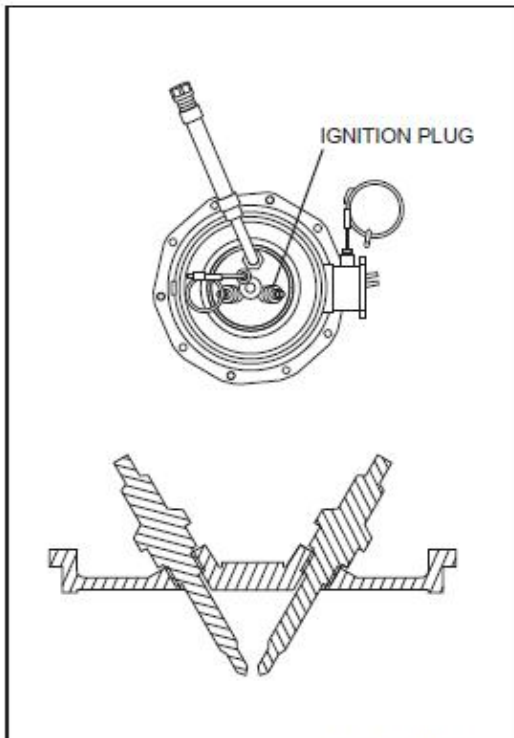
8. IGNITION PLUGS

(1) IMPORTANT POINT - DISMOUNTING

- a. Disconnect the ignition cable on the ignition plug side.
b. Remove the ignition plug.

NOTICE

- After removal, be careful to avoid entry of foreign matter into the ignition cable and combustion chamber.
- If rust is gathered around the nut on the front of the combustion chamber, blow air before removal to avoid rust from getting into the combustion chamber.



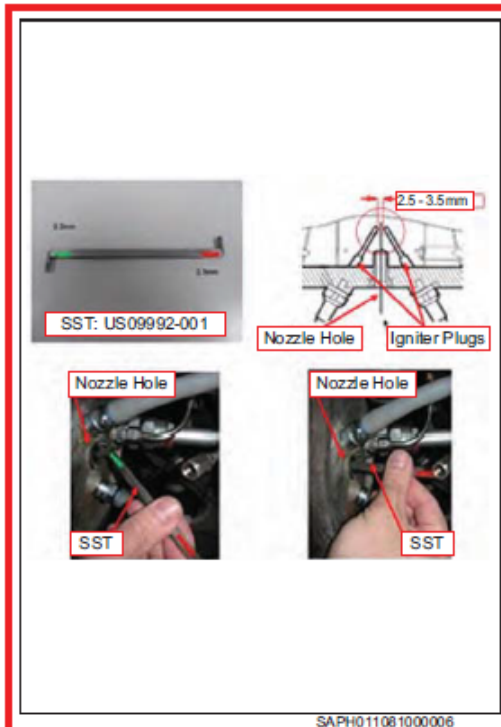
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SERVICE INFORMATION BULLETIN

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EMISSION CONTROL (J08E)

ADDITION



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ADDITION

(2) **IMPORTANT POINT - CHECK**

- a. Check igniter plug gap.

The SST is a "Go - No-Go" gauge to check the igniter gap at the tips. The tool has a 2.5 mm gauge on one end and a 3.5 mm gauge on the other end. The 2.5 mm end should be able to pass between the igniter tips while the 3.5 mm end should not.

Ignition plug gap range:
2.5 - 3.5 mm {0.10 - 0.14 in.}

NOTICE

- Care must be taken when checking the igniter gap to make certain no damage occurs to either igniter tip or to the porcelain.
- Care must be taken to prevent any foreign debris from entering the combustor through the nozzle hole opening. If foreign debris does enter the combustor, the debris must be removed from the combustor.

(3) **IMPORTANT POINT - MOUNTING**

- a. Installation is the reversal of the removal.

Tightening Torque:
29.8 N·m {304 kgf·cm, 22 lbf·ft}

NOTICE

- When reassembling, apply anti-seizure lubricant.

CHANGE

9. IGNITION CABLES

(1) **IMPORTANT POINT - DISMOUNTING**

- a. Remove the clip.
- b. Disconnect the ignition cable by twisting, pulling motion.

NOTICE

After removal, be careful to avoid entry of foreign matter into the removed ignition cable.

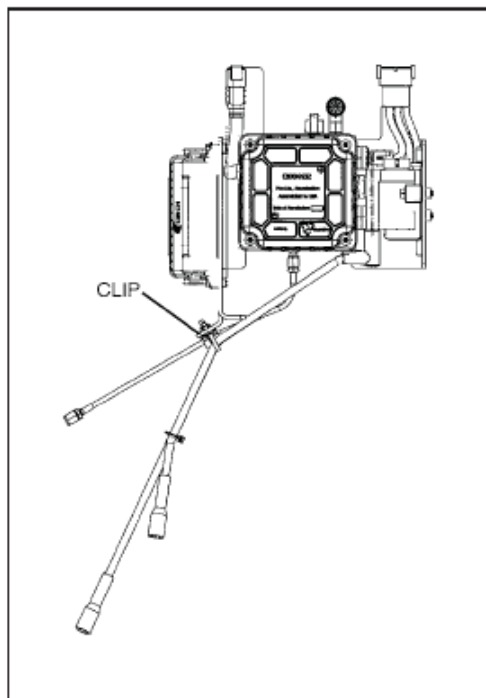
(2) **IMPORTANT POINT - MOUNTING**

- a. Connect the ignition cable.
- b. Mount the clip.

NOTICE

When reassembling, apply the following grease to the ignition cable insertion area.

SILKON 1000 or equivalent (by Superior industries)

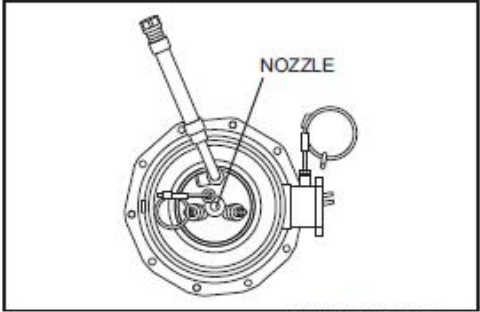


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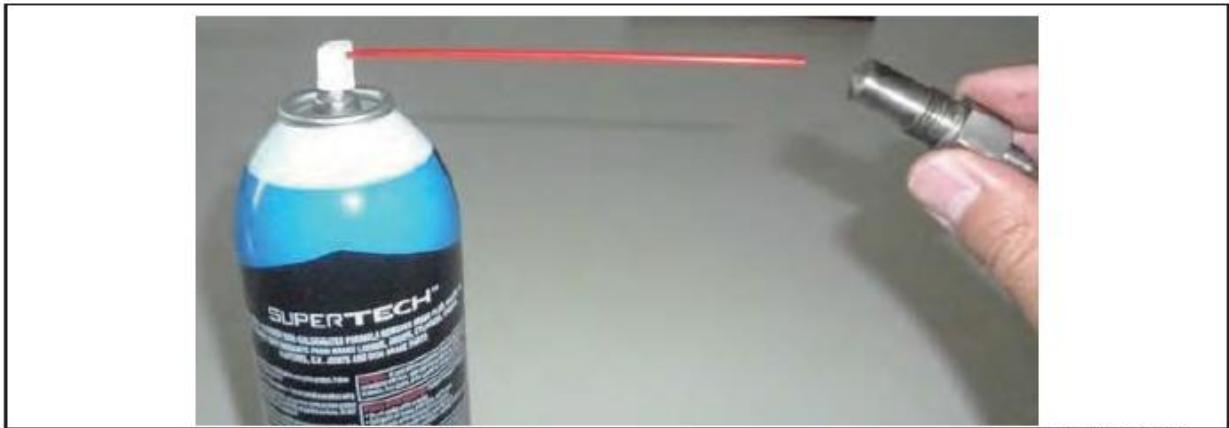
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- 10. NOZZLE**
(1) IMPORTANT POINT - DISMOUNTING
 a. Remove the atomized fuel pipe.
 b. Remove the nozzle.

- NOTICE**
- After removal, be careful to avoid entry of foreign matter into the removed pipe and combustion chamber.
 - If rust is gathered around the nut on the front of the combustion chamber, blow air before removal to avoid rust from getting into the combustion chamber.

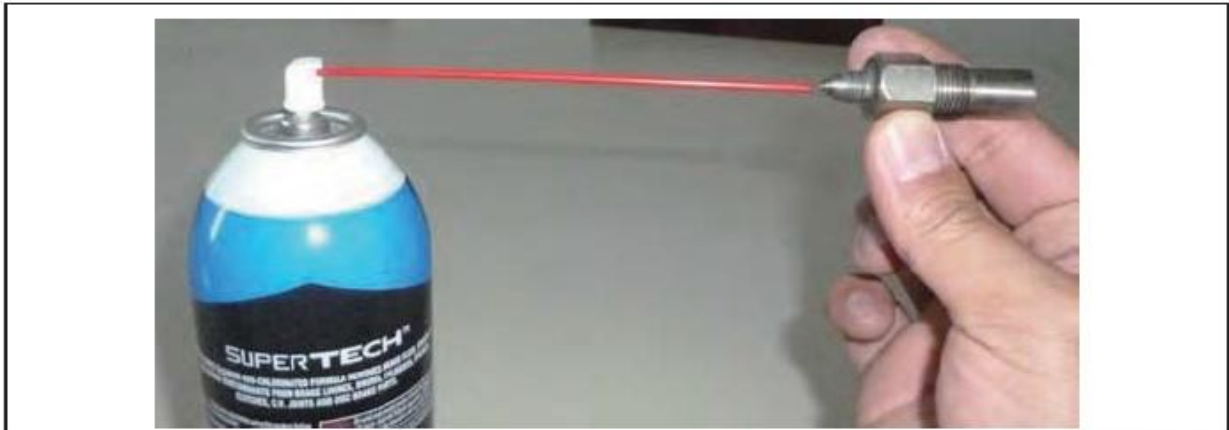
ADDITION

- (2) IMPORTANT POINT - CLEANING**
 a. Clean the outside of the nozzle with brake cleaner.



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- b. Clean the inside of the nozzle with brake cleaner.



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EMISSION CONTROL (J08E)

ADDITION

⚠ CAUTION

Do not wipe the outside of the nozzle; otherwise, the nozzle may become clogged.



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(3) **IMPORTANT POINT - MOUNTING**

a. Mount the nozzle.

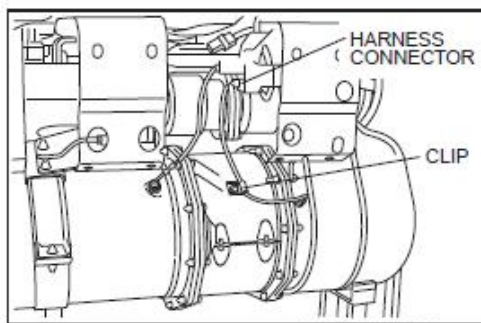
Tightening Torque:

25.5-28.7 N·m {260-292 kgf·cm, 18.8-21.1 lbf·ft}

b. Install the atomized fuel pipe.

NOTICE

- When reassembling, replace with a new washer.
- When reassembling, apply anti-seizure lubricant.



11. TEMPERATURE SENSOR (DPR INLET PORT)

(1) **IMPORTANT POINT - DISMOUNTING**

a. Disconnect the harness connector.

b. Remove the clips.

c. Remove the temperature sensor.

NOTICE

- After removal, be careful to avoid entry of foreign matter into the removed harness connector and combustion chamber.
- If rust is gathered around the nut on the front of the combustion chamber, blow air before removal to avoid rust from getting into the combustion chamber.

(2) **IMPORTANT POINT - MOUNTING**

a. Mount the temperature sensor.

Tightening Torque:

42.3-47.7 N·m {432-486 kgf·cm, 32-35 lbf·ft}

b. Mount the clips.

c. Connect the harness connector.

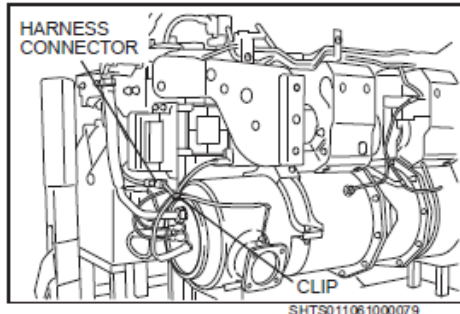
NOTICE

When reassembling, apply anti-seizure lubricant.

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EMISSION CONTROL (J08E)

EN10-43



12. TEMPERATURE SENSOR (COMBUSTION CHAMBER INLET PORT)

- (1) IMPORTANT POINT - DISMOUNTING
- Disconnect the harness connector.
 - Remove the clips.
 - Remove the temperature sensor.

NOTICE

- After removal, be careful to avoid entry of foreign matter into the removed harness connector and combustion chamber.
- If rust is gathered around the nut on the front of the combustion chamber, blow air before removal to avoid rust from getting into the combustion chamber.

- (2) IMPORTANT POINT - MOUNTING

- Mount the temperature sensor.

Tightening Torque:

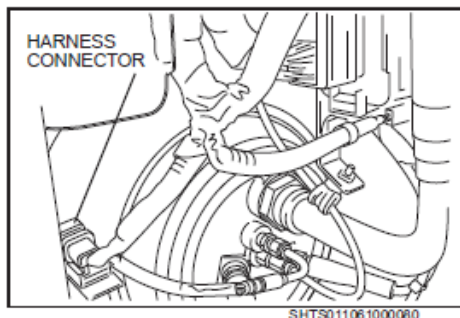
42.3-47.7 N·m {432-486 kgf·cm, 32-35 lbf·ft}

- Mount the clips.

- Connect the harness connector.

NOTICE

When reassembling, apply anti-seizure lubricant.



13. FLAME TEMPERATURE SENSOR

- (1) IMPORTANT POINT - DISMOUNTING

- Disconnect the harness connector.
- Remove the temperature sensor (fix the base connector with the wrench so that it will not also turn).

NOTICE

- After removal, be careful to avoid entry of foreign matter into the removed harness connector and combustion chamber.
- If rust is gathered around the nut on the front of the combustion chamber, blow air before removal to avoid rust from getting into the combustion chamber.

- (2) IMPORTANT POINT - MOUNTING

- Mount the temperature sensor.

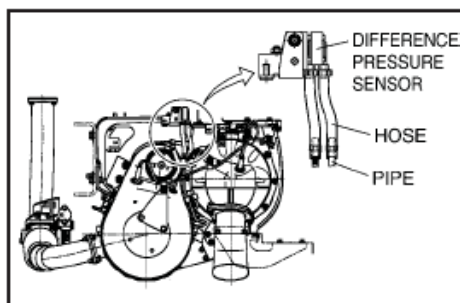
Tightening Torque:

5.3-5.9 N·m {54-60 kgf·cm, 3.9-4.3 lbf·ft}

- Connect the harness connector.

NOTICE

When reassembling, apply anti-seizure lubricant.



14. DIFFERENCE PRESSURE SENSOR

- (1) IMPORTANT POINT - DISMOUNTING

- Remove the clip. Remove the hose between the pipe and differential pressure sensor.
- Remove the nut and then dismount the differential pressure sensor along with the bracket.

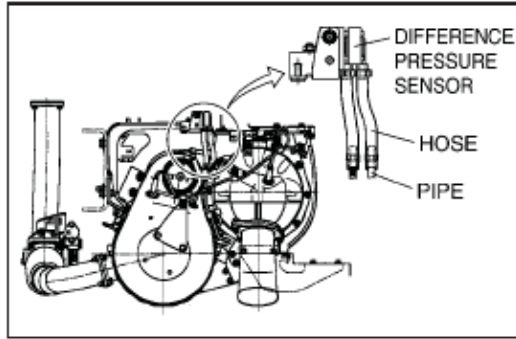
NOTICE

After removal, be careful to avoid entry of foreign matter into the difference pressure sensor and hose.

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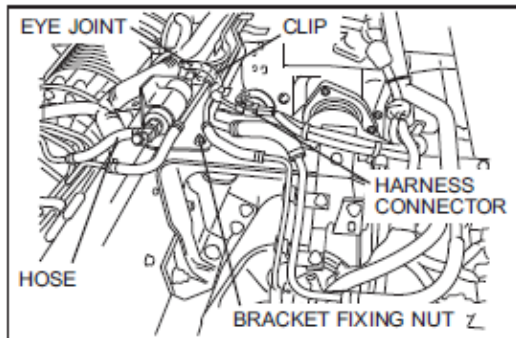
EMISSION CONTROL (J08E)



SHTS011061000022

(2) IMPORTANT POINT - MOUNTING

- a. Mount the differential pressure sensor.
- b. Mount the hose between the pipe and differential pressure sensor and fix it with the clip.



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15. FUEL PUMP

(1) IMPORTANT POINT - DISMOUNTING

- a. Disconnect the harness connector.
- b. Remove the bracket fixing nut.
- c. Remove the fuel pipe fixing clip.
- d. Disconnect the hose on the pump inlet port side.
- e. Remove the eye joint (fix the base connector with the wrench so that it will not also turn).
- f. Remove the fuel pump.

NOTICE

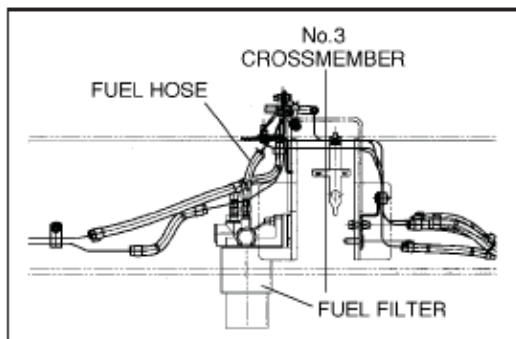
- After removal, be careful to avoid entry of foreign matter into the removed harness connector, pump and pipe.
- If rust is gathered around the eye joint, blow air before removal to avoid rust from getting into the pump and pipe.

(2) IMPORTANT POINT - MOUNTING

- a. Its installation is the reversal of the removal.

NOTICE

After reassembling, operate the pump for 40 seconds before starting the engine.



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16. FUEL FILTER

(1) IMPORTANT POINT - DISMOUNTING

- a. Remove the clip and then the fuel hose.
- b. Dismount the fuel filter from the No. 3 crossmember.

NOTICE

After removal, be careful to avoid entry of foreign matter into the removed filter and hose.

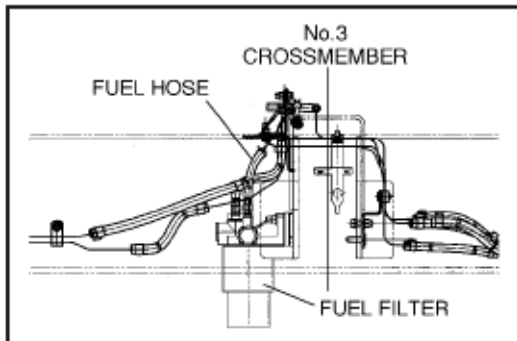
CAUTION

While working, be careful not to make dirt and water enter parts.

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(2) IMPORTANT POINT - MOUNTING

- a. Mount the fuel filter to the No. 3 crossmember.
- b. Connect the fuel hose to the fuel filter and fix them with the clip.

CAUTION

- While working, be careful not to make dirt and water enter parts.
- Before mounting a part, check that there is no dirt on the connection between the parts.
- Air enters the fuel pipe while working. After working, be sure to purge air.
- Use a Hino genuine part for the fuel filter element.

Group:	Service Manual Update
Bulletin No.:	SB-15-014
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EMISSION CONTROL (J08E)

INSPECTION AND REPAIR

EN0110610H300002

Inspect the BURNER SYSTEM-related components in accordance with the table below and perform a repair or replacement if necessary.

Item	Content	Action	Travel distance
DPR filter	Ash deposition	Clean-up	200,000 mile
Hose for difference pressure sensor	Replacement	Replacement	3 years
Burner fuel injection nozzle	Replacement	Replacement	150,000 mile
Burner flame temperature sensor	Replacement	Replacement	150,000 mile
Fuel filter element for burner	Replacement	Replacement	2 years
Burner combustor orifice	Ash deposition	Clean-up	150,000 mile

ADDITION