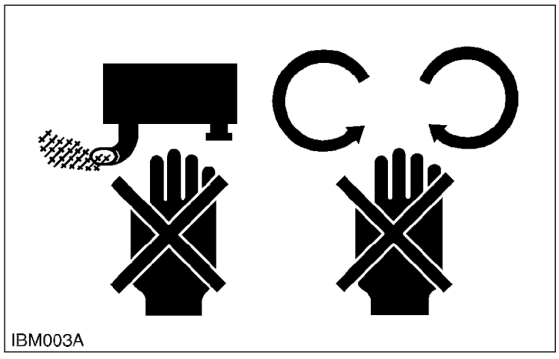
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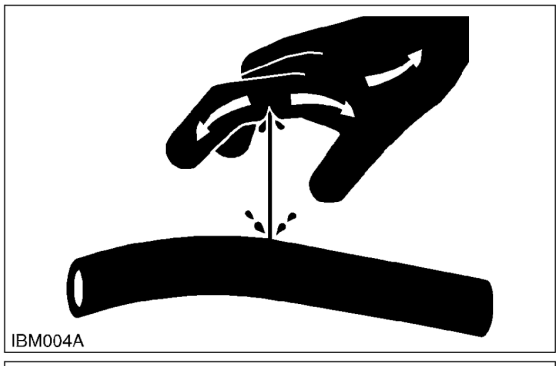
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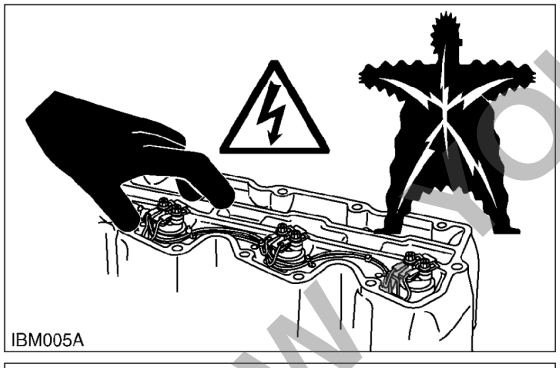
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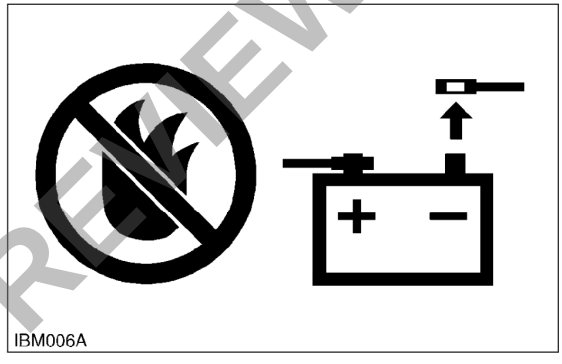
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IBM003A


IBM004A


IBM005A


IBM006A

SAFETY WORKING

- Do not work on the machine while under the influence of alcohol, medication, or other substances or while fatigued.
- Wear close fitting clothing and safety equipment appropriate to the job.
- Use tools appropriate to the work. Makeshift tools, parts, and procedures are not recommended.
- When servicing is performed together by two or more persons, take care to perform all work safely.
- Do not touch the rotating or hot parts while the engine is running.
- Never remove the radiator cap while the engine is running, or immediately after stopping. Otherwise, hot water will spout out from radiator. Only remove radiator cap when cool enough to touch with bare hands. Slowly loosen the cap to first stop to relieve pressure before removing completely.
- Escaping fluid (fuel or hydraulic oil) under pressure can penetrate the skin causing serious injury. Relieve pressure before disconnecting hydraulic or fuel lines. Tighten all connections before applying pressure.
- Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.
- Do not open high-pressure fuel system.
  High-pressure fluid remaining in fuel lines can cause serious injury. Do not disconnect or attempt to repair fuel lines, sensors, or any other components between the high-pressure fuel pump and injectors on engines with high pressure common rail fuel system.
- High voltage exceeding 100 V is generated in the engine ECU and injector.
  Pay sufficient caution to electric shock when performing work activities.

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AVOID FIRES

- Fuel is extremely flammable and explosive under certain conditions. Do not smoke or allow flames or sparks in your working area.
- To avoid sparks from an accidental short circuit, always disconnect the battery negative cable first and connect it last.
- Battery gas can explode. Keep sparks and open flame away from the top of battery, especially when charging the battery.
- Make sure that no fuel has been spilled on the engine.

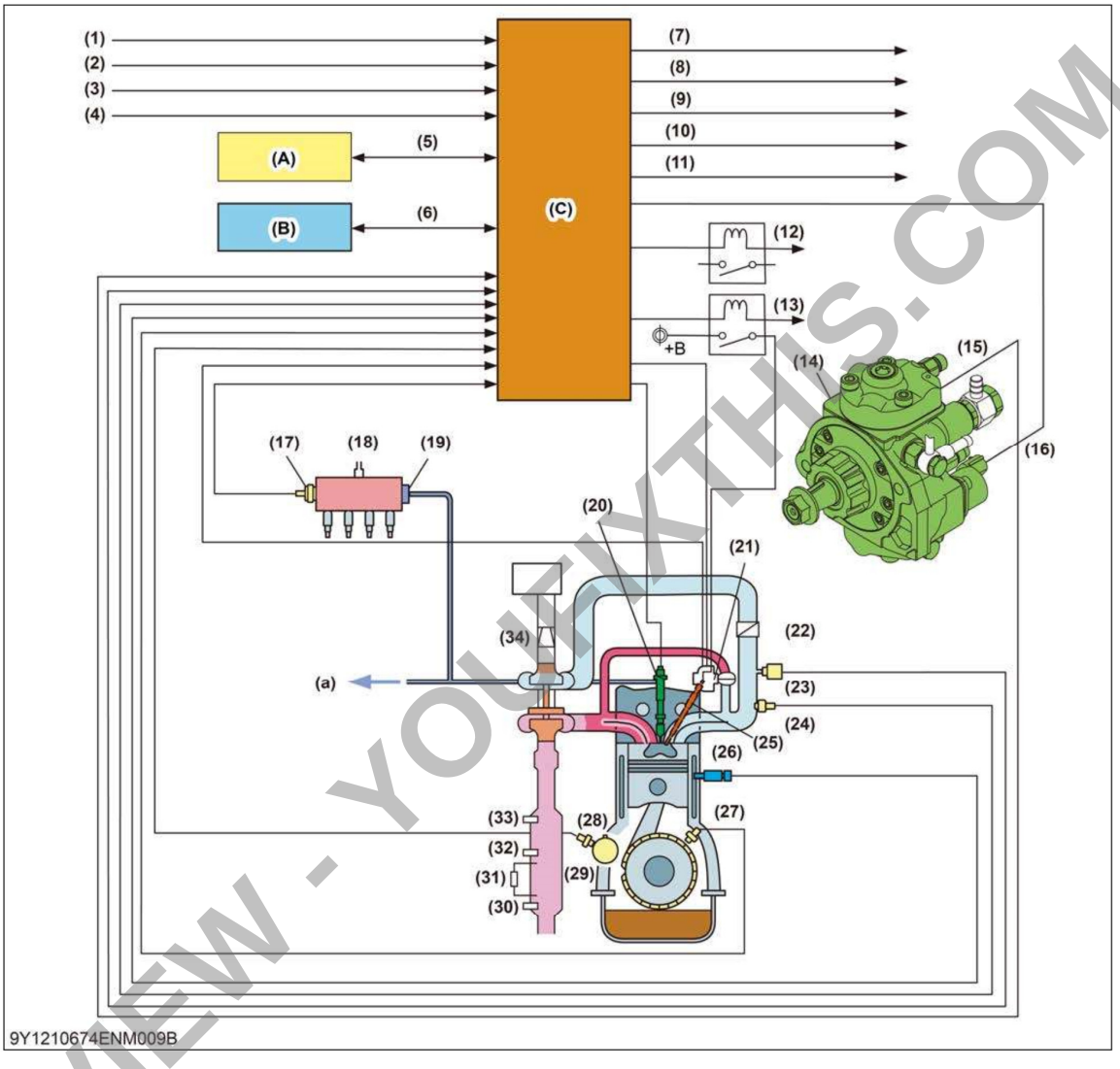
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1. BASIC SYSTEM INFORMATION

[1] SYSTEM CONFIGURATION



(1) Key Switch ON Signal
(2) Starter Switch Signal
(3) Emergency Stop Switch
(4) Oil Pressure Switch
(5) CAN Communication for OEM Machine (*Accelerator Position Signal, *Neutral Switch, *Machine Travel Speed Signal)
(6) CAN Communication for Service
(7) Engine Warning Light Signal
(8) Stop Lamp Signal
(9) Oil Pressure Warning Lamp Signal
(10) Overheat Lamp Signal
(11) Glow Lamp Signal
(12) Starter Relay
(13) Glow Relay
(14) Supply Pump
(15) Fuel Temperature Sensor
(16) SCV (Suction Control Valve)
(17) Rail Pressure Sensor
(18) Rail
(19) Pressure Limiter
(20) Injector
(21) EGR Valve
(22) Intake Throttle Valve
(23) Boost Pressure Sensor
(24) Intake Air Temperature Sensor
(25) Glow Plug
(26) Coolant Temperature Sensor
(27) Crankshaft Position Sensor
(28) Camshaft Position Sensor
(29) Diesel Particulate Filter (Hereinafter Referred To As The "DPF") Muffler
(30) Exhaust Gas Temperature Sensor (T_2) (DPF Outlet)
(31) Differential Pressure Sensor (ΔP)
(32) Exhaust Gas Temperature Sensor (T_1) (DPF Inlet)
(33) Exhaust Gas Temperature Sensor (T_0) (DOC Inlet)
(34) Air Flow Sensor

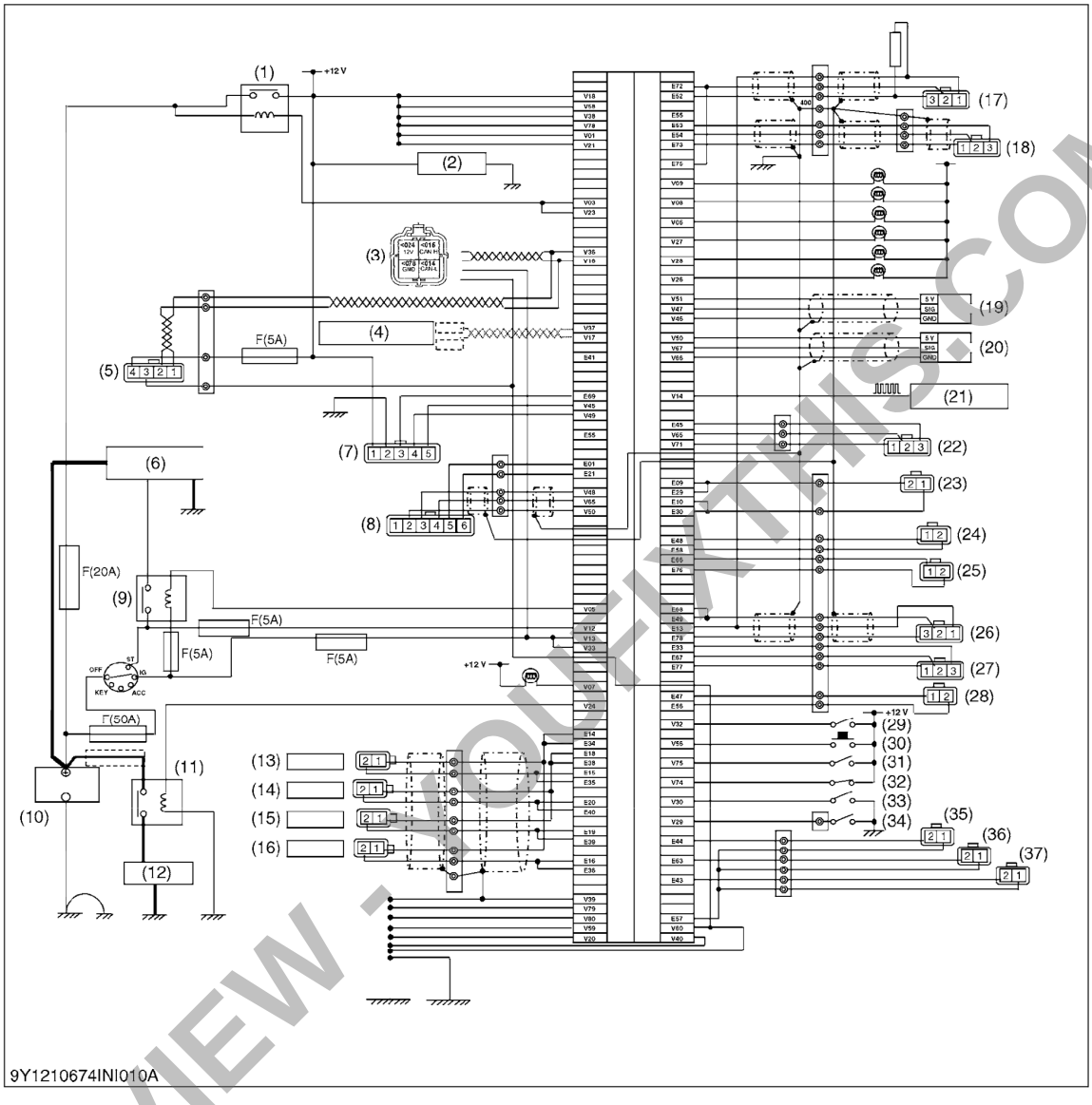
(A) CAN2 Connector (For OEM Machine)
(B) CAN1 Connector (For Service)
(C) Engine ECU
(a) To Fuel Tank

■ **NOTE**
- **The signals marked with * are CAN communication.**

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(4) System Wiring Diagram



(1) Main Relay
(2) Fuel Feed Pump
(3) CAN1 Connector (For Service)
(4) CAN2 Connector (For OEM Machine)
(5) EGR Valve
(6) Starter
(7) Air Flow Sensor
(8) Intake Throttle Valve
(9) Starter Relay
(10) Battery
(11) Glow Relay
(12) Glow Plug
(13) Injector 1
(14) Injector 2
(15) Injector 3
(16) Injector 4
(17) Crankshaft Position Sensor
(18) Camshaft Position Sensor
(19) Accel Sensor 1
(20) Accel Sensor 2
(21) Vehicle Speed Sensor
(22) Differential Pressure Sensor (ΔP)
(23) SCV (Suction Control Valve)
(24) Fuel Temperature Sensor
(25) Coolant Temperature Sensor
(26) Rail Pressure Sensor
(27) Boost Pressure Sensor
(28) Intake Air Temperature Sensor
(29) Stop Switch
(30) Parked Regeneration Switch
(31) Parking Switch
(32) Regeneration Inhibit Switch
(33) Neutral Switch
(34) Oil Pressure Switch
(35) Exhaust Gas Temperature Sensor (T_0)
(36) Exhaust Gas Temperature Sensor (T_1)
(37) Exhaust Gas Temperature Sensor (T_2)

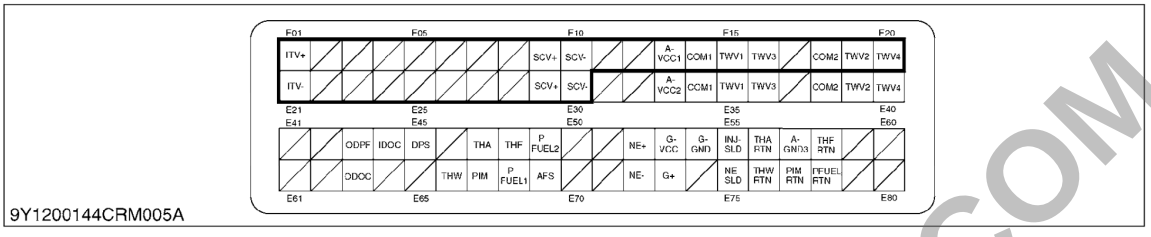
DPF: Diesel Particulate Filter

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[6] ENGINE ECU PIN ASSIGNMENT

(1) Engine ECU Pin Assignment 1 (Engine Side)



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No.	Terminal Name	Signal Name
E01	ITV+	INTAKE THROTTLE VALVE MOTOR (+)
E02	–	–
E03	–	–
E04	–	–
E05	–	–
E06	–	–
E07	–	–
E08	–	–
E09	SCV+	SCV (SUCTION CONTROL VALVE) (+)
E10	SCV−	SCV (SUCTION CONTROL VALVE) (−)
E11	–	–
E12	–	–
E13	A-VCC1	SENSOR (POWER SUPPLY)
E14	COM1	INJECTION COMMON 1
E15	TWV1	INJECTION DRIVE1 (No.1 CYLINDER)
E16	TWV3	INJECTION DRIVE3 (No.4 CYLINDER)
E17	–	–
E18	COM2	INJECTION COMMON 2
E19	TWV2	INJECTION DRIVE2 (No.3 CYLINDER)
E20	TWV4	INJECTION DRIVE4 (No.2 CYLINDER)
E21	ITV−	INTAKE THROTTLE VALVE MOTOR (−)
E22	–	–
E23	–	–
E24	–	–
E25	–	–
E26	–	–
E27	–	–
E28	–	–
E29	SCV+	SCV (SUCTION CONTROL VALVE) (+)
E30	SCV−	SCV (SUCTION CONTROL VALVE) (−)

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[2] DIAGNOSIS BY MALFUNCTION SYMPTOM

(1) Engine Warning Light Comes On

1. Turn the key switch ON and check that the fuel feed pump is operating. If it is not operating, check in accordance with "6.[2] FUEL SYSTEM INSPECTION PROCEDURE - 5. Check the Fuel Feed Pump".(Refer to page 1-S322)
2. Connect diagnosis tool and read DTC. Refer to pertinent DTC diagnosis guidelines and implement diagnosis.

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(2) Engine Does Not Start

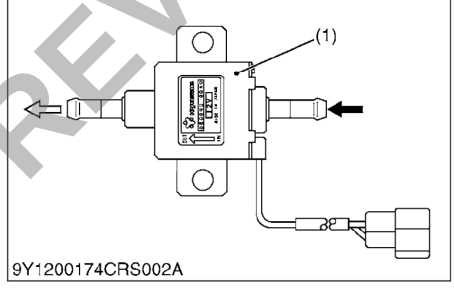
Possible causes:

1. Fuel feed pump operation fault.
2. Starting assist device (glow plug)
   - Applicable only when the temperature is low: −10 °C (14 °F) or less
   - Refer to the workshop manual for the machine and check the glow plug, relay and related wiring harness.

***Refer to the previous "List of malfunction causes by symptom" for the subsequent details.**

3. Engine fault
   - Low compression pressure.
   - Engine internal fault
   - Valve timing fault
4. Control system
   - Damage to the pulsar gear of the crankshaft position sensor
   - Air gap of the crankshaft position sensor is large
   - Damage to the pulsar gear of the camshaft position sensor
   - SCV operation fault
   - Main relay malfunction
5. Engine electrical system
   - Battery fault
   - Charging system malfunction
   - Starter relay malfunction
6. Intake system
   - Glow (intake air heater) relay fault
   - Glow plug fault
7. Fuel system
   - Fuel quality
   - Fuel filter clogging
   - Fuel pressure limiter fault
   - Fuel line clogging, leak
8. CRS (including the wiring harness)
   - Power supply system
   - Output system (supply pump, injector and common rail)
   - Input system (sensors and switches)
   - Engine ECU
9. Others
   - Large amount of drag (including the brakes, etc.)

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1. Check the Fuel Feed Pump Operation

1. Turn the key switch ON and check that the fuel feed pump is operating.

Service specification	Operates when the key switch is turned ON.

OK	Go to "2. Check the DTC".
NG	Check in accordance with "6.[2] FUEL SYSTEM INSPECTION PROCEDURE - 5. Check the Fuel Feed Pump". (Refer to page 1-S322)

(1) Fuel Feed Pump

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5. DIAGNOSTIC PROCEDURE BY DTC

[1] DTC LIST

Name		NE-G phase shift
ISO 14229 P-Code		P0016
J1939-73	SPN	636
	FMI	7
SPN Name SAE J1939 Table C1		Engine Position Sensor
DTC Name		NE-G phase shift
Detection item		• Large phase shift between NE (crankshaft position sensor) pulse and G (camshaft position sensor) pulse
DTC Set Preconditions		• Engine is operating above low idle speed • Battery voltage is normal • Sensor supply voltage VCC# is normal • NE signal is normal • G signal is normal • Coolant temperature is 10 °C (50 °F) or higher
DTC set parameter		(Approximate) • Phase difference between NE pulse and G pulse is within ±0.26 rad (±15°)
Time to action or number of error detection		• 10 times or more
Limp Home Action by engine ECU (system action)		• Output limitation: Approximately 75 % of normal condition
Behaviour During Malfunction		(Invalid G signal) • Engine hesitates at start-up
Engine Warning Light		• ON
Recovery from error		• Diagnostic counter = zero or Key switch turn OFF
Delay time for recovery		• Delay time varies with engine speed in proportional relation. • 30 sec. at 800 min^{-1} (rpm), 15 sec. at 1600 min^{-1} (rpm)
Remark		• NE: Crankshaft position sensor • G: Camshaft position sensor

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Diagnostic Procedure for Pressure System DTCs

Checking of fault conditions and actions taken

If DTCs of non-pressure system are detected (*Refer to the pressure system DTCs given below.)

First locate the non-pressure system problem indicated by DTCs, and repair the affected parts. After the repair has been carried out, check for an output of pressure system DTCs. If so, begin the diagnosis of the affected pressure system.

If only pressure system DTCs are detected (*Refer to the pressure system DTCs given below.)

Diagnose the affected pressure system indicated by DTCs.

If a DTC currently exists

Begin diagnosis without returning the key switch to the OFF position. However, carefully make satisfactory / unsatisfactory judgments as the injection amount and rail pressure are limited by system actions.

If only a past DTC exists

Log the freeze-frame data, clear the DTCs, and stop the engine. Then, try to reproduce the problem using the freeze-frame data and the trouble check sheet.

***Pressure system DTCs**
[High pressure abnormality]
1. P0088: High rail pressure

[Low pressure abnormality]
1. P0087: Pressure limiter emergency open
2. P0093: Fuel leak

[Abnormal pressure]
1. P0089: SCV stuck
2. P1274: Pump seizing 1
3. P1275: Pump seizing 2

■ **IMPORTANT**
- **Multiple pressure system DTCs may be output simultaneously. Also, both abnormal high pressure and abnormal low pressure may be reported simultaneously under certain malfunction conditions.**

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(2) Normal Value

Classification		Signal Name	Unit	Engine Stops	During Start-Up	Idling	During Acceleration	During No-load Maximum Speed
Input	Pulse / Rotary signal	Engine speed	min^{-1} (rpm)	0	0 → 800 (Ordinary temperature)	Approx. 800 (After warm-up)	Approx. 800 → 2700	Approx. 2700 (After warm-up)
		Engine speed active flag	–	OFF	ON	ON	ON	ON
		Cam speed active flag	–	OFF	ON	ON	ON	ON
		Machine speed	km/h	When the machine stopped: 0				
	Analog signal	Final accelerator pedal position opening	%	0	0	0	0 → 100	100
		Accelerator pedal position sensor 1 output voltage	V	Sensor unused by CAN input				
		Accelerator pedal position sensor 2 output voltage	V					
		Boost pressure	kPa	Approx. 100	Approx. 100	Approx. 100	–	–
		Boost pressure sensor output voltage	V	Approx. 1.0	Approx. 1.0	Approx. 1.0	–	–
		Fuel temperature	°C	Representative value: Approx. 20 °C (68 °F) → Approx. 2.4 V Representative value: Approx. 40 °C (104 °F) → Approx. 1.5 V				
		Fuel temperature sensor output voltage	V					
		Coolant temperature	°C	Representative value: Approx. 20 °C (68 °F) → Approx. 2.4 V Representative value: Approx. 80 °C (176 °F) → Approx. 0.5 V				
		Coolant temperature sensor voltage output	V					
		Intake air temperature	°C	Representative value: Approx. 20 °C (68 °F) → Approx. 2.4 V Representative value: Approx. 40 °C (104 °F) → Approx. 1.5 V				
		Intake air temperature sensor output voltage	V					
		Atmospheric pressure	kPa	Representative value: Approx. 100 kPa → 3.7 V (Depending on the atmospheric pressure)				
		Atmospheric pressure sensor output voltage	V					
		Battery voltage	V	When stopped: Approx. 12.5 V When operating: Approx. 14 V (Depends on the battery charging condition, whether or not there is a load voltage, rotation speed)				
	Digital signal	Key Switch	–	ON	ON	ON	ON	ON
		Start switch	–	OFF	ON	OFF	OFF	OFF
		Neutral switch	–	During neutral: ON				

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INFORMATION

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1. SAFETY FIRST I-1

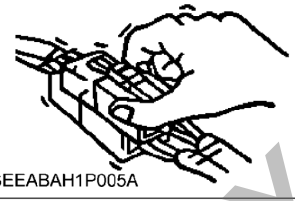
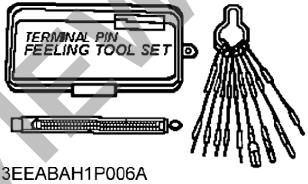
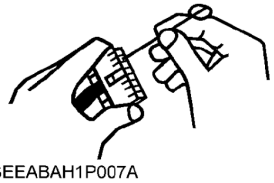
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[4] ACTIONS FOR NON-REOCCURRING MALFUNCTIONS

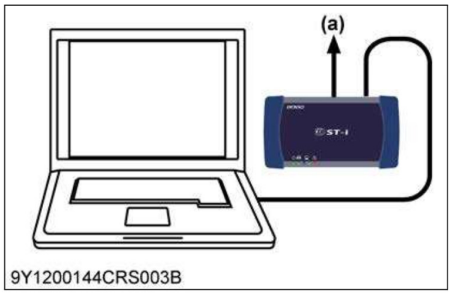
- In cases where the malfunction does not reoccur, perform the actions below to determine the cause of the malfunction.
- In cases where the malfunction does not reoccur at the dealer, sales company or workshop, perform the work that actually caused the malfunction.
- Check the fuel pipe system [including the fuel feed pump (electromagnetic fuel feed pump) and tank], intake system and exhaust system.
- If the malfunction does not reoccur, there may be an engine ECU malfunction. For diagnostic purposes only, temporarily replace the engine ECU with a unit that functions normally to perform the check procedure. At the same time, be sure to perform learning for the supply pump and input QR Code for injectors. If there would be no change, engine ECU should not be replaced.

9Y3200007CRS0008US0

Action	Malfunction symptom		
	Dead battery	Engine will not start	Idle speed abnormal engine stall sluggish poor acceleration
Verify that there is no Diagnostic Trouble Code (DTC) stored in the memory.	–	❍	❍
Using the trouble check sheet as a base, perform a reoccurrence test in "Reoccurrence" mode. Use this data (engine ECU (PCM) voltage value, etc.) to determine the cause of the malfunction.	❍	❍	❍
Assume that an electrical system wiring harness or connector is the cause of the malfunction and vibrate these components by hand to verify whether or not a malfunction occurs and a DTC is generated.  3EEABAH1P005A	–	❍	❍
Assume that an electrical system female connector terminal is the cause of the malfunction and verify that the connection points are not defective. **Recommended Tools: KOWA Precision Handling** Feeling Tool Set (KLM-10- 20) Depending on the terminal, a matching size may not be available.  3EEABAH1P006A Insert the male terminal that matches the shape of the female terminal and check for looseness.  3EEABAH1P007A	–	❍	❍

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10. Check the Data Related to Pressure Control

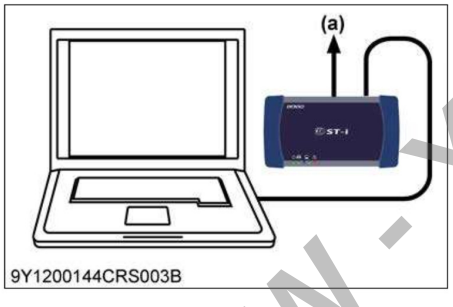
1. Measure the "Target rail pressure" and "Actual rail pressure" when accelerator is operated as indicated below using the diagnosis tool data monitor function.

Service specification	The "Actual rail pressure" always follow to the "Target rail pressure". 1. When idling: 40 to 50 MPa (410 to 500 kgf/cm^2, 5800 to 7200 psi) 2. Accelerator opening 0 → 100 % (During acceleration): Maximum value 95.0 to 130 MPa (969 to 1320 kgf/cm^2, 13800 to 18800 psi) 3. No-load maximum speed: 95.0 to 115 MPa (969 to 1170 kgf/cm^2, 13800 to 16600 psi) 4. The numerical value is stable under normal operating and the target value corresponds with actual pressure value.

OK	Go to "11. Check the Injector (Including the Pipes, etc.)"
NG	**(Check the trouble related to pressure** Refer to the pressure system items (P0087, P0088, P0089 and P0093 (Refer to page 1-S139)) and SCV abnormality items (P0628 and P0629 (Refer to 1-S222)) in "5.[2] DIAGNOSTIC PROCEDURE BY DTC", perform diagnosis for the engine ECU, wiring harness and sensor, and replace the required parts. ■ **NOTE** • **Some diagnosis items above may be mentioned twice.**

(a) CAN1 Connector

9Y3200007CRS0067US0



9Y1200144CRS003B

11. Check the Injector (Including the Pipes, etc.)

1. Perform the diagnosis tool active test (stopping the injector injection by cylinder) and check the injector performance.

Service specification	Engine vibration and noise are increased and the rotation speed is reduced when the injection for the corresponding cylinder is stopped. The same results must be attained from all the cylinders.

OK	Go to "12. Check the Engine".
NG	Check and repair faulty parts including the high pressure line of the defective cylinder.

(a) CAN1 Connector

9Y3200007CRS0068US0

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Name		Air heater (glow) relay driving circuit abnormality	
ISO 14229 P-Code		P0380	P0380
J1939-73	SPN	523544	523544
	FMI	3	4
SPN Name SAE J1939 Table C1		proprietary	proprietary
DTC Name		+B short of air heater (glow) relay driving circuit	Ground short of air heater (glow) relay driving circuit
Detection item		• +B short of air heater (glow) relay driving circuit	• Ground short or open circuit of air heater (glow) relay driving circuit
DTC Set Preconditions		[Engine ECU (Denso)] • +B short of air heater (glow) relay driving circuit [Engine ECU (Kubota)] • +B short or open circuit of air heater (glow) relay driving circuit	[Engine ECU (Denso)] • Ground short or open circuit of air heater (glow) relay driving circuit [Engine ECU (Kubota] • Ground short circuit of air heater (glow) relay driving circuit
DTC set parameter		[Engine ECU (Denso)] • +B short circuit of harness [Engine ECU (Kubota)] • +B short or open circuit of harness	[Engine ECU (Denso)] • Ground short or open circuit of harness [Engine ECU (Kubota)] • Ground short circuit of harness
Time to action or number of error detection		• 1 sec. or more	• 1 sec. or more
Limp Home Action by engine ECU (system action)		• None	• None
Behaviour During Malfunction		(At low temperature) • Faulty starting • Increase in white smoke	(At low temperature) • Faulty starting • Increase in white smoke
Engine Warning Light		• ON	• ON
Recovery from error		• Key switch turn OFF	• Key switch turn OFF
Delay time for recovery		–	–
Remark			

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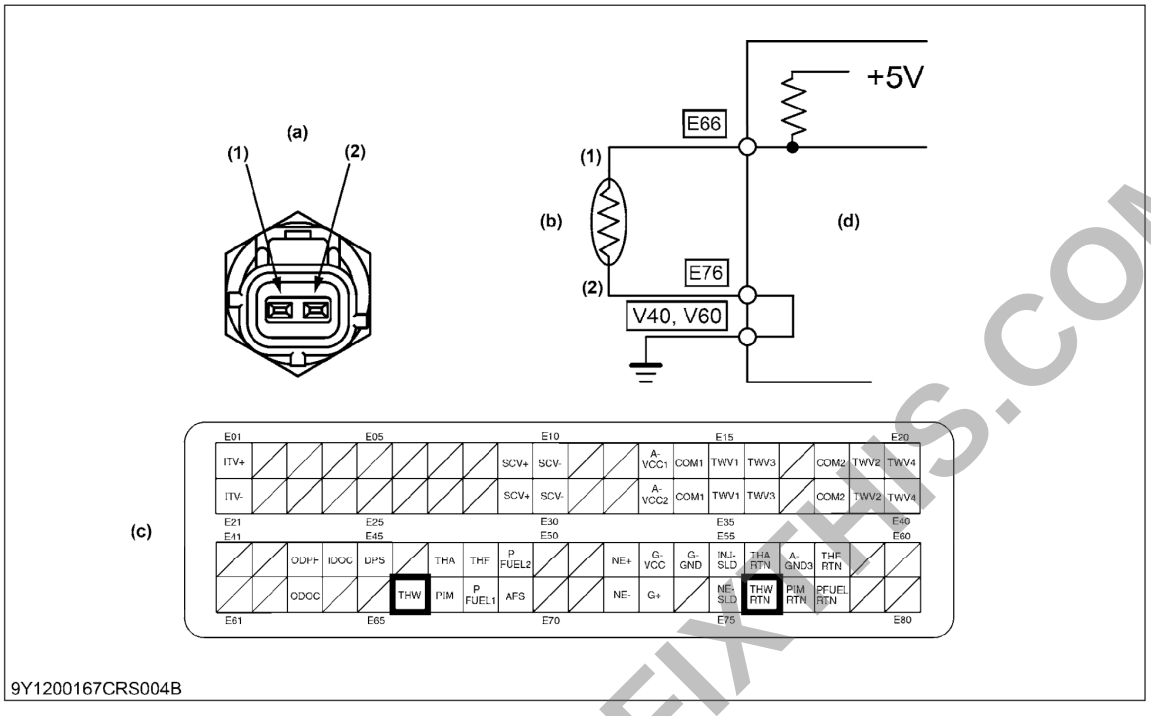
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Name		Over heat pre-caution	CAN2 Bus off
ISO 14229 P-Code		P3025	U0075
J1939-73	SPN	523603	523547
	FMI	15	2
SPN Name SAE J1939 Table C1		proprietary	proprietary
DTC Name		Over heat pre-caution	CAN2 Bus off
Detection item		• Coolant temperature	• CAN2 +B / GND short circuit or high traffic error
DTC Set Preconditions		• Coolant temperature sensor is normal	• Battery voltage is normal • Key switch is ON
DTC set parameter		• Engine coolant temperature ≥ 110 °C (230 °F)	• CAN2 Bus off
Time to action or number of error detection		• Transient	• 2 sec. or more
Limp Home Action by engine ECU (system action)		• None	• Forced Idle (Accelerator = 0 %)
Behaviour During Malfunction		• Worsening exhaust gas performance (NOx)	• Insufficient output • Transmitted data is invalid
Engine Warning Light		• ON	• ON
Recovery from error		• Diagnostic counter = zero or Key switch turn OFF	• Key switch turn OFF
Delay time for recovery		• Immediately	–
Remark			

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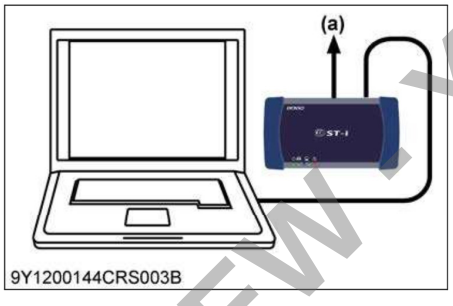
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9Y1200167CRS004B

(1) Terminal THW
(2) Terminal THW RTN
(a) Pin Assignment
(b) Coolant Temperature Sensor
(c) Engine ECU Connector 1 (Engine Side)
(d) Engine ECU

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9Y1200144CRS003B

1. Check the Coolant Temperature Sensor Signals

1. Place the key switch in the ON position, and check the "Coolant temperature" and "Coolant temperature sensor output voltage" on the diagnosis tool data monitor.

Service specification		
Actual coolant temperature	Coolant temperature	Output voltage
20 °C (68 °F)	20 °C (68 °F)	Approx. 2.4 V
40 °C (104 °F)	40 °C (104 °F)	Approx. 1.5 V
60 °C (140 °F)	60 °C (140 °F)	Approx. 0.9 V
80 °C (176 °F)	80 °C (176 °F)	Approx. 0.5 V
100 °C (212 °F)	100 °C (212 °F)	Approx. 0.3 V

OK	Clear the DTC and check whether it is output again or not.	
	OK	Normal.
	NG	Replace the engine ECU.
NG	Go to "2. Measure the Resistance Between Terminals".	

(a) CAN1 Connector

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(25) Exhaust Gas Temperature Sensor (T1) Abnormality (DTC P0543 / 3242-4, P0544 / 3242-3)

P0543 / 3242-4: Exhaust gas temperature sensor (T_1): Low
Behaviour during malfunction:
- None

Detection item:
- Ground short circuit of sensor / harness

DTC set preconditions:
- Battery voltage is normal

DTC set parameter:
- Exhaust gas temperature sensor (T_1) voltage: 0.08 V or less

Engine warning light:
- ON

Limp home action by engine ECU (system action):
- 0 °C (32 °F) [default value]
- Output limitation: Approximately 75 % of normal condition

Recovery from error:
- Key switch turn OFF

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P0544 / 3242-3: Exhaust gas temperature sensor (T_1): High
Behaviour during malfunction:
- None

Detection item:
- Open circuit or +B short circuit of sensor / harness.

DTC set preconditions:
- Battery voltage is normal
- Coolant temperature is 50 °C (122 °F) or more: continues longer than 10 min. after engine starting
- 100 °C (212 °F) ≤ T_0 ≤ 800 °C (1472 °F): continues longer than 10 sec. or 100 °C (212 °F) ≤ T_2 ≤ 800 °C (1472 °F): continues longer than 10 sec.

DTC set parameter:
- Exhaust gas temperature sensor (T_1) voltage: 4.92 V or more

Engine warning light:
- ON

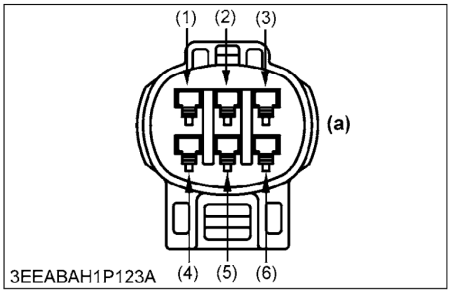
Limp home action by engine ECU (system action):
- 0 °C (32 °F) [default value]
- Output limitation: Approximately 75 % of normal condition

Recovery from error:
- Key switch turn OFF

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2. Measure the Voltage Between Sensor Terminals

1. Place the key switch in the OFF position, unplug the accelerator position sensor connector from the socket, and return the key switch to the ON position again.
2. Measure the voltage between terminals (1) and (3) of accelerator position sensor connector (at the machine wiring harness side).

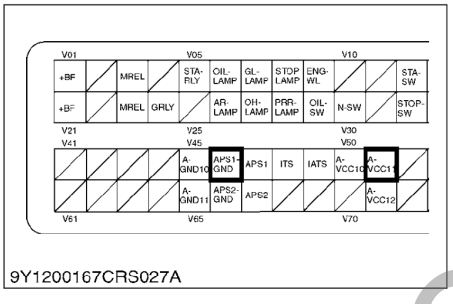
Service specification	4.5 to 5.5 V

OK	Go to "4. Measure the Engine ECU Terminal Voltage".
NG	Go to "3. Measure the Terminal Voltage".

(1) Terminal A-VCC11
(2) Terminal APS1
(3) Terminal APS1 GND
(4) Terminal A-VCC10
(5) Terminal APS2
(6) Terminal APS2 GND

(a) Pin Assignment

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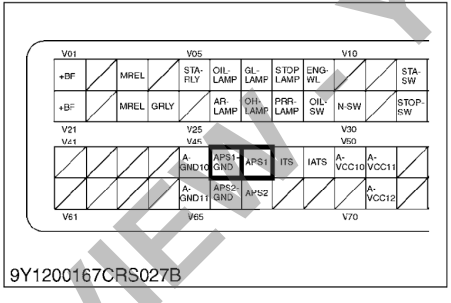
3. Measure the Terminal Voltage

1. Measure the voltage between engine ECU terminals V46 and V51.

Service specification	4.5 to 5.5 V

OK	The wiring harness between the engine ECU and sensor is faulty. → Replace.	
NG	Check the engine ECU connectors.	
	OK	Faulty engine ECU → Replace.
	NG	Replace the engine ECU connectors.

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4. Measure the Engine ECU Terminal Voltage

1. Place the key switch in the OFF position, and plug the accelerator position sensor connector into the socket.
2. Place the key switch in the ON position, and measure the voltage between engine ECU terminals V47 and V46.

Service specification	Accelerator pedal fully closed: 1.35 V or lower Accelerator pedal full throttle: 4.0 V or higher Follow the OEM adjusted value : 1.1 to 1.35 V, 4.0 to 4.2 V

■ **NOTE**

- **"Full close" and "Full open" are with the accelerator position sensor, not with the accelerator pedal or hand accelerator.**

OK	Check the engine ECU connectors.	
	OK	Faulty engine ECU → Replace.
	NG	Replace the engine ECU connectors.
NG	Go to "5. Measure the Voltage Between Sensor Terminals".	

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(55) Exhaust Gas Temperature Sensor (T0) Emergency High (DTC P3002 / 4765-0)

Behaviour during malfunction:
- Engine stops
- Inhibit cranking until down to 300 °C (572 °F)

Detection item:
- DOC inlet temperature (T_0) high

DTC set preconditions:
- Exhaust gas temperature sensor T_0, T_1 and T_2 are normal
- Battery voltage is normal

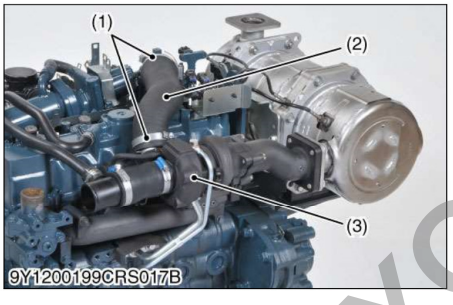
DTC set parameter:
- DOC inlet temperature (T_0): 700 °C (1292 °F) or more

Engine warning light:
- ON

Limp home action by engine ECU (system action):
- Stop injection (Q = 0 mm^3/st)
- Engine stop
- Inhibit starter relay activation until exhaust gas temperature reduces down to 300 °C (572 °F)

Recovery from error:
- Under 300 °C (572 °F) & key switch turn OFF

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1. Check the Air Intake System

1. Check in accordance with "6.[1] AIR INTAKE SYSTEM INSPECTION PROCEDURE". (Refer to page 1-S318)

■ **IMPORTANT**
- **If the two errors occur from "Emergency exhaust gas temperature sensor T_0 high", "Emergency exhaust gas temperature sensor T_1 high", and "Emergency exhaust gas temperature T_2 high" at the same time, check the exhaust gas temperature starting from a bigger number.**

■ **NOTE**
- **Check the clogging condition of the air cleaner. If it is very dirty, replace the new one.**
- **Check if the suction hose of the turbocharger blower does not come off. If the hose comes off, install it.**
- **Check the suction path for leaks. (Suction path joints, suction pipes, hoses)**
- **Check the clogging condition of the fuel filter. If it is very dirty, replace the new one.**
- **Check the installation of all exhaust gas temperature sensors (T_0, T_1 and T_2).**
- **Check the engine oil level.**
- **Check the engine coolant level.**

OK	Go to "2. Check the Exhaust Gas Temperature".
NG	Repair in accordance with "6.[1] AIR INTAKE SYSTEM INSPECTION PROCEDURE". (Refer to page 1-S318)

(1) Hose Clamp
(2) Hose
(3) Turbocharger

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