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2010 MAZDA 5 / Premacy OEM Service and Repair Workshop Manual

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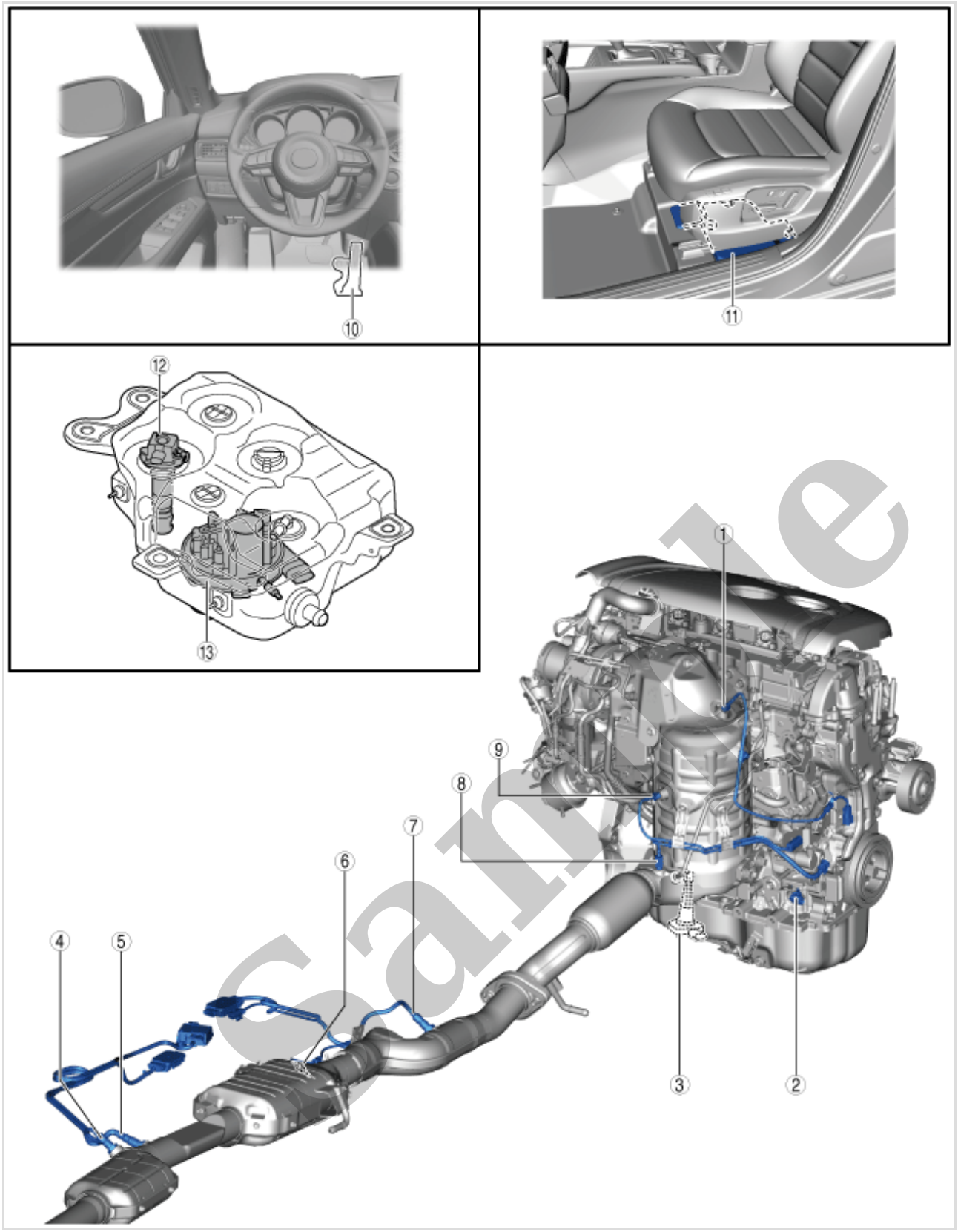

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1	Exhaust gas temperature sensor No.2 (See EXHAUST GAS TEMPERATURE SENSOR REMOVAL/INSTALLATION [SKYACTIV-D 2.2].) (See EXHAUST GAS TEMPERATURE SENSOR INSPECTION [SKYACTIV-D 2.2].)
2	CKP sensor (See CRANKSHAFT POSITION (CKP) SENSOR REMOVAL/INSTALLATION [SKYACTIV-D 2.2].) (See CRANKSHAFT POSITION (CKP) SENSOR INSPECTION [SKYACTIV-D 2.2].)
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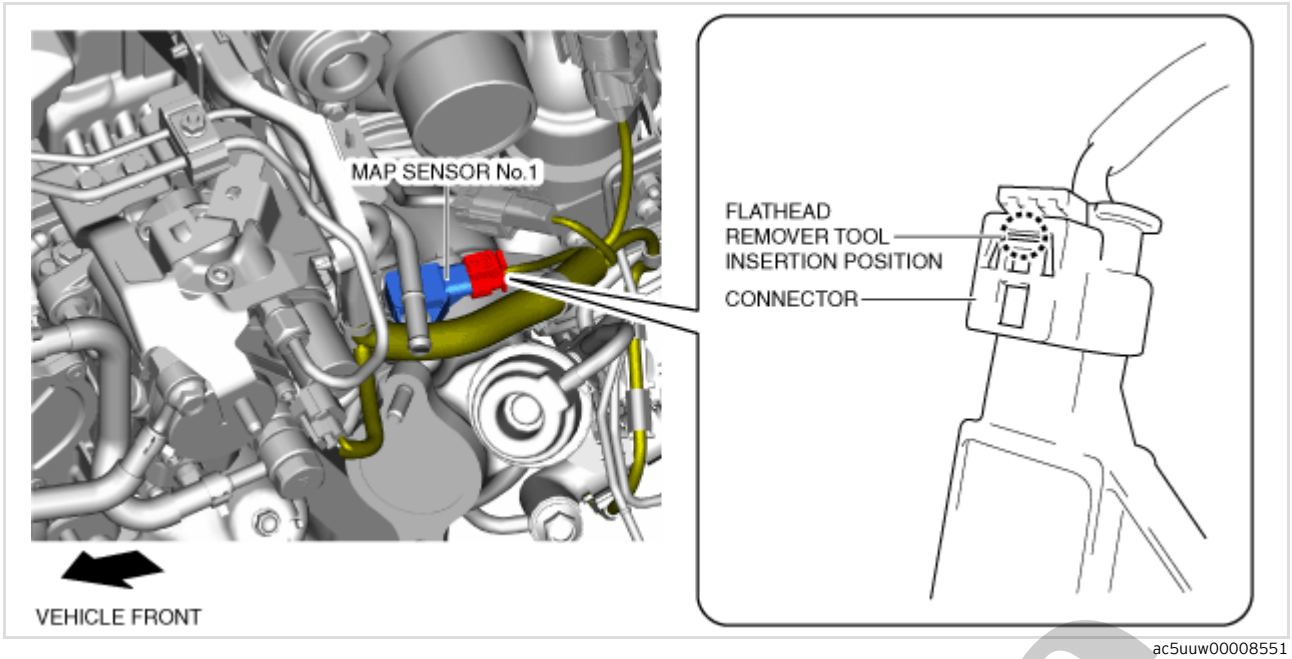

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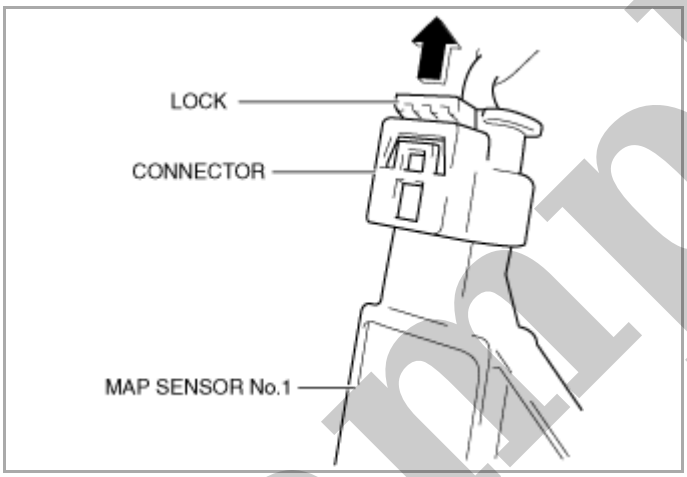
(2)Pull out the connector lock in the direction of the arrow.



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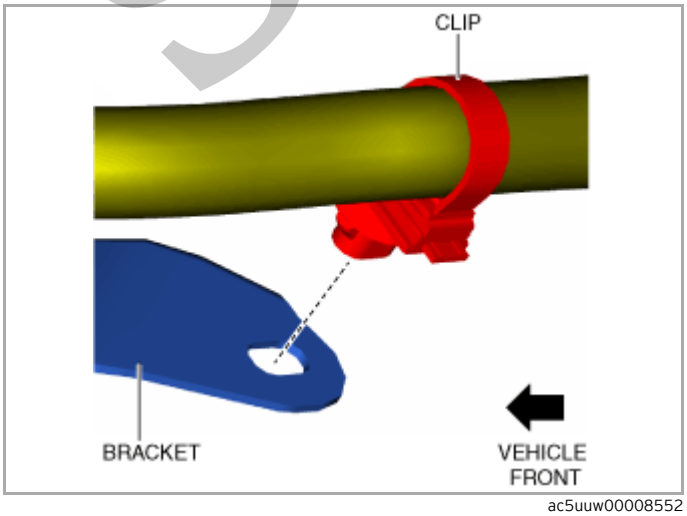
(3)Disconnect the connector. (See MAP sensor No.1 connector connection note.)

8.Remove the clip from the bracket.



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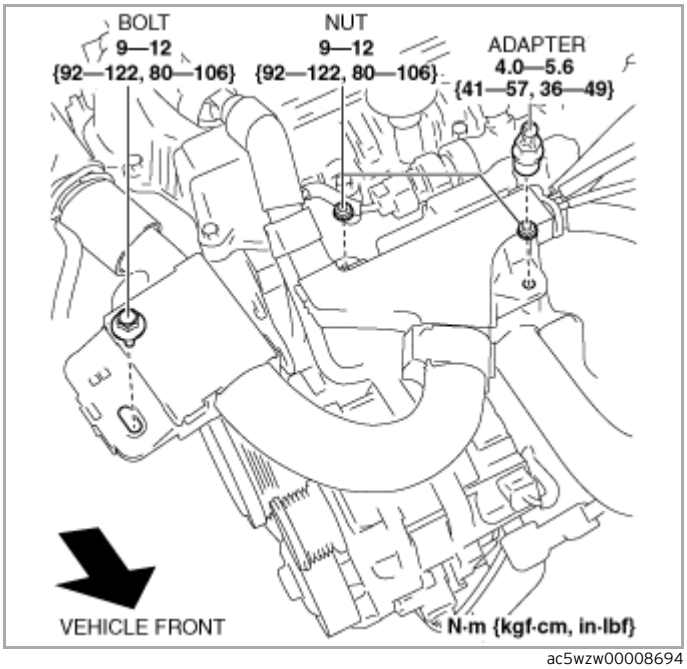
9.Remove the bolts from the bracket.



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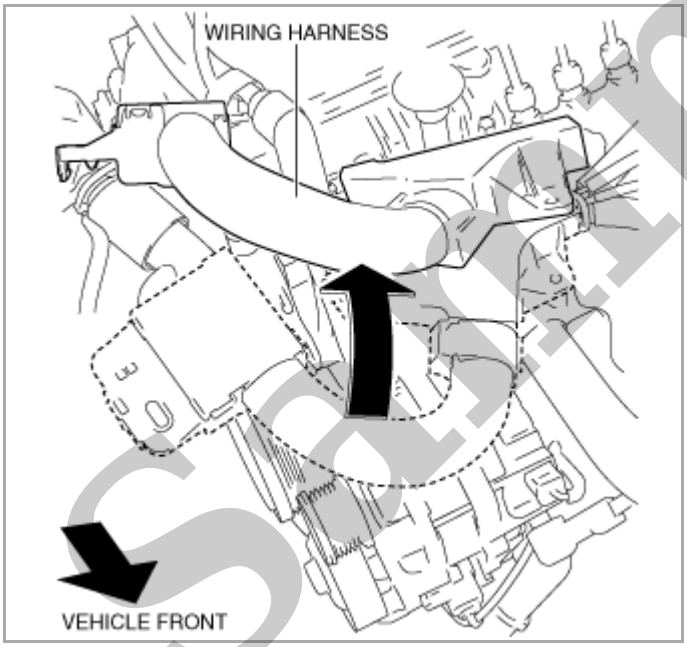
4.Set the wiring harness aside. (See Protector installation note.)



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5.Disconnect the MAP sensor No.2 connector.

6.Remove the MAP sensor No.2.

INTAKE AIR TEMPERATURE (IAT) SENSOR NO.2 REMOVAL/INSTALLATION [SKYACTIV-D 2.2]

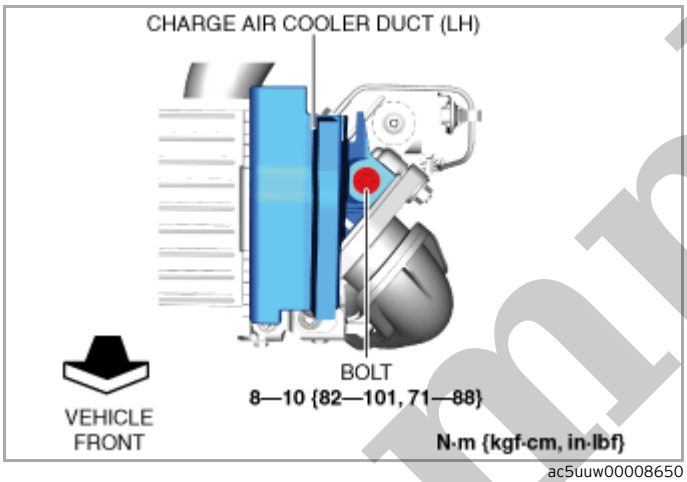
SM2897879

id0140z780630

1.Disconnect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.)

2.Remove the front bumper. (See FRONT BUMPER REMOVAL/INSTALLATION.)

3.Remove the bolt.



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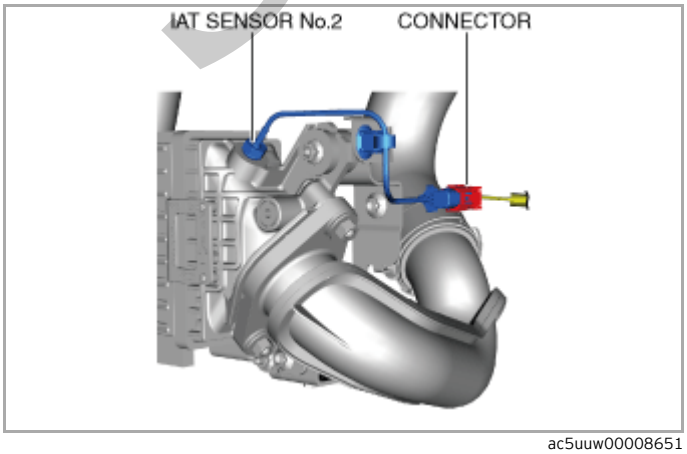
4.Remove the charge air cooler duct (LH).

5.Disconnect the IAT sensor No.2 connector.



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6.Remove the clip from the bracket.

FUEL TEMPERATURE SENSOR REMOVAL/INSTALLATION [SKYACTIV-D 2.2]

SM2897881

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Note

• The fuel temperature sensor cannot be removed as a single unit. When replacing the fuel temperature sensor, replace it together with the fuel injector as a single unit.

1.Remove the fuel injector. (See FUEL INJECTOR REMOVAL/INSTALLATION [SKYACTIV-D 2.2].)

MASS AIR FLOW (MAF) SENSOR DATA RESET [SKYACTIV-D 2.2]

SM2897884

id0140z781010

1.Connect the M-MDS to the DLC-2.

2.After the vehicle is identified, select the following item from the initial screen of the M-MDS.

(1)Select the “Powertrain”.

3.Then, select the items from the screen menu in the following order.

(1)Select the “Data Reset”.

(2)Select the “MAF sensor”.

4.Perform the procedure according to the directions on the screen.

DOSING CONTROL UNIT INSPECTION [SKYACTIV-D 2.2]

SM2897887

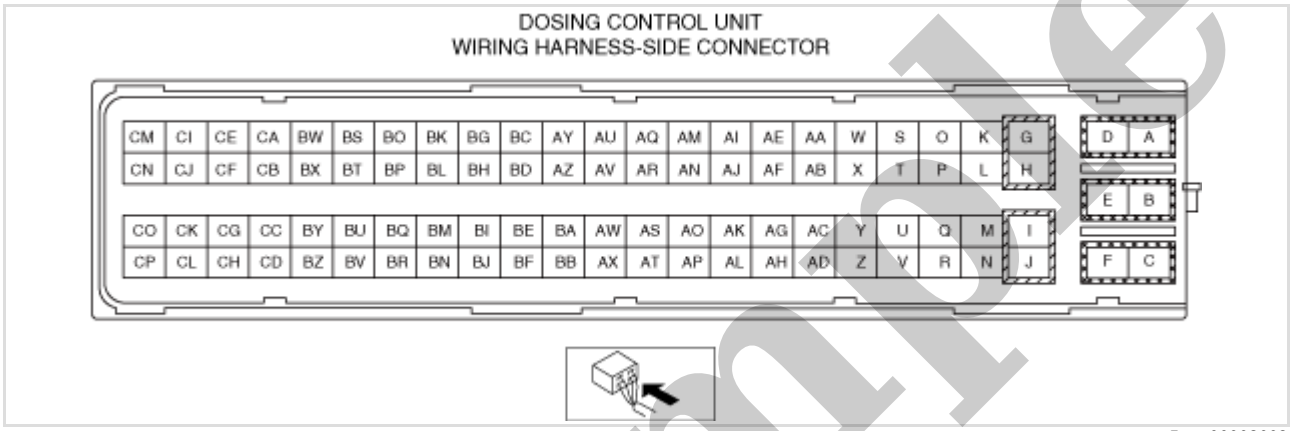
id0140z782410

Without Using The M-MDS

Note

• The dosing control unit terminal voltage can vary with the conditions when measuring and changes due to aged deterioration on the vehicle, causing false diagnosis. Therefore determine comprehensively where the malfunction occurs among the input systems, output systems, and the dosing control unit.

Terminal voltage table (Reference)



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Terminal	Signal	Connected to	Test condition	Voltage (V)	inspection item
A	Battery voltage	SCR relay No.2	Switch the ignition ON (engine off)	B+	• SCR relay No.2 • Related wiring harness
B	Battery voltage	SCR relay No.1, No.2	Switch the ignition ON (engine off)	B+	• SCR relay No.1, No.2 • Related wiring harness
C	Battery voltage	SCR relay No.1, No.2	Switch the ignition ON (engine off)	B+	• SCR relay No.1, No.2 • Related wiring harness
D	Urea tank heater control	Urea tank heater	Urea tank heater operating	B+	• Urea tank heater • Related wiring harness
			Urea tank heater not operating	Below 1.0	
E	GND	GND	Under any condition	Below 1.0	• Related wiring harness
F	Urea hose heater control	Urea hose heater	Urea hose heater operating	B+	• Urea hose heater • Related wiring harness
			Urea hose heater not operating	Below 1.0	
G	–	–	–	–	–
H	DEF pump control (GND)	DEF pump (pumping side)	Depend on engine load	Below 1.0	• DEF pump • Related wiring harness

Terminal	Signal	Connected to	Test condition	Voltage (V)	inspection item
CE	–	–	–	–	–
CF	–	–	–	–	–
CG	–	–	–	–	–
CH	–	–	–	–	–
CI	–	–	–	–	–
CJ	–	–	–	–	–
CK	–	–	–	–	–
CL	–	–	–	–	–
CM	–	–	–	–	–
CN	DEF pump control (GND)	DEF pump (siphoning side)	Depend on engine load	Below 1.0	• DEF pump • Related wiring harness
CO	–	–	–	–	–
CP	–	–	–	–	–

Using The M-MDS

Caution

• The dosing control unit terminal voltage vary with change in measuring conditions and vehicle conditions. Always carry out a total inspection of the input systems, output systems, and dosing control unit to determine the cause of trouble. Otherwise, diagnosis will be incorrect.

1.Connect the M-MDS to the DLC-2.

2.Switch the ignition ON (engine off).

3.Measure the PID value.

• If PID value is not within the specification, follow the instructions in Action column.

Simulation item table

–: Not applicable

Item (definition)	Unit/Condition	Definition	Operation condition
HTR_LINE	Off/On	Urea Pressure Line Heater	• Under the following conditions: — Ignition switched ON (engine off) — Idle
HTR_TANK	Off/On	Urea tank heater	• Under the following conditions: — Ignition switched ON (engine off) — Idle
RDC_PMP_DC_CM	–	DEF pump duty cycle	• Under the following conditions: — Ignition switched ON (engine off) — Idle