CX130D - LC Version
CX130D - Standard with Blade Version
Tier 4B (final)
Crawler Excavator

SERVICE MANUAL

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CASE CONSTRUCTION

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CN.A35	Joint connector A: 20-pin	CN.B17F	Air-conditioner unit: B (22-pin)
CN.A36	Joint connector B: 20-pin	CN.B18F	Radio: 9-pin
CN.A37	Joint connector: GND1 (6-pin)	CN.B19	Option harness: 16-pin
CN.A38	Joint connector: GND2 (6-pin)	CN.B20	Seat suspension: 2-pin
CN.A39	Cab GND	CN.B22F	Air-conditioner GND: 1-pin
CN.A40F	Cab harness A: 14-pin	CN.B23F	Computer GND: 1-pin
CN.A41F	Cab harness B: 18-pin	CN.B24F	**12 V**:+B (1-pin)
CN.A42F	Cab main harness: A (10-pin)	CN.B25F	**12 V**:IGN (1-pin)
CN.A42M	Console harness: A (10-pin)	CN.B26M	**12 V**:GND (1-pin)
CN.A43F	Cab main harness: B (8-pin)	CN.B27F	Free swing switch: 10-pin (ID: Red tape)
CN.A43M	Console harness: B (8-pin)		

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- The engine is running.
- The engine coolant temperature is **70 °C** (**158 °F**) or more and less than **90 °C** (**194 °F**).
- Urea solution is contained.
- The exhaust temperature (DOC outlet) is **680 °C** (**1256 °F**) or less.
- There is no sensor-related failure.
- The battery voltage is **21 V** or more.
- The device test is not in process.

2. AUTO SCR CLEANING standby conditions: If one of the following conditions is fulfilled, AUTO SCR CLEANING goes on standby without starting.
   - The engine coolant temperature is **65 °C** (**149 °F**) or more and less than **100 °C** (**212 °F**).
   - Urea solution has become low.
   - The exhaust temperature (DOC outlet) is **700 °C** (**1292 °F**) or more.
   - There is a sensor-related failure.
   - The battery voltage is **20 V** or less.
   - The device test is in process.

When, in the AUTO SCR CLEANING standby state, the conditions for starting AUTO SCR CLEANING in [1] are fulfilled, AUTO SCR CLEANING will be started.
Moreover, when these conditions are fulfilled during AUTO SCR CLEANING, it will be interrupted and go on standby.

3. Start of AUTO SCR CLEANING: The following controls will start when the conditions in [1] are fulfilled.
   - SCR CLEANING icon (green) turns on.
   - A warning buzzer sounds for 2 seconds.
   - The message "AUTO SCR CLEANING" appears.
4. Manual interruption of AUTO SCR CLEANING: The SCR CLEANING will be interrupted when the following operation is performed.
   During interruption, SCR CLEANING icon turns off.
   To resume the SCR CLEANING, eliminate the cause of interruption.
   - By pressing the SCR switch on the monitor during AUTO SCR CLEANING, the SCR CLEANING is interrupted. (The message "PUSH SCR CLEANING SWITCH" appears on the monitor. Pressing it again resumes AUTO SCR CLEANING.)
   - The SCR CLEANING is interrupted while the engine is stopped.
5. Manual resumption of AUTO SCR CLEANING: AUTO SCR CLEANING will resume when the following conditions are fulfilled.
   - The engine is started.
6. End of AUTO SCR CLEANING: The controls will be finished at the end of AUTO SCR CLEANING.
   - SCR CLEANING icon (green) turns off.
   - The message "AUTO SCR CLEANING" turns off.

MANUAL SCR CLEANING

MANUAL SCR CLEANING is requested if AUTO SCR CLEANING is incomplete (a failure in AUTO SCR CLEANING occurs twice continuously).

The machine cannot operate during MANUAL SCR CLEANING.

Assist load is controlled for the SCR CLEANING.

Operation explanation

1. Request for MANUAL SCR CLEANING: It will be displayed on the monitor when you are requested to perform MANUAL SCR CLEANING.

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P0122-Throttle position sensor, low input

Control Module : ECM

Solution:

1. Check and diagnose the below fault codes before you proceed with the diagnostics code 0122.

   Diagnostic trouble code P06A8

2. Turn OFF the ignition switch.

   Disconnect the harness connector **CN.E3** from the intake throttle valve.

   Turn ON the ignition switch.

   Measure the voltage between the intake throttle position sensor **5 V** power supply circuit and a normal GND.

   A. If the reading is less than or equal to **4.9 V**, inspect to see if there is an open circuit or high resistance with the **5 V** power supply circuit between the ECM and the intake throttle position sensor.

   B. If a problem is found, repair the **5 V** power supply circuit.

   C. If there are no problems, proceed to Step **3**.

   NOTE:
   • *The intake throttle position sensor shares the **5 V** power supply circuit with other sensors.*
   • *The diagnostic trouble code set on a sensor which shares this circuit may be detected.*

3. Connect the test cable with fuse between the intake throttle position sensor **5 V** power supply circuit and the signal circuit.

   Observe the intake throttle sensor display on the trouble diagnosis scan tool.

   A. If the reading is more than or equal to **4.9 V**, inspect to see if there is a poor connection with the intake throttle valve harness connector **CN.E3**.

   B. If a problem is found, repair the harness connector **CN.E3**.

   C. If the harness connector **CN.E3** is normal, replace the intake throttle valve. (Refer to " **Throttle Valve Actuator (TVA) - Remove (55.014)** and **Throttle Valve Actuator (TVA) - Install (55.014)**")

4. Inspect the signal circuit between the ECM and intake throttle position sensor.

   • Make sure that there is no open circuit or high resistance.

   • Make sure that there is no short to GND.

   A. If a problem is found, repair the signal circuit.

   B. If there are no problems, proceed to Step **5**.

5. Inspect the ECM harness connector **CN.D4** for a poor connection.

   A. If a problem is found, repair the harness connector **CN.D4**.

   B. If the harness connector **CN.D4** is normal, replace the ECM. (Refer to " **Engine Control Unit (ECU) - Remove (55.015)** and **Engine Control Unit (ECU) - Install (55.015)**")

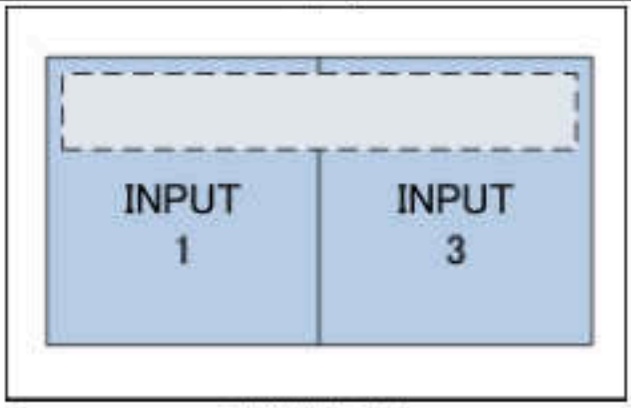
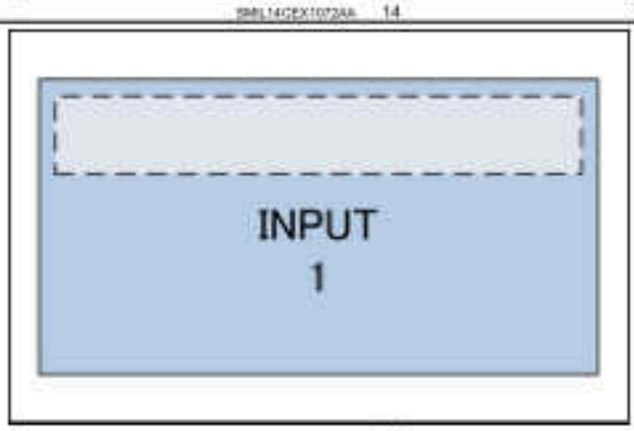
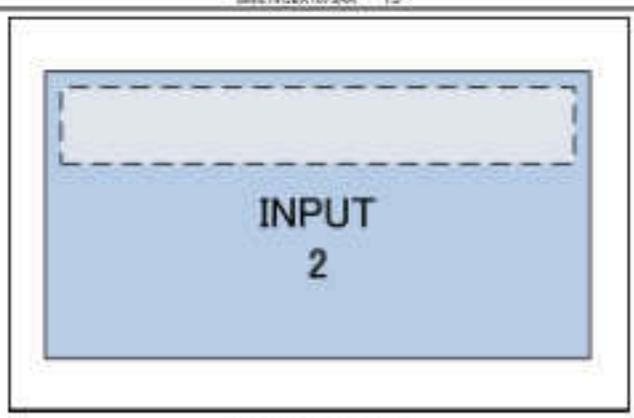
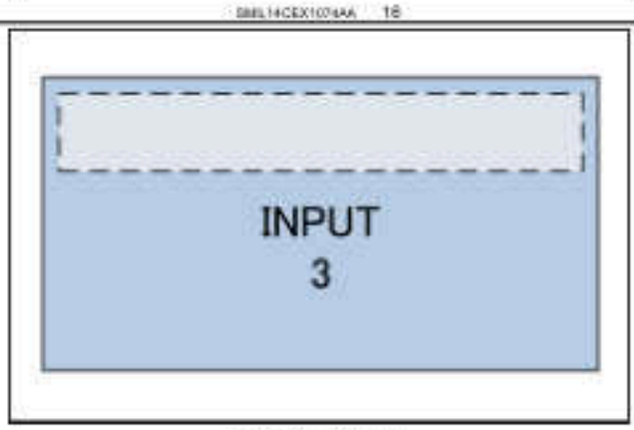
6. Set the Injector ID Code, fuel delivery rate and engine number for the ECM.

7. Confirm resolution:

   1. Clear the diagnostic trouble code using the trouble diagnosis scan tool.

   2. Turn OFF the ignition switch for at least **30 s**.

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Type	Meter position	Camera input	Display
G	TOP	INPUT 1+3	
H	TOP	INPUT 1	
I	TOP	INPUT 2	
J	TOP	INPUT 3	

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2.. Model select switch

Connect the rocker switch [Items to prepare **(3)**] to the connector CN.V2F (tape color: white) of the wire harness for setting Field View Monitor (FVM) [Items to prepare **(1)**].

3. Specification select switch

Connect the rocker switch [Items to prepare **(3)**] to the connector CN.V3F (tape color: blue) of the wire harness for setting Field View Monitor (FVM) [Items to prepare **(1)**].

3. Setting of model/specification

Selection of setting mode

1. Select input 3 for the rear view monitor to display the Field View Monitor (FVM).
2. Turn OFF the key switch to turn off the power.
3. Turn ON the setting mode switch.
4. While keeping the setting mode switch ON, turn ON the key switch.
5. In **0.5 - 1.5 s** after the key switch is ON, turn OFF the setting mode switch.

How to set model/specification

1. About displays
(1): selection of model/specification setting
(2): model name indication (the indication changes with selection of 1)



SME13CEX3804A 5

2. Operate the model select switch to set a left value of the indication **(1)** .

Model	Display **(1)**	Display **(2)**
130X4	1-1	130X4
160X4	2-1	160X4
210X4	3-1	210X4
250X4	4-1	250X4
300X4	5-1	300X4
350X4	6-1	350X4
470X4	7-1	470X4

3. Operate the specification select switch to set a right value of the indication (1).
4. The setting is saved by pressing the setting mode switch for 3 seconds.

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