CRAWLER EXCAVATOR

SERVICE MANUAL

HX355ALCR

HYUNDAI

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Figure 331



DS1901982

Real Time Failure Information

Overview

In this screen, Real Time Failure Information can be monitored.

1. In the central list section, the fault sequence, fault code, and fault details are indicated as follows.
   A. NO: Displays the order according to the error code priority.
   B. CODE: Displays the error code.
      - Equipment error code: VXX (Prefix) + nnn (Priority) - nn (FMI)
      - Engine error code: E + nnnnnn (SPN) - nn (FMI)
   C. Description: Displays detailed fault information.

Figure 332



DS1901983

Failure Log Information

Overview

In this screen, Failure Log Information can be monitored.

1. In the central list section, the fault sequence, fault code, and fault details are indicated as follows.
   A. NO: Displays the order according to the error code priority.
   B. CODE: Displays the error code.
      - Equipment error code: VXX (Prefix) + nnn (Priority) - nn (FMI)
      - Engine error code: E + nnnnnn (SPN) - nn (FMI)
   C. Number of occurrences: Displays the total number of times the corresponding fault occurred.
   D. Occurrence Time: Indicates the operating time of the latest point where the corresponding fault occurred.

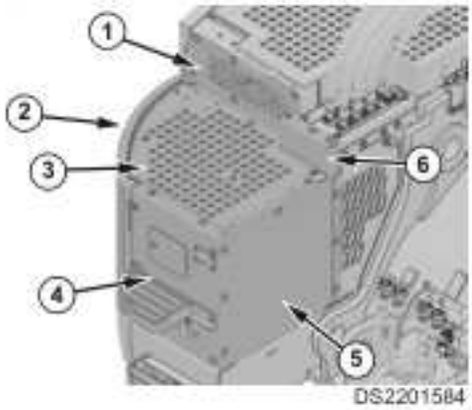
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Removal

1. Turn OFF the battery disconnect switch.

MCV Covers and Support

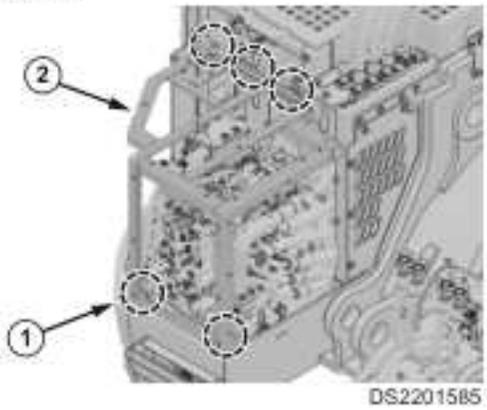
1. Remove mounting bolts and MCV covers (1, 2, 3, 4, 5).
   Figure 91



DS2201584

   - Tool: 19 mm ( )
   - Torque: 107.9 N.m (11 kg.m, 79.6 ft lb)
   - Cover (1) weight: about 3 kg (6.6 lb)
   - Cover (2) weight: about 13 kg (28.7 lb)
   - Cover (3) weight: about 15 kg (33.1 lb)
   - Cover (4) weight: about 7 kg (15.4 lb)
   - Cover (5) weight: about 8 kg (17.6 lb)
   - Cover (6) weight: about 3 kg (6.6 lb)

2. Remove mounting bolts (1, 5ea) and support (2).
   Figure 92



DS2201585

   - Tool: 19 mm ( )
   - Torque: 107.9 N.m (11 kg.m, 79.6 ft lb)
   - Support weight: about 22 kg (48.5 lb)

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No.	Cause	Procedure, Measuring Location, Criteria and Remarks
1	Open Circuit in Harness	1. Turn off the master switch of the machine. 2. Test for an open circuit in the harness between the EPOS and valve. A. Measure the resistance between the wires. → If the measurement is infinite, this indicates an open circuit. B. If the resistance between the wires measures 0 Ω, the wires are correctly connected. 3. Check that the connectors of the valve and main harness are correctly connected.
2	Short Circuit in Harness	1. Turn off the master switch of the machine. 2. Perform the harness short circuit test between the EPOS and valve. A. Check the power source, ground, and signal line for any short circuit.
3	Defective EPPR Valve	1. Turn off the master switch of the machine. 2. Measure the resistance of the valve. A. Measure the resistance of the valve coil. → If the measurement is infinite, this indicates an open circuit of the coil in the valve. B. Measure the resistance of the valve coil. → If the measurement is 0 Ω, this indicates a short circuit of the coil in the valve. 1) Resistance specification: 5.2 Ω±3% (@ 20°C)

Figure 24



DS2102170

Pop-ups, Warning Symbols and Indicators

If the flow control proportional reducing valve (E) (rotating CW) malfunctions or a connection error occurs, an error message (1) pops up and the relevant warning symbol (2) lights up at the top left of the gauge panel.

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General Maintenance

General Maintenance Instructions

Safety Instructions

⚠ WARNING

AVOID DEATH OR SERIOUS INJURY

Instructions are necessary before operating or servicing machine. Read and understand the Operation & Maintenance Manual and signs (decals) on machine. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after adjustments repairs or service. Untrained operators and failure to follow instructions can cause death or serious injury.

Welding Precautions and Instructions

⚠ WARNING

AVOID DEATH OR SERIOUS INJURY

To avoid accidents, personal injury and the possibility of causing damage to the machine or to components, welding must only be performed by properly trained and qualified personnel, who possess the correct certification (when required) for the specific welding fabrication or specialized repair being performed.

⚠ WARNING

AVOID DEATH OR SERIOUS INJURY

Structural elements of the machine may be built from a variety of steels. These could contain unique alloys or may have been heat-treated to obtain particular strength characteristics. It is extremely important that welding repairs on these types of steel are performed with the proper procedures and equipment. If repairs are performed in correctly, structural weakening or other damage to the machine (that is not always readily visible) could result. Always consult with your dealer before welding on integral components (loader arm, frames, car body, track frames, upper structure, attachment, etc.) of the machine. It is possible that some types of structural critically repairs may require Magnetic Particle or Liquid Penetrant testing, to make sure there are no hidden cracks or damage, before the machine can be returned to service.

⚠ WARNING

AVOID DEATH OR SERIOUS INJURY

Always perform welding procedures with proper safety equipment and adequate ventilation in a dry work area. Keep a fire extinguisher near and wear personal protective equipment.

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1. Check periodically whether the engine oil lies within the specified range between the upper and lower limit lines on the oil level gauge.

⚠ CAUTION

AVOID INJURY

In the event that the oil level cannot be checked accurately on the oil level gauge, rotate the oil level gauge 180° and stick the guide tube back in the oil level gauge; then, remove it and check the oil level again.

2. In the event that the oil warning lamp installed in the machine turns on or blinks, it means that the oil pressure is too low. Hence, check the oil level and refill if necessary. When refilling engine oil, do not exceed the upper limit line on the oil level gauge. If the oil level is normal, check related parts, such as the oil pressure sensor, oil pump and oil lines.

⚠ CAUTION

AVOID INJURY

The oil pressure may increase and decrease along with the engine speed (rpm). In addition, cold oil generally indicates a higher oil pressure at certain engine speeds (rpm) than warm oil—a phenomenon which occurs even in normal engine operating conditions.

3. Check the coolant temperature gauge installed in the machine and check whether coolant is circulating properly. If the coolant level in the auxiliary tank is too low, the needle on the coolant temperature gauge may vibrate.
4. Replace the engine oil and oil filter after the break-in period.

⚠ CAUTION

AVOID INJURY

Replace the engine oil and oil filter with engine oil and a genuine part recommended by HD HYUNDAI CONSTRUCTION EQUIPMENT.

Operation After Break-in Period

When starting the engine in extremely cold regions, the engine must be warmed up slowly. Do not increase the engine rpm abruptly before the engine has been preheated sufficiently. Oil consumption is higher until the piston rings are seated properly and the engine is running normally. Hence, the engine oil level must be checked periodically during the initial 50 hours of the break-in period.

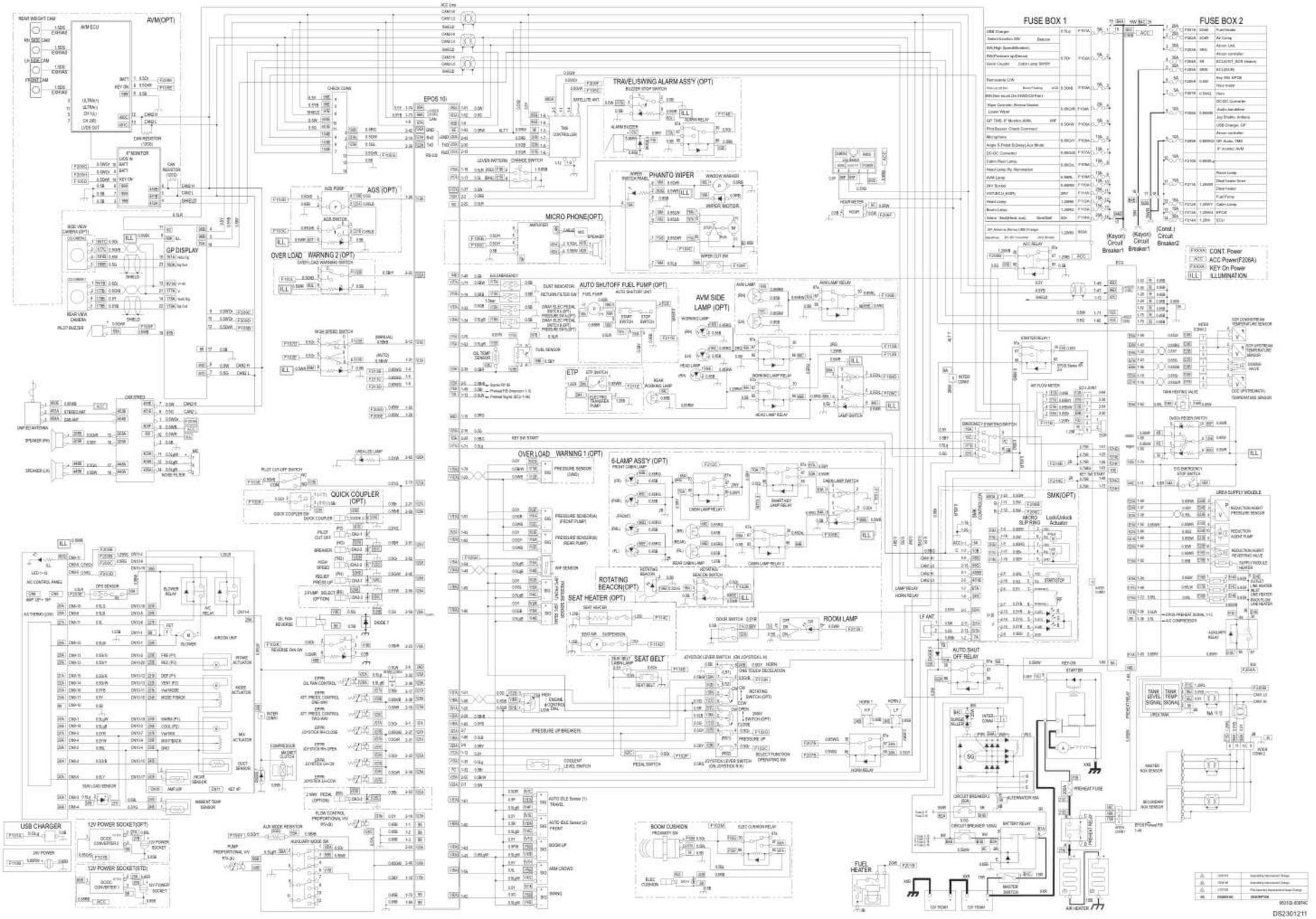
Inspection After Starting the Engine

While the engine is in operation, always check the pressure in the engine lubrication system with the engine oil pressure gauge installed in the machine. If low oil pressure is indicated on the engine oil pressure gauge, stop the engine immediately. In addition, make sure to check whether the charge warning indicator of the generator is turned off while the engine is in operation.

1. Connect the positive (+) and negative (-) battery terminals securely to ensure that they do not come loose. The sheath on battery connector cables should not be torn or ripped.
2. If the battery charge warning indicator blinks or turns on and the engine stops suddenly while driving, check the electrical system for malfunctions.
3. If an abnormal condition, such as an abnormal emission color or odor, occurs while driving, stop the engine, locate the cause, and correct the issue.

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Electrical Schematic(1/2)



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