SERVICE MANUAL

W50C / W60C / W70C / W80C
Tier 4B (final)
Compact Wheel Loader

ELECTRICAL SYSTEMS - 55

[55.DTC] FAULT CODES - 55.5
3665 - 3979
4351 - 4920
19191 - 19192

PLATFORM, CAB, BODYWORK, AND DECALS - 90

Part number 47878218
English
May 2015

NEW HOLLAND CONSTRUCTION

3665-Permanent governor deviation for valve

W50C ZB	NA --- WE
W60C ZB	NA --- WE
W70C HS	NA --- WE
W70C	NA --- WE
W80C HS	NA --- WE
W80C	NA --- WE

Context:
The positive limit of EGR valve governor deviation has been exceeded.

Cause:
Desired EGR valve position can not be reached due to sticking EGR valve. Possible EGR valve position sensor mismatched.

Possible failure modes:

1. Faulty wiring.
2. EGR valve binding inside assembly.

Solution:

1. Verify that the wiring and connectors are free of damage.

   Inspect the ECU and the EGR valve connections. All connections should be secure, tight, free of corrosion, abrasion and damage.

   Inspect the harness from the ECU to the EGR valve. Verify that the harness is free of damage, corrosion, abrasion or incorrect attachment.

   A. The connectors are secure and the harness is free of damage. Go to step **2**.

   B. The connectors or the harness has damage. Repair or replace the harness or connectors as required. Return to step **1** to confirm elimination of fault.
2. Verify the fault code is still present and in an active state.

   A. If the fault is no longer active or present, OK to return the machine to service.

   B. If the fault is still present and active, temporarily replace the EGR valve assemble and retest. Return to step **1** to confirm elimination of the fault.

3666-Permanent governor deviation for valve

W50C ZB	NA --- WE
W60C ZB	NA --- WE
W70C HS	NA --- WE
W70C	NA --- WE
W80C HS	NA --- WE
W80C	NA --- WE

Context:
The negative limit of EGR valve governor deviation has been exceeded.

Cause:
Desired EGR valve position can not be reached due to sticking EGR valve. Possible EGR valve position sensor mismatched.

Possible failure modes:

1. Faulty wiring.
2. EGR valve binding inside assembly.

Solution:

1. Verify that the wiring and connectors are free of damage.

   Inspect the ECU and the EGR valve connections. All connections should be secure, tight, free of corrosion, abrasion and damage.

   Inspect the harness from the ECU to the EGR valve. Verify that the harness is free of damage, corrosion, abrasion or incorrect attachment.

   A. The connectors are secure and the harness is free of damage. Go to step **2**.

   B. The connectors or the harness has damage. Repair or replace the harness or connectors as required. Return to step **1** to confirm elimination of fault.
2. Verify the fault code is still present and in an active state.

   A. If the fault is no longer active or present, OK to return the machine to service.

   B. If the fault is still present and active, temporarily replace the EGR valve assemble and retest. Return to step **1** to confirm elimination of the fault.

3667-Open load error for power stage

W50C ZB	NA --- WE
W60C ZB	NA --- WE
W70C HS	NA --- WE
W70C	NA --- WE
W80C HS	NA --- WE
W80C	NA --- WE

Context:
ECU Power stages : Open load error on the EGR valve power stage.

Cause:
The ECU detects an open circuit in the EGR valve drive circuit. Electrical problem in the EGR valve actuator.

Possible failure modes:

1. Faulty wiring.
2. Faulty EGR valve.
3. Faulty ECU.

Solution:

1. Verify that the fault code is active.

   Connect the Electronic Service Tool to the service tool connector.

   To check for fault codes: Start and operate the machine.

   A. The fault code is not recorded again. OK to return the machine to service.

   B. Fault code 3667 is recorded again. Go to step **2**.
2. Verify that the wiring and connectors are free of damage.

   Inspect the ECU and the EGR valve. All connections should be secure, tight, free of corrosion, abrasion and damage.

   Inspect the harness from the ECU to the EGR valve. Verify that the harness is free of damage, corrosion, abrasion and incorrect attachment.

   A. The connectors are secure and the harness is free of damage. Go to step **3**.

   B. The connectors or the harness has damage. Repair or replace the harness or connectors as required. Return to step **1** to confirm elimination of fault.
3. Measure the resistance through the wiring harness

   Turn the ignition switch OFF.

   Disconnect the EGR Valve connector. Disconnect the ECU connector.

   Measure the resistance between ECU connector X-078 pin 50 and EGR valve motor plus pin. The resistance should be less than **10 Ω**. Wiggle the harness during measurement to reveal an intermittent condition.

   Measure the resistance between ECU connector X-078 pin 35 and EGR valve motor minus pin. The resistance should be less than **10 Ω**. Wiggle the harness during measurement to reveal an intermittent condition.

   Measure the resistance between ECU connector X-078 pin 9 and EGR position sensor supply pin. The resistance should be less than **10 Ω**. Wiggle the harness during measurement to reveal an intermittent condition.

   Measure the resistance between ECU connector X-078 pin 39 and EGR position sensor signal pin. The resistance should be less than **10 Ω**. Wiggle the harness during measurement to reveal an intermittent condition.

Measure the resistance between ECU connector X-078 pin 24 and EGR position sensor ground pin. The resistance should be less than **10 Ω**. Wiggle the harness during measurement to reveal an intermittent condition.

A. The resistance is less than **10 Ω**. Go to step **4**.

B. The resistance is greater than **10 Ω**. There is an open circuit in the wire. Repair or replace the wire as required. Return to step **1** to confirm elimination of fault.

4. Measure the resistance through the valve

Turn the ignition switch OFF.

Disconnect the EGR valve connector.

Measure the resistance through the motor windings. The resistance should be less than **100 Ω**.

A. The resistance is less than **100 Ω**. Temporarily replace the ECU and retest. Return to step **1** to confirm elimination of the fault.

B. The resistance is greater than **100 Ω**. There is an open circuit in the valve windings. Temporarily replace the valve and retest. Return to step **1** to confirm elimination of fault.