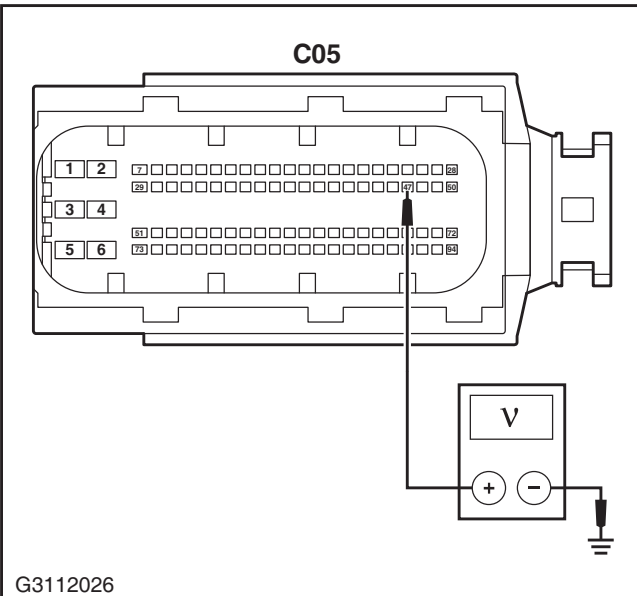
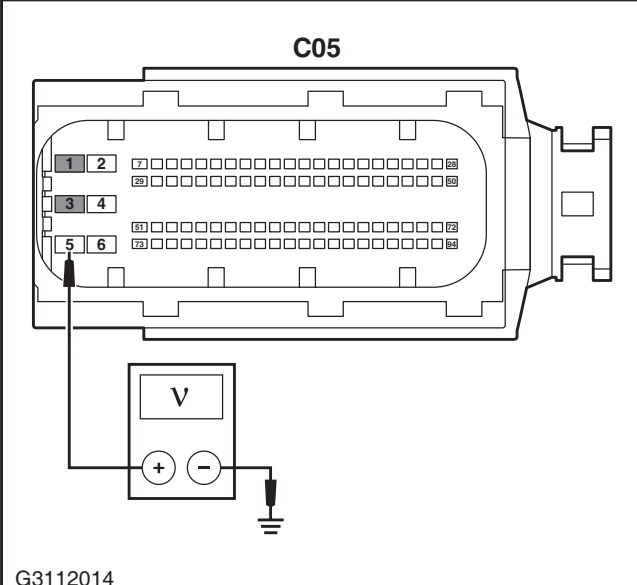


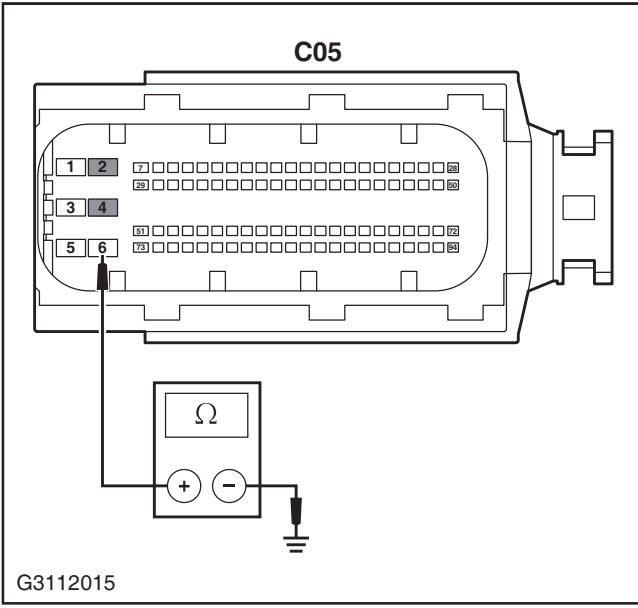
**DTC P068A00, P068B00****1. DTC Description**

<b>DTC</b>	<b>Description</b>	<b>Faulty Area</b>
P068A00	Early Opening Defect of Main Relay	• ECU
P068B00	DFC for Stuck Main Relay Error	• Wiring harness and connector • Main relay

**2. Diagnosis Procedure**

<b>Test Conditions</b>	<b>Details/Results/Actions</b>
1. General inspection	
	<p>A. Inspect ECU wiring harness connector C05 for looseness, aging and poor contact, etc.</p> <p>Is it normal?</p> <p><b>Yes</b></p> <p>Go to step 2.</p> <p><b>No</b></p> <p>Repair the faulty area.</p>
2. Inspect fuse	
	<p>A. Inspect the main relay fuse EF18.</p> <p><b>Fuse rated capacity: 30 A</b></p> <p>Is fuse normal?</p> <p><b>Yes</b></p> <p>Go to step 3.</p> <p><b>No</b></p> <p>Inspect and repair the fuse circuit, and replace the fuse with rated capacity.</p>
3. Inspect main relay	
	<p>A. Turn the ignition switch to "LOCK" position.</p> <p>B. Unplug the main relay ER01.</p> <p>C. Measure resistance between terminals 85 and 86 of main relay ER01.</p> <p><b>Standard resistance: 70 ~ 90 Ω</b></p> <p>Is resistance normal?</p> <p><b>Yes</b></p> <p>Go to step 4.</p> <p><b>No</b></p> <p>Replace the main relay ER01.</p>

Test Conditions	Details/Results/Actions
<p>4. Inspect main relay control signal</p>  <p>G3112026</p>	<p>A. Turn the ignition switch to "LOCK" position.</p> <p>B. Install the main relay ER01.</p> <p>C. Turn the ignition switch to ON.</p> <p>D. Measure voltage between terminal 47 of ECU wiring harness connector C05 and cabin ground with a multimeter.</p> <p><b>Standard voltage: 0 ~ 1.6 V</b></p> <p>Is voltage normal?</p> <p><b>Yes</b></p> <p>Go to step 5.</p> <p><b>No</b></p> <p>Inspect the ECU control main relay control circuit.</p>
<p>5. Inspect engine control module power supply circuit</p>  <p>G3112014</p>	<p>A. Turn the ignition switch to "LOCK" position.</p> <p>B. Measure from back side of ECU wiring harness connector C05.</p> <p>C. Turn ignition switch to "ON", and measure voltage between terminals 1, 3 and 5 and reliable ground.</p> <p><b>Standard voltage: 11 ~ 14 V</b></p> <p>Is measurement normal?</p> <p><b>Yes</b></p> <p>Go to step 11.</p> <p><b>No</b></p> <p>Inspect and repair ECU power supply circuit.</p>

Test Conditions	Details/Results/Actions
<p>6. Inspect engine control module ground circuit</p>  <p>G3112015</p>	<p>A. Turn the ignition switch to "LOCK" position.</p> <p>B. Measure from back side of ECU wiring harness connector C05.</p> <p>C. Measure resistance between terminals 2, 4 and 6 of ECU wiring harness connector C05 and reliable ground with a multimeter.</p> <p><b>Standard resistance: Less than 5 Ω</b></p> <p>Is measurement normal?</p> <p><b>Yes</b></p> <p>Replace the engine control module.</p> <p><b>Refer to: Engine Control Module (3.1.13 Electronic Control System, Removal and Installation).</b></p> <p><b>No</b></p> <p>Inspect and repair ECU ground circuit.</p>