

Engine starting system - Testing - Engine will not crank

N°	Test Point	Expected Result	Other Result (Possible Cause)
1	<p>Condition Turn the ignition switch OFF.</p> <p>Check Verify the connections to the starter and battery are tight and secure. Verify the minus battery connections from the starter and the battery are tight and secure. Verify the wiring and connections are free of corrosion, abrasion and damage.</p>	<p>Result The connections are secure. The connections are free of corrosion, abrasion and damage.</p>	<p>Action The connections are not secure or the connections show signs of corrosion, abrasion or damage. Repair as required.</p>
2	<p>Condition Turn the ignition switch OFF.</p> <p>Check Verify the connections to the ignition switch, ECU, and UCM are tight and secure. Verify the connections to the starter relay, the vehicle safety relay, and the starter are tight and secure. Verify the wiring and connections are free of corrosion, abrasion and damage.</p>	<p>Result The connections are secure. The connections are free of corrosion, abrasion and damage.</p>	<p>Action The connections are not secure or the connections show signs of corrosion, abrasion or damage. Repair as required.</p>
3	<p>Condition Turn the ignition switch OFF.</p> <p>Check Disconnect the UCM connector X-017. Turn the ignition switch to START. Measure the voltage between UCM connector X-017 pin 14 and chassis ground while the ignition switch is in the start position.</p>	<p>Result The voltage should be approximately 24 V.</p>	<p>Action The voltage is less than 18 V. There is a problem with the battery supply from the ignition switch. Verify the ignition switch is function properly. Verify the wiring from the ignition switch to the UCM is not damaged. Repair as required.</p>
4	<p>Condition Turn the ignition switch OFF. Disconnect the vehicle safety relay.</p> <p>Check Turn the ignition switch to the START position. Measure the voltage between the vehicle safety relay connector X-005 pin 48 and chassis ground.</p>	<p>Result The voltage should be approximately 24 V. Go to Engine start relay - Testing - Vehicle Safety Relay (55.201) and Engine start relay - Testing - Starter Relay (55.201).</p>	<p>Action The voltage is less than 18 V. There is a problem with the start signal from the UCM. Repair as required.</p>