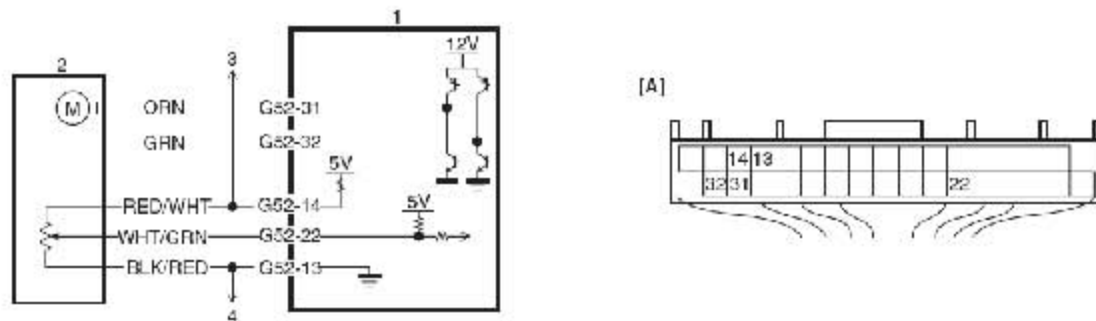


B1531: Air Intake Control Actuator and Its Circuit Malfunction

Wiring Diagram



[A]: HVAC control module connector "G52" (harness side view)	3. To other actuators
1. HVAC control module	4. To other sensors
2. Air intake control actuator	

DTC Detecting Condition and Trouble Area

DTC Detecting Condition	Trouble Area
Difference between target opening and actual opening is more than specified value even though air intake control actuator has operated for 15 seconds.	<ul style="list-style-type: none"> Air intake control actuator circuit Air intake control linkage Air intake control actuator HVAC unit HVAC control module

DTC Confirmation Procedure

- 1) Connect scan tool to DLC with ignition switch turned OFF.
- 2) Turn ON ignition switch and clear DTC using scan tool.
- 3) Start A/C system and select air intake selector at "FRE" position.
- 4) Select air intake selector at "REC" position and wait for 1 min. or more.
- 5) Check DTC.

DTC Troubleshooting

Step	Action	Yes	No
1	<p>Visual check</p> <p>1) Check if there is any obstruction in operating range of actuator linkage and if actuator linkage operates smoothly.</p> <p>Is it in good condition?</p>	Go to Step 2.	Obstruction in operating range of actuator linkage, actuator linkage faulty and/or internal fault of HVAC unit.
2	<p>Wire harness check</p> <p>1) Disconnect connector from air intake control actuator with ignition switch turned OFF.</p> <p>2) Check for proper connection to temperature control actuator connector at "ORN" and "GRN" wire terminals.</p> <p>3) If OK, measure voltage between "ORN" wire terminal of temperature control actuator connector and vehicle body ground with ignition switch turned ON when air intake selector is operation to FRE position.</p> <p>Is voltage 10 – 14 V?</p>	Go to Step 6.	Go to Step 3.
3	<p>Wire harness check</p> <p>1) Disconnect connector from HVAC control module with ignition switch turned OFF.</p> <p>2) Check for proper connection to HVAC control module connector at "G52-31" and "G52-32" terminals.</p> <p>3) If OK, measure resistance between "ORN" wire terminal of air intake control actuator connector and "G52-31" terminal of HVAC control module connector.</p> <p>Is resistance below 5 Ω?</p>	Go to Step 4.	"ORN" wire open or high resistance circuit.

Step	Action	Yes	No
4	Wire harness check 1) Measure resistance between "ORN" wire terminal of air intake control actuator connector and vehicle body ground. Is resistance infinity?	Go to Step 5.	"ORN" wire shorted to ground circuit.
5	Wire harness check 1) Measure voltage between "ORN" wire terminal of air intake control actuator connector and vehicle body ground with ignition switch turned ON. Is voltage 0 V?	Go to Step 6.	"ORN" wire shorted to other circuit.
6	Wire harness check 1) Connect connector to HVAC control module with ignition switch turned OFF. 2) Measure voltage between "GRN" wire terminal of air intake control actuator connector and vehicle body ground with ignition switch turned ON when temperature selector is operation to REC position. Is voltage 10 – 14 V?	Go to Step 10.	Go to Step 7.
7	Wire harness check 1) Disconnect connector from HVAC control module with ignition switch turned OFF. 2) Check for proper connection to HVAC control module connector at "G52-31" and "G52-32" terminals. 3) If OK, measure resistance between "GRN" wire terminal of air intake control actuator connector and "G52-32" terminal of HVAC control module connector. Is resistance below 5 Ω ?	Go to Step 8.	"GRN" wire open or high resistance circuit.

Step	Action	Yes	No
8	Wire harness check 1) Measure resistance between "GRN" wire terminal of air intake control actuator connector and vehicle body ground. Is resistance infinity?	Go to Step 9.	"GRN" wire shorted to ground circuit.
9	Wire harness check 1) Measure voltage between "GRN" wire terminal of air intake control actuator connector and vehicle body ground with ignition switch turned ON. Is voltage 0 V?	Go to Step 10.	"GRN" wire shorted to other circuit.
10	Position sensor circuit check 1) Check air intake control actuator position sensor circuit referring to Step 1 to Step 6 and Step 11 to Step 12 of "DTC B1530: Air Intake Control Actuator (Position Sensor) and/or Its Circuit Malfunction: ". Is it in good condition?	Go to Step 11.	Repair circuit.
11	Air intake control actuator check 1) Check intake air control actuator referring to "Air Intake Control Actuator Inspection: ". Is it in good condition?	HVAC control module faulty.	Air intake control actuator faulty.