

P0161**374 Oxygen Sensor Heating After TWC, Bank 2 – Open Circuit****Diagnosis conditions**

- Engine running

Possible fault cause

- ◆ Resistance of the oxygen sensor heating too great
- ◆ Open circuit

Affected terminals

II/1

Diagnosis/Troubleshooting**Note!**

Do not use contact spray on the connectors to oxygen sensor.

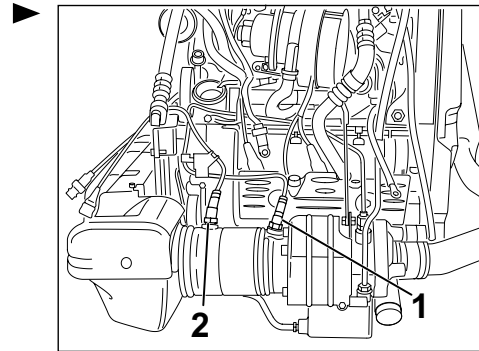
Work instruction			Display OK	If not OK
1	Check oxygen sensor heating	<ul style="list-style-type: none"> ◆ Remove oxygen sensor connector after catalytic converter Bank 2 ◆ Check resistance between pin 1 and 2 towards the oxygen sensor 	9 to 10 Ω at 20 °C	Replace oxygen sensor
2	Check B+ supply	<ul style="list-style-type: none"> ◆ Start the engine ◆ Measure voltage at pin 1 towards the DME control module and ground 	Battery positive voltage	Repair wiring harness
3	Check connection to ground	<ul style="list-style-type: none"> ◆ Check wire from pin 2 to DME control module pin II/1 for continuity. 	0 - 5 Ω	

**Note!**

- ◆ *Faults are recorded in this test Erase the fault memory.*
- ◆ *Do not exchange oxygen sensors ahead of catalytic converter and after catalytic converter.*

Oxygen sensors ahead of and after catalytic converter

- 1 - Oxygen sensor ahead of catalytic converter
- 2 - Oxygen sensor after catalytic converter

**373 Oxygen Sensor Heating After TWC, Bank 1 – Below Limit****Diagnosis conditions**

- Engine running

Possible fault cause

- ◆ Short circuit to ground

Affected terminals

II/1

Diagnosis/Troubleshooting**Note!**

Do not use contact spray on the connectors to oxygen sensor.

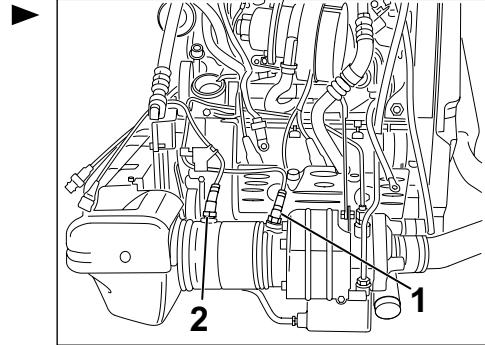
Work instruction		Display OK	If not OK
1	Check oxygen sensor	$\infty \Omega$	Replace oxygen sensor
2	Check pin 2 wiring for short to ground	$\infty \Omega$	Repair wiring harness

i Note!

Do not exchange oxygen sensors ahead of catalytic converter and after catalytic converter.

Oxygen sensors ahead of and after catalytic converter

- 1 - Oxygen sensor ahead of catalytic converter
- 2 - Oxygen sensor after catalytic converter

**373 Oxygen Sensor Heating After TWC, Bank 1 – Above Limit****Diagnosis conditions**

- Engine running

Possible fault cause

- ♦ Resistance of the oxygen sensor heating too low
- ♦ Short circuit to B+

Affected terminals

II/1

Diagnosis/Troubleshooting

**Note!**

Do not use contact spray on the connectors to oxygen sensor.

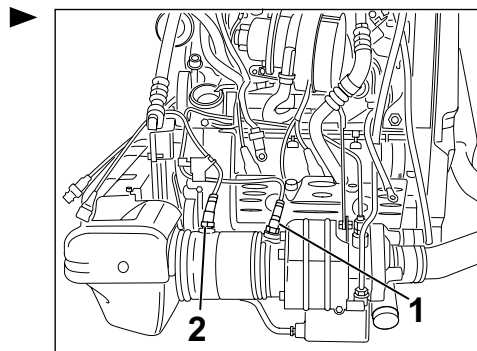
Work instruction		Display OK	If not OK	
1	Check oxygen sensor heating	<ul style="list-style-type: none"> ◆ Remove oxygen sensor connector after catalytic converter Bank 2 ◆ Check resistance between pin 1 and 2 towards the oxygen sensor 	9 to 10 Ω at 20 °C	Replace oxygen sensor
2	Check pin 2 wiring for short to B+	<ul style="list-style-type: none"> ◆ Remove DME control module connector ◆ Start the engine ◆ Measure voltage between pin 2 and ground 	0 V	Repair wiring harness

**Note!**

- ◆ *Faults are recorded in this test Erase the fault memory.*
- ◆ *Do not exchange oxygen sensors ahead of catalytic converter and after catalytic converter.*

Oxygen sensors ahead of and after catalytic converter

- 1 - Oxygen sensor ahead of catalytic converter
- 2 - Oxygen sensor after catalytic converter



P0197

125 Oil temperature sensor - below limit

Diagnosis conditions

- Idle speed
- Time elapsed after engine start-up greater than 5 minutes

Possible fault cause

- ◆ Temperature sensor faulty
- ◆ Wiring harness
- ◆ DME control module faulty

Affected terminals

Terminal III/5 and III/17

Resistance values

60 °C	2.8 - 3.5 kΩ
90 °C	1.0 - 1.3 kΩ
120 °C	0.4 - 0.6 kΩ