

Output Diagnostic Test Mode (DTM) (function 03)

Notes:

- ◆ *Output Diagnostic Test Mode (DTM) is only possible with engine idle and ignition switched on.*
- ◆ *Output Diagnostic Test Mode (DTM) is aborted if engine is started or an RPM signal is recognized.*
- ◆ *In output Diagnostic Test Mode (DTM), individual actuators (with the exception of the fuel injectors) are activated for approximately 1 minute unless the next actuator is selected earlier by pressing the " button.*
- ◆ *Actuators are checked either acoustically or by touch.*
- ◆ *The electric Fuel Pump (FP) runs during all of output Diagnostic Test Mode (DTM).*
- ◆ *Engine must be started before repeating output Diagnostic Test Mode (DTM). (ECM must recognize an engine speed of above 300 RPM).*

Output Diagnostic Test Mode (DTM) activates the following components in the specified sequence:

Activation sequence	
1	Evaporative Emission (EVAP) canister purge regulator valve -N80-
2	Secondary Air Injection (AIR) solenoid valve -N112-
3	Secondary Air Injection (AIR) pump relay - J299-
4	Intake manifold change-over valve -N156-
5	Camshaft adjustment 1 (Valve 1 for camshaft adjustment -N205- and valve 2 for camshaft adjustment -N208-)
6	Leak Detection Pump (LDP) tank ventilation system
7	Cylinder 1 fuel injector -N30-
8	Cylinder 4 fuel injector -N33-
9	Cylinder 3 fuel injector -N32-
10	Cylinder 6 fuel injector -N84-
11	Cylinder 2 fuel injector -N31-
12	Cylinder 5 fuel injector -N83-

Test requirement:

- Fuses for engine electronics OK

Test sequence

- Connect VAS5051 tester or VAG1551 scan tool and select the control module for engine electronics using "address word" 01 ⇒ [Page 01-9](#) .

Ignition must remain switched on for this.

Rapid data transfer HELP
Select function XX



When indicated on display:

- Press buttons -0- and -3- to select "output Diagnostic Test Mode" and press -Q- button to confirm input.

Rapid data transfer Q
03-Output Diagnostic Test Mode



Indicated on display:

Activating the EVAP canister purge regulator valve (tank vent valve)

- Confirm input using the -Q- button.

Note:

The Fuel Pump (FP) relay must trigger, the Fuel Pump (FP) must run, flowing noise at fuel pressure regulator is clearly audible. If Fuel Pump (FP) does not run, check activation ⇒ [Page 24-52](#) .

Output Diagnostic Test Mode →
EVAP canister purge regulator valve -N80

↖ Indicated on display:

(Indicated on VAG1551: from EVAP canister purge regulator valve - N80-)

This valve is activated for approx. 1 minute (clicks), unless → - button is pressed first to switch to the next actuator.

If valve is not activated (does not click):

- Check Evaporative Emission (EVAP) canister purge regulator valve - N80- ⇒ [Page 24-128](#) .

Activating the Secondary Air Injection (AIR) solenoid valve

- Press →button.

Output Diagnostic Test Mode →
Secondary air injection solenoid valve -N112

↖ Indicated on display:

This valve is activated for approx. 1 minute (clicks), unless → - button is pressed first to switch to the next actuator.


If valve is not activated (does not click):

- Check Secondary Air Injection (AIR) solenoid valve -N112-:

⇒ Repair Manual, Engine Mechanical, Repair Group 26; Secondary Air Injection (AIR) system

Activating the Secondary Air Injection (AIR) pump relay

- Press →button.

Output Diagnostic Test Mode 
Secondary air injection pump relay -J299

◀ Indicated on display:

The Secondary Air Injection (AIR) pump relay -J299- (in 3-socket relay carrier in the E-box, at left in the plenum chamber , position 2) switches the Secondary Air Injection (AIR) pump motor -V101- on for approx. 1 minute in intervals unless the next actuator is selected first by pressing the → button.


If the Secondary Air Injection (AIR) pump motor -V101- does not run in intervals:

- Check Secondary Air Injection (AIR) pump relay -J299-:

⇒ Repair Manual, Engine Mechanical, Repair Group 26; Secondary Air Injection (AIR) system

Activating intake manifold change-over valve

- Press →button.

Output Diagnostic Test Mode 
Intake manifold changeover valve -N156

◀ Indicated on display:

This valve is activated for approx. 1 minute (clicks), unless → - button is pressed first to switch to the next actuator.

If valve is not activated (does not click):

- Check intake manifold change-over valve -N156- ⇒ [Page 24-67](#)

Activating camshaft adjustment valves

- Press → button.

Output Diagnostic Test Mode →
Camshaft adjustment 1



Indicated on display:

Valve -1- for camshaft adjustment -N205- and valve -2- for camshaft adjustment -N208- are activated for approximately 1 minute (they click) unless output Diagnostic Test Mode (DTM) is ended first by pressing the " " button

If valves are not activated (do not click).

- Check camshaft adjustment valves:

⇒ Repair Manual, Engine Mechanical, Repair Group 15; Camshaft adjustment, checking; Function of camshaft adjustment, checking

Activating Leak Detection Pump (diagnostic pump for tank ventilation system)

- Press → button.

Output Diagnostic Test Mode →
Leak detection pump Tank vent valve system



Indicated on display:

The change-over valve in the LDP is activated for approximately 1 minute (clicks), unless → button is pressed first to switch to the next actuator.

Note:

The click can be heard by listening near the rear left wheelhousing.

If valve is not activated (does not click):

⇒ [Repair Manual, Fuel Supply System, Repair Group 20; components of the EVAP canister system, servicing; Leak Detection Pump \(LDP\) - V144-, checking.](#)

Activating fuel injectors**Note:**

Fuel injectors are activated according to ignition sequence: Cyl. 1, Cyl. 4, Cyl. 3, Cyl 6 Cyl. 2, Cyl 5.

- Press → button.



Indicated on display:

- Press → button.



Indicated on display:

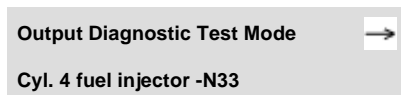
Fuel injector must click 5 times after arrow button is pressed.

Output Diagnostic Test Mode →
Cyl. 1 fuel injector -N30

Output Diagnostic Test Mode →
Cyl. 1 fuel injector -N30

If injector does not click:

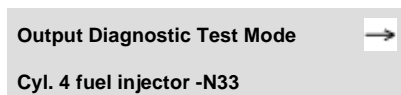
- Check fuel injectors ⇒ [Page 24-36](#) .



- Press →button.

↩ Indicated on display:

- Press →button.



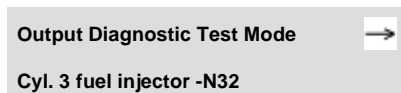
↩ Indicated on display:

Fuel injector must click 5 times after arrow button is pressed.

If injector does not click:

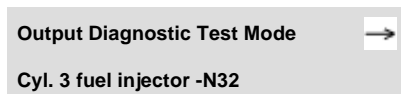
- Check fuel injectors ⇒ [Page 24-36](#) .

- Press →button.



↩ Indicated on display:

- Press →button.

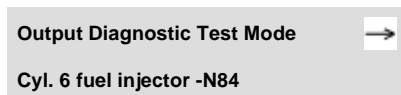


↩ Indicated on display:

Fuel injector must click 5 times after arrow button is pressed.

If injector does not click:

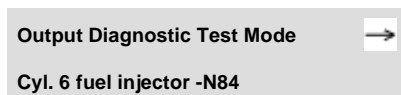
- Check fuel injectors ⇒ [Page 24-36](#) .



- Press →button.

↩ Indicated on display:

- Press →button.



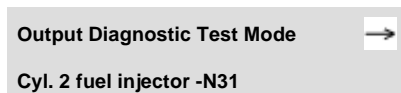
↩ Indicated on display:

Fuel injector must click 5 times after arrow button is pressed.

If injector does not click:

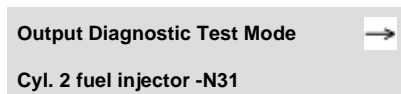
- Check fuel injectors ⇒ [Page 24-36](#) .

- Press →button.



↩ Indicated on display:

- Press →button.

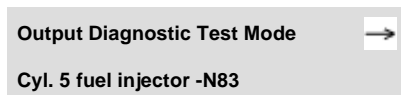


↩ Indicated on display:

Fuel injector must click 5 times after arrow button is pressed.

If injector does not click:

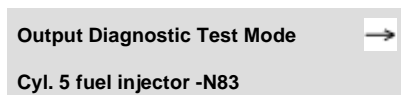
- Check fuel injectors ⇒ [Page 24-36](#) .



- Press →button.

← Indicated on display:

- Press →button.

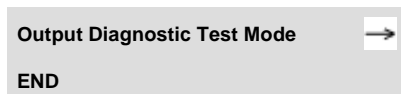


← Indicated on display:

Fuel injector must click 5 times after arrow button is pressed.

If injector does not click:

- Check fuel injectors ⇒ [Page 24-36](#) .



← Indicated on display:

- Press →button.



← Indicated on display (function selection):

Note:

Before re-initiating output Diagnostic Test Mode (DTM), engine must be started and the ignition must be switched off and on again.