

System in basic setting 41 $\Rightarrow$

1 2 3 4

- Press Ckey.
- Press keys 0, 4 and 2 for "display group number 42" and confirm entry with Q key.

	Display zones			
	1	2	3	4
Display group 42: Lambda probe heating, bank 2 at idling speed				
Display	xxx kOhm	Htg. bC. ON	xxx kOhm	Htg. aC. ON
Display	Bank 2, probe 1	Status of heating	Bank 2, probe 2	Status of heating
Range		Htg. bC. ON		Htg. aC. ON
		Htg. bC. OFF		Htg. aC. OFF
Specified value	Smaller than 2 kOhm	Htg. bC. ON	Smaller than 2 kOhm	Htg. aC. ON
Note:	Notes see below		Notes see below	

Important notes for display groups 41 and 42: Display zones 1 and 3:

- ◆ If the lambda probes have not reached their operating temperature there is no display in display zones 1 and 3, i.e. both zones are empty. (Increase engine speed to achieve specified values).
- ◆ After reaching the operating temperature of both lambda probes a resistance of lower than 0.9 Ohm must be shown in display zones 1 and 3.
- ◆ Only carry on with test when a resistance value lower than 0.9 kOhm is shown in display zones 1 and 3.

- Press C key.

Operation 6: Diagnosis of lambda probe ageing upstream of catalytic converter

Test conditions

- Increase engine speed until exhaust temperature 200 °C display zone 2 has been reached.

→ Indicated on display

- Enter "034" for "display group number 034" and confirm entry with Q key.

→ Display readout:

- Check specification in display zone 4:

Initiate basic setting Q
Enter display group number XXX

System in basic setting 34 ⇒
1 2 3 4

	Display zones			
	1	2	3	4
Display group 034: Lambda probe ageing, lambda probe upstream of catalytic converter (bank 1)				
Display	xxx rpm	xxx °C	x.x s	Test ON
Display	Engine speed	Exhaust gas temperature	Period Lambda probe upstream of catalytic converter	Diagnosis status
Range	min.: 550 rpm max.: 7200 rpm	70...850 °C	0.0...3.0 seconds	Test OFF Test ON B1-P1 OK B1-P1 NOK
Specified value	670...820 rpm	Above 200 °C	0.1...1.8 seconds	B1-P1 OK
Note:			If "B1-P1 NOK" is displayed: Interrogate fault memory => Page 01-21.	

If the specified value in display zone 4 "B1-S1 OK" is attained:

- Press C key.
- Press keys 0, 3 and 5 for "display group number 35" and confirm entry with Q key.

	Display zones			
	1	2	3	4
Display group 035: Lambda probe ageing, lambda probe upstream of catalytic converter (bank 2)				
Display	xxx rpm	xxx °C	x.x s	---
Display	Engine speed	Exhaust gas temperature	Period Lambda probe upstream of catalytic converter	Diagnosis status
Range	min.: 550 rpm max.: 7200 rpm	70...850 °C	0.0...3.0 seconds	Test OFF Test ON B2-P1 OK B2-P1 NOK
Specified value	670...820 rpm	Above 200 °C	0.1...1.8 seconds	B2-P1 OK
Note:			If "B2-P1 NOK" is displayed: Interrogate fault memory => Page 01-21.	

If the specified value in display zone 4 "B1-S1 OK" is attained:

- Press C key.

Operation 7: Diagnosis of lambda probe condition downstream of catalytic converter.

- Engine idling

→ Indicated on display

- Enter "036" for "display group number 036" and confirm entry with Q key.

→ Display readout:

- Check specified values in display zones 2 and 4.

Initiate basic setting Q
Enter display group number XXX

System in basic setting 36 ⇒
1 2 3 4

	Display zones			
	1	2	3	4
Display group 036: Condition of lambda probe downstream of catalytic converter (banks 1 and 2)				
Display	x.xxx V	Test ON	x.xxx V	Test ON
Display	Voltage of lambda probe downstream of catalytic converter, bank 1	Diagnosis status	Voltage of lambda probe downstream of catalytic converter, bank 2	Diagnosis status
Range	0.000V...1.000 volts	Test OFF Test ON B1-P2 OK B1-P2 NOK	0.000V...1.000V	Test OFF Test ON B2-P2 OK B2-P2 NOK
Specified value	Lower than 0.4 volts or greater than 0.5 volts	B1-P2 OK	lower than 0.4 volts or greater than 0.5 volts	B2-P2 OK
Note:			If "B1-S2 not OK" is displayed interrogate fault memory => Page 01-21	If "B2-S2 not OK" is displayed interrogate fault memory => Page 01-21

If the specified value in

display zone 2 "B1-S2 OK" and in

display zone 4 "B2-S2 OK" is achieved:

- Press C key.

Operation 8: Diagnosis, lambda control system

- Engine idling

→ Indicated on display

- Enter "037" for "display group number 037" and confirm entry with Q key.

→ Display readout:

- Check specification in display zone 4:

Initiate basic setting Q
Enter display group number XXX

System in basic setting 37 ⇒
1 2 3 4

	Display zones			
	1	2	3	4
Display group 037: Lambda control system (bank 1)				
Display	xx.x %	x.xxx V	xxx ms	Test ON
Display	Load	Voltage of lambda probe downstream of catalytic converter, bank 1	Lambda correction value between lambda probe 1 and lambda probe 2; Bank 1	Diagnosis status
Range	0...175 %	0.000...1.000 volts	---	Test OFF Test ON Syst. OK Syst. NOK
Specified value	14...24 %	0.000...1.000 volts	-800ms...800ms	Syst. OK
Note:			If "syst. NOK" is displayed interrogate fault memory => Page 01-21.	

If specified value in display zone 4 "Syst OK" is attained:

- Press C key.
- Press keys 0, 3 and 8 for "display group number 38" and confirm entry with Q key.

	Display zones			
	1	2	3	4
Display group 038: Lambda control system (bank 2)				
Display	xx.x %	x.xxx V	xxx ms	Test ON
Display	Load	Voltage of lambda probe downstream of catalytic converter, bank 2	Lambda correction value between lambda probe 2 and lambda probe 2; Bank 1	Diagnosis status
Range	0...175 %	0.000...1.000 volts	---	Test OFF Test ON Syst. OK Syst. NOK
Specified value	14...24 %	0.000...1.000 volts	-800ms...800ms	Syst. OK
Note:			If "syst. NOK" is displayed interrogate fault memory => Page 01-21.	

If the specified value in display zone 4 "Syst OK" is attained:

- – Press C key.

Operation 9: Catalytic converter diagnosis

→ Indicated on display

- – Enter "046" for "display group number 046" and confirm entry with Q key.

→ Display readout:

- • Increase engine speed to approx. 3000 rpm until the exhaust temperature 550 °C (display zone 2) is reached, and then leave engine idling.
- – Check specification in display zone 4:

Note:

The test duration for the catalytic converter diagnosis is approx. 60 seconds.

	Display zones			
	1	2	3	4
Display group 046: Catalytic converter diagnosis (bank 1)				
Display	xxx rpm	xxx °C	x.x s	---
Display	Engine speed	Exhaust gas temperature	Catalyst conversion	Diagnosis status
Range	min.: 550 rpm max.: 7200 rpm	70...850 °C	0.0...1.0 seconds	Test OFF Test ON Cat. B1 OK Cat. B1 NOK
Specified value	670...820 rpm	400...540 °C	0.0...0.73 s	Cat. B1 OK
Note:				If "Cat. B1 NOK" is displayed: Interrogate fault memory => Page 01-21 . If no fault is stored, replace the catalytic converter.

If the specified value in display zone 4 "Cat B1 OK" is attained:

- – Press C key.
- – Press keys 0, 4 and 7 for "display group number 47" and confirm entry with Q key.

	Display zones			
	1	2	3	4
Display group 047: Catalytic converter diagnosis (bank 2)				
Display	xxx rpm	xxx °C	x.x s	---
Display	Engine speed	Exhaust gas temperature	Catalyst conversion	Diagnosis status
Range	min.: 550 rpm max.: 7200 rpm	70...850 °C	0.0...1.0 seconds	Test OFF Test ON Cat. B2 OK Cat. B2 NOK
Specified value	670...820 rpm	400...540 °C	0.0...0.73 s	Cat. B2 OK
Note:				If "Cat. B2 NOK" is displayed: Interrogate fault memory => Page 01-21 . If no fault is stored, replace the catalytic converter.

If the specified value in display zone 4 "Cat B2 OK" is attained:

- – Press C key.

Operation 10: Diagnosis of secondary air system

- • Increase engine speed to approx. 1800...2400 rpm use speed adjuster V.A.G 1788/10 to keep the engine speed.

→ Indicated on display

- – Enter "077" for "display group number 077" and confirm entry with Q key.

→ Display readout:

- – Check specification in display zone 4:

Note:

Duration of test of catalytic converter diagnosis is approx. 60 seconds.

	Display zones			
	1	2	3	4
Display group 077: Diagnosis secondary air system (Bank 1)				
Display	xxxx rpm	xx.x g/s	xx %	Test ON
Display	Engine speed	Exhaust gas temperature	Catalyst conversion	Diagnosis status
Range	min.: 550 rpm max.: 7200 rpm			Test OFF Test ON Syst. OK Syst. NOK Cancel
Specified value	1800...2400 rpm	Greater than 14 g/s	-70 %...30 %	Syst. OK
Note:				If "Syst. NOK" is displayed: Interrogate fault memory => Page 01-21 .

If specified value in display zone 4 "Syst OK" is attained:

- – Press C key.
- – Press keys 0, 7 and 8 for "display group number 78" and confirm entry with Q key.

	Display zones			
	1	2	3	4
Display group 078: Diagnosis secondary air system (Bank 2)				
Display	xxxx rpm	xx.x g/s	xx.x %	Test ON
Display	Engine speed	Exhaust gas temperature	Catalyst conversion	Diagnosis status
Range	min.: 550 rpm max.: 7200 rpm			Test OFF Test ON Syst. OK Syst. NOK Cancel
Specified value	1800...2400 rpm	Greater than 14 g/s	-70 %...30 %	Syst. OK
Note:				If "Syst. NOK" is displayed: Interrogate fault memory => Page 01-21 .

If specified value in display zone 4 "Syst OK" is attained:

- – Press ⇒ key.

Operation 11: Reading out readiness code

- – Read out readiness code (for control reasons) again => Page [01-112](#).

Initiate basic setting Q

Enter display group number XXX

System in basic setting 46 ⇒
1 2 3 4

Initiate basic setting Q

Enter display group number XXX

System in basic setting 77 ⇒
1 2 3 4