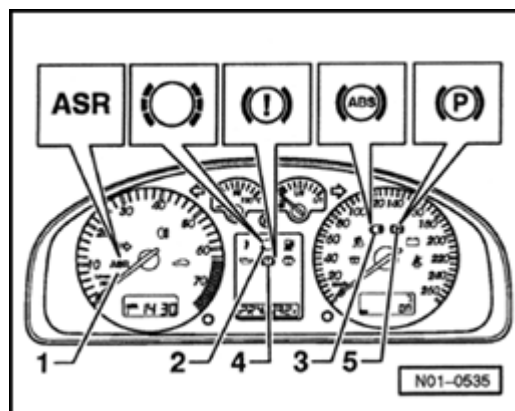


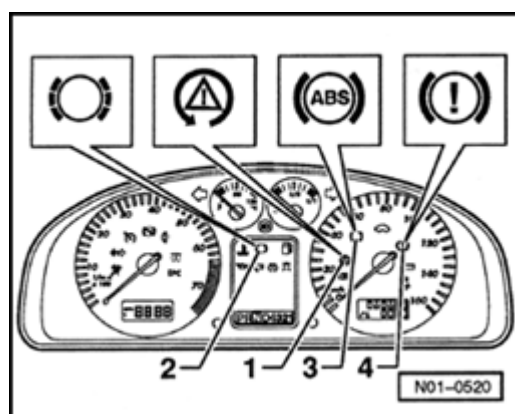
## Malfunctions displayed by warning lights

### ABS/EDL/ASR Bosch 5.3



### Warning lights (previous instrument cluster)

Item	Designation
1	Traction Control Indicator Lamp K86
2	Brake Pad Wear Indicator Lamp K32
3	ABS warning lamp K47
	Brake System Warning Lamp K118
5	Brake and Parking Brake Warning Lamp K7

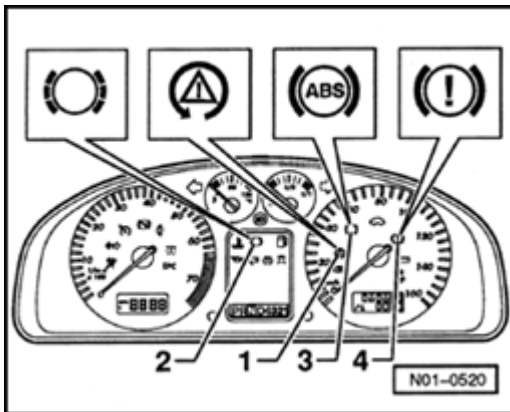


### Warning lamps

Item	Designation
1	Traction Control Indicator Lamp K86 (ASR)
2	Brake Pad Wear Indicator Lamp K32

3	ABS warning lamp K47
4	Brake System Warning Lamp K118

**In the new instrument clusters, the function of the brake and parking brake warning lamp K7 is replaced by the brake system warning lamp K118 .**



#### ABS warning lamp K47

- If the ABS warning lamp K47 - **3** - does not go out after the ignition is switched on and the test sequence is completed, the malfunction may be:

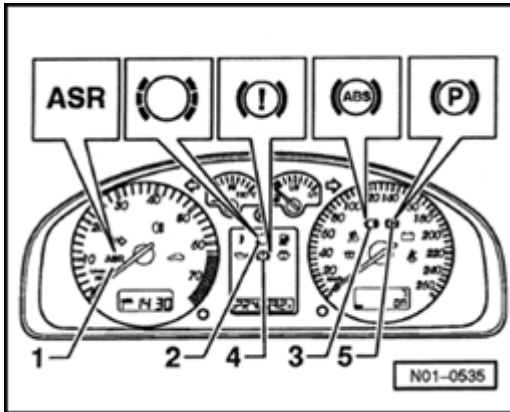
- **a** - Voltage supply is below 10 Volt.
- **b** - There is a malfunction in the hydraulic control unit; the ABS system is not operational.

A braking behavior change should be checked. When the ABS warning lamp comes on the rear wheels can lock-up when braking!

- **c** - Since the last time the vehicle was started there was a temporary wheel speed sensor malfunction.

In this case the ABS warning lamp will go out after the engine is restarted and the vehicle speed exceeds 2.75 km/h.

- **d** - The connection from instrument cluster to ABS control module J104 is interrupted ⇒ *Electrical Wiring Diagrams, Troubleshooting and Component Locations binder* .
- **e** - The ABS warning lamp is faulty.



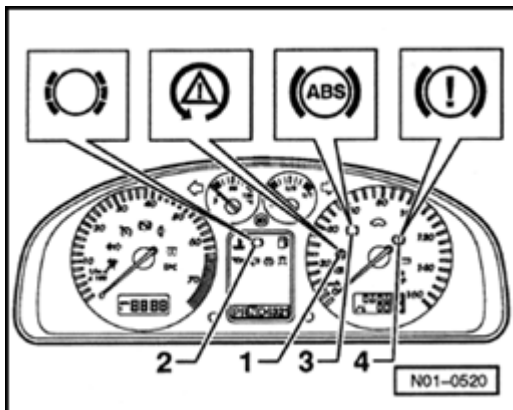
ABS warning lamp K47 and brake system warning lamp K118

- If the ABS warning lamp K47 - **3** - goes out, but the brake system warning lamp K118 - **4** - lights up, the malfunction may be:

- **a** - The brake fluid level is too low.

Three warning tones are audible after switching on the ignition.

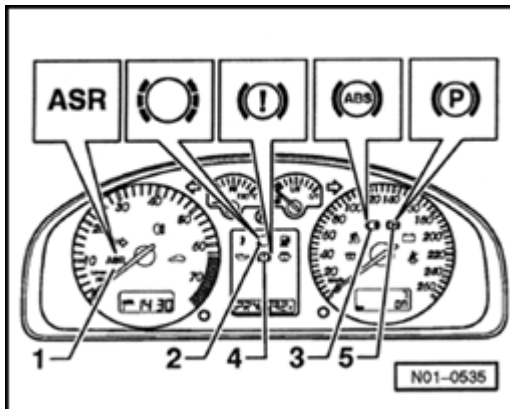
- **b** - There is a malfunction in the wiring to brake system warning lamp K118 ⇒ *Electrical Wiring Diagrams, Troubleshooting and Component Locations binder* .



- If the ABS warning light K47 - **3** - and the brake system warning lamp K118 - **4** - both light up, the ABS system is faulty. A braking behavior change should be checked.

### **Warning!**

**After the ABS warning lamp K47 and brake system warning lamp K118 have lit up, it is possible that the rear wheels will lock-up.**



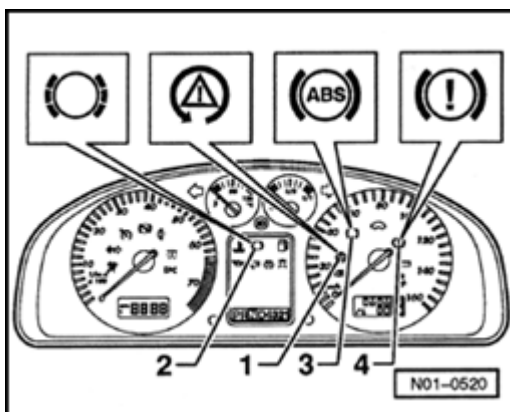
### Traction Control Indicator Lamp K86

- If the Traction Control Indicator Lamp K86 - **1** - does not go out after the ignition is switched on and the test sequence is completed, the malfunction may be:

There is a malfunction present which only affects the ASR. The ABS and EDL systems on the vehicle remain fully functional checking of Diagnostic Trouble Code (DTC) memory.

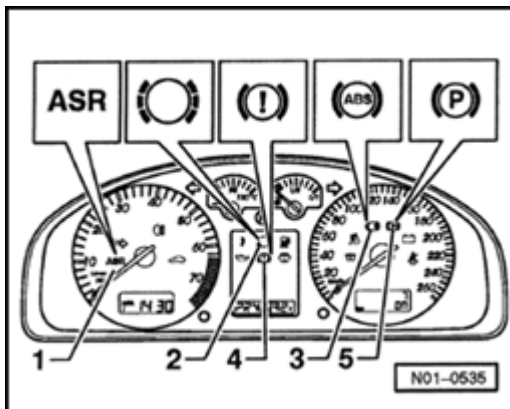
- **a** - Short to positive in ASR button.

The ASR warning lamp turns off 5 minutes after switching on the ignition.



- **b** - A short to Ground (GND) in the activation of the ASR warning lamp.

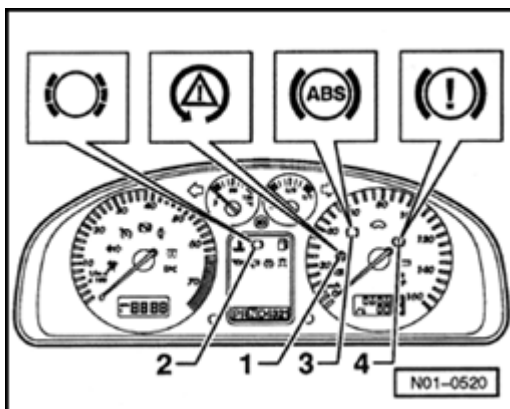
In this case, check the wiring from terminal 20 of the ABS control module J104 to the instrument cluster.



- **c** - The ABS control module J104 was improperly coded after a malfunction and replacement of the hydraulic control unit.

In this case, first check the DTC memory. Then recode ABS control module J104 ⇒ *Coding the control module with the Vehicle diagnostic, test and information system VAS 5051 in "Guided Fault Finding"* .

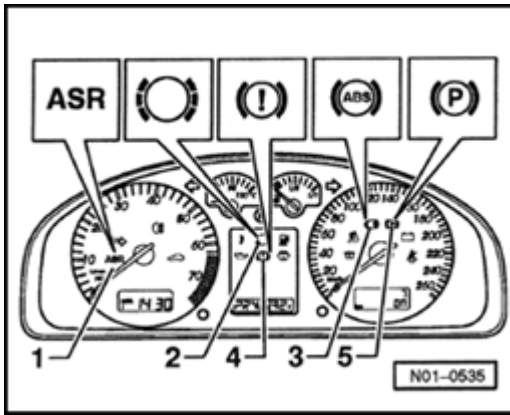
- If the Traction Control Indicator Lamp K86 - **1** - does not light up during the self test, the malfunction may be:



- **a** - The Traction Control Indicator Lamp K86 is faulty.

⇒ *Repair Manual, Brake System On Board Diagnostic (OBD) , Repair Group 01,*

Checking DTC memory



ABS warning lamp K47 , Traction Control Indicator Lamp K86 and Brake System Warning Lamp K118

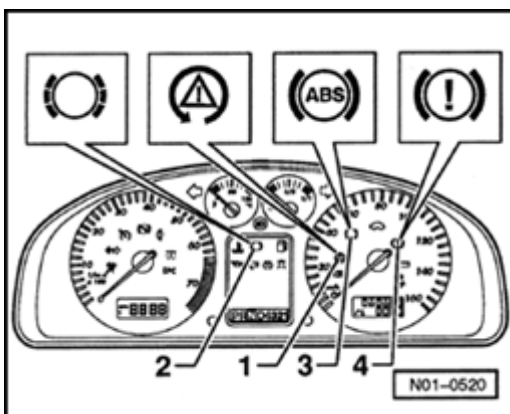
- If the ABS Warning Lamp K47 - **3** - , the Traction Control Indicator Lamp K86 - **1** - and the Brake System Warning Lamp K118 - **4** - do not turn off, the malfunction may be:

- **a** - Voltage supply for ABS system is below 10 volts and the vehicle speed is less than 12 km/h (approx. 7.5 mph).

⇒ [Repair Manual, Brake System On Board Diagnostic \(OBD\) , Repair Group 01.](#)

Checking DTC memory

- **b** - There is a malfunction in the hydraulic control unit; the ABS system is not operational.

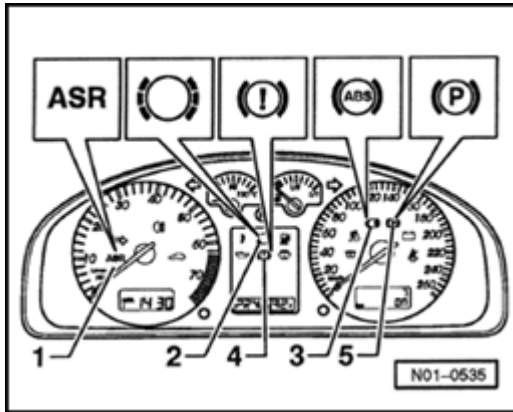


A braking behavior change should be checked. The rear wheels can lock-up when braking!

- **c** - A dynamic ABS wheel speed sensor malfunction was present during the last driving period.

In this case the warning lamps go out automatically after

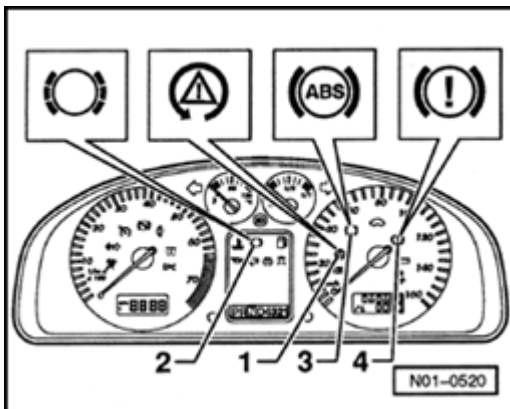
the vehicle is restarted again and a speed of 2.75 km/h (approx. 1.7 mph) is exceeded. Check the DTCs on the speed sensor and clear all codes and check that the DTCs no longer appear.



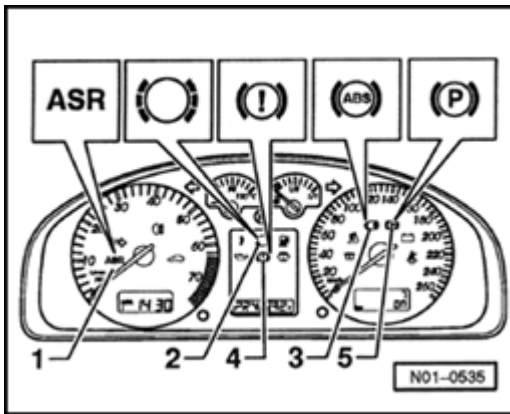
- The ABS warning light K47 - **3** - and the Traction Control Indicator Lamp K86 - **1** - are lit after the ignition is switched on and the test sequence is completed. The malfunction may be:

A braking behavior change should be checked. When the ABS warning lamp comes on the rear wheels can lock-up early when braking!

- **a** - There is an interruption or a short to battery positive (B+) in the wiring from terminal 21 of the ABS Control Module J104 to the instrument cluster, that controls the activation of the ABS Warning Lamp K47 checking of Diagnostic Trouble Code (DTC) memory.



- **b** - Voltage supply for ABS system is below 10 volts and the vehicle speed is less than 12 km/h (approx. 7.5 mph) checking of Diagnostic Trouble Code (DTC) memory.

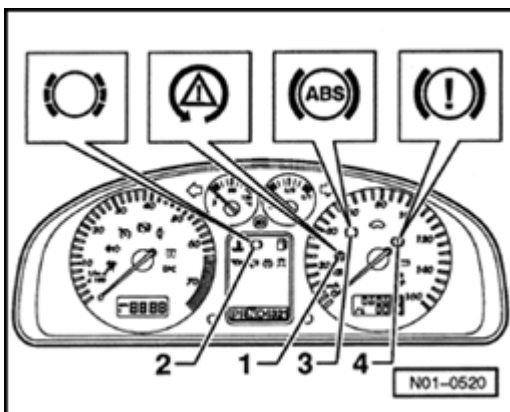


### Brake and Parking Brake Warning Lamp K7

**In new instrument clusters, the function of the Brake and Parking Brake Warning Lamp K7 is replaced by the Brake System Warning Lamp K118 .**

- If the Brake and Parking Brake Warning Lamp K7 - 5 - does not turn off after switching the ignition on, the malfunction may be:

- **a** - The parking brake is applied.
- **b** - The switch for the Brake and Parking Brake Warning Lamp K7 is faulty or incorrectly adjusted.
- **c** - There is a wire routing malfunction ⇒ *Electrical Wiring Diagrams, Troubleshooting and Component Locations binder* .



### Brake Pad Wear Indicator Lamp K32

This warning lamp is not equipped in all vehicles.

- If the Brake Pad Wear Indicator Lamp K32 - 2 - does not turn off 3 seconds after the ignition is switched on, or it comes on during a drive, the malfunction may be:

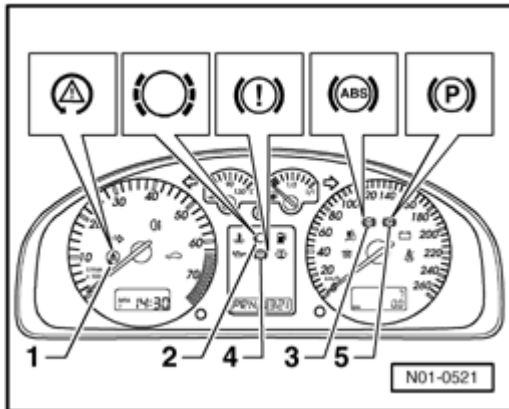


- **a** - The brake pads are worn.

Check front and rear axle brake pads. Replace worn brake pads ⇒ [46-1, Front brakes, servicing](#) .

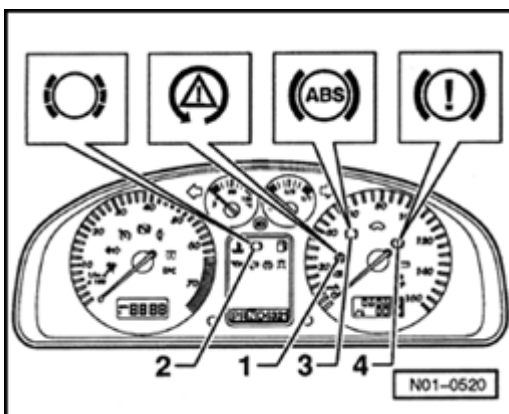
- **b** - There is a wire routing malfunction ⇒ *Electrical Wiring Diagrams, Troubleshooting and Component Locations binder* .

### ABS/EDL/ASR/ESP



### Warning lamps (previous instrument cluster)

Item	Designation
1	ASR/ESP Control Lamp K155
2	Brake Pad Wear Indicator Lamp K32
	ABS warning lamp K47
4	Brake System Warning Lamp K118
5	Brake and Parking Brake Warning Lamp K7

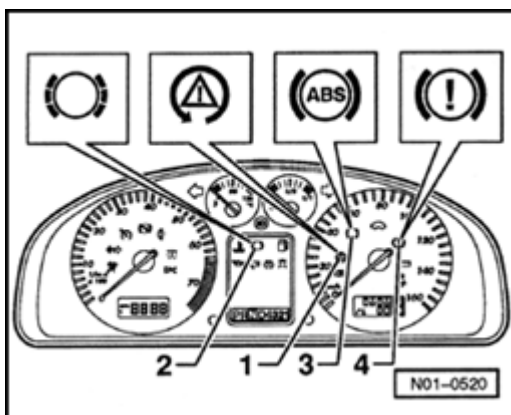


### Warning lamps

Item	Designation
1	ASR/ESP Control Lamp K155
2	Brake Pad Wear Indicator Lamp K32
3	ABS warning lamp K47
4	Brake System Warning Lamp K118

**In new instrument clusters, the function of the brake and parking brake warning lamp K7 is replaced by the brake system warning lamp K118 .**

ABS warning lamp K47



- If the ABS warning light K47 - **3** - does not go out after the ignition is switched on and the test sequence is completed, the malfunction may be:

- **a** - Voltage supply is below 10 Volt.
- **b** - There is a malfunction in the ABS.

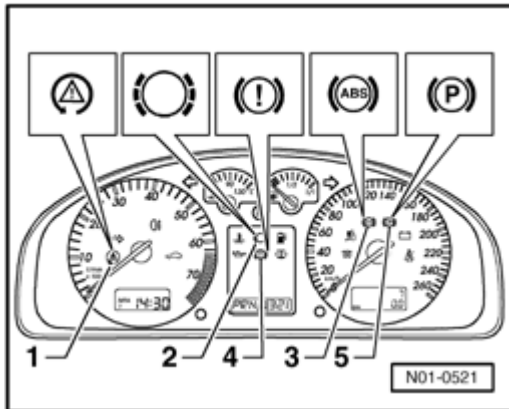
The anti-locking brake system remains switched off with an ABS malfunction - **b** - , but the brake system remains fully operational.

- **c** - Since the last time the vehicle was started there was a temporary speed sensor malfunction.

In this case the ABS warning light will go out after the engine is restarted and the vehicle speed exceeds 2.75 km/h.

- **d** - The connection from instrument cluster to ABS control module J104 is interrupted ⇒ *Electrical Wiring Diagrams, Troubleshooting and Component Locations binder* .

- **e** - The ABS warning lamp is faulty.



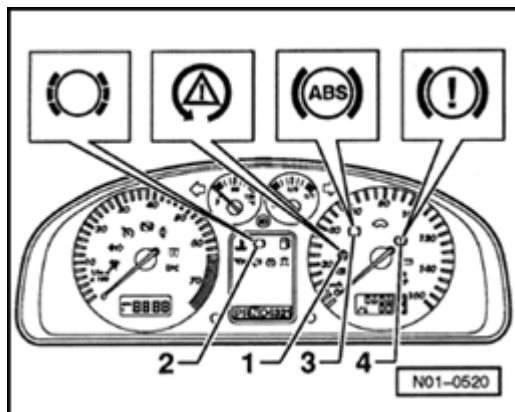
ABS warning lamp K47 and brake system warning lamp K118

- If the ABS warning lamp K47 - **3** - goes out, but the brake system warning lamp K118 - **4** - lights up, the malfunction may be:

- **a** - The brake fluid level is too low.

Three warning tones are audible after switching on the ignition.

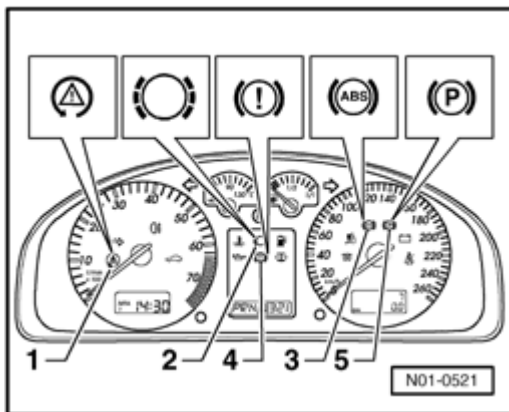
- **b** - There is a malfunction in the wiring to brake system warning lamp K118 ⇒ *Electrical Wiring Diagrams, Troubleshooting and Component Locations binder* .



- If the ABS warning light K47 - **3** - and the brake system warning lamp K118 - **4** - both light up, the ABS system is faulty. A braking behavior change should be checked.

### **Warning!**

**After the ABS warning lamp K47 and brake system warning lamp K118 have lit up, it is possible that the rear wheels will lock-up early.**

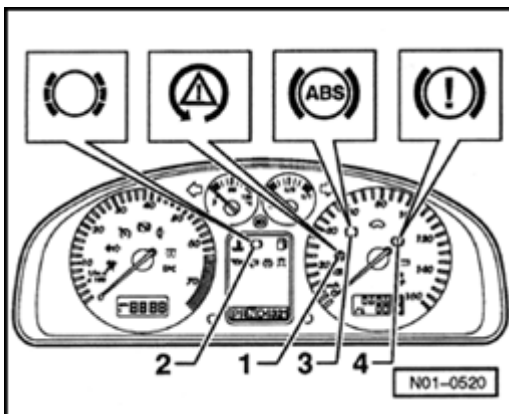


### ASR/ESP Control Lamp K155

- If the ASR/ESP Control Lamp K155 - **1** - does not turn off after the ignition is switched on and the test sequence is completed, the malfunction may be:

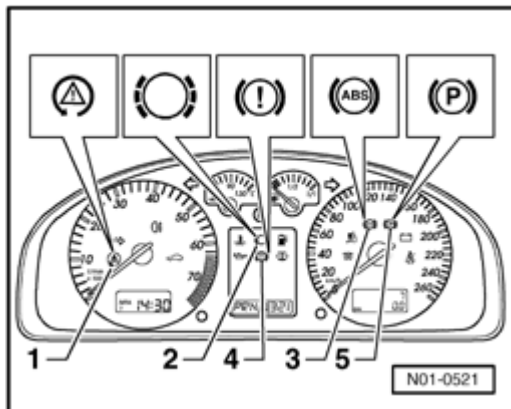
There is a malfunction present which only affects the ASR/ESP. The ABS/EDL system on the vehicle remain fully functional checking of Diagnostic Trouble Code (DTC) memory.

- **a** - Short to positive in ASR/ESP button.



- **b** - A short to Ground (GND) in the activation of the ASR/ESP warning lamp.
- **c** - The wiring from instrument cluster to terminal 31 of ABS control module J104 is interrupted.
- **d** - The ASR/ESP system has been switched off via ASR/ESP Button E256 .

**If ASR/ESP control lamp K155 flashes while driving, the ASR or ESP systems are regulating the system.**

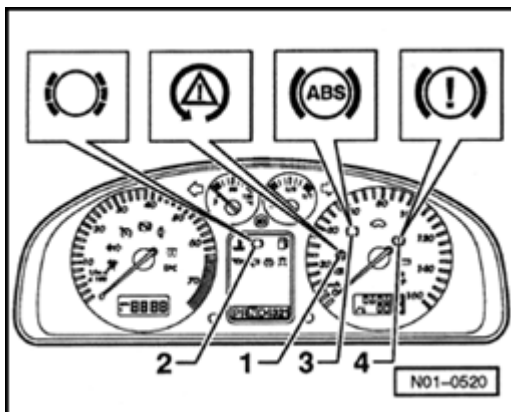


- If the ASR/ESP Control Lamp K155 - **1** - does not light up during the self test, the malfunction may be:

- **a** - The ASR/ESP warning lamp is faulty    Perform electrical test.

ABS warning lamp K47 and ASR/ESP control lamp K155

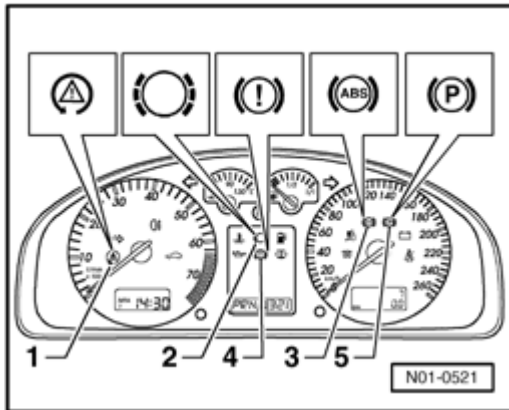
- If the ABS warning light K47 - **3** - and the ASR/ESP control lamp K155 - **1** - do not turn off after the ignition is switched on and the test sequence is completed, the malfunction may be:



- **a** - Voltage supply for ABS system is below 10 volts and the vehicle speed is less than 12 km/h (approx. 7.5 mph) checking of Diagnostic Trouble Code (DTC) memory.

- **b** - A short to positive (B+) in the activation of the ABS warning light.

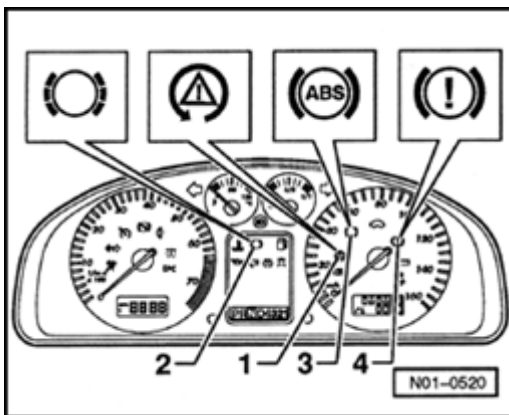
- **c** - Short to positive (B+) in ASR/ESP button.



ABS warning light K47 , Brake System Warning Lamp K118 and ASR/ESP Control Lamp K155

- If ABS Warning Lamp K47 - **3** - , the ASR/ESP Control Lamp K155 - **1** - and Brake System Warning Lamp K118 - **4** - do not turn off, the malfunction may be:

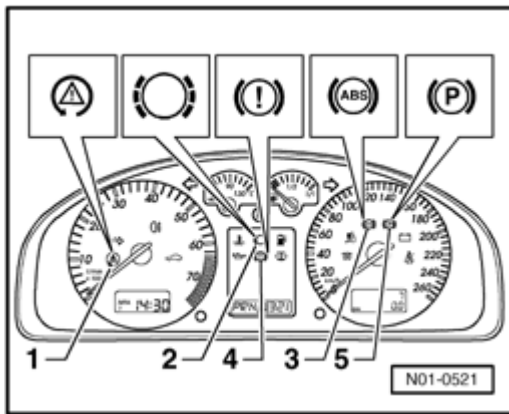
- **a** - Voltage supply for ABS system is below 10 volts and the vehicle speed is less than 12 km/h (approx. 7.5 mph)  
Perform electrical test.
- **b** - There is a malfunction in the hydraulic control unit;  
the ABS system is not operational.



A braking behavior change should be checked. The rear wheels can lock-up early when braking!

- **c** - A dynamic speed sensor malfunction was present during the last driving period.

In this case the warning lamps go out automatically after the vehicle is restarted again and a speed of 2.75 km/h (approx. 1.7 mph) is exceeded. Check the DTCs on the speed sensor and clear all codes and check that the DTCs no longer appear.



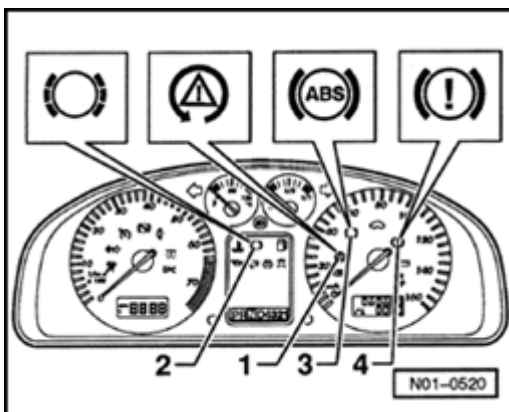
### Brake and Parking Brake Warning Lamp K7

**In new instrument clusters, the function of the brake and parking brake warning lamp K7 is replaced by the brake system warning lamp K118 .**

- If the Brake and Parking Brake Warning Lamp K7 - 5 - does not turn off after switching the ignition on, the malfunction may be:

- **a** - The parking brake is applied.
- **b** - The switch for the Brake and Parking Brake Warning Lamp K7 is faulty or incorrectly adjusted.
- **c** - There is a wire routing malfunction    checking of Diagnostic Trouble Code (DTC) memory.

**The parking brake switch informs the ABS control module J104 whether the parking brake is applied or not. When the parking brake is applied, the ESP control is negatively influenced.**



### Brake Pad Wear Indicator Lamp K32

This warning lamp is not equipped in all vehicles.

- If the Brake Pad Wear Indicator Lamp K32 - 2 - does not turn off 3 seconds after the ignition is

switched on, or it comes on during a drive, the malfunction may be:

- **a** - The brake pads are worn.

Check front and rear axle brake pads/linings. Replace worn brake pads/linings ⇒ [46-1, Front brakes, servicing](#) .

- **b** - There is a wire routing malfunction ⇒ *Electrical Wiring Diagrams, Troubleshooting and Component Locations binder* .