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## Message in instrument cluster "ESP Malfunction - Service Required"

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Topic number	LI42.47-P-048216
Version	9
Design group	42.47 Adaptive Brake (ABR)
Date	10-13-2014
Validity	BR221 with code 800/801/802/803 BR216 with code 800/801/802/803
Reason for change	Part number changed
Reason for block	

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### Complaint:

Message in instrument cluster "ESP Malfunction - Service Required" and/or "BAS Malfunction - Service Required" while vehicle is stationary.

After ignition OFF/ON, or while the vehicle is stationary with the engine running, the ESP warning lamp (yellow triangle) flashes and the transmission cannot be shifted out of "P".

### Note:

At least two of the following codes

- 5101 and/or
- 5102 and/or
- 5105 and/or
- 5106 and/or
- 5107 and/or
- 5111 and/or
- 5112 and/or
- 5115 and/or
- 5116 and/or
- 5117

must be present in the ESP control unit (ESP CU) (N47-5).

### Cause:

An implausible wheel speed sensor (DZS) signal is detected by the ESP CU.

### Remedy:

Check the part number of the DZS already installed:

a.) If part number A221 905 71 00 or A221 905 74 00 is installed, follow the test available in Xentry and replace the DZS if necessary.

b.) If part number A221 905 71 00 or A221 905 74 00 is not installed, replace both front DZS.

Symptoms
Chassis/suspension / Brake system / Service brake / Brakes, Display / Goes on
Chassis/suspension / Brake system / Brakes/traction regulation system / Antilock Brake System ABS / Display message / Antilock braking system - visit workshop
Chassis/suspension / Brake system / Brakes/traction regulation system / Electronic Stability Program ESP / Display message / Display text, yellow/white / Electronic stability program - visit workshop
Chassis/suspension / Brake system / Brakes/traction regulation system / Electronic Stability Program ESP / Display message / Display text, yellow/white / Electronic stability program not available
Chassis/suspension / Brake system / Brakes/traction regulation system / Brake assist system BAS / Display message / Brake assist - visit workshop
Chassis/suspension / Brake system / Brakes/traction regulation system / Brake assist system BAS / Display message / Brake assist - not available

Control unit/fault code		
Control unit	Fault code	Fault text
ABR-Adaptive Brake (ABRXT)	510600	L6/1 (left front speed sensor):The rotation direction is incorrect.
ABR-Adaptive Brake (ABRXT)	511600	L6/2 (right front speed sensor):The rotation direction is incorrect.
ABR-Adaptive Brake (ABRXT)	511700	L6/2 (right front speed sensor):Check installation of sensor and rotor.
ABR-Adaptive Brake (SBC3)	5112	L6/2 (right front speed sensor):Carry out visual inspection.
ABR-Adaptive Brake (ABRXT)	511100	L6/2 (right front speed sensor):Carry out visual inspection.
ABR-Adaptive Brake (ABRXT)	511500	L6/2 (right front speed sensor):Carry out visual inspection.
ABR-Adaptive Brake (ABRXT)	511200	L6/2 (right front speed sensor):Carry out visual inspection.
ABR-Adaptive Brake (SBC3)	5116	L6/2 (right front speed sensor):Carry out visual inspection.
ABR-Adaptive Brake (SBC3)	5115	L6/2 (right front speed sensor):Carry out visual inspection.
ABR-Adaptive Brake (SBC3)	5111	L6/2 (right front speed sensor):Carry out visual inspection.
ABR-Adaptive Brake (ABRXT)	510700	L6/1 (left front speed sensor):Check installation of sensor and rotor.
ABR-Adaptive Brake (SBC3)	5102	L6/1 (left front speed sensor):Carry out visual inspection.
ABR-Adaptive Brake (ABRXT)	510100	L6/1 (left front speed sensor):Carry out visual inspection.
ABR-Adaptive Brake (ABRXT)	510500	L6/1 (left front speed sensor):Carry out visual inspection.
ABR-Adaptive Brake (ABRXT)	510200	L6/1 (left front speed sensor):Carry out visual inspection.
ABR-Adaptive Brake (SBC3)	5105	L6/1 (left front speed sensor):Carry out visual inspection.
ABR-Adaptive Brake (SBC3)	5106	L6/1 (left front speed sensor):Carry out visual inspection.
ABR-Adaptive Brake (SBC3)	5101	L6/1 (left front speed sensor):Carry out visual inspection.

Parts						
Part number	ES1	ES2	Designation	Quantity	Note	EPC
A 221 905 71 00			Front axle rpm sensor	1	NOT 4MATIC	X
A 221 905 74 00			Front axle rpm sensor	1	4MATIC ONLY	X

Work units				
Op. no.	Operation text	Time	Damage code	Note
42-9873	REPLACE RPM SENSORS (BOTH) OF 1ST AXLE FOR ESP (AFTER CHECK)		43A08 73	43A08 - left 43N08 - right

WIS-References			
Document number	Title	Note	Allocation
AR42.30-P-0712	Remove/install left or right front rpm sensor		Remedy

Validity		
Vehicle	Engine	Transmission
216.371	*	*
216.376	*	*
216.377	*	*
216.379	*	*
216.386	*	*
221.022	*	*
221.028	*	*
221.054	*	*
221.056	*	*
221.070	*	*
221.071	*	*
221.077	*	*
221.080	*	*
221.084	*	*
221.086	*	*
221.087	*	*
221.122	*	*
221.128	*	*
221.154	*	*
221.156	*	*
221.170	*	*
221.171	*	*
221.176	*	*
221.177	*	*
221.179	*	*
221.180	*	*
221.184	*	*
221.186	*	*

221.187	*	*
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Full model designation breakdown		
Vehicle	Engine	Transmission
216.371	273.961	722.770
216.371	273.961	722.904
216.376	275.953	722.649
216.377	156.984	722.907
216.377	156.984	722.930
216.379	275.982	722.649
216.386	273.968	722.904
216.386	273.968	722.961
221.022	642.930	722.902
221.028	629.911	722.903
221.054	272.946	722.999
221.056	272.965	722.906
221.070	273.922	722.904
221.071	273.961	722.904
221.077	156.984	722.907
221.077	156.984	722.930
221.080	642.932	722.962
221.084	273.924	722.961
221.086	273.968	722.961
221.087	272.975	722.960
221.122	642.930	722.902
221.128	629.911	722.903
221.154	272.946	722.999
221.156	272.965	722.906
221.170	273.922	722.904
221.171	273.961	722.904
221.176	275.953	722.649
221.177	156.984	722.907
221.177	156.984	722.930
221.179	275.982	722.649
221.180	642.932	722.962
221.184	273.924	722.961
221.186	273.968	722.961
221.187	272.975	722.960