

Engine indicator lamp lights up and/or PreSafe, Blind Spot Assist and DISTRONIC error messages in instrument cluster

Topic number	LI54.21-P-065146
Version	2
Design group	54.21 Control units / basic modules
Date	01-10-2017
Validity	Model 166 or 292 with engine 642. Fault rectified in production date: 2016-02-08
Reason for change	Further possible fault codes have been added.
Reason for block	

Complaint:

- Active engine diagnosis warning lamp.
- In the instrument cluster, error messages for PreSafe, Blind Spot Assist and DISTRONIC are temporarily shown alternately.
- CAN communication fault codes filed in various control units.
- "Bus OFF" fault codes filed on various control units -> CAN line has short circuit to ground.

Attachments	
File	Description
1.pdf	Complaint
1.jpg	Complaint

Cause:

Wiring harness has chafe mark in area of metal bracket for oxygen sensor upstream of catalytic converter or differential pressure sensor B28/8 retaining clamp.

Remedy:

Repair wiring harness and adjust positioning of clips / cable straps

Attachment 3 (Point 1):

- Change to cable strap from A 000 995 82 90 to A 005 997 62 90 and shifted from 90 mm to 100 mm, also rotate clip from 3-o'clock position to a 6-o'clock position.
- Change to cable strap from A 000 995 82 90 to A 000 995 12 90 and shift to new dimension of 255 mm, also rotate clip from a 3-o'clock position to a 6-o'clock position.
- Move cable duct line guide A 222 546 62 80 (not replacement part) from 468 mm to 488 +/-5 mm.
- Move cable strap A 000 995 65 90 from 740 mm to 750 mm, also rotate clip from 9-o'clock position to 6-o'clock position.

Attachment 3 (Point 2):

- Distance between grommet for cable strap and cable strap must be in tolerance range of 146 and 176 mm.
- Picture shows an example with only 110 mm.

Attachment 3 (Point 3):

- Picture shows example of clip direction that may need to be adjusted.

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Attachment 3 (Point 4):

- Picture shows example of ideal clip direction.

Attachments	
File	Description
2.pdf	Remedy
3.jpg	Remedy

Symptoms
Power generation / Engine management / Indicator lamp / Engine diagnosis / lit
Overall vehicle / Wiring / Cable damaged/faulty
Overall vehicle / Networking / CAN/FlexRay communication / Malfunction

Control unit/fault code		
Control unit	Fault code	Fault text
N3/9 - Motor electronics 'CDI61' for combustion engine 'OM642' (CDI) (CR61)	U010387	Communication with the electronic selector lever module has a malfunction. The message is missing.
N62/1 (Radar sensors control unit) (RDU_212FR)	U040200	The CAN message from control unit 'Electronic transmission control' is faulty.
B84/3 - Backup camera (RFK) (RVC166) (GL/GLS (166),M/ GLE (166))	U010187	Communication with control unit "Transmission" has a malfunction. The message is missing.
B84/3 - Backup camera (RFK) (RVC218)	U042000	Implausible data were received from control unit "Power steering". _
N128 - Electric parking brake (EFB) (EPKB166)	U010100	No CAN message was received from control unit 'Transmission'.
N68 - Electrical power steering (ES) (EPS218)	U010100	Communication with control unit "Transmission" has a malfunction. _
N30/4 - Electronic stability program (ESP®) (ESP166)	C075600	No CAN message was received from control unit 'Transmission'.
N30/4 - Electronic stability program (ESP®) (ESP166)	C078300	The CAN message from control unit 'N68 (Electric power steering control unit)' is faulty.
N30/4 - Electronic stability program (ESP®) (ESP166)	C075500	No CAN message was received from control unit 'Transmission'.
N30/4 - Electronic stability program (ESP®) (ESP166)	C074C00	No CAN message was received from control unit 'Transmission'.
N30/4 - Electronic stability program (ESP®) (ESP166)	C067A00	There is an internal fault in control unit 'A80 (Intelligent servo module for DIRECT SELECT)'.
N118 - Control unit 'Fuel pump' (FSCU05) (FSCM212)	124000	The CAN bus has a malfunction. _
A1 - Instrument cluster (IC) (IC172)	U010100	Communication with control unit "Transmission" has a malfunction. _
A1 - Instrument cluster (IC) (IC172)	U015987	Communication with PARKTRONIC has a malfunction. The message is missing.

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N3/9 - Motor electronics 'CDI61' for combustion engine 'OM642' (CDI) (CR61)	U010E00	Communication with the control unit 'AdBlue®' has a malfunction. _
N3/9 - Motor electronics 'CDI61' for combustion engine 'OM642' (CDI) (CR61)	U004688	Communication with the drive train sensor CAN bus has a malfunction. Bus OFF
N3/9 - Motor electronics 'CDI61' for combustion engine 'OM642' (CDI) (CR61)	U014087	Communication with the signal acquisition and actuation module has a malfunction. The message is missing.
N3/9 - Motor electronics 'CDI61' for combustion engine 'OM642' (CDI) (CR61)	U011187	Communication with control unit "Battery" has a malfunction. The message is missing.
N3/9 - Motor electronics 'CDI61' for combustion engine 'OM642' (CDI) (CR61)	U021287	Communication with the steering column module has a malfunction. The message is missing.
N3/9 - Motor electronics 'CDI61' for combustion engine 'OM642' (CDI) (CR61)	U013287	Communication with control unit "Suspension" has a malfunction. The message is missing.
N118 - Control unit 'Fuel pump' (FSCU05) (FSCM212)	C16800	Communication with the electronic ignition lock has a malfunction. _
N118/5 - Selective catalytic reduction (SCR) (SCRCM3)	U041608	Implausible data were received from control unit 'Traction system'. There is a signal fault or the message is faulty.
N118 - Control unit 'Fuel pump' (FSCU05) (FSCM212)	C40100	Implausible data were received from control unit 'combustion engine'. _
Y3/8n4 - Transmission control for 9-speed transmission (VGS) (VGSNAG3)	U016800	Communication with the electronic ignition lock has a malfunction. _
Y3/8n4 - Transmission control for 9-speed transmission (VGS) (VGSNAG3)	U014600	Communication with the central gateway has a malfunction. _
Y3/8n4 - Transmission control for 9-speed transmission (VGS) (VGSNAG3)	U016400	Communication with the air conditioning has a malfunction. _
Y3/8n4 - Transmission control for 9-speed transmission (VGS) (VGSNAG3)	U015531	Communication with the instrument cluster has a malfunction. The signal is not present.
A76 - Left front reversible emergency tensioning retractor (RevETR-LF) (RBTM-FL166)	U016800	Communication with the electronic ignition lock has a malfunction. _
A76 - Left front reversible emergency tensioning retractor (RevETR-LF) (RBTM-FL166)	U014100	Communication with the front signal acquisition and actuation module has a malfunction. _
A76 - Left front reversible emergency tensioning retractor (RevETR-LF) (RBTM-FL166)	U012100	Communication with ESP has a malfunction. _
A76 - Left front reversible emergency tensioning re-	U015100	Communication with the supplemental restraint system (SRS) has a malfunction. _

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tractor (RevETR-LF) (RBTM-FL166)		
A76 - Left front reversible emergency tensioning retractor (RevETR-LF) (RBTM-FL166)	U010000	Communication with the control unit 'combustion engine' has a malfunction. _
A76 - Left front reversible emergency tensioning retractor (RevETR-LF) (RBTM-FL166)	U000188	Drive train CAN communication has a malfunction. Bus OFF
Y3/8n4 - Transmission control for 9-speed transmission (VGS) (VGSNAG3)	U010000	Communication with the control unit 'combustion engine' has a malfunction. _
A76 - Left front reversible emergency tensioning retractor (RevETR-LF) (RBTM-FL166)	U014600	Communication with the central gateway has a malfunction. _
A76/1 - Right front reversible emergency tensioning retractor (RevETR-RF) (RBTM-FR166)	U000188	Drive train CAN communication has a malfunction. Bus OFF
A90 - Control unit 'COLLISION PREVENTION ASSIST' (SG-AWF) (FCW246)	U010087	Chassis CAN bus : One or more messages transmitted by control unit 'Motor electronics' via the CAN bus are intermittently not available.
A90 - Control unit 'COLLISION PREVENTION ASSIST' (SG-AWF) (FCW246)	U021287	Chassis CAN bus : One or more messages transmitted by control unit 'N80 (Steering column tube module control unit)' via the CAN bus are intermittently not available.
A90 - Control unit 'COLLISION PREVENTION ASSIST' (SG-AWF) (FCW246)	U0401FD	The CAN message from control unit 'Motor electronics' is faulty.
N128 - Electric parking brake (EFB) (EPKB166)	U102788	Chassis CAN bus OFF fault Bus OFF
N30/4 - Electronic stability program (ESP®) (ESP166)	C076100	Chassis CAN bus OFF fault
N51/3 - AIRMATIC (SPC166) (GL/GLS (166),M/GLE (166))	U102700	Chassis CAN bus OFF fault _
N3/9 - Motor electronics 'CDI61' for combustion engine 'OM642' (CDI) (CR61)	P0087FC	The fuel pressure in the system is too low. _
N3/9 - Motor electronics 'CDI61' for combustion engine 'OM642' (CDI) (CR61)	P009111	Fuel pressure regulating valve 1 has a short circuit to ground. There is a short circuit to ground.
Y3/8n4 - Transmission control for 9-speed transmission (VGS) (VGSNAG3)	U012100	Communication with ESP has a malfunction. _
N3/9 - Motor electronics 'CDI61' for combustion engine 'OM642' (CDI) (CR61)	P025311	The output for the quantity control valve has a short circuit to ground. There is a short circuit to ground.

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N3/9 - Motor electronics 'CDI61' for combustion engine 'OM642' (CDI) (CR61)	P04042F	The actuation for the exhaust gas recirculation controller (cylinder bank 1) has a malfunction. There is an erratic signal.
N3/9 - Motor electronics 'CDI61' for combustion engine 'OM642' (CDI) (CR61)	P040511	The position sensor for the exhaust gas recirculation controller (cylinder bank 1) has a short circuit to ground. There is a short circuit to ground.
N3/9 - Motor electronics 'CDI61' for combustion engine 'OM642' (CDI) (CR61)	P056013	The on-board electrical system voltage has a malfunction. There is an open circuit.
N3/9 - Motor electronics 'CDI61' for combustion engine 'OM642' (CDI) (CR61)	P06A900	Output 4 for the reference voltage of the sensors has a malfunction. _
Y3/8n4 - Transmission control for 9-speed transmission (VGS) (VGSNAG3)	U012600	Communication with the steering column module has a malfunction. _
Y3/8n4 - Transmission control for 9-speed transmission (VGS) (VGSNAG3)	U002800	Communication with the drivetrain CAN bus has a malfunction. _
N62/1 (Radar sensors control unit) (RDU_212FR)	U01008F	One or more messages transmitted by control unit 'Motor electronics' via the CAN bus are intermittently not available.
N62/1 (Radar sensors control unit) (RDU_212FR)	U0416E2	One or more signals sent from control unit 'N30/4 (Electronic Stability Program control unit)' via the CAN bus is implausible.

Parts						
Part number	ES1	ES2	Designation	Quantity	Note	EPC
A 005 997 62 90			Cable strap	1		X
A 000 995 12 90			Cable strap	1		X
A 000 995 65 90			Cable strap	1		X
A 001 546 99 41			Terminal solder connector			X
A 007 989 07 85			G12 - Polyester fabric tape	1	Use: Engine compartment Width 19 mm, 25 m roll.	X

Operation numbers/damage codes				
Op. no.	Operation text	Time	Damage code	Note
			598DF 22	Connector/line* F for diesel engine control unit chafes
			59780 22	K/Z* differential pressure sensor chafes

WIS-References			
Document number	Title	Note	Allocation
AR00.19-P-0100A	Wiring harness general repair methods	General notes on wiring harness repairs	Remedy

XENTRY TIPS

AR00.19-P-0100-09A	Repair wiring harness using solder connectors		Remedy
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Validity		
Vehicle	Engine	Transmission
GL/GLS (166) - 166.823	*	*
GL/GLS (166) - 166.824	*	*
GLE (292) - 292.323	*	*
GLE (292) - 292.324	*	*
M/GLE (166) - 166.023	*	*
M/GLE (166) - 166.024	*	*