Vehicle does not start

Topic number	LI54.00-P-067822
Version	1
Function group	54.00 General
Date	03-07-2018
Validity	smart electric drive
Reason for change	
Reason for block	

Complaint:

Vehicle does not start, 12 V battery sufficiently charged.
HV fault message (see attachment) in instrument cluster.
After bus idle, the fault is no longer reproducible.
The FC P082062 / P082019 is logged in the power electronics CU N129/1.

Attachments	
File	Description
Bild vom Ki e smart.jpg	IC warning message 1
Bild vom Ki e.jpg	IC warning message 2

Cause:

Possible software error in power electronics CU N129/1.

Remedy:

Follow the XENTRY instructions for the fault code (perform resistance measurement on excitation winding/ insulation test).
1) If the measured resistance is outside the specified range, replace the electric motor.
2) If the measured resistance is within the specified range, visually inspect the threaded connection (picture in attachment).
3) If no faults are found, erase the fault memory, do not replace any parts, and release the vehicle to the customer.
Note:
Software updates are under development to help improve this remedy.

Attachments	
File	Description
Prüfung Bilder.pdf	Pictures of test

Symptoms
Overall vehicle / Power supply / High-voltage on-board electrical system / High-voltage battery / Nonfunctional
Overall vehicle / Power supply / High-voltage on-board electrical system / High-voltage battery / Display message

Control unit/fault code		
Control unit	Fault code	Fault text
N129/1 - Power electronics (SG-EM) (INVERTER453)	P082062	The connection of the excitation winding at the component 'A79/1 (Electric machine)' has a malfunction. The signal comparison is faulty.
N129/1 - Power electronics (SG-EM) (INVERTER453)	P082019	The connection of the excitation winding at the component 'A79/1 (Electric machine)' has a malfunction. The limit value for current has been exceeded.

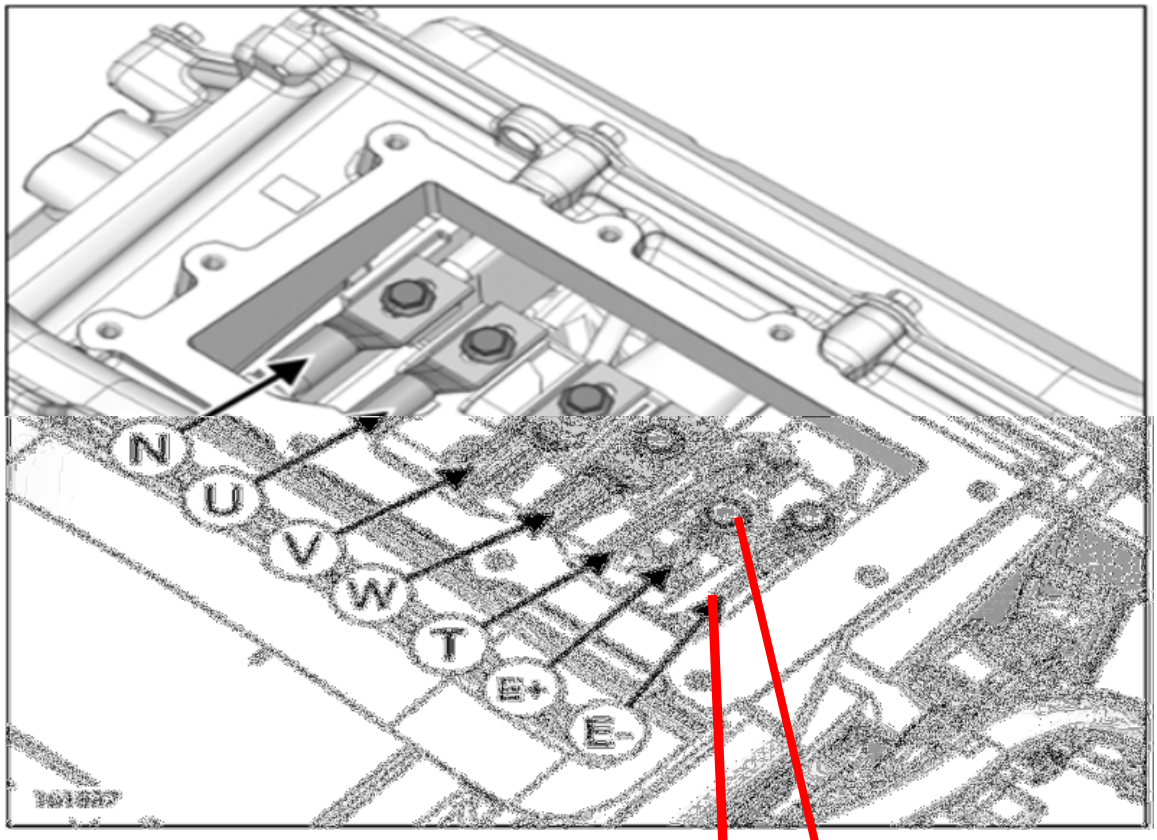
Attachments

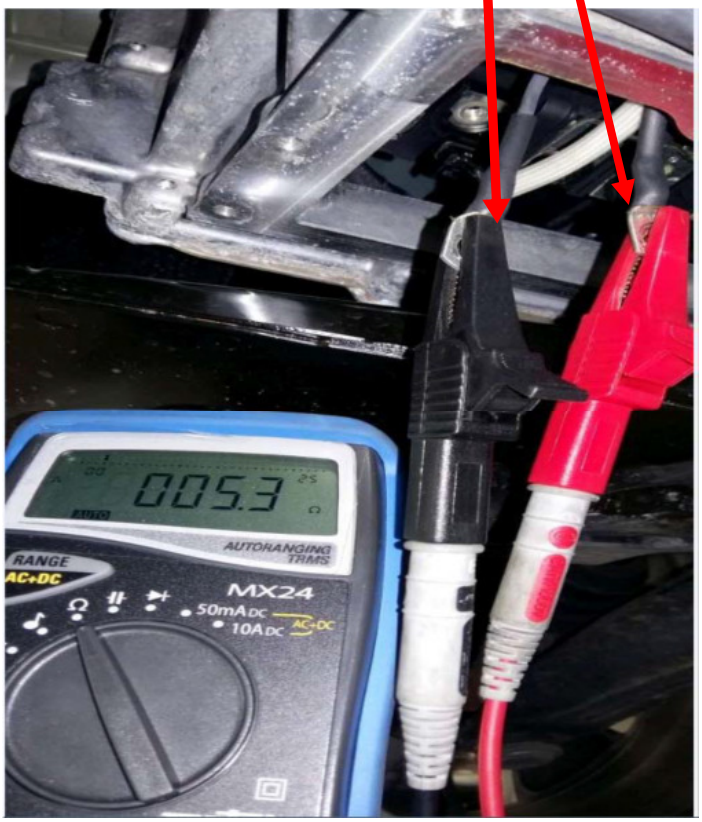
Bild vom Ki e smart.jpg:

Bild vom Ki e.jpg:

ACTIS SOLUTION DOCUMENT N° 32841

Measurement location of the excitation circuit





Excitation Circuit Resistance should be approx.
(4.5 Ohms (left / Black Clip, E-) / 25 ohms (right / Red Clip, E+))

Picture below shows the test lead locations for performing an insulation test of the excitation circuit. Install the alligator clip to the ground in the motor. Set the insulation test voltage to 500 volts. Test both the E+ and E- leads shown on the previous page with your test probe. Both E+ and E- should be > 50 MOhms.

Visual verification of the clamping of the 2 excitation terminals on the PEC internal inverter module