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## Fault message in instrument cluster "Battery - Service Required" - FC B21DF71

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Topic number	L154.10-P-060515
Version	1
Design group	54.10 Battery, voltage supply, voltage converter
Date	12-29-2014
Validity	Model series 172 with SA code "B03" Direct starting/ ECO start/stop function Model series 204 with SA code "B03" Direct starting/ ECO start/stop function Model series 207 with SA code "B03" Direct starting/ ECO start/stop function Model series 212 with SA code "B03" Direct starting/ ECO start/stop function Model series 218 with SA code "B03" Direct starting/ ECO start/stop function Model series 231 with SA code "B03" Direct starting/ ECO start/stop function
Reason for change	
Reason for block	

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### Complaint:

- Fault message in instrument cluster "Battery - Service Required" - FC B21DF71 - The relay "Decoupling of starter battery" has a malfunction. The actuator is blocked.
- Start/stop inoperative

### Cause:

- Incorrect installation of accessories
- Battery sensor electrical fault

Note: The ECO start/stop ring buffer records the on-board electrical system as preventing the stop!

### Remedy:

#### 1. Incorrect installation of accessories

If the fault code B21DF71 is present in the fault memory, then before performing further diagnostic work and before replacing any components, check whether an electrical consumer has been connected directly to the negative battery terminal. If "yes", it must be disconnected and a test drive must be performed to check whether the customer complaint persists.

Note: This work cannot be invoiced under warranty/goodwill!

Approved accessories must always be connected in accordance with the installation instructions directly to the ground points provided on the body!

If "no", continue with step "2".

#### 2. Check plausibility of actual values of battery sensor

Note: Read out current actual values of battery sensor using XENTRY or call them up in the Workshop menu (instrument cluster) under menu item "Vehicle data".

# XENTRY

The plausibility check of the actual value read in by the battery sensor is performed by measuring the voltage (V) of the battery with a multimeter directly at the starter battery.

If the two values are compared and a difference > 0.5V is found, the battery sensor must be replaced.

The plausibility of the actual values for the current (A) read in by the IBS must be checked using a current clamp. If the two measurements vary by more than 5A from each other, the battery sensor must be replaced.

Symptoms
Overall vehicle / Power supply / Battery/On-board electrical system / Battery/on-board electrical system display message / Battery/Alternator - Serviced Required

Control unit/fault code		
Control unit	Fault code	Fault text
Rear SAM - Rear signal acquisition and actuation module (N10/2) (SAMR_212)	B21DF71	The relay 'Decoupling of starter battery' has a malfunction. The actuator is blocked. (EDW-Alarmsirene NOT(.. Steuergeraete/Grundmodule/SAM/SAM%20hinten%20-%20SAMR_204/SAMR_204.xml#SG/Sonstiges/Gueltigkeiten_Fehlercodes/ECO_Start_Stopp/Nicht%20ECO%20Start%20Stopp%20vorhanden))
Rear SAM - Rear signal acquisition and actuation module (N10/2) (SAMR_231)	B21DF71	The relay 'Decoupling of starter battery' has a malfunction. The actuator is blocked. (Innenraumschutz-Sensor NOT(.. Steuergeraete/Grundmodule/SAM/SAM%20hinten%20-%20SAMR_204/SAMR_204.xml#SG/Sonstiges/Gueltigkeiten_Fehlercodes/ECO_Start_Stopp/Nicht%20ECO%20Start%20Stopp%20vorhanden))

Work units				
Op. no.	Operation text	Time	Damage code	Note
54-1011	PERFORM QUICK TEST		53020 73	
54-0641	CHECK COMPONENTS OF BATTERY SYSTEM:..... AS PER FAULT CODE		53020 73	
54-1111	REPLACE BATTERY SENSOR (AFTER CHECK)		53020 73	

WIS-References			
Document number	Title	Note	Allocation
SI54.21-P-0007A	Malfunctions due to other-make installations		Cause

Validity		
Vehicle	Engine	Transmission
C (204)	*	*
CLS (218)	*	*
E (207)	*	*

# XENTRY

E (212)	*	*
GLK (204)	*	*
SL (231)	*	*
SLK/SLC 172	*	*

Full model designation breakdown		
Vehicle	Engine	Transmission
172.403	651.980	711.670
172.403	651.980	722.908
172.403	651.980	725.011
172.404	651.980	711.670
172.404	651.980	722.908
172.404	651.980	725.011
172.434	274.920	716.702
172.434	274.920	722.995
172.434	274.920	725.011
172.438	274.920	725.011
172.447	271.861	711.653
172.447	271.861	711.654
172.447	271.861	722.997
172.448	271.861	711.655
172.448	271.861	722.997
172.457	276.956	722.906
172.475	152.980	722.909
204.000	651.913	711.653
204.000	651.913	716.656
204.000	651.913	722.694
204.000	651.913	722.996
204.001	651.913	711.653
204.001	651.913	716.656
204.001	651.913	722.694
204.001	651.913	722.996
204.002	651.911	711.653
204.002	651.911	716.656
204.002	651.911	722.646
204.002	651.911	722.908
204.003	651.911	711.670
204.003	651.911	722.646
204.003	651.911	722.908
204.006	646.812	711.655
204.006	646.812	716.608
204.006	646.812	716.657

# XENTRY

204.006	646.812	722.699
204.007	646.811	711.655
204.007	646.811	716.608
204.007	646.811	716.655
204.007	646.811	716.657
204.007	646.811	722.699
204.008	646.811	716.657
204.008	646.811	722.640
204.022	642.960	711.670
204.022	642.960	722.902
204.023	642.834	711.670
204.023	642.834	722.903
204.025	642.830	711.670
204.025	642.830	722.902
204.031	274.910	711.655
204.031	274.910	722.995
204.041	271.950	711.656
204.041	271.950	716.607
204.041	271.950	716.635
204.041	271.950	722.695
204.041	271.950	722.997
204.044	271.910	711.655
204.044	271.910	711.656
204.044	271.910	716.635
204.044	271.910	722.695
204.045	271.910	711.655
204.045	271.910	716.607
204.045	271.910	722.695
204.046	271.952	711.656
204.046	271.952	716.607
204.046	271.952	716.635
204.046	271.952	722.695
204.046	271.952	722.997
204.047	271.860	722.618
204.047	271.860	722.997
204.048	271.860	711.655
204.048	271.860	716.607
204.048	271.860	716.612
204.048	271.860	722.696
204.048	271.860	722.997
204.049	271.820	711.655
204.049	271.820	716.607
204.049	271.820	716.612

# XENTRY

204.049	271.820	722.696
204.049	271.820	722.997
204.052	272.921	711.656
204.052	272.921	716.636
204.052	272.921	722.998
204.054	272.947	711.654
204.054	272.947	716.671
204.054	272.947	722.999
204.055	276.957	722.906
204.056	272.961	722.906
204.057	276.957	722.906
204.065	272.982	722.906
204.065	272.984	722.906
204.077	156.985	722.907
204.077	156.985	722.930
204.080	276.957	722.960
204.081	272.948	722.964
204.082	651.912	722.965
204.084	651.912	711.653
204.084	651.912	722.965
204.085	272.911	722.963
204.087	272.971	722.960
204.088	276.957	722.960
204.089	642.961	722.962
204.092	642.832	722.962
204.200	651.913	711.653
204.200	651.913	716.656
204.200	651.913	722.694
204.200	651.913	722.996
204.201	651.913	711.653
204.201	651.913	716.656
204.201	651.913	722.694
204.201	651.913	722.996
204.202	651.911	711.653
204.202	651.911	716.656
204.202	651.911	722.646
204.202	651.911	722.908
204.203	651.911	711.670
204.203	651.911	722.646
204.203	651.911	722.908
204.207	646.811	711.655
204.207	646.811	716.608
204.207	646.811	716.655

# XENTRY

204.207	646.811	716.657
204.207	646.811	722.699
204.208	646.811	716.657
204.208	646.811	722.640
204.222	642.960	711.670
204.222	642.960	722.902
204.223	642.834	711.670
204.223	642.834	722.903
204.225	642.830	711.670
204.225	642.830	722.902
204.231	274.910	711.655
204.231	274.910	722.995
204.241	271.950	711.656
204.241	271.950	716.635
204.241	271.950	722.695
204.241	271.950	722.997
204.245	271.910	711.655
204.245	271.910	716.607
204.245	271.910	722.695
204.246	271.952	711.656
204.246	271.952	716.607
204.246	271.952	716.635
204.246	271.952	722.695
204.246	271.952	722.997
204.247	271.860	722.618
204.247	271.860	722.997
204.248	271.860	711.653
204.248	271.860	711.655
204.248	271.860	716.607
204.248	271.860	716.612
204.248	271.860	722.696
204.248	271.860	722.997
204.249	271.820	711.655
204.249	271.820	716.612
204.249	271.820	722.696
204.249	271.820	722.997
204.252	272.921	711.656
204.252	272.921	716.636
204.252	272.921	722.998
204.254	272.947	711.654
204.254	272.947	716.671
204.254	272.947	722.999
204.256	272.961	722.906

# XENTRY

204.257	276.957	722.906
204.277	156.985	722.907
204.277	156.985	722.930
204.282	651.912	722.965
204.284	651.912	711.653
204.284	651.912	722.965
204.289	642.961	722.962
204.292	642.832	722.962
204.302	651.911	711.653
204.302	651.911	716.656
204.302	651.911	722.646
204.302	651.911	722.908
204.303	651.911	711.670
204.303	651.911	722.646
204.303	651.911	722.908
204.331	274.910	711.655
204.331	274.910	722.995
204.347	271.860	722.618
204.347	271.860	722.997
204.348	271.860	711.655
204.348	271.860	722.997
204.349	271.820	711.655
204.349	271.820	716.607
204.349	271.820	722.997
204.357	276.957	722.906
204.377	156.985	722.907
204.377	156.985	722.930
204.388	276.957	722.960
204.901	651.916	711.653
204.901	651.916	722.908
204.901	651.916	722.996
204.902	651.916	711.653
204.902	651.916	716.658
204.902	651.916	722.908
204.904	651.912	722.965
204.934	274.920	711.653
204.934	274.920	722.995
204.936	274.920	711.653
204.936	274.920	722.995
204.937	274.920	722.968
204.956	272.991	722.906
204.957	276.957	722.906
204.981	272.948	722.964

# XENTRY

204.982	651.912	722.965
204.983	642.961	722.962
204.984	651.912	722.965
204.987	272.971	722.960
204.988	276.957	722.960
204.990	276.957	722.960
204.992	642.832	722.962
204.993	642.835	722.966
204.997	651.912	722.965
207.301	651.911	711.653
207.301	651.911	722.646
207.301	651.911	722.908
207.301	651.911	725.011
207.302	651.911	711.653
207.302	651.911	716.656
207.302	651.911	722.646
207.302	651.911	722.908
207.302	651.911	725.011
207.303	651.911	711.670
207.303	651.911	722.646
207.303	651.911	722.908
207.303	651.911	725.011
207.304	651.911	711.670
207.304	651.911	722.646
207.304	651.911	722.908
207.304	651.911	725.011
207.322	642.836	722.902
207.323	642.838	722.903
207.323	642.838	725.011
207.326	642.838	722.903
207.326	642.838	725.011
207.334	274.920	711.655
207.334	274.920	722.995
207.336	274.920	722.995
207.347	271.860	722.618
207.347	271.860	722.997
207.348	271.860	711.655
207.348	271.860	716.607
207.348	271.860	716.612
207.348	271.860	722.696
207.348	271.860	722.997
207.355	276.957	722.906
207.356	272.961	722.906

# XENTRY

207.356	272.988	722.906
207.357	272.982	722.906
207.357	272.984	722.906
207.359	276.957	722.906
207.361	276.850	722.904
207.362	276.820	722.904
207.365	276.820	722.904
207.367	276.820	722.961
207.372	273.966	722.904
207.373	278.922	722.909
207.388	276.957	722.960
207.401	651.911	711.653
207.401	651.911	722.646
207.401	651.911	722.908
207.401	651.911	725.011
207.402	651.911	711.653
207.402	651.911	716.656
207.402	651.911	722.646
207.402	651.911	722.908
207.402	651.911	725.011
207.403	651.911	711.670
207.403	651.911	722.646
207.403	651.911	722.908
207.403	651.911	725.011
207.404	651.911	711.670
207.404	651.911	722.646
207.404	651.911	722.908
207.404	651.911	725.011
207.422	642.836	722.902
207.423	642.838	722.903
207.423	642.838	725.011
207.426	642.838	722.903
207.426	642.838	725.011
207.434	274.920	711.655
207.434	274.920	722.995
207.436	274.920	722.995
207.447	271.860	722.618
207.447	271.860	722.997
207.448	271.860	711.655
207.448	271.860	722.696
207.448	271.860	722.997
207.455	276.957	722.906
207.456	272.961	722.906

# XENTRY

207.456	272.988	722.906
207.457	272.984	722.906
207.459	276.957	722.906
207.461	276.850	722.904
207.462	276.820	722.904
207.465	276.820	722.904
207.472	273.966	722.904
207.473	278.922	722.909
212.001	651.924	711.653
212.001	651.924	722.646
212.001	651.924	722.908
212.001	651.924	725.011
212.002	651.924	711.653
212.002	651.924	716.656
212.002	651.924	722.646
212.002	651.924	722.908
212.002	651.924	725.011
212.003	651.924	711.670
212.003	651.924	722.646
212.003	651.924	722.908
212.003	651.924	725.011
212.004	651.924	711.670
212.004	651.924	722.646
212.004	651.924	722.908
212.004	651.924	725.011
212.005	651.925	711.653
212.005	651.925	716.656
212.005	651.925	722.694
212.005	651.925	722.996
212.005	651.925	725.011
212.006	651.925	711.653
212.006	651.925	722.694
212.006	651.925	722.996
212.006	651.925	725.011
212.011	651.924	711.653
212.011	651.924	722.965
212.020	642.850	722.902
212.021	642.852	711.670
212.021	642.852	722.903
212.021	642.852	725.011
212.023	642.852	711.670
212.023	642.852	722.903
212.023	642.852	725.011

# XENTRY

212.024	642.850	711.670
212.024	642.850	722.902
212.024	642.850	725.011
212.025	642.850	711.670
212.025	642.850	722.902
212.025	642.850	725.011
212.025	642.856	711.670
212.025	642.856	722.902
212.025	642.856	725.011
212.026	642.852	711.670
212.026	642.852	722.903
212.026	642.852	725.011
212.027	642.852	711.670
212.027	642.852	722.903
212.027	642.852	725.011
212.034	274.920	711.655
212.034	274.920	722.995
212.035	274.920	711.655
212.035	274.920	722.995
212.036	274.920	711.655
212.036	274.920	722.995
212.040	274.910	711.655
212.040	274.910	722.995
212.041	271.958	722.695
212.047	271.860	722.618
212.047	271.860	722.997
212.048	271.860	711.655
212.048	271.860	716.612
212.048	271.860	722.696
212.048	271.860	722.997
212.052	272.923	716.636
212.052	272.923	722.998
212.053	272.980	722.906
212.054	272.952	711.654
212.054	272.952	722.999
212.055	276.952	722.906
212.056	272.980	722.906
212.057	272.983	722.906
212.059	276.952	722.906
212.061	276.850	722.904
212.065	276.820	722.904
212.067	276.820	722.961
212.072	273.971	722.904

# XENTRY

212.073	278.922	722.909
212.073	278.922	725.011
212.073	278.922	725.032
212.073	278.922	725.033
212.074	157.981	722.931
212.075	157.981	722.931
212.076	157.981	722.971
212.077	156.985	722.930
212.080	276.952	722.960
212.082	651.924	722.965
212.087	272.977	722.960
212.088	276.952	722.960
212.089	642.856	722.962
212.090	273.970	722.961
212.091	278.922	722.967
212.091	278.922	725.021
212.092	157.981	722.971
212.093	642.858	722.966
212.093	642.858	725.021
212.094	642.858	722.966
212.094	642.858	725.021
212.095	276.952	724.206
212.097	651.924	722.965
212.098	651.924	724.208
212.099	276.850	722.960
212.099	276.850	722.961
212.133	274.920	711.655
212.133	274.920	722.995
212.134	274.920	711.655
212.134	274.920	722.995
212.136	274.920	711.655
212.136	274.920	722.995
212.147	271.860	722.618
212.147	271.860	722.997
212.148	271.860	711.655
212.148	271.860	722.696
212.148	271.860	722.997
212.154	272.952	711.654
212.154	272.952	722.999
212.162	276.820	722.904
212.165	276.820	722.904
212.167	276.820	722.961
212.168	276.820	722.961

# XENTRY

212.195	276.952	724.206
212.201	651.924	711.653
212.201	651.924	722.646
212.201	651.924	722.908
212.201	651.924	725.011
212.202	651.924	711.653
212.202	651.924	716.656
212.202	651.924	722.646
212.202	651.924	722.908
212.202	651.924	725.011
212.203	651.924	711.670
212.203	651.924	722.646
212.203	651.924	722.908
212.203	651.924	725.011
212.204	651.924	711.670
212.204	651.924	722.646
212.204	651.924	722.908
212.204	651.924	725.011
212.205	651.925	711.653
212.205	651.925	716.656
212.205	651.925	722.694
212.205	651.925	722.996
212.205	651.925	725.011
212.206	651.925	711.653
212.206	651.925	722.694
212.206	651.925	722.996
212.206	651.925	725.011
212.211	651.924	711.653
212.211	651.924	722.965
212.220	642.850	722.902
212.221	642.852	711.670
212.221	642.852	722.903
212.221	642.852	725.011
212.223	642.852	711.670
212.223	642.852	722.903
212.223	642.852	725.011
212.224	642.850	711.670
212.224	642.850	722.902
212.224	642.850	725.011
212.225	642.850	711.670
212.225	642.850	722.902
212.225	642.850	725.011
212.226	642.852	711.670

# XENTRY

212.226	642.852	722.903
212.226	642.852	725.011
212.227	642.852	711.670
212.227	642.852	722.903
212.227	642.852	725.011
212.234	274.920	711.655
212.234	274.920	722.995
212.236	274.920	711.655
212.236	274.920	722.995
212.247	271.860	722.618
212.247	271.860	722.997
212.248	271.860	711.655
212.248	271.860	716.612
212.248	271.860	722.696
212.248	271.860	722.997
212.254	272.952	711.654
212.254	272.952	722.999
212.255	276.952	722.906
212.256	272.980	722.906
212.257	272.983	722.906
212.259	276.952	722.906
212.261	276.850	722.904
212.265	276.820	722.904
212.267	276.820	722.961
212.272	273.971	722.904
212.273	278.922	722.909
212.273	278.922	725.011
212.273	278.922	725.032
212.273	278.922	725.033
212.274	157.981	722.931
212.275	157.981	722.931
212.276	157.981	722.971
212.277	156.985	722.930
212.280	276.952	722.960
212.282	651.924	722.965
212.287	272.977	722.960
212.288	276.952	722.960
212.289	642.856	722.962
212.291	278.922	722.967
212.291	278.922	725.021
212.292	157.981	722.971
212.293	642.858	722.966
212.293	642.858	725.021

# XENTRY

212.294	642.858	722.966
212.294	642.858	725.021
212.297	651.924	722.965
212.298	651.924	724.208
212.299	276.850	722.960
212.299	276.850	722.961
218.301	651.924	722.908
218.301	651.924	725.011
218.303	651.924	722.908
218.303	651.924	725.011
218.304	651.924	722.908
218.304	651.924	725.011
218.323	642.852	722.903
218.323	642.852	725.011
218.323	642.853	722.903
218.323	642.853	725.011
218.326	642.852	722.903
218.326	642.852	725.011
218.336	274.920	722.995
218.355	276.952	722.906
218.355	276.952	725.011
218.359	276.952	722.906
218.359	276.952	725.011
218.361	276.850	722.904
218.361	276.850	725.011
218.362	276.820	722.904
218.362	276.820	725.011
218.365	276.820	722.904
218.365	276.820	725.011
218.367	276.820	722.961
218.368	276.850	722.961
218.373	278.922	722.909
218.373	278.922	725.011
218.374	157.981	722.931
218.375	157.981	722.931
218.376	157.981	722.971
218.391	278.922	722.967
218.391	278.922	725.041
218.392	157.981	722.971
218.393	642.854	722.966
218.393	642.858	722.966
218.394	642.858	722.966
218.397	651.924	722.965

# XENTRY

218.901	651.924	722.908
218.901	651.924	725.011
218.903	651.924	722.908
218.903	651.924	725.011
218.904	651.924	722.908
218.904	651.924	725.011
218.923	642.852	722.903
218.923	642.852	725.011
218.923	642.853	722.903
218.923	642.853	725.011
218.926	642.852	722.903
218.926	642.852	725.011
218.936	274.920	722.995
218.959	276.952	722.906
218.959	276.952	725.011
218.961	276.850	722.904
218.961	276.850	725.011
218.965	276.820	722.904
218.965	276.820	725.011
218.967	276.820	722.961
218.968	276.850	722.961
218.973	278.922	722.909
218.973	278.922	725.011
218.974	157.981	722.931
218.975	157.981	722.931
218.976	157.981	722.971
218.991	278.922	722.967
218.991	278.922	725.041
218.992	157.981	722.971
218.993	642.854	722.966
218.993	642.858	722.966
218.994	642.858	722.966
218.997	651.924	722.965
231.457	276.954	722.906
231.465	276.825	722.904
231.473	278.927	722.909
231.473	278.927	725.011
231.474	157.983	722.931
231.479	279.981	722.932