
Vehicle does not start, vehicle starts with a delay, rear window wiper inoperative

Topic number	LI54.15-P-057373
Version	4
Design group	54.15 Fuse and relay box
Date	02-28-2014
Validity	Model series 204/207/212/218/231/246/176/117/172 as of production month 11/2012 up to 09/2013
Reason for change	New damage code for MFA
Reason for block	

Complaint:

The vehicle cannot be started

The vehicle may start by itself shortly after the startup attempt with a delay, as the relay can be late closing.

and/or

The gear selection is displayed, but no gear is engaged. Gear selection is not possible.

and/or

Rear window wiper inoperative.

and/or

Various fault codes concerning disrupted communication paths are stored and/or the corresponding control units are not displayed in the quick test. Affected control units include the transmission control unit, electronic ignition lock, driver SAM, engine control unit, Lane Keeping Assist, Distronic.

Cause:

The micro-relays in the fuse and relay boxes (SRB) in the engine compartment or rear compartment may have a malfunction and not close correctly.

Due to this malfunction, there are disruptions to the communication paths and no power supply to various systems.

Only affects relays manufactured by Hella with a Date Code (picture: Assignment of Date Codes) from 2248 to 3159.

If the faulty micro-relay(s) of the problem systems fall(s) within the batch carrying this Date Code, then all the micro-relays in the fuse and relay boxes listed below in the vehicle should be checked and likewise replaced if their Date Code is between 2248 and 3159.

To read the date code:

First digit: Year of production 2=2012

Digits two through four: Day of production year

Note: The problems may occur only intermittently, so diagnosis of the relays is not always possible and the fault may not always be reproducible.

Attachments	
File	Designation
Date code Zuordnung.jpg	Assignment of Date Codes to affected relays

Remedy:

ONLY REPLACE MICRO RELAYS (picture: micro-relay) MADE BY HELLA WITHIN THE RELEVANT DATE CODE RANGE 2248 - 3159!

Normal-size relays, e.g. circuit 15 on the driver SAM, must not be replaced!

Perform an initial quick test.

Replace the following micro-relays (PDF attachment) if Date Code is within the batch:

BR246/176/117: Engine compartment fuse and relay box

Relay O, transmission oil auxiliary pump

Relay S, circuit 87C with OM607

Relay P, reserve

BR204/207/212/218/231/172:

Rear fuse and relay box

Relay A, circuit 15

Relay D, fuel pump-circulation pump

Relay E, rear wiper

Relay G, circuit 15R2

Engine compartment fuse and relay box

Relay R, circuit 87F

Hybrid fuse and relay box

Relay S, transmission cooling coolant circulation pump

Relay U, power electronics coolant circulation pump

The replacement relays may be manufactured by Tyco instead of Hella, and must be ordered according to the quantities and part numbers in the vehicle.

The removed relays must be sent back through the usual warranty channels accompanied by the initial quick test report.

The relay responsible for the problem must be clearly marked (using a waterproof marker on the relay itself) with the designation of the slot (e.g. P; O; etc.) and marked as DEFECTIVE. The other replaced relays must likewise be marked with the designation of the corresponding slot.

After replacing the relays, the fault memory must be erased.

Attachments	
File	Designation
Overview Relay Position.pdf	Overview of relay locations
Mikro Relais.jpg	Left: micro-relay, right: normal relay

Symptoms
Overall vehicle / Cleaning system / Windscreen wiper / Nonfunctional
Power transmission / Automatic transmission / Automatic transmission - function / General
Communication/information / Warning and control system / Distronic / Distronic function / Warning message in instrument cluster
Power transmission / Automatic transmission / Automatic transmission - function / Electrical fault/Fault code
Overall vehicle / Networking / CAN/FlexRay communication / Malfunction
Overall vehicle / Networking / Gateway communication / Malfunction
Power generation / Engine management / Engine start/stop / Does not start
Power generation / Engine management / Engine start/stop / Engine starts without obvious cause
Communication/information / Warning and control system / Lane Assistant / Display non-functional
Communication/information / Warning and control system / Blind spot assist / Warning message in instrument cluster

Parts							
Part number	ES1	ES2	Designation	Quantity	Note	EPC	Other make part
A 002 542 84 19			Relay		A 003 542 04 19 may alternatively be supplied.	X	
A 002 542 83 19			Relay		A 002 542 92 19 may alternatively be supplied.	X	
A 002 542 11 19			Relay		Part replaced by A 002 542 92 19	X	

Work units				
Op. no.	Operation text	Time	Damage code	Note
54-2000	REPLACE RELAY		540E8 73	For problem with electric transmission oil coolant pump relay (117, 246, 176)
54-2000	REPLACE RELAY		53317 73	For problem with chassis power supply relay (circuit 87F)
54-2000	REPLACE RELAY		53120 73	For problem with rear SAM circuit 15 relay
54-2000	REPLACE RELAY		53856 73	For problem with rear SAM circuit 15R relay
54-2000	REPLACE RELAY		54585 52	For problem with fuel pump relay

54-2000	REPLACE RELAY		82489 52	For problem with rear window wiper relay
54-1011	PERFORM QUICK TEST AND ERASE FAULT MEMORY			
54-2000	REPLACE RELAY		5421K 73	For problem with circuit 87C relay (117, 246, 176)

Validity		
Vehicle	Engine	Transmission
117.301	*	*
117.303	*	*
117.312	*	*
117.342	*	*
117.343	*	*
117.344	*	*
117.346	*	*
117.352	*	*
176.000	*	*
176.001	*	*
176.003	*	*
176.007	*	*
176.011	*	*
176.012	*	*
176.042	*	*
176.043	*	*
176.044	*	*
176.046	*	*
176.052	*	*
212.001	*	*
212.002	*	*
212.003	*	*
212.004	*	*
212.005	*	*
212.020	*	*
212.021	*	*
212.023	*	*
212.024	*	*
212.025	*	*
212.026	*	*
212.027	*	*
212.034	*	*
212.035	*	*
212.036	*	*

212.040	*	*
212.041	*	*
212.047	*	*
212.048	*	*
212.052	*	*
212.053	*	*
212.054	*	*
212.055	*	*
212.056	*	*
212.057	*	*
212.059	*	*
212.065	*	*
212.067	*	*
212.072	*	*
212.073	*	*
212.074	*	*
212.075	*	*
212.076	*	*
212.077	*	*
212.080	*	*
212.082	*	*
212.087	*	*
212.088	*	*
212.089	*	*
212.090	*	*
212.091	*	*
212.092	*	*
212.093	*	*
212.094	*	*
212.095	*	*
212.097	*	*
212.098	*	*
212.147	*	*
212.148	*	*
212.154	*	*
212.165	*	*
212.195	*	*
212.202	*	*
212.203	*	*
212.205	*	*
212.220	*	*
212.221	*	*
212.223	*	*

212.224	*	*
212.225	*	*
212.226	*	*
212.227	*	*
212.234	*	*
212.236	*	*
212.247	*	*
212.248	*	*
212.254	*	*
212.255	*	*
212.256	*	*
212.257	*	*
212.259	*	*
212.265	*	*
212.267	*	*
212.272	*	*
212.273	*	*
212.274	*	*
212.275	*	*
212.276	*	*
212.277	*	*
212.280	*	*
212.282	*	*
212.287	*	*
212.288	*	*
212.289	*	*
212.291	*	*
212.292	*	*
212.293	*	*
212.294	*	*
212.298	*	*
218.303	*	*
218.323	*	*
218.326	*	*
218.355	*	*
218.359	*	*
218.373	*	*
218.374	*	*
218.375	*	*
218.376	*	*
218.391	*	*
218.392	*	*
218.393	*	*

218.394	*	*
218.903	*	*
218.923	*	*
218.959	*	*
218.973	*	*
218.974	*	*
218.975	*	*
218.976	*	*
218.991	*	*
218.992	*	*
218.993	*	*
231.457	*	*
231.473	*	*
231.474	*	*
231.479	*	*
242.848	*	*
246.200	*	*
246.201	*	*
246.203	*	*
246.207	*	*
246.211	*	*
246.212	*	*
246.242	*	*
246.243	*	*
246.244	*	*
246.247	*	*
C (204)	*	*
E (207)	*	*
GLK (204)	*	*
SLK (172)	*	*

Full model designation breakdown		
Vehicle	Engine	Transmission
117.301	651.901	711.642
117.301	651.901	724.003
117.303	651.930	724.003
117.312	607.951	711.632
117.312	607.951	724.020
117.342	270.910	711.632
117.342	270.910	711.643
117.342	270.910	724.002
117.343	270.910	711.643

117.343	270.910	724.002
117.344	270.920	724.003
117.346	270.920	724.011
117.352	133.980	724.015
172.403	651.980	711.670
172.403	651.980	722.908
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
176.000	651.901	711.642
176.000	651.901	724.003
176.001	651.901	711.642
176.001	651.901	724.003
176.003	651.930	724.003
176.007	651.930	711.645
176.007	651.930	724.003
176.011	607.951	711.632
176.011	607.951	711.645
176.011	607.951	724.020
176.012	607.951	711.632
176.012	607.951	711.645
176.012	607.951	724.020
176.042	270.910	711.632
176.042	270.910	711.643
176.042	270.910	724.002
176.043	270.910	711.643
176.043	270.910	724.002
176.044	270.920	724.003
176.046	270.920	724.011
176.052	133.980	724.015
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	722.699
204.007	646.811	711.655
204.007	646.811	716.608
204.007	646.811	716.655
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	711.653

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	711.653
204.049	271.820	711.655
204.049	271.820	716.607
204.049	271.820	716.612
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
204.077	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
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	716.635
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	711.653
204.249	271.820	711.655
204.249	271.820	716.607
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
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	716.658
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	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
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
207.302	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
207.322	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

207.356	272.988	722.906
207.357	272.982	722.906
207.357	272.984	722.906
207.359	276.957	722.906
207.362	276.820	722.904
207.365	276.820	722.904
207.372	273.966	722.904
207.373	278.922	722.909
207.388	276.957	722.960
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
207.422	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	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
207.456	272.988	722.906
207.457	272.984	722.906
207.459	276.957	722.906
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
212.020	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
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
212.065	276.820	722.904
212.067	276.820	722.961
212.072	273.971	722.904
212.073	278.922	722.909
212.073	278.922	725.011
212.073	278.922	725.032
212.074	157.981	722.931
212.074	157.981	722.965
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
212.147	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
212.165	276.820	722.904
212.195	276.952	724.206
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
212.205	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
212.220	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
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
212.265	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
212.294	642.858	722.966
212.294	642.858	725.021

212.298	651.924	724.208
218.303	651.924	722.908
218.303	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
218.355	276.952	722.906
218.359	276.952	722.906
218.359	276.952	725.011
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
218.903	651.924	722.908
218.903	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
218.959	276.952	722.906
218.959	276.952	725.011
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
231.457	276.954	722.906
231.473	278.927	722.909

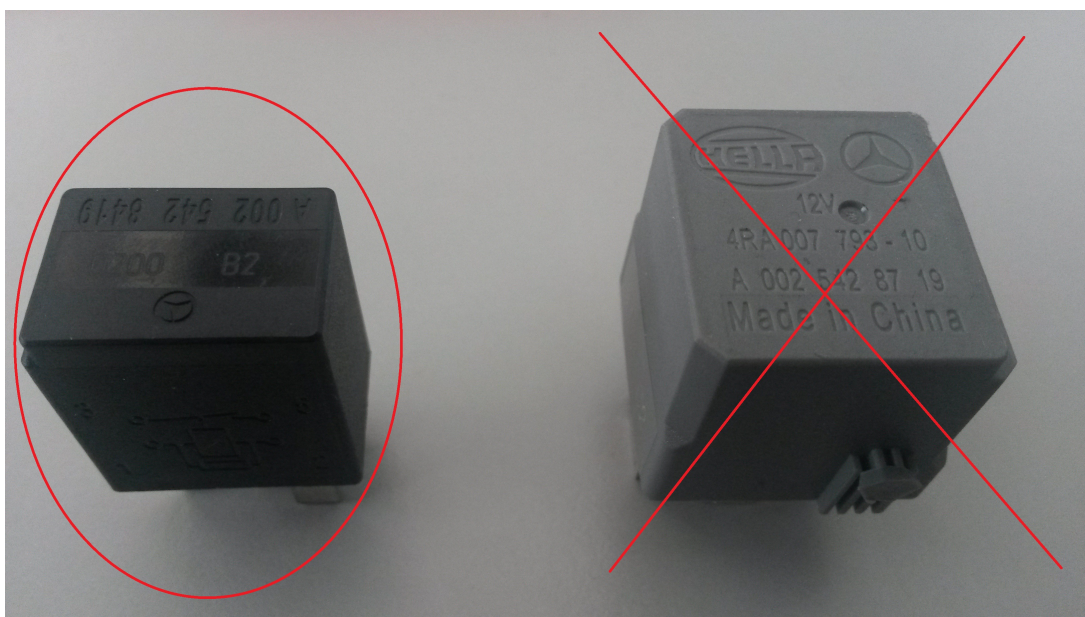
231.474	157.983	722.931
231.479	279.981	722.932
242.848	270.920	711.632
242.848	270.920	724.003
246.200	651.901	711.642
246.200	651.901	724.003
246.201	651.901	711.642
246.201	651.901	724.003
246.203	651.930	724.003
246.207	651.930	711.645
246.207	651.930	724.003
246.211	607.951	711.632
246.211	607.951	724.020
246.212	607.951	711.632
246.212	607.951	711.645
246.212	607.951	724.020
246.242	270.910	711.632
246.242	270.910	711.643
246.242	270.910	724.002
246.243	270.910	711.643
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246.243	270.910	724.003
246.244	270.920	724.003
246.247	270.920	724.011

Attachments

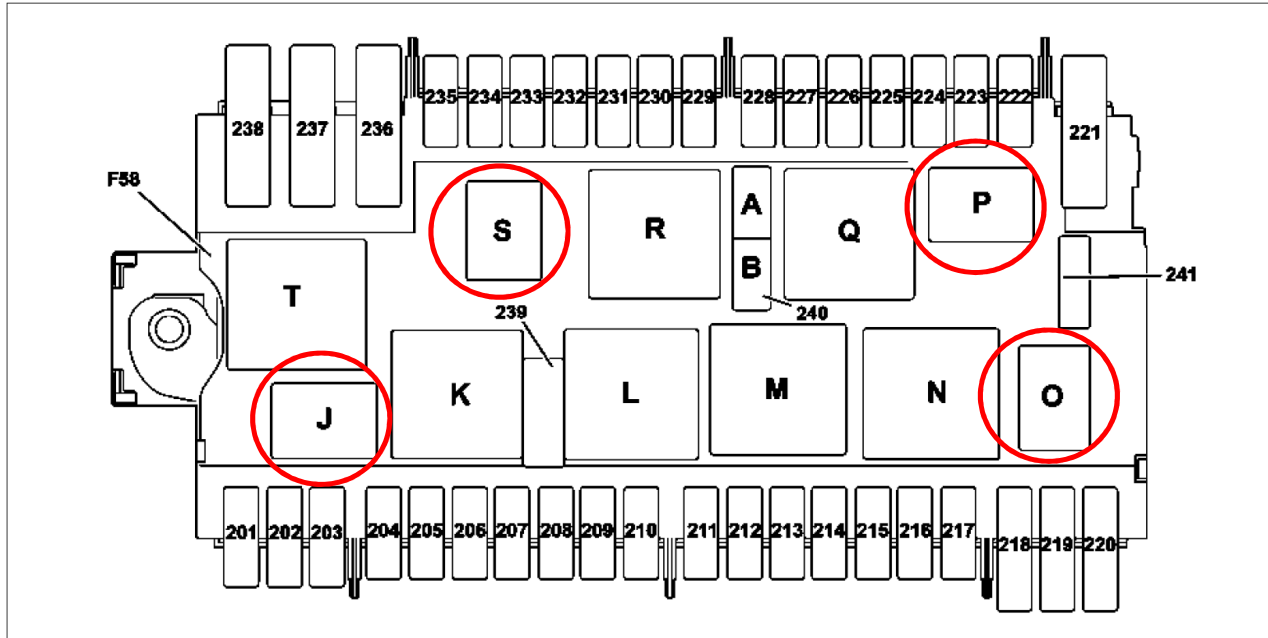
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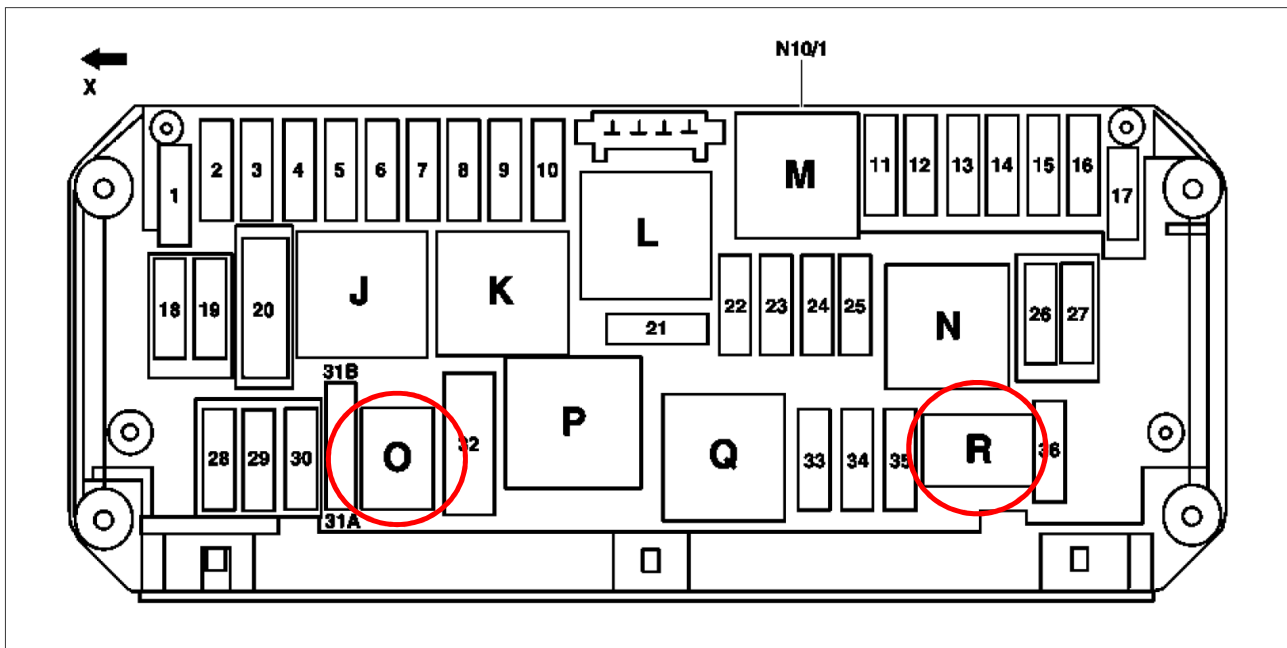
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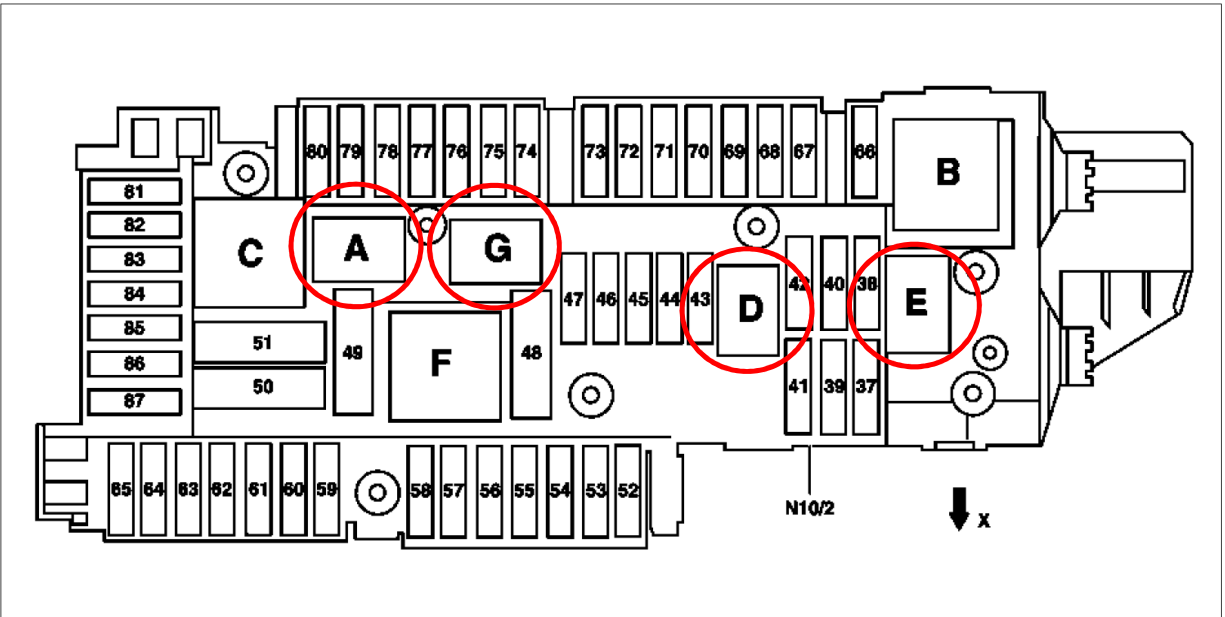
Relay Module Engine Room Model 117, 176, 246



Relay Module Engine Room Model 204, 207, 212, 218, 231, 172



Relay Module Back Model 204, 207, 212, 218, 231, 172



Relay Module Hybrid Model 212

