

DTC U3003:16 [ADAPTIVE FRONT LIGHTING SYSTEM (AFS)]

id09021n935200

System malfunction location	AFS control module low power supply voltage input
Detection condition	• AFS control module power supply circuit voltage of 9 V or less is detected for 5 s or more with the ignition switched ON (engine off or on).
Fail-safe	• The swivel actuator is stopped at the position when the malfunction is determined. • The headlight leveling actuator is stopped at the position when the malfunction is determined.
Possible cause	• DTCs are stored in the PCM. • Battery malfunction • Generator malfunction • AFS control module connector or terminal malfunction • AFS control module power supply circuit malfunction <ul style="list-style-type: none">— Short to ground in wiring harness between METER1 10 A fuse and AFS control module terminal N— METER1 10 A fuse malfunction— Open circuit in wiring harness between IG1 relay and AFS control module terminal N • AFS control module malfunction

IG1 RELAY

RELAY AND FUSE BLOCK

AFS CONTROL MODULE

AFS CONTROL MODULE

WIRING HARNESS-SIDE CONNECTOR

O	M	K	I	G	E	C	A
P	N	L	J	H	F	D	B

Diagnostic Procedure

Diagnostic Procedure		Inspection		Action	
1	VERIFY PCM DTCs <ul style="list-style-type: none">Perform the DTC inspection for the PCM using the M-MDS. (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See ON-BOARD DIAGNOSTIC TEST [SKYACTIV-D 2.2].)Is the DTC displayed?	Yes	Repair the malfunctioning part according to the applicable DTC troubleshooting. (See DTC TABLE [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See DTC TABLE [SKYACTIV-D 2.2].)	No	Go to the next step.
2	INSPECT BATTERY <ul style="list-style-type: none">Inspect the battery. (See BATTERY INSPECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See BATTERY INSPECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) (See BATTERY INSPECTION [SKYACTIV-D 2.2].)Is the battery normal?	Yes	Go to the next step.	No	Recharge or replace the battery, then go to Step 6. (See BATTERY RECHARGING [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See BATTERY RECHARGING [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) (See BATTERY RECHARGING [SKYACTIV-D 2.2].) (See BATTERY REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See BATTERY REMOVAL/INSTALLATION [SKYACTIV-D 2.2].)

Step	Inspection	Action
3	INSPECT GENERATOR <ul style="list-style-type: none"> Inspect the generator. (See GENERATOR INSPECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See GENERATOR INSPECTION [SKYACTIV-D 2.2].) Is the generator normal? 	Yes Go to the next step.
		No Replace the generator, then go to Step 6. (See GENERATOR REMOVAL/INSTALLATION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See GENERATOR REMOVAL/INSTALLATION [SKYACTIV-D 2.2].)
4	INSPECT AFS CONTROL MODULE CONNECTOR CONDITION <ul style="list-style-type: none"> Switch the ignition to off. Disconnect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-D 2.2].) Disconnect the AFS control module connector. Inspect the connector engagement and connection condition and inspect the terminals for damage, deformation, corrosion, or disconnection. Is the connector normal? 	Yes Go to the next step.
		No Repair or replace the connector, then go to Step 6.
5	VERIFY AFS CONTROL MODULE POWER SUPPLY VOLTAGE <ul style="list-style-type: none"> Reconnect all the disconnected connectors. Connect the negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-D 2.2].) Display PID VPWR_IG using the M-MDS. (See PID/DATA MONITOR INSPECTION [ADAPTIVE FRONT LIGHTING SYSTEM (AFS)].) Is the voltage B+? 	Yes Go to the next step.
		No Inspect the METER1 10 A fuse. <ul style="list-style-type: none"> If a fuse is burnt out: <ul style="list-style-type: none"> Repair or replace the wiring harness which is shorted to ground. Replace the fuse. If a fuse is damaged: <ul style="list-style-type: none"> Replace the fuse. If the fuse is normal: <ul style="list-style-type: none"> Repair or replace the wiring harness which has an open circuit. Go to the next step.

Step	Inspection	Action
6	VERIFY THAT REPAIRS HAVE BEEN COMPLETED <ul style="list-style-type: none"> • Reconnect all the disconnected connectors. • Reconnect the disconnected negative battery cable. (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-G 2.0, SKYACTIV-G 2.5 (WITHOUT i-stop)].) (See NEGATIVE BATTERY CABLE DISCONNECTION/CONNECTION [SKYACTIV-D 2.2].) • Clear the AFS control module DTCs using the M-MDS. (See CLEARING DTC [ADAPTIVE FRONT LIGHTING SYSTEM (AFS)].) • Switch the ignition ON (engine off or on) and wait for 5 s or more. • Perform the DTC inspection for the AFS control module using the M-MDS. (See DTC INSPECTION [ADAPTIVE FRONT LIGHTING SYSTEM (AFS)].) • Is DTC U3003:16 displayed? 	Yes Repeat the inspection from Step 1. • If the malfunction recurs, replace the AFS control module, then go to the next step. (See ADAPTIVE FRONT LIGHTING SYSTEM (AFS) CONTROL MODULE REMOVAL/INSTALLATION.)
		No Go to the next step.
7	VERIFY IF OTHER DTCs DISPLAYED <ul style="list-style-type: none"> • Are any other DTCs displayed? 	Yes Repair the malfunctioning part according to the applicable DTC troubleshooting. (See DTC TABLE [ADAPTIVE FRONT LIGHTING SYSTEM (AFS)].)
		No DTC troubleshooting completed.