

DTC U3003:16 [FORWARD SENSING CAMERA (FSC)]

id0902p9030900

System malfunction location	Forward sensing camera (FSC) low power supply voltage input
Detection condition	<ul style="list-style-type: none">Forward sensing camera (FSC) power supply circuit voltage of 7.2 V or less is detected for 5 s or more with the ignition switched ON (engine off or on).
Fail-safe	<ul style="list-style-type: none">Inhibits the lane departure warning system (LDWS).Inhibits the high beam control system (HBC).
Possible cause	<ul style="list-style-type: none">DTCs are stored in the PCM.Battery malfunctionGenerator malfunctionForward sensing camera (FSC) connector or terminal malfunctionForward sensing camera (FSC) power supply circuit malfunction<ul style="list-style-type: none">Short to ground in wiring harness between C/U IG1 15 A fuse and forward sensing camera (FSC) terminal IC/U IG1 15 A fuse malfunctionOpen circuit in wiring harness between IG1 relay and forward sensing camera (FSC) terminal IForward sensing camera (FSC) malfunction

IG1 RELAY

RELAY AND FUSE BLOCK

C/U IG1 15 A

FORWARD SENSING CAMERA (FSC)

FORWARD SENSING CAMERA (FSC)
WIRING HARNESS-SIDE CONNECTOR

I	G	E	C	A
J	H	F	D	B

Diagnostic Procedure

Step	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 FORWARD SENSING CAMERA (FSC) CONNECTOR <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 forward sensing camera (FSC) 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 FORWARD SENSING CAMERA (FSC) 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_IG1 using the M-MDS. (See PID/DATA MONITOR INSPECTION [FORWARD SENSING CAMERA (FSC)].) Is the voltage B+? 	Yes	Go to the next step.
		No	Inspect the C/U IG1 15 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 forward sensing camera (FSC) DTCs using the M-MDS. (See CLEARING DTC [FORWARD SENSING CAMERA (FSC)].) • Switch the ignition ON (engine off or on) and wait for 6.5 s or more. • Perform the DTC inspection for the forward sensing camera (FSC) using the M-MDS. (See DTC INSPECTION [FORWARD SENSING CAMERA (FSC)].) • Is DTC U3003:16 displayed? 	Yes Repeat the inspection from Step 1. • If the malfunction recurs, replace the forward sensing camera (FSC), then go to the next step. (See FORWARD SENSING CAMERA (FSC) 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 [FORWARD SENSING CAMERA (FSC)].)
		No DTC troubleshooting completed.