

DTC P0500 [FN4A-EL]

B3E050219090W06

DTC P0500	Vehicle speed sensor (VSS) circuit malfunction
DETECTION CONDITION	<ul style="list-style-type: none"> Vehicle speed signal is not input after the following conditions are met and 4.5 s or more have passed. <ul style="list-style-type: none"> - D, or M range switch ON - P and N position of TR switch OFF - Engine coolant temperature 60 °C {140 °F} or more - Turbine speed 1,500 rpm or more <p>Diagnostic support note:</p> <ul style="list-style-type: none"> This is a continuous monitor (CCM). The MIL illuminates if the PCM detects the above malfunction condition in two consecutive drive cycles or in one drive cycle while the DTC for the same malfunction has been stored in the PCM. The PENDING CODE is available if the PCM detects the above malfunction condition during the first drive cycle. FREEZE FRAME DATA is available. The AT warning light illuminates. The DTC is stored in the PCM memory.
POSSIBLE CAUSE	<ul style="list-style-type: none"> VSS malfunction Open circuit in wiring harness between VSS terminal B and PCM terminal 1AY (Z6)/1J (LF) Short to ground in wiring harness between VSS terminal B and PCM terminal 1AY (Z6)/1J (LF) Open circuit in wiring harness between VSS terminal A and PCM terminal 1BC (Z6)/1A (LF) Short to ground in wiring harness between VSS terminal A and PCM terminal 1BC (Z6)/1A (LF) Open circuit in wiring harness between VSS terminal C and body ground Damaged connectors between VSS and PCM PCM malfunction
<div style="text-align: center;"> <p>VSS WIRING HARNESS-SIDE CONNECTOR</p> <p>PCM WIRING HARNESS-SIDE CONNECTOR</p> </div>	

Diagnostic procedure

STEP	INSPECTION	ACTION	
1	VERIFY STORED DTC IN ABS HU/CM OR DSC HU/CM <ul style="list-style-type: none"> Turn the ignition switch to the ON position (Engine off). Verify stored DTCs in ABS HU/CM or DSC HU/CM. (See ON-BOARD DIAGNOSIS [ABS] .) (See ON-BOARD DIAGNOSIS [DSC (DYNAMIC STABILITY CONTROL)] .) • Are DTCs stored?	Yes	Go to the appropriate DTC inspection. (See DTC Table) (See DTC Table .)
		No	Go to the next step.
2	VERIFY FREEZE FRAME DATA HAS BEEN RECORDED <ul style="list-style-type: none"> Has the FREEZE FRAME DATA been recorded? 	Yes	Go to the next step.
		No	Record the FREEZE FRAME DATA on the repair order, then go to the next step.
3	VERIFY RELATED SERVICE INFORMATION AVAILABILITY <ul style="list-style-type: none"> Verify related Service Bulletins and/or on-line repair information availability. Is any related repair Information available? 	Yes	Perform repair or diagnosis according to the available repair information. • If the vehicle is not repaired, go to the next step.
		No	Go to the next step.
4	INSPECT VSS CONNECTOR FOR POOR CONNECTION <ul style="list-style-type: none"> Turn the ignition switch to the LOCK position. Disconnect the VSS connector. Inspect for poor connection (such as damaged/pulled-out pins, corrosion). Is the connection normal? 	Yes	Go to the next step.
		No	Repair or replace the pin or connector, then go to Step 11.
5	INSPECT VSS POWER CIRCUIT FOR OPEN CIRCUIT <ul style="list-style-type: none"> Verify that the VSS connector is disconnected. Turn the ignition switch to the ON position (engine off). Inspect the voltage between VSS terminal A (wiring harness-side) and ground. Is the voltage B+? 	Yes	Go to Step 6.
		No	Go to the next step.
6	INSPECT VSS POWER CIRCUIT FOR SHORT TO GROUND <ul style="list-style-type: none"> Turn the ignition switch to the LOCK position. Inspect for continuity between VSS terminal A (wiring harness-side) and ground. Is there continuity? 	Yes	Go to the next step.
		No	Repair or replace the wiring harness, then go to Step 11.
7	INSPECT VSS GROUND CIRCUIT FOR OPEN CIRCUIT <ul style="list-style-type: none"> Verify that the VSS connector is disconnected. Inspect for continuity between VSS (wiring harness-side) terminal C and ground. Is there continuity? 	Yes	Go to the next step.
		No	Repair or replace the wiring harness, then go to Step 11.
8	INSPECT PCM CONNECTOR FOR POOR CONNECTION <ul style="list-style-type: none"> Disconnect the PCM connector. 	Yes	Go to the next step.

	<ul style="list-style-type: none"> Inspect for poor connection (such as damaged/pulled-out pins, corrosion). Is the connection normal? 	No	Repair or replace the pin or connector, then go to Step 11.
9	INSPECT VEHICLE SPEED SIGNAL CIRCUIT FOR OPEN CIRCUIT <ul style="list-style-type: none"> Disconnect the PCM connector and VSS connector. Inspect for continuity between VSS terminal B and PCM terminal 1AY (Z6)/1J (LF). Is there continuity? 	Yes	Go to the next step.
		No	Repair or replace the wiring harness, then go to Step 11.
10	INSPECT VEHICLE SPEED SIGNAL CIRCUIT FOR SHORT TO GROUND <ul style="list-style-type: none"> Verify that the VSS connector and PCM connector are disconnected. Inspect for continuity between PCM terminal 1AY (Z6)/1J (LF) and body ground. Is there continuity? 	Yes	Repair or replace the wiring harness, then go to the next step.
		No	Replace the VSS, then go to the next step. (See VEHICLE SPEED SENSOR (VSS) REMOVAL/INSTALLATION.)
11	VERIFY TROUBLESHOOTING OF DTC P0500 COMPLETED <ul style="list-style-type: none"> Make sure to reconnect all the disconnected connectors. Clear the DTC from the memory using the WDS or equivalent. Warm up engine. Drive the vehicle under the following conditions for 4.5 s or more while monitoring PIDs. <ul style="list-style-type: none"> Engine coolant temp: 60 °C {140 °F} or more Drive in M range Frequency of input/turbine speed sensor: 800 Hz or more Is the PENDING CODE present? 	Yes	Replace the PCM, then go to the next step. (See PCM REMOVAL/INSTALLATION [ZJ, Z6] .) (See PCM REMOVAL/INSTALLATION [LF] .)
		No	No concern is detected. Go to the next step.
12	VERIFY AFTER REPAIR PROCEDURE <ul style="list-style-type: none"> Perform the "After Repair Procedure". (See AFTER REPAIR PROCEDURE [FN4A-EL].) Are any DTCs present? 	Yes	Go to the applicable DTC inspection.
		No	DTC troubleshooting completed.