

19. Diagnostics with Phenomenon

A: INSPECTION

1. SYMPTOM TABLE

Symptoms	Maintenance parts	Note
Hybrid fail lamp does not illuminate.	CAN communication	Perform the basic inspection for LAN system. <Ref. to LAN(HEV)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>
	Combination meter assembly	Perform the basic inspection for meter system. <Ref. to IDI(diag)-2, COMBINATION METER, PROCEDURE, Basic Diagnostic Procedure.>
Hybrid fail lamp remains ON. (If DTCs are detected, perform inspection according to those DTC diagnostic procedures.)	CAN communication	Perform the basic inspection for LAN system. <Ref. to LAN(HEV)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>
	Combination meter assembly	Perform the basic inspection for meter system. <Ref. to IDI(diag)-2, COMBINATION METER, PROCEDURE, Basic Diagnostic Procedure.>
Charge warning light illuminates.	Integrated starter generator	Check the charge warning light. <Ref. to SC(H4DO(HEV))-38, CHECK CHARGE WARNING LIGHT, INSPECTION, Integrated Starter Generator (ISG).>
Unable to switch to EV traveling.	CAN communication	Perform the basic inspection for LAN system. <Ref. to LAN(HEV)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>
	Combination meter assembly	Perform the basic inspection for meter system. <Ref. to IDI(diag)-2, COMBINATION METER, PROCEDURE, Basic Diagnostic Procedure.>
	Check EV traveling conditions. <Ref. to HEV(diag)-50, HYBRID POWERTRAIN CONTROL SYSTEM (Auto Start Stop AND EV TRAVELING CONDITIONS), OPERATION, Read Current Data.>	The brake vacuum pressure must be sufficient. (The vacuum pressure may decrease at high altitude or repetitive brake operation.)
		The 12 volt engine restart battery must not have abnormality.
		Engine coolant temperature must not be too low. (60°C (140°F) or more)
		The shift lever must be in "D" range.
		Battery pack must not have abnormality.
		Integrated starter generator must not have abnormality.
		ABS must not be operating.
		There must not be a steep incline in uphill.
		Accelerator pedal must not be depressed.
		Brake pedal must not be depressed.
		Warning lights are not illuminating.
		DC/DC converter must be operating normally.
		Drive motor must not have abnormality.
		System Operation Check Mode must not be active.

Diagnostics with Phenomenon

HYBRID ELECTRIC VEHICLE (DIAGNOSTICS)

Symptoms	Maintenance parts	Note
EV MODE indicator light does not illuminate.	CAN communication	Perform the basic inspection for LAN system. <Ref. to LAN(HEV)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>
	Combination meter assembly	Perform the basic inspection for meter system. <Ref. to IDI(diag)-2, COMBINATION METER, PROCEDURE, Basic Diagnostic Procedure.>
EV MODE indicator light remains on.	CAN communication	Perform the basic inspection for LAN system. <Ref. to LAN(HEV)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>
	Combination meter assembly	Perform the basic inspection for meter system. <Ref. to IDI(diag)-2, COMBINATION METER, PROCEDURE, Basic Diagnostic Procedure.>
Poor acceleration	Hybrid system	Perform the basic inspection for hybrid system. <Ref. to HEV(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>
	Engine system	Perform the basic inspection for engine system. <Ref. to EN(H4DO HEV)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>
	CVT System	Perform the basic inspection for CVT system. <Ref. to CVT(HEV)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>
READY ON does not occur. (Models without keyless access system)	Ignition switch assembly	Perform unit check for the ignition switch.
	IG relay	Perform unit check for the ignition relay.
	ECM power supply system	Perform the basic inspection for engine system. <Ref. to EN(H4DO HEV)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>
	Check READY mode conditions	The current data «Contactor Close Status» must be «close». (The ignition switch is OFF, battery runout prevention control is active, no fault conditions.)
		Current data «Engine Speed» must have input.
		Drive motor must not have abnormality.
	Combination meter assembly	Perform the basic inspection for meter system. <Ref. to IDI(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>
	Hybrid system	Perform the basic inspection for hybrid system. <Ref. to HEV(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>
	Engine system	Perform the basic inspection for engine system. <Ref. to EN(H4DO HEV)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>

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HYBRID ELECTRIC VEHICLE (DIAGNOSTICS)

Symptoms	Maintenance parts	Note
READY ON does not occur. (Models with keyless access system)	Keyless access system	Perform the basic inspection for keyless access system. <Ref. to KPS(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>
	ECM power supply system	Perform the basic inspection for engine system. <Ref. to EN(H4DO HEV)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>
	Check READY mode conditions	The current data «Contactor Close Status» must be «close». (The ignition switch is OFF, battery runout prevention control is active, no fault conditions.)
		Current data «Engine Speed» must have input.
		Drive motor must not have abnormality.
	Combination meter assembly	Perform the basic inspection for meter system. <Ref. to IDI(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>
	Hybrid system	Perform the basic inspection for hybrid system. <Ref. to HEV(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>
	Engine system	Perform the basic inspection for engine system. <Ref. to EN(H4DO HEV)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>
Defective operation of Auto Start Stop	Check Auto Start Stop mode conditions. <Ref. to HEV(diag)-50, HYBRID POWERTRAIN CONTROL SYSTEM (Auto Start Stop AND EV TRAVELING CONDITIONS), OPERATION, Read Current Data.>	The brake vacuum pressure must be sufficient. (The vacuum pressure may decrease at high altitude or repetitive brake operation.)
		The 12 volt engine restart battery must not have abnormality.
		Engine coolant temperature must not be too low. (60°C (140°F) or more)
		The shift lever must be in "D" range.
		Battery pack must not have abnormality.
		Drive motor must not have abnormality.
		Integrated starter generator must not have abnormality.
		The vehicle must not be moving. (0.1 km/h (0.1 MPH) or less)
		ABS must not be operating.
		There must not be a steep incline in uphill.
		Accelerator pedal must not be depressed.
		Defroster must not be on.
		Warning lights are not illuminating.
		DC/DC converter must be operating normally.
		System Operation Check Mode must not be active.

Diagnostics with Phenomenon

HYBRID ELECTRIC VEHICLE (DIAGNOSTICS)

Symptoms	Maintenance parts	Note
The braking force is weak.	VDC system	Perform the basic inspection for VDC system. <Ref. to VDC(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>
	Hybrid system (brake vacuum pump)	Perform the basic inspection for hybrid system. <Ref. to HEV(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>
Engine does not restart under Auto Start Stop or EV traveling.	Engine system	Perform the basic inspection for engine system. <Ref. to EN(H4DO HEV)(diag)-2, PROCEDURE, Basic Diagnostic Procedure.>
	Hybrid system	Perform the basic inspection for hybrid system. <Ref. to HEV(diag)-2, PROCEDURE, Basic Diagnostic Procedure.> NOTE: Restarting the engine may be temporarily prohibited due to certain voltage or temperature condition. In such case, the engine may be restarted when normal voltage or temperature condition is restored.

GENERAL DESCRIPTION (HEV)

GD(HEV)

	Page
1. List of Diagnostic Trouble Code (DTC)	2
2. Diagnostic Trouble Code (DTC) Detecting Criteria	11