

Fail-Safe Chart

HYBRID ELECTRIC VEHICLE (DIAGNOSTICS)

17.Fail-Safe Chart

A: LIST

1. HYBRID POWERTRAIN CONTROL SYSTEM

If any of the following DTCs are stored in the hybrid powertrain control system, the vehicle enter the appropriate fail safe pattern.

DTC	Fail safe pattern	Prohibited concurrent controls	Availability of system operation check mode
P0506	Fail safe pattern 1: Illuminates the hybrid fail lamp.	—	*2
P0507		—	*2
P0516		—	*2
P0517		—	*2
P0572		—	*2
P0573		—	*2
P058D		—	*4
P0719		—	*2
P0724		—	*2
P1C04		—	*2
P1C05		—	*2
P1C16		—	*2
P1C17		—	*2
U0131		—	*1
U0140		—	*1
U0151		—	*1
U0155		—	*1
U0287		—	*1
U0420		—	*1
U0422		—	*1
U0423		—	*1
U0452		—	*1
U0588		—	*1

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DTC	Fail safe pattern	Prohibited concurrent controls	Availability of system operation check mode
P0556	Fail safe pattern 2: Prohibits EV traveling and Auto Start Stop. If EV traveling or Auto Start Stop is in process, the engine is restarted. Illuminates the hybrid fail lamp.	—	*2
P057B		Prohibits regeneration control by brake system.	*2
P057C		Prohibits regeneration control by brake system.	*2
P057D		Prohibits regeneration control by brake system.	*2
P05DD		Prohibits regeneration control by brake system.	*2
P05DE		Prohibits regeneration control by brake system.	*2
P065A		—	*2
P1C00		—	*4
P1C08		—	*2
P1C10		—	*2
P1C11		—	*2
P1C12		—	*2
P2158		Prohibits regeneration control by brake system.	*2
U0164		—	*1
U0122		—	*1
U0416		—	*1
U0424		—	*1
U1711		—	*1
P0620	Fail safe pattern 3: Prohibits EV traveling and Auto Start Stop. If EV traveling or Auto Start Stop is in process, the engine is not restarted. Illuminates the hybrid fail lamp.	—	*2
P6EF		—	*2
P1C06		—	*2
P1C07		—	*2
P1C09		—	*2
P1C14		—	*3
P1C18		—	*2
U1676		—	*1
U1720		—	*1
U0111	Fail safe pattern 4: Deactivates the hybrid system. Illuminates the hybrid fail lamp.	—	*1
U0412		—	*1
P1C1E		Prohibits reconnection of the High voltage battery until the condition is restored.	*2

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DTC	Fail safe pattern	Prohibited concurrent controls	Availability of system operation check mode
P0604	Fail safe pattern 5: Deactivates the hybrid system. Also, driving power and shifting commands by the hybrid powertrain CM are stopped, and instead they are controlled by ECM and TCM respectively. Illuminates the hybrid fail lamp.	—	*2
P0605		—	*2
P0A1D		—	*2
U0073		—	*1
U0075		—	*1
U0076		—	*1
U0100		—	*1
U0101		—	*1
U0110		—	*1
U0401		—	*1
U0402		—	*1
U0411		—	*1
U1100		—	*1
U1101		—	*1
U1401		—	*1
U1402		—	*1

*1: Prohibits all «System Operation Check Modes».

*2: Prohibits «Engine only Drive Mode» and «Auto Start Stop Cancel Drive Mode (Engine only or Engine + Motor)».

*3: Prohibits «Engine only Drive Mode», «Auto Start Stop Cancel Drive Mode (Engine only or Engine + Motor)», and «ISG Voltage Control».

*4: Prohibits «Engine only Drive Mode», «Auto Start Stop Cancel Drive Mode (Engine only or Engine + Motor)», and «12V Battery Relay Operation».

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HYBRID ELECTRIC VEHICLE (DIAGNOSTICS)

2. DRIVE MOTOR CONTROL SYSTEM

If any of the following DTCs are stored in the drive motor control system, the vehicle enter the appropriate fail safe pattern.

DTC	Fail safe pattern	Prohibited concurrent controls	Availability of system operation check mode
P0A90	Fail safe pattern 1: Illuminates the hybrid fail lamp.	—	—
P0C0D		—	—
P0A94	Fail safe pattern 2: Prohibits EV traveling and Auto Start Stop. If EV traveling or Auto Start Stop is in process, the engine is restarted. Illuminates the hybrid fail lamp.	—	—
P1C34		—	—
P1C35		—	—
P0604	Fail safe pattern 3: Deactivates the hybrid system. Illuminates the hybrid fail lamp.	—	—
P0605		—	—
P06B1		—	—
P06B2		—	—
P0A1B		—	*1
P0A2A		—	—
P0A2C		—	—
P0A2D		—	—
P0A3C		—	—
P0A44		—	—
P0A5D		—	—
P0A60		—	—
P0A63		—	—
P0A78		—	—
P0AED		—	—
P0AEE		—	—
P0AF2		—	—
P0AF3		—	—
P0BD1		—	—
P0BD2		—	—
P0BE6		—	—
P0BE7		—	—
P0BE8		—	—
P0BEA		—	—
P0BEB		—	—
P0BEC		—	—
P0BEE		—	—
P0BEF		—	—
P0BF0		—	—
P0BFD		—	—
P0C05		—	—
P0C0C		—	—
P0C79		—	—
P0DA8		—	—
P1C20		—	—
P1C22		—	*1
P1C24		—	—
P1C25		—	—
P1C26		—	—

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DTC	Fail safe pattern	Prohibited concurrent controls	Availability of system operation check mode
P1C27	Fail safe pattern 3: Deactivates the hybrid system. Illuminates the hybrid fail lamp.	—	—
P1C2A		—	—
P1C30		—	—
P1C31		—	—
U0076		—	*1
U0111		—	*1
U0412		—	*1
U1290		—	*1
U1591		—	*1
P0A82		—	—
P0A83		—	—
P0A3F	Fail safe pattern 4: Deactivates the hybrid system. Also, driving power and shifting commands by the hybrid powertrain CM are stopped, and instead they are controlled by ECM and TCM respectively. Illuminates the hybrid fail lamp.	—	—
P0A43		—	—
P0A40		—	—
P0C52		—	—
P0C5C		—	—
P0CDC		—	—
P0CDD		—	—

*1: Prohibits all «System Operation Check Modes».

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HYBRID ELECTRIC VEHICLE (DIAGNOSTICS)

3. BATTERY ENERGY CONTROL SYSTEM

If any of the following DTCs are stored in the battery energy control system, the vehicle enter the appropriate fail safe pattern.

DTC	Fail safe pattern
P0AA4	Fail safe pattern 1: Illuminates the hybrid fail lamp.
P0A7F	
P0AA6	
P0AA7	
P0AAD	
P0AAE	
P0AAF	
P0ADF	
P0AE6	
P0B4A	
U0110	
U0411	
P0A9C	Fail safe pattern 2: Prohibits EV traveling and Auto Start Stop. If EV traveling or Auto Start Stop is in process, the engine is not restarted. Illuminates the hybrid fail lamp.
P0A9D	
P0A9E	
P0ABF	
P0AC0	
P0AC1	
P0AC2	
P0AC3	
P0AC6	
P0AC7	
P0AC8	
P0ACB	
P0ACC	
P0ACD	
P0B3C	
P0B3D	
P0B3E	
P0B41	
P0B42	
P0B43	
P0B46	
P0B47	
P0B48	
P0B4B	
P0B4C	
P0B4D	
P0B50	
P0B51	
P0B52	
P0B55	
P0B56	
P0B57	
P0B5A	
P0B5B	
P0B5C	

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DTC	Fail safe pattern
P0604	Fail safe pattern 3: Deactivates the hybrid system. Illuminates the hybrid fail lamp.
P0605	
P062F	
P0A1F	
P0A7D	
P0A7E	
P0A95	
P0AD9	
P0ADB	
P0ADD	
P0AE4	
P0B25	
P0B26	
P0B37	
P0BB8	
P0C30	
P0C78	
P0CA6	
P0CA7	
P1C40	
P1C41	
P1C42	
P1C43	
P1C44	
P1C45	
P1C46	
P1C47	
P1C48	
P1C49	
P1C4A	
P1C5E	
U0076	
U1290	
U1591	