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Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [12/2022 -]
Title: HYBRID / BATTERY CONTROL: HYBRID CONTROL SYSTEM (for M20A-FXS): VEHICLE BEHAVIOR CHART; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

VEHICLE BEHAVIOR CHART

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(a) Vehicle behavior categorized by DTC

If a DTC is output, the vehicle behaves as follows.

DTC NO.	DETECTION ITEM	VEHICLE BEHAVIOR WHEN DTC IS OUTPUT
C134800	Different Diameter Tire	AWD stopped
P05042B	Brake Switch "A"/"B" Signal Cross Coupled	-
P056014	System Voltage (BATT) Circuit Short to Ground or Open	-
P057113	Brake Switch "A" Circuit Open	-
P060647	Hybrid/EV Powertrain Control Module Processor Watchdog / Safety MCU Failure	<ul style="list-style-type: none"> • Reduced output power • Engine not stopped
P060687	Hybrid/EV Powertrain Control Module Processor to Monitoring Processor Missing Message	<ul style="list-style-type: none"> • Reduced output power • Engine not stopped
P060694	Hybrid/EV Powertrain Control Module Monitoring Processor Unexpected Operation	<ol style="list-style-type: none"> 1. Stop the output of the hybrid system 2. When return to normal <ul style="list-style-type: none"> ◦ Normal driving 3. When the vehicle is stopped while the malfunction continues <ul style="list-style-type: none"> ◦ Hybrid system stopped
P060A29	Hybrid/EV Powertrain Control Module Monitoring Processor Signal Invalid	<ul style="list-style-type: none"> • Reduced output power • Engine not stopped
P060A44	Hybrid/EV Powertrain Control Module Monitoring Processor Data Memory Failure	Normal driving
P060A45	Hybrid/EV Powertrain Control Module Monitoring Processor Program Memory Failure	Normal driving
P060A47	Hybrid/EV Powertrain Control Module Monitoring Processor Watchdog / Safety MCU Failure	Normal driving (engine output drop)
P060A49	Hybrid/EV Powertrain Control Module Monitoring Processor Internal Electronic Failure	<ul style="list-style-type: none"> • Reduced output power • Engine not stopped

DTC NO.	DETECTION ITEM	VEHICLE BEHAVIOR WHEN DTC IS OUTPUT
P060A87	Hybrid/EV Powertrain Control Module Processor from Monitoring Processor Missing Message	<ul style="list-style-type: none"> • Reduced output power • Engine not stopped
P060A94	Hybrid/EV Powertrain Control Module Monitoring Processor Unexpected Operation	<ol style="list-style-type: none"> 1. Stop the output of the hybrid system 2. When return to normal <ul style="list-style-type: none"> ◦ Normal driving 3. When the vehicle is stopped while the malfunction continues <ul style="list-style-type: none"> ◦ Hybrid system stopped
P060B1C	Hybrid/EV Powertrain Control Module A/D Processing Voltage Out of Range	READY OFF
P060B49	Hybrid/EV Powertrain Control Module A/D Processing Internal Electronic Failure	Normal driving (engine output drop)
P060B71	Hybrid/EV Powertrain Control Module A/D Processing Actuator Stuck	READY OFF
P062F44	Hybrid/EV Powertrain Control Module EEPROM Data Memory Failure	Normal driving
P06881F	ECM/PCM Power Relay Sense Circuit Intermittent	<ul style="list-style-type: none"> • Reduced output power • Engine not stopped
P0A0A13	High Voltage System Interlock Circuit Open	Normal driving
P0A0A92	High Voltage System Interlock Performance or Incorrect Operation	READY OFF
P0A1F94	Hybrid/EV Battery Energy Control Module Unexpected Operation	<ul style="list-style-type: none"> • Reduced output power • Engine not stopped
P0A3011	Drive Motor "B" Temperature Sensor Circuit Short to Ground	Normal driving
P0A3015	Drive Motor "B" Temperature Sensor Circuit Short to Battery or Open	Normal driving
P0A302A	Drive Motor "B" Temperature Sensor Signal Stuck In Range	Normal driving
P0A9300	Inverter "A" Cooling System Performance	<ul style="list-style-type: none"> • Greatly reduced output power • Diving range is limited
P0AA000	Hybrid/EV Battery Positive Contactor Circuit Stuck Closed	<ol style="list-style-type: none"> 1. 1st trip <ul style="list-style-type: none"> ◦ Normal driving 2. 2nd trip <ul style="list-style-type: none"> ◦ READY OFF

DTC NO.	DETECTION ITEM	VEHICLE BEHAVIOR WHEN DTC IS OUTPUT
P0AA073	Hybrid/EV Battery Positive and Negative Contactor Actuator Stuck Closed	<ol style="list-style-type: none"> 1. 1st trip <ul style="list-style-type: none"> ◦ Normal driving 2. 2nd trip <ul style="list-style-type: none"> ◦ READY OFF
P0AA373	Hybrid/EV Battery Negative Contactor Actuator Stuck Closed	<ol style="list-style-type: none"> 1. 1st trip <ul style="list-style-type: none"> ◦ Normal driving 2. 2nd trip <ul style="list-style-type: none"> ◦ READY OFF
P0AA649	Hybrid/EV Battery Voltage System Isolation Internal Electronic Failure	Normal driving (READY OFF after a certain period of time)
P0AA749	Hybrid/EV Battery Voltage Isolation Sensor Circuit Internal Electronic Failure	Normal driving
P0ABF00	Hybrid/EV Battery Current Sensor "A" Circuit Range/Performance	<ul style="list-style-type: none"> • Reduced output power • Engine not stopped
P0AD911	Hybrid/EV Battery Positive Contactor Circuit Short to Ground	READY OFF
P0AD915	Hybrid/EV Battery Positive Contactor Circuit Short to Auxiliary Battery or Open	READY OFF
P0ADD11	Hybrid/EV Battery Negative Contactor Circuit Short to Ground	READY OFF
P0ADD15	Hybrid/EV Battery Negative Contactor Circuit Short to Auxiliary Battery or Open	READY OFF
P0B231C	Hybrid/EV Battery "A" Voltage Sensor Voltage Out of Range	<ul style="list-style-type: none"> • Reduced output power • Engine not stopped
P0C7396	Motor Electronics Coolant Pump "A" Component Internal Failure	<ul style="list-style-type: none"> • Greatly reduced output power • Driving range is limited
P0C7600	Hybrid/EV Battery System Discharge Time Too Long	READY OFF
P0D2D1C	Drive Motor "A" Inverter Voltage Sensor Voltage Out of Range	Reduced output power
P0E311C	Boosting Converter Voltage Sensor "A" Voltage Out of Range	Reduced output power
P160600	Collision detected or Collision Sensor Connection (Open)	<ol style="list-style-type: none"> 1. 1st trip <ul style="list-style-type: none"> ◦ Normal driving 2. 2nd trip <ul style="list-style-type: none"> ◦ READY OFF

DTC NO.	DETECTION ITEM	VEHICLE BEHAVIOR WHEN DTC IS OUTPUT
P160604	Collision detected or Collision Sensor Connection (Open) System Internal Failure	<ol style="list-style-type: none"> 1. 1st trip <ul style="list-style-type: none"> ◦ Normal driving 2. 2nd trip <ul style="list-style-type: none"> ◦ READY OFF
P163181	Communication Error from ECM to VSC Invalid Serial Data Received	-
P176A87	Lost Communication with Fail Safe Signal (Gear Shift Control Module "A") Missing Message	Shift position cannot be changed
P19E100	DC/DC Converter System Performance	Normal driving
P1C2D62	Hybrid/EV Battery "A" Voltage Sensor/Boosting Converter Voltage Sensor "A" Signal Compare Failure	Reduced output power
P1C6A9F	Motor Shutdown Stuck Off	READY OFF
P1C6B9F	Rear Motor Shutdown Stuck Off	READY OFF
P1C6C9F	Generator Shutdown Stuck Off	READY OFF
P1C7779	Engine Failed to Start Mechanical Linkage Failure	<ul style="list-style-type: none"> • Reduced output power • Driving range is limited • Engine always stopped
P1C7C49	Hybrid/EV Battery Voltage System Isolation (A/C Area) Internal Electronic Failure	Normal driving (READY OFF after a certain period of time)
P1C7D49	Hybrid/EV Battery Voltage System Isolation (Hybrid/EV Battery Area) Internal Electronic Failure	Normal driving (READY OFF after a certain period of time)
P1C7E49	Hybrid/EV Battery Voltage System Isolation (Transaxle Area) Internal Electronic Failure	Normal driving (READY OFF after a certain period of time)
P1C7F49	Hybrid/EV Battery Voltage System Isolation (Direct Current Area) Internal Electronic Failure	Normal driving (READY OFF after a certain period of time)
P1C8049	Hybrid/EV Battery Voltage System Isolation (Rear Motor Area) Internal Electronic Failure	Normal driving (READY OFF after a certain period of time)
P1C8349	High Voltage Power Resource Circuit Voltage Sensor after Boosting Malfunction	READY OFF
P1C8449	High Voltage Power Resource Circuit Short during Ready ON	<ul style="list-style-type: none"> • Reduced output power • Engine not stopped
P1C8679	Transmission (Input) Mechanical Linkage Failure	<ul style="list-style-type: none"> • Reduced output power • Driving range is limited • Engine always stopped
P1C8779	Generator Mechanical Linkage Failure	<ul style="list-style-type: none"> • Reduced output power • Driving range is limited • Engine always stopped

DTC NO.	DETECTION ITEM	VEHICLE BEHAVIOR WHEN DTC IS OUTPUT
P1C8879	Planetary Gear Mechanical Linkage Failure	<ul style="list-style-type: none"> • Reduced output power • Driving range is limited • Engine always stopped
P1C9E9F	Hybrid/EV System Reset Stuck Off	READY OFF
P1CCC49	DC/DC Converter Internal Electronic Failure	Normal driving
P1CE213	PCU Interlock Circuit Open	Normal driving
P1CE292	PCU Interlock Performance or Incorrect Operation	READY OFF
P1CE31C	Hybrid/EV Powertrain Control Module Monitoring Processor A/D Processing Voltage Out of Range	Normal driving
P1CE349	Hybrid/EV Powertrain Control Module Monitoring Processor A/D Processing Internal Electronic Failure	Normal driving
P1CE371	Hybrid/EV Powertrain Control Module Monitoring Processor A/D Processing Actuator Stuck	Normal driving
P1CFA12	IGB Signal Circuit Short to Auxiliary Battery	-
P1F689F	Motor Inverter Shutdown Performance Stuck Off	Normal driving (READY OFF after a certain period of time)
P212012	Throttle/Pedal Position Sensor/Switch "D" Circuit Short to Auxiliary Battery	Normal driving (limit accelerator opening)
P212014	Throttle/Pedal Position Sensor/Switch "D" Circuit Short to Ground or Open	Normal driving (limit accelerator opening)
P21201C	Throttle/Pedal Position Sensor/Switch "D" Voltage Out of Range	Normal driving (limit accelerator opening)
P21201F	Throttle/Pedal Position Sensor/Switch "D" Circuit Intermittent	Normal driving (limit accelerator opening)
P212512	Throttle/Pedal Position Sensor/Switch "E" Circuit Short to Auxiliary Battery	Normal driving (limit accelerator opening)
P212514	Throttle/Pedal Position Sensor/Switch "E" Circuit Short to Ground or Open	Normal driving (limit accelerator opening)
P21251C	Throttle/Pedal Position Sensor/Switch "E" Voltage Out of Range	Normal driving (limit accelerator opening)
P21251F	Throttle/Pedal Position Sensor/Switch "E" Circuit Intermittent	Normal driving (limit accelerator opening)
P213800	Throttle/Pedal Position Sensor/Switch "D"/"E" Voltage Correlation	Normal driving (limit accelerator opening)
P21382B	Throttle/Pedal Position Sensor/Switch "D"/"E" Signal Cross Coupled	Greatly reduced output power
P253012	IG2 Signal Circuit Short to Auxiliary Battery	READY OFF
P253314	Ignition Switch On/Start Position Circuit Low Circuit Short to Ground or Open	-
P310711	Lost Communication with Airbag System Control Module Circuit Short to Ground	Normal driving

DTC NO.	DETECTION ITEM	VEHICLE BEHAVIOR WHEN DTC IS OUTPUT
P310715	Lost Communication with Airbag System Control Module Circuit Short to Auxiliary Battery or Open	Normal driving
P310764	Lost Communication with Airbag System Control Module Signal Plausibility Failure	Normal driving
P314779	Transmission (Shaft) Mechanical Linkage Failure	READY OFF
P314A31	Motor Electronics Coolant Pump "A" No Signal	<ul style="list-style-type: none"> • Greatly reduced output power • Driving range is limited
P31B300	Hybrid/EV Battery Voltage High	<ul style="list-style-type: none"> • Reduced output power • Engine not stopped
P321E9F	Motor/Generator Shutdown Signal Stuck Off	Normal driving (READY OFF after a certain period of time)
P33B99F	Motor/Generator Shutdown Signal (Hybrid/EV Side) Stuck Off	Normal driving (READY OFF after a certain period of time)
P33BF9F	Motor/Generator Shutdown Signal (MG Side) Stuck Off	Normal driving (READY OFF after a certain period of time)
U010087	Lost Communication with ECM/PCM "A" Missing Message	Reduced output power
U011087	Lost Communication with Drive Motor Control Module "A" Missing Message	Normal driving
U010387	Lost Communication with Gear Shift Control Module "A" (Hybrid/EV Battery Local Bus) Missing Message	-
U011187	Lost Communication with Hybrid/EV Battery Energy Control Module "A" Missing Message	<ul style="list-style-type: none"> • Reduced output power • Engine not stopped
U012687	Lost Communication with Steering Angle Sensor Module Missing Message	-
U012987	Lost Communication with Brake System Control Module Missing Message	Normal driving
U013187	Lost Communication with Power Steering Control Module "A" Missing Message	-
U014087	Lost Communication with Body Control Module Missing Message	Normal driving
U015187	Lost Communication with Restraints Control Module Missing Message	Normal driving
U015500	Lost Communication with Instrument Panel Cluster (IPC) Control Module	-
U016487	Lost Communication with HVAC Control Module Missing Message	Normal driving
U01BD87	Lost Communication with DC/DC Converter Control Module "C" Missing Message	Normal driving

DTC NO.	DETECTION ITEM	VEHICLE BEHAVIOR WHEN DTC IS OUTPUT
U029187	Lost Communication with Gear Shift Control Module "B" Missing Message	-
U042481	HVAC Control Module to Hybrid Powertrain Control Module Invalid Serial Data Received	-
U110787	Lost Communication with Power Management Module Missing Message	READY OFF
U111A87	Lost Communication with ECM/PCM "A" (ch2) Missing Message	<ul style="list-style-type: none"> • Reduced output power • Driving range is limited • Engine always stopped
U115487	Lost Communication with Drive Motor Control Module "A" (ch2) Missing Message	Normal driving
U117087	Lost Communication with Brake System Control Module (Secondary CAN Line) Missing Message	Normal driving
U117687	Lost Communication with Gear Shift Control Module "A" (Powertrain Bus) Missing Message	-
U117B87	Lost Communication with Hybrid/EV Battery Energy Control Module "A" (ch2) Missing Message	<ul style="list-style-type: none"> • Reduced output power • Engine not stopped
U117E87	Lost Communication with Drive Motor Control Module "A" (ch4) Missing Message	<ul style="list-style-type: none"> • Reduced output power • Engine not stopped
U11BC87	Lost Communication with Hybrid/EV Powertrain Control Module (ch6) Missing Message	-

