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<b>Model Year Start:</b> 2023	<b>Model:</b> Prius Prime	<b>Prod Date Range:</b> [12/2022 - ]
<b>Title:</b> ADVANCED DRIVER ASSISTANCE SYSTEM: FRONT RADAR SENSOR SYSTEM: FREEZE FRAME DATA; 2023 - 2024 MY Prius Prius Prime [12/2022 - ]		

## FREEZE FRAME DATA

### DESCRIPTION

- (a) Whenever a front radar sensor system DTC is stored, the millimeter wave radar sensor assembly stores the current vehicle state as Freeze Frame Data.

### CHECK FREEZE FRAME DATA

- (a) Select a DTC to display the freeze frame data.

#### Body Electrical > Front Radar Sensor > Trouble Codes

- (b) Check the freeze frame data for the output DTC.

### FREEZE FRAME DATA CHART

#### Body Electrical > Front Radar Sensor

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
Total Distance Traveled	-	-	-	Cannot be used
Total Distance Traveled - Unit	-	-	-	Cannot be used
Vehicle Setting Value Delta X	Sensor position	-1.28 to 1.27 m	Actual sensor position displayed	-
Vehicle Setting Value Delta Z	Sensor position	0.00 to 655.35 m	Actual sensor position displayed	-
Vehicle Setting Value H	Sensor position	0.00 to 2.55 m	Actual sensor position displayed	-
Optical Axis Not Adjusted Status	Beam axis not adjusted status	Complete or Not Complete	Complete: Beam axis adjustment completed Not Complete: Beam axis adjustment not completed	-
Optical Axis Adjustment Angle	Latest beam axis adjustment angle value	-12.8 to 12.7 deg	Adjusted angle of beam axis alignment	-

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
(Horizontal) (Latest)	(horizontal)		(Default value: 0.0 deg.)	
Optical Axis Adjustment Angle (Vertical) (Latest)	Latest beam axis adjustment angle value (vertical)	-12.8 to 12.7 deg	Adjusted angle of beam axis alignment (Default value: 0.0 deg.)	-
Optical Axis Adjustment Angle (Horizontal) (2nd Latest)	2nd latest beam axis adjustment angle value (horizontal)	-12.8 to 12.7 deg	Adjusted angle of beam axis alignment (Default value: 0.0 deg.)	-
Optical Axis Adjustment Angle (Vertical) (2nd Latest)	2nd latest beam axis adjustment angle value (vertical)	-12.8 to 12.7 deg	Adjusted angle of beam axis alignment (Default value: 0.0 deg.)	-
Optical Axis Offset Angle (Horizontal)	Beam axis offset value (horizontal)	-12.8 to 12.7 deg	Beam axis offset value	-
Optical Axis Offset Angle (Vertical)	Beam axis offset value (vertical)	-12.8 to 12.7 deg	Beam axis offset value	-
Optical Axis Offset Angle (Horizontal) (with On-Line Calibration Angle)	Beam axis offset value (horizontal) (after completing calibration)	-12.8 to 12.7 deg	Beam axis offset value	-
Optical Axis Offset Angle (Vertical) (with On-Line Calibration Angle)	Beam axis offset value (vertical) (after completing calibration)	-12.8 to 12.7 deg	Beam axis offset value	-
Dirt Detection for Radar Cruise	Dirt detection status for radar cruise	OFF or ON	OFF: Dirt not detected ON: Dirt detected	-
Dirt Detection for PCS	Dirt detection status for PCS	OFF or ON	OFF: Dirt not detected ON: Dirt detected	-
Partially Dirt Detection	Partial dirt detection status	OFF or ON	OFF: Dirt not detected	-

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
			ON: Dirt detected	
Foreign Matter Detection	Foreign matter detection status	OFF or ON	OFF: No foreign matter detected ON: Foreign matter detected	-
Dirt Detection	Dirt detection status	OFF or ON	OFF: Dirt not detected ON: Dirt detected	-
Blockage Detection	Blockage detection status	OFF or ON	OFF: Blockage not detected ON: Blockage detected	-
Optical Axis Misalignment (Horizontal)	Beam axis misalignment (horizontal) result	OFF or ON	OFF: Normal ON: Misalignment	-
Optical Axis Misalignment (Vertical)	Beam axis misalignment (vertical) result	OFF or ON	OFF: Normal ON: Misalignment	-
Front Radar Sensor Temporary Unavailable (Horizontal Direction Optical Axis Misalignment)	Millimeter wave radar sensor assembly temporarily unavailable due to horizontal beam axis misalignment	OFF or ON	OFF: Normal ON: Temporarily disabled due to beam axis misalignment	-
Front Radar Sensor Temporary Unavailable (Vertical Direction Optical Axis Misalignment)	Millimeter wave radar sensor assembly temporarily unavailable due to vertical beam axis misalignment	OFF or ON	OFF: Normal ON: Temporarily disabled due to beam axis misalignment	-
IG Voltage	IG voltage value	0.0 to 25.5 V	11.0 to 14.0 V: Ignition switch ON	-
Front Radar Sensor Temperature	Temperature of area around millimeter wave radar sensor assembly	-32768 to 32767°C	Actual temperature of area around millimeter wave radar sensor displayed	This value differs to the outside temperature.

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
Vehicle Speed	Vehicle speed	-30 km/h (-19 mph) to 225.99 km/h (159 mph)	Almost same as actual vehicle speed	-
Ambient Temperature	Actual ambient temperature	-78.75 to 78.125°C	Actual ambient temperature displayed	-
Wiper Operation Status	Wiper operation status	Front Wiper Stop, Front Wiper INT, Front Wiper LO, Front Wiper HI, Front Wiper Storage, Service Position or Front Wiper Malfunction	Front wiper operation status displayed	-
Heater Control Duty	Heater operation duty status of millimeter wave radar sensor assembly	0 to 255 %	Heater operation duty status of millimeter wave radar sensor assembly displayed	Cannot be used
Heater Control Status	Heater operation status of millimeter wave radar sensor assembly	OFF or ON	OFF: Heater not operating ON: Heater operating	Cannot be used
On-Line Calibration Angle (Horizontal)	Calibrated angle value (horizontal)	-12.8 to 12.7 deg	Learned value	-
On-Line Calibration Angle (Vertical)	Calibrated angle value (vertical)	-12.8 to 12.7 deg	Learned value	-

