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| Model Year Start: 2023 | Model: Prius Prime | Prod Date Range: [12/2022 -] |
| Title: M20A-FXS (ENGINE CONTROL): CAMSHAFT TIMING CONTROL MOTOR: ON-VEHICLE INSPECTION; 2023 - 2024 MY Prius Prius Prime [12/2022 -] | | |

ON-VEHICLE INSPECTION

PROCEDURE

1. INSPECT CAM TIMING CONTROL MOTOR WITH EDU ASSEMBLY

Pre-procedure1

- (a) None

Procedure1

- (b) Check Rotation Direction Signal:

- (1) According to the display on the GTS, read the Data List.

Powertrain > Engine > Data List

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|-------------------------------|
| TESTER DISPLAY |
| VVT-iE Motor Direction Bank 1 |

Specified Condition:

| GTS DISPLAY | CONDITION | SPECIFIED CONDITION |
|-------------------------------|--|---------------------|
| VVT-iE Motor Direction Bank 1 | Ignition switch off → Ignition switch ON | Backward |

If the result is not as specified, inspect the cam timing control motor with EDU assembly and wire harness.

Procedure2

- (c) Check VVT Change Angle:

- (1) Put the engine in Inspection Mode (Maintenance Mode).

Powertrain > Hybrid Control > Utility

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|-----------------|
| TESTER DISPLAY |
| Inspection Mode |

- (2) Start the engine and warm it up until the engine coolant temperature reaches 75°C (167°F) or higher.

- (3) Read the Data List while performing the Active Test with the engine idling.

Powertrain > Engine > Active Test

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|---|
| ACTIVE TEST DISPLAY |
| Control the VVT-iE Opening Angle Bank 1 |

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|--------------------------------|
| DATA LIST DISPLAY |
| Intake VVT Change Angle Bank 1 |
| Intake VVT Target Angle Bank 1 |

Specified Condition:

| | |
|---|--|
| ACTIVE TEST MOVEMENT ORDER | DIFFERENCE BETWEEN "INTAKE VVT CHANGE ANGLE BANK 1" AND "INTAKE VVT TARGET ANGLE BANK 1" |
| 0 deg → 10 deg → 20 deg → 40 deg → 0 deg → 10 deg → END | Within 4 DegFR |

If the result is not as specified, inspect the cam timing control motor with EDU assembly and camshaft timing gear assembly.

Post-procedure1

(d) None

