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Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [03/2023 -]
Title: M20A-FXS (FUEL): FUEL SYSTEM: ON-VEHICLE INSPECTION; 2023 - 2024 MY Prius Prius Prime [03/2023 -]		

ON-VEHICLE INSPECTION

PROCEDURE

1. CHECK FUEL PUMP OPERATION AND INSPECT FOR FUEL LEAK

(a) Check fuel pump operation.

NOTICE:

Do not start the engine.

Powertrain > Engine > Active Test

TESTER DISPLAY
Activate the Circuit Relay (Brushless)

(1) for HEV Model:

Check for pressure in the fuel tube sub-assembly from the fuel line. Check that sounds of fuel flowing from the fuel tank sub-assembly can be heard. If no sounds can be heard, check the relay, fuel pump, ECM and wiring connectors.

for PHEV Model:

Check for pressure in the fuel tube sub-assembly from the fuel line. Check that sounds of fuel flowing from the fuel tank sub-assembly can be heard. If no sounds can be heard, check the relay, fuel pump with filter assembly, ECM and wiring connectors.

(b) Inspect for fuel leaks.

(1) Check that there are no fuel leaks from the fuel system after doing any maintenance or repairs. If there is a fuel leak, repair or replace parts as necessary.

2. CHECK FUEL PRESSURE

Pre-procedure1

(a) Discharge fuel system pressure.

HINT:

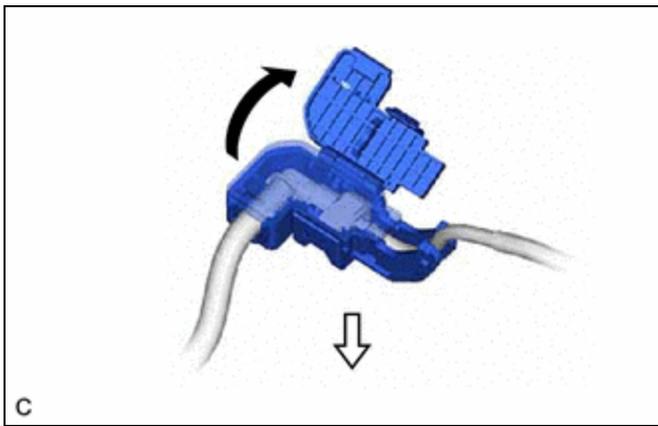
[Click here](#) **INFO**

(b) Measure the auxiliary battery voltage.

Standard Voltage:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION	RESULT
Positive (+) auxiliary battery terminal - Negative (-) auxiliary battery terminal	20°C (68°F)	11 to 14 V	V

(c) Open the cover of the EFI fuel pipe clamp and remove the EFI fuel pipe clamp from the fuel tube connector.

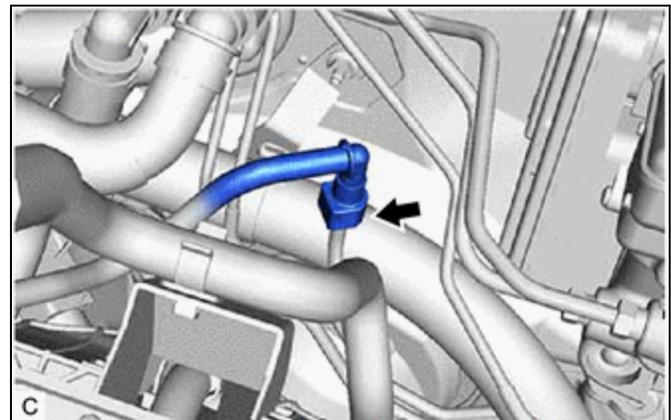


	Open
	Pull

(d) Disconnect the fuel tube sub-assembly from the fuel pipe.

HINT:

[Click here](#) 



(e) Install SST (EFI fuel pressure gauge) as shown in the illustration.

SST: 09268-45101

09268-41260

09268-41280

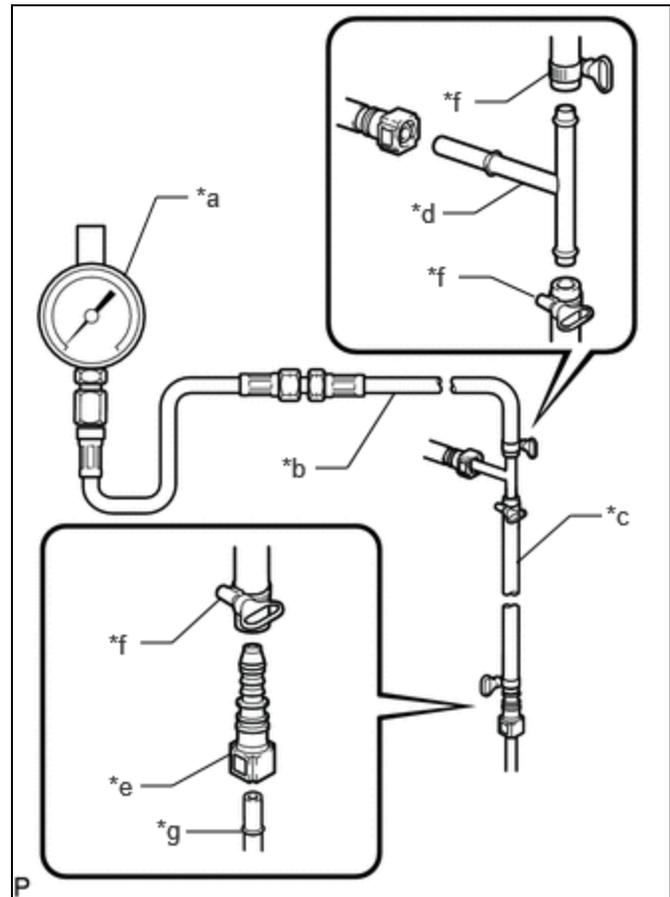
09268-41700

95336-08070

SST: 09268-00010

09268-00020

09268-00030



*a	SST (Gauge)
*b	SST (Hose Joint)
*c	SST (Hose)
*d	SST (T-joint)
*e	SST (Fuel Tube Connector)
*f	SST (Hose Band)
*g	Fuel Pipe (Vehicle Side)

(f) Wipe up any spilled fuel.

(g) Connect the cable to the negative (-) auxiliary battery terminal.

HINT:

[Click here](#) **INFO**

Procedure1

(h) Measure the fuel pressure.

NOTICE:

Do not start the engine.

Powertrain > Engine > Active Test

TESTER DISPLAY
Activate the Circuit Relay (Brushless)

Standard Fuel Pressure:

SPECIFIED CONDITION	RESULT
300 to 640 kPa	kPa
3.1 to 6.5 kgf/cm ²	kgf/cm ²
44 to 93 psi	psi

- If the fuel pressure is more than the standard, replace the No. 2 fuel main valve assembly.
- for HEV Model:

If the fuel pressure is less than the standard, check the fuel hoses and their connections, fuel pump and fuel main valve assembly.

- for PHEV Model:

If the fuel pressure is less than the standard, check the fuel hoses and their connections, fuel pump with filter assembly and No. 2 fuel main valve assembly.

Pre-procedure2

(i) Put the engine in Inspection Mode (Maintenance Mode).

Powertrain > Hybrid Control > Utility

TESTER DISPLAY
Inspection Mode

(j) Start the engine.

Procedure2

(k) Measure the fuel pressure at idle.

Standard Fuel Pressure:

SPECIFIED CONDITION	RESULT
300 to 640 kPa	kPa
3.1 to 6.5 kgf/cm ²	kgf/cm ²
44 to 93 psi	psi

HINT:

Refer to Standard Idle Speed.

Click here [INFO](#)

Pre-procedure3

(l) Stop the engine.

Procedure3

(m) Check that the fuel pressure remains as specified for 5 minutes.

Standard Fuel Pressure:

SPECIFIED CONDITION	RESULT
98 kPa or higher	kPa
1.0 kgf/cm ² or higher	kgf/cm ²
14.2 psi or higher	psi

for HEV Model:

If the result is not as specified, check the fuel pump, fuel main valve assembly and/or port fuel injector assemblies.

for PHEV Model:

If the result is not as specified, check the fuel pump with filter assembly, fuel main valve assembly and/or port fuel injector assemblies.

Post-procedure1

(n) After checking the fuel pressure, disconnect the cable from the negative (-) auxiliary battery terminal and carefully remove SST to prevent fuel from spraying.

HINT:

[Click here](#) INFO

(o) Connect the fuel tube sub-assembly to the fuel pipe.

HINT:

[Click here](#) INFO

(p) Install the EFI fuel pipe clamp to the fuel tube connector and close the cover of the EFI fuel pipe clamp.

(q) Connect the cable to the negative (-) auxiliary battery terminal.

HINT:

[Click here](#) INFO

(r) Inspect for fuel leaks.

HINT:

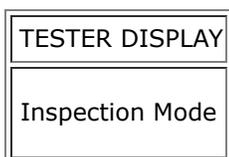
[Click here](#) INFO

3. CHECK FUEL PRESSURE (for High Pressure)

Pre-procedure1

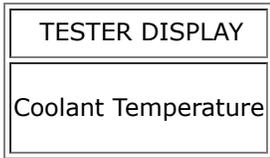
(a) Put the engine in Inspection Mode (Maintenance Mode).

Powertrain > Hybrid Control > Utility



(b) Start the engine and warm it up until the engine coolant temperature is 75°C (167°F) or higher with all the accessories switched off.

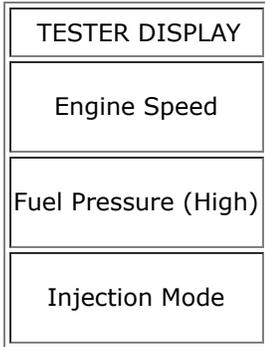
Powertrain > Engine > Data List



Procedure1

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

Powertrain > Engine > Data List



HINT:

During charge control, the engine speed is set at idle. Therefore, the engine speed will not increase when the accelerator pedal is depressed. In this case, read the Data List after charge control has completed.

Standard:

GTS DISPLAY	CONDITION	SPECIFIED CONDITION
Fuel Pressure (High)	<ul style="list-style-type: none"> • Shift position: P • A/C: Off • Engine warmed up • Engine Speed: 2500 rpm • Injection Mode: Direct 	3000 to 25000 kPa

for HEV Model:

If the result is not as specified, check the fuel pump, fuel (engine room side) pump assembly, fuel pressure sensor and wire harnesses.

for PHEV Model:

If the result is not as specified, check the fuel pump with filter assembly, fuel (engine room side) pump assembly, fuel pressure sensor and wire harnesses.

Post-procedure1

(d) None

