

Last Modified: 12-04-2024	6.11:8.1.0	Doc ID: RM100000029H12
Model Year Start: 2023	Model: Prius Prime	Prod Date Range: [12/2022 -]
Title: METER / GAUGE / DISPLAY: METER / GAUGE SYSTEM: Engine Oil Level Sensor Circuit; 2023 - 2024 MY Prius Prius Prime [12/2022 -]		

Engine Oil Level Sensor Circuit

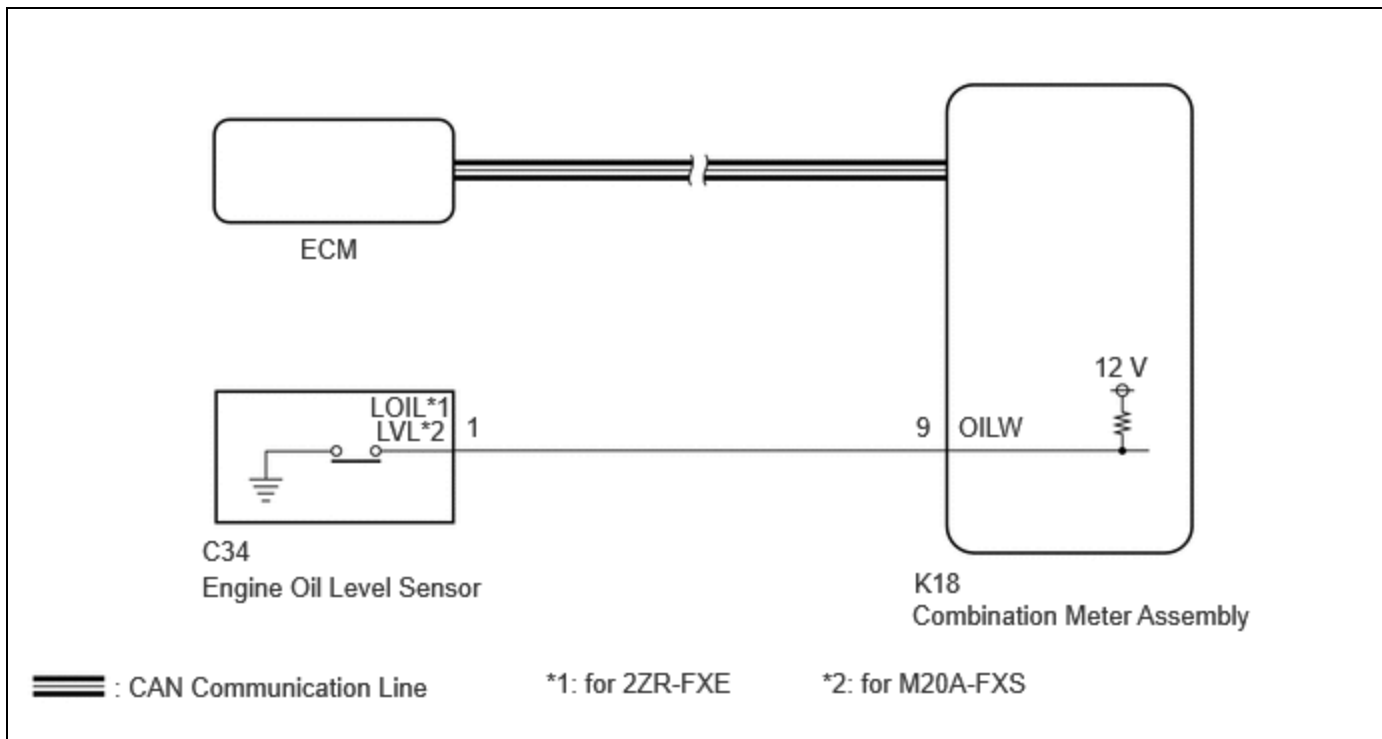
DESCRIPTION

The combination meter assembly and engine oil level sensor are connected via direct line. The combination meter assembly determines the engine oil level based on the engine oil level sensor status signal.

HINT:

The coolant temperature signal and engine speed signal is sent from the ECM to the combination meter assembly via CAN communication. Because an accurate engine oil level cannot be detected when the engine is cold or operating at high speeds, warning control is only performed after the engine is warmed up and the engine is stopped or idling.

WIRING DIAGRAM



CAUTION / NOTICE / HINT

NOTICE:

- When replacing the combination meter assembly, always replace it with a new one. If a combination meter assembly which was installed to another vehicle is used, the information stored in it will not match the information from the vehicle and a DTC may be stored.
- When replacing the combination meter assembly, update the ECU security key.

Click here [INFO](#)

- The following troubleshooting procedure is based on the assumption that the SFI system is normal. Confirm that the SFI system is not malfunctioning before performing the following procedure.

for 2ZR-FXE: [Click here](#) INFO

for M20A-FXS: [Click here](#) INFO

PROCEDURE

1. CHECK ENGINE OIL

(a) Check the engine oil level and engine oil quality is normally.

for 2ZR-FXE: [Click here](#) INFO

for M20A-FXS: [Click here](#) INFO

NG ▶ **REPLACE OR ADD ENGINE OIL**

OK



2. READ VALUE USING GTS

(a) Read the Data List according to the display on the GTS.

Body Electrical > Combination Meter > Data List

TESTER DISPLAY	MEASUREMENT ITEM	RANGE	NORMAL CONDITION	DIAGNOSTIC NOTE
Oil Level Switch	Engine oil level sensor input	OFF or ON	OFF: Engine oil level not low ON: Engine oil level low	-

Body Electrical > Combination Meter > Data List

TESTER DISPLAY
Oil Level Switch

RESULT	PROCEED TO
The Data List item changes correctly	A
The Data List item do not change correctly	B

A ▶ **REPLACE COMBINATION METER ASSEMBLY**

B
▼

3. INSPECT ENGINE OIL LEVEL SENSOR

for 2ZR-FXE: Click here [INFO](#)

for M20A-FXS: Click here [INFO](#)

NG ▶ REPLACE ENGINE OIL LEVEL SENSOR

for 2ZR-FXE: Click here [INFO](#)

for M20A-FXS: Click here [INFO](#)

OK
▼

4. CHECK HARNESS AND CONNECTOR (ENGINE OIL LEVEL SENSOR - COMBINATION METER ASSEMBLY)

- (a) Disconnect the K18 combination meter assembly connector.
- (b) Measure the resistance according to the value(s) in the table below.

Standard Resistance (for 2ZR-FXE):



- [Click Location & Routing\(C34,K18\)](#)
- [Click Connector\(C34\)](#)
- [Click Connector\(K18\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
C34-1 (LOIL) - K18-9 (OILW)	Always	Below 1 Ω
C34-1 (LOIL) or K18-9 (OILW) - Body ground	Always	10 kΩ or higher

Standard Resistance (for M20A-FXS):



- [Click Location & Routing\(C34,K18\)](#)
- [Click Connector\(C34\)](#)
- [Click Connector\(K18\)](#)

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
C34-1 (LVL) - K18-9 (OILW)	Always	Below 1 Ω
C34-1 (LVL) or K18-9 (OILW) - Body ground	Always	10 k Ω or higher

OK ► **REPLACE COMBINATION METER ASSEMBLY**

NG ► **REPAIR OR REPLACE HARNESS OR CONNECTOR**

