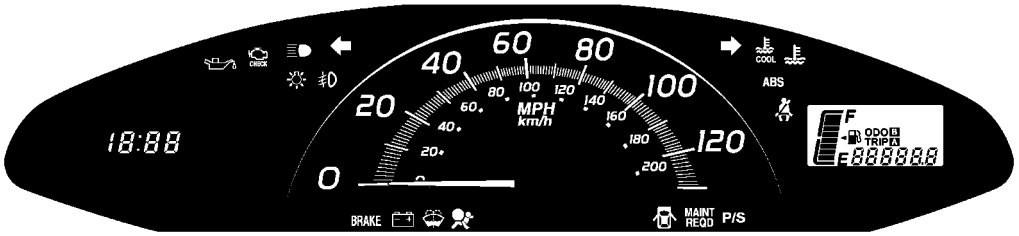
METER

■ COMBINATION METER

1. General

The combination meter in the ’06 models has the following features:

- An Optitron display type combination meter is used. It is located at the upper center of the instrument panel to ensure its visibility.
- The Optitron display type meter realizes excellent visibility through the use of smoke acrylic in the protective panel, and LEDs (Light Emitting Diodes) that are very bright and have high contrast for illuminating the indicator and dial.
- The movement for actuating the indicator of the speedometer and tachometer is used a step-motor type.
- LCDs (Liquid Crystal Displays) are used for the odometer, trip meter, and fuel gauge.
- A fuel gauge which displays the amount of fuel remaining in the fuel tank with an 8-segment bar is used.
- A meter ECU and multi buzzer are enclosed in the combination meter. This ECU maintains communication with other ECUs through the CAN (Controller Area Network).
- An oil replacement reminder light has been established in the combination meter, which will light or flash to remind the driver to change the engine oil. (Only for the U.S.A. models)



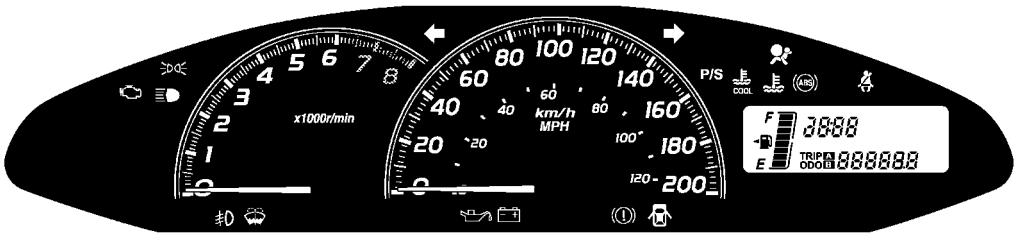
00RBE09Y

U.S.A. Models



00RBE10Y

CANADA Models



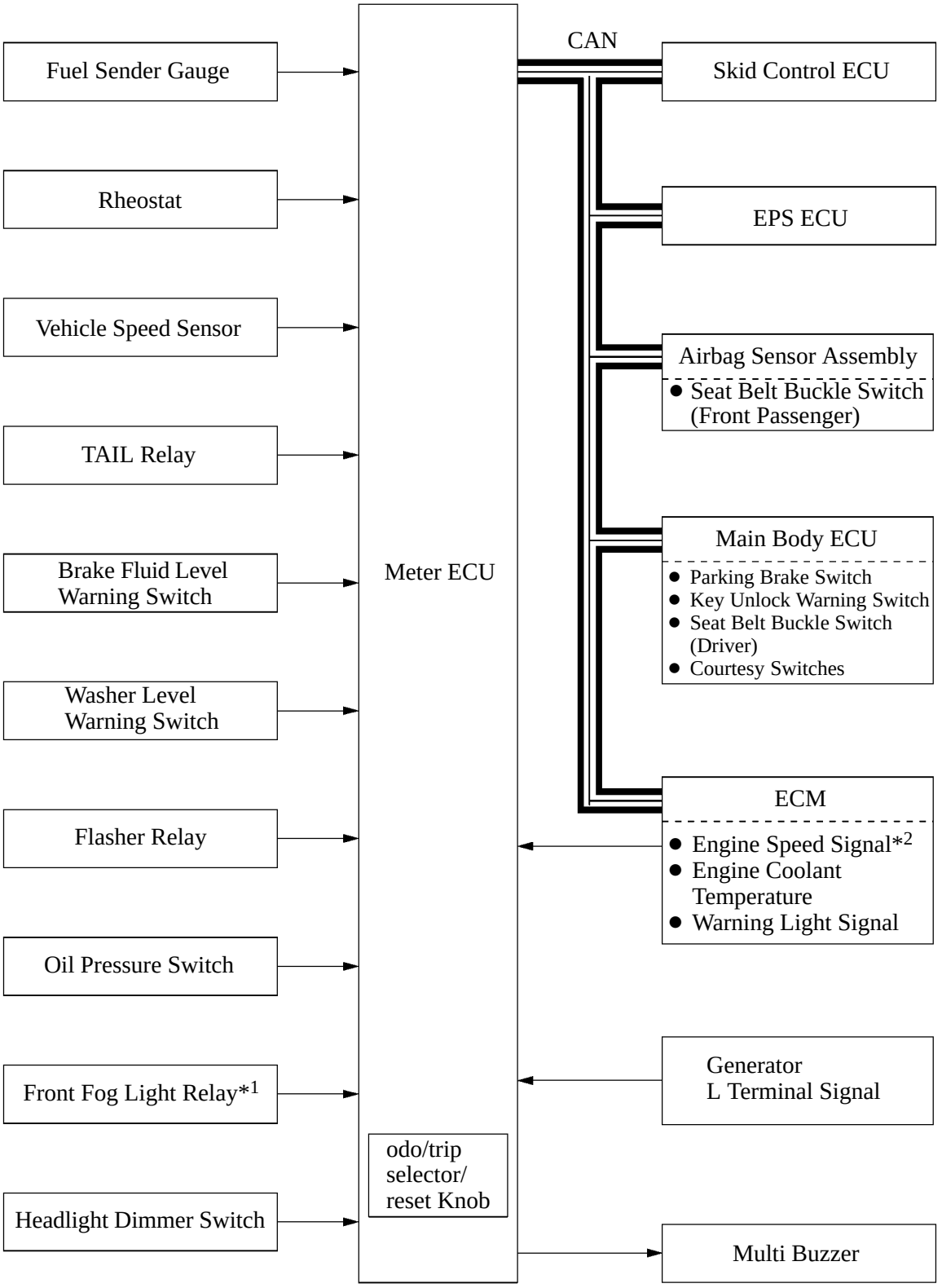
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CANADA Models (RS Grade)

Service Tip

If the LEDs malfunction, it must be replaced as a combination meter assembly. Refer to the 2006 Yaris Repair Manual (Pub. No. RM00R0U).

2. System Diagram

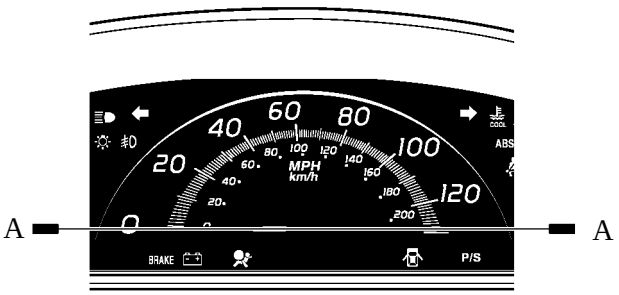


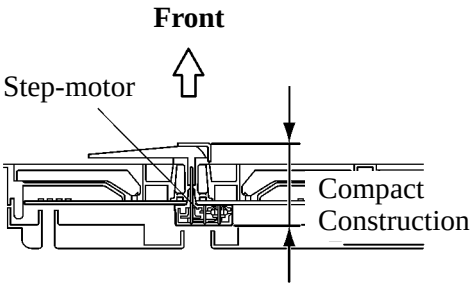
00RBE04Y

*1: With Front Fog Light
*2: With Tachometer

3. Construction

- The pointer movement for the speedometer and the tachometer is used the step-motor type. This has resulted in a thinner pointer movement, thus achieving a lightweight and compact construction.
- In the case of the step-motor type, when the power to the combination meter is turned on through the recollection of the battery terminal, the step-motor initializes once to recognize the zero point of the indicator in relation to the step-motor. However, if the ignition switch is changed to ON after 60 seconds or more have elapsed after the initialization, the step-motor initializes again.





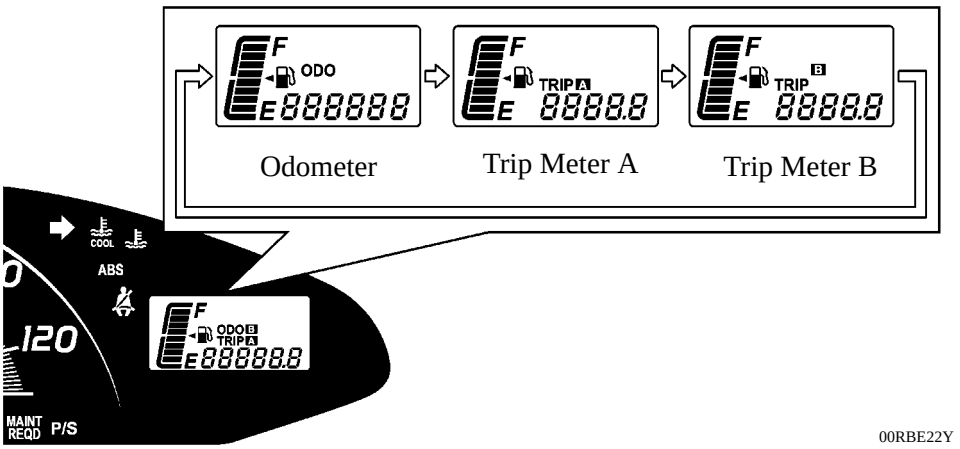
A - A Cross Section

00RBE05Y

4. LCD (Liquid Crystal Display)

Odo/Trip Meter

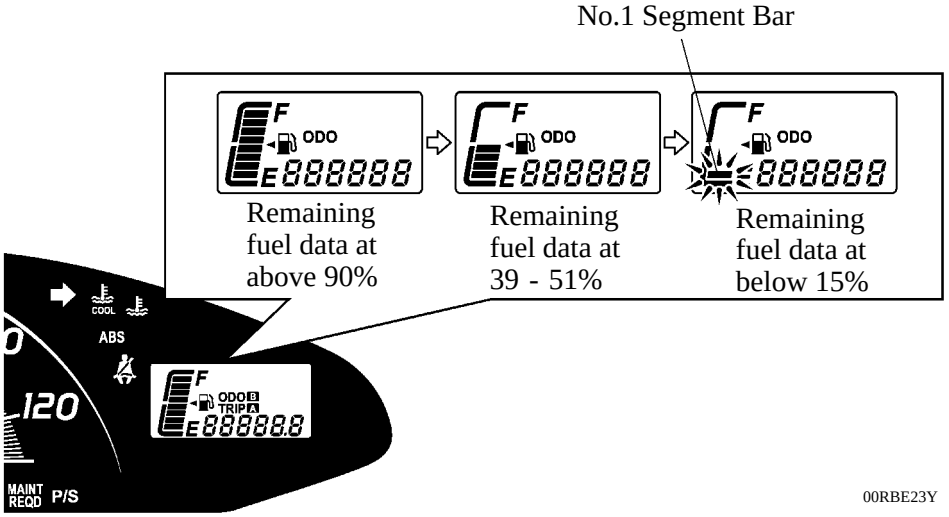
- Pressing the odo/trip selector/reset knob switches between each mode in the following order: odometer → trip meter A → trip meter B.
- While the trip meter A or B is displayed, pressing the odo/trip selector/reset knob 0.8 seconds or longer causes the driven distance displayed by the current trip mode to revert to 0.0 mile (or km/h). The trip meter will resume measuring the distance at the moment the odo/trip selector/reset knob is released.



00RBE22Y

Fuel Gauge

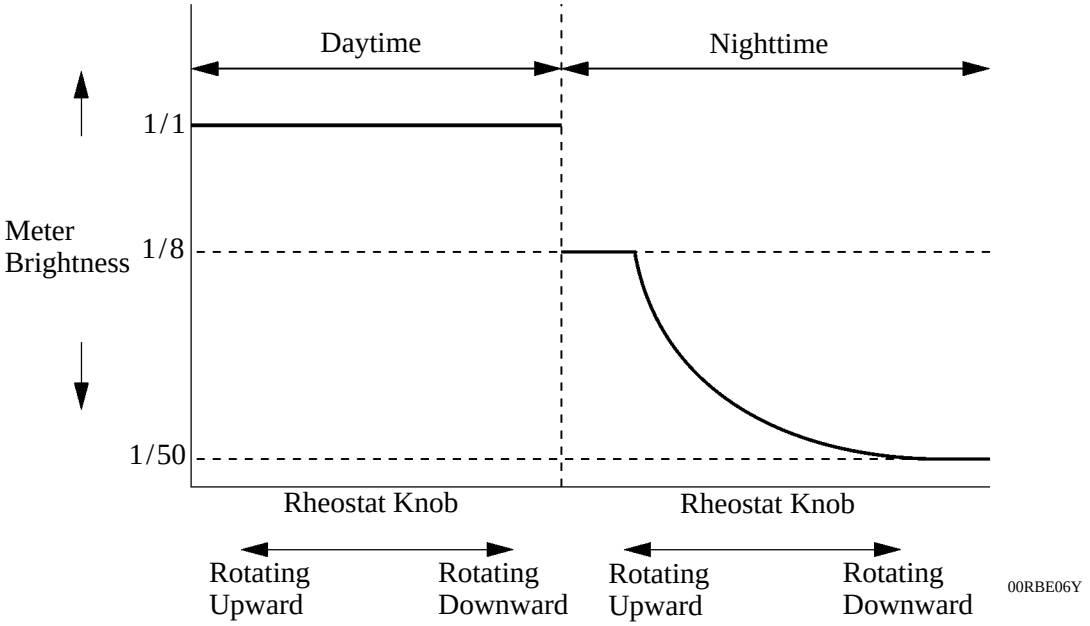
- A fuel gauge which displays the amount of fuel remaining in the fuel tank with an 8-segment bar is used.
- A remaining fuel amount indicator function is used to blink the No. 1 segment bar when the amount of remaining fuel is lower than the predetermined value. Furthermore, there are two patterns of blink cycles depending on the amount of remaining fuel to provide a more accurate remaining fuel warning.
- The amount of the remaining fuel is calculated and displayed by the meter ECU. The meter ECU calculates this based on the signal from the fuel sender gauge and the vehicle speed signal from the skid control ECU in accordance with the vehicle conditions such as driving or stopped.
- The remaining fuel amount indicator function is activated when the fuel amount data calculated by the meter ECU indicates the amount of remaining fuel has dropped to 15% or less, and causes the No. 1 segment bar to blink in approximately 1.2-second cycles. When the amount of remaining fuel drops to 10% or less, the No. 1 segment bar blinks in approximately 0.6-second cycles.

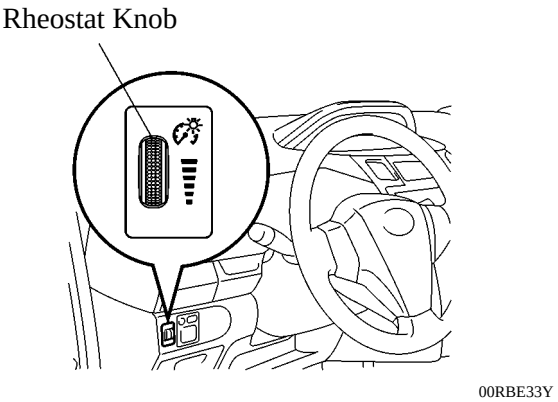


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5. Combination Meter Illumination Control

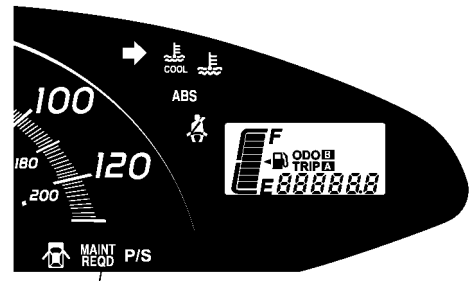
- As part of the combination meter illumination control, the meter brightness can be adjusted by operating the rheostat knob when the meter ECU has determined that it is nighttime.
- The brightness of the meters is fixed to the daytime characteristic when the taillights are off. The brightness is automatically adjusted between the daytime characteristic and nighttime characteristic according to the detection signal provided by the tail relay.
- Assuming the maximum brightness to be 1, the meter brightness for the daytime characteristic is fixed at 1/1, and the meter brightness for the nighttime characteristic can be adjusted from 1/8 to 1/50.
- The meter ECU controls the combination meter illumination.





6. Oil Replacement Reminder Light (U.S.A. Models)

- An oil replacement reminder light will light or flash to remind the driver to change the engine oil depending on the vehicle driving distance.
- Lighting and flashing of the oil replacement reminder light are operated based on the accumulated vehicle driving distance memorized in the combination meter (Meter ECU).
- The meter ECU calculates the vehicle driving distance based on the signals from the skid control ECU.
- This light has a bulb check function and an oil replacement reminder function.
- When turning the ignition switch ON, the meter ECU will turn on the oil replacement reminder light for 3 seconds for the bulb check.
- When the accumulated vehicle driving distance memorized in the meter ECU exceeds 4500 miles (7200 km) after being reset, the meter ECU will flash the oil replacement reminder light for 15 seconds after the bulb check and remind the driver that the engine oil needs to be changed shortly.
- When the accumulated vehicle driving distance memorized in the meter ECU exceeds 5000 miles (8000 km) after being reset, the meter ECU will keep the oil replacement reminder light on immediately and remind the driver to change the engine oil.



Oil Replacement Reminder Light

00RBE29Y

Service Tip

The accumulated mileage memorized in the meter ECU can be reset by the following procedures.
1) Turn the ignition switch on and make sure that the odo/trip display screen is in the Trip A mode.
2) Turn the ignition switch off. Then, while pressing the odo/trip selector/reset knob, turn the ignition switch on again. (Note: hold down the knob throughout the entire reset procedure.)
3) The odometer indicates “000000” and then the oil replacement reminder light goes off.
4) When the light goes off, release the odo/trip selector/reset knob. The mode should change to Trip A.
5) Turn the ignition switch off. Turn the ignition switch on again and confirm that the oil replacement reminder light goes on for 3 seconds and then goes off.
6) This completes the reset procedure.