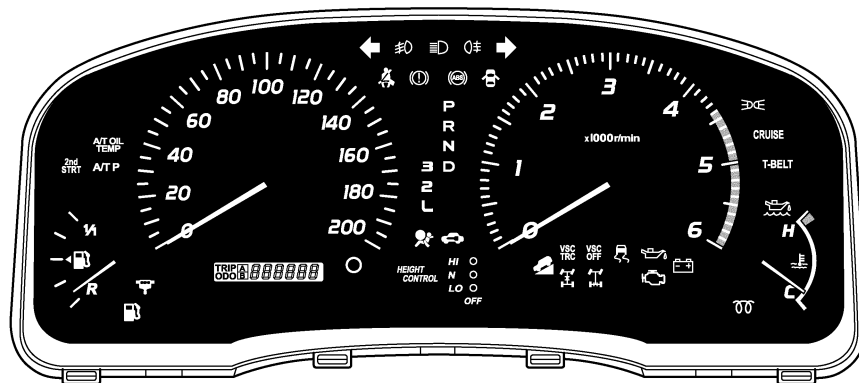


METER

■ COMBINATION METER

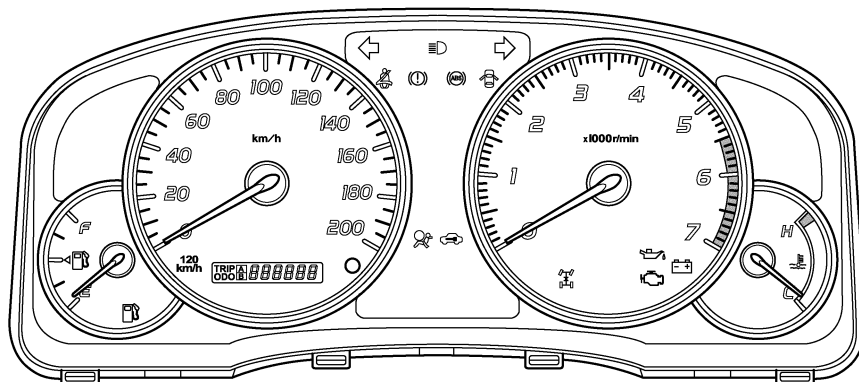
1. General

- An analog type combination meter is used as standard equipment.
- An optitron display type combination meter has been adopted as optional equipment for European models and Australian VX grade models. The optitron display type meter realizes excellent visibility through the use of smoke acrylic in the protective panel, and LEDs (Light Emitting Diodes) that is vary bright and has high contrast for illuminating the indicator and the dial.
A point illumination, in which a red light is emitted from the tip of the indicator of the speedometer and the tachometer, has been adopted.
- The movement for actuating the indicator of the speedometer and the tachometer has been changed from the cross-coil type of the previous model to a step-motor type.
- An odometer and trip meter that use an LCD (Liquid Crystal Display) is used.
- A level sensor is provided in the combination meter to detect the inclination of the vehicle.
- A speed warning system that sounds a buzzer and blinks a warning light has been adopted on the models for the G.C.C. countries.
- The combination meter has a built-in meter ECU and buzzer.
- An indicator that points to the side of the vehicle where the fuel lid is located.



Optitron Display Type for Europe

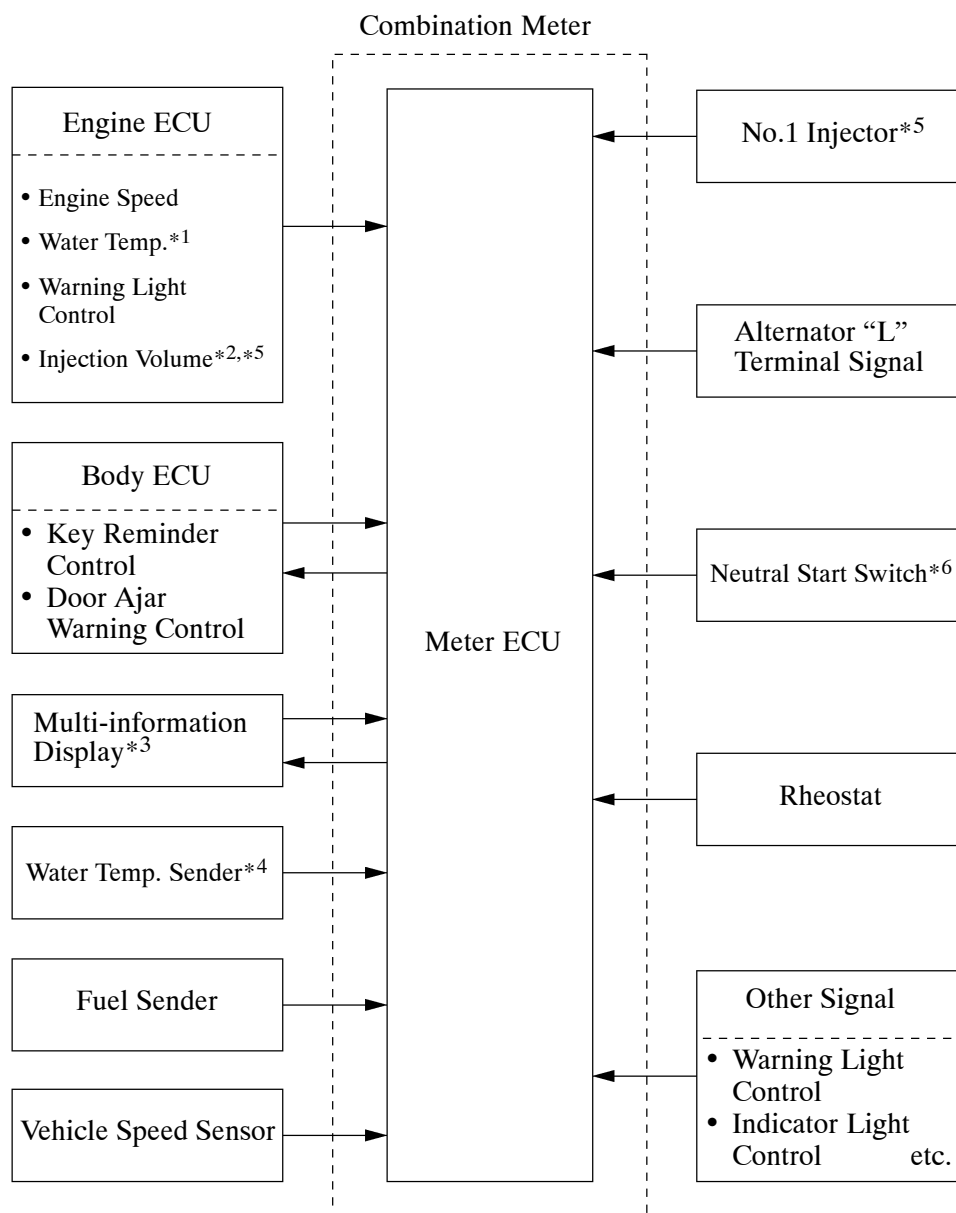
233BE07



Analog Type for G.C.C Countries

233BE08

2. System Diagram



*1: Gasoline Engine

*2: Diesel Engine

*3: Optional Equipment

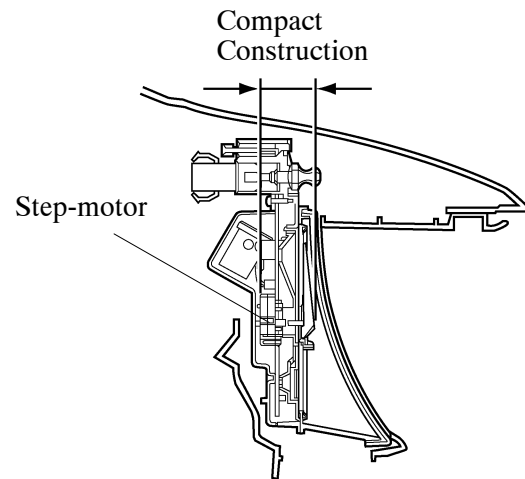
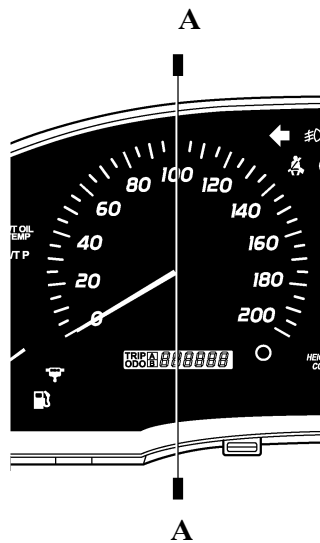
*4: except Gasoline Engine

*5: The signal for trip information calculation

*6: Models with Automatic Transmission

3. Construction

- The indicator actuation movement for the speedometer and the tachometer has been changed from the cross coil type to the step-motor type. This has resulted in a thinner indicator actuation 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 reconnection 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 turned ON after 60 seconds or more have elapsed after the initialization, the step-motor initializes again.

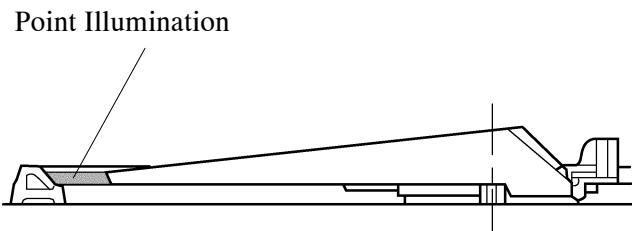
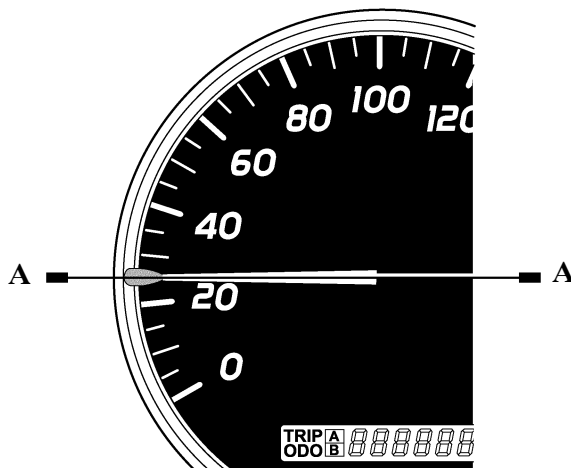


233BE10

A-A Cross Section

BE

- A point illumination, in which a red light is emitted from the tip of the indicator of the speedometer and the tachometer, has been adopted on the optitron display type combination meter to enhance product appeal.



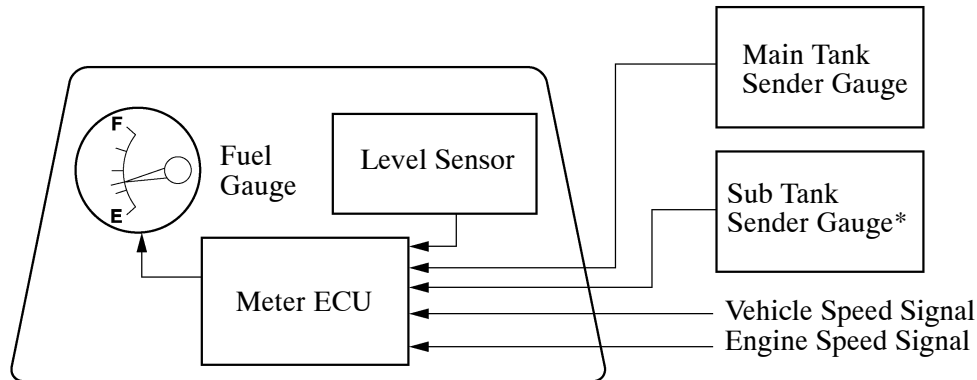
A-A Cross Section

233BE11

4. Fuel Gauge

Level Sensor

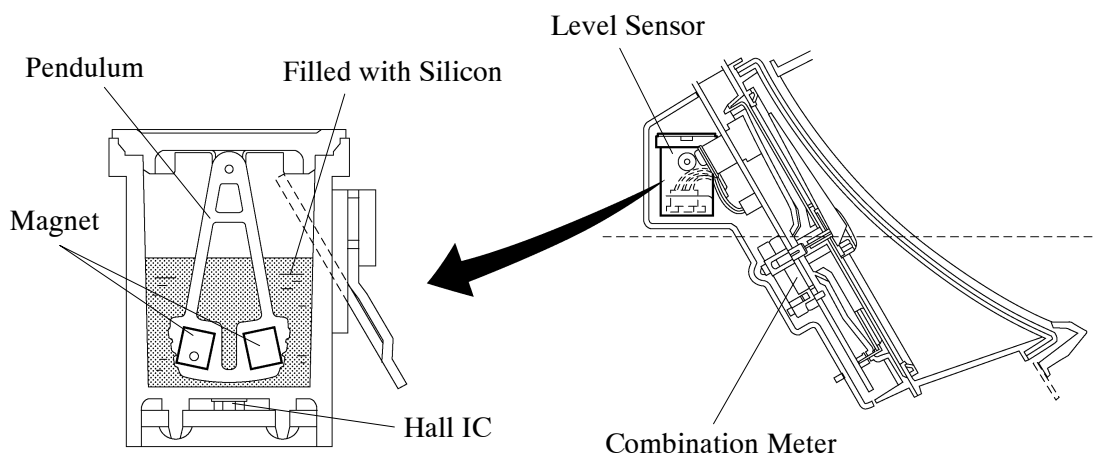
- A level sensor is provided in the combination meter to detect the inclination of the vehicle. The sensor prevents the fuel gauge from indicating erroneously due to the fluctuation of the fuel surface, which occurs when driving on a slope.



233BE61

*: Only for Dual Fuel Tank Model

- This sensor consists of a pendulum, 2 magnets provided for the pendulum and hall IC. Hall IC converts the magnetic flux density change caused by a pendulum inclination into the voltage value and output it to the meter ECU. The meter ECU judges the inclination condition of the vehicle based on this signal and corrects the fuel gauge.

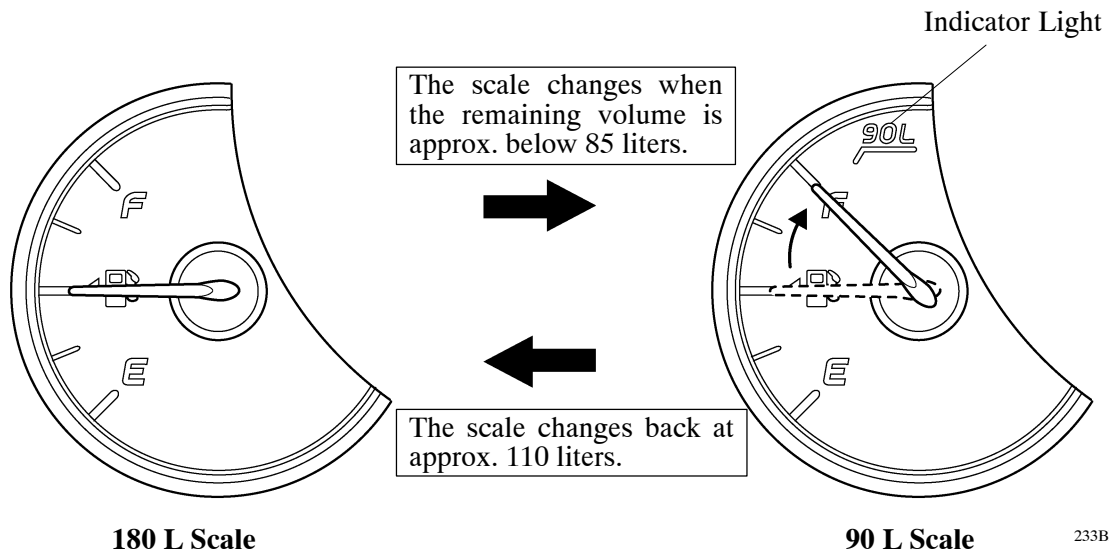


Level Sensor Cross Section

233BE62

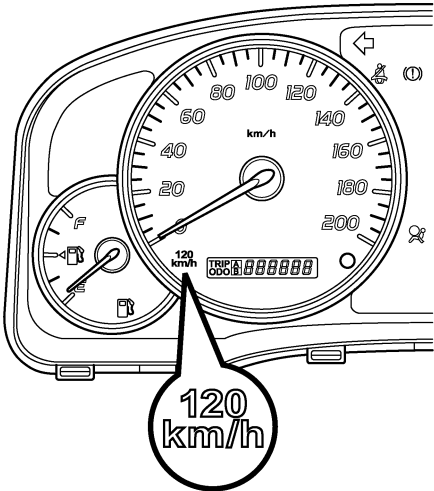
Fuel Gauge for Dual Fuel Tank Model

- On the dual fuel tank model, the main and sub fuel gauges have been integrated into a single gauge.
- When the total fuel volume of the main and sub tanks is below 85 liters, the meter ECU illuminates the indicator light and changes the gauge scale to indicate 90 liters at the maximum. When the total fuel volume is above 110 liters after refueling, the meter ECU turns OFF the indicator light and changes the gauge scale back to indicate 180 liters at the maximum.



5. Speed Warning System

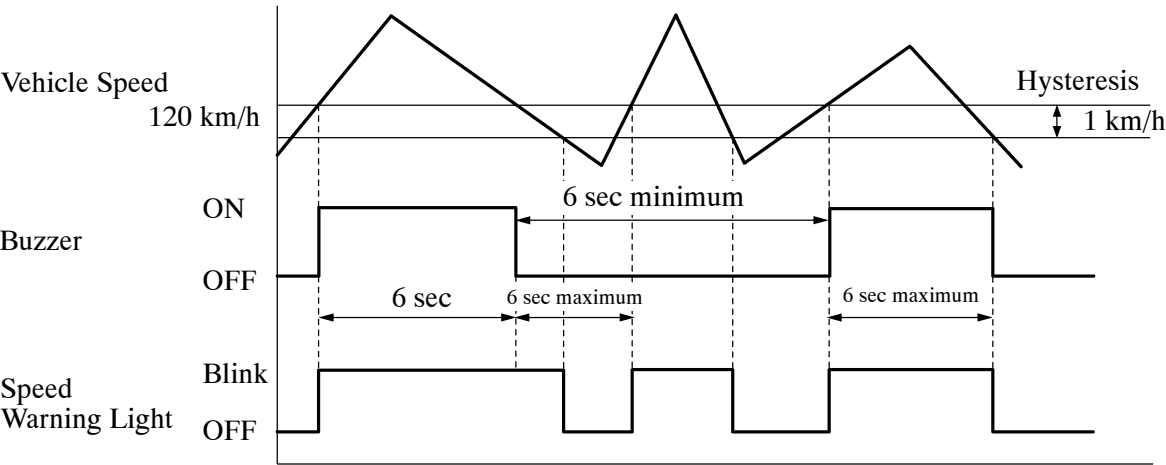
On the previous model for the G.C.C. countries, the buzzer of the speed warning system continues to sound at speeds of 120 km/h or higher. This has been changed to a system that sounds the buzzer in the combination meter for a prescribed duration (6 seconds) and then blinks the speed warning light in the combination meter.



Speed Warning Light

233BE13

► Timing Chart ◀



233BE14