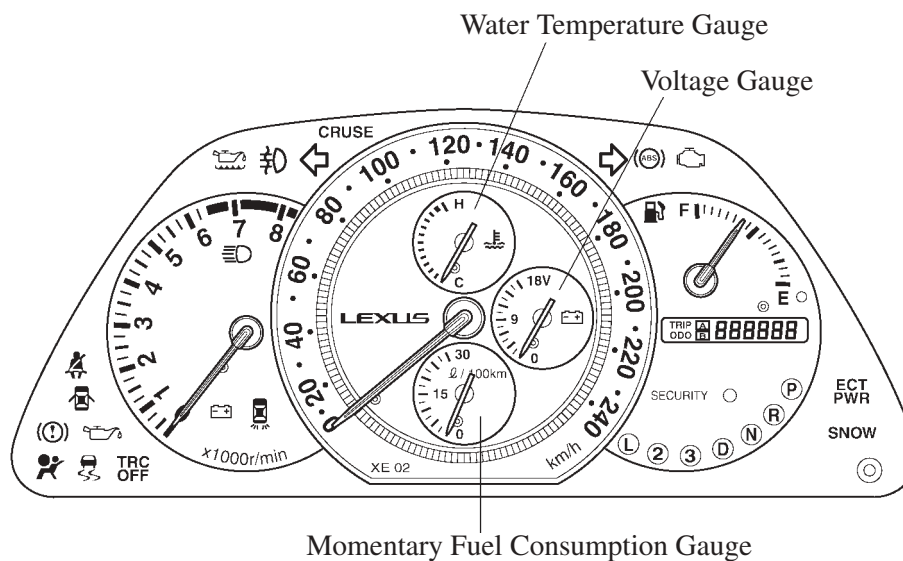


METER

■ COMBINATION METER

1. Description

- A compact, multi-purpose, and chronograph style speedometer that also contains a water temperature gauge, voltage gauge, and a momentary fuel consumption gauge, has been adopted.
The speedometer is located in the center, the tachometer on the left, and the fuel gauge, odo/trip meter, and the A/T shift position indicator light (automatic transmission model only) on the right to ensure visibility.
- An electronic speedometer that displays the vehicle's speed in accordance with signals received from the speed sensor (manual transmission model) or the ABS & TRC ECU (automatic transmission model) has been adopted.
- An odo/trip meter that uses an LCD (Liquid Crystal Display) is provided below the fuel gauge.
- A flashing warning indicator light has been adopted for the driver's seat belt.



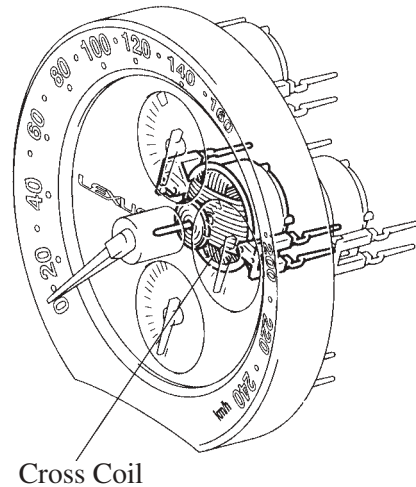
163BE05

2. Construction and Operation

1) Speed Meter

Cross coils are used in the speedometer to drive the pointer.

The vehicle speed signals from the speed sensor (manual transmission model) or the ABS & TRC ECU (automatic transmission model) are input into the speedometer. In accordance with this vehicle speed, the amount and the direction of the current that is introduced to the coils varies, causing the pointer to move in the direction of the resulting composite magnetic field.

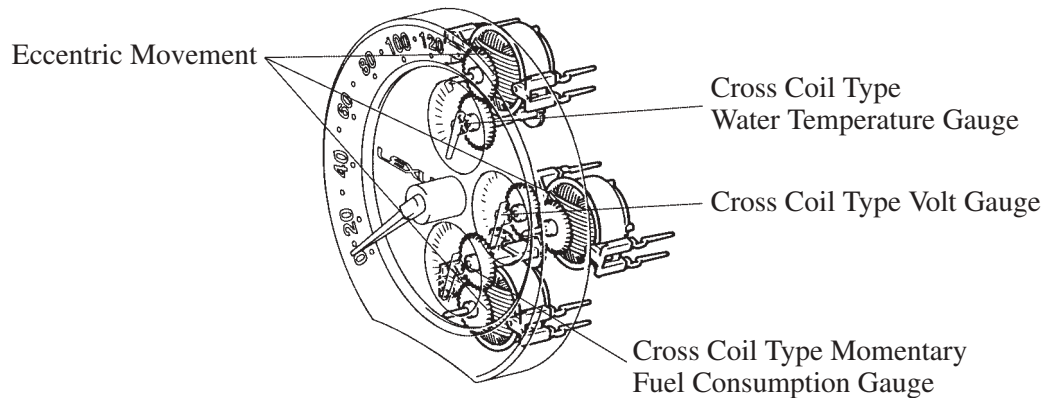


163BE06

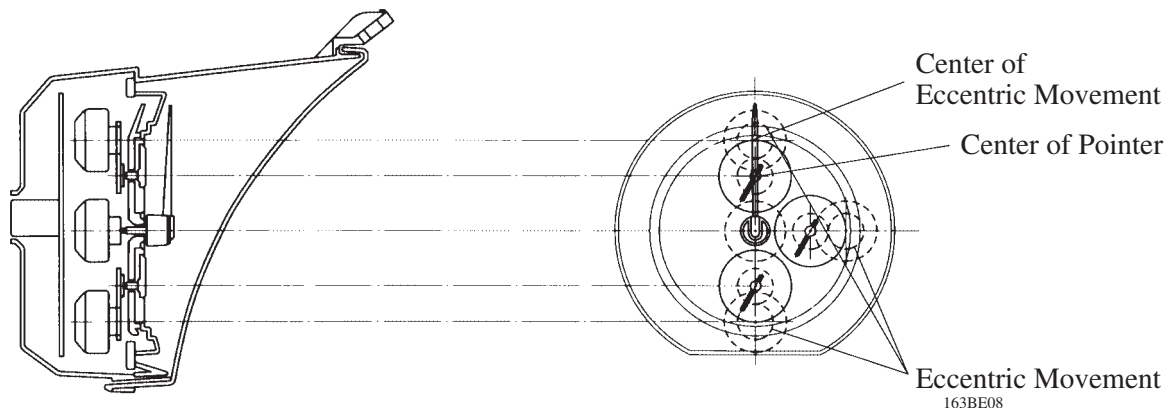
2) Water Temperature Gauge, Voltage Gauge, Momentary Fuel Consumption Gauge

As in the speedometer, cross coils are used to drive the pointer of these gauges.

Furthermore, by adopting an eccentric movement in the gauges and shifting the cross coils of each gauge away from the center of the pointer, a chronograph style layout has been made possible.



163BE07



163BE08

a. Momentary Fuel Consumption Gauge

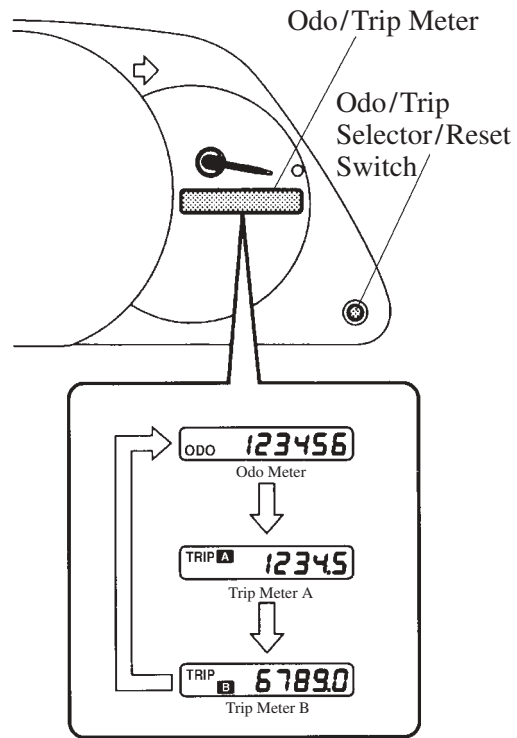
The momentary fuel consumption rate is calculated based on every 10 injections of fuel into the No. 1 cylinder and is displayed on the gauge.

3) Odo/Trip Meter

The odo/trip meter displays digitally through an LCD (Liquid Crystal Display) located below the fuel gauge.

The switching of the modes is effected by pressing the odo/trip selector/reset switch, which causes the LCD to display in the following order: odometer → tripmeter A → tripmeter B.

While tripmeter A or B is displayed, pressing the odo/trip selector/reset switch 0.8 seconds or longer causes the driven distance displayed by the current trip mode to revert to 0.0 km. The tripmeter will resume measuring the distance at the moment the odo/trip selector/reset switch is released.



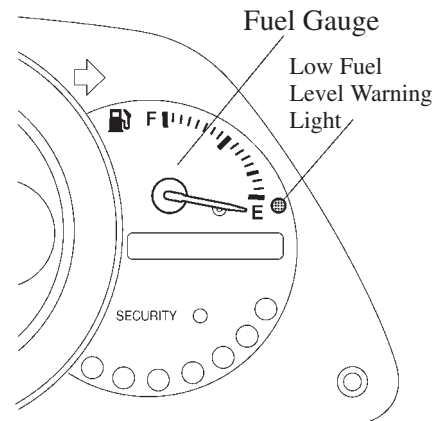
163BE09

4) Fuel Gauge, Low Fuel Level Warning Light

a. Fuel Gauge

To minimize the fluctuation of the fuel gauge needle while driving up or down hill cornering, the position of the fuel gauge needle of the IS200 is determined by calculating the residual fuel data that is sent from the fuel sender to the meter ECU, and the fuel consumption data that is sent from the engine ECU to the meter ECU.

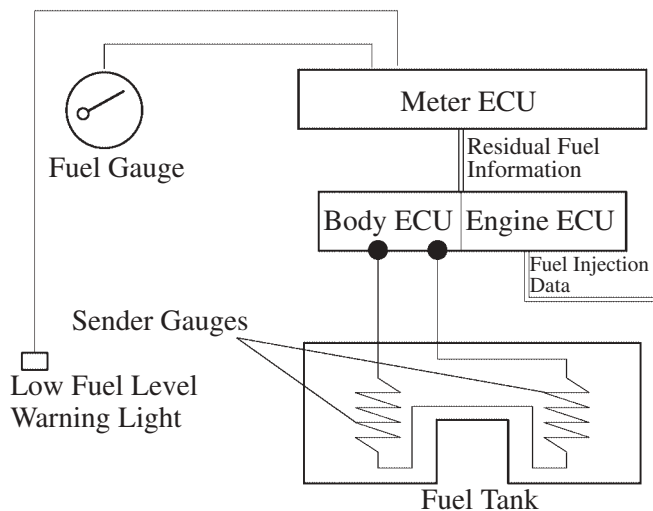
In addition, a sender gauge is connected in-line and placed inside the fuel tank to effect an accurate measurement of the residual volume of fuel.



163BE10

b. Low Fuel Level Warning Light

The warning indication is effected in accordance with the data that has been computed by the meter ECU, which contains minimal display fluctuation. Thus, the variance in the operation of the warning indicator light when the residual volume is low is minimized so that it illuminates with precise timing (when the residual volume is 11liter or less) to alert the driver.



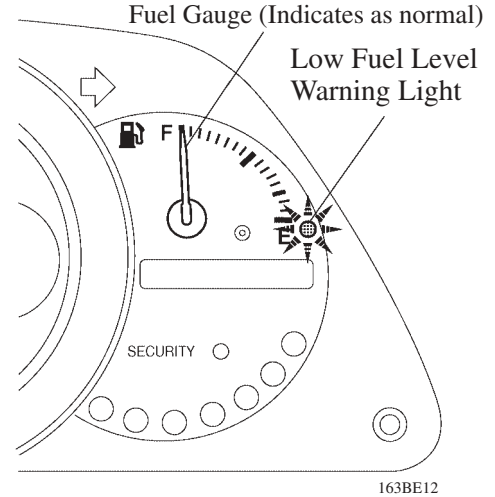
163BE11

c. Fuel Residual Volume System Warning

i) For Abnormal Fuel Injection Signal Input

If an abnormal condition (open circuit, detached connector, abnormal signals, etc.) occurs in the multiplex communication data input for the fuel injection duration, this function flashes the low fuel level warning light to inform the driver of the abnormal condition.

Even in this case, the system continues to detect the residual volume of fuel in the fuel tank, thus displaying the residual volume of fuel on the gauge in the normal manner (although the fluctuation of the pointer may increase slightly).



ii) For Abnormal Fuel Tank Residual Volume Signal Input

If an abnormal condition (open circuit, detached connector, abnormal signals, etc.) occurs in the multiplex communication data input for the fuel tank residual volume, this function causes the pointer to move to "E" (empty) and flashes the low fuel level warning light to inform the driver of the abnormal condition.

If abnormal conditions "i)" and "ii)" occur simultaneously, abnormal condition "ii)" takes precedence.

