# METER

## ■COMBINATION METER

### 1. General

Three types of combination meters are available as shown below:

×: Standard OP: Option -: Not Equipped

| Regular Cab | | | |
|---|---|---|---|
| **Engine** | **1GR-FE** | **2UZ-FE/3UR-FE** | |
| **Model** | **2WD** | **2WD** | **4WD** |
| With Tachometer | × | × | × |
| With Tachometer + ATF Temperature Gauge | - | OP | OP |
| Without Tachometer | OP | - | - |

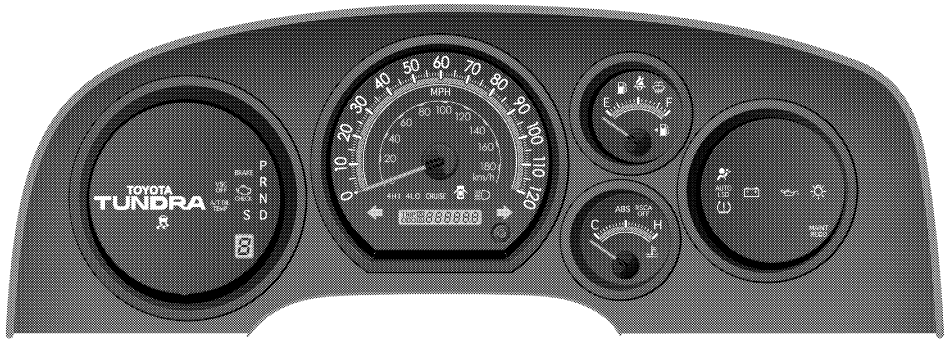
| Double Cab | | | |
|---|---|---|---|
| **Engine** | **1GR-FE** | **2UZ-FE/3UR-FE** | |
| **Grade** | **SR5** | **SR5** | **Limited** |
| With Tachometer | × | ×*1 | - |
| With Tachometer + ATF Temperature Gauge | - | OP*1, ×*2 | - |
| Optitron (With Tachometer + ATF Temperature Gauge + Multi-information Display) | - | - | × |

| CrewMax | | |
|---|---|---|
| **Engine** | **2UZ-FE/3UR-FE** | |
| **Grade** | **SR5** | **Limited** |
| With Tachometer | × | - |
| With Tachometer + ATF Temperature Gauge | OP | - |
| Optitron (With Tachometer + ATF Temperature Gauge + Multi-information Display) | - | × |

*1: Standard Deck Only *2: Long Deck Only

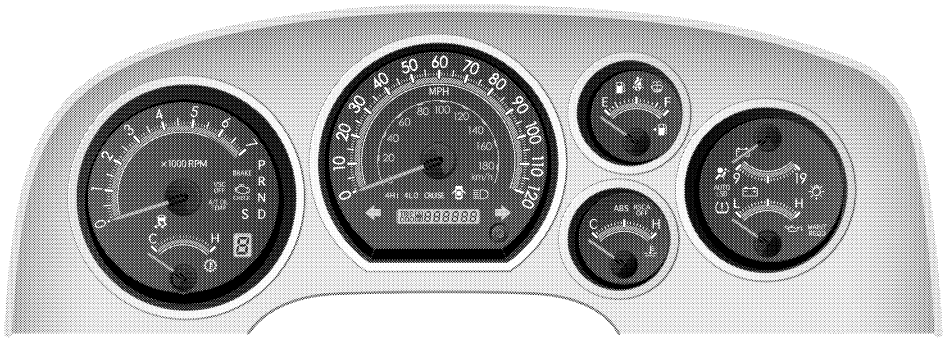
The combination meter has the following features:

- A multi-information display and ATF temperature gauge are provided on the optitron type combination meter to enhance product appeal.
- All the meters, gauges, indicator lights and warning lights use LEDs (Light Emitting Diodes) to reduce consumption of electrical energy.
- The combination meter has a built-in Meter ECU and buzzer.
- An LCD (Liquid Crystal Display) combined odometer and trip meter is used.
- The oil replacement reminder light is used.




04E0BE11Z

**Non-up Grade Package (Without Tachometer)**




**Up Grade Package or SR5 Grade**
**(With Tachometer and ATF Temperature Gauge)**

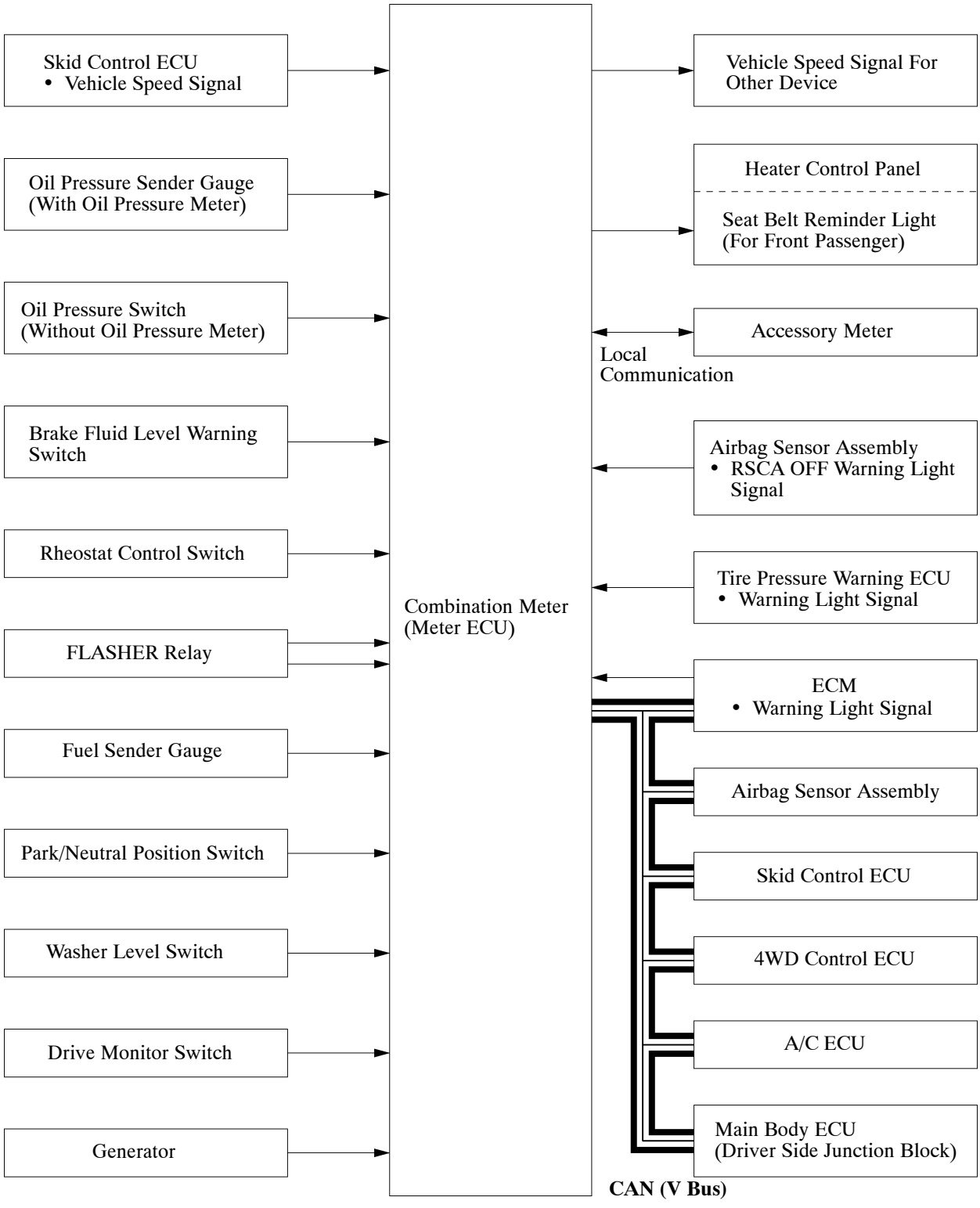
04E0BE12Z




04E0BE13Z

**Limited Grade (Optitron Type)**

## 2. System Diagram




04E1BE08C

BE

## 3. Input Communication Signals to Combination Meter

| Input Communication Signal | Transmitting ECU |
|---|---|
| • Starter Signal<br>• Engine Type Signal<br>• Cruise Control Signal<br>• TACH Signal<br>• Fuel Injection Information Signal<br>• Engine Coolant Temperature Signal<br>• ATF Temperature Signal<br>• Current Gear Position Signal<br>• Shift Position Signals (P, R, N, D)<br>• Reject Buzzer Signal<br>• Sport Mode Signal<br>• TOW HAUL Indicator Signal* | ECM |
| • Outside Temperature Signal | A/C ECU |
| • SRS Warning Signal<br>• Occupant Classification Signal<br>• Seat Belt Buckle Switch Signal (For Front Passenger) | Airbag Sensor Assembly |
| • Vehicle Speed Sensor Signal<br>• Brake Warning Signal<br>• ABS Warning Signal<br>• AUTO LSD Warning Signal<br>• Slip Indicator Signal<br>• VSC OFF Indicator Signal | Skid Control ECU |
| • 4WD Switching Signal<br>• 4Hi Indicator Signal<br>• 4Lo Indicator Signal<br>• Reminder Buzzer Signal | 4WD Control ECU |
| • Courtesy Switch Signals<br>• Seat Belt Buckle Switch Signal (For Driver)<br>• Key Unlock Warning Signal<br>• Light Control Switch Signal<br>• Automatic Dimmer Signal<br>• Parking Brake Signal<br>• Sliding Roof Open Warning Signal (Models with Sliding Roof) | Main Body ECU<br>(Driver Side Junction Block) |

*: Towing Package with 3UR-FE Engine

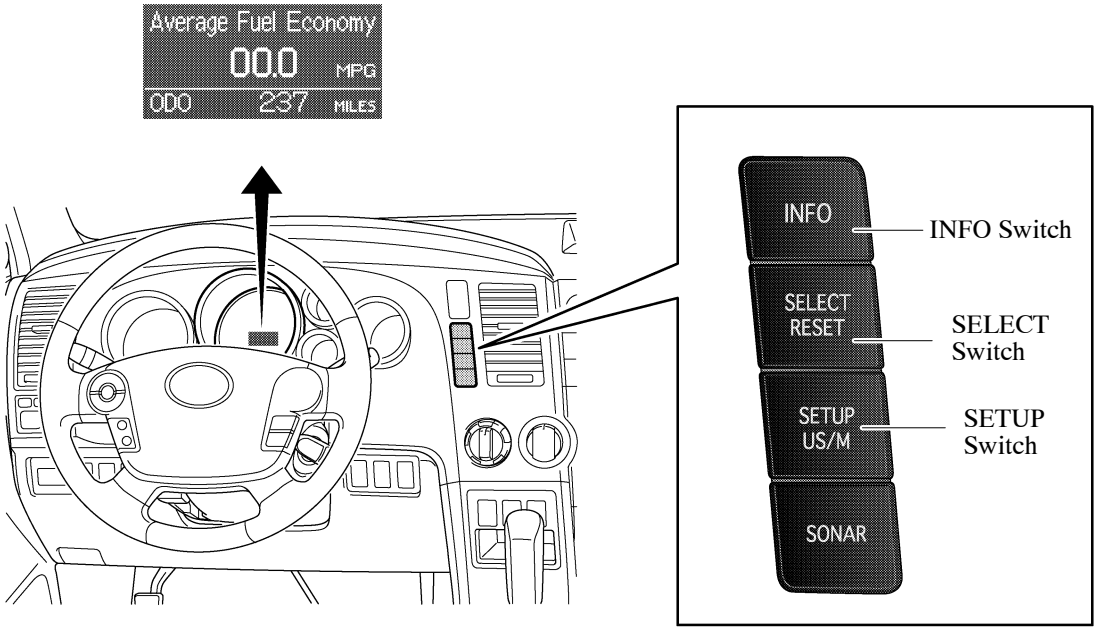
## 4. Multi-information Display

### General

The multi-information display has three displays.

| Display | Outline |
|---|---|
| Cruise Information | • In the cruise information display, five types of information (Average Fuel Economy, Average Speed, Distance To Empty, Current Fuel Economy, and Trip Timer) can be displayed.<br>• The display can be switched by using the INFO switch in the drive monitor switch. |
| Warning | The warning display will interrupt the multi-information display immediately when a warning occurs. |
| Customize | • The settings of nine items can be changed on the customize display.<br>• The display can be switched by using the SETUP switch.<br>• The customizing value can be selected by using the SELECT switch. |

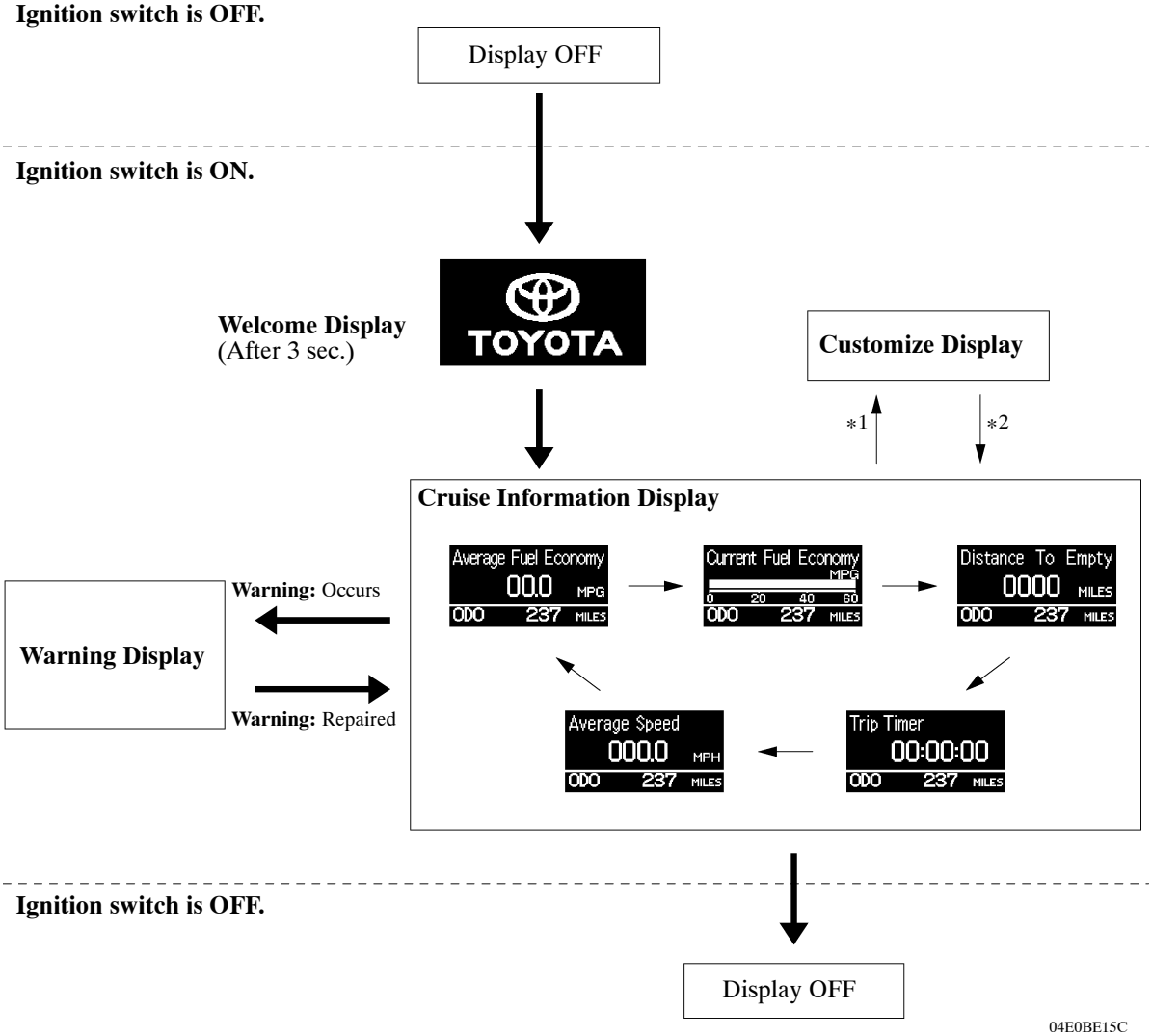
**Multi-information Display**




**Drive Monitor Switch**

04E0BE14Z

- The multi-information display modes can be switched as shown in the flow chart below:

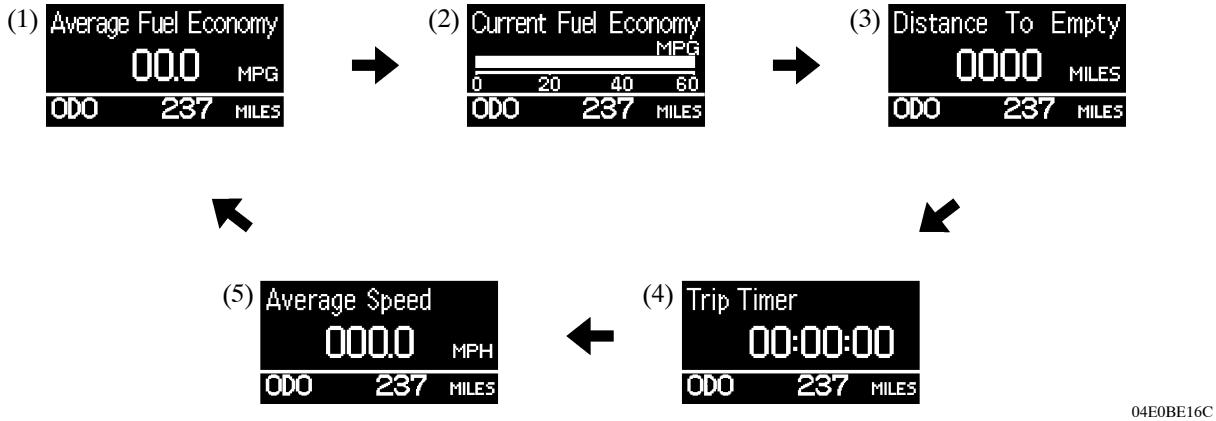



*1: The display changes to the customize display when all of the following conditions are met:
- Ignition switch is ON.
- Vehicle speed is 0.
- SETUP switch is pressed.

*2: The display returns to the previous display when either of the following conditions is met:
- INFO switch is pressed.
- 10 seconds have elapsed after the SETUP or SELECT switch was pressed.

### Cruise Information Display

The cruise information is displayed in the following order each time the INFO switch is pressed.



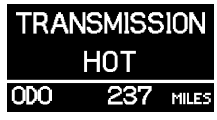

04E0BE16C

| Information | | Outline |
|---|---|---|
| (1) | Average Fuel Economy | • Displays a value that has been calculated by the combination meter, which is based on the distance driven and the fuel consumption volume (fuel injection signal from the No.1 cylinder).<br>• This display is updated every 10 seconds. |
| (2) | Current Fuel Economy | • Displays a value that has been calculated by the combination meter. When the ignition switch is turned ON, the combination meter calculates this value based on the distance driven and the fuel consumption volume (fuel injection signal from the No.1 injector).<br>• This display is updated every 0.5 seconds. |
| (3) | Distance To Empty | • Displays the value that has been calculated by the combination meter (Meter ECU). This calculation is based on the fuel consumption data that the combination meter (Meter ECU) continuously monitors and stores in its memory and the residual fuel volume data, provided that the ignition switch is turned ON.<br>• The display is updated every 1 mile (1 km). |
| (4) | Trip Timer | • Calculates and displays the elapsed time since the engine start signal was input into the combination meter (Meter ECU).<br>• The display is updated every second. |
| (5) | Average Speed | • Calculates and displays the elapsed time since the engine start signal and vehicle speed signal were received by the combination meter.<br>• This display is updated every 10 seconds. |

## Warning Display

When a warning is necessary, the warning display interrupts the multi-information display.

- The master warning light may illuminate or blink and the buzzer may sound depending on the item in the multi-information display.

| Warning | Detail | Warning | Detail |
|---|---|---|---|
| <br><br><br><br> : Blinks*<br> : Illuminates<br>04E0BE17C | Any door is open.<br>*: The vehicle has reached a speed of 5 km/h (3 mph). | <br> : Blinks<br>**Buzzer:** Sounds<br>04E0BE18C | Parking brake is still engaged with the vehicle having reached a speed of 5 km/h (3 mph). |
| | | <br> : Illuminates<br>**Buzzer:** Sounds<br>04E0BE19C | Washer fluid level is low. |
| | | <br>**Buzzer:** Sounds<br>04E0BE20C | Fuel level is low. |
| <br> : Blinks<br>**Buzzer:** Sounds<br>04E0BE21C | Engine coolant temperature is more than 120°C (248°F). | <br>**Buzzer:** Sounds<br>04E0BE22C | ATF temperature is high. |
| <br> : Illuminates<br>**Buzzer:** Sounds<br>04E0BE23C | Comes on approximately 4500 miles after the engine oil is changed. | <br> : Illuminates<br>**Buzzer:** Sounds<br>04E0BE24C | Comes on approximately 5000 miles after the engine oil is changed. |

## Customize Display

The customize display is displayed in the following order each time the SETUP switch is pressed. Nine items can be set.

- A customized value for each item will be set when any of the following conditions is met after the customizing value is selected using the SELECT switch:
  - The screen of the customizable item is changed by operating the SETUP switch.
  - Customize display shifts to cruise information display or ODO meter.
  - Ignition switch is turned off.
- The items and the default setting are as follows:

| Item | Default | Customizing Value |
|---|---|---|
| Units | US (English) | US (English) → Metric |
| Keyless Entry Feedback | Both (Lamps and Tone) | Both (Lamps and Tone) → Lamps → Tone → OFF |
| Keyless Entry Relock Timer | 60 seconds | 60 seconds → 120 seconds → OFF → 30 seconds |
| Keyless Entry All Doors Unlock | 2 press | 2 press → 1 press |
| Door Auto Locking | Above 12 mph | Above 12 mph → OFF → Shift Out of Park |
| Door Auto Unlocking | Shift to Park | Shift to Park → Driver Door Open → OFF |
| Headlight Auto Off Timer | 30 seconds | 30 seconds → 60 seconds → 90 seconds → 0 |
| Courtesy Light Off Timer | 15 seconds | 15 seconds → 30 seconds → 8 seconds |
| Default Setting | - | - |

- A warning message will appear if the SETUP switch is pressed when the vehicle speed is more than 5 km/h (3 mph).
- An error message will appear if the customizing value setting is not completed.






**Warning Message** 04E0BE25C




**System Error** 04E0BE26C

- The customize display can be switched as shown in the flow chart below:

