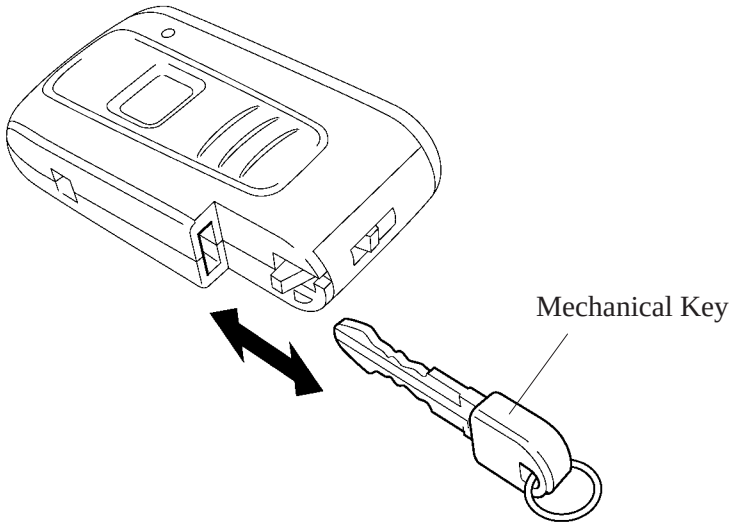
■CONSTRUCTION AND OPERATION

1. Key

- The key performs the function of the ignition key in a conventional system. Unless the transponder key ECU or the smart ECU* recognizes the ID code of the key, the switching of the power modes, the starting of the hybrid system, or the unlocking of the parking lock (to operate the shift lever) through the use of the power switch will not be authorized.
- The key transmits the ID code of the key to the transponder key ECU when the key is inserted in the key slot.
- On the model with smart entry & start system, the key transmits the ID code of the key to the smart ECU when the power switch is operated while the key is in the driver's possession.
- A mechanical key, which can be used in the event of an emergency due to a failure in the wireless door lock remote control system (due to a depleted transmitted battery, for example), is also provided. The mechanical key can be used to unlock the driver's door lock in case the wireless door lock remote control system is inoperative.

*: Models with Smart Entry & Start System

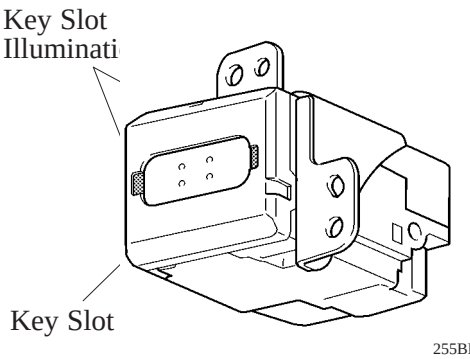


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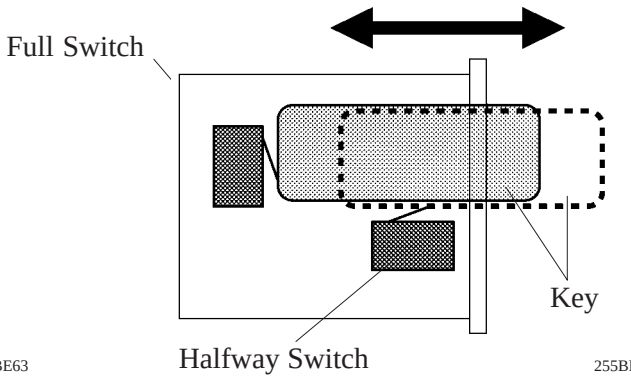
2. Key Slot

General

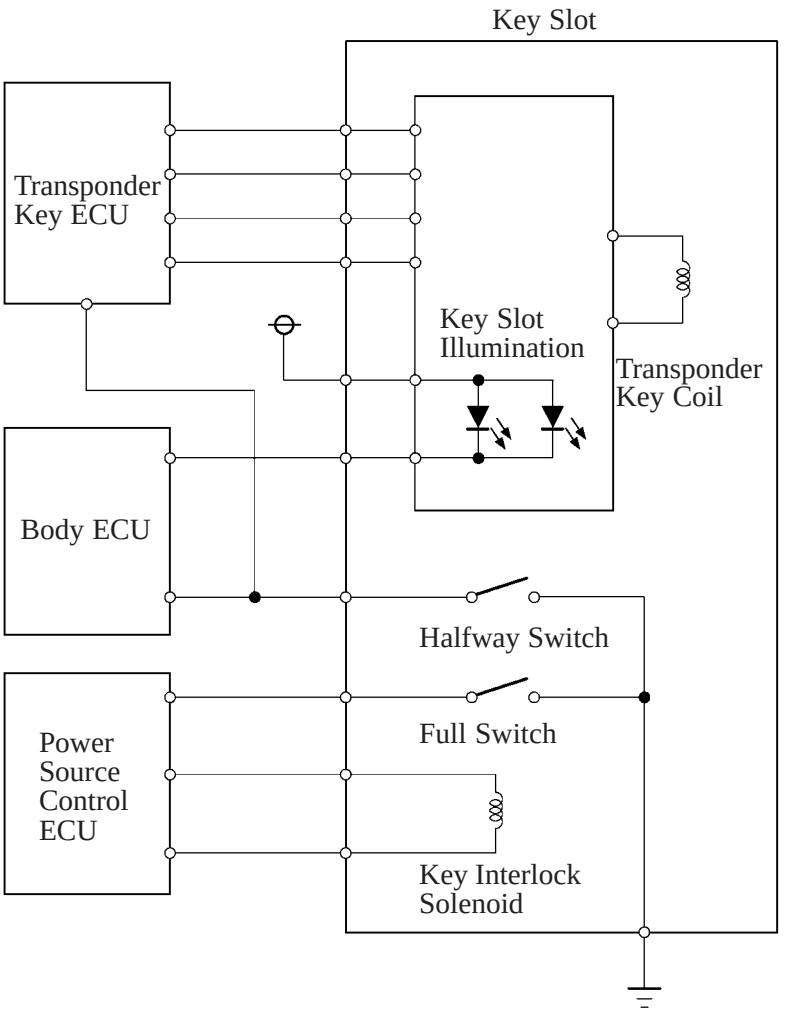
- The key slot consists of a transponder key coil, transponder key amplifier, LEDs for key slot illumination, halfway switch, full switch, and key interlock solenoid.
- The halfway switch, which is used by the system to detect the inserting state of the key, is wired to the transponder key ECU and the body ECU. The transponder key ECU and the body ECU use the signal from the halfway switch in order to check the key ID code and control the body electrical system.
- As with the halfway switch, the full switch is also used by the system to detect the inserting state of the key. This switch is wired to the power source control ECU. The power source control ECU controls the push button start system in accordance with the signals from this switch.



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CAUTION

Do not put fingers into the key slot. Fingers might be injured.

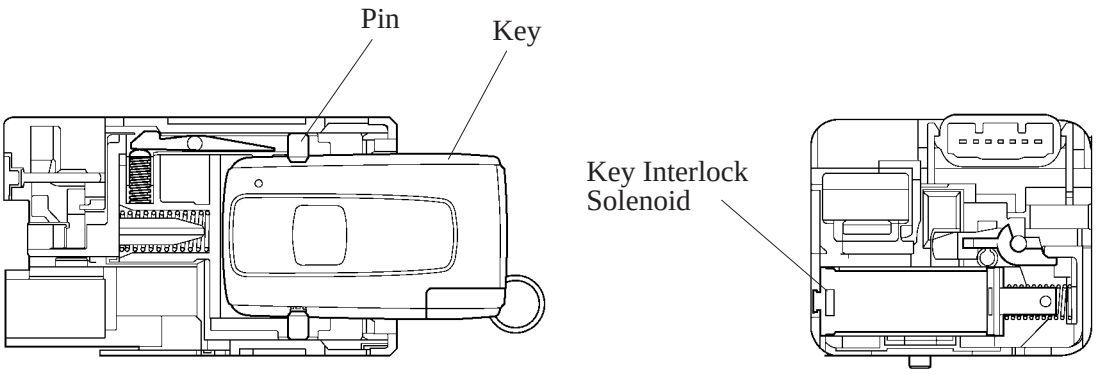
NOTICE

Observe the following instructions, or the key mechanism might be damaged and will not work properly.

- The key should be operated with a clean hand and fingers.
- Do not insert the key forcefully.
- Do not insert any key other than genuine formal keys into the key slot.
- Do not pull out the key forcefully when it cannot be removed.
- Do not put water, oil, foreign objects, etc. into the key slot.
- Do not insert a wet, oily or damaged key into the key slot.
- Do not stick a seal on the key.
- Do not insert the key in the wrong way.
- Do not pull out the key ring when removing the key out of the key slot.

Key Interlock Solenoid

- The power source control ECU actuates the key interlock solenoid in accordance with the power mode and the shift position (whether the shift lever is in the P position or some other position), in order to lock the key in the key slot and prevent it from being pulled out.
- The actuation of the key interlock solenoid causes the pin, which was engaged in the key locking hole on the side of the key, to lock. As a result, the key becomes locked in the key slot.



Backside Cross Section

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▶ Key Interlock Solenoid Condition ◀

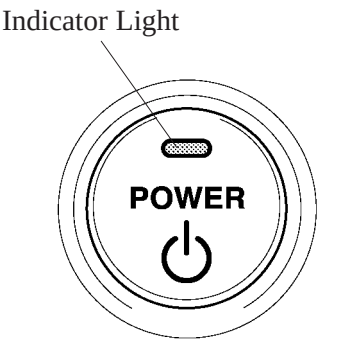
Shift Position	Power Switch Condition			
	OFF	ACC	IG-ON	READY
P Range	OFF	OFF	ON	ON
Except P Range	—	ON	ON	ON

3. Power Switch

- Power switch is the momentary type switch.
- The power modes change in three stages (OFF → ACC → IG-ON → OFF) each time the power switch is pressed. If the driver presses on the power switch while pressing on the brake pedal (which causes the stoplight switch to turn ON), the power mode will change to READY regardless of the previous power mode. For details on the power switch operation, see page BE-15.
- The power switch is provided with an indicator light. Thus, the driver can check the present power mode in accordance with the illumination state of the indicator light.

▶ Indicator Light Condition ◀

Power Switch	Indicator Light
OFF	OFF
ACC	ON (Green)
IG-ON	ON (Amber)
READY	OFF
Push Button Start System Malfunction	Blink (Amber)



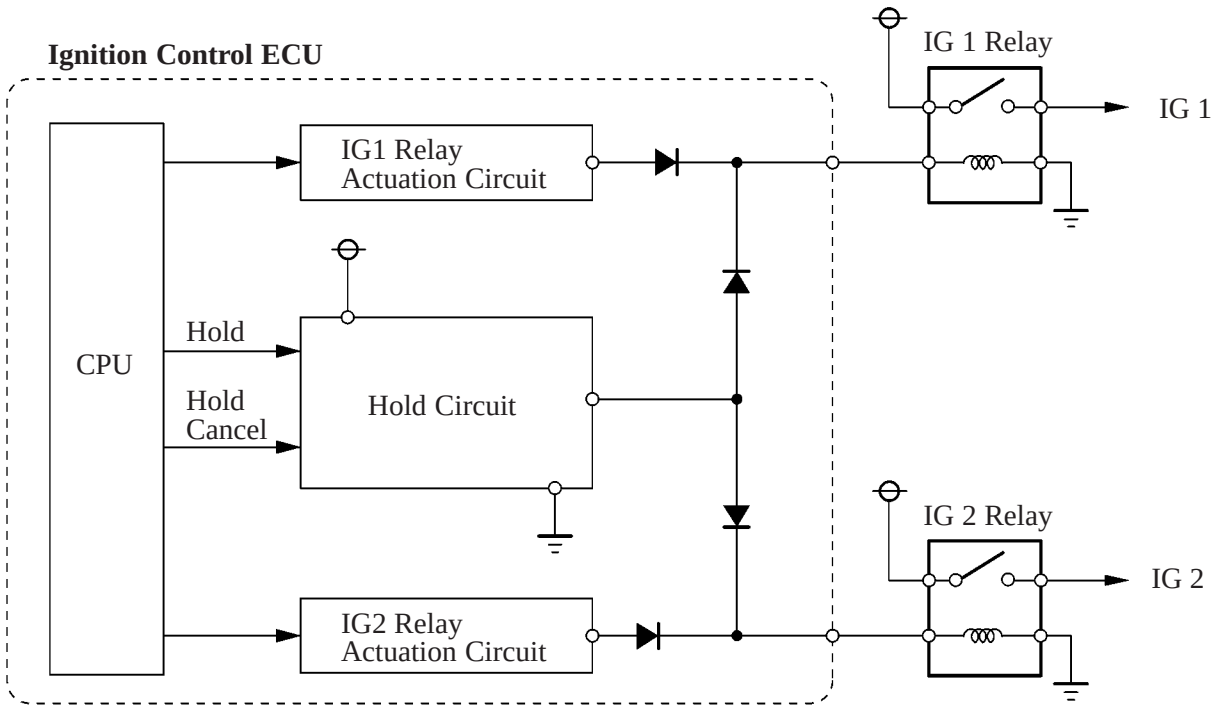
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4. Power Source Control ECU

- Power Source control ECU controls the push button start system in accordance with the signals received from the switches and ECUs.
- The power source control ECU maintains communication with the transponder key ECU, transmission control ECU, and the smart ECU* via the BEAN (Body Electronics Area Network). In addition, it has a dedicated serial communication line for independently maintaining communication with the transponder key ECU.
- The power source control ECU is provided with a hold circuit that maintains the actuation of the IG1 and IG2 relays in the event of a failure in the IG1 and IG2 relay actuation circuits. This prevents the power from being cut off if the IG1 and IG2 relay actuation circuits fail while the vehicle is being driven.

*: Models with Smart Entry & Start System

▶ Hold Circuit ◀



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Service Tip

The power source control ECU constantly stores the present power mode in its memory. Therefore, if the power to the power source control ECU is interrupted due to the removal of the auxiliary battery, the power source control ECU restores the power mode after the auxiliary battery is reconnected.
For this reason, if the auxiliary battery is removed when the power switch mode is other than OFF, the power will be restored to the vehicle at the same time the power is restored to the power source control ECU (by reconnecting the auxiliary battery).
Therefore, before removing the auxiliary battery, make sure to turn the power switch OFF and remove the key from the key slot.