

BATTERY CHARGE SYSTEM

DESCRIPTION

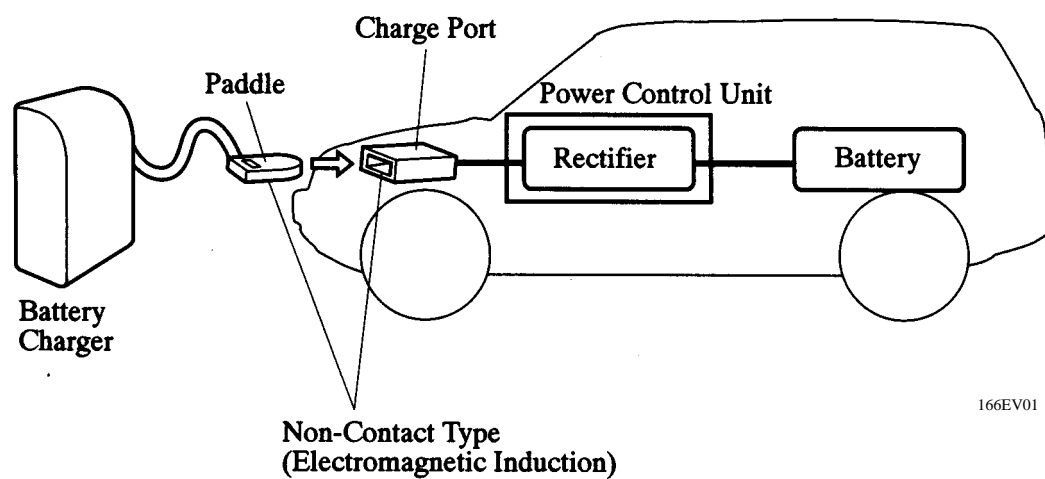
An inductive type battery charge system has been added.

The inductive type battery charge system is a non-contact type charge system in which the electrical power is supplied by an external charger through electromagnetic induction, instead of using an on-board charger.

The battery ECU establishes wireless communication between the antennas that are built into the charge port and the paddle and controls the charging power.

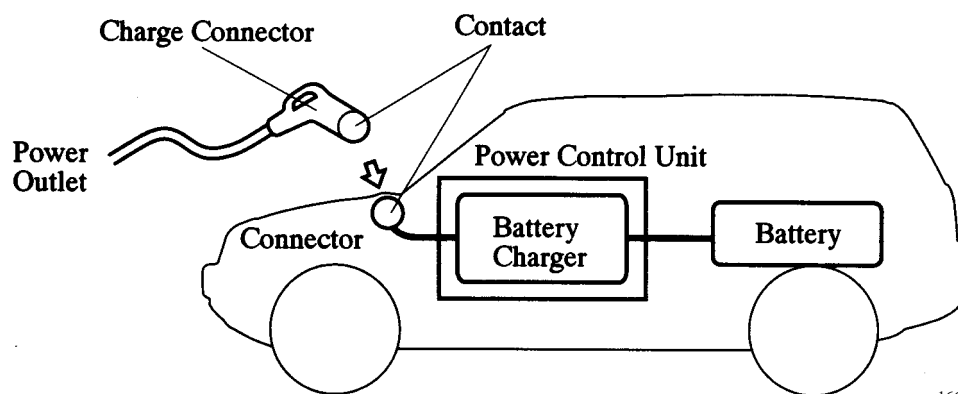
The charge port is located in the front grille, and it is opened by operating the opener switch located in the center console.

► Imagine Drawing ◀



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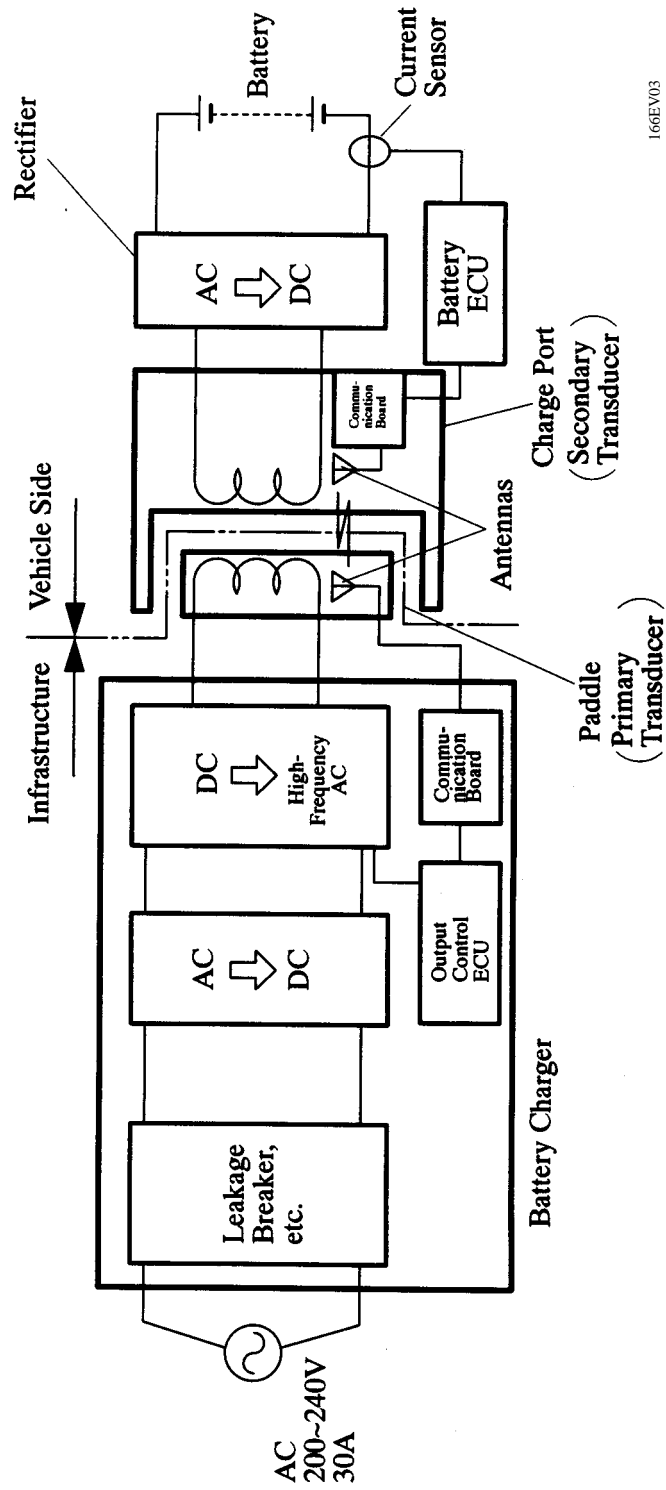
Inductive Type



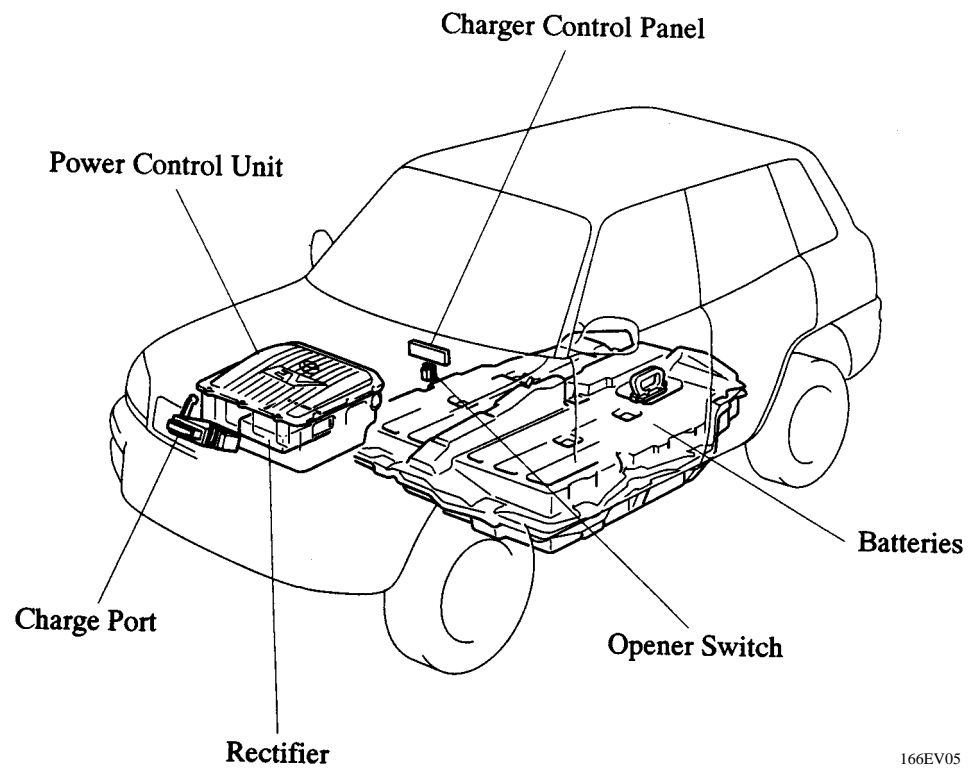
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Conductive Type

■ SYSTEM DIAGRAM



■ LAYOUT OF COMPONENTS



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■ FUNCTION OF MAIN COMPONENTS

1. Charge Port

The charge port is magnetically coupled to the battery charger's paddle and receives electric power through electromagnetic induction.

The charge port has a built-in antenna and a communication board to establish wireless communication between the battery ECU and the battery charger.

2. Rectifier

The rectifier rectifies the high-frequency alternating current that is sent from the charge port into direct current and outputs it to the battery.

3. Charger Control Panel

The charger control panel is used for adjusting the settings of the charging timer and preheat/precool functions. The charging method as well as the preheat/precool method are the same as those of the conductive type battery charge system.

■ BATTERY CHARGER

The paddle has a built-in antenna to establish communication with the vehicle side. Through this communication, the battery ECU on the vehicle is able to control the charging electric power of the charger.

The battery charger contains a display panel on which the indications listed below are shown.

For details on the handling of the battery charger, refer to the operation manual that is provided with the charger.

Indication	Description
*****	The charger is being reset.
CONNECT TO VEHICLE	The paddle is not inserted into the charge port or no communication between charger and vehicle.
STANDBY	The vehicle is preparing for charging.
CHARGING xx% FULL	The vehicle is being charged. The present SOC (state of charge): (SOC xx%)
SUPPORT FULL	After charging has been completed, the battery is cooling or preheating/precooling, or is defrosting.
FULL COMPLETE	Charging or preheating/precooling is completed.
VEHICLE DELAY xxH xxM TO START	The setting of the charging timer (Charging will start xx hours and xx minutes later.)
CHECK CHARGER	Charging is canceled because of charging malfunction on the charger side.
CHECK VEHICLE	Charging is canceled because of charging malfunction on the vehicle side.

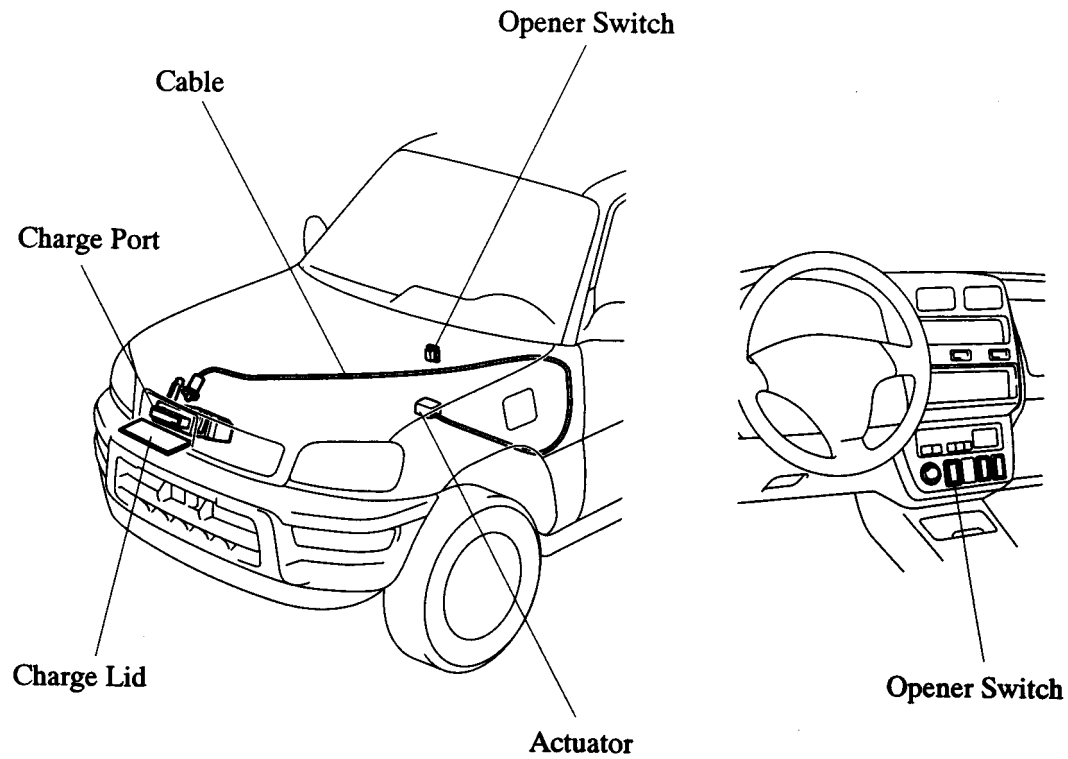
Service Tips

- In case of pulling out the paddle while charging, please reconnect after waiting for more than 2 seconds. If reconnecting too soon, charging won't restart.
- If pulling in or out of the paddle while timer charging, timer charging will be canceled. In case of continuing charging, it is necessary to set again the timer charging from the beginning according to the procedure.
- If you repeat the forced termination of charging (below full charge) before completing full charge (automatic stop), discrepancy between the SOC (State Of Charge) on the vehicle/Charger and actual SOC occurs and this may cause failure resulting in margin of error in the meter display.
We recommend to do full charge when charging.

■ CHARGE LID AND OPENER

In accordance with the adoption of the inductive type battery charge system, a charge port and a charge lid have been provided in the front grille.

The charge lid can be opened by operating the opener switch that is located in the center console.



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CAUTION

Exercise extreme caution because the surface of the paddle and the inside of the charge port can be very hot immediately after charging.