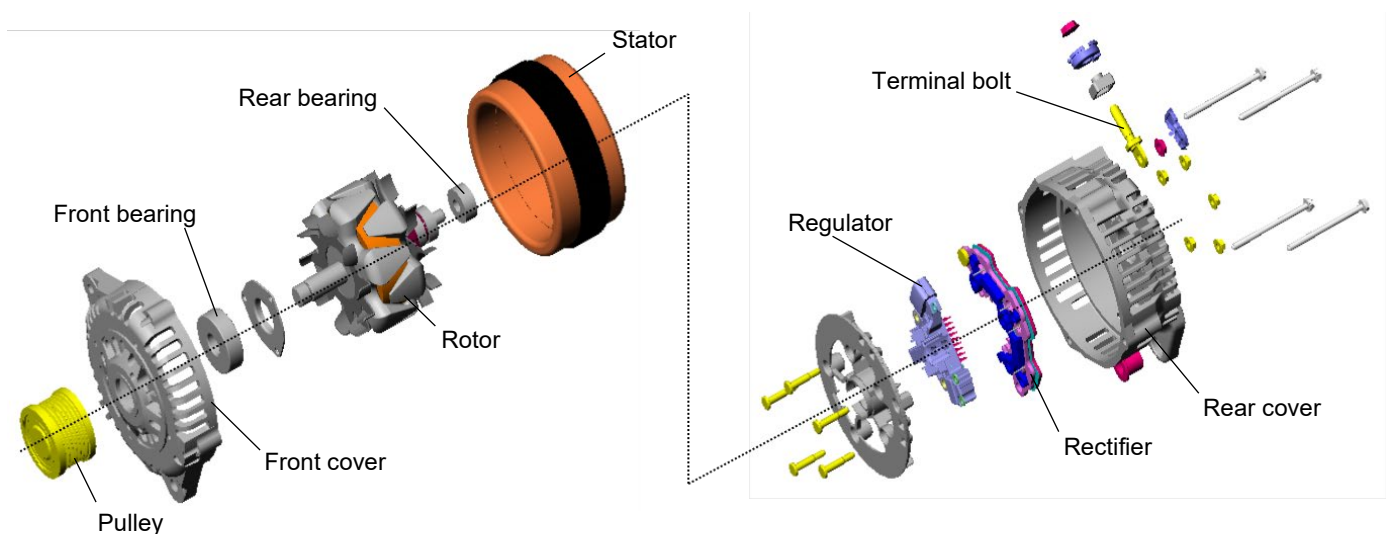


WHAT IS AN ALTERNATOR?

An alternator receives power from the engine through a belt, generating electricity for the headlights, car audio system, and other electrical components while also charging the battery.

The AC current generated by the alternator is converted into DC current by a rectifier composed of diodes. Because the voltage generated varies depending on the engine speed, a voltage regulator controls the generated voltage to within 13.5–14.5 V.

Previously, the alternator generated power at all times even when the battery was fully charged. In recent years, however, to improve the fuel economy, vehicles that control the charge by monitoring the battery voltage and reducing or stopping the generation of alternator power have been developed. Furthermore, some vehicles have attempted to achieve an even better fuel economy by converting the kinetic energy of the vehicle, not the engine power, into electricity; this is done by controlling the alternator so that it operates extensively during vehicle deceleration thereby achieving regenerative power generation.



TYPICAL SYMPTOMS IN CASE OF FAILURE

Symptoms in case of failure

- Dead battery
- Engine start failure
- Dimming or blinking of light
- Malfunction indicator light (MIL) turned on