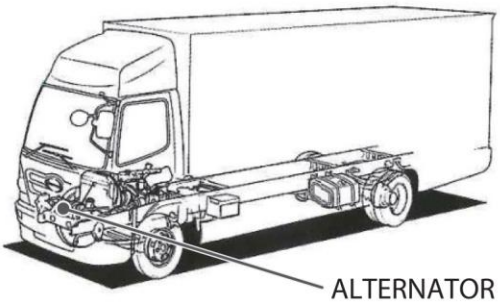
ALTERNATOR



Function

The alternator is a device that uses the engine's rotational force (mechanical energy) to produce electricity (electrical energy), which is then supplied to various electrical components in the vehicle.

The importance of periodic inspections

Whenever your engine is running, the alternator is also running at a speed that is proportional to your engine's speed. Some of its internal parts are subject to wear, so they will wear down with use. This is why you must inspect or replace your alternator on a regular basis to maintain the performance levels of your vehicle's electrical components and ensure the safe operation of your vehicle.

When your alternator's performance declines, it may stop producing electricity, and you may see the Charge Failure Alert Lamp on your instrument panel come on. As you continue to operate your vehicle, your battery will lose its capacity to supply the electrical power needed to keep it running, and ultimately, your vehicle will become unable to run on its own. Even before the Charge Failure Alert Lamp comes on, if you notice that it is taking longer to start your engine or that your headlamps are dimmer, you should inspect or replace your alternator.

The voltage produced at the alternator fluctuates in proportion to engine/alternator rpm (revolution per minute). The regulator is responsible for regulating this voltage at levels that are suited for use by electrical components or charging your vehicle's battery. If the regulator fails, the voltage produced can become excessively high, which can cause damage to your battery. If you notice that your battery is getting excessively hot or that its electrolyte is boiling over and spewing out of your battery's casing, you must inspect or replace your regulator.

By inspecting and replacing your parts periodically, and using genuine parts when you do so, you can ensure a consistent supply of power and the safe operation of your vehicle.(See Fig.3)

Inspection and replacement timing(Japan case)

I : Inspect R : Replace

	1 year	2 years	3 years	4 years	5 years	6 years
Brushes	R	R	R	R	R	R
Rotor assembly		I		R		I
Stator coil		I		R		I
Field coil		I		R		I
Regulator		I				R
Rectifier		I				R
Connector		I		R		I
Terminal insulator		I		R		I
Holder bush insulator		I		R		I
Pulley		I		R		I
Bearings		R		R		R
O-ring & oil seal		R		R		R

Fig.3 Inspection and replacement timing