■CHARGING SYSTEM

1. General

- Segment conductor type alternator is used.
- On the automatic transmission models, a one-way clutch function has been provided in the alternator pulley.

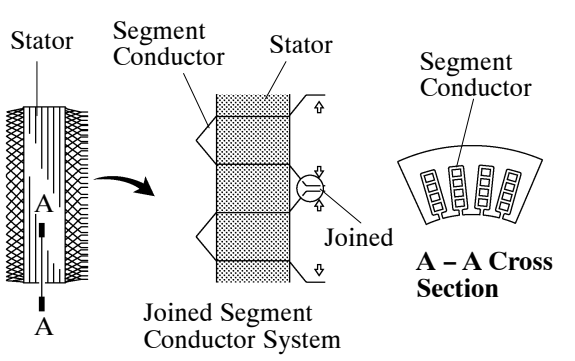
2. Alternator

General

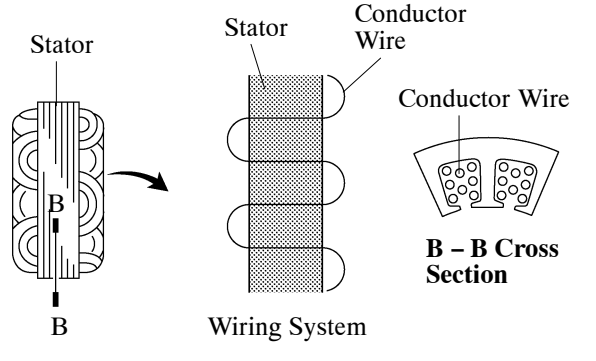
A compact and lightweight segment conductor type alternator that generates high amperage output in a highly efficient manner is used as standard equipment.

Construction and Operation

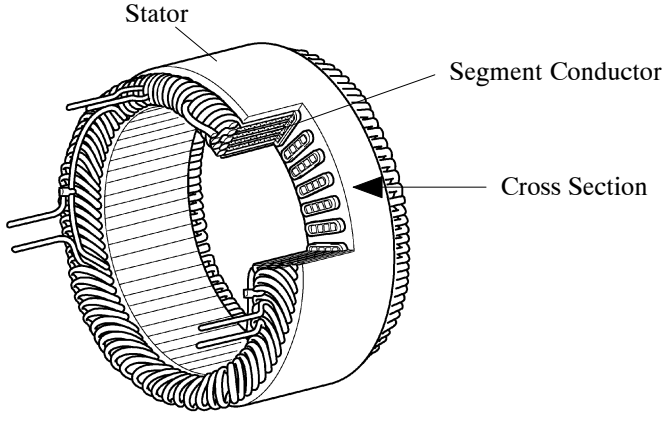
This alternator has a joined segment conductor system, in which multiple segment conductors are welded together to form the stator. Compared to the conventional wiring system, the electrical resistance is reduced due to the shape of the segment conductors, and their arrangement helps to make the alternator more compact.



Segment Conductor Type Alternator



Conventional Type Alternator

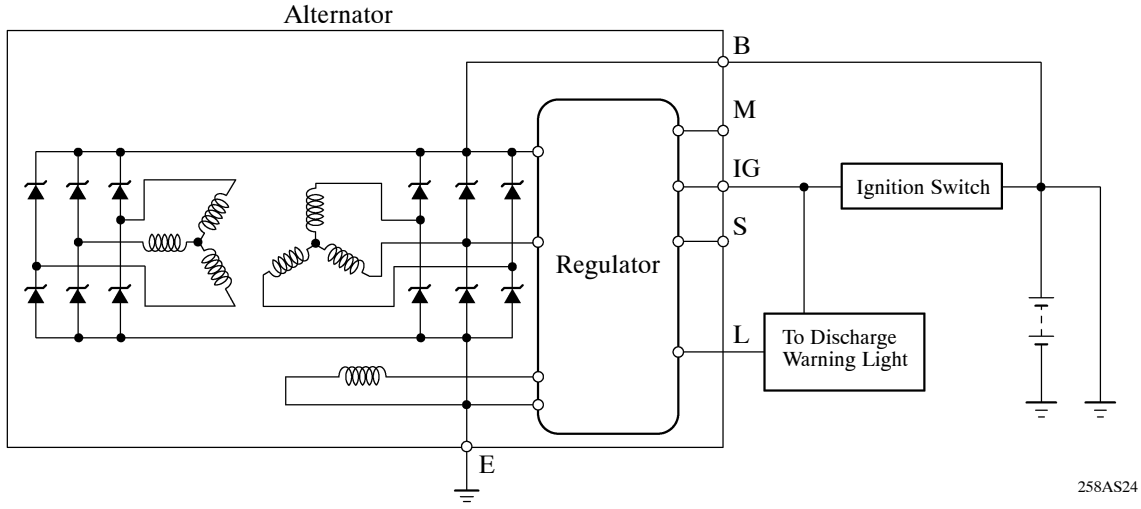


Stator

▶ Specifications ◀

Type	Segment Conductor (SC1)
Rated Voltage	12 V
Rated Output	130 A
Initial Output Starting Speed	1250 rpm max.

▶ Wiring Diagram ◀

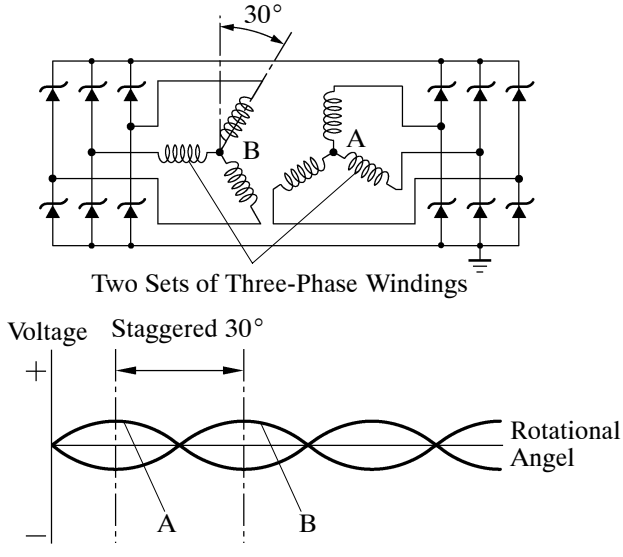


Service Tip

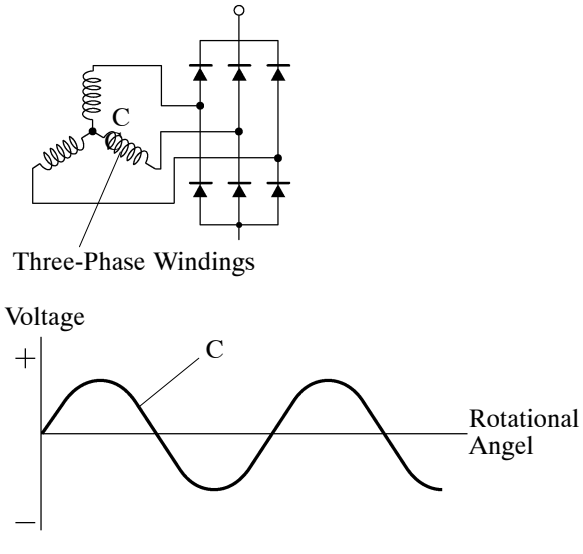
Although the charging circuit of a conventional alternator is checked through the F terminal, this check cannot be performed on the Segment Conductor type alternator through the use of the F terminal because the F terminal has been eliminated.

Dual Winding System

A dual winding system is used. This system consists of two sets of three-phase windings whose phases are staggered 30°. Because the magnetic fluctuations of the respective windings cancel each other out, magnetic noise and radio frequency interference are reduced.



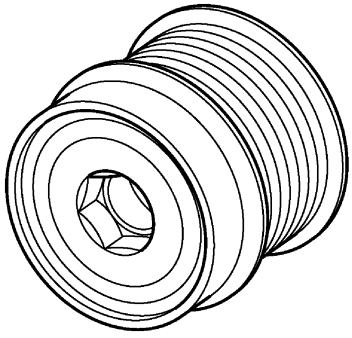
Segment Conductor Type Alternator



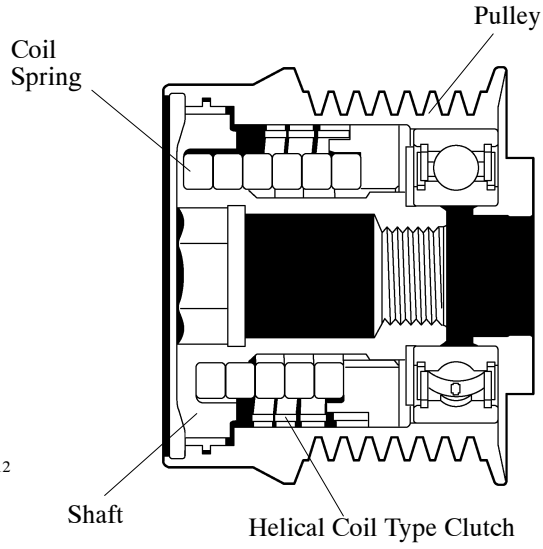
Conventional Type Alternator

3. Alternator Pulley (for Automatic Transmission Models)

- A helical coil type one-way clutch is used in the alternator pulley to absorb the fluctuations in the engine speed, thus significantly reducing the damage sustained by the drive belt.
- The pulley mounting nut and the alternator pulley have been integrated to achieve a compact construction.



281EG12



281EG13

Service Tip

SST (09820-63020) has been newly established due to the adoption of a pulley with the one-way clutch function. For details, refer to the Hiace Repair Manual (Pub. No. RM1171E).