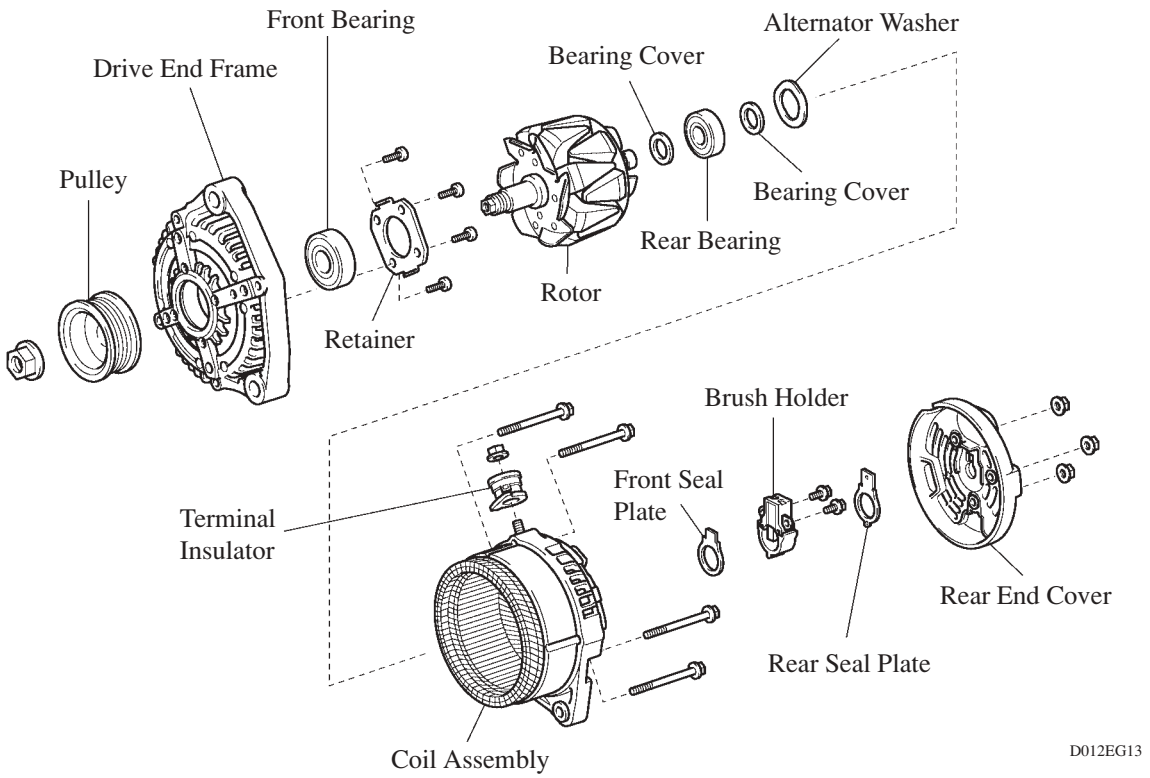
# ■CHARGING SYSTEM

## Alternator

### General

A compact and lightweight Segment Conductor type alternator that generates high amperage output in a highly efficient manner has been adopted on optional equipment.

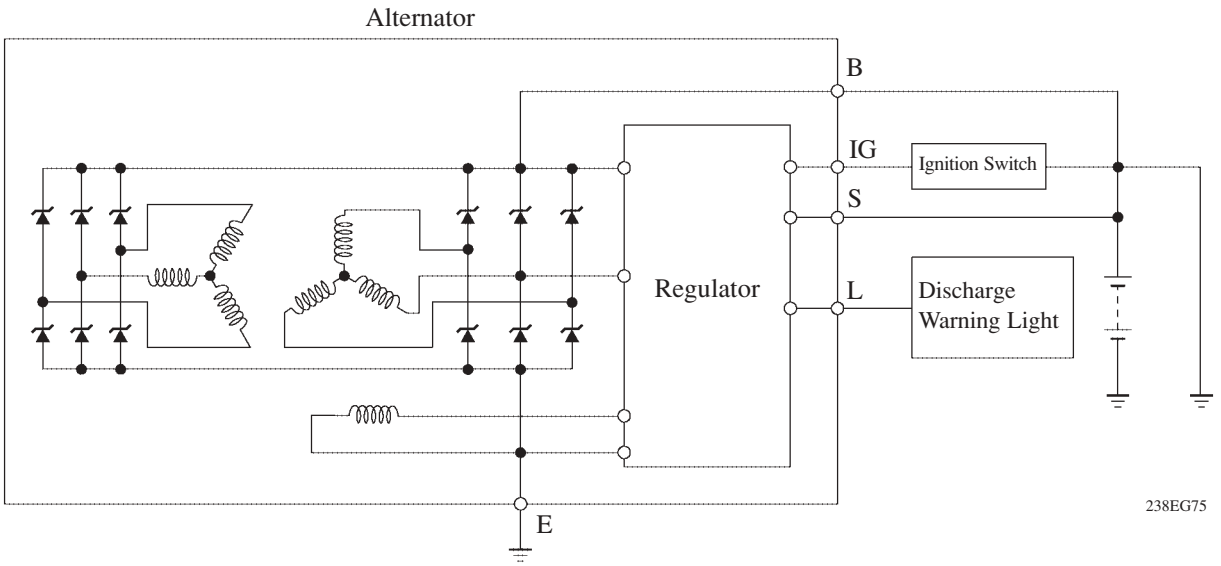
**▶ Component of Segment Conductor Type Alternator ◀**




**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.
For details, refer to the 3MZ-FE Engine Repair Manual (Pub. No. RM1088E).

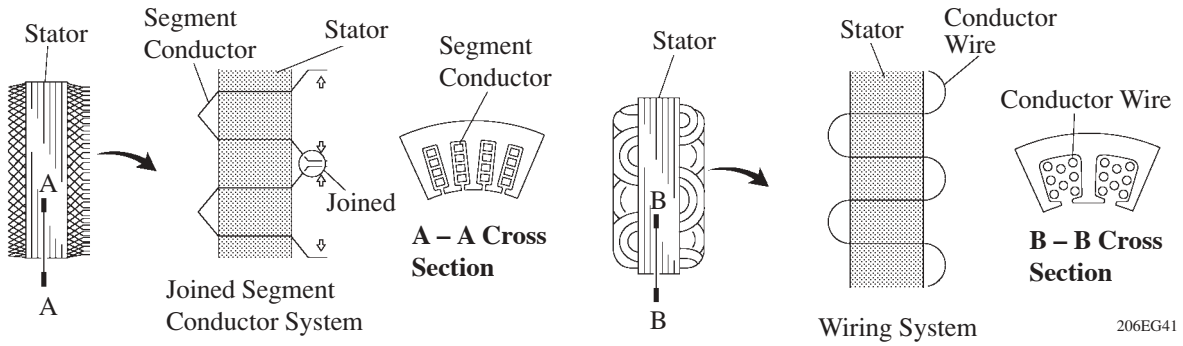
**▶ Wiring Diagram ◀**





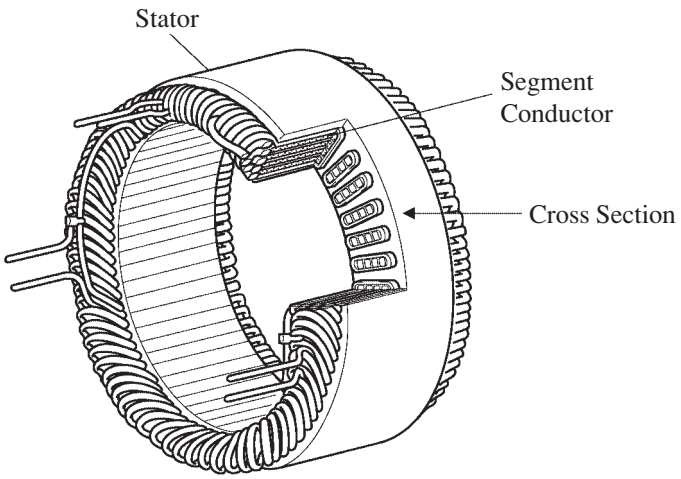

## Construction and Operation

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



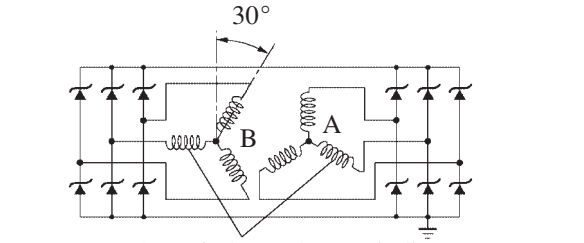

**Segment Conductor Type Alternator**

**Conventional Type Alternator**

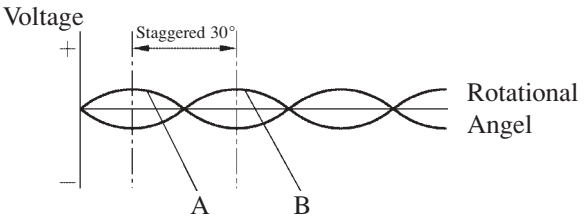



**Stator of Segment Conductor Type Alternator**

- A dual winding system has been adopted. 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.

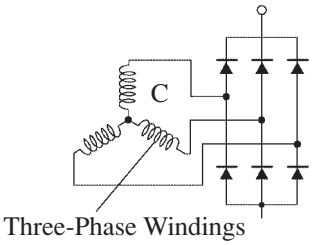



Two Sets of Three-Phase Windings

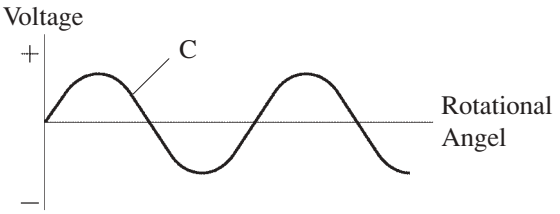



**Segment Conductor Type Alternator**

198EG14




Three-Phase Windings




198EG15

**Conventional Type Alternator**