

■ CHARGING SYSTEM

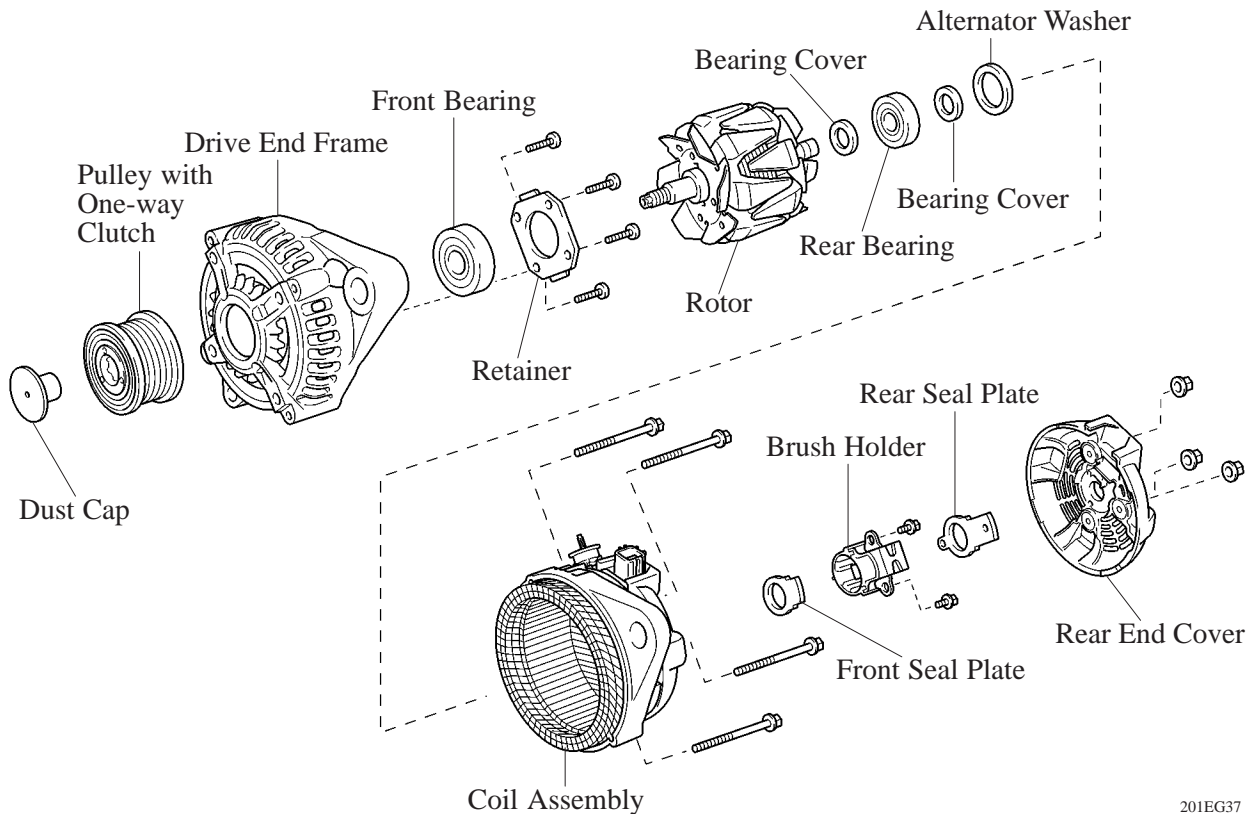
1. General

- SC (Segment Conductor) alternator has been adopted.
- A one-way clutch function has been provided in the alternator pulley.
- V-ribbed belt has been adopted to alternator drive belt, and automatic tensioner has been adopted to belt tensioner.

2. Alternator

General

- A compact and lightweight SC (Segment Conductor) alternator that generates high voltage output in a highly efficient manner has been adopted.
- A one-way clutch function has been provided in the alternator pulley to absorb the fluctuations in the engine speed, thus significantly reducing the damage sustained by the drive belt.



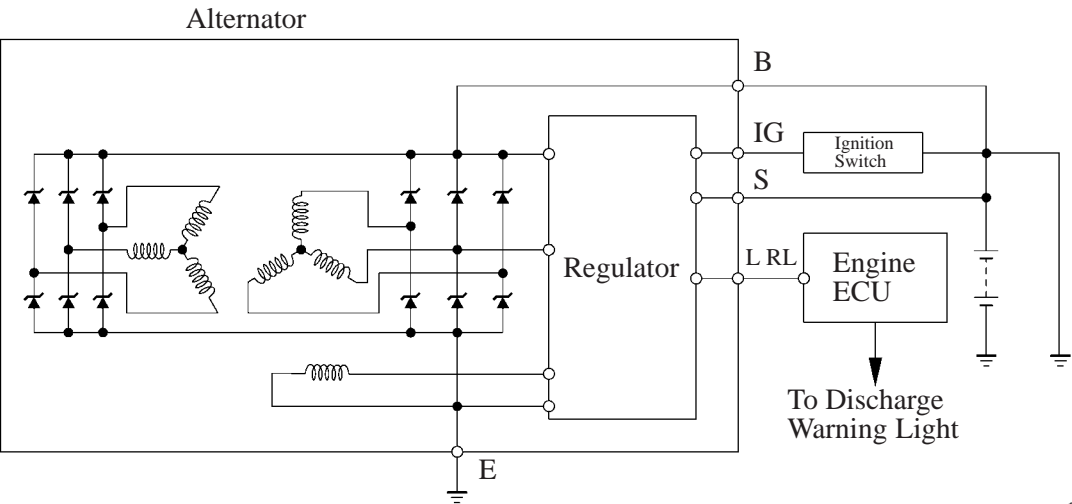
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Service Tip

- SST (09820-63020) has been newly established due to the adoption of a pulley with the one-way clutch function.
- Although the charging circuit of a conventional alternator is checked through the F terminal, this check cannot be performed on the SC alternator through the use of the F terminal because the F terminal has been eliminated.

For details, refer to the 1CD-FTV Engine Repair Manual (Pub. No. RM866E).

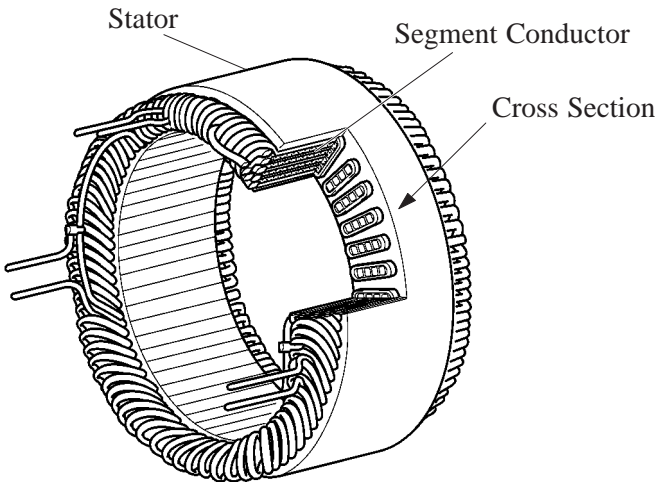
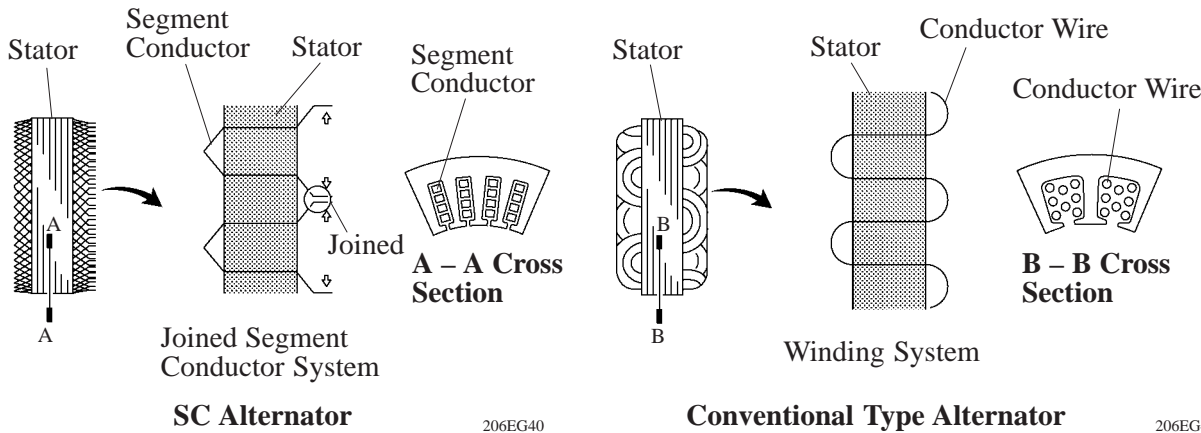
Wiring Diagram



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Construction and Operation

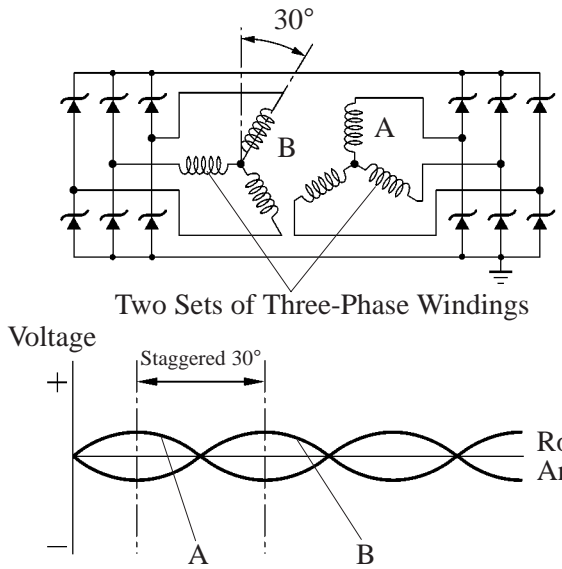
- This alternator has adopted a joined segment conductor system, in which multiple segment conductors are welded together to form the stator. Compared to the conventional winding system, the electrical resistance is reduced due to the shape of the segment conductors, and their arrangement helps to make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



Stator of SC Alternator

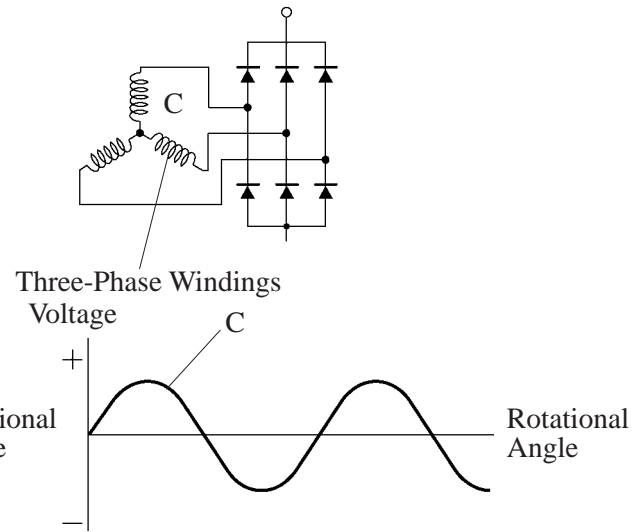
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- A dual winding system has been adopted. This system consists of two sets of three-phase windings whose phases are staggered 30° . Because the magnetic fluctuations of the respective windings cancel each other out, magnetic noise is reduced.



SC Alternator

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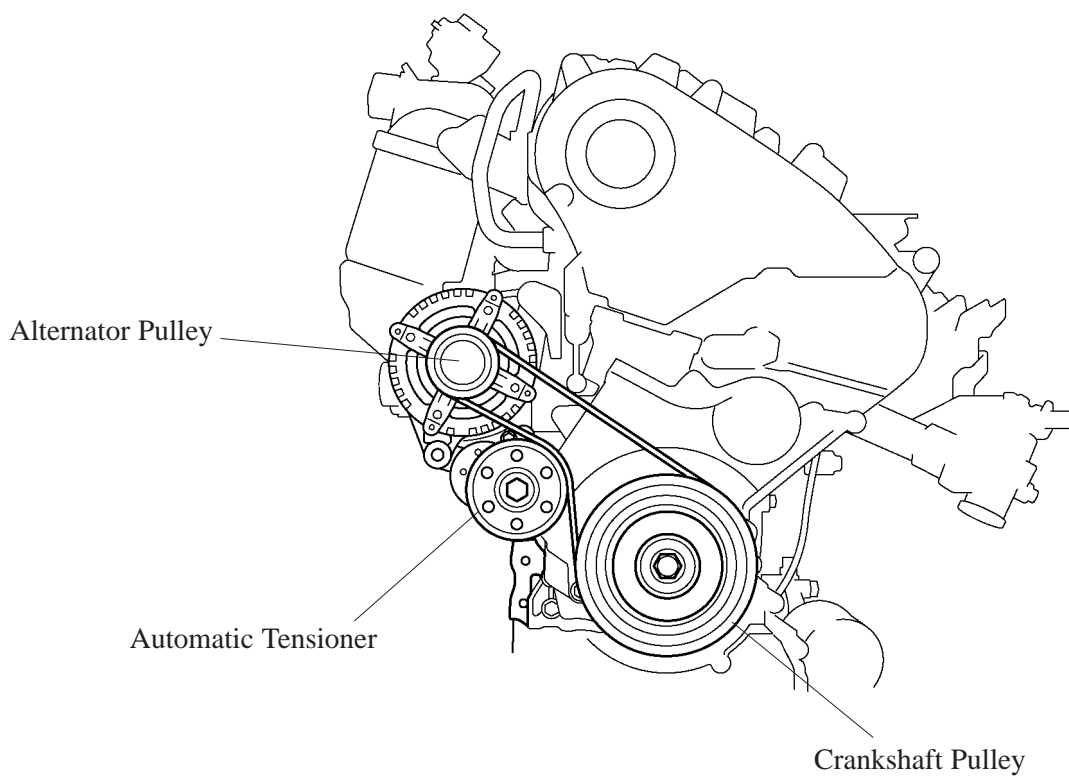


Conventional Type Alternator

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3. Alternator Drive Belt

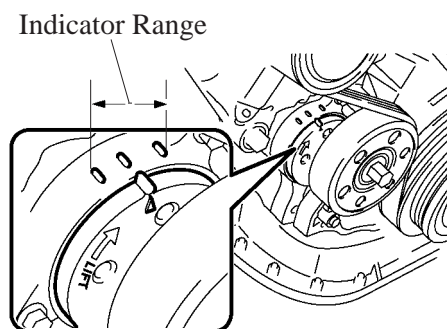
An automatic tensioner eliminates the need for tension adjustment.



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Service Tip

To inspect the drive belt check that the indicator mark is positioned in the indicator range. If not, replace the drive belt.



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