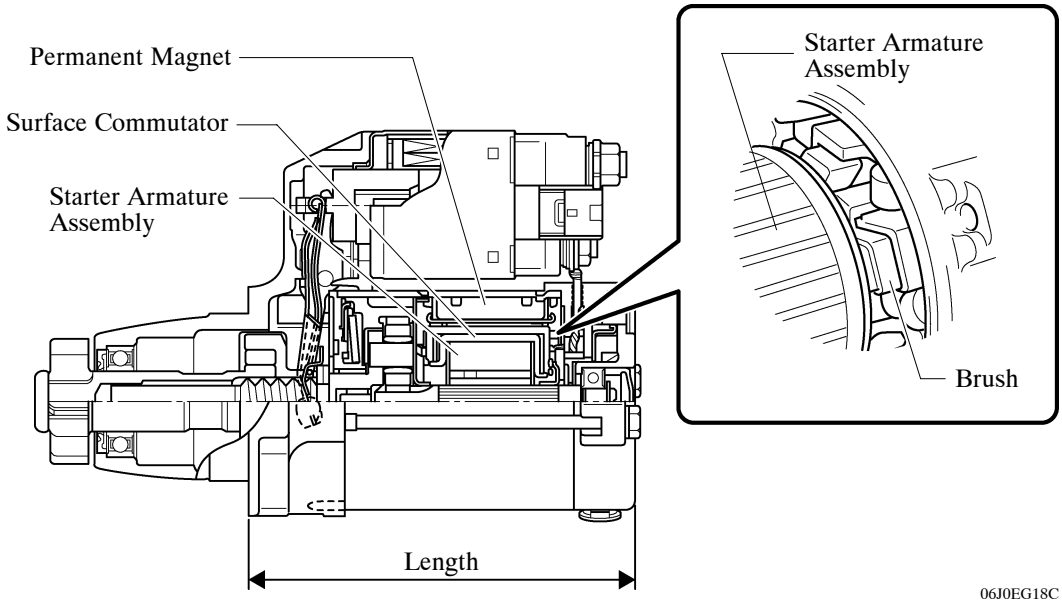
■STARTING SYSTEM

1. General

A compact and lightweight PS (Planetary reduction-Segment conductor motor) starter assembly is used on all models.

- The PS starter assembly contains a starter armature assembly that uses square-shaped conductors. The surface of the starter armature assembly at one end functions as the commutator, resulting in improved output torque and overall length reduction.
- In place of the field coil used in a conventional starter assembly, the PS starter assembly uses two types of permanent magnets: main magnets and interpolar magnets. The main magnets and interpolar magnets have been efficiently arranged to increase the magnetic flux and to shorten the length of the starter yoke assembly.



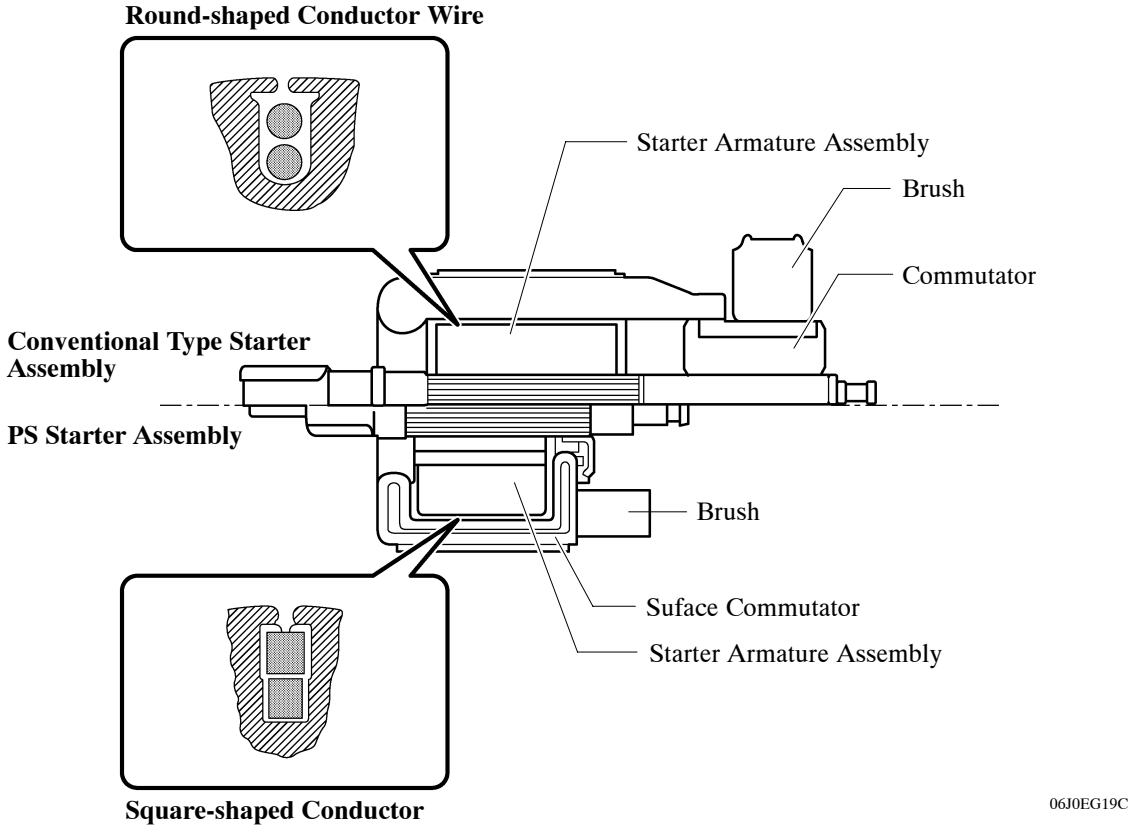
▶ Specifications ◀

Type	PS Starter Assembly
Length mm (in.)	128 (5.04)
Weight g (lb)	2950 (6.50)
Rating Voltage	12 V
Rating Output	1.7 kW
Rotating Direction	Counterclockwise*

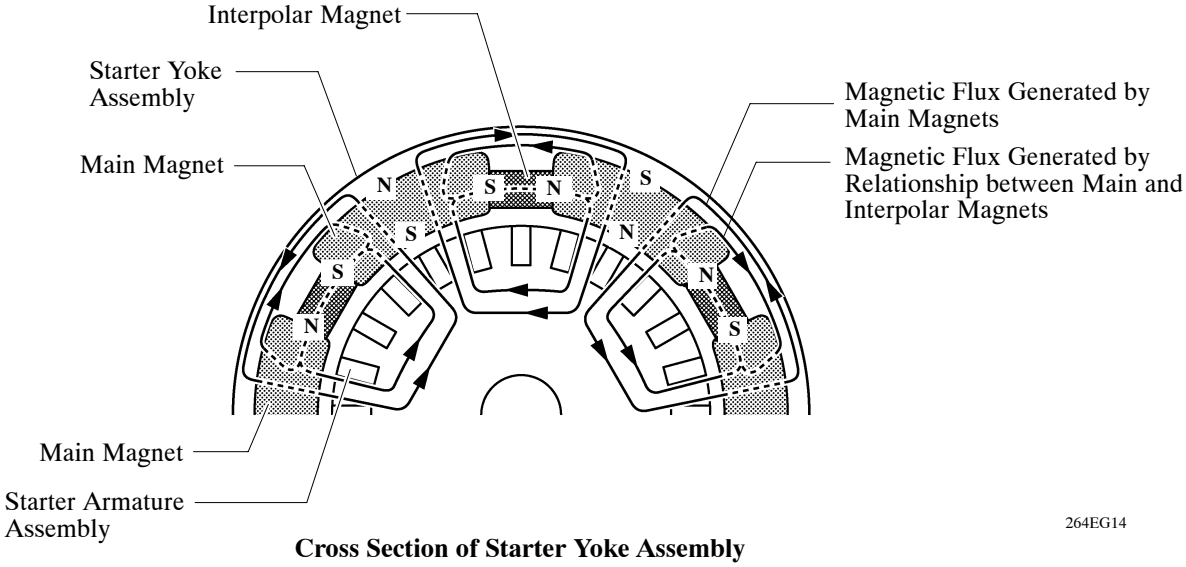
*: Viewed from Pinion Side

2. Construction

- Instead of the round-shaped conductor wires used in a conventional starter assembly, the PS type starter assembly uses square-shaped conductors. In this type of construction, square-shaped conductors can achieve the same magnetic field strength as would be achieved by winding numerous round-shaped conductor wires, but without increasing the mass. As a result, the output torque is increased, and the armature coil is more compact.
- Because the surface of the square-shaped conductors that are used in the armature coil functions as a commutator, the overall length of the PS type starter assembly is shortened.



- Instead of the field coils used in the conventional starter assembly, the PS type starter assembly uses two types of permanent magnets: main magnets and interpolar magnets. The main and interpolar magnets are arranged alternately inside the starter yoke assembly. This allows the magnetic flux generated between the main and interpolar magnets to be added to the magnetic flux generated by the main magnets. In addition to increasing the amount of magnetic flux, this construction shortens the overall length of the starter yoke assembly.



Cross Section of Starter Yoke Assembly