

1. Starter

Trouble		Probable cause
Starter does not start.	Magnet switch does not operate. (no clicks are heard.)	Magnet switch poor contact or discontinuity of pull-in coil circuit Improper sliding of magnet switch plunger
	Magnet switch operates. (clicks are issued.)	Poor contact of magnet switch's main contact point Layer short of armature Contaminants on armature commutator High armature mica Improper grounding of yoke field coil Insufficient carbon brush length Insufficient brush spring pressure
Starter starts but does not crank engine.	Failure of pinion gear to engage ring gear	Worn pinion teeth Improper sliding of overrunning clutch Improper adjustment of stud bolt
	Clutch slippage	Faulty clutch roller spring
Starter starts but engine cranks too slowly.		Poor contact of magnet switch's main contact point Layer short of armature Discontinuity, burning or wear of armature commutator Poor grounding of yoke field coil Insufficient brush length Insufficient brush spring pressure Abnormal brush wear
Starter overruns.		Magnet switch coil is a layer short.