

STARTER FAULT DIAGNOSIS

Before testing the starter ensure that the transmission is in neutral, and brakes are applied.
On petrol models disconnect wiring from electronic ignition control unit.

Symptom	Possible Cause	Correction
Starter fails to operate	a) Weak battery or dead cell in battery	a) Test specific gravity. Recharge or replace battery as required.
	b) Loose or corroded battery terminals	b) Clean terminals and clamps, replace if necessary. Apply a light film of petroleum jelly to terminals after tightening.
	c) Ignition switch faulty	c) Test and replace switch if necessary
	d) Open circuit, wire between the ignition — starterswitch and ignition terminal on starter relay	d) Inspect and test all the wiring
	e) Starter relay defective	e) Test relay and replace if necessary
	f) Faulty starter	f) Test and repair as necessary.
	g) Armature shaft sheared	g) Test and repair
	h) Solenoid pull-in defective	h) Test and replace solenoid if necessary.
	i) Starter jammed	i) Slacken the housing fixing bolts, to free drive pinion.
Starter fails and lights dim	a) Weak battery or dead cell in battery	a) Test for specific gravity. Recharge or replace battery as required.
	b) Loose or corroded battery cable terminals	b) Clean terminals and clamps, replace if necessary. Apply a light film of petroleum jelly to terminals after tightening.
	c) Internal ground in windings	c) Test and repair starter
	d) Grounded starter fields	d) Test and repair starter
	e) Armature rubbing on pole shoes	e) Test and repair starter
Starter turns, and engages, but does not turn engine	a) Starter clutch slipping	a) Replace the clutch unit
	b) Engine basic timing wrong	b) Check engine basic timing
	c) Broken teeth on engine ring gear	c) Replace ring gear. Inspect teeth on starter clutch pinion
Starter relay does not close	a) Battery discharged	a) Recharge or replace battery
	b) Faulty wiring	b) Test for open circuit, between ignition—starter switch, ignition terminal, and starter relay.
	c) Starter relay faulty	c) Test and replace if necessary.

Continued over. . .

Symptom	Possible Cause	Correction
Relay operates but solenoid does not	<ul style="list-style-type: none"> a) Faulty Wiring b) Faulty solenoid switch or connections c) Solenoid switch contacts corroded d) Broken lead or a loose soldered connection inside solenoid 	<ul style="list-style-type: none"> a) Test for open circuit wire between starter—relay solenoid terminal and solenoid terminal post b) Test for loose terminal connections between solenoid and starter field c) Test and replace solenoid if necessary d) Test and replace solenoid if necessary
Solenoid plunger vibrates back and forth when switch is engaged	<ul style="list-style-type: none"> a) Battery low b) Faulty wiring c) Lead or connections broken inside solenoid switch cover, or open hold-in winding d) Check for corrosion on solenoid contacts 	<ul style="list-style-type: none"> a) Test for specific gravity of battery. Replace or recharge battery b) Test for loose connections at relay, ignition—starter switch and solenoid c) Test and replace solenoid if necessary d) Test and clean the contacts
Starter operates but will not disengage when the ignition—starter switch is released	<ul style="list-style-type: none"> a) Broken solenoid plunger spring or spring out of position b) Faulty ignition—starter switch c) Solenoid contact switch plunger stuck in solenoid d) Insufficient clearance between winding leads to solenoid terminals and main contactor in solenoid (Only applicable to starters of Chrysler USA, manufacture) e) Faulty relay 	<ul style="list-style-type: none"> a) Test and repair b) Test and replace switch if necessary c) Remove contact switch plunger, wipe clean of all dirt, apply a film of SAE 10 oil on plunger, wipe off excess. d) Test and repair e) Test and replace relay if necessary
Excessive arcing at commutator	<ul style="list-style-type: none"> a) Defective armature b) Sticking, or worn brushes c) Dirty commutator d) Insufficient brush pressure 	<ul style="list-style-type: none"> a) Renew armature b) Fit new brushes c) Clean and resurface if necessary d) Renew brush springs