

Charging Systems



BOSCH

CHARGING SYSTEMS

Before Start Static Tests

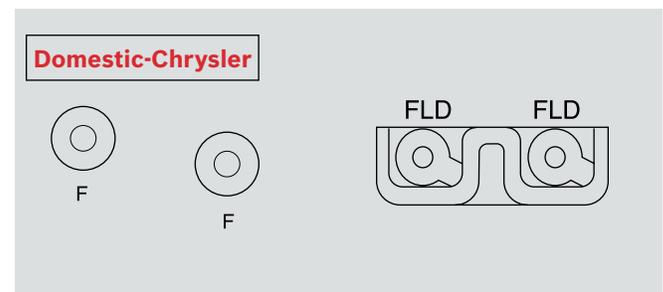
1. The battery should be fully charged. Terminal voltage OCV for maintenance free batteries must be 12.6 volts at 100% charge. A minimum of 12.4 volts at 75% charge is necessary to properly test the system. Terminal voltage OCV of new batteries must register a minimum of 12.5 volts before installation. Recharge and retest, per manufacturer's specifications, any battery that does not meet the requirement above.
2. Check conditions of battery connections. All battery cable connections must be clean, free of corrosion, and tight. If cable ends are corroded, do not replace just the cable ends, replace the entire battery cable.
3. Check condition of ground strap from battery to engine, frame and body. All connections must be clean and tight.
4. If alternator is mounted in rubber grommets, check condition of ground strap from alternator; all connections must be clean and tight.
5. Check tightness and condition of alternator drive belt. Belt tension and condition should be to manufacturer's specifications.

System Running Test (vehicle with warm engine):

1. Start engine and run at 2000 rpm.
2. Create an electrical load by turning on headlights, heater blower motor, A/C, rear defroster, etc.
3. Check output of alternator by measuring regulated voltage from the alternator battery terminal (B+) to ground.
4. Turn off all electrical loads. Output should remain within vehicle specifications. Refer to the vehicle manufacturer's regulated voltage specifications for the vehicle being tested.
5. Load alternator to within 10% of rate output current, using a load tester across the battery and an ammeter at the alternator terminal (B+). Voltage should remain above 12 volts, while output is within 10% of rated current.

PLUG IDENTIFICATION

The following plug identifications cover the most popular alternators.

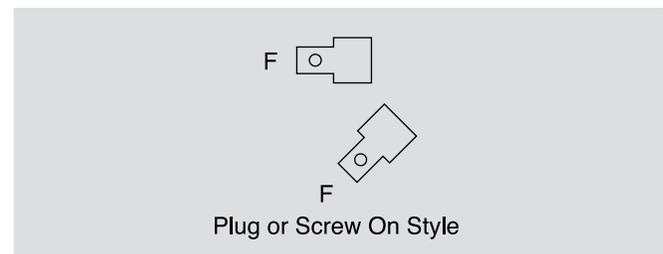


Terminal Reg. Markings Type

F Field ER
F Field

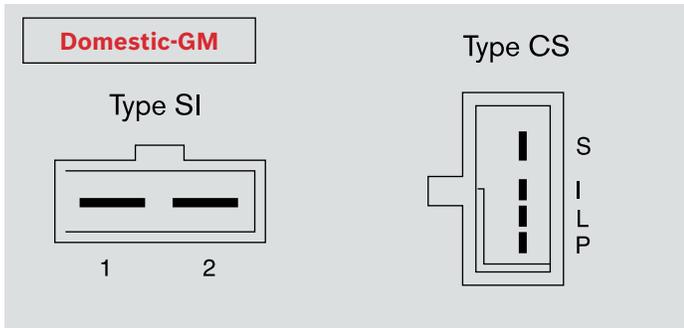
Terminal Reg. Markings Type

F Field ER
F Field

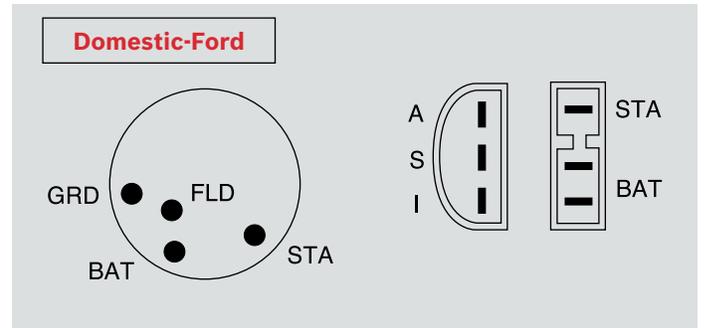


Terminal Markings Reg. Type

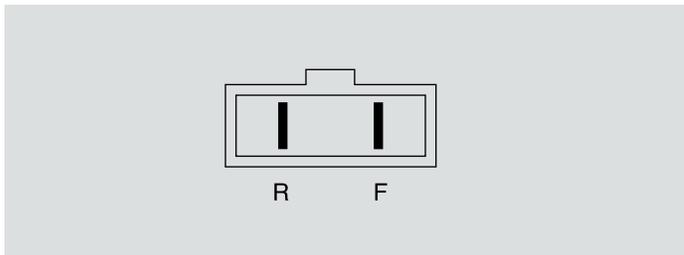
F Field ER
F Field (Early Type)



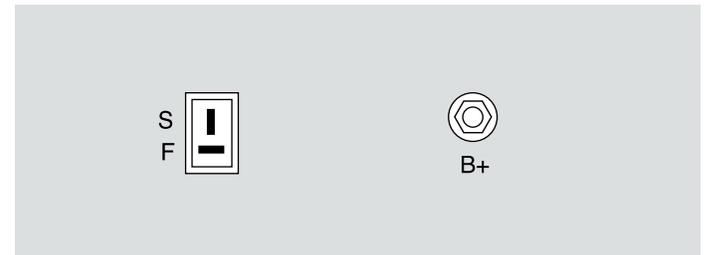
Terminal Markings	Reg. Type	Terminal Markings	Reg. Type
1 Trio (Lamp)	IR	I Ignition (+)	IR
2 Sense (+)		L Lamp	
		F Stator	
		S Sense (+)	



Terminal Markings	Reg. Type	Terminal Markings	Reg. Type
FLD Field	ER	A Sense (+)	IR
STA Stator		I Lamp	
BAT Battery (+)		S Stator	



Terminal Markings	Reg. Type
R Stator	ER
F Field	(Early Type)



Terminal Markings	Reg. Type
S Stator	ER
F Field	
B+ Battery (+)	