

ALTERNATOR & REGULATOR - MITSUBISHI

1990 Nissan 240SX

1990 ELECTRICAL
Nissan Alternators & Regulators - Mitsubishi

Pulsar, Sentra, Stanza, 240SX

NOTE: Some models are available with Hitachi alternators. See
ALTERNATOR & REGULATOR - HITACHI article.

DESCRIPTION

Mitsubishi alternators are conventional 3-phase, self-rectifying type units containing 6 diodes (3 positive and 3 negative). These diodes are used to rectify current. A case-mounted Integrated Circuit (IC) regulator is used on all models.

ADJUSTMENTS

BELT TENSION

ALTERNATOR BELT ADJUSTMENT

Application	(1) Deflection In. (mm)
Pulsar NX	9/32 (7)
Sentra	5/16 (8)
Stanza	1/4 (6)
240SX	1/4 (6)

(1) - Deflection is with 22 lbs. (10 kg) pressure applied midway on the longest belt run.

ON-VEHICLE TESTING

NOTE: Check alternator wire harness connections and drive belt tension. Ensure battery is fully charged before testing. Wait at least 30 seconds after starting engine before measuring voltage.

ALTERNATOR TEST

1) Ensure battery is fully charged before testing. Turn ignition on and check charge indicator light on instrument panel. If light comes on, go to step 3).

NOTE: Terminals "B", "E", "L" and "S" are marked on the alternator's rear cover.

2) If light is off, disconnect alternator connector and ground wire of terminal "L". If light comes on, replace regulator and alternator. If light remains off, replace indicator bulb and retest.

3) Start and run engine at idle. If charge indicator light is dim, flickers or remains on (bright), repair alternator. If light goes off, run engine at 1500 RPM and turn on headlights. If light remains off, go to step 4). If light comes on, replace alternator.

4) Run engine at 1500 RPM and measure voltage at terminal "B". If voltage is more than 15.5 volts, replace IC regulator. If voltage is 13-15 volts, alternator and regulator are okay.

BENCH TESTING

ROTOR

Connect ohmmeter leads to each of the rotor slip rings. If continuity is present, rotor is okay. If continuity is NOT present, rotor is defective. Connect an ohmmeter lead any slip ring and connect remaining lead to rotor core. If continuity exists, replace rotor assembly.

NOTE: To test stator or diodes, separate them by unsoldering the connecting wires. Use just enough heat to melt solder. Excess heat will damage diodes.

STATOR

Using ohmmeter, check continuity between stator core leads. If continuity is NOT present between leads, replace stator. Connect one ohmmeter lead to stator core. Connect remaining ohmmeter lead, in turn, to each of the stator leads. If continuity is NOT present, stator is good. If continuity exists, stator is grounded and must be replaced.

DIODES

Using an ohmmeter, check continuity of all diodes in both directions. Continuity should exist in only one direction. If continuity exists in both directions, diode is shorted. See Fig. 1. If continuity is NOT present in either direction, diode is open. If any diode is defective, replace entire diode assembly.

BRUSHES

Inspect brushes for freedom of movement in holder. Clean brush holder if necessary. Check brushes for cracks and wear. Check brush springs for corrosion or damage. Ensure brushes are not worn beyond minimum length. See MITSUBISHI ALTERNATOR APPLICATIONS or ALTERNATOR SPECIFICATIONS tables.

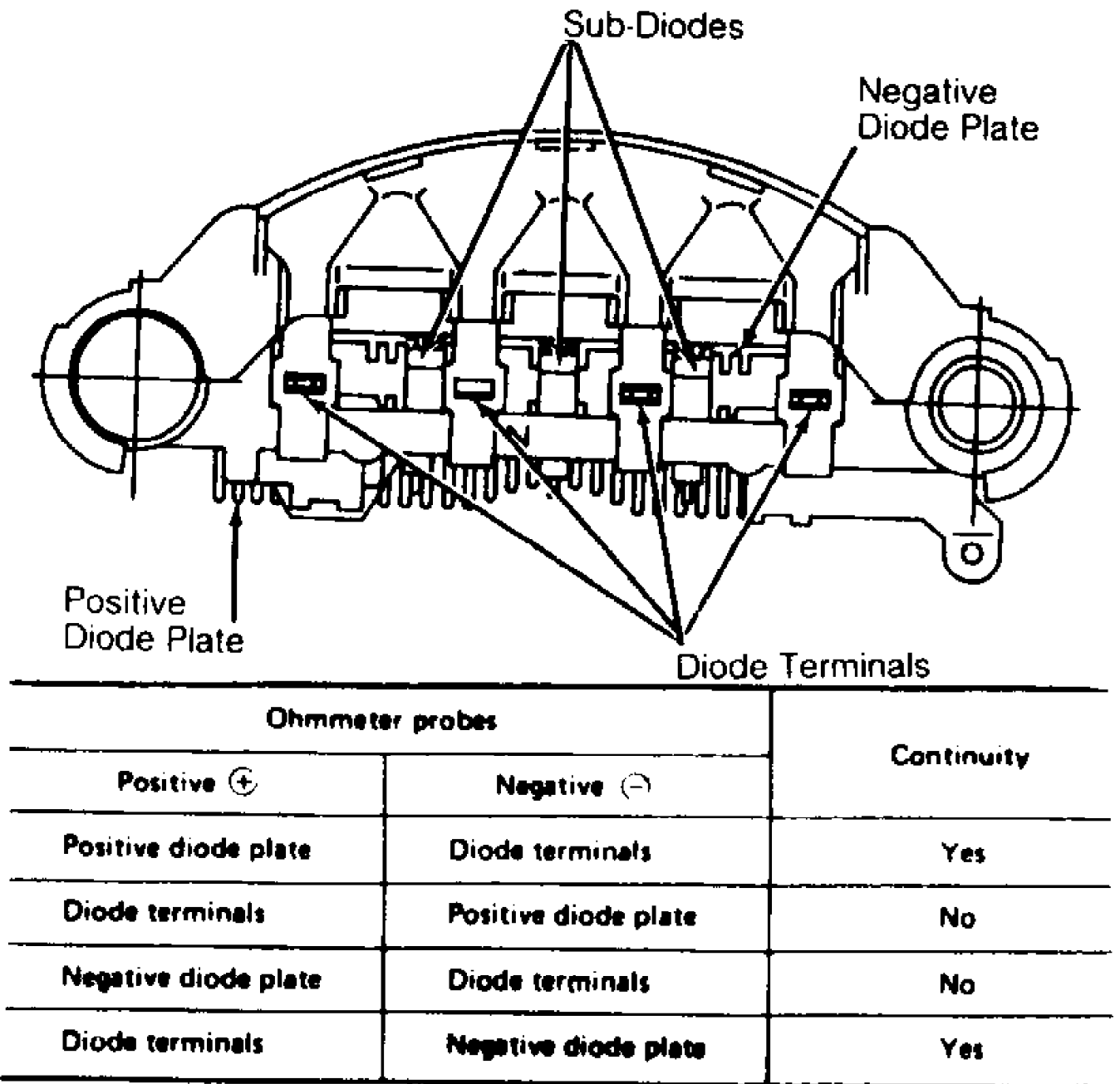


Fig. 1: Testing Diode Assembly
 Courtesy of Nissan Motor Co., U.S.A.

ALTERNATOR APPLICATION

Model	Mitsubishi Part No.
Pulsar NX	A5T00192
Sentra	A5T00192

Stanza	A2T18792
240SX	A2T14094

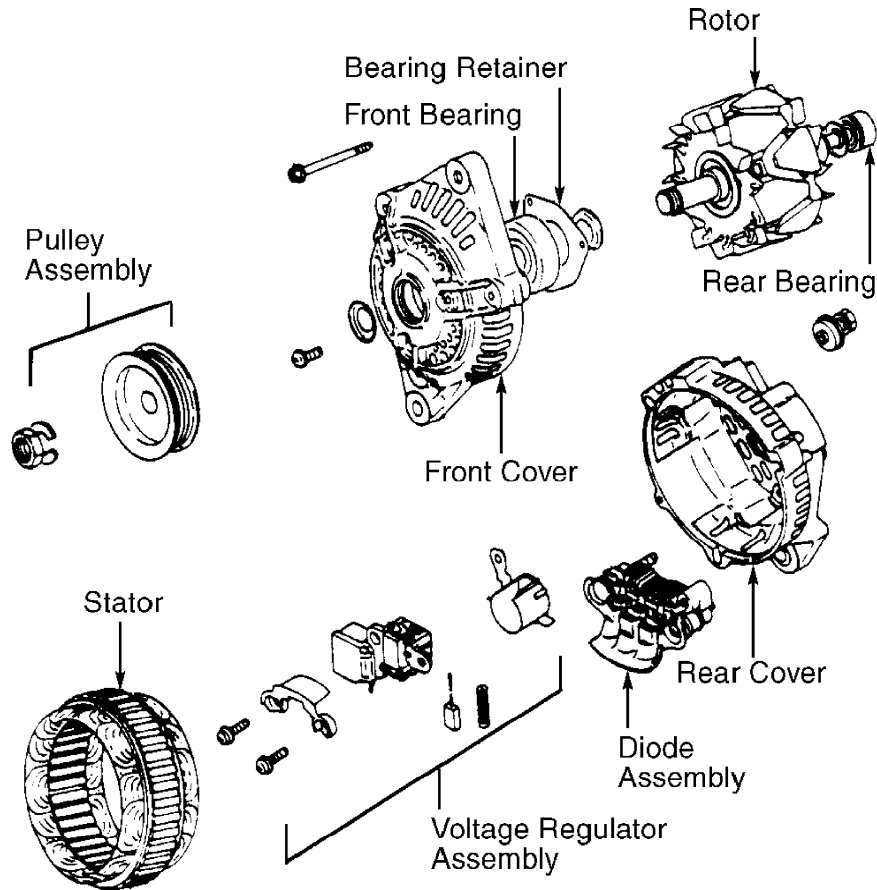
ALTERNATOR SPECIFICATIONS

Application	Output Amps @ RPM	(1) Brush Length Inch (mm)
A5T00192	50 @ 250031 (8)
A5T00192	50 @ 250031 (8)
A2T18792	60 @ 250031 (8)
A2T14094	60 @ 250031 (8)

(1) - Minimum brush length.

OVERHAUL

NOTE: A ring is used to lock outer bearing race in alternator's rear cover. It may be necessary to heat bearing housing to remove cover. Use 200 watt soldering iron to heat housing. DO NOT use heat gun, as it may damage diode.



90E09390
 Fig. 2: Exploded View of Mitsubishi Alternator
 Courtesy of Nissan Motor Co., U.S.A.

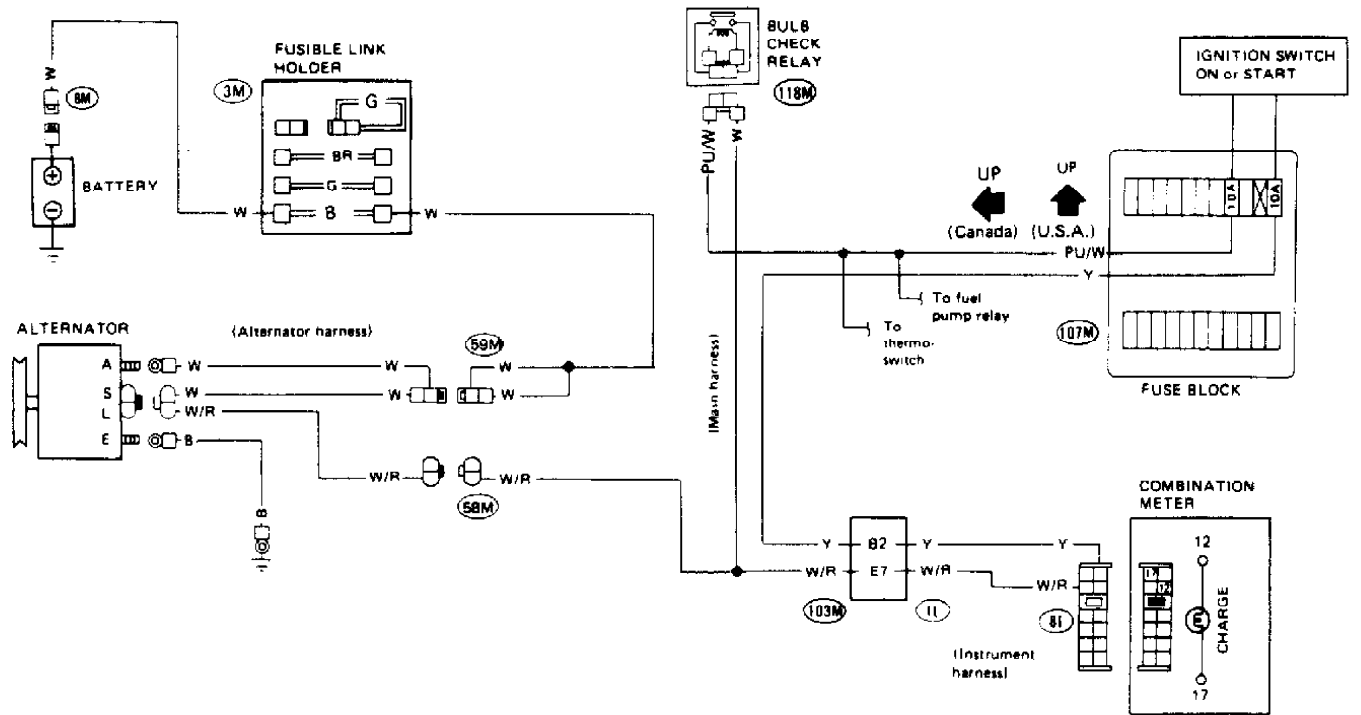


Fig. 3: Pulsar NX Charging System Wiring Schematic (Others Similar)
 Courtesy of Nissan Motor Co., U.S.A.