

Component Procedures: Alternator

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Component Procedures: Alternator

Parts and Labor (itype_189)

Parts

Qualifier	Part #	Name	Price	Note
Alternator	56005685AB	1-alternator	285.00	Order By Description.

Labor

Operation	Qualifier Path	Skill	Std Hrs	Wty Hrs
Replace	Alternator, R&R	B	1.0	0.4

Components (itype_389)

Type = DENSO

Part Number = 56005684AB

Part Number = 56005685AB

Components (itype_392)

SYSTEM OPERATION

The

generator

is belt-driven by the engine using a serpentine type drive belt. It is serviced only as a complete assembly.

If the generator fails for any reason, the entire assembly must be replaced.

As the energized rotor begins to rotate within the generator, the spinning magnetic field induces a current into the windings of the stator coil. Once the generator begins producing sufficient current, it also provides the current needed to energize the rotor.

The Y type stator winding connections deliver the induced AC current to 3 positive and 3 negative diodes for rectification. From the diodes, rectified DC current is delivered to the vehicle electrical system through the generator

battery

terminal.

Although the generators appear the same externally, different generators with different output ratings are used on this vehicle. Be certain that the replacement generator has the same output rating and part number as the original unit. Refer to Generator Ratings in the Specifications for amperage ratings and part numbers, Noise emitting from the generator may be caused by: worn, loose or defective bearings; a loose or defective drive pulley; incorrect, worn, damaged or misadjusted fan drive belt; loose mounting bolts; a misaligned drive pulley or a defective stator or diode.

GENERATOR OUTPUT-PCM INPUT

Provides a

charging system

voltage input to the Powertrain Control Module (PCM). It is sensed at the battery input to the PCM.

GENERATOR FIELD SOURCE (+)-PCM OUTPUT

This output from the Powertrain Control Module (PCM) regulates charging system voltage to the generator field source (+) circuit. The voltage range is

12.9 to 15.0 volts

. Models of previous years had used the ASD relay (directly) to apply the

12 volt +

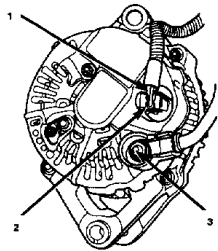
power supply to the generator field source (+) circuit. Refer to charging system information.

GENERATOR FIELD DRIVER (-)-PCM OUTPUT

This output from the Powertrain Control Module (PCM) regulates charging system ground

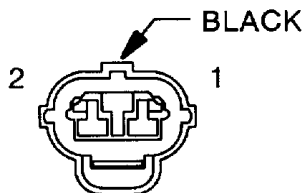
control to the generator field driver (-) circuit. Refer to charging system information.

Connector Views (itype_47)



GENERATOR

CAV	CIRCUIT	FUNCTION
1	-	FIELD WIRES
2	-	FIELD WIRE CONNECTOR
3	-	B(+) (OUTPUT TERMINAL)

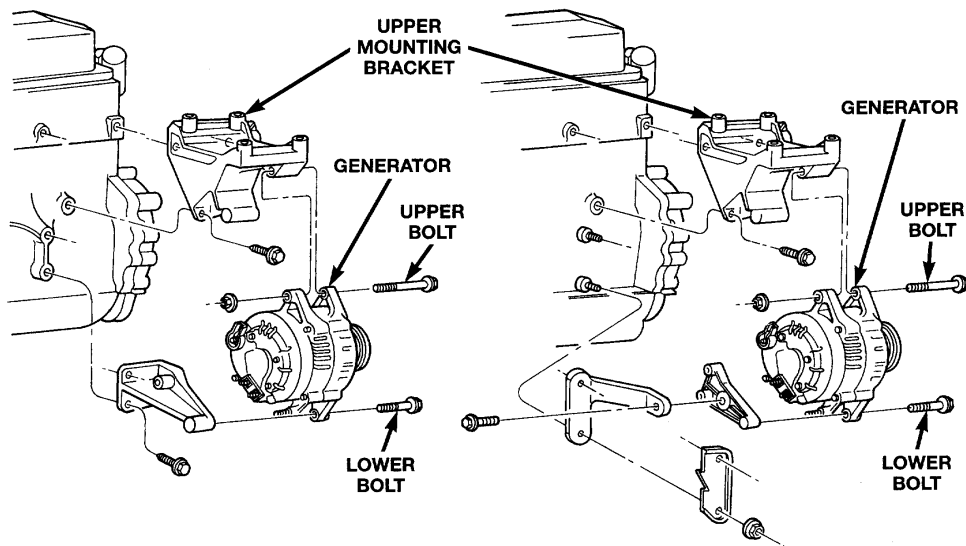


GENERATOR - BLACK 2 WAY

CAV	CIRCUIT	FUNCTION
1	K72 18DG/OR	VOLTAGE REGULATOR SIGNAL
2	K20 18DG	GENERATOR FIELD DRIVER (+)

GENERATOR

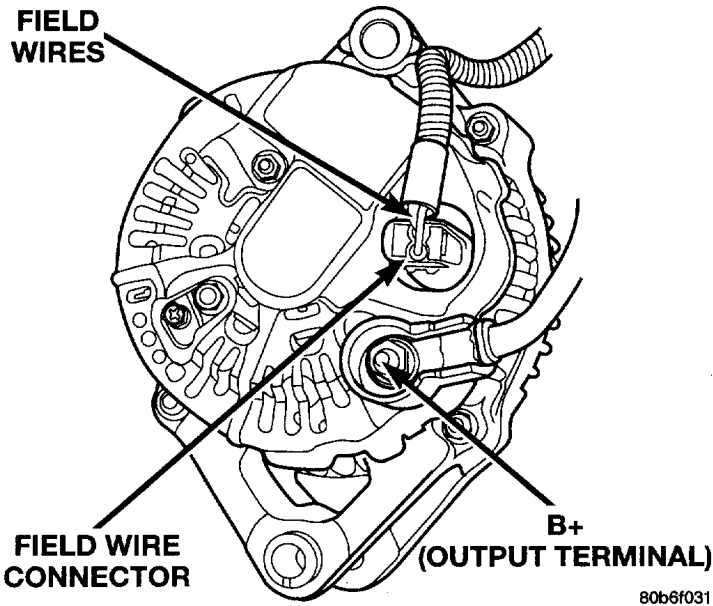
Procedures (itype_376)



4.0L 6-CYLINDER

2.5L 4-CYLINDER

80add394



Technician Safety Information (itype_15)

WARNING: DISCONNECT NEGATIVE CABLE FROM BATTERY BEFORE REMOVING BATTERY OUTPUT WIRE (B+ WIRE) FROM GENERATOR . FAILURE TO DO SO CAN RESULT IN INJURY OR DAMAGE TO ELECTRICAL SYSTEM .

Vehicle Damage Warnings (itype_16)

WARNING: DISCONNECT NEGATIVE CABLE FROM BATTERY BEFORE REMOVING BATTERY OUTPUT WIRE (B+ WIRE) FROM GENERATOR . FAILURE TO DO SO CAN RESULT IN INJURY OR DAMAGE TO ELECTRICAL SYSTEM .

Voltage (Article 2026152)

Powertrain Control Module (PCM) regulates charging system voltage by controlling the generator field source (+) circuit. The voltage range is 12.9 to 15.0 volts

Rated Amps (Article 2026153)

Part Number = 56005684AB
 Rated SAE Amps
 81 amps
 Minimum Test Amps
 57 amps
 Part Number = 56005685AB
 117 amps
 88 amps

Mechanical (including Torque) (itype_28)

Generator Adjusting Bolt 18 ft.lb

Pivot Bolt/Nut 28 ft.lb

Mounting Bracket-To-Engine Bolts 28 ft.lb

Mounting/Head Bolts 33 ft.lb