

## DELCO-REMY

Jensen-Healey (1973)  
 Lotus Europa (1973)  
 Triumph TR 6 (1971-73)

### TESTING

#### ON CAR FUNCTIONAL TEST

1) Check adjustment of alternator drive belt. Detach harness connectors and hook up test circuit as illustrated. **CAUTION** - Observe polarity of system when installing, in order to prevent reversed polarity.

#### ► CHANGES, CAUTIONS, CORRECTIONS

► **BATTERY INSTALLATION, BATTERY CHARGING, OR USING A BOOSTER BATTERY FOR ENGINE START** - Reversed polarity or excessive voltage will result in extensive damage to alternator system. Note the following to prevent damage:

**Battery Installation** - Negative battery terminal must be connected to ground and positive terminal must be connected to starter. **DO NOT** reverse polarity.

**Battery Charging** - If a Quick Charger is used, both battery cables must be disconnected from the battery. **DO NOT** use a Quick Charger to provide starting voltage.

**Circuit Interruption** - Battery must **NEVER** be disconnected while alternator is running.

**Alternator Removal** - Always disconnect battery ground before removal and replacement of alternator.

**High Voltage** - **DO NOT** use a high voltage source to test diodes.

**Battery Booster (For Engine Start)** - Booster battery must be connected with proper polarity alignment with battery connections. **DO NOT** reverse battery leads.

### DESCRIPTION

Conventional three-phase, self-rectifying type alternator. Alternator has a single field winding on rotor shaft which is encased between two multi-fingered overlapping iron pole pieces assembled on rotor shaft. Field winding is connected to two slip rings assembled on, but insulated from rotor shaft. Alternator also has a solid state regulator which is mounted inside the slip ring end frame. The voltage regulator is not adjustable.

### APPLICATION

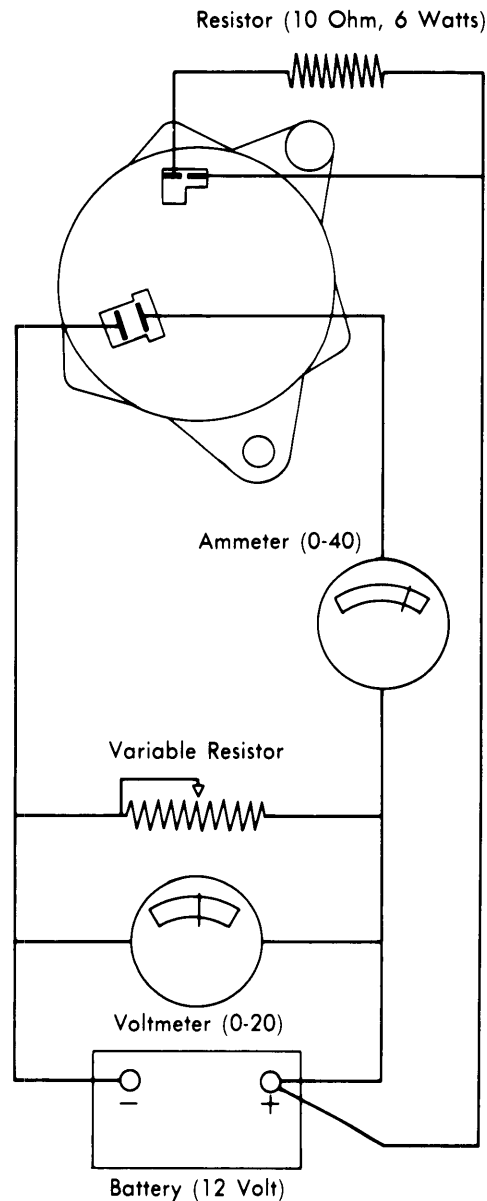
Model	Type No.
Jensen-Healey (1973) .....	DN 460
Lotus Europa (1973) .....	DN 460
Triumph TR6 (1971-73) .....	① DN 460

① - Some models use Lucas alternators.

### SPECIFICATIONS

Application	Data
Nominal Output.....	35 Amps
Control Voltage.....	14
Max. Output Speed.....	① 5000 RPM
Field Winding (Rotor) Resistance.....	2.65-2.95 Ohms
Brush Replacement Length.....	0.2" (5 mm)
Brush Spring Pressure.....	② 8-13 oz.

① - Alternator RPM.  
 ② - At normal working position.



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#### DELCO-REMY ALTERNATOR TEST CIRCUIT

2) **NOTE** - Do not connect variable resistor into the test circuit until instructed and do not connect it across battery for longer than necessary to perform test. Start engine. If voltmeter reading fluctuates with speed and exceeds 15.5 volts, indication is that regulator should be replaced.

## DELCO-REMY (Cont.)

3) If voltmeter reading is steady below 15.5 volts, connect the variable resistor into test circuit as shown. Hold speed at approximately 5000 alternator RPM (1800-2400 engine RPM). Adjust variable resistor to obtain maximum ammeter reading. Ammeter should now register within 10% of specified nominal output. If not, alternator requires replacement or overhaul.

### OVERHAUL

#### DISASSEMBLY

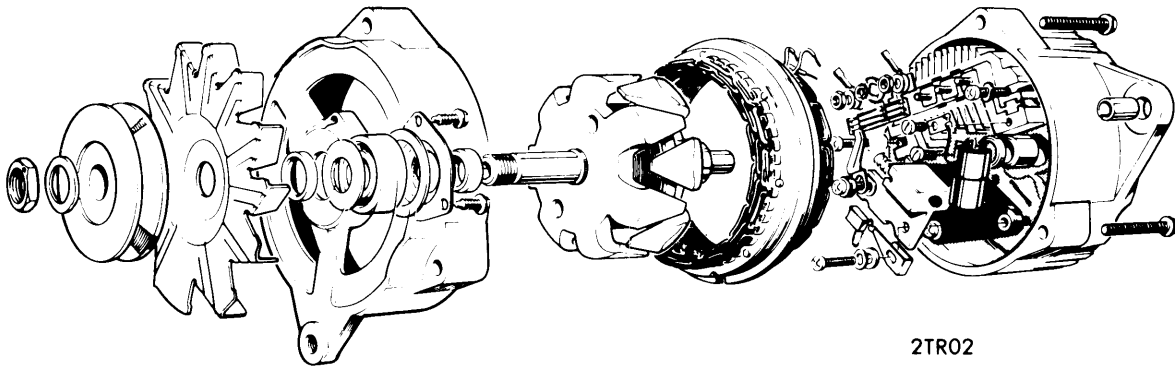
- 1) Scribe a line across drive end frame, stator, and slip ring end frame to facilitate assembly. Remove three through bolts. Separate drive end frame and rotor assembly from slip ring end frame and stator assembly. As rotor is withdrawn, brushes will be pushed up by brush springs. Extract brushes.
- 2) Remove three nuts. Withdraw stator, noting three wire tags. *NOTE — It is essential that all components be sufficiently marked for proper reinstallation in original position, including screws and washers, to ensure proper alternator operation.*
- 3) Remove single screw, washer, and insulation washer (with insulation sleeve), then lift out diode trio. Extract components retaining brush box and withdraw box. Remove short, red grounding screw and extract regulator.

4) Detach and remove rectifier bridge. Insulation piece attached to rectifier bridge may remain in position, unless replacement is necessary.

5) Mark pulley and fan, then detach from shaft. Withdraw rotor shaft from drive end frame bearing. Remove spacer.

#### REASSEMBLY

- 1) Position spacer. Ensure rotor shaft is clean, then insert shaft through drive end frame bearing. Position fan, pulley, spring washer, and nut.
- 2) Ensure insulation piece is properly fitted to rectifier bridge live side slot (so that flange will be assembled against slip ring end frame). Position rectifier bridge and attach with proper screws placed in original positions.
- 3) Position diode trio, attaching with proper screws. Using a suitable probe, hold back brushes (insert probe through slip ring end frame), then insert stator, noting three wire tags for proper position. Fit three nuts.
- 4) Ensure rotor shaft and slip rings are clean. Carefully position drive end frame and rotor assembly to slip ring end frame and stator assembly. Align housing scribe marks and join housing halves with through bolts. Withdraw probe and allow brushes to drop onto slip rings.



2TR02

DELCO-REMY (DN 460) ALTERNATOR