PARIS RHONE

Citroen A13R52, A13R59, A13R92

►CHANGES, CAUTIONS & CORRECTIONS

►*BATTERY INSTALLATION, BATTERY CHARGING, CIRCUIT INTERRUPTION, ALTERNATOR REMOVAL, HIGH VOLTAGE, OR USING A BOOSTER BATTERY TO START ENGINE CAUTION – 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 (Negative ground systems), and Positive terminal connected to ground (Positive ground systems). *Do not reverse battery leads.*

Battery Charging – If a "Fast Charger" is used, both of the car's battery cables must be disconnected from battery. *Do not use "Fast Charger" to provide starting voltage.*

Circuit Interruption – The battery must *Never* be disconnected while alternator is running.

Alternator Removal – Always disconnect battery ground before replacement of alternator.

High Voltage – *Do not use a high voltage source to test diodes.*

Booster Battery (Used to Start Engine) – Booster Battery must be connected with negative lead to negative terminal of battery and positive lead to positive terminal of battery. *Do not reverse battery leads.*

Field Terminal – Never ground field energizing terminal on alternator, regulator or connecting lead.

DESCRIPTION

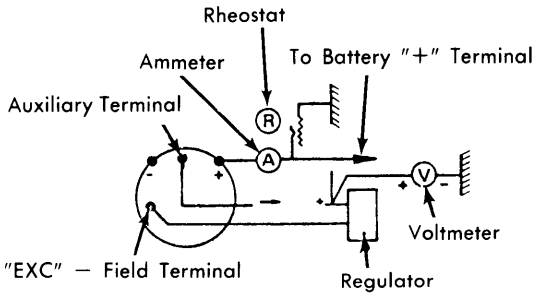
Paris-Rhone Alternators used on Citroen vehicles are conventional three phase, self rectifying type alternators. Six silicon diodes (three positive and three negative) are used to rectify A.C. current. Paris-Rhone regulator specifications are included in the specification chart.

TESTING

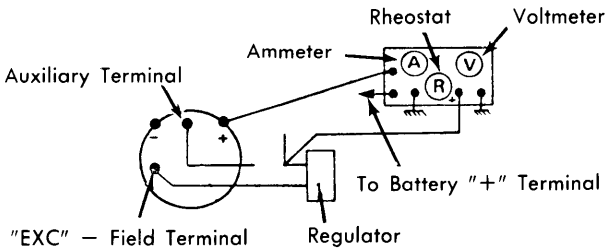
ALTERNATOR

NOTE – Before performing any tests or checks on charging system, it is important to stabilize temperature of the components. This can be done by operating system at various speeds for 30 minutes.

Disconnect negative battery terminal. Connect test equipment as shown in illustration. Reconnect negative battery terminal. Start engine and slowly increase speed to lowest RPM listed. See "Output" under specification table. Adjust rheostat to obtain 14 volts. Current output should be as listed. Raise engine speed to next level (see specifications) and adjust rheostat to gain 14 volts. If current output at these engine RPM's cannot be obtained, inspect alternator.



WITH SEPARATE METERS



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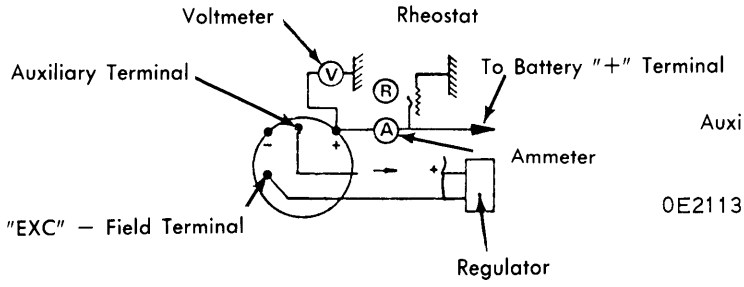
WITH COMBINED TESTER

REGULATOR TESTING CIRCUITS

REGULATOR

Disconnect negative battery terminal. Connect test equipment as shown in illustration. Reconnect negative battery terminal. Start engine and slowly increase speed to RPM shown. See "Regulating Voltage" under specification chart. Adjust rheostat to obtain current value listed. Voltage reading should be within specifications. Increase current setting and record reading. If alternator is known to be good and regulating voltage is not correct, regulator is defective. *NOTE – Successive voltage readings during this test should be obtained by increasing current steps only. NEVER decrease current during test.*



WITH SEPARATE METERS

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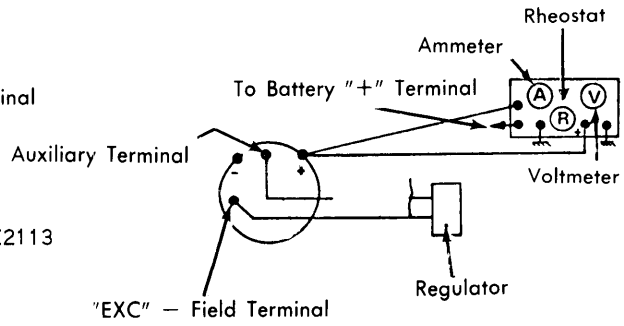

WITH COMBINED TESTER

ALTERNATOR TESTING CIRCUITS

PARIS RHONE (Cont.)

PARIS-RHONE ALTERNATOR AND REGULATOR SPECIFICATIONS					
Alt. No.	Output ④ Amps. RPM ⑤	Resistance Ohms @ 75° F Rotor	Resistance Ohms @ 75° F Stator	Regulator Model	Regulating Voltage ④ @ 68° F
AI3R52	12 @ 880 33 @ 1960 37 @ 5200	4.4	.25 ②	AYD 212	13.4 - 14.4 @ 8 Amps. - 2600 RPM 13 - 14 @ 20 Amps - 2600 RPM
AI3R59	17.5 @ 880 43 @ 1960 48 @ 5200	4.4	2.1 ②	AYD 212	13.4 - 14.4 @ 8 Amps - 2600 RPM 13 - 14 @ 20 Amps. - 2600 RPM

② – Resistance between phases
④ – After thermal stabilization
⑤ – Engine RPM