



Generator

Diagnostics

For fault diagnosis on generators consider the following principles:

- Don't disconnect, fit or short circuit terminals when the engine is running and the generator working (voltage spikes lead to damage).
- Don't measure voltage and electrical current by short circuit (voltage spike), use a volt and ammeter.

For fault diagnosis a multi-meter and a amps clamp is necessary.
The following summary shows causes of failure and remedy:

Trouble:

generator charging light flickers

Cause:

1. v-belt to loose
2. adjustment of the contacts wrong or regulator resistor blown (only regulator control)

Remedy :

1. tighten v-belt
2. adjust contacts, renew resistor or regulator

generator charging light remains lit when engine speed is high

1. wiring D+/61 short circuit to earth
2. regulator faulty
3. rectifier faulty, commutator soiled, short circuit in wiring DF or rotor winding

1. repair short circuit to earth, renew wiring
2. renew regulator
3. check and repair generator, renew if necessary

generator charging light is lit when ignition is on, becomes darker or glows when the engine is run

1. resistance in the charging circuit or wiring to the light
2. regulator faulty
3. generator faulty

1. check wirings and terminals renew if necessary
2. renew regulator
3. check generator and repair, renew if



		necessary
generator charging light is not lit when ignition is on	<ol style="list-style-type: none">1. battery faulty or discharged2. wirings or terminals are faulty, loose or oxidized3. carbon brush worn, regulator faulty4. short circuit at positive side diode5. oxide layer build up on the slip ring, open circuit of the rotor winding6. light faulty	<ol style="list-style-type: none">1. charge and check battery, renew if necessary2. check and repair wirings and terminals, renew if necessary3. renew carbon brush or regulator4. disconnect battery immediately (otherwise discharged battery) repair/renew generator5. repair/renew generator6. renew light
battery is not or less charged	<ol style="list-style-type: none">1. v-belt to loose2. wiring or terminals loose, faulty, oxidized3. battery faulty4. regulator faulty5. commutator soiled, rectifier faulty	<ol style="list-style-type: none">1. tighten v-belt2. check wiring and terminals between generator, battery and all earth points, renew if necessary3. charge and check battery, renew if necessary4. renew regulator5. check and repair generator, renew if necessary

Attention!

During welding work or renewing the generator the battery must be disconnected.

Technical Information



© Hella KG Hueck & Co., Lippstadt	10. September 2001	Generator diagnostics 3-3
-----------------------------------	--------------------	---------------------------