

2/4/58

Group 274 No. A100  
USA

# Service Bulletin

Only for Volvo Dealers Service Bulletin file.

GENERATOR

B16 Engine

Charging interruptions on PV 444-445 with B16 engine, Bosch generator LJ/CG 200/6/2300 R7 and charging relay RS/JA 200/6/23.

Since we last informed you about charging interruptions with the B16 generator in our Export Service letter 4/58 of January 23rd, 1958, it has become apparent that it was not as we assumed from the beginning, the brushes which are the cause of the trouble - apart from the individual cases where the brushes have jammed in the brush retainers. The interruptions are actually due to the charging relay. Brush and commutator trouble results from this.

When running at comparatively low speed and low engine speeds respectively with a high degree of loading on the generator, it operates with particularly high current in the field circuits. The lower control contacts on the charging regulator are thus subjected to such heavy loading that, under unfavorable conditions, they are subject to oxidizing damage which can lead to poor or non-existent generator output and charging respectively. The poor generator output can, in its turn, cause a coating on the commutator since the cleaning effect of sparking at the brushes becomes less or non-existent.

In order to relieve loading on the control contacts under these unfavorable conditions, a new model of charging relay will be delivered in future which is a control resistor with a somewhat lower resistance than that used hitherto. The new model retains the old type designation but can be identified by means of a red spot after the designation.

In order to eliminate any risk of the brushes jamming, the brushes WSK 40 L I and WSK 40 L 2 will be replaced by a new model called WSK 40 L 3 which is 2 mm (0.08") shorter and 0.5 mm (0.020") narrower than the two first-mentioned models. The new brushes are already introduced into our generator production and generators fitted with this type of brush can be identified for the time being by means of a blue spot after the designation.

The red-marked relays have been introduced with effect from the following chassis number:-

|          |   |        |
|----------|---|--------|
| 4440     | - | 175776 |
| 44501    | - | 3732   |
| 44505    | - | 3633   |
| 44506    | - | 10732  |
| 44507/8- | - | 6443   |

In case of complaints concerning unsatisfactory charging on vehicles with chassis numbers lower than those shown above, the following procedures should be adopted:

Procedure (A)

1. Replace the charging relay by the new model RS/UA 200/6/23 with a red spot after the designation. Note that the generator is not removed.
2. Check the ground connections and the fan belt tension, see our Service Bulletin Group 276, No.1.
3. Examine the generator brushes. Check that the cable on the positive brush is not too near the generator housing. Bend the cable towards the center by using your finger. If the brush cable is damaged, procedure (B) must be carried out. If the brush cables are in good condition, continue with points 4 and 5 below.
4. Let the engine run at idling speed and clean the commutator with the grinding tool ER 15 v 5 (special chemically pure pumice stone) which should be moved backwards and forwards with light pressure against the commutator for a few seconds.
5. Then check on the ammeter that the charging is functioning normally. If the generator does not charge, the reason is definitely that one or more of the brushes have become jammed so that procedure (B) must be carried out.

Procedure (B)

If the generator does not charge after procedure (A) has been carried out or if charging ceases after a short time, then the carbon brushes must be removed and brushes of the new type WSK 40 L 3 must be fitted. Special working instructions with the designation WJE 311/4 have been issued by Bosch for this purpose.