

Generator

The generator is one of the hardest working units of the electrical system. It requires regular checking and maintenance to keep it operating efficiently. The view below is that of a typical passenger-car generator. It is a shunt-type generator having two magnetic poles and two brushes.

Generators should be given the following six-point inspection and lubrication every 5000 miles:

Step 1—Check the belt for tension and the mounting and pulley nut for tightness.

Step 2—Be sure that the connections at the terminals are tight and the leads in good condition.

Step 3—Check the cover band for thrown solder. This is evidence that the generator has been overloaded, and if detected before the armature is too badly damaged, the leads simply can be resoldered to the riser bars. Of course, the trouble which caused the overloading must be located and repaired immediately.

Step 4—Clean the commutator. A slight coating of gum or dirt can be removed by holding a strip of 0/0 sandpaper against it with a small stick while the commutator rotates in the generator. Do not use a degreasing or cleaning compound. If the commutator is worn, especially dirty, out of round or has high mica, it should be trued on the lathe. Then, the mica is cut from the slots to a depth of $\frac{1}{2}$ in. with a hacksaw blade, and the slots carefully

brushed clean of all dust particles.

Step 5—Inspect the brushes to make sure they are free in the brush holders and rest against the commutator with sufficient pressure to insure good contact. Replace them if worn to half their original length. Seat new brushes.

Step 6—Apply 8 to 10 drops of medium engine oil to the oilers. Avoid excessive lubrication and be sure that only clean oil is used. Don't lubricate the generator while it is running.

After a generator has been dismantled and repaired it must be repolarized to be sure that it has correct polarity with respect to the battery it is to charge. Failure to do this may result in burned relay contact points, a run-down battery or serious damage to the generator itself. The method of repolarizing depends upon the generator-regulator wiring circuits, which vary with different manufacturers, so the manufacturer's specifications must be followed.

Lubricating the generator: Clean and tighten the generator connections, especially at the cutout, and inspect the brushes. Also see that the contact points on the voltage regulator are clean. Do not over-oil the generator. A drop or two of oil on the bearings every thousand miles is sufficient, as too much lubricant coats the commutator with a film which results in arcing and pitting. This film can be removed from the commutator by merely touching the surface with 0/0 sandpaper while the generator is running.

The generator, supplying current and keeping battery charged, is the hardest-working unit in the electrical system. For this reason, it requires regular checking and maintenance to keep it operating efficiently

