

G. Dynamic Balancing of Crankshaft with Counterweight and Flywheel

For Models 180 a, 180 b, 190 SL, 220 a, 219, 220 S and 220 SE the dynamic balancing procedure is the same as for Model 190. The crankshaft is balanced together with the mounted counterweight and the flywheel. A maximum unbalance of 15 cmg is permissible.

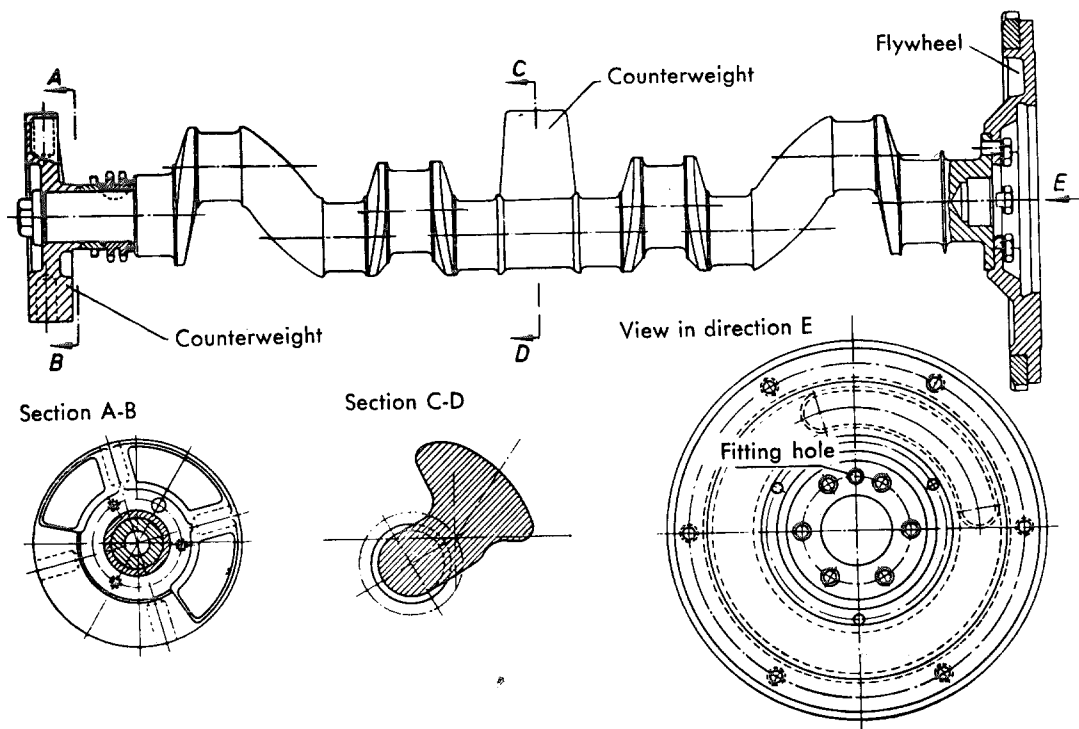


Fig. 03-5/10

Crankshaft for Model 220 a and Models 219 and 220 S with flywheel 1st version

1. Drill the balancing holes at the circumference on the front counterweight of the crankshaft in a radial direction using a 14 mm ϕ drill (Fig. 03-5/10). The maximum bore depth is 30 mm.
2. If an abnormal degree of unbalance of the crankshaft is found in cars of Models 220 a, 219, 220 S and 220 SE, it is permissible under certain circumstances to drill balancing holes also into the center counterweight using a 14 mm ϕ drill and not exceeding a depth of 35 mm.
3. The dimensions of the balancing holes on the flywheel are listed in the table below.

See also Figs. 03-5/5 to 03-5/9. If two holes have to be drilled side by side, the distance between bore hole centers should be 22 mm.

Note: To facilitate production the flywheels of the design used today have "humps" on the engine side into which the balancing holes are drilled at an angle of 30° (Figs. 03-5/5, 03-5/8, and 03-5/9). This can only be done on a special drilling machine and in repair shop work the balancing holes must be drilled as described above.

Balancing Holes for Flywheels

Model	Hole circle diameter for balancing hole E	Drill diameter	Maximum bore depth
180 a, 180 b, 190, 190 b, 190 SL	223	12	30
220 a as well as 219 and 220 S 1st Version	240	10	8
219 and 220 S 2nd Version	223	12	30
219 and 220 S with hydraulic automatic clutch	223	12	5
220 SE	250	12	20