

P. Removal and Installation of Piston and Connecting Rods

Removal and Installation of pistons and connecting rods on models 180 a, 180b, 190 SL, 220 a, 219, 220 S and 220 SE is exactly the same as for model 190. In these models the pistons may be removed in upward direction.

In all models, with the exception of models 180 a and 180 b, pistons with extended skirt will be used (Fig. 01-4/63).

The piston for model 220 SE has a piston pin bore of 24 mm dia. as compared with the piston for models 220 a, 219 and 220 S, which have a 22 mm dia. Since the reinforcement of the connecting rods at the piston boss of models 219 and 220 S the external dia. of the bushing is now also 27 mm, similar to model 220 SE, instead of 25 mm as before. The internal dia. of the bushing of models 219 and 220 S has remained the same.

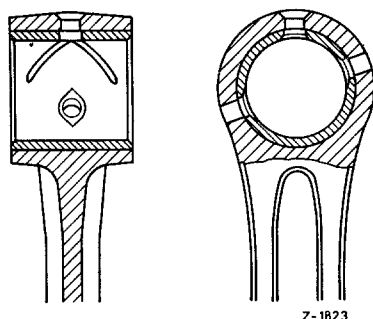


Fig. 01-4/63 a

Small End with Oil Holes

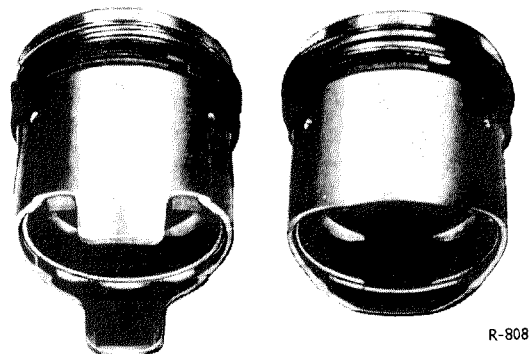


Fig. 01-4/63

Piston Shapes

Models 180 c, 190, 190 b, 190 SL, Models 180 a, 180 b
220 a, 219, 220 S and 220 SE

For connecting rods and pistons of models 180 c (from the beginning) and 190 SL the distance from the center bearing hole has been changed from 154 mm to 149 mm, the distance from center piston pin hole to piston head from 43 mm to 48 mm, and the diameter of the piston pin from 25 mm to 26 mm. The pressure oil hole to piston pin has been eliminated. Instead, the piston head is provided with three holes through which the splashed oil reaches the piston pins.

Connecting rods and pistons are installed in such a manner that the lower oil hole "a" at the connecting rod boss, or the holding lugs of the bearing shells, respectively, point towards the left, and the arrow on the piston head in the direction of driving.

Q. Disassembly and Reassembly of Crankcase

Disassembly and reassembly of cylinder crankcase for models 180 a, 190 SL, 220 a, 219, 220 S and 220 SE is substantially the same, since the various crankcases vary but slightly in construction.

On models 180 a and 190 SL fastening the right-hand cylinder cover holds simultaneously also the bearing block for the carburetor linkage relay lever, on type 190 SL in addition

the bracket for the air suction pipe support. When mounting the cylinder cover watch out for proper length of bolts. The long M 6 x 18 screws are meant to attach the brackets.