

Note 44B



Mercedes and Auto Union (Bore/Cylinder-centres) ratio, 1934 – 1937

The gradual increase of the ratio of (Bore/Cylinder-centres) for the rival engines was as follows:-

<u>Mercedes</u>		
<u>1934</u>	<u>1936</u>	<u>1937</u>
<u>M25A</u>	<u>ME25</u>	<u>M125</u>
78/95 = 0.821	86/95 = 0.905	94/104 = 0.904

Roller main and big-end bearings in all engines.

<u>Auto Union</u>		
<u>A</u>	<u>C</u>	<u>R</u>
68/85 = 0.800	75/85 = 0.882	77/85 = 0.906
Plain mains & big-ends	Plain mains & roller big-ends	

The block structures were quite different between the two makes, as described in Egs 21, 22 and 23. The Mercedes heads were integral. The gasket for the detachable head of the Auto Union R-type, with a land of only 8mm between bores, had to seal a maximum combustion pressure starting from an inlet charge entering at 1.94 ATA followed by a compression ratio of 9.2.