

Brochure from the series SERVICE TIPS & INFORMATION

Reconditioning of Aluminium Engine Blocks





Recondition engine blocks? - No problem!

Aluminium engine blocks – The trend

Since they were first introduced, engines with aluminium engine blocks have continued to enjoy increasing popularity. The potential in the field of engine construction for passenger cars offered by the reduction in weight has by no means been exhausted. Especially in the case of diesel engines, because of their heavy, robust construction, there is still much potential for saving weight. Therefore the substitution of aluminium for grey cast iron in passenger car engine blocks will continue in the future with greater impetus.

With the machining concepts recently developed by MS Motor Service International GmbH, for the first time it is now possible to recondition aluminium engine blocks without exceptional effort or expense, and with the equipment already available, whilst achieving a machining quality superior to any ever attained in the past. This quantum leap was accomplished in co-operation with KS Aluminium Technology, the manufacturer of aluminium engine blocks of Kolbenschmidt Pierburg AG. The machining processes used in series production for machining cylinders were studied, adapted for engine reconditioners and developed further.



You will find a full description of the damages and their causes in our new brochure! It should provide you with a comprehensive source of information which will assist you in either your work or your studies.



Reconditioning of Aluminium Engine Blocks REPAIR AND MACHINING PROCEDURES

Therefore, the pressure applied by the honing stone, the honing angle, the size of the grain and the honing speed are important parameters for obtaining the right surface topography.

M Important!

To obtain best machining results from honing ALUSIL® attention must be paid to the silicon, that the crystals are cut properly and are not torn out from the surface. This is achieved only by the appropriate honing stones and the correct machining parameters. In the subsequent exposure of the silicon crystals, it is mainly the depth of the exposure that is of significance. In the mechanical exposure process, the silicon grains are still somewhat rounded, which has a positive impact on the sliding behaviour of the piston rings. In the case of etching, the sharp edges of the silicon crystals that are produced by cutting are not rounded, which produces a somewhat greater wear on the piston rings during the engine break-in.



C Note

Because of the complexity of the subject, the honing of grey cast iron cylinder bores is not within the scope of this brochure. Therefore we recommend that you study our brochure entitled "Honing grey cast iron engine blocks". Ordering information is given in the attachment to this brochure.

In the case of ALUSIL® cylinder sliding surfaces, the shape and size of the silicon crystals embedded in the aluminium produce the plateaus on which the pistons and piston rings run. The distance between the silicon crystals determines the width and the shape of the profile valleys, while the depth of the exposure corresponds to the depth of the profile valley.

Excerpt of the brochure

»Reconditioning of Aluminium Engine Blocks«

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MS MOTOR SERVICE INTERNATIONAL

More information...

...will be supplied by your local MS Motor Service distributor or via www.ms-motor-service.com.





MS Motor Service International Quality and Service from one source

MS Motor Service International GmbH (MSI) is the sales organisation for the worldwide aftermarket activities of Kolbenschmidt Pierburg AG. We are a leading supplier of engine components for the independent aftermarket, featuring the premium brands KOLBENSCHMIDT, TRW Engine Components and PIERBURG. The MSI product range is both broad and deep, enabling customers to procure all engine components from one source. As a problem solver in the marketplace and in the workshop, MSI offers extensive services and the technical expertise that you would expect from the subsidiary of one of the largest automotive suppliers.

Motor Service Partner



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