

## Practical Tips: Preparation and Cylinder head Installation

### The first steps ...



1. Carefully clean the sealing surfaces of engine block and cylinder head – dirt and gasket remnants on the surfaces are a frequent source of trouble.



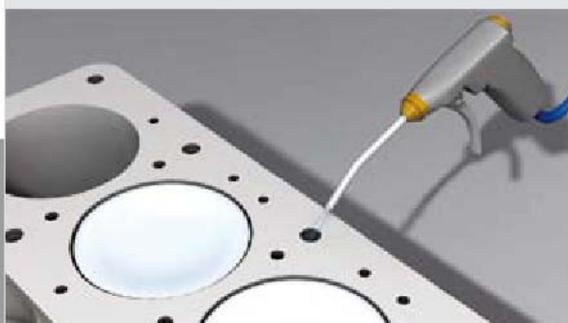
2. Use a straightedge to check the surface flatness; longitudinally and transversely.



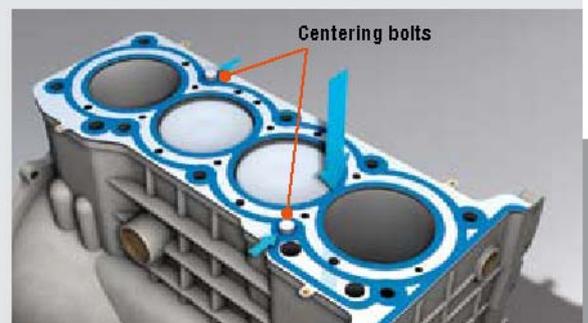
3. Remove any gouging, component distortions, grooves or scores, e.g. by surface grinding in a specialist workshop.



4. Observe the minimum dimensions of engine block and cylinder head according to the manufacturer's specifications, as well as the specified head gasket thickness.



5. Clean the bolt hole threads, and remove any contamination, oil and water, e.g. with a blast of compressed air.



6. Position the head gasket accurately on the engine block. Do not use any additional sealing compounds, grease or oil.

# Replacing the Cylinder-head Bolts

... the next steps



7. Fit the cylinder head, and take care not to damage the head gasket during assembly.



8. Always use new head bolts.



9. Lightly lubricate the bolt thread and the bottom of the bolt head by applying a small quantity of oil to a rag and rotating the bolt in the oily rag.



10. If the manufacturer specifies the use of a washer, lightly lubricate both sides.



11. Always follow the manufacturer's instructions regarding the tightening sequence for the head bolts – the instructions are not only different according to manufacturer, but can also vary depending on engine type.



12. Only use approved and recommended anti-freeze agents and corrosion inhibitors.