Cylinder Head Bolt Threads Stripping On All BMW Aluminum Block Engines

The AERA Technical Committee offers the following information regarding head bolt threads stripping out on all BMW aluminum block engines. This situation seems to be happening during disassembly and reassembly of the cylinder head onto the cylinder block.

This problem will typically occur on engines that have been overheated. The overheating condition has changed and weakened the structure of the aluminum block assembly in the area of the bolt threads.

In cases where an engine needs to be disassembled due to an overheat event, the following steps should be taken.

1. Before removing the cylinder head, loosen and retorque each bolt to ensure thread strength and integrity.
2. If the engine block threads strip (pull out of the block) during the retorque, replace the engine block or you can re-thread the stripped out holes with aftermarket repair inserts similar to the one shown below.
3. If all head bolts achieve correct torque, proceed with cylinder head removal. Once removed, use a straight edge on the block surface, as well as the cylinder, head to determine if any deviation caused by the overheat is present. If applicable, be aware of any protrusion of the cylinder liners above the surface of the engine block.