Sealant Overload

Liberty & Outback 2.5L SOHC EJ25 1998-2012

Proof that there can be 'too much of a good thing'. Excessive application of sealant has caused some serious damage to a number of vehicles.

This information has been supplied by Geoff Gillam from All Head Services, Hallam, Victoria.

One of the most recent examples of excessive sealant came from a workshop that removed the heads on a Subaru with a 2.5L EJ25 SOHC engine. The heads were overhauled by All Head Services and then returned.

The mechanic wanted to ensure that it would never again leak oil by applying 'heaps' of sealant to the refitted heads. Unfortunately one of the camshafts seized in the head while the engine was idling on warm up.

When the heads were returned and dismantled for inspection, Geoff could easily see that cause was due to a blocked oil feed to the camshaft. There was so much sealant that it even stopped oil going to where it was meant to go.

These engines lubricate the cam journals through oil galleries in the camshaft. The blocked gallery resulted in oil starvation to the rear cam journal. This caused the camshaft to grab and seize, which lead to a broken timing gear, damaged camshaft and cam journals.

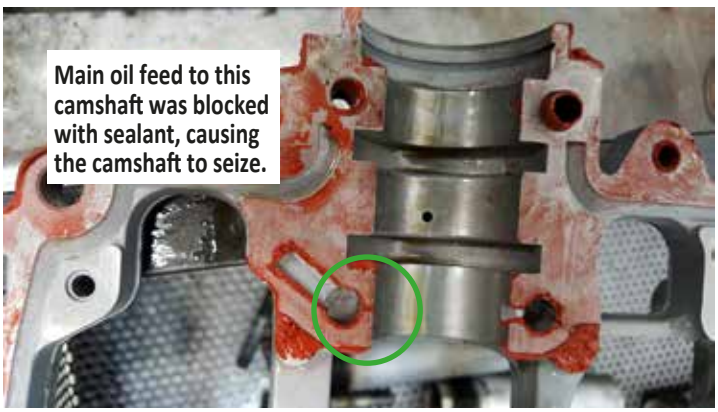
The cylinder head was repaired and camshaft replaced and the correct procedure was followed when refitting the heads.

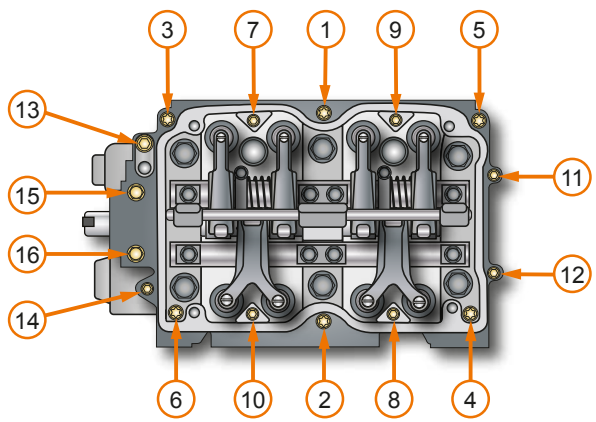
The recommended sealant is an oil and pressure resistant silicone sealant, such as Three Bond 1217G.

Apply a 3mm bead of the sealant only around the outer edge of the camshaft bearing cap. Then assembly the parts within 5 minutes, to ensure the sealant does not begin to set before assembly.

We would like to thank Geoff, from All Head Services, for sharing this practical information and photos.

Don't go overboard when applying sealant or you may cause more damage than you fix.





1st: Evenly tighten bolts 11,12,13 and 14 until the cam cover contacts head
2nd: Tighten bolts 1 – 6 to 18 Nm
3rd: Tighten bolts 7 – 14 to 10 Nm
4th: Tighten bolts 15 – 16 to 10 Nm

Lubricate the camshaft with engine oil before installing the cam cover.
Apply a thin bead of liquid silicone gasket **only on outer edge** of the camshaft cover before you install it.