



SERVICE BULLETIN WA-SB-005

- SUBJECT:** Crankshaft Flange Head Screws
- DESCRIPTION:** Avoiding fatigue issues of crankshaft gear timing bolts
- APPLICABILITY:** All Serial Numbers
- COMPLIANCE:** **On receipt of this Service Bulletin, Effective Date: 1 June 2009**

This Bulletin requires replacement of screws Part Number: 001304 with new items.

Tools needed: 10 and 17mm sockets, 17mm spanner, measuring calliper, Calibrated torque wrench.

Duration: Depending on Installation the process should take approximately an hour and should only be carried out by someone with a good mechanical aptitude.

As a precautionary measure we have decided to change our original M6 crankshaft gear timing bolts every 10 hours of operation. This should avoid any possible fatigue failures in the bolts. This is just an interim measure until we have tested and approved some higher strength M6 bolts which will allow higher tightening torques.

We will supply new parts with this bulletin, carefully monitor your total hours with each set of bolts and let us know when you require more.

The procedure to fit is noted below, please read through carefully and if you have any concerns do not hesitate to contact us on - 0870 170 9670.

1. Remove the Alternator by unscrewing the 2 nuts on the back of the engine, retain it and carefully withdraw the unit ensuring you catch the 4 rubber drive pieces which may fall out.
2. Once removed, you will see 4 flange head screws; mark these so that you know which one you have started with, and unscrew the first and remove.
(DO NOT UNSCREW ALL 4 AT THE SAME TIME ALWAYS LEAVE 3 TIGHT)
3. Measure the under-head length of the screw that you have just removed. Check the end threads carefully for signs of thread damage that could have been caused by bottoming out in the hole. If there is any sign of this contact Wilksch for further instructions.
4. As long as the measurement at 3 above is 40mm or greater, apply some clean engine oil to the threads of a new screw and tighten to 16Nm with a torque wrench. (Not one where 16 is near the bottom of the scale) There should be at least 10 full threads of engagement (corresponds with 10 turns of the screw). If the measurement in 3 is less than 40mm but over 38mm carefully shorten one of the new screws to the same length and then fit it and tighten to 16Nm. If the measurement of the just-removed screw shows that it is less than 38mm contact Wilksch for further instructions.
5. Work round the other 3 screws carefully in a sequence following steps 3 & 4 for each screw. Then reassemble the alternator to the engine, being very careful to ensure all 4 rubber drive pieces are located in the square drive correctly.
6. Re torque the alternator retaining nuts to 30 NM.
7. Pack up the removed screws and return them to Wilksch for analysis.

*Do not fly again until you have carried out the process described above.
Please confirm receipt of instructions via email and also once the work is carried out.*

Failure to comply with any recommendations/limitations published by Wilksch Airmotive will invalidate your warranty.

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