

M3W Cam belt change. Paul Rand

To be read in conjunction with the S&S X-Wedge service manual instructions. Cam belt failure should not result in engine damage.

Tools:

3/16" allen key for cover screws

1/4" hex bit 3/8" drive for 2 idler sprockets screws

11/16" open ended spanner for holding tensioner open

Flat bladed screwdriver to ease last idler sprocket in line for screw

3/16" x 2" metal pins (dowels) for cam sprockets alignment 3 required (drills can be used)

Strong string or similar to tension 11/16" spanner onto light bracket, or use a jack

3/4" socket to rotate cam sprockets

Method:

1. Remove timing cover.
2. Rock car in gear gently back and forth to rotate engine to timing position .
3. If the belt has broken, the timing position can be aligned by rocking in gear to get crankshaft position and turning camshaft sprockets with the 3/4" socket.
4. Timing position - all 3 cam sprockets 3/16" dowel holes aligned with back plate holes and crankshaft pinion sprocket notch in line with FTDC arrow on back plate, RH/ front piston is at TDC. (LH and RH are as you look at the engine from the front.)
5. Insert the cam 3 dowel pins.
6. Hold tensioner off with spanner and string, or a jack under the spanner.
7. Take off both idler sprockets note position of flanges.
8. Remove old belt.
9. Replace with new, the writing on belt the readable way round and don' crush belt.
10. Ensure belt loops by removed idlers are similar if not it will be a tooth out somewhere.
11. Ensure idler screw spacers are seated in bearings properly view inside ones before inserting screw.
12. Replace left idler first then the right one using screwdriver against cover to push it down to align screw. If it doesn't fit, you are probably a tooth out somewhere.
13. I used thread lock (Loctite 243) on these screws. Tighten to 15-18 lbs ft.
14. Release tensioner spanner and check alignments. Remove the dowels.
15. The belt routing is cast into the inside of the cam belt cover, to confirm correct fitment. Turn the engine over to ensure all turns correctly and timing marks align still. Start the engine and check the belt tracks correctly.
16. Turn off the engine and refit the cover.