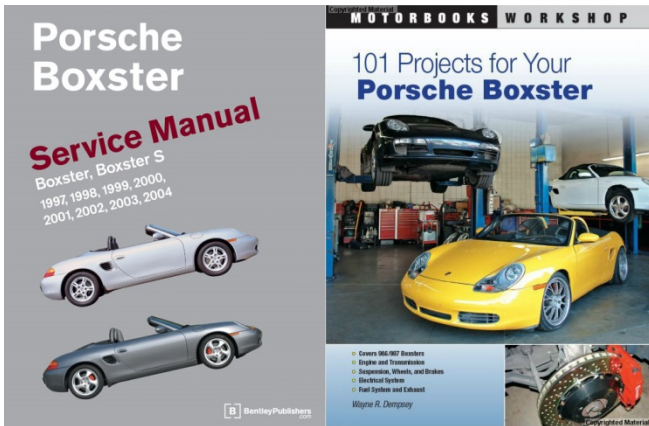


Installation procedures for LN Engineering Tandem Scavenge Pump 106-26, 106-26.1, 106-26.2

Please refer to factory technical manual or if unavailable, Bentley Publishers Porsche Boxster Service Manual Section 15-1 or 101 Projects for Your Boxster: Project 16 Camshaft Swap and Valvetrain Repair to review procedure for cam cover and scavenge pump removal and reinstallation.



Also available online is an overview on engine teardown from 101 Projects which incorporates an overview of the cam cover and scavenge pump removal:

http://www.pelicanparts.com/techarticles/Boxster_Tech/Disc163/BoxsterTech-163.htm

Service manuals can be found online at <http://www.cannell.co.uk/Manuals.htm>

With the above as your guide, you should be able to carry out the required procedure for installing the tandem scavenge pumps. These are intended as supplements to the factory manual which covers cam cover and scavenge pump removal and replacement. Additional modifications to the cam cover will be required.

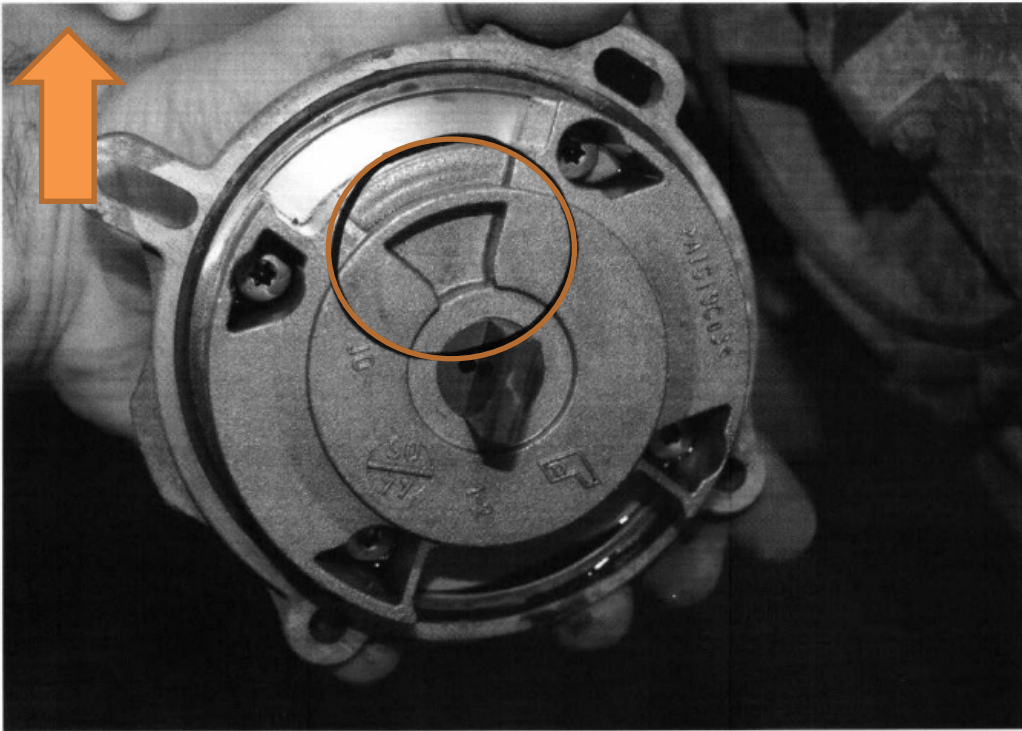
1. Disassembly. Place engine at TDC. Insert TDC lock pin into crankshaft pulley at TDC for cylinder 1.
2. Remove two cam plug from cylinder head.
3. Insert camshaft holder tool and attach to cylinder head for both 5 and 3 chain engines.



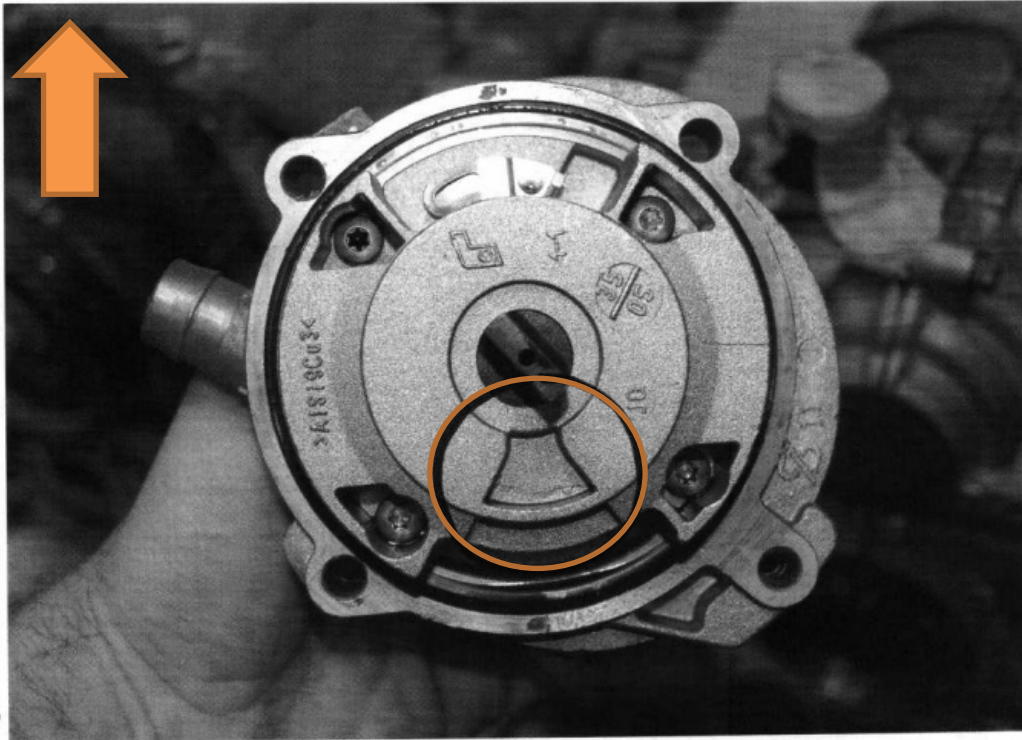
4. You can now remove the scavenge pump from the side of the engine you are working on.

5. Make note of oil pump orientation, as new pumps must be properly oriented to operate correctly.

BANK 1-3



BANK 4-6

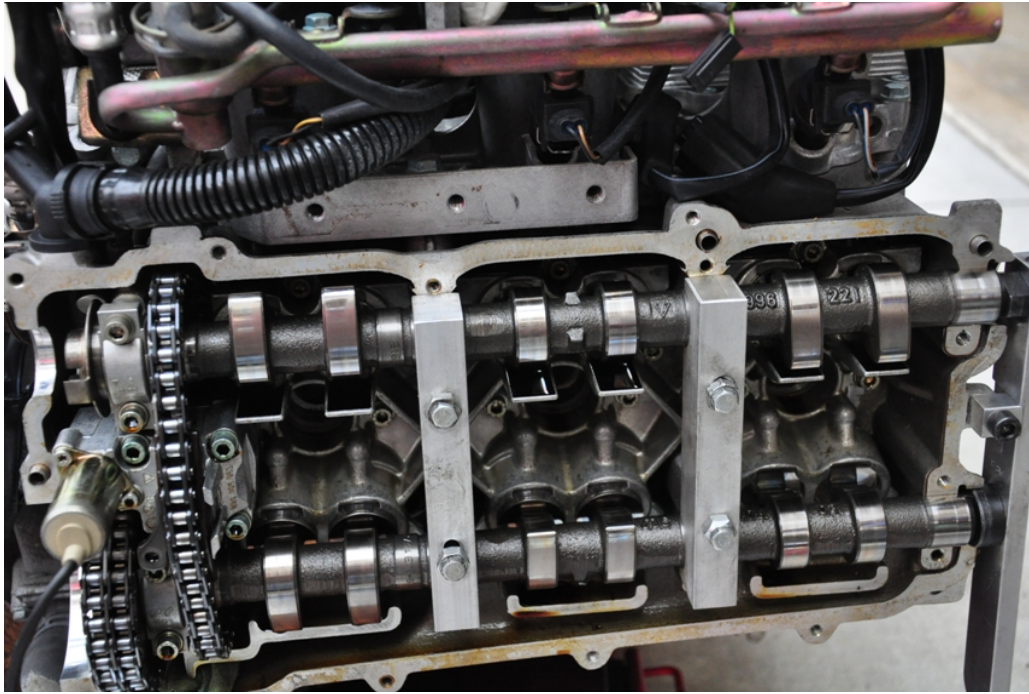


6. Remove scavenge pump.

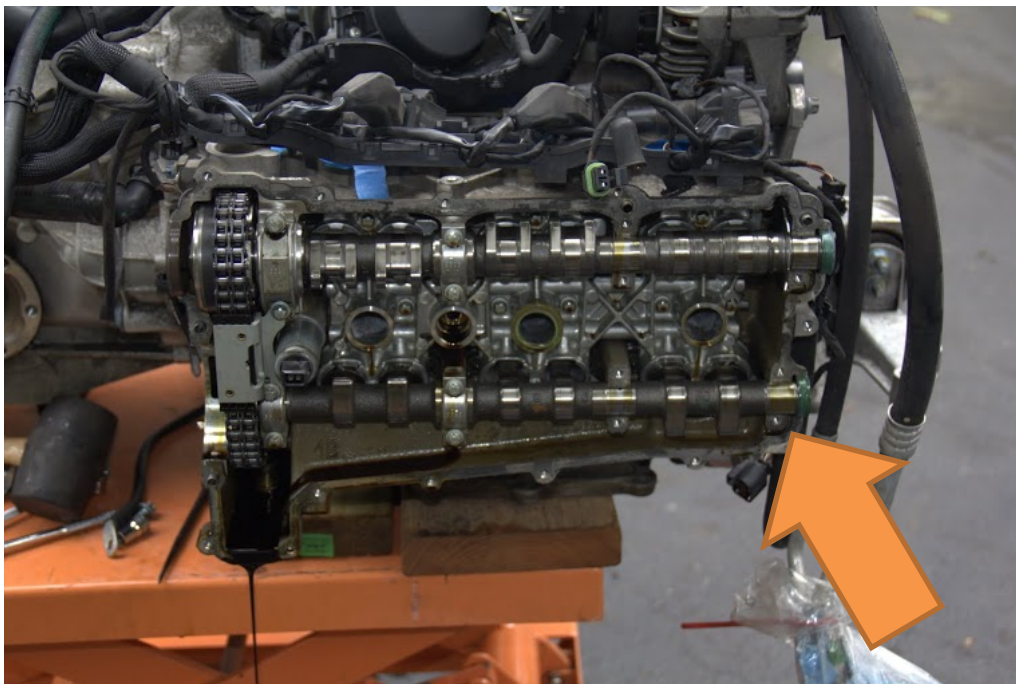


7. Remove any VarioCam solenoid covers and any additional components that would impede removal of the camshaft cover. With everything disconnected, pry only on the designated separation areas to ensure you do not damage any critical sealing surfaces.
8. On a 5-chain engine, you must install the cam bearing supports:





9. On a 5-chain engine, the cam cover actually supports the cams, so installation of the cam bearing supports is necessary to prevent damage to your cams. If performing this procedure on a 5 chain engine (Boxster 97-02, 911 99-01), we also recommend replacing the 4th and 5th chains as well as the variocam wear pads.
10. You will be scavenging oil from this corner of the cam cover, so it's imperative to locate the new scavenge fitting properly (3-chain head shown):

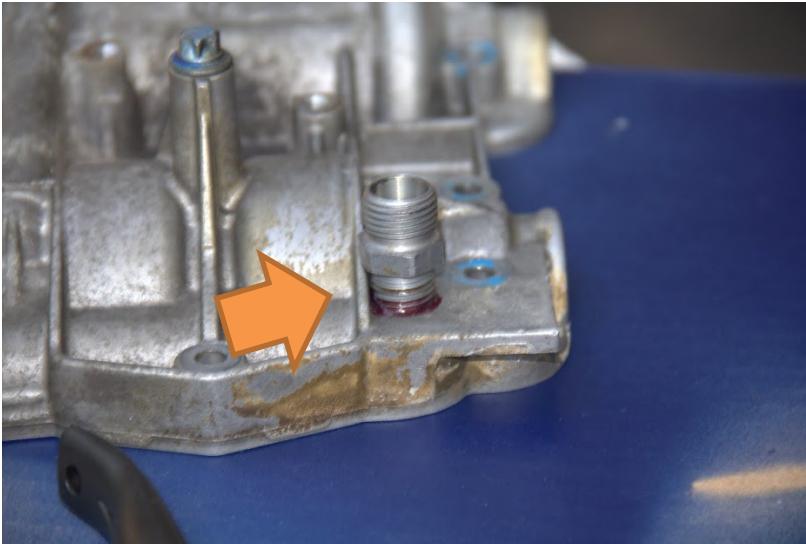


11. With the cam cover removed, it is now time to drill and tap the cam cover for the additional scavenge pickup point at the far corner of the cam cover.

- a. Note location for 5-chain cam cover. Rib on cam cover must be clearanced as pointed to below (orange arrow):



- b. Note location for 3-chain cam cover. Rib on cam cover must be clearanced where shown (orange arrow):



- c. The fitting provided is requires you to drill a hole first with a **7/16"** drill bit.



- d. Then use a **1/4" NPT** (national pipe thread) tap to thread the hole.



12. You can now install the fitting. Use Loctite to ensure you have no leaks.



13. Re-install cam cover per factory procedure with new hardware, cam plugs, and proper sealant (Dreibond or Loctite 5900)

14. Refer to photo showing correct pump orientation for the side of the engine you are working on and install the new tandem scavenge pump. Check pump to ensure it turns over smoothly and lubricate pump before install. NOTE: be sure to check orientation of the pump drive when inserting the scavenge pump into head to ensure it aligns with the drive slot properly.



15. Install supplied external scavenge oil line. If installing on both heads, repeat procedure on 2nd cylinder head.

16. On 996 and 997 models specifically, engine cross member and suspension console may require modification. Verify clearance is maintained between the new tandem scavenge pump and any possible contact points.

17. On engines fitted with a factory tandem vacuum pump, removal of the original pump to facilitate installation of the new tandem oil scavenge pump will require plumbing a source of vacuum to the brake booster. One possible option is installation of the Hella 009428087 on demand Vacuum pump:

<https://www.summitracing.com/parts/HLA-009428087>