

Technical Bulletin



Model(s)	Year	Eng. Code	Trans. Code	VIN Range From	VIN Range To
Passat	1998 - 2004	1.8L (AEB, ATW, AWM, AUG)	All	All	All

Condition

17 07 13 Aug. 17, 2007 2013233 Supersedes T. B. Group 17 number 07 09 dated Apr. 11, 2007 due to procedural change of removing the second inspection of oil suction strainer and replacement of oil return line.

Engine Oil Pressure Too Low, Light is ON, Engine Flush

Technical Background

The low engine oil pressure condition may be caused by a restriction of the oil pump suction line strainer.

Production Solution

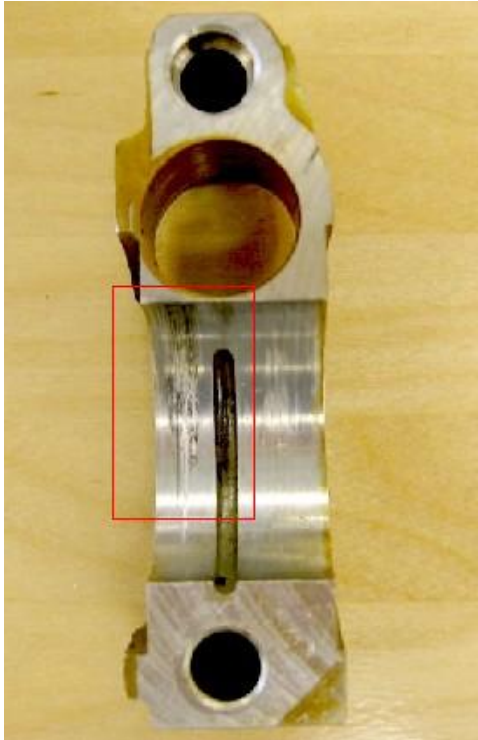
N/A

Service

Preliminary diagnosis reveals an actual low engine oil pressure condition (engine oil level is OK and oil pressure switch, instrument cluster, wiring harness, etc. are OK).

- Place the vehicle in "service position".
- Remove cylinder head cover.
- Remove plastic oil deflectors from the top of intake camshaft.
- Inspect all camshaft bearings (remove only one cap at a time) for damage.

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If one or more camshaft bearings are damaged, the complete engine must be replaced as described in “**Engine Replacement Guidelines**” section.

If ALL camshaft bearings are OK (NOT damaged), the engine must be repaired as described in “**Engine Repair Guidelines**” section.

Engine Repair Guidelines:

This section applies if NONE of the camshaft bearings are damaged:

- Inspect camshaft chain tensioner-adjuster for visible damage on pads in contact with chain. Replace tensioner-adjuster if pads are damaged.
- Drain engine oil and remove oil pan.
- Visually inspect engine oil pump suction line strainer for obstructions (use background lighting if necessary).

If engine oil pump suction line strainer is NOT obstructed:

- Further diagnosis is required to determine root cause of low engine oil pressure. Repair as necessary (always refer to ElsaWeb repair manual for additional information).

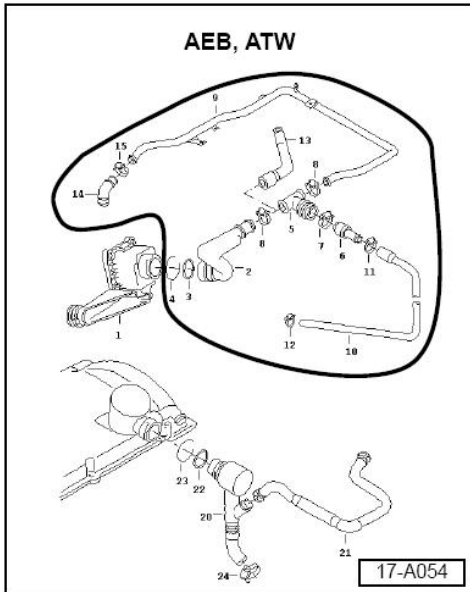
If engine oil pump suction line strainer is obstructed by solid particles:

- Replace oil pump suction line or oil pump on AEB and ATW engines only (the engine cleaner will not remove any of the obstructions).
- Install oil pan following ElsaWeb repair manual procedures. Oil pan **WILL NOT** be removed again.
- Clean intake camshaft plastic oil deflectors (previously removed).

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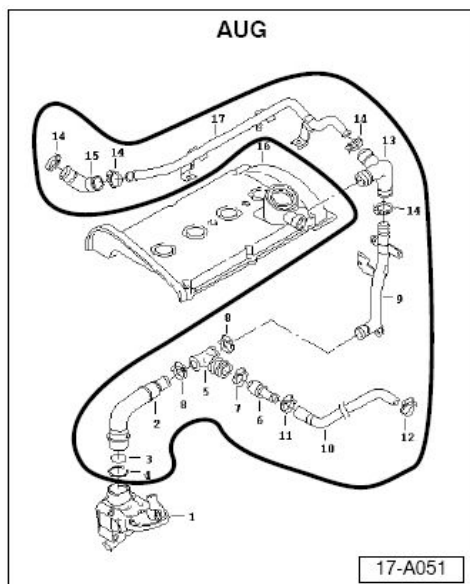


- Install cylinder head cover **without oil deflectors**. The cylinder head cover must later be removed again.
- Replace oil feed line of the turbocharger.
- Visually inspect interior of oil filter holder through crankcase ventilation system line opening (at top of holder). If excessive oil deposits are found, clean as necessary.



For Engine code AEB, ATW

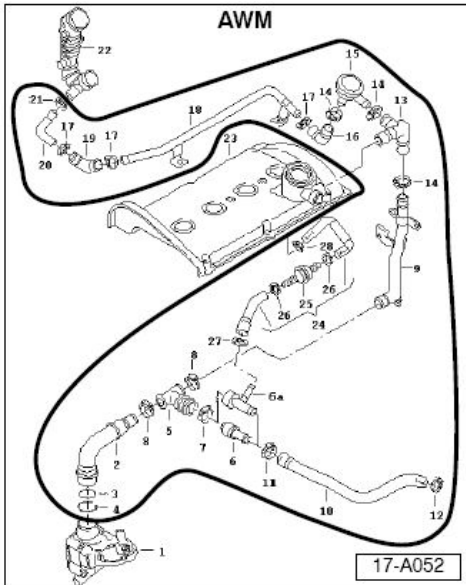
- Replace crankcase ventilation system hoses and pressure regulating valve depending on engine code (see circled items and compare to latest Parts Dept. illustration).
- Replace O-rings, clamps and miscellaneous fasteners only as necessary.



For Engine code AUG

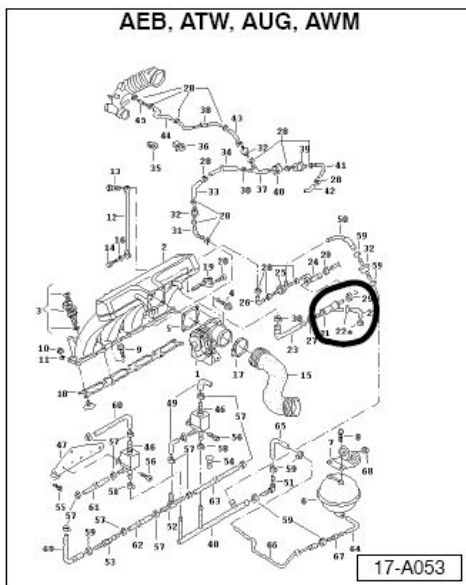
- Replace crankcase ventilation system hoses, pipes and pressure regulating valve depending on engine code (see circled items and compare to latest Parts Dept. illustration).
- Replace O-rings, clamps and miscellaneous fasteners only as necessary.

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For Engine code AWM

- Replace crankcase ventilation system hoses, pipes and pressure regulating valve depending on engine code (see circled items and compare to latest Parts Dept. illustration).
- Replace O-rings, clamps and miscellaneous fasteners only as necessary.



For All Vehicles

- Inspect and replace brake booster suction jet pump (circled) if clogged.
- Replace O-rings, clamps and miscellaneous fasteners only as necessary.

To remove coked oil deposits, engine is flushed using 6 quarts of engine cleaner.

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- Remove oil filter.
- Install oil filter adapter on oil filter holder.
- Connect oil lines from external oil filter assembly to oil filter adapter.



- Insert a new oil filter element in canister of external oil filter assembly.
- Partially fill (approximately 1 quart) canister of external oil filter assembly with engine cleaner, **DO NOT** overfill.
- Attach filled canister to external oil filter assembly and tighten securely.

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- Hook external oil filter assembly to engine hood latch.
- Pour remaining engine cleaner (total amount 6 quarts) into engine through oil filler cap.



Note:

For the following steps, the engine must be able to run in neutral on the hoist for an extended period of time, but it is not yet necessary to restore the vehicle to full driving conditions. Ensure engine and transmission are adequately supported.

With vehicle on hoist, transmission in neutral and wheels raised off the ground:

- Start engine and verify on the pressure gauge of the external oil filter assembly that appropriate engine oil pressure is obtained (see ELSA WEB repair manual for specifications).



Note:

Ensure adequate ventilation to engine and unrestricted airflow to coolant radiator.

- Run engine in neutral at approximately 3000 RPM for 30 minutes (tool VAG 1788/10 can be used for this purpose).



Note:

DO NOT leave engine running unattended! Monitor engine oil pressure throughout procedure. If engine oil pressure drops, check the oil pump suction line strainer for obstructions.

- After 30 minutes, switch ignition OFF.
- While engine is still hot, immediately drain engine cleaner from engine.



Note:

After engine flush, engine cleaner must be drained from engine immediately, or damage to engine gaskets can occur.

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- Empty external oil filter canister assembly.
- Remove oil filter adapter, empty and set aside external oil filter assembly.
- Install a new engine oil filter.
- Fill the engine with fresh oil. **As an exception, and for this specific step only, inexpensive engine oil with correct viscosity MUST be used.**
- Run engine at idle for 15 minutes.
- After 15 minutes, switch ignition OFF.
- While engine is still hot, drain the oil from engine.

After engine flush allow engine to cool to safely continue repair.

- Remove cylinder head cover.
- Install plastic oil deflectors on top of intake camshaft.
- Install cylinder head cover following ELSA WEB repair manual procedures. Cover will NOT be removed again.
- Install a new engine oil filter again and fill the engine with fresh oil.
- Restore engine and vehicle to full driving conditions.



Note:

Always use engine oil that conforms to Volkswagen Oil Quality Standard VW 502 00.

Engine Replacement Guidelines:

If at least ONE camshaft bearing is damaged, proceed with the following:

- Replace complete engine using factory remanufactured parts in accordance to warranty policy.



Note:

Before installing a previously used toothed belt camshaft sprocket on a new engine, visually inspect for fractures and damage especially in the indexing key area. If fractures or damage is found, replace the sprocket.

- Replace turbocharger.
- Replace oil feed and oil return lines of turbocharger.
- Replace crankcase ventilation system hoses, pressure regulating valve and brake booster suction jet pump as described in “**Engine Repair Guidelines**” section.
- Replace oil filter holder.
- Replace engine oil cooler.
- Install new engine oil filter, fill engine with fresh oil and restore the engine and vehicle to full driving conditions.



Note:

Always use engine oil that conforms to Volkswagen Oil Quality Standard VW 502 00.

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Warranty

When ENGINE REPAIR procedure applies to vehicles within the applicable Warranty, use the following:	
Claim Type:	W2
Part Identifier:	S617
Damage Code:	S617 10 AUN 1
Labor Operation:	S617 8887, 700 TU. Includes all operations necessary to complete the described repair.
Labor Operation:	S617 8886, 80 TU. Additional time to replace the camshaft adjuster, if necessary.
All warranty claims submitted for payment must be in accordance with the Volkswagen Warranty Policies and Procedures Manual. Claims are subject to review or audit by Volkswagen Warranty.	

When ENGINE REPLACEMENT procedure applies to vehicles within the applicable Warranty, use the following:	
Claim Type:	W2
Part Identifier:	S617
Damage Code:	S617 10 AUN 2
Labor Operation:	S617 8889, 1200 TU Includes all operations necessary to complete the described repair.
All warranty claims submitted for payment must be in accordance with the Volkswagen Warranty Policies and Procedures Manual. Claims are subject to review or audit by Volkswagen Warranty.	

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Required Parts and Tools

Required Special Parts and Tools:

BG Products, Inc. - Part Number	Part- Tool Description	Qty	Minimum Amount that Can Be Ordered from BG Products Inc.
103192*	Dynamic Engine Cleaner	One 6-Quart Container	One Case with Four 6-quart Containers
9850	Dynamic Engine Cleaning Tool	1	1 Tool
9850-013	9850 Filter Kit	1	4 Filters

 **Note:**

(*) BG part number 103192 is one case with 4 containers (qty. Four of 6-quart containers) representing the amount needed to service 4 vehicles.

Qty. one 6-quart container of Dynamic Engine cleaner, 1 filter (from kit) and any oil (inexpensive oil used for flushing purposes in procedure with no VW Part No.) should be claimed in the Sublet Parts Field of the Warranty claim.

Additional Information

All part and service references provided in this Technical Bulletin are subject to change and/or removal. Always check with your Parts Dept. and Repair Manuals for the latest information.