

How to: Change rocker head gasket

VW Golf 3 (1.8 / 2.0 8V engines), also for Passat and other VAGs

This how to is specifically for the 1.8 AAM (75PS) petrol engines in Mk3 Golfs - but is virtually identical for 1.8 ABS and ADZ (90PS) engines . The gasket and procedure is the same on 2.0s, however you'll may have to remove additional parts, like idle stabilisation valves on the 2E. It should be easily transferable to other Audi, VW and Seat engines of the age.

Difficulty: easy

Timescale: 45 - 90 minutes

Parts needed:

1 x gasket: 051103483A (for most 1.8 and 2.0 4-cylinders)
1-2x M6 nuts, should you lose one
1 x hose clip 16-28 or 19-31mm
Some engine oil or high temperature grease
brake cleaner
engine cleaner

Tools needed:

Short ratchet
10mm socket
socket extension
torque wrench (adjustable between ca. 5-20Nm)
pliers (narrow ended ones, a leatherman will do)
screwdriver
maybe a knife

Notes / comments:

Early Mk3s can have a cork gasket, those have shorter bolts compared to the new rubber type. Should this be the case you'll have to replace the bolts (8 pcs). Old bolts can be undone using two nuts and two spanners (during Step 12).

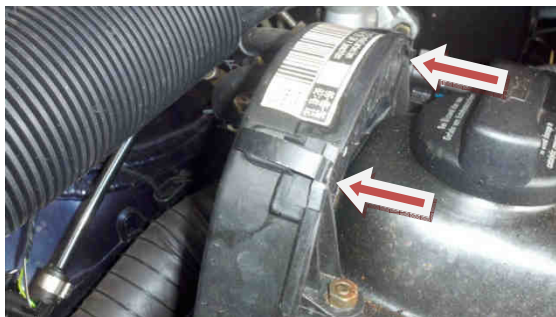
If your old gasket was leaking in the left hand side of the cylinder head (cam belt end) that could happen again. It can help to put a sealing strip there using an appropriate filler. I personally have used high temperature grease without solids additives (like MoS) to grease the gasket.

You don't really have to remove the throttle cable or the electric connectors from the Injector unit but if your intake manifold has oil on it you'll find it lots easier to clean up.

Overview (MY 1996 - Golf 3 AAM)



Step 1) Remove upper cam belt cover



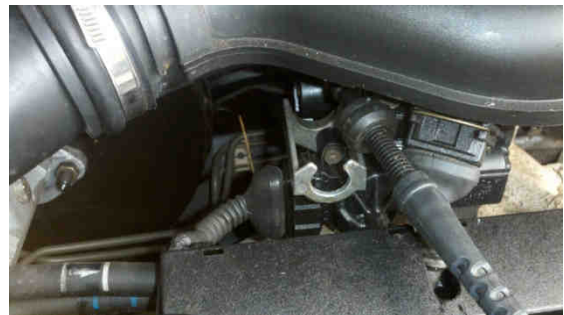
Pull up both brackets then push to left and remove the cover.

Step 2) Remove throttle cable



Remove the securing clip. Push cable to the front and remove the grommet (by

pushing it up). Place the cable to the side so it's not on the way.



Step 3) Remove upper p/o cable conduit



The cable conduit has 3 latches, use a small screwdriver to lever them open

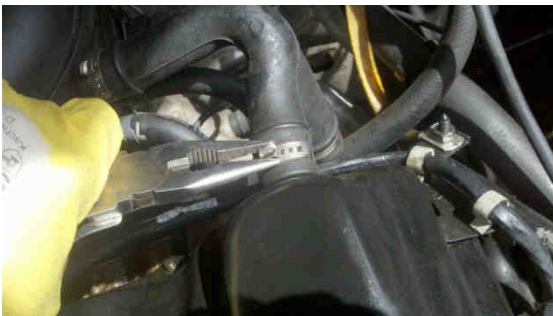
carefully. Remove top part of cable conduit.

Step 4) Remove electrical connectors from injection unit



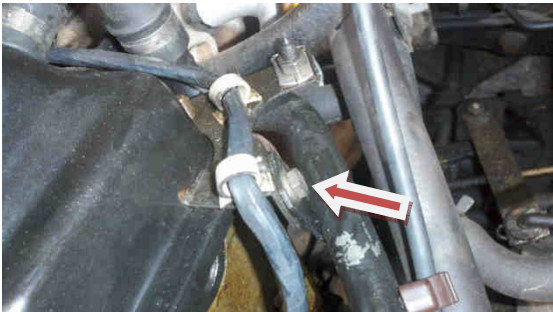
The 3 connectors have to come off the injection unit. (Simply follow cables from conduit). Place cable on side so they're out the way. That should allow access to 2 screws (no need to remove those yet).

Step 5) Remove crank case breather tube from rocker head



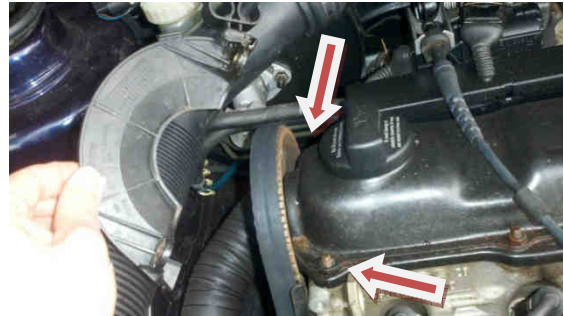
Remove the clip using pliers. Pull off tube.

Step 6) Undo the breather metal tube from bracket



You'll only need to remove the bolt at this stage, the bracket can stay where it is for the time being.

Step 7) Remove inner timing belt cover



The cover is held by two nuts on the left. First unclip the petrol lines in the back then undo bolts and remove.

Step 8) Remove cable conduit

Unclip petrol line, then undo bolts and remove conduit.



Step 9) Remove metal rails



Undo remaining bolts on rocker head, lift metal clip off (see picture in Step 6, it can remain in engine bay). Now both rails can be removed. Note their orientation!

Step 10) Remove rocker head cover and oil splash guard

Step 11) Clean the rocker head cover



Cover with old gasket



Remove gasket (if on the cover), spray brake cleaner on the metal mesh and breather tube opening on other side to ensure air flow during operation.

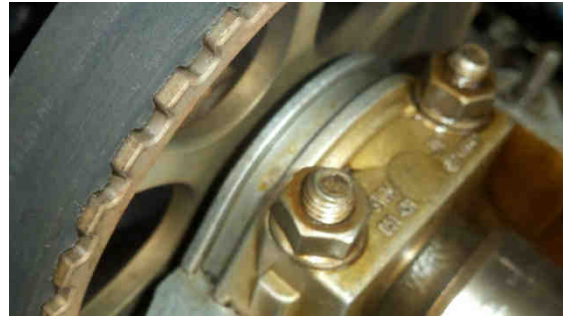
Remove gasket from either rocker cover or cylinder head and clean carefully with a cloth and engine cleaner. Pay particular importance to sealing surface but it can't hurt to clean oil sludge and other deposits.

Step 12) Clean cylinder head



Clean sealing surface on the cylinder head carefully. It's advisable to clean dirt around the sealing areas - this makes it easier to spot leaks after the assembly, if there are any. Spray engine cleaner on a cloth, not the engine itself in particular when close to the cam belt.

Most important are the cam shaft ends...



cam belt end



gearbox end

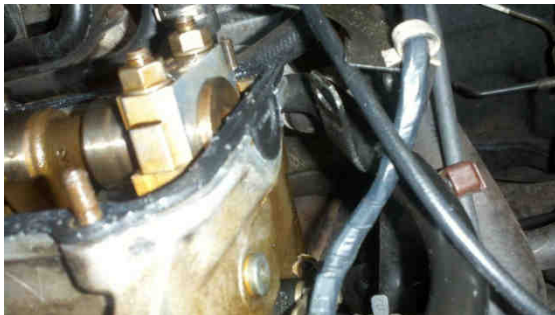
Since we're in the area I would recommend to check the cam shaft seal, if it is leaking it should be replaced, but that's far beyond the scope of this how to.



Step 13) Cover gasket in grease/or oil and put it in place



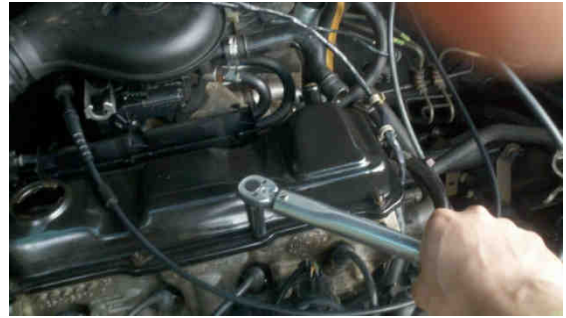
Cover the gasket with a thin film of oil or high temperature grease and place on cylinder head, press down flat (watch bolts). The gasket should be flat on the head, also at the cam shaft ends.



Step 14) Place the rocker cover on the head, press flat down, check for proper seating. Place the metal rails in correct orientation.

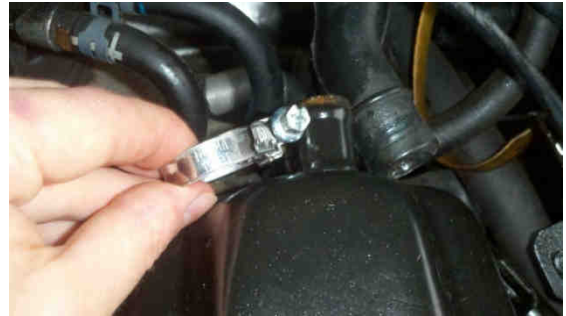
Step 15) Reinstall inner cam belt cover and cable conduit (clip in petrol lines before) and screw the nuts onto the bolts, but don't yet tighten them up! Screw on other nuts.

Step 16) Tighten nuts up



Tighten the nuts to 10Nm - from the inside to the outside, work your way out across and diagonally. If you don't have a torque wrench 10Nm are mildly tight by hand.

Step 17) Reconnect the breather rubber tube

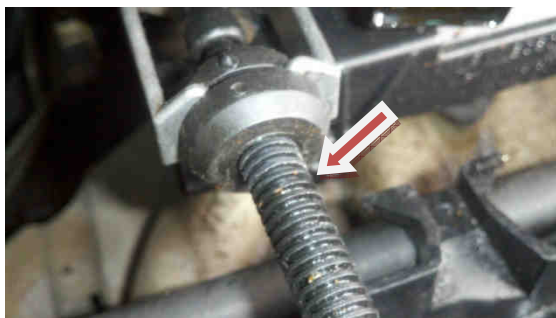


Put metal clip on tube, slide tube on the rocker cover opening, tighten up clip carefully.

Step 17) Reinstall throttle cable

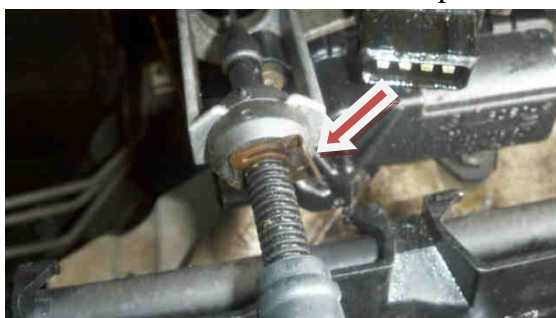


Feed the wire through the guidance. Push the grommet into the bracket.

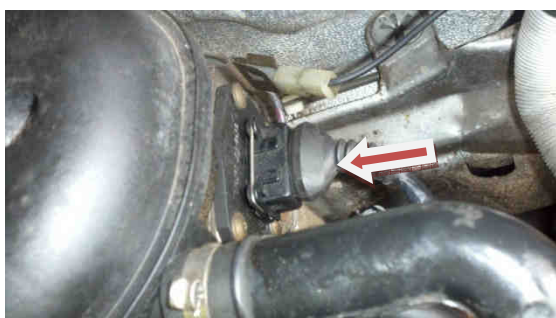


You can tell by the discolouration how far the wire should go in. Mine has to go in a bit further.

Replace the retaining clip. If necessary check correct function with a 2nd person.



Step 18) Reconnect wires to injector unit



Step 19) Test drive

Almost done!

Now you should go on a test drive to see if the engine is still leaking oil. For this the engine should well get up to temperature.

Step 20) Check nuts are still tight, if need be use torque wrench. Don't forget to reinstall the upper bit of the cable conduit.

Done!

I do hope that everything went well and all is described correctly! :)

As it often is in life you're following this at your own risk, so don't blame me if you brake anything or hurt yourself. If you don't think you can do it -> don't. ;)

This how-to can be passed on for personal use, but if you do find it helpful I (itavaltalainen) would be happy to get a thank you on the thread where I've posted this (releasing both on vwaudioforum.co.uk and golfgtiforum.co.uk). If you do speak German you can also find me on motor-talk.de (itasuomessa).

If you want to use this commercially or post it in another forum please contact me beforehand (I am retaining any commercial rights).

Wish you all good fun with your cars - and working on them!

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