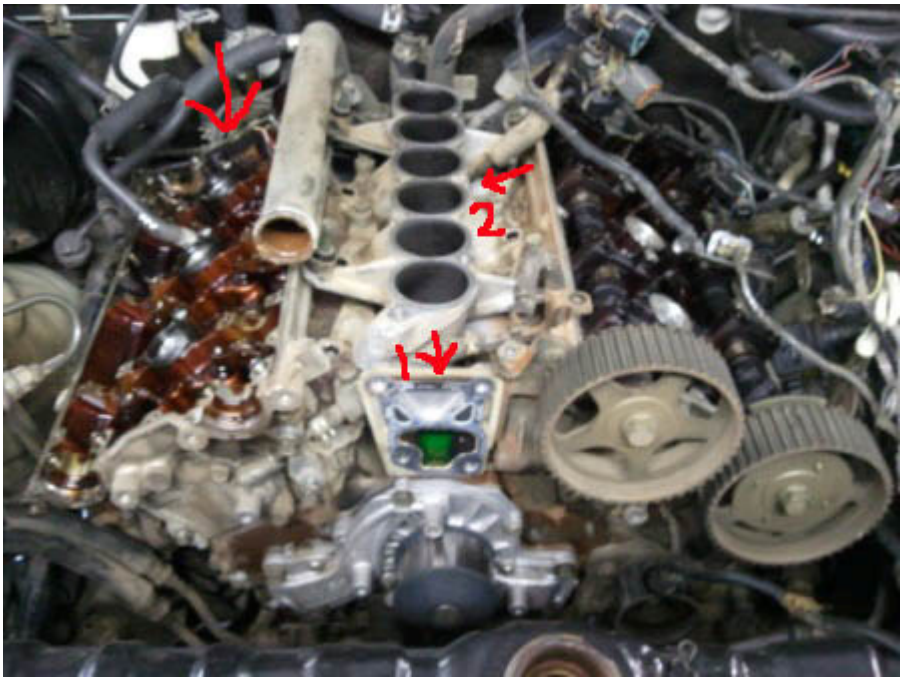
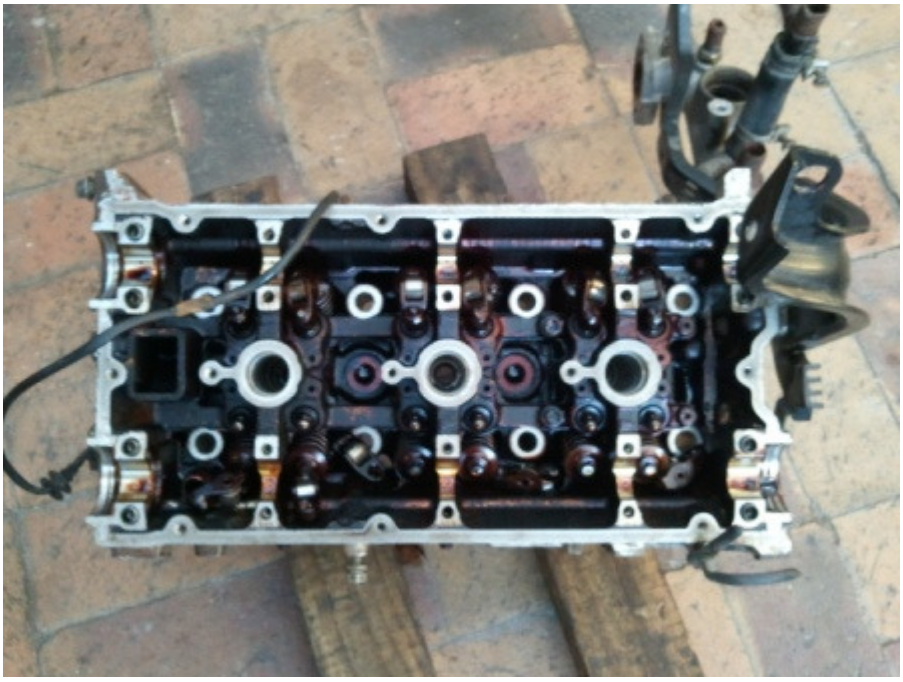
Pajero 6g74 quad cam valve stem seal replacement

At this point the inlet manifold is removed as well as the accessories bracket with all belts

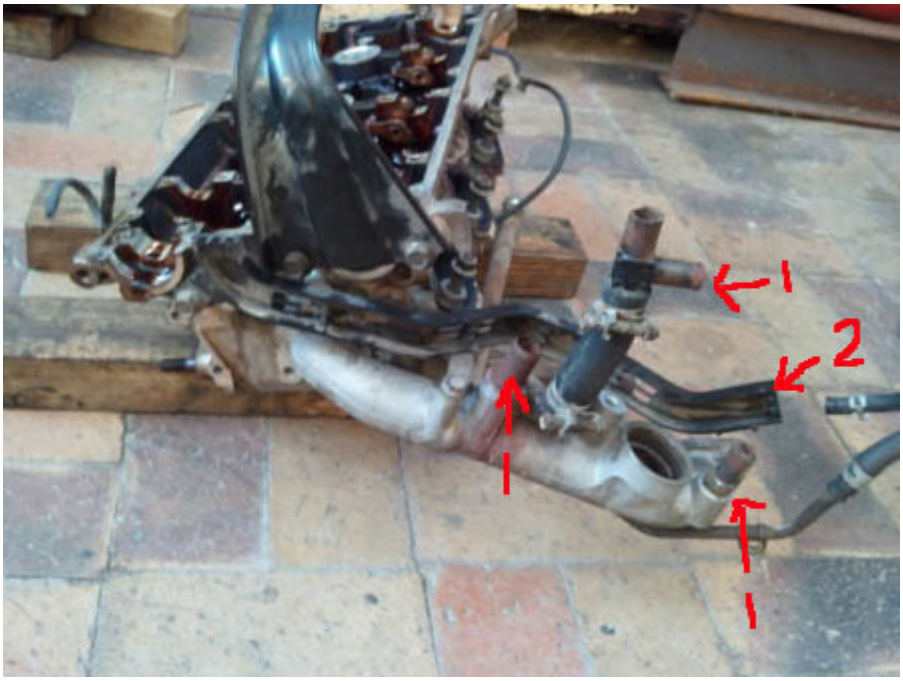


Remove 1 waterpump 2 bottom half of inlet manifold after removing fuel injection rail, now behind the RHS head remove 2x12mm bolts from water cross over pipe the space is very limited behind the head



Remove the LHS head complete with

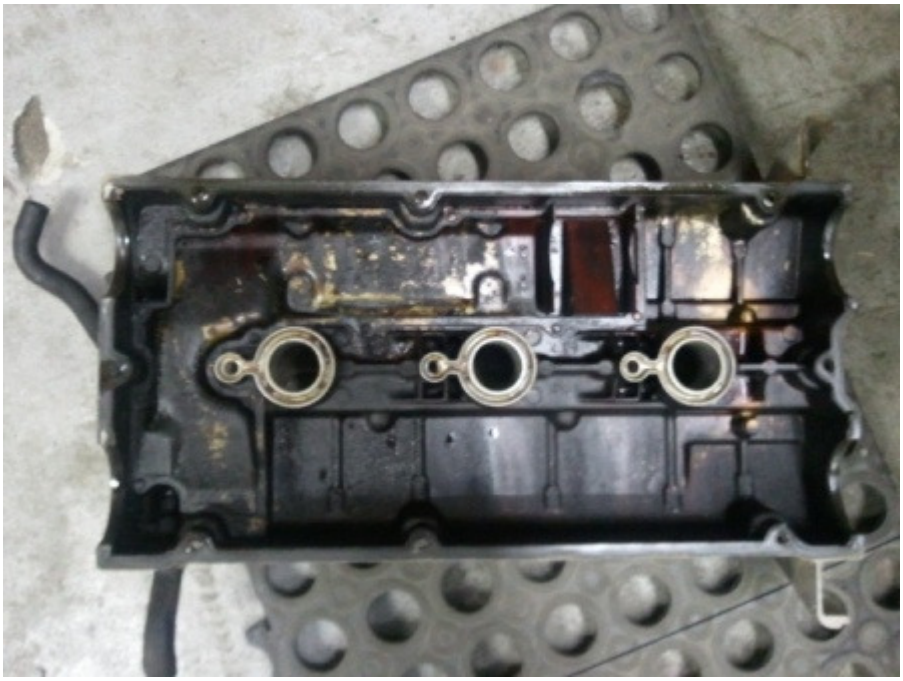
all plumbing and brackets



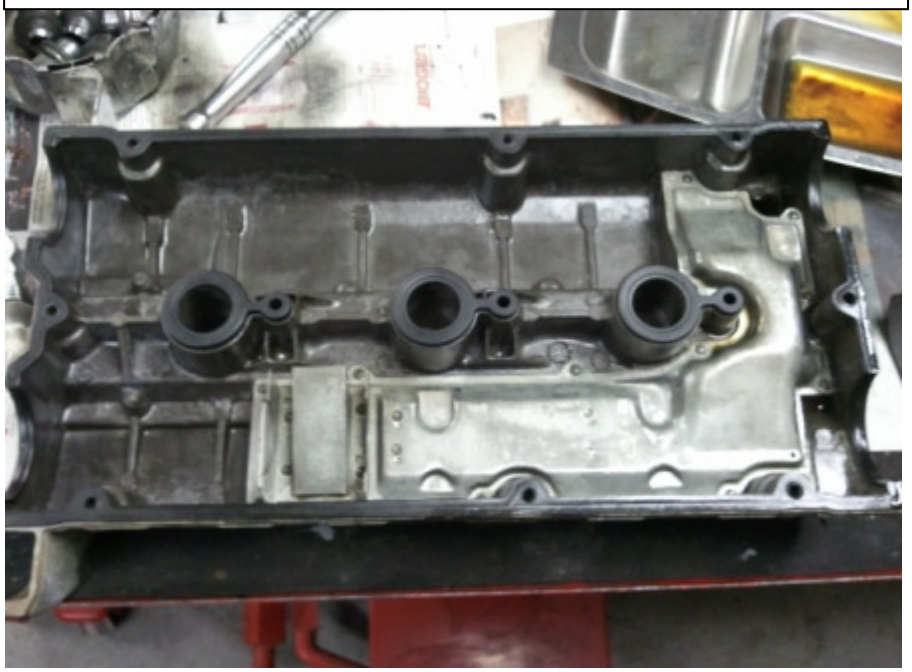
1 is heater hose connections 2 is spark plug lead holder

My inlet manifold secondary butterflies were worn and the shaft was rattling and just starting to eat into the housing I have made a separate document on the repair

I cannot believe the state of the valve covers my paj had mostly service history from the agents last few stamps were shell autoserve. either 10 000 KM intervals were too long or the history is dodgy.



I bought the paj 18month ago at 197 000KM now 206 000KM in that time 3 oil changes day I got it Castrol edge six months later Castrol magnatec six months later dello 400 I wander if the exhaust valve stem seals could have contributed to this



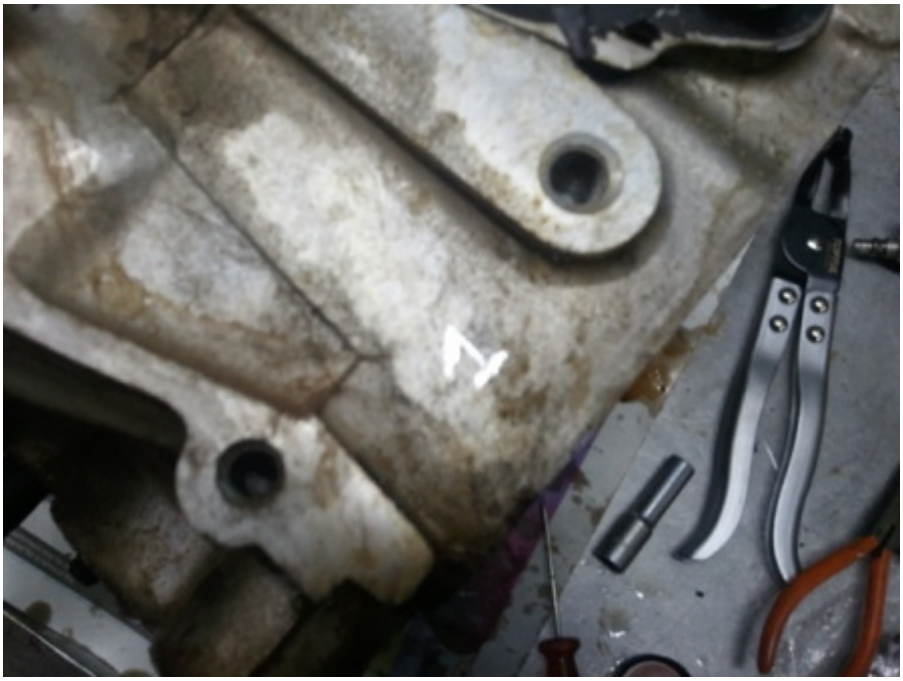
Loads of elbow grease later this is how it now looks

My exhaust manifold was also cracked

Tempory measure until I decide on branches or a new manifold

The exhaust manifold nuts were seized on very tight and access is very limited my power bar normally turns through 90 degrees. I ground out the corner of my power bar to give me a better angle

With the right length extension and angle I was able to bring the power bar up between the engine and inner wheel arch this made loosening the nuts much easier



Mark your head on one side

Rockers removed

Mark all the valves they must be returned to their original seat

Valve spring compressor to remove valves

Be careful not to lose any of the small cotters

My paj never smoked on start up it would only smoke while idling after approximately 20 seconds

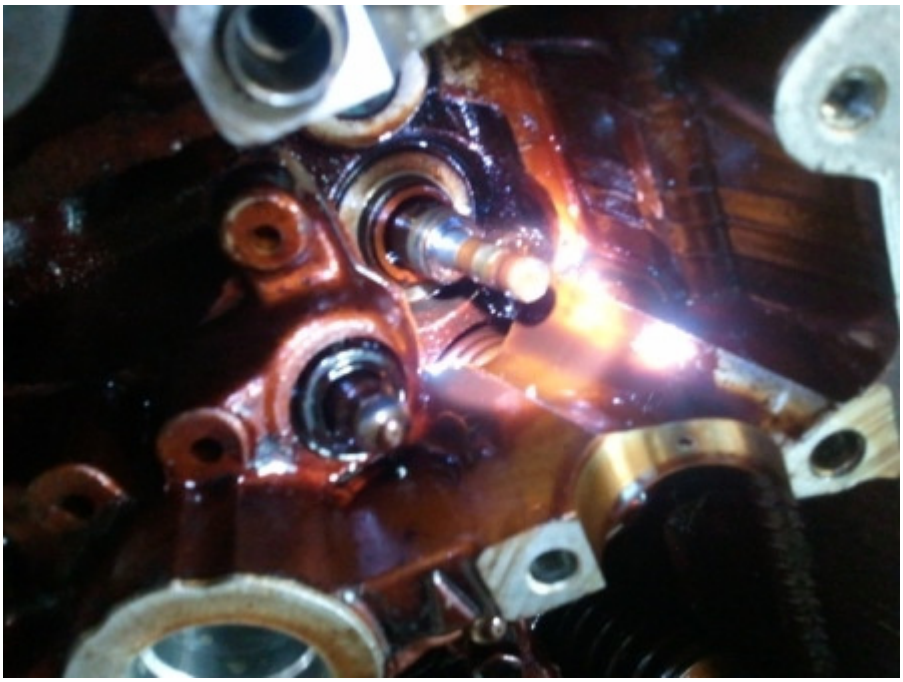
It’s not necessary to have a valve stem seal tool but it does make it easier

Old seals

This is the part of the seal that goes hard

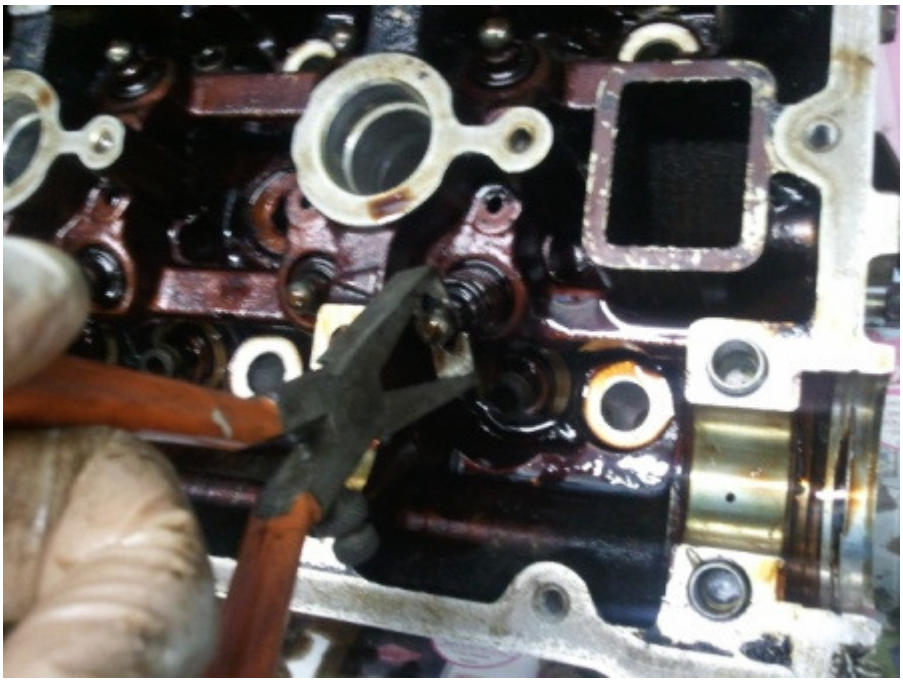
The old seal nearly slides down the valve on its own

The new seal nice and firm on the stem



At this point try and wiggle the valve in the guide it must be an absolute perfect fit even the smallest play and the guide must be replaced

Valve spring seat being removed



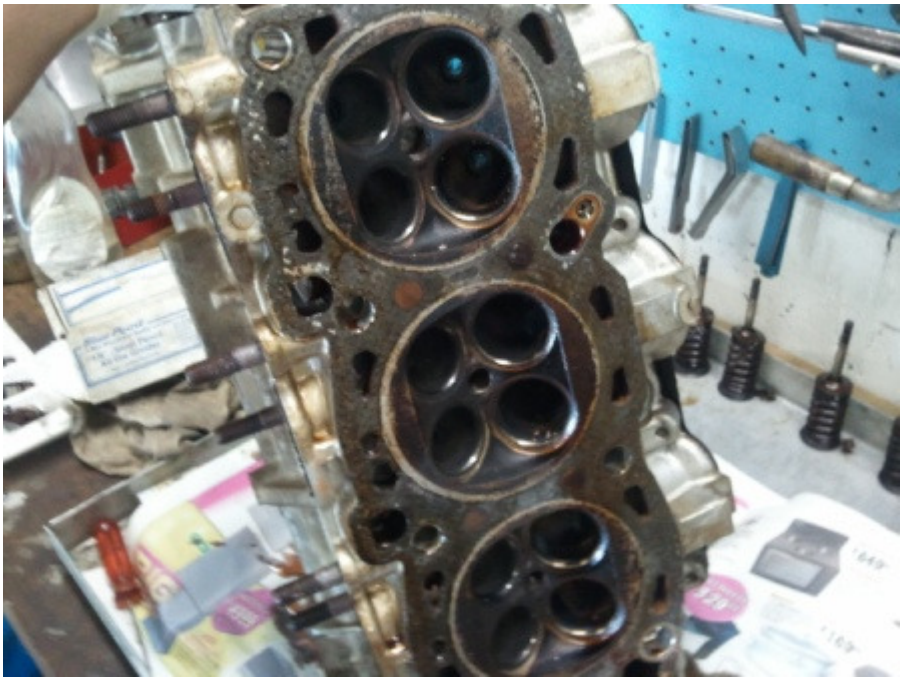
Hydraulic valve lifter being removed

This is a hydraulic lifter or lash adjuster

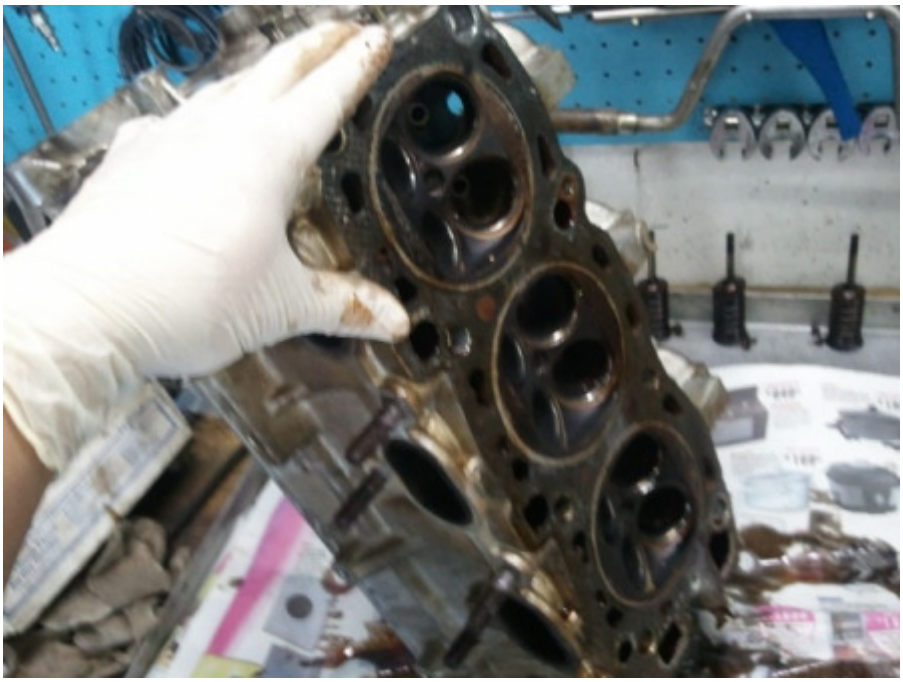
Oil feed hole

Oil exit hole I have seen these lifters with bigger holes on top can't understand how they would improve the pressure in the lifter as a bigger hole will mean less pressure. If one looks at a genuine mitu workshop manual it calls for 10w oil to be used in the pajero, samcor have printed 20w in the owner's manual in my opinion this might contribute to the noisy lifter issues

Keep all the lifters in an upright position in clean oil



Head one now stripped

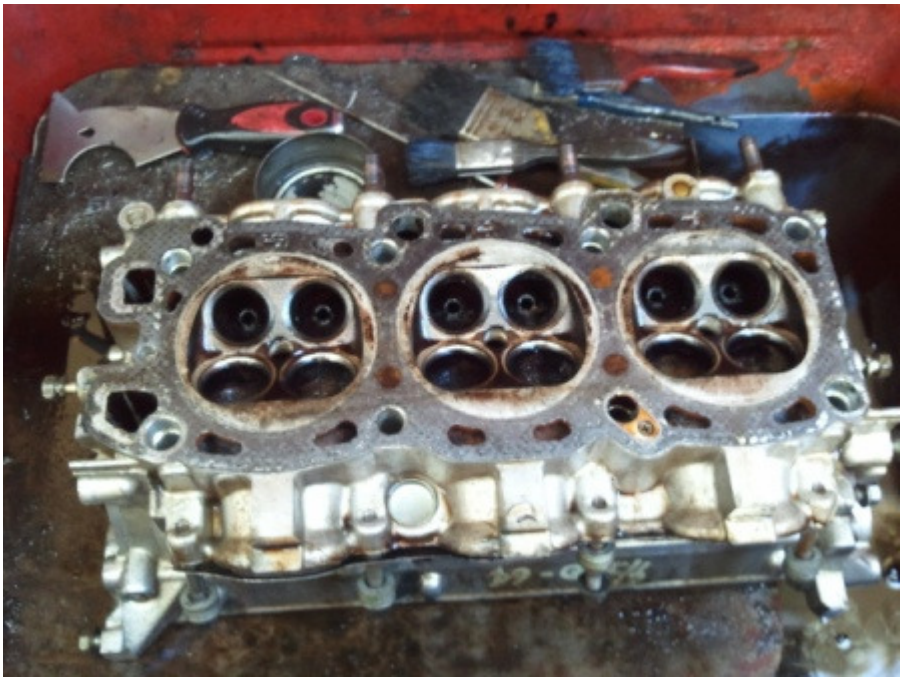


Head two stripped

Kept in a dry place until I could get around to cleaning them

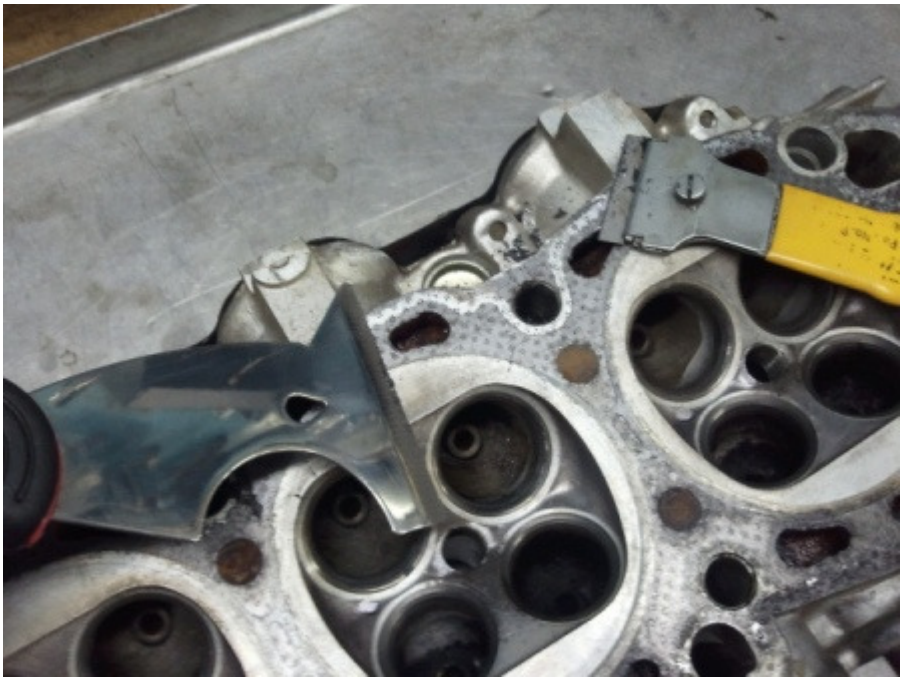
Heads and cams now soaking in oven cleaner NOTE oven cleaner will discolors aluminum if left on too long, use with caution if you need to clean

Valve cover now soaking

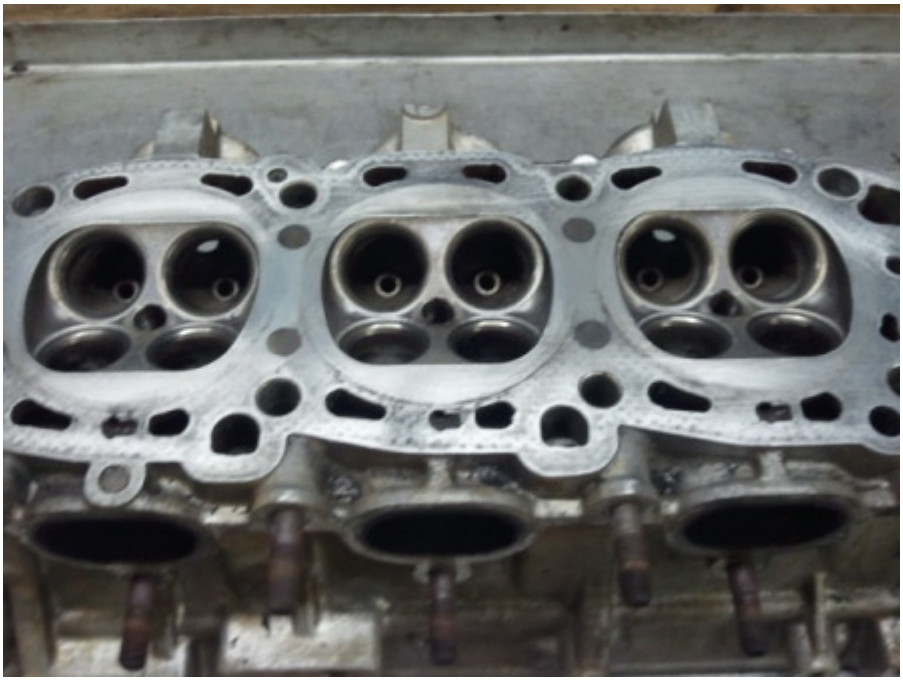


Now in the parts washer 1st round

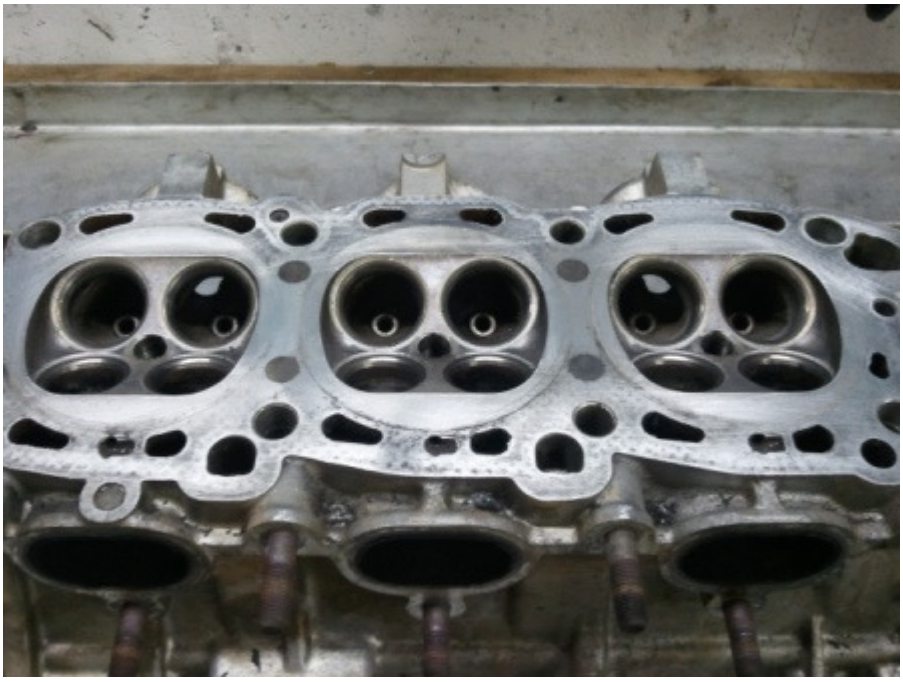
Looking much better



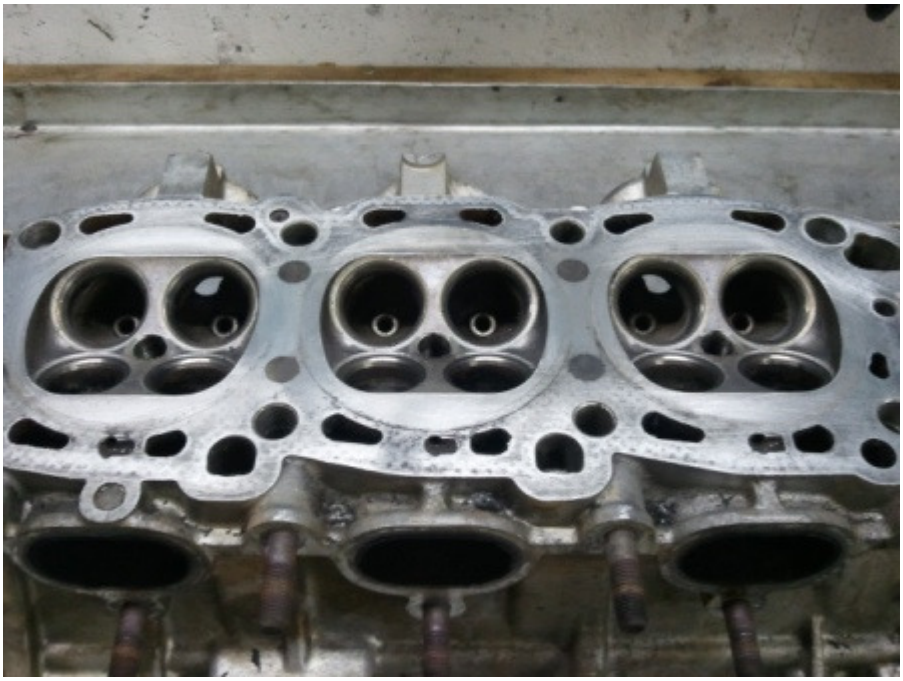
Now to prepare the mating surface use a scraper to remove old gasket



Then use emery paper and thinners

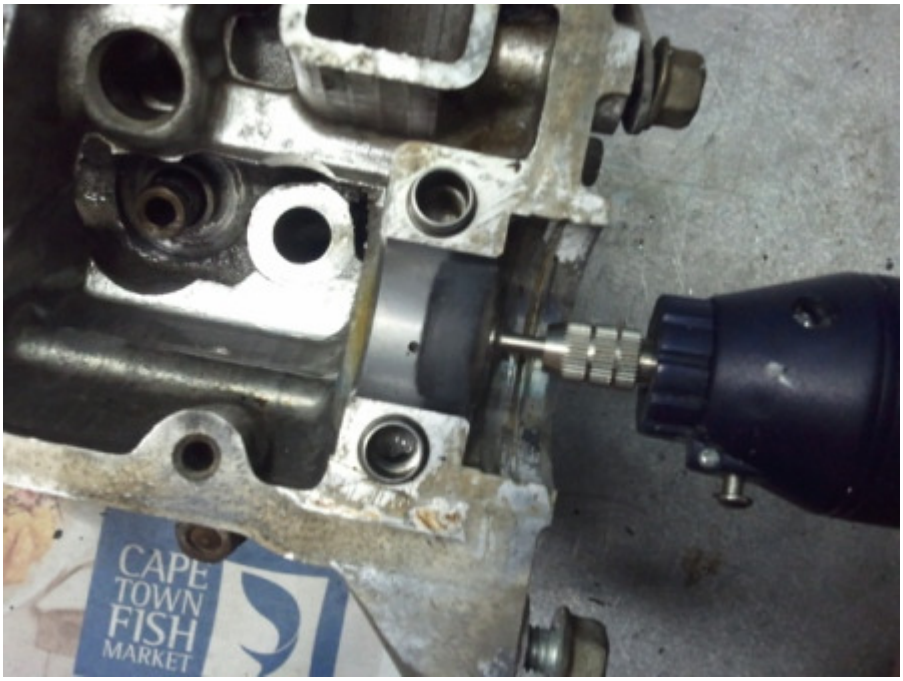


Nearly clean



Keep the valve guides oiled straight after rinsing and drying

Second wash starting to look half decent



I now polished every cam journal, this is not necessary but as the oven cleaner discolored it I preferred to do this

Cam caps ready to be cleaned

Cam caps in parts washer

Polishing all the cam cap journals

Cam cap journals now all polished

Valves and springs now soaking

Springs and keepers now clean at this point I might have done 20hours just cleaning everything

Clean stubborn carbon off the valves with a wire wheel

These are the components that make up one valve set