UK MKIII Supra Owners Group

Recirculating the HKS SSQBOV

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The HKS SSQBOV can vent to atmosphere (which sounds great if you like that sort of thing), or it can recirculate the air back into the intake pipework. With it recirculating it is far quieter and you can only really hear the ptssschhh noise at high boost if you come of throttle abruptly.

The 7MGTE is an AFM (air flow meter) based setup as standard which means that the ECU measures any air that passes through the AFM body. Once this air has been 'metered' i.e. the ECU is aware of it, fuelling will take it into account. When you vent to atmosphere, the 'whoosh' is made by air escaping. This will then cause the mix to become richer because the ECU thinks there is more air than is actually present.

This is not a huge problem in itself (although isn't good and can cause problems such as stalling & erratic revs and also encourages 'bore wash' where the oil on the cylinder bores is diluted by fuel), but the ECU can then adapt fuelling to correct the fact it sees a rich mixture at the O2 (lambda) sensor in the exhaust. By pulling the fuelling this can cause the car to run lean and that's very bad news.

It's up to you whether you decide to make it recirculate but if you do, here is how:

Step 1 - Undo the 8 small allen key bolts around the outlet of the blow off valve

Step 2 - Store them somewhere safely, they are very small and easy to lose. A magnetic parts retrieve might help you get them out because they are quite stiff

Step 3 - Remove the outer shell of the BOV. For interest, the second picture shows you what you leave behind

Step 4 - Looking inside the housing you will see a rubber gasket which holds the propeller-style front on (shown in the second picture)

Step 5 - Push the front of the BOV (propeller bit) down the housing so the 3 components separate as shown in the picture

Step 6 - Take the recirculating adaptor (Available from HKS), and place it on the rubber seal

Step 7 - Look down the housing and you will see two notches, one big and one small. There are similar markings on the rubber ring - when you insert the ring/metal adaptor, ensure they line up correctly

Step 8 - Slide the adaptor and rubber ring into the body of the housing

Step 9 - Pop in your first allen key bolt and put the allen key on the end while you have the device in a position where you have good access. This way, when you slide the housing back over the body of the valve it will be easier to get it held in place

Step 10 - Do all the 8 screws up and you're done. All you need to do now is run a pipe from the metal extension back to your accordion hose (There is already a port on the accordion hose waiting for a pipe)

Step 11 - Use a jubilee clip to attach one end of the hose (1 inch hose) to the BOV

Step 12 - Attach the other end to the AFM port (Which is probably capped with something at the moment)