

Just like many of us I love my XK8. The only thing it lacks in my opinion is a bit of extra power. Perhaps it would be wise to sell the N/A car and get a supercharged one. But I love this particular car and don't want to let it go. I thought that there are so many aftermarket supercharger kits for the variety of cars (even for those with quite high compression engines like BMW M3 E93 and so on) that it could not be impossible to install the supercharger into the XK8. Having read the story by forum member Fishman (he made the same thing-the supercharged XK8) I decided that I have to try this out.

First of all, I am not any kind of expert, everything below is just my little experience.

The parts list was quite large. Unfortunately I have not made any photos of all the parts before the installation. What I purchased was:

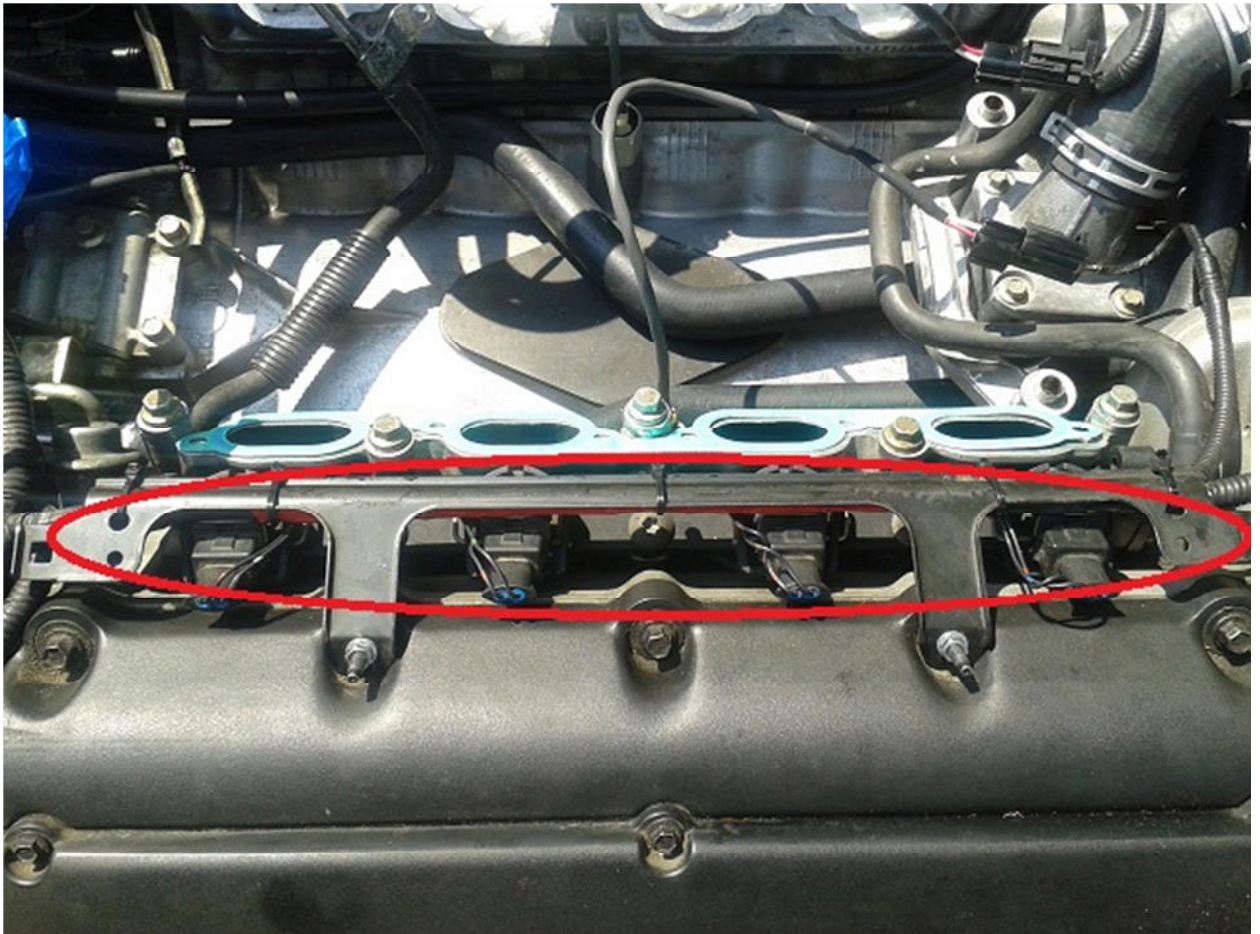
- supercharger and intercoolers
- Intercooler-cylinder head adapters
- XKR injectors and injector harness with brackets
- XKR fuel rails with fuel pressure regulator (perhaps the FPR from N/A model will work, but I haven't tried it)
- throttle body elbow
- thermostat housing from the XKR
- new knock sensors
- updated duct seals and plates (they connect the supercharger outlet to the intercoolers)
- all intake gaskets
- Bosch intercooler pump
- valley hoses
- intercooler circuit hoses
- intercooler radiator (24x12 inch unit from E-bay)
- supercharger mounting bracket
- alternator bracket from the s/c engine (it allows to install the s/c drivebelt tensioner)
- s/c drivebelt tensioner and idler pulley with bracket (I got the used ones and simply changed the bearings)
- coolant header tank from the XKR (the one from N/A car will not physically fit)
- angled pipe and short hose that connect the engine block to the thermostat housing

First of all it's necessary to disconnect the battery. After draining the coolant it's time to take everything apart: remove the coolant pipes, old thermostat housing, throttle body, unbolt the intake manifold, remove the cooling fans . What you will find afterwards is great amount of sand and dirt, so it's cleaning time.

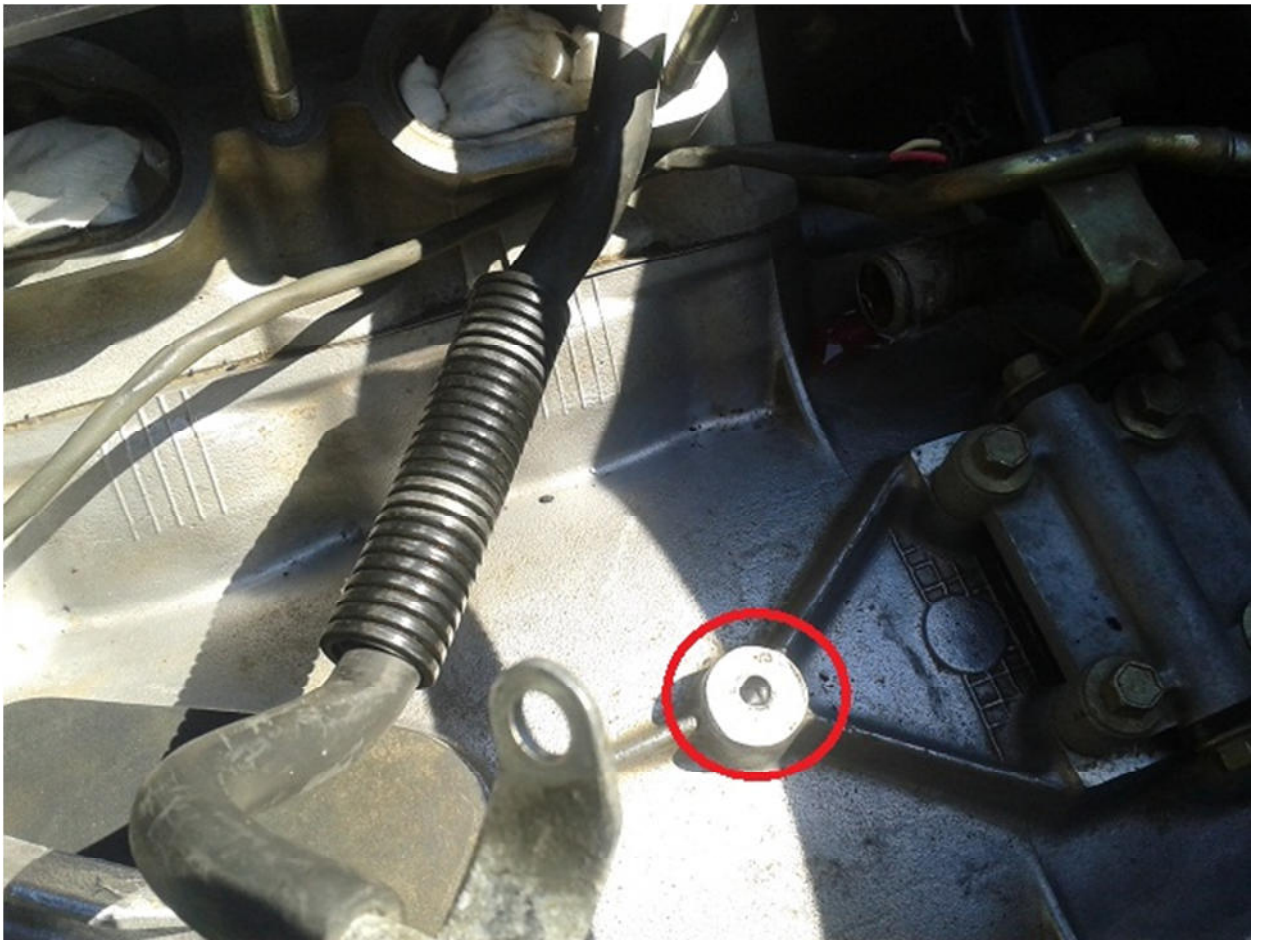
As soon as cleaning is over and engine is shiny again we can start putting the things together. While everything is apart it's a great opportunity to replace the old knock sensors (knock protection becomes extremely important after addition of the supercharger) and valley heater hoses (my hoses had multiple

cracks of the inner surface so I was potentially close to coolant burst). After some thinking I decided to delete coolant flow through the throttle body, it's pretty easy to arrange the bypass at this step.

The stock injector harness needs to be modified. It's necessary to remove the plastic brackets from the car's injector harness (they are attached by the electric tape) and fit the metal brackets from the XKR injector harness using cable ties or electric tape. This will allow to reliably attach the stock harness to the engine under the intercoolers. The desired result is shown below:



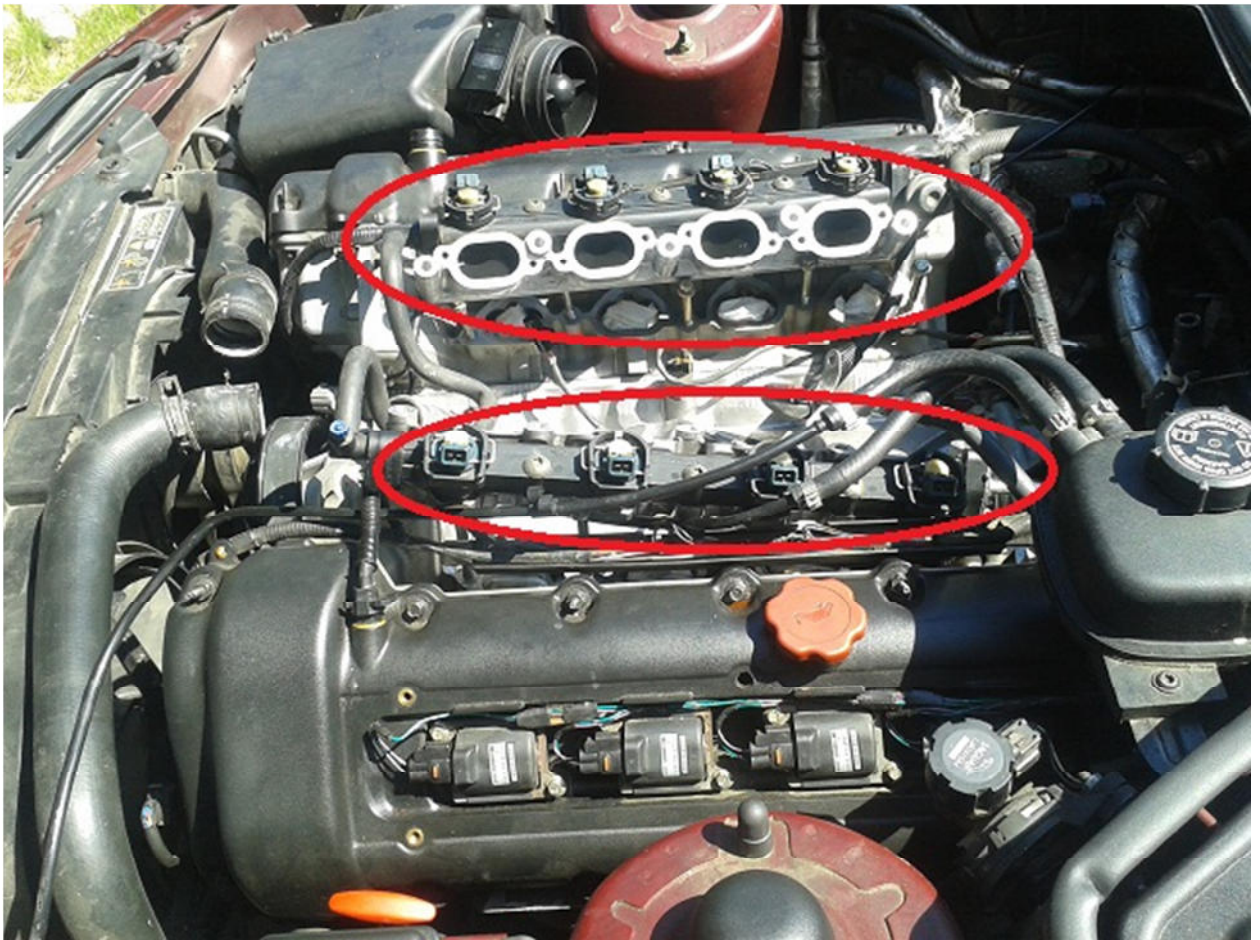
The next step is to be done with great care. It's necessary to drill 3 holes and cut the thread in the engine block for the bolts that will hold the supercharger, 2 of them are in front, and 1 is behind. The thread must be M8, for this thread the holes must be done using 6.8mm tap. This picture shows where the rear hole is located:



This picture shows one of the front holes:



I received the injectors, manifold adaptors and fuel rails as one piece, so I just connected the fuel pipes and primed the fuel pump to check for any leaks. There were none. It's a good idea to ultrasonically clean the injectors before the installation but I skipped this step. The fuel rails/manifold adaptors are shown below:



Now we can fit the intercooler adaptors to the engine. Once finished, there go the intercoolers and duct plates/seals. It's good to clean the intercoolers inside first. I used some gasoline, but it didn't do the trick completely, so I decided to boil the intercoolers in water. After several hours of boiling the junk inside the intercoolers became soft and I washed it away using high pressure water (this must be done with care not to bend the cells).

Now it's time to fit the angled pipe and the short rubber hose, together they connect the engine block to the new thermostat housing (this pipe goes in place of the stock thermostat housing). What I am talking about is shown below:



Once done, we need to fit and bolt the supercharger using the supercharger bracket in front.

After the supercharger is in place, we can fit the throttle body elbow, the throttle body and air intake pipe, fit the new thermostat housing, radiator hoses (the stock XK8 upper and lower radiator hoses need to be shortened a bit to fit the XKR thermostat housing) and XKR coolant header tank. It's necessary to make a simple bracket to install the new header tank in place of the old one, the bracket is shown below:



Once the cooling system is put together, we can fill it up (I used water for testing).

Having done everything stated above I decided to try to start the engine. But it's necessary to lower the MAF sensor output first as we have the high flow XKR injectors. My current solution is not the permanent one and it's far from ideal, but it seems to work so far. I restricted the air flow through the sensor element. In the nearest future I am going to fit the Abaco programmable MAF sensor that will let me create the needed output signal. Although at this stage no work has been done on supercharger belt drive and intercooling coolant circuit/radiator installation, I thought it could be useful just to test how the engine would work with all new parts, especially new fuel injectors. The first engine start went great, no codes, cooling system kept the proper operating temperature, I was very happy to have this result. At this point my setup looked like this:



You can see that I still had the old header tank and some coolant pipes were not the perfect fit, but it was OK for the first testing.