

Cayenne Coolant Pipes

By Karl Wilen

As many articles as I write and read about, Porsche's best-selling vehicle always seems to get left out. In the December 2010 issue of Excellence magazine, there was a great article about how affordable the used Cayenne market is becoming, and some things to watch out for when purchasing one. One of the items mentioned are the plastic coolant pipes that run on top of the engine, underneath the intake manifold. Putting plastic coolant pipes on top of an engine that produces a lot of heat is going to lead to failure at some point (in the same aspect, gluing 2 piece aluminum coolant ports together on Porsche engines and thinking it will not fail eventually is foolish as well). Porsche has since redesigned this engineering marvel, and has updated those plastic pipes to hefty aluminum pipes. When the plastic pipes crack from the heat stresses, this will dump coolant on top of the engine where it will pool in the valley between the cylinder heads (just read "the top of the engine"). The coolant (after soaking the starter which also sits under there) will then pour down the backside of the engine and through the bell housing and out the bottom of the car onto your garage floor. But not so fast, the coolant's epic journey takes it past the torque converter seal in the transmission, which will get crusty from the coolant residue, and can cause it to leak. All of a sudden, that affordable, used \$25k Cayenne has a quick \$5-6k repair bill. The coolant pipe update kit runs about \$550, and you can expect about 8-10 hours of labor to put it in. In reality, it is a very straight forward procedure until you have to pull the lower pipe out of the engine, as this can take some time due to parts "mating" over the years.

Here we have our patient with age related leakage issues. Luckily we caught this one in time before it got too bad.



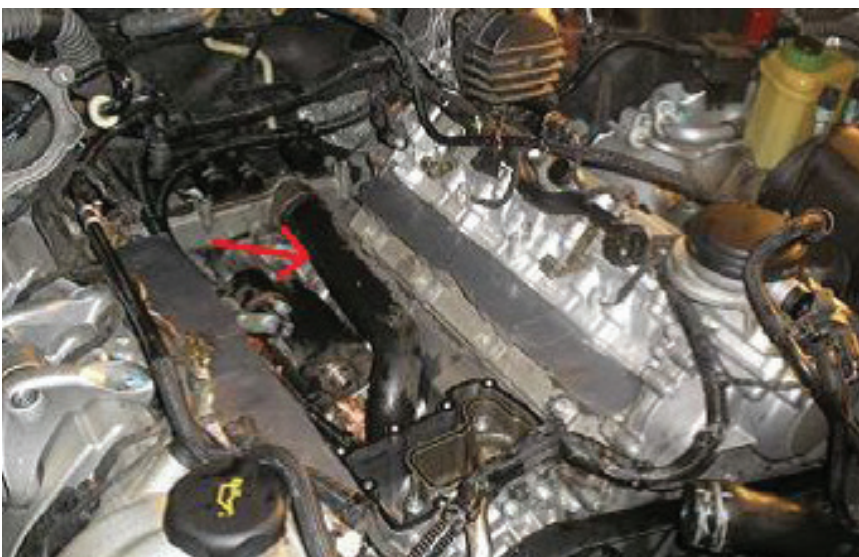
The updated parts kit looks like this in the photo at the top of the next column:



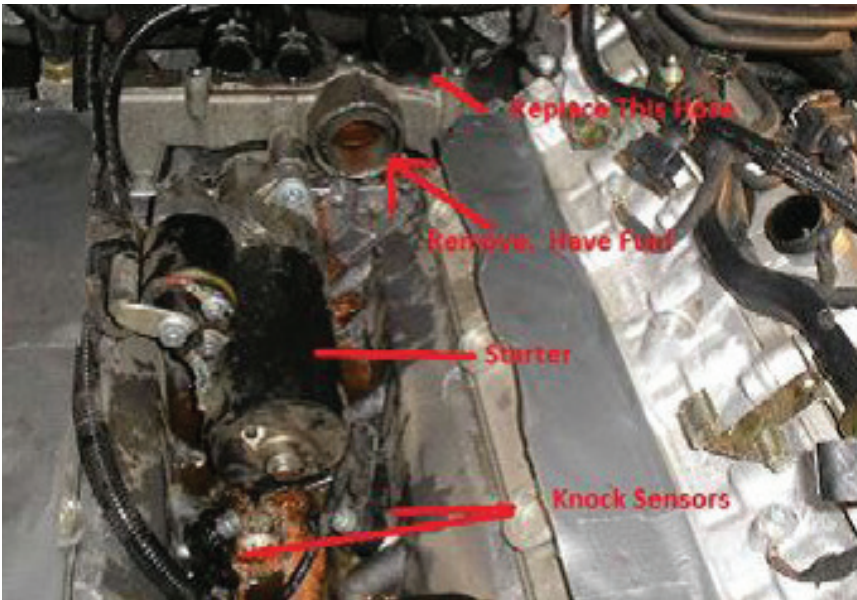
After removing the intake manifold, you can see 3 upper coolant pipes, part of the starter (the black round thingy), and a bunch of crusty pink coolant residue below pooling in the valley. The upper 3 pipes will come out after removing some hardware and a little brute force.



The lower pipe shown here is a little harder to remove. The pipe needs to be cut in order for it to be removed due to the assembly of the engine.



Once the large pipe is cut and the biggest section removed, the fun begins. At each end where the pipe inserted into the engine, the remaining pipe needs to be removed. Unfortunately, these remaining pieces essentially seize themselves together over time, so most of the labor is right here getting these out. Care must be taken to not knick the aluminum housing of the engine block.



Once all the pieces are finally removed, you can reassemble with the new aluminum tubes. The large pipe is a 3 piece tube, so inserting it is easier than removal. Here the lower pipe is installed, along with the upper thermostat housing.



After that, you can install the upper aluminum pipes and button everything back up on top of the engine. There is also a coolant hose on the back of the engine that should be replaced at the same time. Another fun time, as the hose tends to seize itself to the hard line.



There is also a coolant cross over pipe on the back of the engine on the 2008 and newer Cayenne that uses glued in fittings which will "unglue" over time, and also leak coolant. Unfortunately, this is an engine/transmission out of the car to replace situation and much more involved. As with any used Porsche, a Pre-Purchase Inspection (and I cannot reiterate this enough.....the P stands for 'PRE' not 'POST') and maintenance records are really important BEFORE you take the leap. Records showing this type of work that has already been done can really save you a lot of money in the long run. All in all, the Cayenne market is a great buy right now if you do the research, and don't make that emotional leap when buying one. There are a lot of them out there to choose from!