

SSI – Author: Bill Gregory

The 911SC 3.0 liter motor has a well deserved reputation as a strong, long-lived Porsche engine. There are times, though, when you wish for more than the standard 180 horsepower. Unfortunately, the 911SC engines with CIS fuel injection don't lend themselves to easy ways of increasing power without significant, and expensive, surgery. One modification you can make, however, is to upgrade to SSI stainless steel heat exchangers. This modification replaces your existing heat exchangers, catalytic converter, and muffler with the pre-1975-styled heat exchangers which are much more effective in pulling exhaust gases out of the engine. It also requires a new muffler, and two pre-1975 oil lines. In addition, it removes the catalytic converter, so this is for "off highway" use only.

When you switch over to the SSI's, first thing to do is remove the existing muffler, cat, and heat exchangers. I was fortunate that none of the exhaust studs broke – one came out with a rusted nut, which was replaced with a new stud. Breaking an exhaust stud is not the end of the world, however, it can create unpleasant complications for you. When you order the SSI exchangers for an SC, make sure you order the ones that have the oxygen sensor port on the left heat exchanger. The SSI's were drop shipped from the manufacturer, and were well packed. You also have to replace two oil lines with older-style lines.

First, remove the right rear wheel. If your SC hasn't been lowered, you can probably do the engine operation without raising the rear, although it's certainly easier if you do. Next, drain all the oil. Then if you look in your right rear wheel well, on your right you'll see two oil lines coming out of the thermostat back towards the engine (the other two disappear towards the front cooler). Of course the one you want to get off is the line in back, so remove the nut on the lower line, to get at the nut in back. Have some newspaper on the floor or a pan underneath, as some oil will come out of the lines. If you follow the line you want to remove, it goes around the back of the engine and then back forward on the other side of the engine to the front of the engine. Remove the nut there, and voila, the long line is disconnected. Try not to make a mess as you pull it out from under the car - it will still have oil in it. At that point, you have two replacement lines, one which is all metal with a curve in it and one that has a metal line and rubber hose. Hook up the all metal line at the left front of the engine, and there is a bolt at the other end by the wheel well that is used to cinch the metal line to the chassis. Then attach the rubber end of the other line to the all metal oil line, and the longer metal line part then attaches to the thermostat. Hook up the lower thermostat hose, and you're done with the oil line portion. Refill/change your oil.

Next, hook up the SSI's. You'll note that on both sides of the engine, towards the front on the bottom there is part of the engine that has a small bolt which has nothing attached to it. Take both bolts out. If you trial fit the heat exchanger, you'll see that the bolt is there to help cinch down the heat exchanger to the engine. It helps to do

that before bolting in the exchangers and wondering why they don't quite fit. Put your new exhaust gaskets on, lift one side up, and bolt it in. It helps, by the way, to have a long 8mm Hex socket, which goes thru the holes in the heat exchanger to access some of the exhaust nuts. There is a nifty tool that comes with the SSI's to help put bolts on. Be smart and use it to take the old exchangers off too. OK, so now you've bolted up both exchangers, you've put the 2 little 10mm bolts next to the engine block back in, and now you're putting the muffler on. This is pretty straight forward. Remember there is a gasket between each heat exchanger outlet and each muffler inlet. Reuse/replace the stainless steel straps off the old muffler. You can either reuse the old O2 sensor or replace it with a new one. I found the wire too short so I soldered on an extension.