928 Motorsports Oil Control System for the 16V Porsche 928

NOTE: "Left" and "Right" are always as seen from the driver's seat-as you sit in the car.

The following instructions will help you improve the oil separator and return the oil back to the crankcase, and allow you to vacuum out or depressurize the crankcase on your 16-valve Porsche 928.

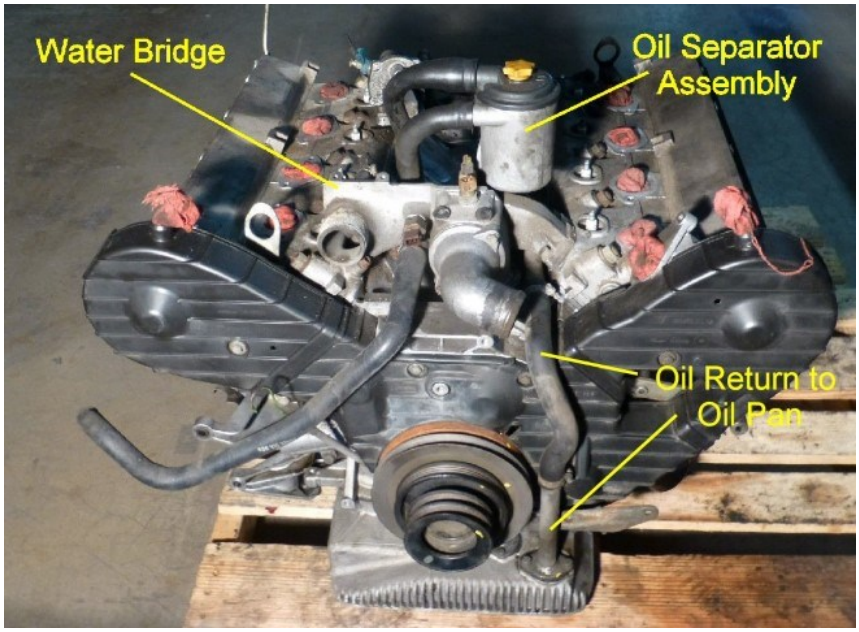
It is recommended that you read these instructions completely before beginning.

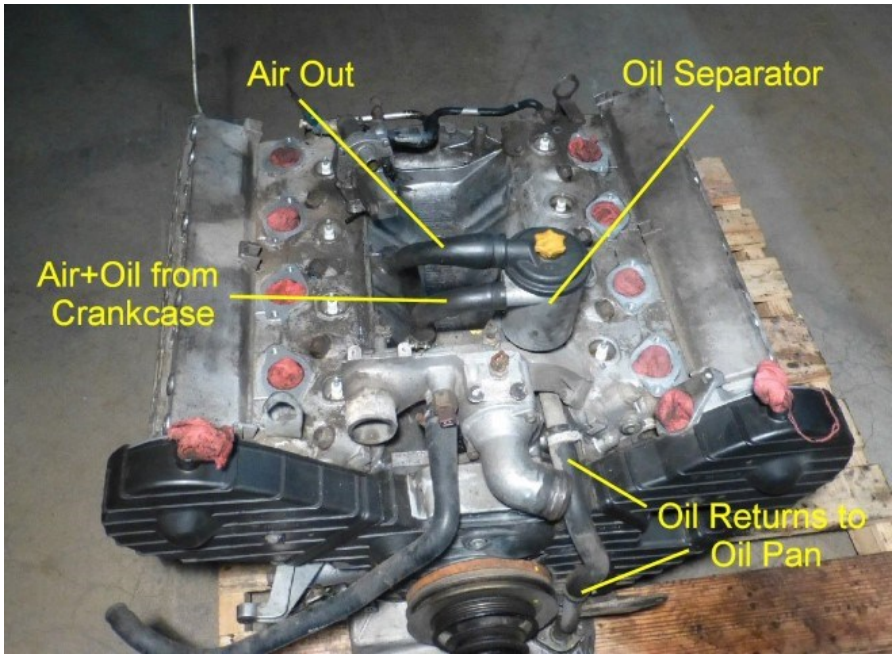
ALL MOTORS: Adding the baffle

This is a critical part of improving the oil control on your 16v motor—DO NOT SKIP THIS STEP.

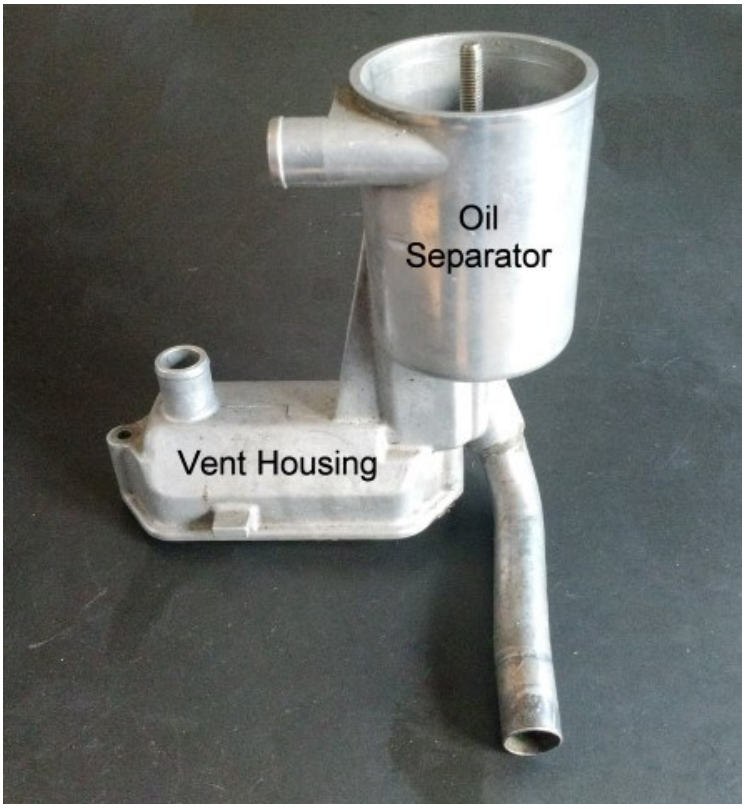
Identifying the parts —>

The Vent Housing is not visible in these pictures. It is underneath and slightly behind the water bridge. A picture of the vent housing is on the next page.





How it Works: Crankcase fumes wet with motor oil exit the top of the motor via the vent housing connected to the engine block. These Air/Oil Fumes enter the Oil Separator at the side, where they spin around, throwing the oil against the outer wall of the separator. The gases exit the top of the oil separator, and the oil that collects in the bottom is returned to the oil pan via a hose that runs under the water bridge down the front of the motor.



The crankcase vent housing for the 928 engine is located directly above one of the crankshaft counterweights, so it is constantly awash with wet oil slung up there by the crankshaft. Our baffle plate will block off the vent from receiving liquid oil, and only allow the gases to exit.

Unfortunately, the vent housing is located just underneath the water bridge, so it is really impossible to remove the separator without removing the water bridge at the same time.

Drain the radiator, disconnect the hoses, and remove two bolts that hold the water bridge to each head, then pull the water bridge straight up and out. New water bridge gaskets for where the water bridge meets the heads have been provided in your kit.

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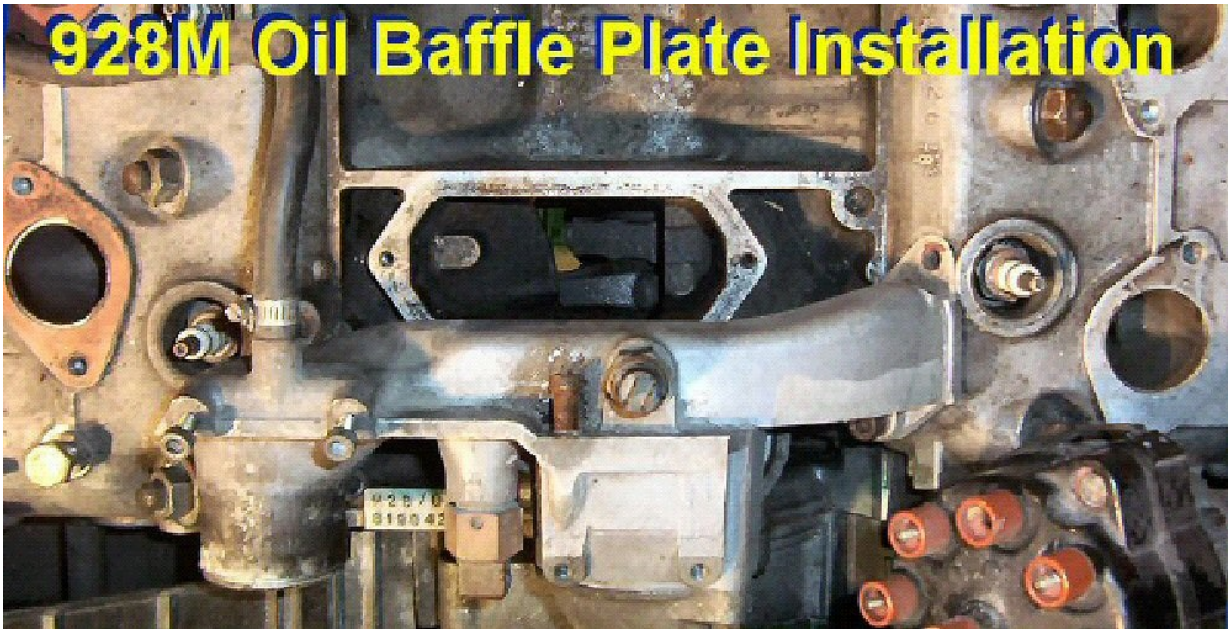
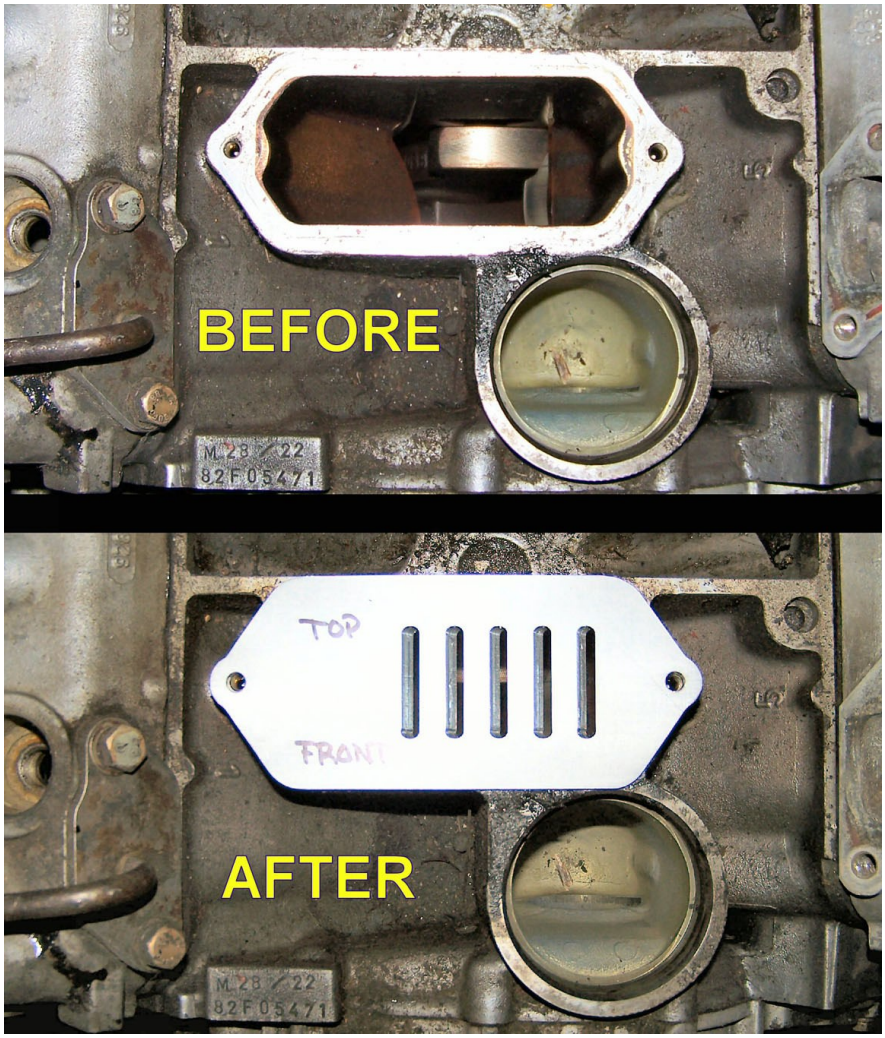


Remove the black cover from your oil separator and look down inside. At the bottom of the oil separator there is a 10mm bolt that you need to remove, and a matching 10mm bolt on the other end of the crankcase breather housing. There is one lower hose to detach, and then that breather housing comes off so you can put our baffle plate underneath it.



While you have the oil breather assembly off, take a flashlight and look straight down into the motor. You'll see how easy it is for the crankshaft counterweights to sling oil up into your breather system without this baffle plate!

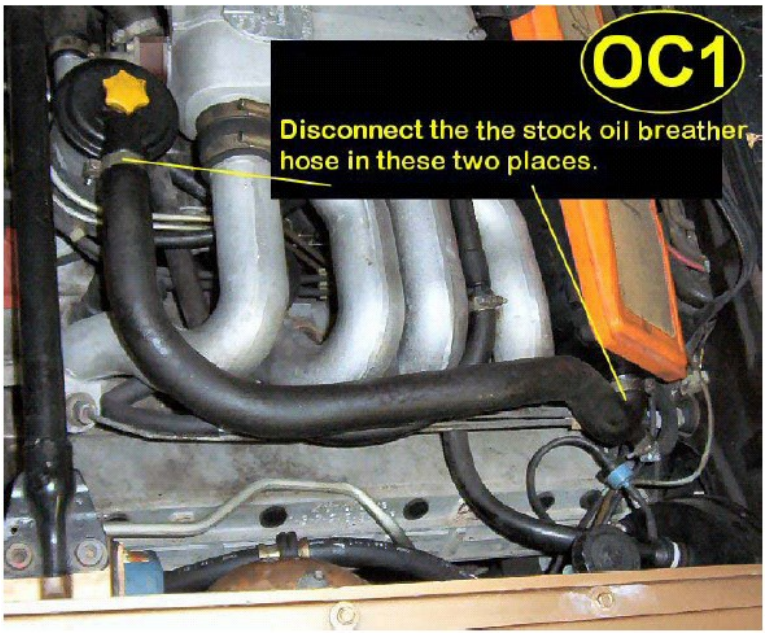
Clean the gasket surfaces on the water bridge and inspect the o-ring now. The water bridge and the oil separator have to be installed at the same time, so get everything ready.

Place a bead of gasket sealer on both sides of the baffle plate and set the separator/ breather assembly in place and loosely start its fasteners. Place a fresh bead of silicone gasket maker around the o-ring at the bottom of the water bridge, and the new gaskets on either end. Set the water bridge into place now, and get all of its fasteners in place and started. You may have to lift the oil separator up a little bit to get one or more of the water bridge bolts into their location, then set it back down.

Once all is where it should be, and all the fasteners are in their holes loosely, then you can do the final tightening of the water bridge and the oil separator and vent housing.

Instructions for K-Jet (CIS) Motors
If your engine is equipped with L-Jet, skip ahead to your model.

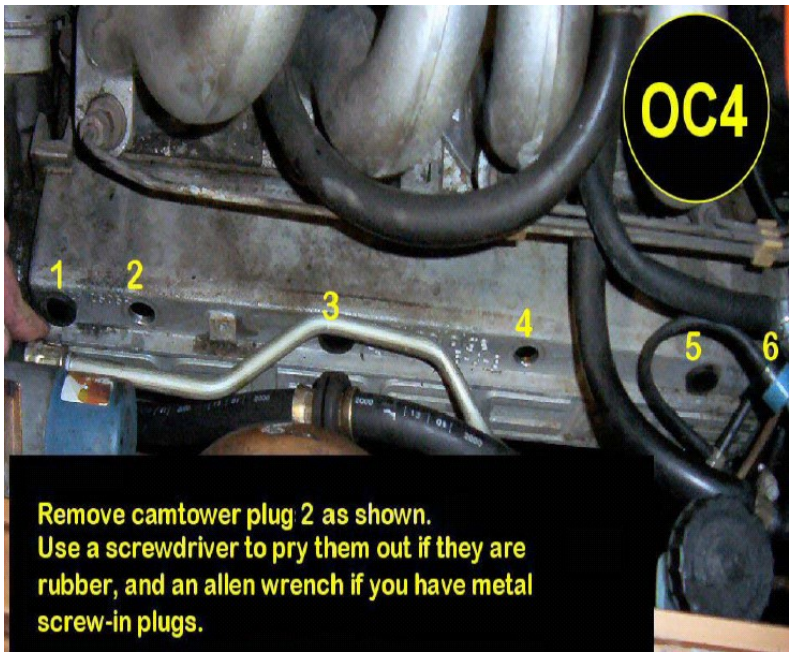
First, disconnect the stock oil breather hose in the two places as shown in **picture OC1**.



Once you have both ends disconnected, you will discover that there is some small water lines that go through that oil breather hose to warm it as shown in **picture OC2**

We want you to disconnect those two small water lines, re-route them so you can connect them to each other, and splice them together with the splice provided as shown in **picture OC3.**

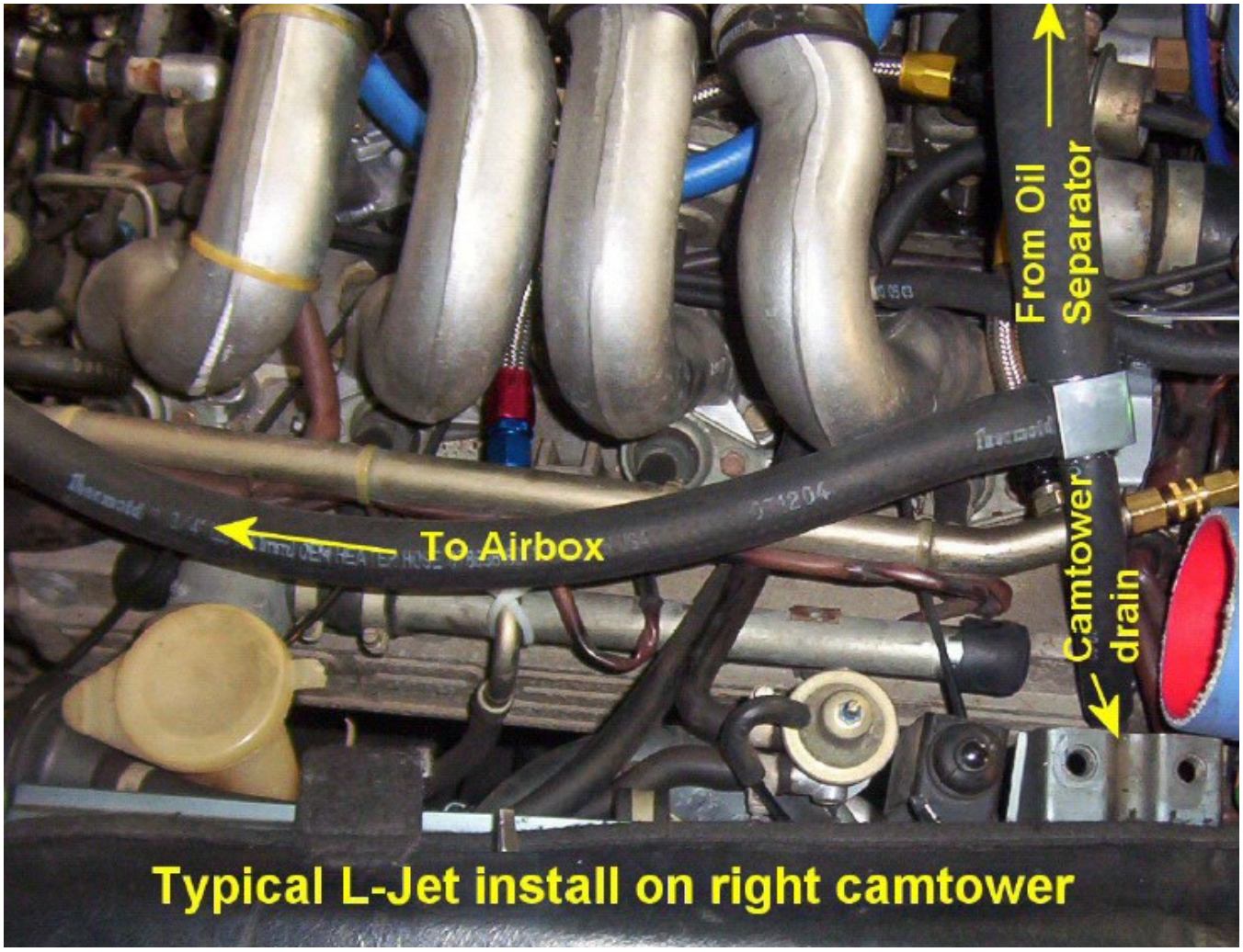
Counting from the front of the motor, left side, remove the second cam tower plug back, as shown in **picture OC4.** On the very early cars (1977 and some 1978), those cam tower plugs are black rubber and later models have Allen head cap screws.



Only those very early cars with the black rubber plugs should follow the instructions in ***photo OC5****.*

Instructions for L-Jet Motors

The L-Jet follows all the same instructions, on the other side of the motor. You remove the #1 or #2 cam tower plug, (your choice) and insert the elbow and hoses as shown below.



Instructions for installing the drain elbow are on the following page.

ALL 16V MOTORS:

Your shop will need to be at 50 degrees or warmer for the next step. Locate the cam tower elbow as shown in **picture OC6** and the two tubes of J.B. Weld metallic epoxy provided in the kit. You will need to take brake cleaner or carb spray and clean out the hole where you're just removed the cam tower plug.

As in **OC6**, layout two equal-sized stripes of the J.B. Weld metallic epoxy, on e of the hardener and one of the liquid metal. Then mix them together to where they become a consistent gray color. Coat the threads of the cam tower barbed nipple as shown in **OC6** and screw it into your cam tower.

Make sure that the barbed hose nipple points straight up when you're done. This will have to set 12 hours before we can use the nipple so we will move on to another section and come back to this after the epoxy has hardened. We use the J.B. Weld epoxy
specifically because of its ability to withstand high temperature and oil. It is not softened by oil or temperature. While we wait for that to harden, lets move on to start plumbing our new lines.

ALL MOTORS:

Modifying the Oil Separator

Under the black cover for your oil separator you may have a wire mesh screen. If so, remove that item, it will not be going back in. A section of aluminum tubing has been provided in your kit to install into your oil separator that will make it a 2-chamber device, and improve its ability to separate the oil from the air.

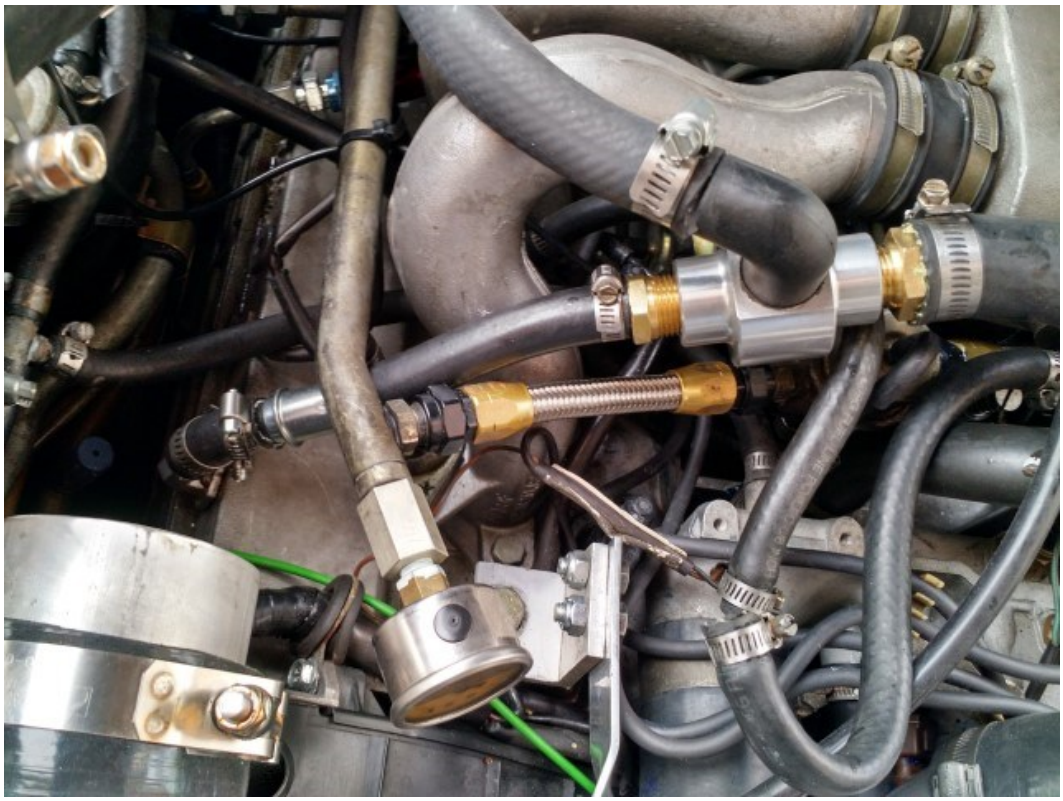
Place it into the oil separator as shown, then place the black cap back onto the oil separator and screw it down.

NOTE: You may rotate the cover of your oil separator to aim the air outlet in the direction you like. K-Jet cars typically aim to the left head, and L-Jet and LH-Jet installs typically aim toward the right head.

ALL MOTORS:
Final Assembly: Routing the Hoses

Take a look at these pictures to see how he finished installation can look.

The 1” hose we supplied will go from the oil separator cap to the large fitting on our tee, and the 1/2” hose goes from the bottom of the tee to the PCV valve, then from the PCV valve to the elbow you have mounted in the L or Right camshaft tower.



The 3/4” hose is the air outlet.

You can run it to the air filter box, to a catch tank, or down behind the motor to let the crankcase fumes exit under the vehicle. Your choice.

NOTES:

We have provided more hose than you need, so you can cut the hoses to length to place the oil tee where you want it. Put the clamps provided on all the connections.

Blow into the PCV valve with your lips before installing it to discover which way it flows. You want to install it in such a way that the oil can flow down and back into the cam tower, but would have a difficult time being blown *up* from the cam tower. The PCV valve is designed for this, and flows easily in one direction only.

Install the oil tee so that the black 90-degree nipple is on top as shown, not on the side. This is important. We want only air exiting the system, not oil, so position that vent straight up at the top. Then you can route your 3/4” hose that connects to it anyway you please to the air filter box, a catch can, or down behind the motor as a dump tube.