Installing a By-Pass Oil Filter

An extract from the 1964 book
"Volkswagen Technical Manual" by Henry Elfrink.
Plus picture illustrations of a Fram Oil Filter
on a Judson supercharged 36hp engine.

INSTALLING A BY-PASS OIL FILTER

A very useful accessory is a by-pass oil filter. A by-pass oil filter gives that extra cleaning protection which is extremely effective, especially with operation in dusty conditions.

The accompanying illustrations show how a Fram by-pass oil filter is installed on the fanhousing of an engine equipped with an OKRASA conversion kit employing two carburetors.

The most suitable position for the oil filter in the case of the regular VW would be the upper center of the fanhousing as shown. It is advisable to reinforce the fanhousing sheetmetal near the mounting holes to prevent fatigue cracks, or to fit an additional support bracket.

The pressure line to the filter is taken from the oil gallery containing the oil pressure-sending switch. The return line terminates on top of the crankcase as shown. It is not necessary to drill the crankcase, instead proceed as follows: with the 34 hp (40 hp SAE) engine, remove the rear mounting bolt for the fuel pump and substitute a hollow bolt to which the return line is attached. With the older 30 hp (36 hp SAE) engine, substitute a hollow bolt for the retaining stud of the ignition bracket (see drawing).

The illustration also shows the additional oil line cooling spiral which is integrated in the by-pass filter return line. It can be seen that this cooling spiral is fitted with a support bracket in front of the cooling fan air intake so that it is subjected to a forceful cooling air blast.

The cooling effect of the oil return spiral as described is considerable and highly recommended for engines that have been extensively reworked for extra high power output (such as would be the case with an engine with the full-house OKRASA treatment).

A convenient filter location for the Karmann-Ghia would be the left side of the engine compartment (as seen from the rear).

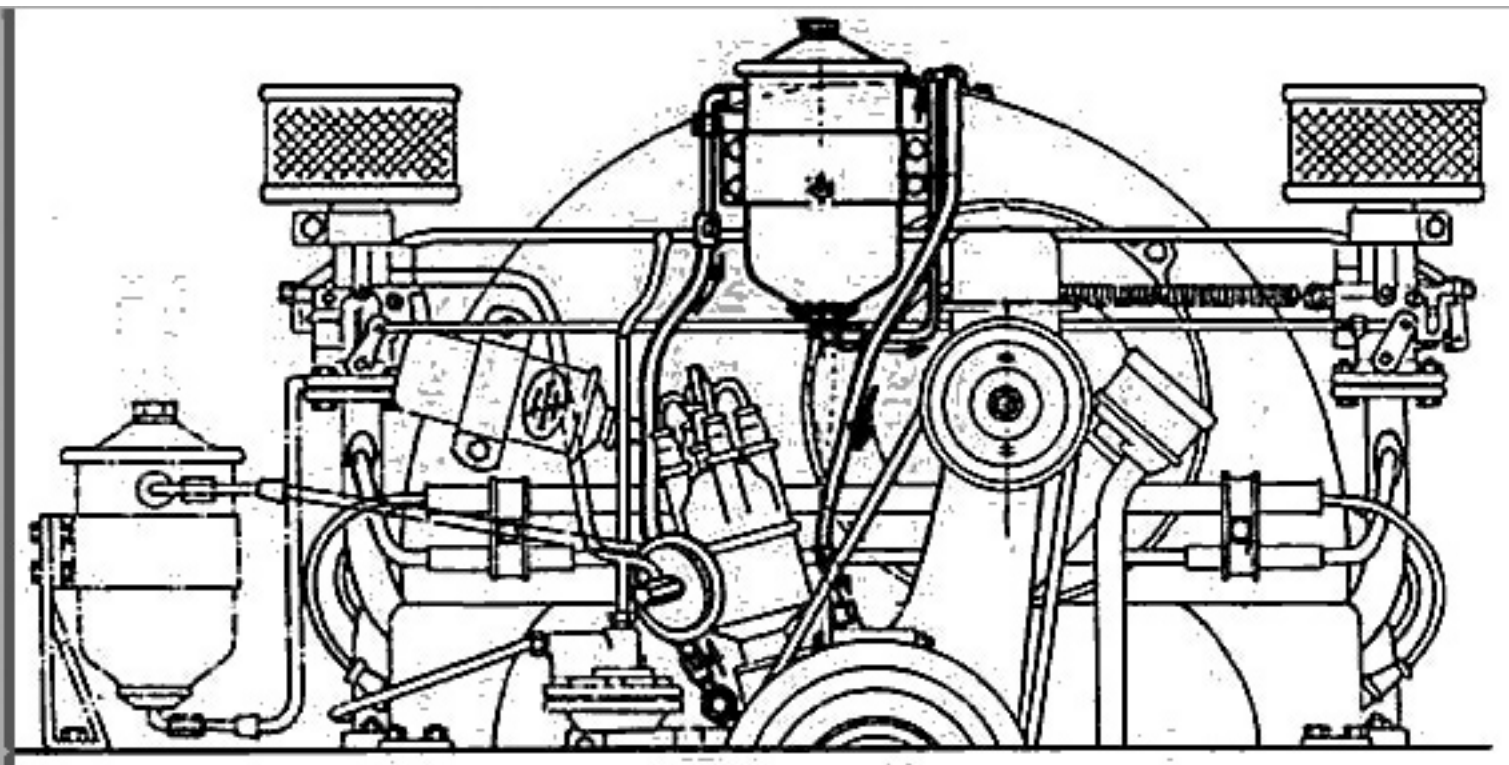
After installation of the by-pass oil filter be sure to check for oil leaks.

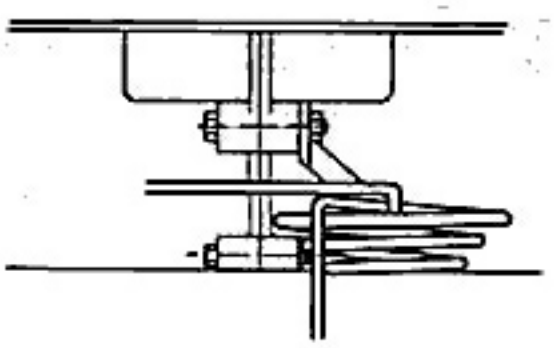
It is not advisable to extend the oil change time intervals after the oil filter has been installed; in other words, change the oil at the recommended intervals. This is especially important with a converted engine called upon to do a lot of work.

On VW sedans and convertibles using the regular single-carburetor layout with oil bath air filter, the by-pass oil filter can be accommodated on the left side of the fanhousing, by repositioning the ignition coil and oil bath air filter.

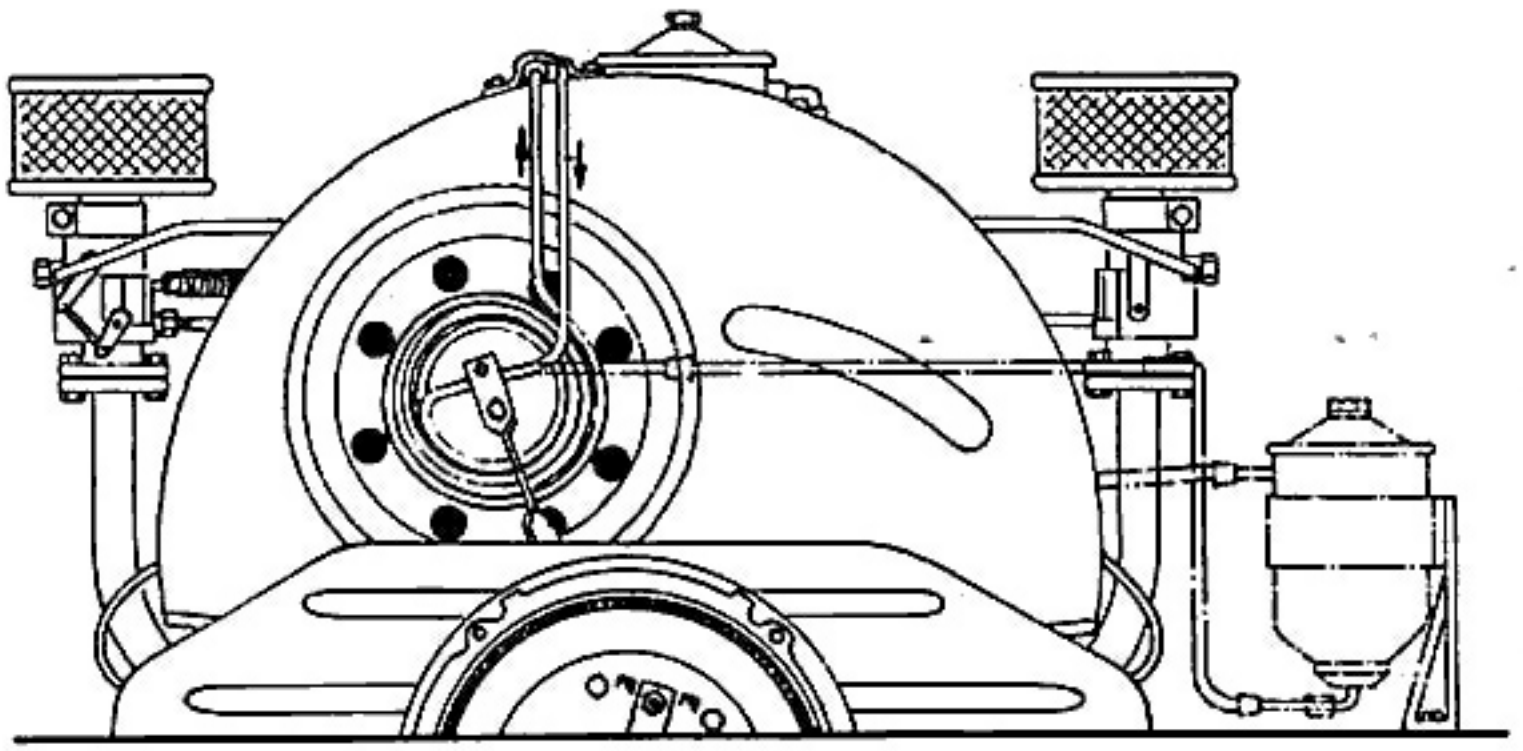
The dotted lines in the illustration on the opposite page show the suggested filter position in the Karmann Ghia. A similar position could also be used in the sedan, although there is not too much room between body and engine.

When using the return line cooling spiral, the air regulator ring (throttle ring) should be eliminated.





Left: top view of return oil line and cooling spiral with its support bracket in front of the cooling blower air intake. The air regulator ring is eliminated

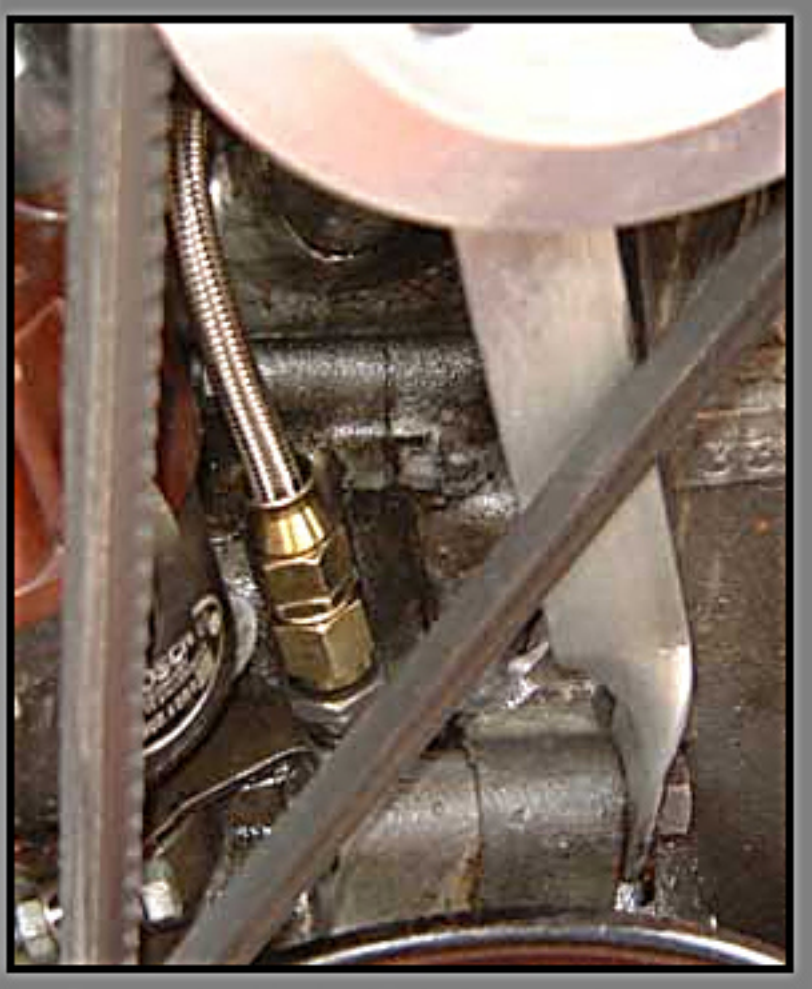


Installation of by-pass oil filter on engine fitted with dual carburetors (30 DIN hp engine). This particular installation also employs a long return oil line which doubles as an oil cooler. The cooler spiral is situated in front of the cooling blower air intake and thus is subjected to the cooling blast of the incoming air (the regulator ring is done away with). The dotted line depicts the installation of the oil filter on the Karmann Ghia. On engines with a single carburetor the oil filter can be fitted on the extreme left of the fanhousing (ignition coil and oil bath filter must be repositioned), or next to the engine with a special support bracket

With a Judson Supercharger and Marvel Oiler in place there is only one obvious location for the Fram Oil Filter, on the right hand side of the engine bay attached to the firewall.

(Notice the smaller bore tubing to the filter inlet than the outlet. This is to avoid drawing too much oil from the crankcase at any one time.)

Outlet from the crankcase is through a "T" piece screwed into the oil pressure outlet.
The original pressure switch is screwed into the end of the "T" piece.



The return line from the filter is routed back into the crankcase through a hollow bolt which replaces the stud that retains the distributor clamp.

Thanks to Alejandro Martin for supplying these two pictures of a oil spiral on an Okrasa engine.