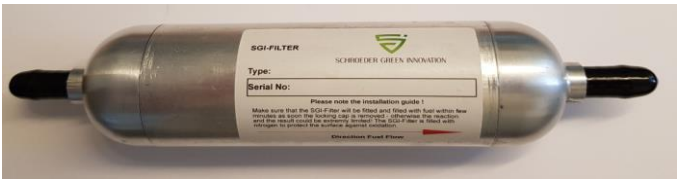
SCHROEDER GREEN INNOVATION

SGI filter installation instruction



These installation instructions are valid for models SGI filters aluminium

SGI filters installation instructions and description

1. Brief description

The SGI system is a chemical-catalytic reactor unit for improving the combustion characteristics in gasoline and diesel engines. By using the SGI filter, higher energy efficiency is obtained due to faster and more uniform combustion combined with more pressure on the piston, as well as full utilization of the fuel (reduction of unburned hydrocarbons). The service life of an SGI filter is approximately 250.000 – 300.000 kilometers. The SGI filter is absolutely maintenance-free during this time, if installed correctly. The storage temperature until installation must not exceed 30°C.

2. The use of an SGI filter results in the following advantages

- ✓ Fuel savings (gasoline or diesel)
- ✓ Improved fuel quality
- ✓ Smoother and quieter starting characteristics and cold running

✓ Extended life of the engine and exhaust system

✓ Reduction of harmful exhaust gases through more efficient combustion. The proportion of soot particles is reduced by approximately 80 percent

A comparison of the engine exhaust emissions with and without SGI filter proves the effectiveness and therefore also the advantages: Fuel savings, easier starting, quieter engine running, reduced emissions for efficient environmental protection are facts that will convince you.

3. Application

The SGI filter can be used for all gasoline and diesel engines.

Caution! ***We strongly recommend using a new fuel hose to install the SGI filter.***

4. Installation instructions:

- Time required for installation is approximately 0.5 - 2.0 hours, depending on model.
- Check the diameter of the fuel line before installing the SGI filter, it may require an additional adapter.
  Attention: **the material of adapters must not contain zinc!**
- During assembly, observe the installation direction, i.e. the arrow points in the direction of flow.
- Find out where the engine fuel line is located (Note - some engines have a fuel line back to the tank. Make sure that the SGI filter is installed in the engine fuel line).

Carefully select the installation location in the engine compartment:

➔ Is there sufficient space for the installation?

➔ Installation should be after the fuel filter and before the injection pump/carburetor. The ambient temperature of the SGI filter must not exceed 130°.

➔ It should be noted that depending on the vehicle type, pressure brackets and connections may have to be created or installed. In addition, the fuel hose may have to be extended.

➔ The SGI filter should be installed 60-70° with the outlet at the top (so that no gas accumulates in the reactor).

The SGI should be placed after the fuel filter and before the injection pump or carburetor.

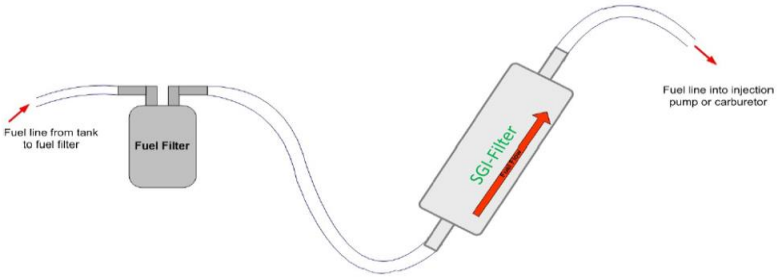


Figure 1. Schematic diagram of SGI filter installation

Caution! After removing the plugs (see Fig. 2), the SGI filter must be filled with fuel within a few minutes (see page 6, item f)). To do this, immediately after installing the filter, turn on the motor for a short time.

➔ Prepare everything carefully before opening the SGI filter sealing caps.

Figure 2. SGI filter caps (see arrows)

➔ Make sure that the arrow on the SGI points in the direction of the fuel flow after installation, as shown in Figure 3.

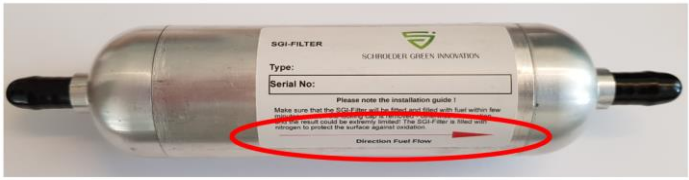


Figure 3. SGI filter - Watch the flow direction!

5. Installation

The SGI filter must be installed with extreme care according to the following instructions, if possible by a qualified specialist. It may be necessary to remove parts of the engine compartment, such as air filters, etc., in order to access the fuel line. The following procedure should be followed:

a) Read the installation instructions carefully

b) Turn off the engine and let it cool down

c) Prepare the necessary tools (knife, pliers, screwdriver, etc.)

d) Disconnect the fuel line between the fuel filter and the injection pump or carburetor. **Be careful and proceed with caution!** When cutting the fuel line, fuel can leak! Pay attention to the general instructions for handling flammable liquids

e) Place the hose clamps over the ends of the shut-off line

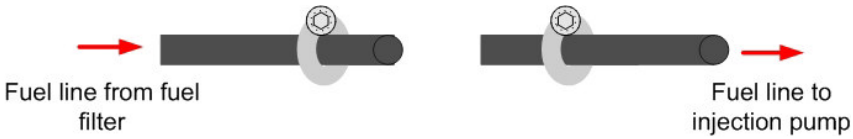


Figure 4. The hose clamps are placed over the fuel hose

f) Remove the SGI filter caps. The SGI filter is filled with nitrogen to protect the working element. **Under no circumstances should air enter the SGI filter for more than 10 minutes, as this will deactivate it, and reactivation will take a longer time!**

Figure 5. Removing the sealing caps

g) Connect the hose ends first to the inlet and then to the outlet of the SGI filter. Make sure that the hose ends are properly seated on the spigot

Figure 6. Hose connection ends with SGI filter

h) Place the hose clamps in the correct position and tighten the screws

Figure 7. SGI filter connected

i) Remove any fuel spillage

j) Start the engine and check the connections for leaks

k) Retighten the bolts and connections if necessary

l) Make sure there are no kinks in the fuel line

m) Place the SGI filter in a slightly tilted vertical position (see picture) using cable ties, with the outlet in the flow direction (arrow) upwards. This prevents air from accumulating in the SGI

n) Repeat the leak test after the first loads under full power

Correct Installation

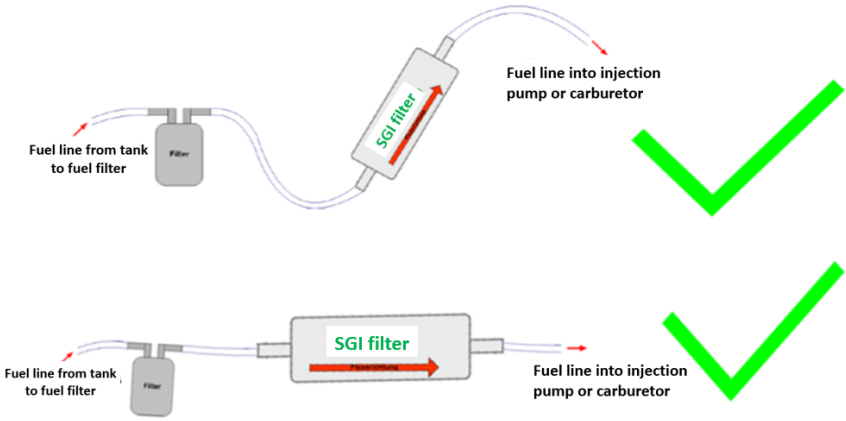


Figure 8. Correctly installed SGI filter

Wrong installation

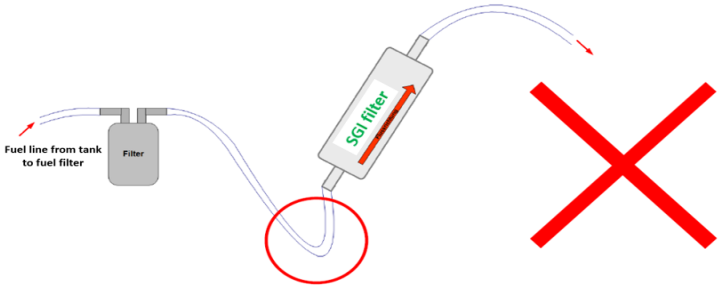


Figure 9. Attention to the kinked hose

Caution! There is a risk of kinking the hose if the fuel hose is laid at an angle.

6. Maintenance

When correctly installed, the SGI filter is maintenance free.

7. Recycling

The SGI filter should be replaced after a maximum of 300.000 kilometers, so that the usual effect is maintained.

Caution!

After installing of the SGI filter, the soot deposits on the engine are first burned off. This process is accompanied by a *temporary* increase in fuel consumption, as well as increased soot emissions, and can last for approximately 1.000 km of driving. After that, consumption drops off rapidly.