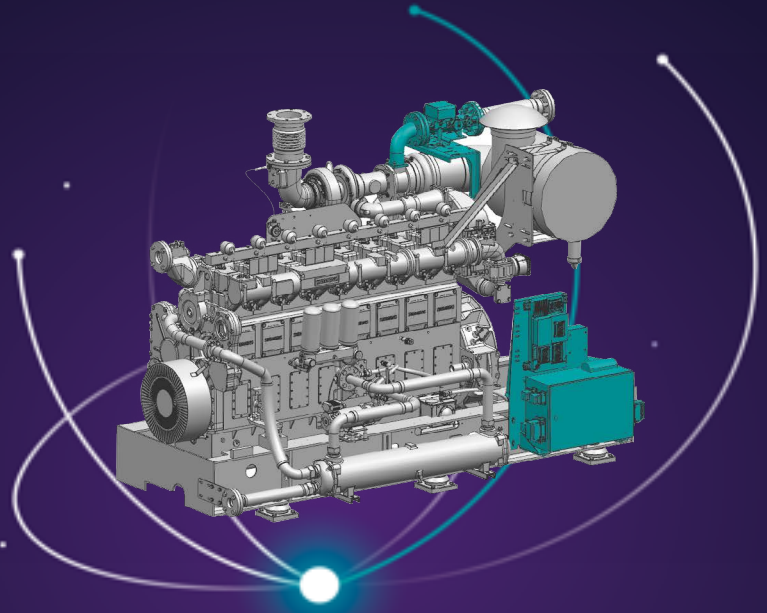


Conversion to Electronic Carburation System

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Background

In engines with mechanical control of carburation may occur decarburation due mainly for the following reasons:

- Change of gas supply conditions such as pressure, temperature, humidity, and composition.
- Change of the ambient temperature or air intake manifold temperature.
- Clogging of air filters.

Currently, the SGE-FL engine with mechanical carburation system has a screw with which is possible to mechanically adjust the level of emissions required when one or several of these circumstances occur.

The main difference comparing the mechanical with electronic control is the carburation system itself and the control system including the ignition system and its components.

The transformation to an electronic control system enables a better control of the carburation in each operation point of the engine and also self-adjust the carburation in case of need.

Product Overview

The kit is basically composed by an electronic gas supply valve and a control system GCS-E. This control system includes a more flexible and complete ignition system than those installed in SGE-FL engines.

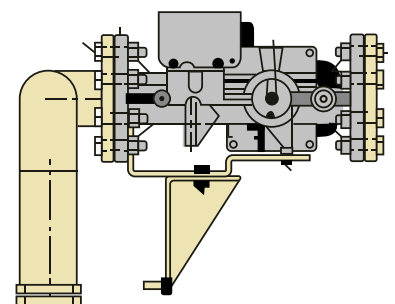


Figure 1 Electronic gas supply valve

The selection of the electronic valve to be implemented depends on the LHV, gas supply pressure and the engine power level.

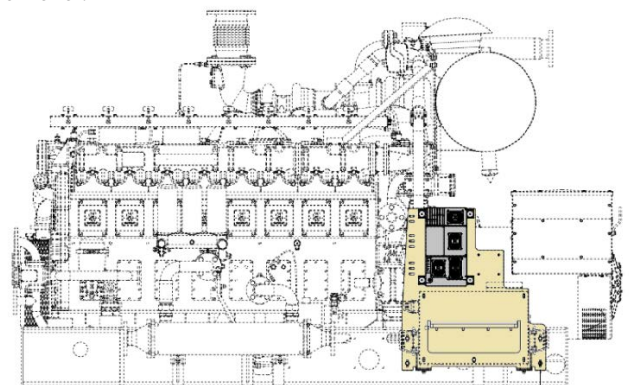


Figure 2 Control System GCS-E

Application

The kit is available for all engines of F series (previously named FGLD) composed by mechanical carburation systems, as seen in the figure 3.

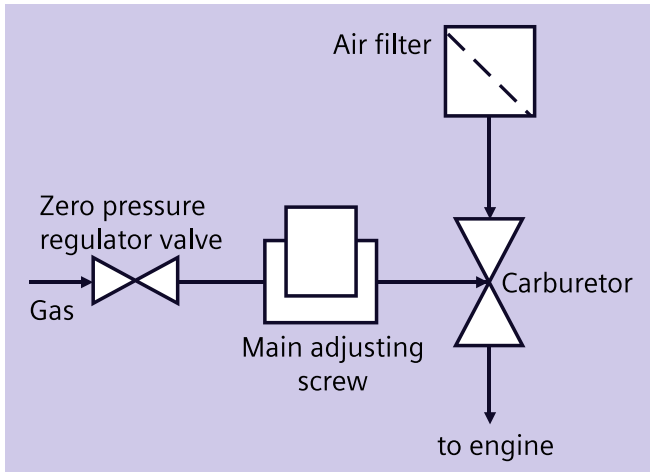


Figure 3 Mechanical carburation system

A previous verification of the existing installation shall be performed to assure that there are no mechanical interferences to implement the kit in the engine.

Schematically this is how the system would be like, after the transformation:

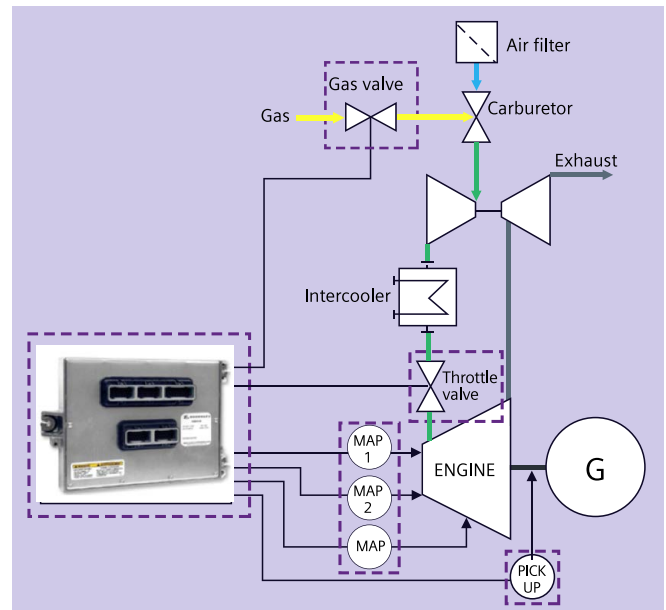


Figure 3 Electronic carburation system

Benefits

There are several benefits that come from the implementation of such kit.

- Better emissions stability and control.
- Higher margin to absorb gas quality variation.
- Less human intervention to recarburate the engine during changes in gas quality and, consequently, more availability of the engine and operational safety.
- Higher performance to be able to work at the optimal carburation point.

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