

Tartarini SGI - sequential injection system - LPG the System

The LPG SEQUENTIAL system is an electronically controlled gas feed system that can be installed in most vehicles with sequential petrol injection.

The system is a multi-point sequential one and is directed by the engine control unit (ecu) that controls the gas injection sequence and timing.

Gas is injected through the injector rails directly into the suction pipes achieving a precise fuel mix to optimise the combustion process. The gas injection timing is obtained by utilising the petrol injection timing with the original ecu of the vehicle.

The SGI system offers the following benefits:

- Compatibility with the vehicles equipped with onboard diagnostics (OBD) systems
- Optimisation of fuel consumption
- Reduction in exhaust emission
- Installation simplicity
- Auto-calibration of vehicle in neutral
- Auto-diagnosis
- Pre-disposition for self-adaptation

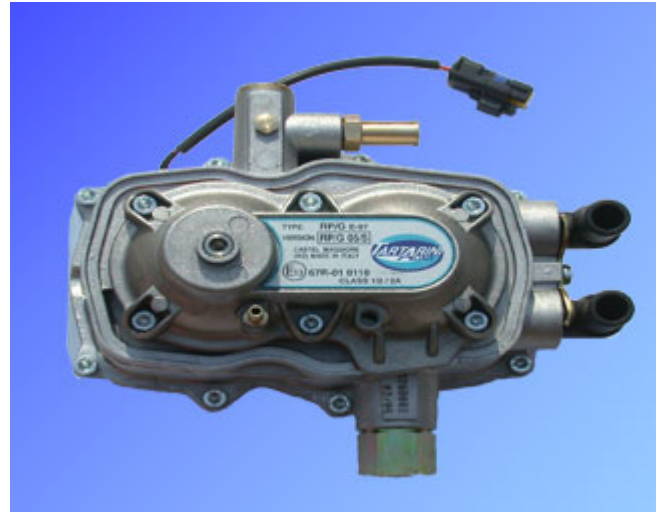


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The Regulator

The LPG regulator-vaporiser is a single-stage type with the one diaphragm and works with the vacuum within the vehicle manifold. The regulator is designed to ensure a higher output pressure than the pressure inside the suction pipes of the engine. The engine coolant flows inside the regulator-vaporiser to ensure optimum vaporisation of the LPG. A solenoid valve complete with filter, a temperature sensor and safety valve are fitted on the regulator casing.



The ECU

The SEQUENTIAL ecu is connected in parallel to the original petrol cpu. The petrol injection timing and engine rpm signals are processed by the sequential ecu and transformed into electric signals controlling the injectors optimising driving quality and fuel consumption.

Once the vehicle has been converted, the installer simply connects a PC and executes the initial set-up of the basic parameters. If the dedicated map for the vehicle being converted is not available in the 'data-base' the installer can still create the map for that vehicle simply by entering the vehicle parameters into the engine management software.

The ecu also offers other functions such as;



- It is pre-programmed to suit the majority of level sensors throughout Europe
- It is pre-programmed to read the majority of lambda probes
- Automatically switches back to petrol if there are any anomalies in the system or if the LPG runs low (audible signal is also triggered)

Additional feature of the ecu is its ability to analyse any system anomalies and to record and diagnose through the ecu itself. It can record the time the vehicle has run on gas and all details can be reset at recommended service schedules.

Injector Rails

The injector rail sequentially injects the gas to each cylinder. Each injector is independent and is controlled by signals sent from the ecu. Precision control enables the optimum amount of gas through each injector and also controls the cut-off safety function.



Switch Unit

This very discreet module is installed inside the vehicle compartment in a convenient location for the driver in either an existing blank or can be cut into the dash with a hot cutter for a very professional finish.



The switch unit has the following functions;

It acts as a 2 -position gas/petrol selector switch and indicates the fuel in use by means of two LED's:

- A yellow one is lit when running of gas
- A red one when running on petrol

The switch displays the amount of gas in the tank/cylinder by means of five LED's four green ones (1/4, 1/2, 3/4 and full) and a red light for the reserve. The switch will inform the driver if there are any anomalies encountered in the Etagas system by means of the red petrol LED starts to flash.

There is also an audible signal.