

LONG-DISTANCE

Controller LPG/CNG for Diesel engines.
Economic solution for long-distance travelers.



STAG DIESEL



STAG[®]
autogas systems

Additional savings

STAG DIESEL

STAG Diesel is an alternative fuelling system for 2-16 cylinder Diesel engines. The whole system has been based on modern technical solutions that allow the mixture of gas and air which later is mixed with Diesel in the cylinder. Installation of the STAG Diesel system does not prevent driving only on Diesel, as our solution does not require interference with internal engine parts. The controller is able to manage intelligently the dosing of both fuels to an engine while it is running, thanks to the readings of sensors: exhaust temperature probe, knock sensor or oxygen sensor (lambda probe).

An advanced algorithm of sequential injection and the innovative system of auto-adaptation ensures the correct fuel ratios within the entire working range of the engine, therefore, the user can quickly observe significant economic benefits.



Advantages and benefits for drivers

- no impact on engine operation with active post-injection,
- smooth switching of the system to on and off,
- savings within the entire engine load range,
- protection of engine components,
- increased efficiency of Diesel combustion,
- increased engine power.



Key features

STAG DIESEL

- operation with Diesel engines up to 8 cylinders in a sequential mode,
- operation with Diesel engines up to 16 cylinders in a full group mode,
- LPG or CNG post injection option,
- advanced algorithm for sequential gas injection,
- precise gas fuel dosing based on the current engine demand, accurate measurement of the volume of Diesel directly from the injectors ensures maximum savings,
- measurement and control of the amount of injected Diesel in vehicles with common rail engines,
- extended algorithm for engine protection,
- controlled exhaust gas temperature for improved safety of the drive unit,
- use of the readings of a wide-band oxygen sensor, control of air-to-fuel rate with an independent wide-band oxygen sensor dedicated to Diesel engines (optional installation for engines without factory-mounted sensors),
- support for cars provided with cruise control,
- support for electronic Petrol/Gas switch type LED401,
- ability to maintain power after conversion in vehicles with common rail engines,
- auto-calibration system,
- modifications of gas injection sequence.

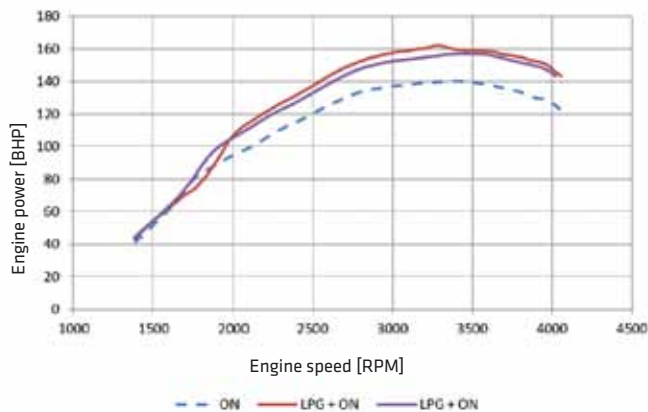


Increase power of engine

STAG DIESEL

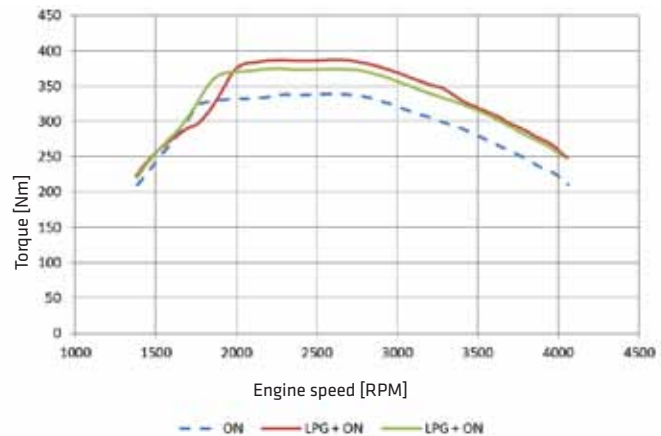
Dual-fuel systems in LPG/CNG/Diesel configuration make it possible to use the energy in Diesel that has not been used before. When autogas installation is properly installed and tuned it is possible to gain a significant increase in power and torque within 10% to 30% in power, while reducing operating costs and improving engine performance.

The system operation principle is based on a very simple mechanism. In mechanical-injection Diesel engines, gas is injected into the intake manifold, thus causing improved Diesel combustion and additional gas combustion, which increases engine power. To maintain the same driving conditions it is only necessary to press the accelerator pedal less intensively, thus saving Diesel fuel, so called saving through adding. The driver has a choice of driving smoothly and enjoying fuel savings, or taking advantage of the increased power of the vehicle, thus deriving measurable benefits. obtaining significant Diesel fuel savings.



Graph 1.

Vehicle power depending on fuel and map settings
(red - more gas, violet - less gas, blue - Diesel)



Graph 2.

Vehicle torque depending on fuel and vehicle settings
(red - more gas, green - less gas, blue - Diesel)

Toyota Hilux

STAG DIESEL

Technical data:

Toyota Hilux

Type: Pick-up

Year of production: 2012

Norm of exhaust gas: EURO 5

Capacity: 2494ccm

Engine: straight, 4 cylinders, turbo

The maximum speed: 170km/h

Power: 106kW

Mover: RWD

Gearbox: Manual 5 gear

Injectors: Diesel piezoelectric injectors



Components LPG:

1. Controller: STAG DIESEL-4
2. Injectors: STAG W01
3. Reducer: STAG R01
4. Pressure sensor: PS-02 PLUS
5. Switch B/G: LED400
6. Level of gas: WPGH

The alternative use

STAG DIESEL



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