TOMASETTO ACHILLE
components for LPG & CNG systems

LPG PRESSURE REGULATOR model AT13 XP

Tomasetto LPG pressure regulators ("reducers") model AT13 XP are homologated according to Regulation ECE 67R and dedicated to automotive LPG sequential systems.

AT13 XP reducers are provided with integrated inlet filter and integrated solenoid valve, and equipped with a double membrane system, that allows to get an increase of LPG outlet pressure when increasing the engine load (Dynamic Pressure Compensation).

Installation and use of the product shall be executed according to prescriptions of Regulation ECE 67R.

Any different use will void warranty and will exclude Manufacturer from any responsibility.

TECHNICAL DATA

	AT13 XP
max inlet pressure	30 bar
outlet pressure	adjustable from 0.9 to 1.8 bar (referred to MAP)
coil voltage - power	12 V DC - 17 W
engine power *	up to 275 kW

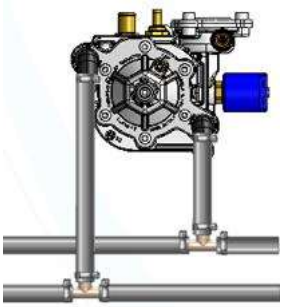
* maximum values, in ideal system and ambient condition

INSTALLATION

- Place the reducer inside the engine compartment, vertically fixed to the chassis, possibly in a position that allows its easy setting and maintenance. Outlet gas connection has to be positioned upwards.
- Install reducer under the level of the drip tray of the engine cooling circuit, avoiding to fix it to the engine or other heating or vibrating elements that may shock or damage it.
- Minimum distance from engine exhaust manifold or other heating elements shall be at least 150mm. If the distance is lower, we recommend the use of a steel diaphragm (1mm thickness) or equivalent material.
- Verify cleanness of pipes, before connection, to avoid impurities entering the regulator.
- Verify that there is no abnormal tension in the connections, to avoid any possible pipes bending.

CONNECTIONS

- Connect inlet pipe to **gas inlet** using the fittings and joints supplied with the product.
- Connect rubber pipe to **gas outlet** using proper clamps. Screw connectors with proper tightening torque, to ensure the fastening. An excessive torque may damage the tubes, affect the regular flow rate and, possibly, lead to leakages.
- Connect the reducer **water circuit** to the engine cooling system, in parallel to the passenger compartment radiator, by means of two T-fittings and proper rubber pipes and clamps.
- Connect the **coil** in accordance with electric diagram of gas ECU, and verify that the wires are electrically insulated.
- Connect the **MAP connection** pipe to the engine intake manifold, close to throttle valve, to allow pressure compensation.

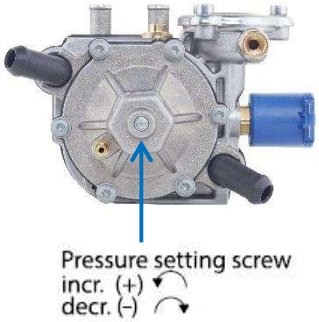


Water circuit connection

After the installation, verify any possible gas leakage presence using gas detectors.
Warning: do not approach the vehicle with flaming objects, such as cigarettes, or elements that may cause sparks. Do not remove the reducers cover screws to connect the NTC sensor.

ADJUSTMENT

After installation, it is necessary to **set** the **injection pressure**, according to the system requirement, by turning the adjusting screw on the reducer cover.
Before pressure setting, warm the reducer to the operating temperature (typically over 50°C). Turn the screw clockwise to decrease pressure, anti-clockwise to increase it.
Considering that the pressure influences the injection timing, adjustment procedure shall be made in accordance with the supplier's Electronic Control Unit guidebook.
Set injection pressure before proceeding with ECU setting at idle, in order to ensure system stability and avoid deviations from the injection setting values.



MAINTENANCE

At least once in a year, or every 20.000 km, it is suggested to maintain the filter unit with proper original kit RGAT2070.
A complete maintenance is recommended every 50.000 km or 3 years, or if the car remained unused for a long time (1 year), by using only the original Tomasetto maintenance kit RGAT2087.
Make a complete revision more frequently in case of dirt or contaminants presence in the water or gas circuit.
Attention: to keep the reducer outlet pressure stable, it is also necessary to do periodic maintenance or replacement of injectors rail filter.

WARRANTY

Manufacturer guarantees that each device has been manufactured according to applicable Regulations and 100% calibrated and tested. Without any different written agreement between the Parties, Tomasetto Achille S.p.a. guarantees that the Products are free from manufacturing defects for a period of 24 months from their production date.
If the Customer claim is covered by warranty and notified within the terms indicated in this paragraph, Tomasetto Achille, at his discretion, will replace or repair each Product or its parts.
The defective product shall be sent to your supplier free of charge, with its accessories, not tampered, accompanied by a document indicating the defect.
In any case, warranty will not cover defects caused by: damages during transport; not proper or wrong use; degradation by normal use; non-compliance with Tomasetto instructions related to use and maintenance of the Products; improper storage; repairs or modifications made by the Customer or by others without previous written authorization by Tomasetto; usage for applications different than automotive.