Resolution ENARGAS Nr. 2947

BUENOS AIRES, January 21, 2004

PURSUANT TO File Nr. 7843 of the ENTE NACIONAL REGULADOR DEL GAS (ENARGAS) Records, Law 24076, Resolution ENARGAS Nr. 138/95, Resolution ENARGAS Nr. 139/95, Resolution ENARGAS Nr. 2603/02, and

WHEREAS:

Item 1.2.3.e) of Resolution ENARGAS 138/95, among other issues, sets forth that the Certification Organizations recognized by this Regulatory Authority shall develop Technical Specifications for those products not foreseen by the applicable standards and shall submit them to ENARGAS which will assess them and eventually include them in the standards.

Due to an initiative of CNG Fuel System Supplier, Volpe GNC, the Instituto del Gas Argentino S.A., as Certification Organization recognized by ENARGAS, submitted a Technical Specification project for the conversion of motorcycles into an alternative gasoline and natural gas propulsion system which complies with the requirements of the CNG fuel system and its installation.

After performing the first feasibility analysis, the project's suitability was prepared and sent to Distribution Licensees, Certification Organizations, Fuel system suppliers, Federal Agency of Firemen and both Motorcycles Chambers for review by virtue of that stated in item 10), Chapter XI, Regulatory Decree 1738/92 of Law 24076 and section 2 of Resolution ENARGAS Nr. 138/95.

The document was reassessed based on the observations made by five individuals or legal entities involved in the CNG system, both Motorcycle Chambers and the Federal Agency of Firemen.

As of the conclusions drawn from the previous paragraph, a new revised version of the Technical Specification project was drafted.

The document was resent to the previously stated agents for them to make the pertinent comments on the revised project.

Once the term for submitting comments was due, the documents delivered by four individuals and legal entities involved in the system were reviewed based on which the project was restructured and the final Technical Specification project was completed.

The final document foresees that cylinders to be installed must comply with the same present requirements applicable to converted motor vehicles.

In addition to that set forth in the previous paragraph, the cylinder and the other installation components must be protected against possible strikes caused by a lateral roll-over of the motorcycle loaded with the maximum allowable axle weight, reinforced with a safety element.

Furthermore, those components shall be protected from damages resulting from impacts or contact with stationary objects, and in case any of these situations arise, loads will be transferred to the motorcycle chassis.

Despite the proposal submitted by one of the individuals or legal entities involved in the CNG system, the final document included the exception of inspecting the installation on a six-month basis, independently of the annual inspection used in the rest of CNG motor vehicle installations with the aim of performing a closer follow-up of the proposed technological innovation.

The document will control the prototype approval and the subsequent control of the corresponding production for each motorcycle make and model.

The motorcycle CNG installation approved according to the document must not jeopardize the vehicle's structural integrity, stability, driving features or

maneuvering capacities during acceleration, braking, stable speed, turning or when it circulates along a straight line.

The CNG fuel system components will be installed as far as possible from heat sources, no less than fifty (50) millimeters from combustion gas channeling and in such a way that they do not project over the motorcycle limits at their installation height.

ENARGAS, exercising its regulatory powers, favors the incorporation of new technologies provided precautions are taken to protect goods, environment and public safety.

In that respect, the necessary regulation for CNG safe use in this type of vehicles must be encouraged.

The motorcycle fuel system conversion to allow them to run with natural gas as an alternative fuel favors the possibility of extending the Liquid Fuels Substitution Program to other types of motor vehicles and to encourage rational use of fuels available in the national energy matrix besides favoring development of new technologies capable of generating other exports and labor sources niches.

ENARGAS has taken the necessary technical precautions to adopt a specification compliant with the procedures stated in the regulation in force and has considered the minimum technical requirements to protect safety.

To include motorcycles as another type of vehicle in the CNG Fuel System Sheet Form and to improve controls, statistical analysis and identification of this type or vehicles, Document Nr. 3 of Annex I, Resolution ENARGAS Nr. 2603 must be modified.

Due to the increasing interest and course of the conversations addressing the use of a gas-oil and natural gas mix for fuelling Diesel motors, which

is under development by this Entity, it would be adequate to include this type of vehicles in said Sheet Form with the same aims defined for motorcycles.

Based on the experience shown after announcement of Resolution ENARGAS Nr. 2603, it is the appropriate opportunity to make other changes in said Sheet Form so as to provide more information about the regulators.

The Ente Nacional Regulador del Gas is empowered to issue this document by virtue of the stipulations included in Section 52 subsection b) of Law 24076, its Regulatory Decree 1738/92 and Resolution ENARGAS Nr. 138/95.

Therefore;

THE ENTE NACIONAL REGULADOR DEL GAS BOARD OF DIRECTORS

RESOLVES:

SECTION 1.- To approve the Technical Specification NAG-E 407 "CNG Fuel System on Motorcycles" included herein as Annex I.

SECTION 2.- To replace Document Nr. 3 of Annex I, Resolution ENARGAS Nr. 2603/02 by Annex II of this Resolution which includes filling-in instructions, for all the indicated operations and types of vehicles.

SECTION 3.- To establish the obligation of using the Document defined in Annex II of this Resolution and the filling-in instructions, after SIXTY (60) running days as of its enforcement and during said interval, the available printed forms prepared according to the model defined in Document Nr. 3 of Annex I, Resolution ENARGAS Nr. 2603/02 may be used.

SECTION 4 – This Resolution shall be effective as of the following day of its publication in the Official Bulletin.

SECTION 5 – Communicate, publish, deliver to the National Bureau of Official Registry and file.

RESOLUTION ENARGAS Nr. 2947

ANNEX I

NAG–E 407

MOTORCYLES

COMPRESSED NATURAL GAS

FUEL

SYSTEM

ANNEX II

CNG

FUEL SYSTEM

TECHNICAL

SHEET

FORM

AND

FILLING-IN

INSTRUCTIONS

ANNEX II

CNG FUEL SYSTEM TECHNICAL SHEET FORM

F1, F2 y F3

PEC **logotype**
Address and telephones
Technical Representative
Professional License Nr.
Installation Workshop Firm Name and address
TdM Tax Identification (CUIT) Nr.

DATE	**Qualification**	**STICKER NR.** OLD NR.
	Expiration	NEW NR.

PEC CODE | **WORKSHOP CODE**

MOTOR

Make | Model | Year

License Plate Nr. | Motor vehicle type | Injection | Yes | No

OPERATION TYPE	CONVERSION **C**
	MODIFICATION **M**
	ANNUAL INSP **R**
WIT	**B**	DISMOUNTING **D**

OWNER:

Name | Street | Nr. | Floor/Apt | Zip Code

Locality | Province | Telephone | Document Type and Nr.

REGULATOR: | Mounting | Without change | Dismounting | Withdrawal | New | Used | **Pressure gauge:** | **Tubing fitting:** | **High pressure tubing**

Code | | | | | | | Code | Code | Code

Serial Nr. | | | | | | | Serial Nr. | Serial Nr. | Serial Nr.

CYLINDERS:

Code	Serial Nr.	New	Used	Manufactured Month/Year	Inspected Month/Year	CRPC	Specify M/SC/D/B		**Cylinder Valve:** Code	Serial Nr.

Cylinder fastening device:	**Gasoline solenoid valve**	**CNG solenoid valve:**	**Dosing app/Mixer:**	**Venting System:**	**Switch**
Code	Code	Code	Code	Code	Code
Serial Nr.	Serial Nr.	Serial Nr.	Serial Nr.	Serial Nr.	Serial Nr.

Internal Fueling Valve:	**External Fueling Valve**	**Low Pressure Hose:**			
Code	Code	Code			
Serial Nr.	Serial Nr.	Serial Nr.			

Notes:

....

....

Installation Workshop:

I DO HEREBY CERTIFY that I have carried out the operation included in this Technical Sheet according to the procedure and training provided by the qualifying PEC pursuant to the standards in force.

TdM Technical Representative
Signature, type or print and License Nr.

Vehicle Owner:

I am aware of the CNG equipment qualification expiration date and I do hereby certify that I have received a copy of the "Guide for the use of CNG equipment" / "Safety recommendations for the use of CNG-propelled motor vehicles"
(cross out the non-applicable one)
THIS DOCUMENT DOES NOT ENABLE CNG REFUELING .

Owner Technical Representative
Signature, type or print and License Nr.

CNG Fuel System Supplier (PEC):

I DO HEREBY CERTIFY that data included herein is true and that the operation was carried out according to ENARGAS standards in force.

Pec Technical Representative
Signature, type or print and License Nr.

ANNEX II

FILLING-IN INSTRUCTIONS FOR THE TECHNICAL SHEET

1. "SC" code in the "Cylinders" field must be used when the operation stated in the technical sheet does not imply changes to the cylinders installed in the motor vehicle.

2. The same criterion stated in 1 shall be used for "Without change" in the "Regulator field".

3. The classification of each vehicle type in the field "Vehicle" shall be established by ENARGAS.