



LE GOUVERNEMENT
DU GRAND-DUCHÉ DE LUXEMBOURG

Ministère des Transports

L-2938 Luxembourg

SOCIÉTÉ NATIONALE DE
CERTIFICATION ET D'HOMOLOGATION
s.à r.l.

Registre de Commerce: B 27180

L-5201 Sandweiler



Référence: E13*110R00*110R00*0042*02

Annexes: - Rapport technique
- Fiche de renseignements du constructeur

Sandweiler, le 08 octobre 2007

INDEX DU DOSSIER D'HOMOLOGATION
INDEX TO TYPE-APPROVAL

	Numéro d'homologation: Approval number:	E13*110R00*110R00*0042*02
	Révision: Revision:	00
	Marque de fabrique ou de commerce: Trade name or mark:	MTM, BRC Gas equipment, <u>IMPCO</u>
	Type: Type:	VB S1
1.	Procès-verbal d'essai: Test report:	N° LCA 54 280 011 7
	- Technical report:	Page(s) 1 to 7;
	- Index:	Annex A - Page(s) 1 & 2.
2.	Dossier du constructeur: Report of the manufacturer:	N° ---
	- Manufacturer's information document:	Page(s) 1 to 22, <u>23 to 36</u> .
3.	Autres documents annexés: Other documents annexed:	not applicable
4.	Date de délivrance de l'homologation initiale: Date of issue of initial type approval:	30.05.2003
5.	Date de la dernière délivrance de pages révisées: Date of last issue of revised pages:	not applicable
6.	Date de la dernière délivrance d'une homologation révisée: Date of last extension:	08.10.2007



Luxcontrol
SA

TECHNICAL REPORT

No.: LCA 54 280 011 7

Inspection concerning the

Specific components of motor vehicles using compressed natural gas (CNG) in their propulsion system

performed according to

ECE – Regulation No. 110- Part I

Type: VB S1
Manufacturer: M.T.M. s.r.l.
Via La Morra, 1
I-12062 Cherasco (CN)

Extension 2 to ECE Type Approval no.: E13*110R00*110R00*0042*00

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E13*110R00*110R00*0042*02
Société Nationale de Certification et d'Homologation
L-5201 SANDWEILER (Luxembourg)
Organisme accrédité OLAS EN 45011
...
Accréditation N° 5/001 (Portée communiquée sur demande)

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BIC: BILLULL



1. **General**

1.1. **Test Provisions**

The inspection was carried out according to the requirements of ECE-Regulation No. 110 including Supplement 6 to the 00 series of amendments entered into force on June 18, 2007.

1.2. **Information concerning the vehicle type and the requested approval**

The statements below apply to the previous ECE type-approval as referred to on page 1.

1.2.1. **Numbering according to the communication concerning the approval of ECE-R110**

[1.] CNG component considered:

Cylinder multivalve

- **Type: VB S1**

- **Version: VB S1, VB A1, VB S1 MY07, VB A1 MY07**

[2.] Trade name or mark:

MTM, BRC Gas equipment, Impco

[3.] Manufacturer's name and address:

M.T.M. s.r.l.

Via La Morra, 1

I-12062 Cherasco (CN)

[4.] If applicable, name and address of manufacturer's representative:

not applicable

[5.] Submitted for approval on: **July 16, 2007 - September 14, 2007**

[10.] Reason(s) of extension:

added versions "VB S1 MY07", "VB A1 MY07", new optional PRD (discharge valve), device part modifications (manual valve, automatic valve, gas tight housing, excess flow valve), alternative O'ring arrangements

1.2.2. **Numbering according to the communication concerning the approval of ECE-R110, Annex 2B -Addendum**

[1.] Additional information concerning the type approval of a type of CNG components pursuant to Regulation No 110:

E13*110R00*110R00*0042*02

Société Nationale de Certification et d'Homologation

L-5201 SANDWEILER (Luxembourg)

Organisme accrédité OLAS EN 45011

Accréditation N° 5/001 (Portée communiquée sur demande)



[1.1.] - [1.2.]	not applicable	
[1.3.]	Pressure relief valve (discharge valve)	
[1.3.1.]	Working pressure(s):	max. 220 bar
[1.3.2.]	Material:	
	- O-rings, washer:	viton, NBR
	- O-rings, BK anti extrusion ring, shutter:	NBR
	- knob, neutral cap, coil cover:	nylon PA6
	- sealing disk:	PA6 35% RFV, PVC
	- see information document for other material detail (metallic parts)	
[1.4.]	Automatic valve(s)	
[1.4.1.]	Working pressure(s):	see item [1.3.1.]
[1.4.2.]	Material:	see item [1.3.2.]
[1.5.]	Excess flow valve	
[1.5.1.]	Working pressure(s):	see item [1.3.1.]
[1.5.2.]	Material:	see item [1.3.2.]
[1.6.]	Gas tight housing	
[1.6.1.]	Working pressure(s):	10 kPa
[1.6.2.]	Material:	see item [1.3.2.]
[1.7.] - [1.8.]	not applicable	
[1.9.]	Pressure relief device (temperature triggered)	
[1.9.1.]	Working pressure(s):	see item [1.3.1.]
[1.9.2.]	Material:	see item [1.3.2.]
[1.10.]	Manual valve(s)	
[1.10.1.]	Working pressure(s):	see item [1.3.1.]
[1.10.2.]	Material:	see item [1.3.2.]
[1.11.] - [1.18.]	not applicable	

2. Inspections and their results

2.1. Version of the tested equipment

The following variants have been used for testing (if not stated in part 1.2.1. of this report):

- versions VB S1 (main report)
- versions "VB S1 MY07" and "VB A1 MY07" (extension 2)



2.2.

Inspection items

	Inspectors	Location of test:	Date of receipt of test item:	Date of test:
Main	D. Durazzi	I-CSI/Bollate (MI)	November 02	Nov 02 –Mar 03
Ext. 1:	D. Durazzi	L-4004 Esch/Alzette	Not applicable	31 August 2005
Ext. 2:	D. Durazzi	I-CSI/Bollate (MI)	July 10, 2007	16/7/07- 14/9/07

2.2.1.

General

The marking requirements according to item 4.1. and 4.2. of Part I of the Regulation are fulfilled.

Every material of the equipment in contact with CNG is compatible with it. The fitting of the CNG-component, approved by this regulation into a full installation of CNG-equipment, must comply with relevant electromagnetic compatibility requirements according to Regulation R10.02 or equivalent. The cylinder multi valve has parts of class 0.



2.2.2. Inspections: (according to Annex 4A; Class 0 device)

Tests	Test results	Line item
Overpressure test	no rupture or permanent distortion at pressure test of 1.5 times the maximum working pressure maintained for a period of 60 seconds	Annex 5A
External leakage test	Leakage from stem or body seals or other joints less than 15 cm ³ / hour under a pressure of twice the maximum working pressure at room temperature, at -40°C and at +85°C.	Annex 5B
High temperature test	Leakage from stem or body seals or other joints less than 15 cm ³ / hour under the maximum working pressure at temperature +85°C, after 8 hours conditioning	Annex 5B
Low temperature test	Leakage from stem or body seals or other joints less than 15 cm ³ / hour under the maximum working pressure at temperature -40°C, after 8 hours conditioning	Annex 5B
Internal leakage test	After previous external leakage tests (annex 5B), no leakage appeared when submitted to pressure test of 1.5 times the maximum working pressure	Annex 5C
Durability test	requirements fulfilled	Annex 5L
CNG compatibility	all plastic parts fulfill the requirements	Annex 5D
Corrosion resistance	requirements fulfilled	Annex 5E
Resistance to dry heat	all plastic parts fulfill the requirements	Annex 5F
Ozone aging	all plastic parts fulfill the requirements	Annex 5G
Temperature cycle	requirements fulfilled	Annex 5H
Vibration resistance	requirements fulfilled	Annex 5N
Operating temperatures	Components designed to operate at temperatures between -40°C and +85°C	Annex 5O
General provisions	requirements fulfilled	Par. 6.1
Provisions regarding automatic valve, check valve, pressure relief valve, pressure relief device and excess flow valve	requirements fulfilled	Annex 4A



2.3. Remarks

Inspection results are only applicable to items, which have been tested.

2.4. Test facilities

Calibration of measuring and test equipment used to carry out the inspections is in accordance with the EEC-Directive and/or ECE-Regulation stated in 1.1. of this report and with ISO 17025.

Inspectors stated under 2.2. of this report were in charge of performing and/or evaluating the tests.

3. Evaluation of test results

3.1. Variants and equipment covered

The tests carried out cover the following variations as far as these are relevant for the gas unit:

- versions and relative accessories configurations as stated in the information document

3.2. Remarks

3.2.1. Main-report:

not applicable

3.2.2. Extension 1:

The added version is covered by previous tests.

3.2.3. Extension 2:

The stated change required new tests to be performed.



4. **Statement of compliance**

The inspections items and measurements carried out have shown the compliance of the vehicle type described in this report and the attached Annex with the requirements of ECE-Regulation No. 110 including Supplement 6 to the 00 series of amendments entered into force on June 18, 2007.

Esch/Alzette, 05 October 2007

Luxcontrol s.a.
Service Homologation-automobile

David Durazzi
Ingénieur-Inspecteur

Mauro Moscardelli
Ingénieur-Inspecteur

Annex



to be corrected:

- gas tight housing working pressure
- the maximum working temperature

to be updated:

- the stated amendment of the regulation

Index to the information folder:

- manufacturer's information document (page 1 to 36)
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