

# INTERNATIONAL CENTRE FOR AUTOMOTIVE TECHNOLOGY

[A Division of NATRiP Implementation Society (NATIS), Govt. of India]

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AM-0177

Date : 13<sup>th</sup> February 2017

## CERTIFICATE

Cert	Brief	Drq	Total
03	07	02	12 pgs

### FOR COMPLIANCE TO THE CENTRAL MOTOR VEHICLES RULES.

- 1 In order to establish compliance to the provisions of CMVR, 1989, applicable as on date, documental verification/necessary testing was carried out, on the following CNG converted, MPFI, "In-Use" Gasoline vehicle model, fitted with O. E. Catalytic Converter, submitted by the CNG Kit Manufacturer / Installer referred below :

<b>Kit Installer / Manufacturer</b>	M/s. Highrise International Pvt Ltd, 3473 ,Second Floor, Street No.6,Nicholson Road, Kashmeri Gate, Delhi - 110 006.		
<b>CNG Kit identification</b>	Highrise		
<b>"IN-USE" BASE MODEL</b>	<b>GVW kg</b>	<b>Engine Power</b>	<b>Engine cm<sup>3</sup></b>
Maruti Wagon R	1510	39.06 kW @ 4500 rpm	998
<b>TYPE</b>	<b>Year of</b>	<b>Seating Capacity (Incl. Driver)</b>	<b>Engine cm<sup>3</sup> Range</b>
Passenger Car	April 2010	5 Persons	748.50 to 1247.50

- 2 Brief & CNG Kit technical specifications No. HIPL/CNG-WR-BSIV-01 dt. 14.11.2016 of the In-Use vehicle model, as declared by the CNG Kit Installer, are enclosed with this certificate.
- 3 It is certified that the above CNG converted "In-Use" Gasoline vehicle model complies with the provisions of the Central Motor Vehicle Rules, 1989, as amended up to date, including following requirements, (as detailed at ANNEXURE - I):

Standards	Notification No.	Date	Effective		CMV Rule
			From	To	
CNG (For In-Use Gasoline Vehicles)	GSR 853(E)	19.11.2001	19.05.2002		115B A. (II)
Type Approval norms for Petrol Vehicles	Idling CO & NMHC	GSR 103(E)	23.02.2012	23.02.2013	115 (2) (i)
	Bharat Stage-IV (For Notified Areas)	GSR 84(E)	09.02.2009	01.04.2010	115 [15 (a),(b)(i)]
		GSR 443(E)	21.05.2010	01.06.2010	
		GSR 504(E)	21.05.2010	01.10.2014	
		GSR 555(E)	14.07.2015	14.07.2015	
Safety Checks for use of CNG Fuels in internal combustion engines vehicles (as per AIS 028) and Indian Gas Cylinder Rules, 2004	GSR 534(E)	24.07.2014	24.07.2015		115B E.

### Compliance of Mass Emission Standards & Validity: (Ref. 115B A.(II) Clause (iv), as per GSR 84(E) dt. 09.02.2009

1. The above CNG converted, "In-Use" base model "Maruti Wagon R (April 2010 make)", fitted with O.E. Catalytic Converter, meets the Bharat Stage-IV norms. Same kit can therefore be fitted on the MPFI vehicles fitted with O.E. Catalytic Converter, between stipulated Engine cylinder capacity range (748.50 to 1247.50 cm<sup>3</sup>) manufactured /registered from 01<sup>st</sup> April 2010 till 31<sup>st</sup> March 2013, subject to specific approval, for layout plan by ICAT, for retrofitment of CNG Kit in each vehicle model.
2. This certificate is valid for the 3 years from the date of its issue or until further amendment in CMV Rules, which ever is earlier.
- 4 This Certificate is issued as per CMV Rule 126, to establish compliance with the Central Motor Vehicles Rules, 1989, and shall not be construed as a certificate of compliance to any rules other than those listed in ANNEXURE-I. Compliance to these rules has been verified based on the use of specific components / parts / assemblies etc. based on which type approval is given. It is the Kit Installer's responsibility to ensure fitment of same components / parts / assemblies etc. before submission of the vehicle for registration.
- 5 This Certificate is issued for the above "In-Use" base model subject to the conditions given at ANNEXURE-II.

### DISCLAIMER

- 1 ICAT issues "Type Approval Certificates" (TAC) for vehicles/ engines/gensets/ parts/ assemblies etc. based on the documents produced and/or prototype / vehicle(s) submitted by the applicant and testing thereof.
- 2 ICAT issues TAC in compliance to Motor Vehicle Act/ Central Motor Vehicle Rules/ Central Pollution Control Board rules and their provisions as amended from time to time or any other statutory orders under which ICAT is authorized. Other Rules/Acts are outside the purview/scope of the TAC.
- 3 Test(s) on prototype /s/are carried out on the basis of standard procedures as notified under specific rules. Results of such tests are property of bearer of TAC. These results cannot be disclosed unless specifically ordered by Government, Court, etc.
- 4 The bearer of the TAC is under the obligation to ensure production strictly as per the provisions of the specific TAC.
- 5 ICAT is not responsible for testing each vehicle/ engines/gensets/ component/part/assemblies etc. for which TAC is issued. Further, ICAT is not responsible for ensuring manufacturing quality of the type approved vehicles/ engines/gensets/ components/ parts/ assemblies etc.
- 6 ICAT is no way responsible for any misuse or copying of any design/type/system in connection with entire vehicle/ engines/gensets/ components/parts and assemblies covered under the TAC.
- 7 Breach of any statutory provision of Indian laws or laws of other countries, will be sole responsibility of the bearer of the TAC and ICAT shall not be liable for any claims or damages. The bearer shall alone be liable for the same, and shall undertake to indemnify ICAT in this regard.
- 8 ICAT has the right, but not under obligation to initiate cancellation / withdrawal of the certificate issued, in case of any fraud, misrepresentation, when it surfaces and comes in the knowledge of ICAT.
- The appropriate local court at Gurgaon shall have the jurisdiction in respect of any dispute, claim or liability arising out of this certificate/report

### AUTHORISED SIGNATORIES,

			
<b>VIJAYANTA AHUJA</b> Asst. GENERAL MANAGER		<b>DINESH TYAGI</b> DIRECTOR	Page 1 of 3

## ANNEXURE – I

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Date : 13<sup>th</sup> February 2017

Following rules are verified and found to be complying.

Rule No.	Sub Rules							
94 - Condition of tyres	(1), (2) & (3)							
95 - Size & Ply rating of tyres    Fr & Rr: 145/80 R13	.....							
112 - Exhaust gases	.....							
113 - Location of exhaust pipes	.....							
115 - Emission of smoke, vapour, etc. from motor vehicle	(1), (2)(i) & 115 [15 (a), (b) (i) ](In CNG mode)							
115 B	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Mass Emission Standards for CNG vehicles</td> <td style="width: 15%;">GSR 853 (E)</td> <td style="width: 15%;">A.(II), b(ii)</td> <td rowspan="2" style="width: 40%;">For in-use Gasoline MPFI Vehicles</td> </tr> <tr> <td></td> <td>GSR 84 (E)</td> <td>A.(II)</td> </tr> </table>	Mass Emission Standards for CNG vehicles	GSR 853 (E)	A.(II), b(ii)	For in-use Gasoline MPFI Vehicles		GSR 84 (E)	A.(II)
	Mass Emission Standards for CNG vehicles	GSR 853 (E)	A.(II), b(ii)	For in-use Gasoline MPFI Vehicles				
	GSR 84 (E)	A.(II)						
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">- CNG Safety Checks for CNG Kit Components and Installation on the vehicle</td> <td style="width: 15%;"></td> <td style="width: 15%;">E</td> <td style="width: 40%;">As per AIS028 and respective standards referred in the Notification No. GSR 534(E) dt. 24.07.2014 in Indian Gas Cylinder Rules, 2004</td> </tr> </table>	- CNG Safety Checks for CNG Kit Components and Installation on the vehicle		E	As per AIS028 and respective standards referred in the Notification No. GSR 534(E) dt. 24.07.2014 in Indian Gas Cylinder Rules, 2004			
- CNG Safety Checks for CNG Kit Components and Installation on the vehicle		E	As per AIS028 and respective standards referred in the Notification No. GSR 534(E) dt. 24.07.2014 in Indian Gas Cylinder Rules, 2004					
124	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%;">The procedure for Type Approval and establishing Conformity of production for components – CNG Pressure Regulator (Model No- Tomasetto AT12, TAC No. CG 0837 dt. 26.07.2016)</td> <td style="width: 15%;">GSR 784(E)</td> <td style="width: 45%;">(4) Sl. No. 5</td> </tr> </table>	The procedure for Type Approval and establishing Conformity of production for components – CNG Pressure Regulator (Model No- Tomasetto AT12, TAC No. CG 0837 dt. 26.07.2016)	GSR 784(E)	(4) Sl. No. 5				
The procedure for Type Approval and establishing Conformity of production for components – CNG Pressure Regulator (Model No- Tomasetto AT12, TAC No. CG 0837 dt. 26.07.2016)	GSR 784(E)	(4) Sl. No. 5						
Mass Emission Test, Fuel Consumption Test (Ref: GSR 84(E) dt. 09.02.2009 and GSR No. 853(E) dt. 19-11-2001)		Meets the requirement of sub clauses (i) & (iii)						

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Emission Test Report No:	(Everest Kanto Cylinder- Suzuki Cat Con – NGK R Spark Plug) C T O P L 0783 Dt.14.12.2016
Case No:	2016-753 (IOCS Ref. :48262)

AUTHORISED SIGNATORIES,		
		
<b>VIJAYANTA AHUJA</b> Asst. GENERAL MANAGER		<b>DINESH TYAGI</b> DIRECTOR

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## ANNEXURE – IA

Date : 13<sup>th</sup> February 2017

**C    A    M    A    0036**

**This Certificate is issued subject to the following conditions:**

i.	The "In-Use" Gasoline vehicle model "Maruti Wagon R (April 2010 make)", retrofitted with CNG kit of M/s. Highrise International Pvt Ltd, 3473 ,Second Floor, Street No.6,Nicholson Road, Kashmeri Gate, Delhi - 110 006., shall have CNG Cylinder and Cylinder Valve approved by Chief Controller of Explosives, Nagpur, for the following :		
	A]	The cylinders are filled at a pressure not exceeding 200 kg/cm <sup>2</sup> at 15° C.	
	B]	The cylinders are subjected to hydraulic stretch test at a pressure of 335kg/cm <sup>2</sup> as required under rules 39to42 of the Gas Cylinders Rules, 2004	
	C]	Other relevant provisions of the said rules are complied with.	
ii.	CNG Gas Injector is of the type and design (Ref. Point 13 of Technical Specifications of CNG system) .		
iii.	Any Change in the CNG System Specifications or Layout will call for recertification.		
iv.	This Certificate is issued by ICAT exclusively for fitment of the CNG system of M/s. Highrise International Pvt Ltd, 3473 ,Second Floor, Street No.6,Nicholson Road, Kashmeri Gate, Delhi - 110 006. (with following CNG Cylinder) on the "In-Use" Gasoline vehicle model "Maruti Wagon R (April 2010 make)", fitted with O.E. Catalytic Converter.		
	CNG Cylinders Option	1	2
	Manufacturer	M/s Everest Kanto Cylinder Ltd.	M/s Rama Cylinders Pvt. Ltd.
	Capacity, Ltr.	60 & 65 (Dia 317 & 356mm) & 70 (356 mm)	60 (Dia 317 & 323mm) & 65 (317 & 356 mm)
	CNG Cylinders Option	3	60 & 65 (Dia 316 & 356mm)
	Manufacturer	M/s Worthington Nitin Cylinders Ltd.	
	Capacity, Ltr.		
	CNG Cylinders Option	4	5
	Manufacturer	M/s Lizer Cylinders Ltd	M/s.Jay Fe Cylinders Ltd
	Capacity, Ltr.	60 & 65 (Dia 317 & 356mm)	60 & 65 (Dia 316,317 & 356mm)
	CNG Cylinders Option	6	60 & 65 (Dia 316 & 356mm) & 70 (356 mm)
	Manufacturer	M/s.Sahuwala High Pressure Cylinder (P) Ltd	
	Capacity, Ltr.		
	The above CNG converted "In-Use" base model meets the Bharat Stage-IV norms. Same kit can therefore be fitted on the MPFI vehicles fitted with O.E. Catalytic Converter, between stipulated Engine cylinder capacity range (748.50 to 1247.50 cm <sup>3</sup> ), manufactured / registered from 01 <sup>st</sup> April 2010 till 31 <sup>st</sup> March 2013, subject to specific approval, for layout plan by ICAT, for retrofitment of CNG Kit in each vehicle model.This certificate is valid for the 3 years from the date of its issue or until further amendment in CMV Rules, which ever is earlier.		
v.	The onus of verification of fitness / proper functioning of CNG system on each and every vehicle, including endorsement as "operation on CNG" by the concerned Registering Authorities, under this Certificate lies with M/s. Highrise International Pvt Ltd, 3473 ,Second Floor, Street No.6,Nicholson Road, Kashmeri Gate, Delhi - 110 006.		
vi	Registering Authorities shall, at the time of registration, verify the CCoE approval for the CNG cylinder and Cylinder Valve, in respect of make / identification no. (as referred in Point 3 & 4 of Technical Specifications of CNG system) and documental reference for Quantity / Sr. No. cleared by DoE, time to time.		
vii.	guidelines:		
	Annexure to AIS 024	Details	Responsibility
	III	Checklist for fitness tests and certification for In-Use vehicles after fitment / conversion to CNG mode	Undertaking by Kit Installer, Verification by RTO
	IV	Safety checks for use of CNG fuels in internal combustion engine vehicles (as per AIS 028) & Indian gas cylinder rules, 2004	CCOE / Test Agency
	V	Criteria to authorize the kit installer and responsibility of vehicle / kit manufacturer / supplier / Installer (Including Inspection, Testing & Commissioning, Garaging & Repairs, etc.)	Vehicle Manufacturer (O.E.) Kit Manufacturer (In-Use)
	VI	Installation Certificate for converted CNG vehicle (A checklist given in the APPENDIX-A under Version 3 may be referred by the Kit Installer at the time of inspection prior to issuing installation certificate)	Undertaking by Kit Installer, Verification by Designated Authority
	VII	Checklist for third party checking or inspection of built-up CNG buses before registration	RTOs before Registration / Designated Authority
	VIII	Checklist for preventive maintenance of In-Use CNG vehicles	Workshop authorised by Kit Installer
	AIS – 028	Code of practice for use of CNG fuel in internal combustion engine vehicles-AIS 028 and respective standards referred in the Notification No. GSR 534(E)dt. 24.07.2014	CCOE / Test Agency
	Applicability of AIS 024 Latest Amendment : Amendment 7 to Version 3 w.e.f. 05.12.2014		

**AUTHORISED SIGNATORIES,**

  <b>VIJAYANTA AHUJA</b> Asst. GENERAL MANAGER	  <b>DINESH TYAGI</b> DIRECTOR	Page 3 of 3
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