

कार्यालय परिवहन आयुक्त, उत्तराखण्ड,  
कुल्हान, सहस्रधारा रोड़, देहरादून।  
संख्या-2836/ TR/23-3(ii)/सी0एन0जी0किट/2021 दिनांक 24 सितम्बर, 2021

### आदेश

केन्द्रीय मोटरयान नियमावली, 1989 के नियम 115 बी में in use वाहनों में सी0एन0जी0 किट लगाये जाने की व्यवस्था की गयी है। इस सम्बन्ध में कार्यालय ज्ञाप संख्या-3460/टी0आर0/5/CNGKIT/2019-2020 दिनांक 04-11-2019 के द्वारा सी0एन0जी0 किट के रिट्रोफिटमेंट हेतु अनुमोदन की प्रक्रिया निर्धारित की गयी है, जिसके अन्तर्गत M/s Motozen Fuel System द्वारा केन्द्रीय मोटरयान नियमावली 1989 के नियम 126 में वर्णित टेस्टिंग एजेंसी ICAT, Manesar द्वारा नार्म्स के अनुरूप होने के प्रमाण संख्या- CAMA-0292 Dated 27<sup>th</sup> December, 2017 , CAMA-0292 R01 Dated 09th July 2021, CAMA-0292\*01 Dated 9th July, 2021, CAMA 0292 L01 Dated 23 January, 2018 प्राप्त कर लिये गये है। उक्त प्रमाण पत्र के आधार पर M/s Motozen Fuel System के सी0एन0जी0 किट मॉडल MFS BSIV(Engine cm<sup>3</sup> Range-898.50 to 1497.50) को in use पेट्रोल चालित वाहन मॉडल Honda Jazz (1198cc) में रिट्रोफिटमेंट कर प्रस्तुत की गयी, जिसका संयुक्त निरीक्षण उप परिवहन आयुक्त (प्रथम) एवं सम्भागीय निरीक्षण (प्राविधिक) देहरादून द्वारा किया गया। उक्त सी0एन0जी0 किट एवं सिलेण्डर/वाल्व का संक्षिप्त विवरण निम्नानुसार है:-

1. Detail of Kit Manufacturer/ Supplier/ Installer- M/s Motozen Fuel Systems  
Dahiya Greens, Sec-17-18 Dividing  
Road, Opp. Green Park, Gurgaon
2. CNG Kit Identification no- MFS BSIV(Engine cm<sup>3</sup> Range-898.50 to 1497.50
3. CNG Cylinder (DOE Approved/Endorsed):

Name of Manufacturer	M/s Everest kaanto cylinder ltd.	M/s Rama Cylinder Pvt. Ltd.	M/s Sahwala High Pressure Cylinder Pvt. Ltd.	M/s Jay Fe Cylinder Ltd.	M/s Lazer Technologies Ltd	M/s EuroIndia Cylinder Ltd.	M/s Beijing Tianhai Industries Co. Ltd.
Identification no	EKC	RAMA	SHPCL/ECON	JFC/TLM13456	LTL	EICL	BTIC
Type	Steel Cylinder	Steel Cylinder	Steel Cylinder	Steel Cylinder	Steel Cylinder	Steel Cylinder	Steel Cylinder
Max test Pressure (kg/cm <sup>2</sup> )/MPa	360/36	340/33.4	335/33	335/33	335/33	335/33	340
Working Pressure (KG/cm <sup>2</sup> )/MPa	200/20	204/20	200/20	200/20	200/20	200/20	204
Cylinder Capacity (water Equivalent)	50,55,60,65,70 ltr (Dia 316mm) 50,53, 55, 58,60, 63,65,70,75,80, 85, 90ltr (Dia 356mm) 50,53,55,58,60, 63, 65, 70, 75,80, 85,90 ltr (Dia 323 8mm)	50,52,53,55,57,58, 60,62,63,65,70,75, 78,80,82,85,90 ltr (Dia 356mm) 50, 55, 60, 65,70, 75,80 ltr (Dia 317mm)	50, 55, 60, 65,70, 75,80,85,90ltr (Dia 325mm) 50, 55, 60, 65,70,75, 80,85,90 ltr (Dia 356 mm) 50, 55, 60, 65,70, 75,80 ltr (Dia 316 mm)	50, 55,58 60,63,65, 70, 75, 78,80,85,90 ltr (Dia 356mm) 50, 50,55,58,60,70,75, 80, ltr (Dia 317 mm)	50, 55, 57,58, 60, 62,63,65,68,70,73, 75,77,78,80,82,85, 90 ltr (Dia 356mm) 50, 55, 57,58,60, 62,63,65,70,75,80, 85 ltr (Dia 317 mm )	50, 60 ltr (Dia 267 mm) 57,60,63,65,70, 75, 80,82,85,90 ltr (Dia 356mm) 50, 55, 60, 65,70,75 80,82, ltr (Dia 316mm)	50,55,60,65,70,80, 90 ltr (Dia 325 mm)
Approval Reference from DOE	G3(42)523/ Dt-06-02-2006	G3(42)553/ DT-11-11-2010 G3(42)515/V1 Dt- 20-05-2011	G3(42)544/01 DT-06-05-2011 G3(42)544/1 Dt- 24-12-2008	G 3(42) 557/1 Dt-22/12/2009	G 3(42)536/1 Dt-10-12-2008	G 3 (42)572/1 Dt-14-10-2011	G3(4)71/BTIC Dated 01-11-2018

**4. Cylinder Valve (DOE approved/endorsed):**

Name of manufacturer	M/s OMB Saleri Spa Italy	M/s Minda Emer Technologies Ltd.	M/s Batra Associate Ltd.	M/s H.M Plastic
Model name/Identification no	Alfa	ME-CVM-001	Batra	HMP
Type	Manual shut off	Manual shut off	Manual shut off	Manual shut off
Working pressure (KG/Cm <sup>2</sup> )	210/21	200/20	200/20	200/20
Max Test pressure (kg/cm <sup>2</sup> )	330/33	300/30	300/30	300/30
Approval refernce form DOE	G-3(4)166 Dt 03/05/2009	G-3(40)230 Dt 05/07/2016	G-3(40)87 Dt 23/11/2011	G-3(40)225 Dt 15/04/2014

**5. ICAT, Manesar द्वारा प्रदत्त CAMA-0292 Dated 27<sup>th</sup> December, 2017 & CAMA 0292 L01 Dated 23 January, 2018 में उक्त सी0एन0जी0 किट एवं सिलेन्डर/वाल्व को निम्न मॉडल वाहन पर लगाये जाने के उल्लेख किया गया है:-**

Sl. No.	Approved Vehicle Model	Engine CC	Mass Emission	ICAT Certificate No.	Validity for the conversion in use vehicles Manufactured & Registered from
1	HONDA JAZZ (Base Model)	1198	BS-IV	CAMA 0292 Date - 27th December 2017	01 <sup>st</sup> April 2010 till 31 March 2013
2	CHEVROLET AVEO	1399		CAMA 0292 L01 Date - 23 <sup>rd</sup> January 2018	- do -
3	CHEVROLET AVEO U-VA	1150		- do -	- do -
4	CHEVROLET BEAT	1199		- do -	- do -
5	CHEVROLET SPARK	995		- do -	- do -
6	FIAT GRAND PUNTO 1.2	1172		- do -	- do -
7	FIAT GRAND PUNTO 1.4	1368		- do -	- do -
8	FIAT LINEA	1368		- do -	- do -
9	FIAT PALIO STILE 1.1	1108		- do -	- do -
10	FORD FIGO	1196		- do -	- do -
11	HONDA AMAZE	1198		- do -	- do -
12	HONDA BRIO	1198		- do -	- do -
13	HONDA CITY	1497		- do -	- do -
14	HONDA ACCENT	1495		- do -	- do -
15	HYUNDAI GETZ 1.1	1086		- do -	- do -
16	HYUNDAI GETZ 1.3	1341		- do -	- do -
17	HYUNDAI I10 1.2	1197		- do -	- do -
18	HYUNDAI I10 1.1	1086		- do -	- do -
19	HYUNDAI I20 1.2	1197		- do -	- do -
20	HYUNDAI I20 1.4	1396		- do -	- do -
21	HYUNDAI SANTRO XING	1086		- do -	- do -
22	HYUNDAI VERNA FLUIDIC 1.4	1396		- do -	- do -
23	MAHINDRA LOGAN	1390		- do -	- do -
24	MAHINDRA VERITO	1390		- do -	- do -
25	MARUTI A STAR	998		- do -	- do -
26	MARUTI ALTO K10	998		- do -	- do -
27	MARUTI EECO (5 SEATER)	1196		- do -	- do -
28	MARUTI EECO (7 SEATER)	1196		- do -	- do -
29	MARUTI ERTIGA	1373		- do -	- do -
30	MARUTI RITZ	1197		- do -	- do -
31	MARUTI SWIFT	1197		- do -	- do -
32	MARUTI SWIFT DZIRE	1197		- do -	- do -
33	MARUTI WAGON R	998		- do -	- do -
34	MARUTI ZEN ESTILO	998		- do -	- do -

35	NISSAN MICRA	1198	- do -	- do -
36	RENAULT PULSE	1198	- do -	- do -
37	SKODA FABIA	1198	- do -	- do -
38	TATA INDICA VISTA	1172	- do -	- do -
39	TATA INDIGO ECS	1193	- do -	- do -
40	TATA MANZA	1368	- do -	- do -
41	TOYOTA ETIOS	1496	- do -	- do -
42	TOYOTA ETIOS LIVA	1197	- do -	- do -
43	VOLKSWAGEN POLO	1198	- do -	- do -


अतः उक्त सी०एन०जी० किट/सिलेंडर/वाल्व को प्रोटोटाइप एजेन्सी द्वारा अनुमोदित विशिष्टताओं के अनुसार उपरोक्त 43 मॉडल वाहनों पर रिट्रोफिटमेंट निम्नलिखित प्रतिबन्धों एवं शर्तों के अधीन किये जाने की अनुमति प्रदान की जाती है:-

1. किट रिट्रोफिटमेंट के साथ वाहन में लगाये जाने वाले ऑटो सीएनजी टैंक एवं मल्टीफंक्शन वाल्व के सुरक्षित होने के सम्बन्ध में सीसीओई के प्रमाण-पत्र की प्रति विक्रय के समय क्रेता को उपलब्ध करायी जाएगी, जिसे क्रेता द्वारा पंजीयन अधिकारी के समक्ष प्रस्तुत किया जाएगा।
2. वाहन में किट रिट्रोफिटमेंट किट निर्माता की अधिकृत कार्यशाला अथवा वाहन विनिर्माता द्वारा ही लगायी जायेगी। इस प्रकार की कार्यशालाओं को जी०एस०टी० प्रमाण-पत्र उपलब्ध कराना अनिवार्य होगा।
3. किट के स्पेसिफिकेशन अथवा ले आउट में किसी प्रकार का परिवर्तन हाने पर इसकी सूचना सम्बन्धित प्रोटोटाइप एजेन्सी को तत्काल देनी होगी और पुनः टाइप एप्रूवल प्राप्त कर प्रस्तुत करना होगा।
4. किट के सम्बन्ध में सुरक्षा प्राविधान केन्द्रीय मोटरयान नियमावली, 1989 के नियम 115ख के बिन्दु (ड) के एनेक्जर IX एआईएस024 और एआईएस028 (आरईवी-1) में समय-समय पर यथा संशोधित -विनिर्धारित सुरक्षा सम्बन्धी अपेक्षाओं का अनुपालन किया जायेगा।
5. प्रत्येक किट स्थापित करने वाला (kit installer) यह सुनिश्चित करेगा कि लगायी जाने वाली किट सुरक्षित है तथा लगाये गये फ्यूल टैंक एवं मल्टीफंक्शन वाल्व के सम्बन्ध में सीसीओई प्रमाण-पत्र प्राप्त कर लिया गया है।
6. ऑटो सीएनजी टैंक वाहन में स्थायी रूप से स्थापित किया जायेगा।
7. ऑटो सीएनजी टैंक निर्माता के स्पेसिफिकेशन के अनुरूप ही लगाया जायेगा।
8. प्रोटोटाइप एजेन्सी से अनुमोदित किट का वाहन में रिट्रोफिटमेंट के पश्चात् विनिर्माता द्वारा वाहन स्वामी को सर्विस मैनुअल आर्वतक निरीक्षण और अनुरक्षण की निर्देशिका, सर्विस, मरम्मत अनुरक्षण हेतु पर्याप्त बुनियादी संरचना प्रदान की जायेगी।
9. किट निर्माता द्वारा किट उपयोगकर्ताओं का समुचित प्रशिक्षण देने की व्यवस्था की जायेगी।
10. किट निर्माता द्वारा केन्द्रीय मोटरयान नियमावली, 1989 के नियम 115ख के बिन्दु (च) के एनेक्जर X के उपबन्धों का अनुपालन सुनिश्चित किया जायेगा।
11. किट निर्माता द्वारा सीएनजी किट के रिट्रोफिटमेंट के समय मोटरयान अधिनियम, 1988 केन्द्रीय मोटरयान नियमावली, 1989 एवं उत्तराखण्ड मोटरयान नियमावली, 2011 की व्यवस्थाओं का अनुपालन करना होगा।

12. किट निर्माता द्वारा मोटर वाहन में विधिमान्य तरीके से किट रिट्रोफिटमेंट न किये जाने और या विधि की व्यवस्थाओं का अनुपालन सुनिश्चित न करने की दशा में अनुमोदन रद्द कर दिया जायेगा।
13. मोटर वाहनों में किट रिट्रोफिटमेंट के सम्बन्ध में किट निर्माता द्वारा परिवहन विभाग के सक्षम अधिकारी द्वारा अपेक्षित सूचनाओं को निर्धारित समय के भीतर उपलब्ध कराना होगा। साथ ही इस विषय में परिवहन आयुक्त द्वारा समय-समय पर जारी आदेशों का अनुपालन सुनिश्चित किया जाएगा।
14. किट निर्माताओं द्वारा अनुमोदन प्राप्त किट ही वाहनों में फिट की जाएगी और ऐसी किट का विवरण सम्बन्धित पंजीयन अधिकारी द्वारा पंजीयन प्रमाण पत्र में प्रविष्ट किया जाएगा।

संलग्न:- प्रोटोटाईप प्रमाण पत्र की प्रति।


15/11/21

  
(सनत कुमार सिंह)  
उप परिवहन आयुक्त,  
उत्तराखण्ड।

संख्या-2836/TR/CNG/2021 तददिनांकित।

प्रतिलिपि:- निम्नलिखित को अनुपालनार्थ हेतु प्रेषित।

- 1-समस्त सम्भागीय/सहायक संभागीय परिवहन अधिकारी, उत्तराखण्ड।
- 2-समस्त संभागीय निरीक्षक (प्राविधिक) उत्तराखण्ड।
- 3-सम्बन्धित पत्रावली।
- 4- M/s Motozen Fuel Systems Dahiya Greens, Sec-17-18 Dividing Road, Opp. Green Park, Gurgaon-122007

  
(सनत कुमार सिंह)  
उप परिवहन आयुक्त,  
उत्तराखण्ड।



# INTERNATIONAL CENTRE FOR AUTOMOTIVE TECHNOLOGY

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

C A M A 0292 R01

Date : 09<sup>th</sup> July 2021

## EXTENSION OF VALIDITY

Cert	Brief	Dwg	Total
01	12	02	15 Pgs

1. This is in continuation to certificate referred below, issued to CNG Kit manufacturer in respect of retrofitment on the model specified therein.

Reference TA Certificate	CNG Kit Manufacturer
Refer Annexure "A"	M/s. Motozen Fuel Systems Pvt Ltd Plot No. B- 9/2, Block-B Phase-1, Landmark Samaypur Baldi Metro Station, Badli Industrial Area, North Delhi, Delhi - 110 042.

2. All conditions and compliance requirement, in respect retrofitment of CNG Kit, given in the certificate referred below, remain unchanged. Brief & CNG Kit Specification (No. Motozen-Wagon R-CNG-2020-21-03-18 dt.18.03.2021) of the in-Use vehicle model, as decalred by the CNG Kit installer, are enclosed with this certificate.

MPPFI, "In-Use" Base Model	Year of Manufacture	Engine cm <sup>3</sup>	Engine CC Range
Honda Jazz	November 2010	1198	898.50 to 1497.50 cm <sup>3</sup>

### ANNEXURE A

Sr. No.	Reference of TA/ Extension/ Layout / Revalidation Certificate	Validity of Certificate			
		Earlier		Revalidated	
		From	To	From	To
1	C A M A 0292	27.12.2017	26.12.2020	27.12.2020	26.12.2023
2	C A M A 0292 L01	23.01.2018			
3	C A M A 0292 *01	09.07.2021	-	-	

Compliance of Mass Emission Standards & Validity: (Ref. 115B (1) A.(II) Clause (a) (iii), as per GSR 589(E) dt. 16.09.2005

The CNG Converted "In-Use" base model meets the Bharat Stage - IV norms, manufactured/ registered from from 01<sup>st</sup> April 2010 to 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.

Emission Test report: Maruti Wagon R, C T O P Q 0544 Dt. 06.07.2021  
(JAYFE Cylinder, Suzuki Cat Con, NGK Spark Plug, Injector : TA10, Regulator : TA01, Interfacing Unit : MP 32)

ICAT Ref No. 2020-1705 (IOCS Ref. : 148355) Please turn over for Disclaimer

#### AUTHORISED SIGNATORY

 ICAT <b>PRASHANT VIJAY</b> DEPUTY GENERAL MANAGER	 ICAT	 ICAT <b>DINESH TYAGI</b> DIRECTOR	 Page 1 of 1
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Office Address : Centre-I Plot No.-26, Sector-3, HSIIDC, IMT-Manesar, Gurugram-122050, Haryana (India)

Centre-II : Plot No -01, Sector-M-11, HSIIDC, Manesar, Gurugram-122051, Haryana (India)

Phone : 0124-4586111, Fax : +91-124-4586112, Email: team@icat.in, Website : www.icat.in

(An ISO 9001, ISO 14001 and DHSAS 18001 Certified, scope NABL accredited and BIS recognised Test House)



Innovation • Service • Excellence

# MOTOZEN

TECHNICAL SPECIFICATION OF GASOLINE FUEL SYSTEMS KIT (DEDICATED/BI-FUEL/DUALFUEL/DEDICATEDDUALFUELAS APPLICABLE)  
 FUEL SYSTEMS PRIVATE LIMITED

ANNEXURE

1. Details of Kit Manufacturer / Supplier / Installer			
a) Name of the manufacturer	M/s. Motozen Fuel Systems Private Limited		
b) Address	Plot No. B-9/2, Block-B Phase-1, Landmark Samaypur Badli Metro Station, Badli Industrial Area, North Delhi, Delhi - 110042		
c) Telephone No. & Fax No.	98448383692 (Mob)		
2. Gas Kit Identification			
a) Identification No.	MFS BSIV		
b) Variants, if any	NA		
c) Fuel system (Dedicated / Bi-Fuel / Dual Fuel / Dedicated Dual Fuel)	Dual Fuel		
d) Type of Dual-fuel system (Type 1A / 1B / 2A / 2B/ 3B)			
e) Fuel (Gas Fuel (Specify Name of fuel) & Gasoline/ Diesel)	GAS FUEL (CNG)		
3. Cylinder Details (PESO approved / endorsed)			
a) Name of manufacturer	M/s. Everest Kanto Cylinder Limited	M/s. Rama Cylinder Pvt. Ltd.	M/s. Sahuwala High Pressure Cylinder(p) Ltd.
b) Identification No.	EKC	RAMA	SHPCL / ECON
c) Type	Steel Cylinder	Steel Cylinder	Steel Cylinder
d) Working pressure (kg/cm <sup>2</sup> )	200/20	204/20	200/20
e) Max. test pressure (kg/cm <sup>2</sup> )	360/36	340/33.4	335/33
f) Cylinder capacity (water equivalent) (liters) and diameter (mm)	50,55,60,65,70 liters Dia 316mm 50,54,55,58,60,64,65,68,70,75,80, ltrs Dia 316mm Dwg. No. 5747003/0)	50,52,53,55,57,58,60,62,63,65,70,75,78,80,82,85,90 ltrs Dia. 356 mm (Dwg.No. R-SC-356-200-7.4 Rev.2)	50,55,60,65,70,75,80,85,90 ltrs Dia. 325mm 50,55,60,65,70,75,80,85,90 ltrs Dia. 356mm Dwg. No SHPCL/417302-0)
g) Approval reference from PESO (PESO compliance with Date)	G.3(42)523 dated 06.02.2006	G.3(42)515/Vdated 20.05.2011 G.3(42)553/I dated 11.11.2010	G.3(42)544/I dated 24.12.2008 G.3(42)544/I dated 17.07.2008 G.3(42)544/III dated 06.05.2011 G.3(42)544/III dated 06.02.2006
h) Number of Cylinders fitted ( schematic drawing)	ONE	ONE	ONE
Manufacturer: Motozen Fuel Systems Private Limited	Document No : Motozen-Wagon R-CHG-2020-21-03-18	Test Agency: ICAT MANESAR	Cert. No: Automotive Technology
Signature:		Signature:	
Name: VIVEK SHARMA	Sheet No : 1 of 14	Designation: Product Vijay	
Designation: Manager, Prod. & Quality	Date : 18-03-2021	Date of Issue: 18/03/2021	Page No 01 of 09

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 E-mail: motozencng@gmail.com, www.motozencng.com

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i) Tare weight of each cylinder(kg)				
<b>3. Cylinder Details (PESO approved / endorsed)</b>				
a) Name of manufacturer	M/s. Jay Fe Cylinders Ltd.	M/s. Lizer Technologies Ltd.	M/s. Euro India Cylinders Limited	M/s. Beijing Tianhai Industry Co. Ltd.
b) Identification No.	JFC/YLM 13456	LTL	EI CL	BTIC
c) Type	Steel Cylinder	Steel Cylinder	Steel Cylinders	Steel Cylinders
d) Working pressure (kg/cm <sup>2</sup> )	200/20	200/20	200/20	204
e) Max. test pressure (kg/cm <sup>2</sup> )	335/33	335/33	335/33	340
f) Cylinder capacity (water equivalent) (liters) and diameter (mm)	50,55,58,60,63,65,70,75,78,80,85,90 ltrs Dia. 356mm (Dwg No. EICL-356-7.5-34CrMo4)	50,55,57,58,60,62,63,65,67,70,73,75,77,78,80,82,85,90 ltrs Dia. 356mm (Dwg. No.LTL/A/V/Y/15)	50,60 ltrs- Dia. 267mm 90 ltrs Dia. 356mm (Dwg. No. EICL-356-7.5-34CrMo4)	50,55,60,65,70,80,90 ltrs Dia. 325mm (Dwg. No. IS325-CrMo-CNG Rev.0)
g) Approval reference from PESO (PESO compliance with Date)	G.3(42)557/I dated 22.12.2009  Batch Certificate: G.3(42)557/P/2017/468 dated 03.10.2017	G.3(42)536/I dated 10.12.2008  G.3(42)536 dated 18.3.2008	G.3(47)572 dated 18.08.2011  50ltrs, 55ltrs, 60ltrs, 65ltrs G.3(42)572/I dated 14.10.2011	CCOE Approval Letter No. G.3 (4) 71/BTIC dated 01.11.2018
h) Number of Cylinders fitted ( schematic drawing)	ONE	ONE	ONE	ONE
i) Tare weight of each cylinder(kg)				
<b>4. Cylinder Valve (s) / Shutoff valve (PESO approved / endorsed)</b>				
a) Name of manufacturer	M/s. DMB Sakeri Spa, Italy	M/s. Minda Emer Technologies Ltd.	M/s. Batra Associate Ltd.	M/s. H.M. Plastic
b) Model name/Identification No.	Alfa	ME-CVM 001	Batra	HMP
c) Type	Manual Shut off	Manual Shut off	Manual Shut off	Manual Shut off
d) Working pressure (kg/cm <sup>2</sup> )	210/21	200/20	200/20	200/20
e) Max. test pressure (kg/cm <sup>2</sup> )	330/33	300/30	30/30	300/30
f) Approval reference from PESO (PESO compliance with Date)	As per drawing 695_Alfa New, CCOE Approval No. G.3(4)166 dtd. 03.06.2009	As per drawing A4D-A-5237 CCOE Approval No. G.3(40)230 dtd. 05.07.2016	As per drawing BV/CNG 1/000 CCOE Approval No. G.3(40)87 dtd. 23.11.2011	As per drawing HMP/CNG/CV/00 CCOE Approval No. G-3(40)225 dtd. 15.04.2014



Manufacturer : Motozen Fuel Systems Private Limited	Document No : Motozen-Wagon R-CNG-2020-21-03-18	Test Agency : ICAT MANESAR	Cert No. :
Signature :		Signature : Prashant Vijay	Seal
Name: VIVEK	Sheet No : 2 of 14	Name	Page No 02 of 09
Designation : Manager Prod. & Quality	Date : 18-03-2021	Designation : Prashant Vijay	DGM Certification Business Unit

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5. Solenoid Valve / Automatic shutoff valve			
a) Name of manufacturer			
b) Model Name / Identification No.	PART OF REGULATOR		
c) Type			
d) Working pressure (kg/cm <sup>2</sup> )			
e) Max test pressure (kg/cm <sup>2</sup> )			
f) Approval reference (Test Report / Approval Number)			
5. Petrol Solenoid Valve			
a) Name of manufacturer			
b) Model Name / Identification No.	NOT APPLICABLE (since the vehicle have fuel injection system, injection cut off relay is used to cut off petrol supply to injector)		
c) Type			
d) Max test pressure (kg/cm <sup>2</sup> )			
7. Refilling valve / Refilling Receptacle			
a) Name of the manufacturer	M/s. Emer, S.r.l. Italy	M/s. OMB Saleri S.p.A	M/s. H.M. Plastic Rajkot
b) Model name / Identification No.	DGM41037GM	C1-C1.0	HMP
c) Type	N25	N25	N25
d) Working pressure (kg/cm <sup>2</sup> )	200/20	200/20	200/20
e) Max test pressure (kg/cm <sup>2</sup> )	300/30	300/30	300/30
6. Pressure Regulator			
a) Name of manufacturer	M/s. Motozen Fuel Systems Private Limited		
b) Model name / Identification No.	AOTOMOTO / TA01	TACNO- CM9040 (Trade Mark- DIGIFUEL ITALY)	
c) Type	CNG ELECTRONIC REGULATOR		
d) Inlet pressure (kg/cm <sup>2</sup> )	200/20		
e) Outlet pressure (kg/cm <sup>2</sup> )	2/0.2 - 4/0.4		
f) No. of stages	TWO		

Manufacturer : Motozen Fuel Systems Private Limited	Document No : Motozen-Wagon R CNG-2020-21-03-18	Test Agency : ICAT MANESAR Signature : <i>[Signature]</i> Name : Prashant Vijay Designation : DGM, Certification Business Unit	Cert No : <i>[Blank]</i>
Signature : <i>[Signature]</i>	Sheet No : 3 of 14	Date of Issue : 18-03-2021	Page No 03 of 09
Name : VIVEK SHARMA			
Designation : Manager Prod. & Quality			

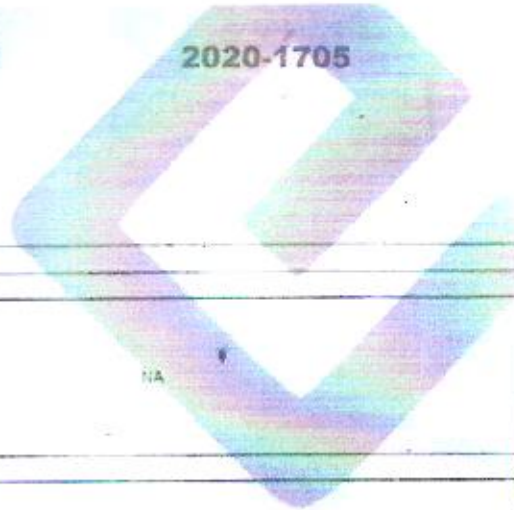
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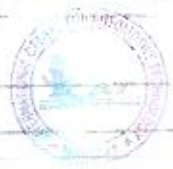


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g) Approval reference (Test Report / TAC compliance with Date)		TAC NO - CM9040				
<b>9. Vaporizer / Heat exchanger (for LNG)</b>						
a) Name of manufacturer						
b) Model name / Identification No.						
c) Type		NA				
d) Inlet pressure (kg/cm <sup>2</sup> )						
e) Outlet pressure (kg/cm <sup>2</sup> )						
f) Approval reference (Test Report / Approval Number)						
<b>10. Filter</b>						
a) Name of manufacturer						
b) Model name / Identification No.						
c) Type		Inbuilt with CNG Pressure Regulator				
d) Inlet pressure (kg/cm <sup>2</sup> )						
e) Outlet pressure (kg/cm <sup>2</sup> )						
<b>11. Oil Pump or Lubrication System, if applicable</b>						
a) Name of manufacturer		NA				
b) Type						
<b>12. High Pressure Tubing</b>						
a) Name of manufacturer		M/s. Autotronics Impex Pvt. Ltd.	M/s. Emer S.P.A., Italy	M/s. Livoo Gas Equipments	M/s. Jaxing E-xon Power Technology Ltd.	M/s. Shiv Shakti Impex.
b) Model name / Identification No.		ST-01 CT0CF 1037	EMER	LEG-HPP-01	HP 01	SSI-P-995-5D-05-6MM*4MM
c) Type (rigid / flexible)		Steel Tube	Steel Tube	Steel Tube	Steel Tube	Steel Tube
d) Working pressure (kg/cm <sup>2</sup> )		215/21.5	200/20	200/20	200/20	300/30
e) Max. test pressure (kg/cm <sup>2</sup> )		700/70	700/70	700/70	700/70	700/70



Manufacturer : Motozen Fuel Systems Private Limited	Document No : Motozen-Wagon R-CNG-2020-21-03-10	Test Agency : ICAT MANESAR	Cert No :
Signature :	Sheet No : 4 of 14	Signature International Center for Automotive Technology	Page No 04 of 07
Name : VIVEK SHARMA		Date : 18-05-2021	
Designation : Manager Prod. & Quality		Designation DGPI Certification Business Unit	



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f) Outer diameter / Inner Diameter (mm)	5/4	6/4	6/4	6/4	6/4
g) Material	PVC Coating	PVC Coating	PVC Coating	PVC Coating	PVC Coating
h) Approval reference (Test Report / Approval Number)	CT18M 5148 dated. 23.05.2017	CT11L 0124 dated. 03.02.2016	CT0806066	CT08M 5009 dated. 18.01.2017	SHL/16/2017-2018/1697/1941 dated. 08.06.2017
<b>13. Low Pressure Tubing</b>					
a) Name of manufacturer	M/s. Superseal Flexible Hose Limited	M/s. Polyhose India (Rubber) Pvt. Ltd.	Gates India Pvt. Ltd.	M/s. Polyhose India (Rubber) Pvt. Ltd.	Gates India Pvt. Ltd.
b) Model name / Identification No.	Superseal X"	Polyhose Fuel/CNG Hose I.D. X"	GATES X INCH (12.5 mm) CNG HOSE	Polyhose Fuel/CNG Hose I.D. 3/16"	GATES X INCH (6.3 mm) CNG HOSE
c) Type	Low Pressure Hose with braided	Low Pressure Hose with braided	Low Pressure Hose with braided	Low Pressure Hose with braided	Low Pressure Hose with braided
d) Working pressure (kg/cm <sup>2</sup> )	2.04	2.04	2.04	2.04	2.04
e) Max test pressure (kg/cm <sup>2</sup> )	48.95	48.95	48.95	48.95	48.95
f) Outer diameter / Inner Diameter (mm)	19.80/12.50	19.4/12.7	19.8/12.7	11.10/4.95	12.7/6.3
g) Material					
h) Approval reference (Test Report / Approval Number)	SHL/239/2014-2015/585/500 dated. 05.03.2015	CT1CK1974 dated. 08.07.2015	SHL/239/2015-2016/717/1057 dated. 19.05.2015	CT2M 5008 dated. 06.09.2016	SHL/239/2016-2017/10620/1338 dated. 19.05.2015

**14. Gas-Air Mixer**

a) Name of manufacturer	
b) Model name / Identification No	
c) Type & drawing	N.A.
d) Venturi Size (mm)	
e) Approval reference (Test Report / Approval Number)	

**15. Gas Injector**

a) Name of manufacturer	M/s. Motozen Fuel Systems Private Limited
b) Model name / Identification No	AUTOMOTO / TA10
c) Type & drawing	TA10-01
d) Injector flow specs	0 BAR
e) Approval reference (Test Report / Approval Number)	CO06Q9148 dated.12/04/21

Manufacturer : Motozen Fuel Systems Private Limited	Document No : Motozen Wagon R CNG-2020-21-03-18	Test Agency :ICAT MANESAR Signature International Centre for Automotive Technology Name Prashant Vijay	Cert No :
Signature : 	Sheet No :5 of 14	Designation : ICG Certification Business Unit	
Name: VIVEK SHRIVASTAVA	Date : 10-07-2021	Date of Issue	Page No 05 of 05
Designation : Manager Prod. & Quality			

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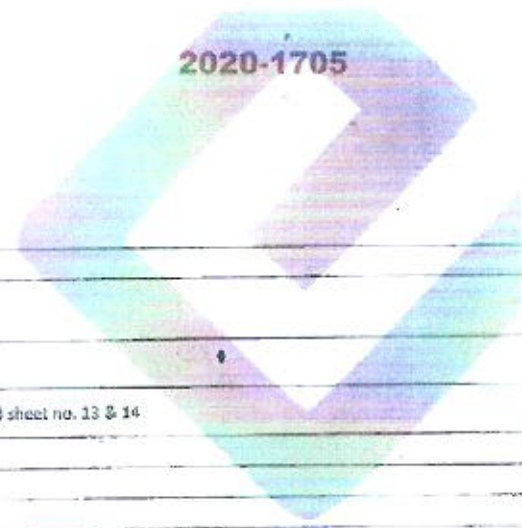
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<b>16. ON / OFF Switch (Fuel selector switch)</b>			
a) Name of manufacturer	M/s. A.E.B. S.p.A, Italy		
b) Model name / Identification No	119B		
<b>17. Ignition System</b>			
a) Name of manufacturer	OE FITTED		
b) Type of Ignition System	Electronic		
c) Spark plug gap mm	1.0 ± 0.05mm		
d) Make	NGK KR6A10		
e) Identification			
<b>18. Wiring Harness</b>			
a) Name of manufacturer	M/s. A.E.B. S.p.A	M/s. A.E.B. S.p.A	
b) Electrical circuit diagram / Detail layout			
c) Approval reference (Test Report / Approval Number)	CTOCI 0799 dated. 15.05.2013	CTOGM 0423 dated. 25.09.2017	
<b>19. Interfacing Unit (ECU)</b>			
a) Name of manufacturer	M/s. A.E.B. S.p.A, ITALY		
b) Identification No.	MP32		
c) Type	Injection Type		
<b>20. Ignition Timing Advancer</b>			
a) Name of manufacturer			
b) Type	NA		
c) Timing on Gas mode			
d) Timing on baseline fuel.			
<b>21. Fuel selector switch</b>			
a) Name of manufacturer	Prefer clause no. 15		
b) Model No			
c) Type			

Manufacturer : Motozen Fuel Systems Private Limited	Document No : Motozen-Wagon R-CNG-2020-21-03-18	Test Agency : ICAT MANESAR	Cert No :
Signature :		Signature International Centre for Automotive Technology	
Name: VIVEK SHARMA	Sheet No : 6 of 14	Name Prashant Vijay	
Designation : Manager Prod. & Quality	Date : 18-03-2021	Designation ICAT Certification Business Unit	Page No 06 of 09



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20. Fuel flow actuation mechanism (Mechanical / Electronic)			
a) Brief description of system (Attach Annexure)			
b) Schematic layout (Attach Drawing)			
c) Identification of critical components of KE (including F-CLI, Lambda sensor, Pressure sensor, temperature sensor etc with Make and Identification number) (Attach Annexure)			
21. Brief Description of System Including Dimensional Layout for Cylinder and other kit components installation ventilation details etc.		Enclosed sheet no. 13 & 14	
22. Joints and connections			
a) Name of manufacturer			
b) Type			
c) Number of joints and connections represented on Drawing (Attach Drawing)			
23. Catalytic Converter OE			
a) Make & Identification Replaced			
M/s. Maruti Car (OE Fitted)			
b) Make & Identification			
NA			
24. Refilling valve interlocking switch (NA for LHS)			
a) Name of manufacturer		M/s. SUNGHO	Dongnan Electronics Co. Ltd.
b) Identification No.		SUNGHO	Dongnan
c) Type		Micro switch with side actuated	Micro switch with side actuated
25. Current limiting Device (Fuse)			
a) Name of manufacturer			
M/s. Protectron Electromech (p) Ltd.			
b) Identification No.			
15A			
c) Voltage / current rating			
12V / 7.5A			
d) Type			
Glass Fuse			

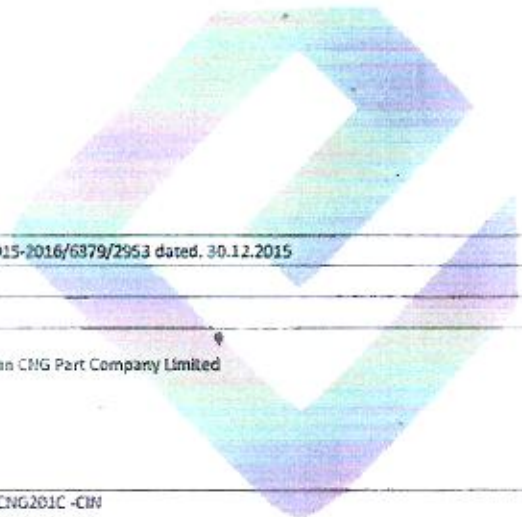


Manufacturer: Motozen Fuel Systems Private Limited	Document No: Motozen Wagon R-CNG-2020-21-03-18	Test Agency: ICAT MANESAR National Centre for Automotive Technology	Cart No:
Signature:		Name:	
Name: VIVEK SHARMA	Sheet No: 7 of 14	Designation: Ashanti Vijay Manager, Business Unit	
Designation: Manager Prod. & Quality	Date: 18-03-2021	Date of Issue	Page No 07 of 09

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e) Approval reference (Test Report / Approval Number)	SHL/239/2015-2016/6979/2953 dated, 30.12.2015		
26. Indicator			
(A) Pressure Indicator			
a) Name of manufacturer	M/s. Human CNG Part Company Limited		
b) Identification No.	CNGauge - CNG201C -CIN		
c) Type	Manometer		
(B) Temperature Indicator (for LNG)			
a) Name of manufacturer	NA		
b) Identification No.	NA		
c) Type	NA		
27. Service shut off valve			
a) Name of manufacturer	NA		
b) Identification No.	NA		
c) Type	NA		
28. Compartment/Sub-compartment / Gas tight housing			
a) Name of manufacturer	NA		
b) Identification No.	NA		
c) Type	NA		
d) Material used			
e) Approval reference (Test Report / Approval Number)			
29. Conduit			
a) Name of manufacturer	M/s. Schlemmer Technology India Private Limited.	M/s. Schlemmer Technology India Private Limited	M/s. Precision Corrugators Pvt. Ltd.
b) Identification / Part No.	VDR / 3036	VDR / 2939	SSI/P/1002/06
c) Inner & outer diameter	30 mm / 36 mm	29 mm / 39 mm	30 mm / 36 mm
d) Type	PVC	PVC	PVC
Manufacturer : Motozen Fuel Systems Private Limited	Document No : Motozen-Wagon R-CNG-2020-21-03-18	Test Agency : ICAT MANESAR	Cert No :
Signature : 		Signature : 	
Name : VIVEK SHARMA	Sheet No : 8 of 14	Name : Prashant Vijay	
Designation : Manager Prod. & Quality	Date : 18-03-2021	Designation : DGM Certification, Bunking Unit	Page No 08 of 09



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e) Approval reference (Test Report / Approval Number)	SHL/239/2014-2015/9044/392 dated 20.02.2015	SHL/239/2014-2015/9044/391 dated 20.02.2015	SHL/239/2017-2018/3418/2544 dated 03.08.2017
30. Details of non-moisture retaining hard rubber / equivalent material padding / lining provided for inner side of the cylinder mounting band(s)			
a) Name of manufacturer	M/s. Livon Gas Equipments		
b) Identification No.	LPG/CNG Pad		
c) Type	EPDM		
d) Number of bands / cylinder (Should be part of layout)			
e) Approval reference (Test Report / Approval Number)	AML/2010-03/7398/938 dtd. 30.03.2010		
31. Battery cut off switch (If applicable)			
(a) Name of manufacturer	NA		
(b) Identification No.	NA		
(c) Type	NA		
32. Labels - Number and position	NA		
33. First Aid Box	NA		
34. Fire Extinguisher ( Number and Type)	NA		
35. Idle rpm	900 +/- 100		
36. Brief Description of System Including Dimensional Layout for Cylinder and other kit components installation ventilation details etc.	Enclosed sheet no. 15 & 16		
37. Any other information	NA		
a.) Petrol ECU Make/ Identification	M/s Danso/33920-67LA		
b.) Oxygen Sensor	NA		
c.) Lambda	Pre-Heated		
Note: In case of OE fitment, if any of the above information is already covered in the information submitted as per AIS-007, only the reference need be given and it is not necessary to duplicate the information.			
Mention NA wherever not applicable			



Manufacturer : Motozen Fuel Systems Private Limited	Document No : Motozen-Wagon R-CNG-2020-21-03 18	Test Agency : ICAT MANESAR	Cert No :
Signature :		Signature : International Centre for Automotive Technology	
Name : VIVEK SHARMA	Sheet No : 9 of 16	Name : Prashant Vijay	
Designation : Manager Prod. & Quality	Date : 18-03-2021	Designation : BGR Certification Business Unit	
		Date of Issue	Page No 09 of 09

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FULL SYSTEMS PRIVATE LIMITED

## ANNEXURE II

## TECHNICAL SPECIFICATIONS OF IN-USE VEHICLES

1.	Manufacturer's name and address	Maruti Suzuki India Limited Gurgaon Plant Old Palam Gurgaon Road Gurgaon - 122015, Haryana
2.	Vehicle Data	
	a) Model	Maruti Wagon R MPFI
	b) Category of Vehicle	Passenger Car
	c) Year and Month of Manufacture	2010 / April
	d) Engine No.	4050837
	e) Chassis No.	MA3EWDF15C0110121
	f) Registration number (Enclose RC copy)	DL2C AL 5894
	g) Application	
3.	Engine	
	a) Make	MARUTI
	b) Model	
	c) Type	Water cooled SOHC
	d) Bore x stroke (mm)	73 x 79.5 (mm)
	e) No. of cylinders	3 (Three) in line
	f) Displacement	998 c.c
	g) Compression ratio	10:01
	h) Max. Engine output (kW @ rpm)	45.6kW @ 6200 RPM
	i) Max. Torque (Nm @ rpm)	90 n-m @ 3500 RPM
4.	Frame	



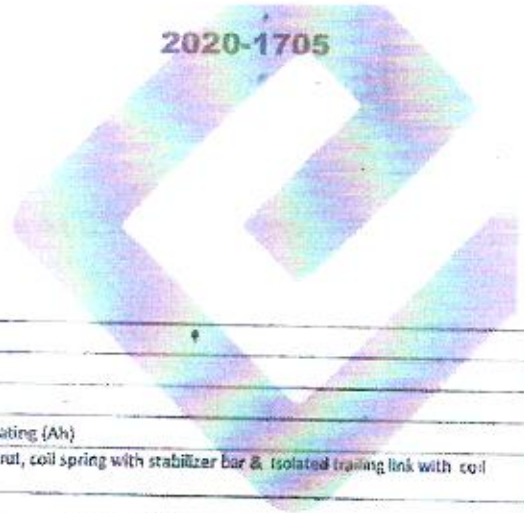
Manufacturer : Motozen Fuel Systems Private Limited	Document No : Motozen-Wagon R-CNG-2020- 21-03-18	Test Agency : ICAT MANESAR	Cert No :
Signature : 		Signature International Centre for Automobile Technology	
Name: VIVER SHARMA	Sheet No : 10 of 14	Designation : Prashant Vijay DGT Certification Resource Unit	
Designation : Manager Prod. & Quality	Date : 18-03-2021	Date of Issue	Page No 01 of 03

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E-mail: motozencng@gmail.com, www.motozencng.com



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	a) Long member size (mm)	2355 mm
	b) Number of cross members	2 nos
5.	Suspension	
	a) Type / Description	b) Battery rating (Ah)
	b) Spring	McPherson strut, coil spring with stabilizer bar & isolated trailing link with coil spring
	c) Anti-roll bar	
6.	Wheels and tyres	
	a) Wheel rim size	
	b) Tyre size designation including ply rating	
	c) Speed index	
	d) Load index / Load rating	Radial, JK TYRE, 145/ 80 R-13
	e) Tyre Type (Radial / Cross / Tube / Tubeless)	
	f) Laden Tyre pressure (front & rear) (kg/cm <sup>2</sup> )	
7.	Electrical system	
	a) System voltage (V)	12 V
	b) Battery rating (Ah)	N/A
8.	Fuel tank	
	a) Material	
	b) Capacity (l)	50 L
9.	Dimensions	
	a) Wheel base (mm)	2400 mm



Manufacturer: Motozen Fuel Systems Private Limited	Document No: Motozen-Wagon R-CNG-2020-21-05-15	Test Agency: ICAT MANESAR	Cert No:
Signature:		Signature:	
Name: VIVEK SHARMA	Sheet No: 11 of 14	Name: Prashant Vijay	
Designation: Manager Prod. & Quality	Date: 18-03-2021	Designation: Prashant Vijay ICAT Certification Business Unit	Date of Issue
			Page No 02 of 03






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FUEL SYSTEMS PRIVATE LIMITED



	b) Overall width (mm)	1475 mm
	c) Overall length (mm)	3595 mm
	d) Overall height (mm)	N/A
	e) Front track (mm)	1295 mm
	f) Rear track (mm)	1290 mm
	g) Min. ground clearance (mm)	165 mm
	h) Cargo box dimensions (mm)	N/A
	i) Load body platform area	3595 mm x 1475 mm = 5302625 mm <sup>2</sup>
10.	Weights	
	a) Maximum GVW (kg)	1350 kg
	b) Maximum GCW (kg)	N/A
	c) Maximum FAW (kg)	700 kg
	d) Maximum RAW (kg)	720 kg
	e) Kerb weight with 90% fuel (with spare wheel, tools, etc.) (kg)	900 to 950 kgs.
	f) Maximum gradeability in 1st gear	7 degree MAX
11.	Seating	
	a) Seating capacity	5
	b) Sketch showing seating layout with dimensions	N/A



Manufacturer : Motozen Fuel Systems Private Limited	Document No : Motozen-Wagon R-CNG-2020-21-03-1R	Test Agency : ICAT MANESAR	Cert No :
Signature : 		Signature : International Centre for Alternative Technology	
Name : VIVEK PARMA	Sheet No : 12 of 14	Name : Prasanth Vijay	
Designation : Manager Prod. & Quality	Date : 18-03-2021	Designation : ICAT Certification Business Unit	Date of Issue
			Page No 03 of 03

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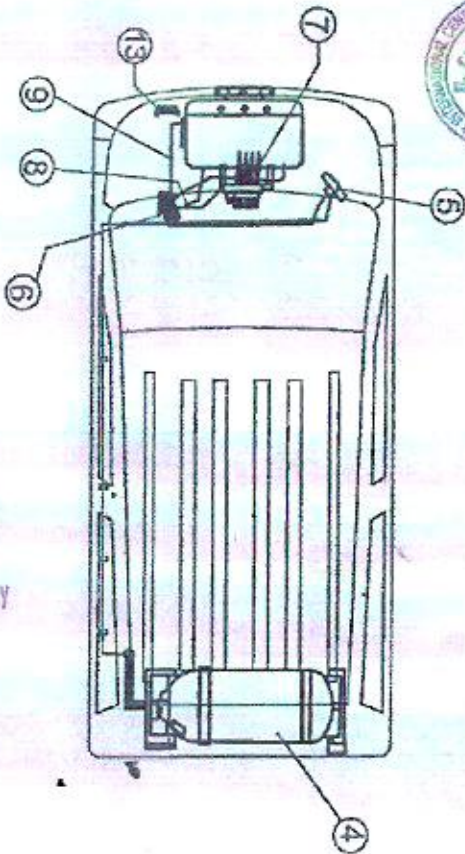
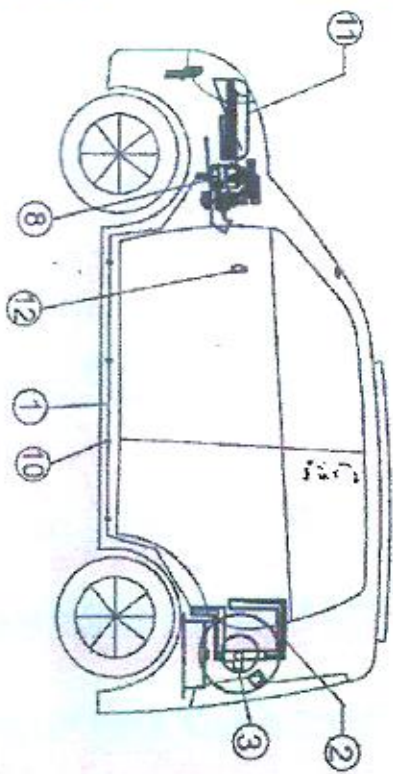
Head Office & Manufacturing  
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GAMA 0292 R0  
**MOTOZEN FUEL SYSTEMS**  
**PRIVATE LIMITED**

JULY 2021

2020-1705



SR. NO.	DESCRIPTION	SR. NO.	DESCRIPTION	SR. NO.	DESCRIPTION
05	REFILLING VALVE	10	LINE CLAMP/SCREW	13	ECU
4	CNG CYLINDER	9	COOLANT HOSE	12	CHANGE OVER SWITCH
3	CNG CYLINDER VALVE	8	LOW PRESSURE HOSE	11	ENGINE
2	DUCTING PIPE	7	INJECTOR RAIL		
1	HIGH PRESSURE STEEL PIPE	6	REDUCER		

SR. NO.

DESCRIPTION

SR. NO.

DESCRIPTION

LAYOUT PLAN OF CNG CONVERSION OF MARUTI WAGON R

DATE

18/03/2021

SHEET NO: 1 of 2



Centre for Automotive Technology  
 Ashant Vijay  
 Application Business Unit

