

**कार्यालय परिवहन आयुक्त, उत्तराखण्ड,  
कुल्हान, सहस्रधारा रोड़, देहरादून।**

संख्या-506 / TR/23-1/सी0एन0जी0किट/2020

दिनांक 12 फरवरी, 2020

**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 Mijo Auto Gas Pvt. Ltd. द्वारा केन्द्रीय मोटरयान नियमावली 1989 के नियम 126 में वर्णित टेस्टिंग एजेंसी ICAT, Manesar द्वारा नार्म्स के अनुरूप होने के प्रमाण संख्या- CAKA-0195 Dated 28th December, 2015, Extension-1 Certificate no-CAKA-0195 E01 dated 06 September, 2016, Extension 2 Certificate no-CAKA-0195 E02 dated 11th December, 2017 तथा वैधता के सम्बन्ध में Extension of Validity Certificate No-CAKA-0195 R01 Dated 30<sup>th</sup> May 2018 प्राप्त कर लिये गये हैं। उक्त प्रमाण पत्र के आधार पर M/s Mijo Auto Gas Pvt. Ltd. द्वारा निर्मित सी0एन0जी0 किट मॉडल-MAGPL OBDII को in use पेट्रोल चालित वाहन मॉडल Honda Brio E MT, BSIV (Engine Capacity-1198 cm<sup>3</sup>) में रिट्रोफिटमेंट कर प्रस्तुत की गयी। जिसका निरीक्षण उप परिवहन आयुक्त एवं सम्भागीय निरीक्षण प्राविधिक द्वारा किया गया है। सी0एन0जी किट एवं सिलेण्डर/वाल्व का संक्षिप्त विवरण निम्नानुसार है:-

**1-Detail of Kit Manufacturer/ Supplier/ Installer-** M/s Mijo Auto Gas Pvt. Ltd.  
(ISO 9001:2008 Company)  
S-110, Badli Industrial Area,  
Phase-I, Delhi  
**2-CNG Kit Identification no-** MAGPL OBDII

**3-CNG Cylinder (DOE Approved/Endorsed:**

Description detail	Fitted	Opt I	Opt-II	Opt-III	Opt-IV	Opt V
Name of Manufacturer	M/s sahuwala High pressure cylinder pvt. Ltd.	M/s Everest kanto cylinder ltd.	M/s Rama Pvt. Cylinder Ltd.	M/s Jay Fe cylinder Ltd.	M/s Lizer Cylinder Ltd	M/s Euro India Cylinder Ltd.
Identification No/Cylinder no	SPHPCL/26857	EKC	RCPL	JCL	LIZER	EURO
Type	Seamless	Seamless	Seamless	Seamless	Seamless	Seamless
Max test Pressure (kg/cm <sup>2</sup> )/MPa	340 kg/cm <sup>2</sup>	340 kg/cm <sup>2</sup>	340 kg/cm <sup>2</sup>	340 kg/cm <sup>2</sup>	340 kg/cm <sup>2</sup>	340 kg/cm <sup>2</sup>
Working Pressure (KG/cm <sup>2</sup> )/MPa	204 kg/cm <sup>2</sup>	204 kg/cm <sup>2</sup>	204 kg/cm <sup>2</sup>	204 kg/cm <sup>2</sup>	204 kg/cm <sup>2</sup>	204 kg/cm <sup>2</sup>
Cylinder Capacity (water Equivalent) and Dia in mm	316mm 50,55,60,65,70,75, 80,85,90 Ltrs 325mm 50,55,60,65,70,75, 80,85,90 Ltrs 356 mm 50,55,60,65,70,75 ,80,85,90Ltrs	267 mm 50,55,60,65,70 Ltrs 316 mm 50,54,55,58,60,64,65,6 8,70,80,85,90 Ltrs 323.8 mm 50,53,55,58,60,63,65,7 0,75,80,85,90Ltrs 356 mm 55,58,60,63,64,65,66,6 7,68,70,73,75,78,80,85, 90 Ltrs	317 mm 50,55,60,65,70,75, 80,85,90 Ltrs 356 mm 50,52,53,55,57,58, 60,62,63,65,70,75,78, 80,82,85,90 Ltrs	317 mm 50,55,58, 60,65,70,75,80, 85,90 Ltrs 356 mm 50,55,58,60,63, 65,70,75,80,85, 90 Ltrs	317 mm 50,55, 57,58, 60,62,63,65,70, 75,80,85,90 Ltrs 356 mm 50,55,57,58,60, 62,63,65,68,70, 73,75,77,78,80, 82,85,90 Ltrs	267 mm: 50,60 Ltrs 316mm: 50,55,60,65,70, 75,80,90 Ltrs 356 mm: 57,60,63,65,75 80,82,85,90 Ltrs
Approval Reference from DOE	G3 (42) 544/I Dt-17-07-2008	G3(42) 523. Dt 06/02/2006	G.3(42)515/II Dt-11-09-2006	G.3(42) 557/I Dt-22/12/2009	G.3(42)536/II Dt-13-8-2010	G.3(42) 572/I Dt- 14/10/2011



#### 4-Cylinder Valve (DOE approved/endorsed):

Description detail	Opt-1	Opt-2	Opt-3	Opt-4
Name of manufacturer	M/s EMER s.r.l Italy	M/s Batra Valves	M/s H.M Plastic	M/s Minda Emer Technologies Ltd.
Model name/ Identification no	Valve 119/CNG EM04-Z	Batra Valve	HMP	MINDA EMER
Type	With fusible plug, burst disc & built in vent	with fusible plug burst disc & built in vent	with fusible plug burst disc & built in vent	with fusible plug burst disc & built in vent
Working pressure (KG/Cm <sup>2</sup> )Mpa	204.4/20 (200 bar)	240 Kg/cm <sup>2</sup>	204 kgf/cm <sup>2</sup>	204 kgf/cm <sup>2</sup>
Max Test pressure (kg/cm <sup>2</sup> ) (Mpa)	309.9/30 (375 bar)	350 kgf/cm <sup>2</sup>	350 kgf/cm <sup>2</sup>	350 kgf/cm <sup>2</sup>
Approval reference form DOE	G.3(4)140 Dt -04-04-2001	G3(40)87, Dt 16-10-2010	G-3(40)225 Dt 22/5/2015	G.3(40) 230 Dt 05-07-2016

5. ICAT, Manesar द्वारा प्रदत्त CAKA-00195 L01 Dated 29th December 2015, CAKA-0195 L02 Dated 27th October, 2016 & CAKA 0195 L03 Dated 12th December, 2017 में उक्त सी0एन0जी0 किट एवं सलेन्डर/वाल्व को निम्न मॉडल वाहन पर लगाये जाने के उल्लेख किया गया है:-

Sl. No.	"In Use Base Model	Engine Cm <sup>3</sup>	Mass Emission	ICAT Certificate No.	Validity for the conversion in use vehicles Manufactured & Registered from
1	HONDA BRIO E MT	1198	Bharat Stage-IV	CAKA 0195 Date - 28th Dec. 2015	1st April 2013 till Validity of BS IV Norms
2	CHEVROLET BEAT	1199		CAKA 0195 L01 Date - 29th Dec. 2015	- do -
3	CHEVROLET ENJOY	1399		- do -	- do -
4	CHEVROLET SAIL HATCHBACK	1199		- do -	- do -
5	CHEVROLET SAIL SEDAN	1199		- do -	- do -
6	CHEVROLET SPARK	995		- do -	- do -
7	DATSUN GO	1198		- do -	- do -
8	DATSUN GO PLUS	1198		- do -	- do -
9	FIAT AVVENTURA	1368		- do -	- do -
10	FIAT LINEA	1368		- do -	- do -
11	FIAT PUNTO EVO ( 1.2)	1172		- do -	- do -
12	FIAT PUNTO EVO ( 1.4)	1368		- do -	- do -
13	FORD ECO SPORT	999		- do -	- do -
14	FORD FIGO ASPIRE	1196		- do -	- do -
15	FORD FIGO	1196		- do -	- do -
16	HONDA AMAZE	1198		- do -	- do -
17	HONDA CITY	1497		- do -	- do -
18	HONDA JAZZ	1199		- do -	- do -
19	HONDA MOBILIO	1497		- do -	- do -
20	HYUNDAI ELITE I20	1197		- do -	- do -
21	HYUNDAI EON	998		- do -	- do -
22	HYUNDAI I10 GRAND	1197		- do -	- do -
23	HYUNDAI I10	1086		- do -	- do -
24	HYUNDAI I20 ACTIVE	1197		- do -	- do -
25	HYUNDAI SANTRO XING	1086		- do -	- do -
26	HYUNDAI VERNA FLUIDIC 1.4	1396		- do -	- do -
27	HYUNDAI XCENT	1197		- do -	- do -
28	MAHINDRA VERITO	1390		- do -	- do -
29	MARUTI ALTO K 10	998		- do -	- do -
30	MARUTI A STAR	998		- do -	- do -



31	MARUTI BALENO	1197	Bharat Stage-IV	- do -	- do -
32	MARUTI CELERIO	998		- do -	- do -
33	MARUTI CIAZ	1373		- do -	- do -
34	MARUTI EECO 5 SEATER	1196		- do -	- do -
35	MARUTI EECO 7 SEATER	1196		- do -	- do -
36	MARUTI EECO CARGO	1196		- do -	- do -
37	MARUTI ERTIGA	1373		- do -	- do -
38	MARUTI RITZ	1197		- do -	- do -
39	MARUTI SWIFT	1197		- do -	- do -
40	MARUTI SWIFT DZIRE	1197		- do -	- do -
41	MARUTI WAGON R	998		- do -	- do -
42	MARUTI WAGON R STINGRAY	998		- do -	- do -
43	MARUTI ZEN ESTILO	998		- do -	- do -
44	NISSAN MICRA	1198		- do -	- do -
45	RENAULT PULSE	1198		- do -	- do -
46	SKODA FABIA	1198		- do -	- do -
47	SKODA OCTAVIA	1395		- do -	- do -
48	TATA BOLT	1193		- do -	- do -
49	TATA INDIGO ECS	1193		- do -	- do -
50	TATA MANZA	1368		- do -	- do -
51	TATA ZEST	1193		- do -	- do -
52	TATA ZICA	1199		- do -	- do -
53	TOYOTA ETIOS	1496		- do -	- do -
54	TOYOTA ETIOS CROSS G	1197		- do -	- do -
55	TOYOTA ETIOS CROSS V	1496		- do -	- do -
56	TOYOTA ETIOS LIVA	1197		- do -	- do -
57	VOLKSWAGEN CROSS POLO	1199		- do -	- do -
58	VOLKSWAGEN POLO	1198		- do -	- do -
59	VOLKSWAGEN VENTO	1197		- do -	- do -
60	FIAT LINEA CLASSIC	1368		CAKA 0195 L02 Date - 27thOct. 2016	- do -
61	FIAT PUNTO PURE	1172		- do -	- do -
62	HONDA BRV	1497		- do -	- do -
63	MAHINDRA KUV 100	1198		- do -	- do -
64	MARUTI GYPSY	1298		- do -	- do -
65	PREMIER RIO	1173		- do -	- do -
66	RENAULT KWID	999		- do -	- do -
67	TATA TIAGO	1199		- do -	- do -
68	VOLKSWAGEN AMEO	1198		- do -	- do -
69	DATSUN REDI GO	999		CAKA 0195 L03 Date - 12thDec. 2017	- do -
70	MARUTI IGNIS	1197		- do -	- do -
71	NISSAN MICRA ACTIVE	1198		- do -	- do -
72	TATA TIGOR	1199		- do -	- do -
73	TATA NEXON	1198		- do -	- do -
74	TOYOTA PLATINUM ETIOS	1496		- do -	- do -
75	HONDA WR-V	1199		- do -	- do -
76	MARUTI TOUR S PETROL	1197		- do -	- do -
77	MARUTI DZIRE	1197		- do -	- do -
78	JEEP COMPASS	1368		- do -	- do -
79	MARUTI SWIFT DZIRE TOUR	1197		- do -	- do -
80	MARUTI DZIRE TOUR	1197		- do -	- do -
81	HYUNDAI XCENT PRIME	1197		- do -	- do -
82	FORD ECO SPORT	1497		- do -	- do -

अतः उक्त सी0एन0जी0 किट/सिलेंडर/वाल्व को प्रोटोटाईप एजेन्सी द्वारा अनुमोदित विशिष्टताओं के अनुसार उक्त मॉडल वाहनों में 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 जायगी। इस प्रकार की कार्यशालाओं को जी0एस0टी0 प्रमाण-पत्र उपलब्ध कराना अनिवार्य होगा।
3. किट के स्पेसिफिकेशन अथवा ले आउट में किसी प्रकार का परिवर्तन होने 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 ही सम्बन्धित पंजीयन अधिकारी द्वारा पंजीयन प्रमाण पत्र में प्रविष्ट किया जाएगा।


संलग्न:- प्रोटोटाईप प्रमाण पत्र की प्रति।

  
(एस0के0सिंह)  
उप परिवहन आयुक्त,  
उत्तराखण्ड।

संख्या-506 /TR/VLT/2019 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 Mijo Auto Gas Pvt. Ltd. (ISO 9001:2008 Company) S-110,  
Badli Industrial Area, Phase-I Delhi-110042

  
(एस0के0सिंह)  
उप परिवहन आयुक्त,  
उत्तराखण्ड।



# INTERNATIONAL CENTRE FOR AUTOMOTIVE TECHNOLOGY

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

Date: 30<sup>th</sup> May 2018

C	A	K	A	0195	R01
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AN-1056

Cert	Brief	Drg	Total
01	09	02	12 pgs

## EXTENSION OF VALIDITY

1. This is in continuation to the certificate referred below, issued to M/s. Mijo Auto Gas Pvt. Ltd. (ISO 9001 : 2008 COMPANY), S-110, Badli Industrial Area, Phase - I, Delhi - 110 042 (India), in respect of retrofitment on the model specified therein.

Sr. No.	Reference of Type Approval	Validity of Certificate			
		Earlier		Revalidated	
		From	To	From	To
1	<b>C A K A 0195 Dt. 28.12.2015</b> (Base Certificate) Issued for CNG In-Use base model "Honda Brio E MT" " 1198 cc -July 2013 make - Bharat Stage - IV	28.12.2015	29.05.2018	30.05.2018	29.05.2021
	Reference of layout / Extension Certificates	From	To	From	To
1	C A K A 0195 L01	29.12.2015	29.05.2018	30.05.2018	29.05.2021
2	C A K A 0195 E01	06.09.2016			
3	C A K A 0195 L02	27.10.2016			
4	C A K A 0195 E02	11.12.2017			
5	C A K A 0195 L03	12.12.2017			

Compliance of Mass Emission Standards & Validity: Ref. 115B (1) A.(II) Clause (iv), as per GSR 84(E) dt. 09.02.2009 & Compliance of safety components as per GSR 643(E) dt. 27.06.2017.

2. The CNG converted "In-Use" base model "Honda Brio E MT" 1198 cc (July 2013 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 cc range (898.5 to 1497.5 cm<sup>3</sup>) manufactured / registered from 01<sup>st</sup> April 2013 till the validity of Bharat Stage IV norms, subject to specific approval, for layout plan by ICAT, for retrofitment of CNG kit in each vehicle model.

3. All conditions and compliance requirements, in respect retrofitment of CNG kit, given in the certificates referred above, remain unchanged. Brief technical & CNG Kit Specification (No. MAGPL TA HB R03 Dt. 14.03.2018) of the In-Use vehicle model, as declared by the CNG Kit Installer, are additionally enclosed with this certificate.

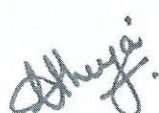

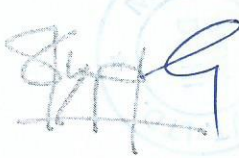

### DISCLAIMER

- 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.
- 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.
- Test(s) on prototype is/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.
- The bearer of the TAC is under the obligation to ensure production strictly as per the provisions of the specific TAC.
- 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.
- 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.
- 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.
- 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 Gurugram shall have the jurisdiction in respect of any dispute, claim or liability arising out of this certificate/report

ICAT Case ref:	2017 - 1443 (IOCS Ref. : 58732)
Emission test report:	Honda Brio E MT, CT0PN 0266 Dt. 07.05.2018(Sahuwala High Pressure Cylinder Pvt. Ltd : Cylinder, Honda : Cat Con, NGK : Spark Plug, Regulator: SR09, Interfacing Unit:ME-10, Gas Injector: MIR01)

### AUTHORISED SIGNATORIES,

 <b>VIJAYANTA AHUJA</b> <b>ASST. GENERAL MANAGER</b>		 <b>DINESH TYAGI</b> <b>DIRECTOR</b>	 <b>AN-1056</b>





TECHNICAL SPECIFICATION

## TECHNICAL SPECIFICATIONS OF CNG CONVERSION KIT

1. Details of Kit Manufacturer / Supplier / Installer			
a. Name of Manufacturer	M/s. MIJO AUTO GAS PVT. LTD. (ISO 9001:2008 COMPANY) S-110, BADLI INDUSTRIAL AREA PHASE-I DELHI-110042. (INDIA) E-mail: info@mijoautogas.co.in Website: www.mijoautogas.co.in PHONE - (011) 27294386, 32588722 TELE FAX - (011) 47550538 Mr. Dipesh Mittal (Mobile) - 09999689995		
b. Telephone No.			
c. Contact Person			
2. CNG Kit Identification			
a. Identification No.	MAGPL OBDII		
b. Variants, if any			
3. CNG Cylinder (DOE Approved / Endorsed)			
Description detail	Fitted	Option I	Option II
A Name of the Manufacturer	M/s. Sahuwala High Pressure Cylinder Pvt. Ltd.	M/s. Rama Cylinder Pvt. Ltd.	M/s. Everest Kanto Cylinder Ltd.
B Identification No. / Cylinder No	SHPL/26857	RCPL	EKC
C Type	Seamless	Seamless	Seamless
D Max. Test Pressure (kg/cm <sup>2</sup> )/(MPa)	340 kg/cm <sup>2</sup>	340 kg/cm <sup>2</sup>	340 kg/cm <sup>2</sup>
E Working Pressure (Kg/cm <sup>2</sup> ) / (MPa)	204 kg/cm <sup>2</sup>	204 kg/cm <sup>2</sup>	204 kg/cm <sup>2</sup>
F Cylinder Capacity (Water Equivalent) and Dia. in mm.	316 mm 50,55,60,65,70,75,80,85,90 ltrs 325 mm 50,55,60,65,70,75,80,85,90 ltrs 356 mm 50,55,60,65,70,75,80,85,90 ltrs	317 mm 50,55,60,65,70,75,80,85,90 ltrs 356 mm 50,52,53,55,57,58,60,62,63,65,70,75,78,80,82,85,90 ltrs	267 mm 50,55,60,65,70 ltrs 316 mm 50,54,55,58,60,64,65,68,70,75,80,85,90 ltrs 323.8 mm 50,53,55,58,60,63,65,70,75,80,85,90 ltrs 356 mm 55,58,60,63,64,65,66,67,68,70,73,75,78,80,85,90 ltrs
G Approval Reference from DOE	G.3(42)544/III dt.-06.05.2011, G.3(42)544/I dt.-17.07.2008, G.3(42)544/I dt.-24.12.2008 Batch Certificate No.- G.3(42)544/P/2015/254/I	G.3(42)553/I dt.-11.11.2010 & G.3(42)515/VI dt.-20.05.2011	G.3(42)523,dt.-06.02.2006

Test Agency ICAT- Gurgaon	Manufacturer: M/s. MIJO AUTO GAS PVT. LTD. (MAGPL)	Document No. (Including also revision status)
Signature:	Signature:	
Name:	Name: Dipesh Mittal	MAGPL TA HB R03
Designation: Prachant Vijay	Designation: Director	
Date:	Date: 14/03/2018	

Page 1 of 6







Description/detail	Option III	Option IV	Option V
Name of the Manufacturer	M/s. Jay Fe cylinder Ltd.	M/s. Lizer Cylinder Ltd.	M/s. EuroIndia Cylinders Ltd.
Identification No./ Cylinder No	JCL	LIZER	EURO
Type	Seamless	Seamless	Seamless
Max. Test Pressure (kg/cm <sup>2</sup> )/(MPa)	340kg/cm <sup>2</sup>	340kg/cm <sup>2</sup>	340kg/cm <sup>2</sup>
Working Pressure (Kg/cm <sup>2</sup> )	204kg/cm <sup>2</sup>	204kg/cm <sup>2</sup>	204kg/cm <sup>2</sup>
Cylinder Capacity (Water Equivalent) and Dia. In mm.	317 mm 50,55,58,60,65,70,75,80,85,90 ltrs 356 mm 50,55,58,60,63,65,70,75,78,80,85,90 ltrs	317 mm 50,55,57,58,60,62,63,65,70,75,80,85,90 ltrs 356 mm 50,55,57,58,60,62,63,65,68,70,73,75,77,78,80,82,85,90 ltrs	267 mm 50,60 ltrs 316 mm 50,55,60,65,70,75,80,90 ltrs 356 mm 57,60,63,65,70,75,80,82,85,90 ltrs
Approval Reference from DOE	G.3(42)557/1 dt.-22.12.2009	G.3(42)536 dt.-18/03/2008 & G.3(42)536/1 dt.-10/12/2008	G.3(42)572 dt.-18/08/2011 & G.3(42)572/1 dt.-14/10/2011

4. Cylinder Valve (DOE approved / endorsed)	Option-1 ✓	Option-2 ✓	Fitted ✓	Option-3 ✓
a. Name of manufacture	M/s. EMER s.r.l, Italy	M/s. Batra Valves	M/s. H.M. Plastic	M/s. Minda Emer Technologies Ltd.
b. Model name/ Identification No.	Vale 119 / CNG - EM04 -Z	Batra Valve	HMP	MINDA EMER/ME-CVM-001
c. Type	With fusible plug, burst disc & built in vent	With fusible plug burst disc & built in vent	With fusible plug burst disc & built in vent	With fusible plug burst disc & built in vent
d. Working pressure (Kg/cm <sup>2</sup> )/(MPa)	204.4 / 20 ( 200 bar)	204kgf/cm <sup>2</sup>	204kgf/cm <sup>2</sup>	204kgf/cm <sup>2</sup>
e. Max. Test pressure (kg/cm <sup>2</sup> )/(MPa)	309.9 / 30 (375 bar)	350 kgf/cm <sup>2</sup>	350 kgf/cm <sup>2</sup>	350 kgf/cm <sup>2</sup>
f. Approval reference from DOE	G.3(4) 140, Dt.-04-04-2001	G-3(40)87, Dt.-06/10/2010	G-3(40)225	G.3(40) 230, Dt.-05/07/2016

5. CNG Solenoid Valve a. Name of manufacturer	M/s. Mijo Auto Gas Pvt.Ltd.(MAGPL)	
b. Model name / Identification no. c. Type	Integral part of the pressure Regulator.	
6. Petrol Solenoid Valve	NA	
7. Refilling Valve		
a. Name of Manufacturer	M/s. Mijo Auto Gas Pvt.Ltd.(MAGPL)	M/s. Mijo Auto Gas Pvt.Ltd.(MAGPL)
b. Model Name / Identification No	MRV (Trade Marks- Mijo, Msequent, Gold AFS)	MRV 02 (Trade Marks- Mijo, Msequent, Gold AFS)
c. Type	NZS type	NZS type
d. Working Pressure (kg/cm <sup>2</sup> )	26.0 mpa	26.0 mpa

Test Agency	Manufacturer: M/s. MIJO AUTO GAS PVT.LTD. (MAGPL)	Document No. (Including also revision status)
Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>	
Name: <i>[Signature]</i>	Name: Dipesh Mittal	MAGPLTAHB R03
Designation: <i>[Signature]</i>	Designation: Director	
Date: <i>[Signature]</i>	Date: 14/03/2018	





**8. Pressure Regulator**

a. Name of Manufacturer	M/s. Mijo Auto Gas Pvt. Ltd. (MAGPL)
b. Model Name / Identification No./TAC NO	SR09 (Trade Marks- Mijo, Msequent, Gold AFS)
c. Type / Sr. No.	Sequential
d. Inlet Pressure (kg/cm <sup>2</sup> ) / (MPa)	200 bar
e. Outlet Pressure (kg/cm <sup>2</sup> ) / (MPa)	0.8 to 3.5 bar
f. Test Report No.	ISR336684, DT-16/09/2015
g. TAC Report No.	CF2941, DT-18/09/2015
h. COP Certificate No.	CC0BM 5077, DT-21/03/2017

**9. CNG Filter**

Integral part of the pressure Regulator

**10. Oil Pump or Lubrication system, if any**

NA

**11. High Pressure Tubing**

a. Name of Manufacturer	M/s. Rispar Fueltek Inc.	M/s. Shiv Shakti Impex	M/s. Highrise International Pvt. Ltd.
b. Model Name / Identification No.	RFI-6	SSI-P-999-5D-05	HIGHRISE KIA-HP-01
c. Type	PVC STEEL TUBES	PVC STEEL TUBES	PVC STEEL TUBES
d. Working Pressure (Mpa)	28.17 Mpa	28.17 Mpa	28.17 Mpa
e. Max. Test Pressure (Mpa)	70 Mpa	70 Mpa	70 Mpa
f. Outer Diameter / Inner Dia.	6mm / 4mm	6mm / 4mm	6mm / 4mm
g. Protection Quality (material used)	PVC Steel	PVC Steel	PVC Steel
h. Approval reference no.	Report No.- CT0BM5170, Dt- 12.6.2017	Rep. No.-SHL/16/ 2017-18/1697/1941 Dt- 08.06.2017	Report No.-CT0BM5009, Dt-18.1.2017

**12. Low Pressure Tubing**

a. Name of Manufacturer	M/S. GATES INDIA LTD.	M/S. GATES INDIA LTD.
b. Model Name / Identification No.	Gates 3/8 Inch (9.5mm) CNG	Gates 1/4 Inch (6.3mm) CNG
c. Type	Hose, J30R6 21 BAR WP 48 BAR	Hose, J30R6 21 BAR WP 48 BAR
d. Working Pressure (kg/cm <sup>2</sup> )	Low pressure CNG hose	Low pressure CNG hose
e. Max. Test Pressure (kg/cm <sup>2</sup> )	21bar	21bar
f. Outer Diameter / Inner Diameter	48bar	48bar
g. Protection Used / Test Report No.	15.8mm/9.5mm	12.7mm/6.3mm
	SHL/239/2016-2017/10620/1343, Dt-11/04/2017	SHL/239/2016-2017/10620/1338, Dt-11/04/2017

**13. Gas Injector Rail**

a. Name of Manufacturer	M/s. Mijo Auto Gas Pvt. Ltd. (MAGPL)
b. Model Name / Identification No.	MIR01 (Trade Marks- Mijo, Msequent, Gold AFS)
c. Type	Gas Injector type
d. Working Pressure (kg/cm <sup>2</sup> )	-40 to +120°C





Test Agency ICAT - Gurgaon	Manufacturer: M/s. MIJO AUTO GAS PVT. LTD. (MAGPL)	Document No. (Including also revision status)
Signature:	Signature:	MAGPL TA HB R03
Name: Prashant Vijay	Name: Dipesh Mittal	
Designation: Designation: Director	Designation: Director	
Date: 14/03/2018	Date: 14/03/2018	Page 3 of 6

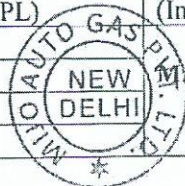






14. ON / OFF Switch a. Name Of Manufacturer b. Model name / Identification No. c. Type	PART OF ECU MIJO ELECTRONIC SWITCH
15. Ignition System a. Name of manufacturer b. Type of Ignition system c. Spark plug gap	OE Fitted Standard Ignition System 0.8 to 0.9 mm
15A. Wiring Harness (for CNG System) (Ref. Clause A11 of Table 2 of AIS 007) a. Name Of Manufacturer b. Model name / Identification No. c. Type d. Electrical circuit diagram	M/s. Jiaying Lineng Autogas Equipment Co., Ltd. ME-10 PVC Insulated Copper Separately enclosed
16. ECM / Interfacing Unit a. Name of manufacturer b. Model Name / Identification No. c. Type	M/s. Jiaying Lineng Autogas Equipment Co., Ltd. ME-10 (Trade Marks- Mijo, Msequent, Gold AFS) Sequential Type
17. Brief Description of System Including Dimensional Layout for Cylinder and Other kit component installations, Ventilation details etc.	CNG comes out from the cylinder through the cylinder valve & goes to the engine compartment through a high-pressure pipe, which is also connected to the refueling system. The engine compartment contains the regulator where the pressure of CNG is reduced from 200 bars to (1-3) bars. From the regulator the CNG goes to the injector rail which is located on the intake manifold. It releases the flow of gas according to the requirement of the engine. The regulator allows gas to flow through the engine only when engine is running and the switch is in the gas position and the supply of fuel is control by ECM.
18. Refilling Valve interlocking switch a. Name of manufacturer b. Identification No. c. Type	Part of Refilling valve Interlocking

Test Agency ICAT - Centre for Automotive Technology	Manufacturer: M/s. MIJO AUTO GAS PVT. LTD. (MAGPL)	Document No. (Including also revision status)
Signature: 	Signature: 	MAGPL TA HB R03
Name: Prashant Vijay	Name: Dipesh Mittal	
Designation: DGM Certification Business Unit	Designation: Director	
Date: 14/03/2018	Date: 14/03/2018	



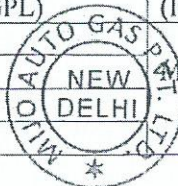




<b>19. Catalytic Converter</b>			
a. Make		OE fitted	
b. Model		5X0M1422	
<b>20. Current limiting Device (Fuse)</b>			
a. Name of manufacturer		M/s. Protectron Electromech Pvt. Ltd.	M/s. Mijo Auto Gas Pvt. Ltd. (MAGPL) (Customer)
b. Identification No.		PTF 200 15A	IMP 7.5
c. Voltage / current rating		15A	7.5A
d. Type		Moulded	Moulded
<b>21. Conduit</b>			
a. Name of manufacturer		M/s. Tubicor	
b. Identification No.		VDH/2939	
c. Inner & outer diameter		29mm / 39mm	
d. Type		PVC with spring cored	
e. Report No.		Rep.No-SHL/239/2005-06/5257/1376 , Dt.-6.12.05	
<b>22. Details of Seat / Upholstery / roof and side Lining</b>			
a. Name of manufacturer		O.E Fitted.	
b. Identification No.			
c. Type			
<b>23. Details of non-moisture retaining hard Rubber / equivalent material padding / Lining provided for inner side of the cylinder mounting band(s).</b>			
a. Name of manufacturer		M/s. Mijo Auto Gas Pvt. Ltd. (MAGPL)	
b. Identification No.		MIJO	
c. Type		EPDM	
d. Report No.		Rep No-AML/2005-01/NK/CM/3775/710, Dt-31.01.05	
<b>24. Timing Advancer</b>			
a. Name of manufacturer		N.A.	
b. Type			
c. Timing on CNG mode			
d. Timing on baseline fuel.			



Test Agency ICAT- Gurgaon	Manufacturer: M/s. MIJO AUTO GAS PVT. LTD. (MAGPL)	Document No. (Including also revision status)
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Name: Prashant Vijay	Name: Dipesh Mittal	MAGPL TA HB R03
Designation: Communication Business Unit	Designation: Director	
Date:	Date: 14/03/2018	Page 5 of 6



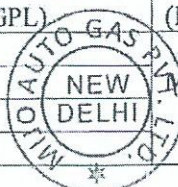




<b>25. Battery cut off switch (if applicable)</b> a. Name of manufacturer b. Identification No. c. Type	Not a part of Kit ( O.E. fitted)		
<b>26. Compartment / subcompartment /Gas tight housing</b> a. Name of manufacturer b. Identification No. c. Type	In built with in the cylinder valve		
<b>27. Pressure Indicator</b> a. Name of Manufacturer  b. Identification no.  c. Type	M/s. Mijo Auto Gas Pvt. Ltd. (MAGPL) CNG- bottom mounting Mano meter type	M/s. Ramesh Corporation  CNG- bottom mounting Mano meter type	M/s. Green Globe CNG  CNG- bottom mounting Mano meter type
<b>28. Service Shutt off Valve</b> a. Name of Manufactrer b. ID No. c. Type	INBUILT IN REFILLING VALVE		
<b>29. Any Other information (Not covered)</b> a. Idle rpm b. Spark Plug (Make/ID No.) c. Petrol ECU (Make) d. Petrol ECU (ID No.)	700±100 NGK- BKR6E 11 BOSCH SVI		



Test Agency <b>ICAT - Gurgaon</b> International Centre for Automotive Technology	Manufacturer: M/s. MIJO AUTO GAS PVT. LTD. (MAGPL)	Document No. (Including also revision status)
Signature: Name: <b>Dipesh Mittal</b>	Signature: Name: <b>Dipesh Mittal</b>	<b>MAGPL TA HB R03</b>
Designation: <b>Prashant Vijay</b> Date: <b>14/03/2018</b>	Designation: <b>Director</b> Date: <b>14/03/2018</b>	Page 6 of 6





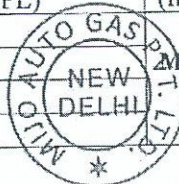


### TECHNICAL SPECIFICATION OF VEHICLE

Manufacturer's Name and Address	HONDA CARS INDIA LTD.
Vehicle data Model Type Year and Month of Manufacture Engine No. Chassis No.	Honda Brio - EMT Passenger Car JULY 2013 L12B33007648 MAKDD171GDN200339
Engine Type Bore x Stroke, mm No. of cylinders Displacement Compression Ratio  Max. Engine Output (As per IS Std. 14599) Max. Torque (As per IS Std. 14599) Air Cleaner Oil Filter Fuel Filter Capacity of Cooling System Oil Sump Capacity Weight of Engine (Complete) Radiator Frontal Area (Core Area)	SOHC 4 Cylinder 16 Valve i-VTEC 73mm X71.6mm 4 Cylinder 1198 cc 10.2:1  66 kw @ 6000 rpm 110Nm @ 4500 rpm Dry Paper Type Cartridge Type Conventional paper type 3.94 Ltrs. 3.2 Ltrs. NA NA
Clutch Type Outside Diameter	Dry single plate diagram spring type 190 mm




Test Agency ICAT, Gurgaon Signature: _____ Name: _____ Designation: _____ Date: _____	Manufacturer: M/s. MIJO AUTO GAS PVT. LTD. (MAGPL) Signature: _____ Name: Dipesh Mittal Designation: Director Date: 14/03/2018	Document No. (Including also revision status)  MAGPL TA HB R03  Page 1 of 3
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<b>Gear Box</b>	
Model	
Type	SYNCHROMESH 5 SPEED MANUAL TRANSMISSION
No. Of Gears	5 FORWARD + 1 REVERSE
Gear Ratio	
1 <sup>st</sup>	3.461
2 <sup>nd</sup>	1.869
3 <sup>rd</sup>	1.171
4 <sup>th</sup>	0.853
5 <sup>th</sup>	0.727
6 <sup>th</sup>	NA
Reverse	3.307
Front Axle	Live Axle
Rear Axle	Dead Axle
Ratio	4.294
<b>Steering</b>	
Steering Wheel Diameter	RACK & PINION WITH POWER ASSISTED (EPS)
Ratio	3.42
<b>Frame</b>	
Long member size, mm	INTEGRATED CHASIS WITH BODY
Number of Cross Member	1 NO.
<b>Suspension</b>	
Spring	FRONT:MCPHERSON STRUT WITH STABILIZER BAR
Anti-Roll Bar	REAR : H-SHAPE TORSION BEAM
<b>Shock absorber</b>	(FRONT)TWIN TUBE STRUT TYPE(gas), (REAR) COMPOUND LINK TYPE (gas)
<b>Brake</b>	
Service Brake	Hydraulic Vacuum Assisted, Diagonal Circuit with auto lock
Front	Ventilated Disc Brake
Rear	Drum Brake
Total Brake Area	62.225sq.cm X 2 Rear Brake and 41.7sq.cm X 2 Front Brake
Parking Brake	Mechanical Action On Rear Wheel
Wheel and Tyres	175/65 R14 - 82T 175/65 R14 (TUBELESS)- MRF

Test Agency	Manufacturer: M/s. MIJO AUTO	Document No.
ICAT, Gurgaon	GAS PVT. LTD. (MAGPL)	(Including also revision status)
Signature: 	Signature: 	
Name: 	Name: Dipesh Mittal	MAGPL TA HB R03
Designation: 	Designation: Director	
Date: 14/03/2018	Date: 14/03/2018	

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<b>Electrical System</b>	
System voltage	12V DC
Battery	12V DC
Alternator (Max. output)	14.7V DC
Type	4PK Pulley type alternator
Wiper Motor	12V (10 To 12)
<b>Fuel Tank</b>	35 Ltrs.
<b>Dimensions</b>	
Wheel Base, mm	2345 mm
Overall width, mm	1680 mm
Overall length, mm	3610 mm
Front Track, mm	1480 mm
Rear Track, mm	1465 mm
Min. Ground Clearance, mm	150 mm
Cargo Box Dimensions (capacity)	175 Litres
Load Body Platform Area	N.A
<b>Weights</b>	
Maximum GVW	1430 Kgs
Maximum Permissible FAW	780 Kgs
Maximum Permissible RAW	624 Kgs
KERB weight with 90% fuel (with spare wheel, tools, etc.)	920 Kgs
Maximum Grade ability in 1 <sup>st</sup> Gear	7DEGREE
<b>Seating Capacity</b>	5 Person

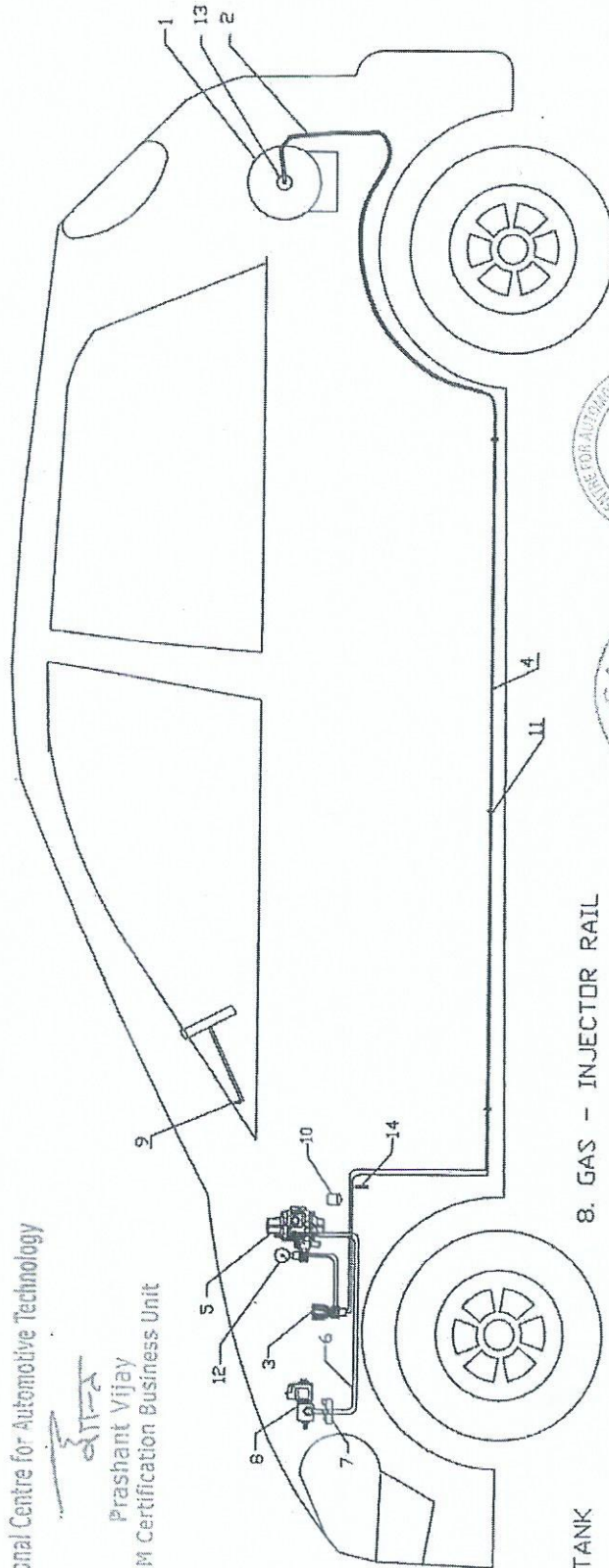


Test Agency ICAT - Gurgaon	Manufacturer: M/s. MIJO AUTO GAS PVT. LTD. (MAGPL)	Document No. (Including also revision status)
Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>	
Name: <i>[Signature]</i>	Name: <b>Dipesh Mittal</b>	<b>MAGPL TA HB R03</b>
Designation: <b>Prashant Vijay</b>	Designation: <b>Director</b>	
Date: <i>[Signature]</i>	Date: 14/03/2018	Page 3 of 3





International Centre for Automotive Technology

Prashant Vijay  
DGM Certification Business Unit

1. CNG TANK

2. CONDUIT

3. REFILLING VALVE

4. HIGH PRESSURE TUBE

5. CNG REDUCER

6. LOW PRESSURE TUBE

7. MAP SENSOR

8. GAS - INJECTOR RAIL

9. CONTROL SWITCH

10. M. SEQUENT .ECM

11. CLIP

12. PRESSURE INDICATOR

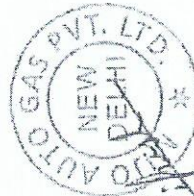
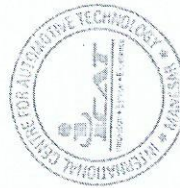
13. CYLINDER VALVE

14. COMPLIANCE PLATE

Item No	Description	Bolt/ Tightening Screw Size Torque
1.	Cylinder mounting	M10x1.5 25-30Nm
2.	Vaporiser mounting	M8x1 20-25Nm
3.	High Pressure Low Clip Fitting	Helical screw 7Nm

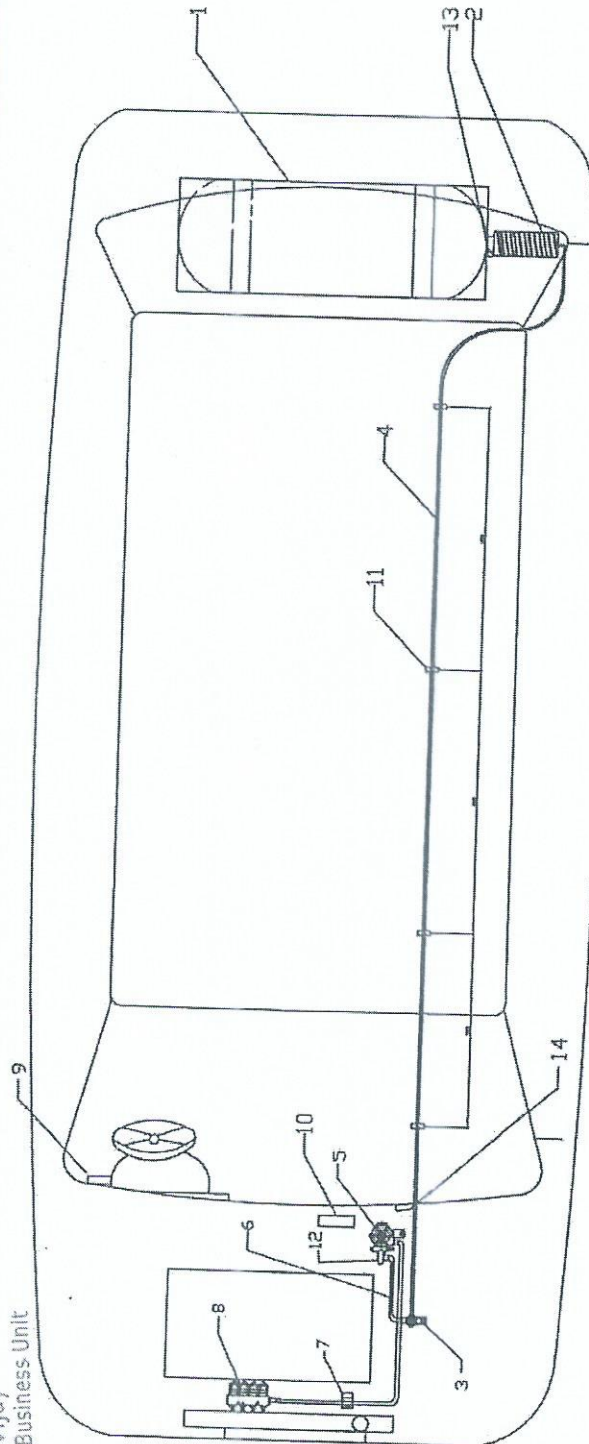
ALL DIMENSIONS ARE IN mm

NAME	DATE	MJO AUTO GAS PVT. LTD.
DRN. BY NISLAM	08-09-15	S-110, BADLI INDUSTRIAL AREA, PHASE-I, DELHI-42
CHD. BY D.MITTAL	10-09-15	TITLE
APPD. BY D.MITTAL	10-09-15	SYSTEMATIC DIAGRAM OF CNG KIT FOR HONDA- BRIO-1.2
MODEL No.-H-BRIO (BS IV)		DRAWING NO: MSD-01
		NOT TO SCALE
		PAGE NO. OF 1
		REVISION : 00





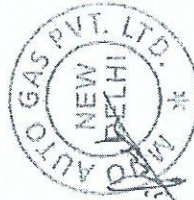
Prashant Vijay  
DGM Certification Business Unit



- |                       |                        |
|-----------------------|------------------------|
| 1. CNG TANK           | 8. GAS - INJECTOR RAIL |
| 2. CONDUIT            | 9. CONTROL SWITCH      |
| 3. REFFILING VALVE    | 10. M. SEQUENT .ECM    |
| 4. HIGH PRESSURE TUBE | 11. CLIP               |
| 5. CNG REDUCER        | 12. PRESSURE INDICATOR |
| 6. LOW PRESSURE TUBE  | 13. CYLINDER VALVE     |
| 7. MAP SENSOR         | 14. COMPLIANCE PLATE   |

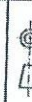
Item No	Description	Bolt/ Screw Size	Tightening Torque
1.	Cylinder mounting	M10x1.5	25-30Nm
2.	Vaporiser mounting	M8x1	20-25Nm
3.	High Pressure Line Clip Fixing	helical screw	7Nm

ALL DIMENSIONS ARE IN mm



NAME	DATE	TITLE	
DRN. BY NISLAM	08-09-15	SYSTEMATIC DIAGRAM OF CNG KIT FOR HONDA -BRIO-1.2	
CHD. BY DMITTAL	10-09-15	NOT TO SCALE	
APPD. BY DMITTAL	10-09-15	PAGE NO.1 OF 1	
MODEL No.- H-BRID (BS IV)		DRAWING NO: MSD-02	
		REVISION : 00	

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S-110, BADLI INDUSTRIAL AREA,  
PHASE-I, DELHI-42



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