

Laboratory Test Factory, AVL Technical Centre Private Limited, 376-377,  
Phase-IV, Udyog Vihar, Gurugram, Haryana

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-7121

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Validity 13.04.2018 to 12.04.2020

Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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**CHEMICAL TESTING**

I.	<b>GASES</b>			
A.	<b>Vehicle Emissions Emission Of Gaseous Pollutants for GVW less than 3.5 tons</b>			
1.	<b>Emissions from 4W , 2W Petrol CNG Vehicle</b>	Idling CO For Si Engines Idling HC For Si Engines	MoRTH/CMVR/TAP/115-116_ Issue. 4: 2010 (Type II Test)	0.0001 % to 10% 0.001 ppm to 1990 ppm
2.	<b>Emissions from 4W Diesel vehicle</b>	Free Acceleration Smoke Test For Ci Engines	MoRTH/CMVR/TAP/115-116_ Issue. 4: 2010	0.01 m <sup>-1</sup> to 10 m <sup>-1</sup>
3.	<b>Emissions from 4W Petrol Diesel &amp; CNG Engine vehicles</b>	Tail Pipe Emissions - Pollutants CO HC NO <sub>x</sub> CO <sub>2</sub> CH <sub>4</sub> Particulate matter  Particulate Number	MoRTH/CMVR/TAP/115-116_ Issue. 4: 2010 (Type I) for MIDC and IDC  Test cycles (WLTP) - UN/ECE/WP.29/GRPE/WLTP-LG, R 83/04: 2004, 70/220/EEC Ammended Till 2002/80/EC: 2002  EU 715/2007	5 ppm to 2500 ppm 0.1 ppm to 20000 ppm 1.0 ppm to 5000 ppm 15 ppm to 50000 ppm 0.1 ppm to 10000 ppm 1.0 µg to 2.1 g 10 p/cm <sup>3</sup> to 10000 p/cm <sup>3</sup> (Total Dilution Ratio: 100 to 20000)
4.	<b>Emissions from 2W Petrol Engine vehicles</b>	Tail Pipe Emissions - Pollutants CO HC NO <sub>x</sub> CO <sub>2</sub> CH <sub>4</sub>	MoRTH/CMVR/TAP/115-116_ Issue. 4: 2010 (Type I) Test cycles BSIV & Above-, R 83/04: 2004, 70/220/EEC Ammended Till 2002/80/EC: 2002	5 ppm to 2500 ppm 0.1 ppm to 20,000 ppm 1 ppm to 5000 ppm 15 ppm to 50,000 ppm 0.1 ppm to 10000 ppm

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<b>5.</b>	<b>Emissions from Engines</b>			
a.	Light / heavy Duty LCV/HCV application Diesel & Petrol Engines	Smoke Measurement	MoRTH/CMVR/TAP/115-116_ ISSUE-4: 2010	0.01 m <sup>-1</sup> to 10 m <sup>-1</sup>
b.	Off Road application Tractor , Construction equipment Diesel Engines		MoRTH/CMVR/TAP/115-116_ ISSUE-4: 2010	
c.	Genset (up to 440 kW) Diesel Engines		MoRTH/CMVR/TAP/115-116_ ISSUE-4: 2010 ISO 8178: 2008 (Full load Smoke)	
d.	Light / heavy Duty LCV/HCV application Diesel & Petrol Engines	Pollutant (measured on steady state cycle & transient test cycle) CO THC (C1) NO <sub>x</sub> CH <sub>4</sub> CO <sub>2</sub> NH <sub>3</sub>  Particulate mass and Particulate No. with Partial flow & full flow with CVS system.	MoRTH/CMVR/TAP/115-116_ ISSUE-4: 2010, ECE-R- 49 GTR-4 - Compression ignition (C.I.) engines and positive ignition (P.I.) 2005/78/EC (EU) No. 595/2009 amend. (EU) No.133/14 R-49-02 to R 49-06 Dir. 88/77/EEC 1999/96/EC 2005/55/EC- Heavy Duty Dir. 2010/26/EU 2001/27/EC	5 ppm to 100000 ppm
				0.1 ppm to 50000 ppm
				1 ppm to 5000 ppm
				0.1 ppm to 10000 ppm
				15 ppm to 200000 ppm
				0.01 ppm to 1000 ppm
				PM: 1.0 µg to 2.1 g
				PN: 10 p/ cm <sup>3</sup> to 10,000 p/ cm <sup>3</sup> (Total Dilution ratio: 100 to 20000)
e.	Emissions from Off Road application		MoRTH/CMVR/TAP/115-116_ ISSUE-4: 2010 ISO 8178: 2008	

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	Tractor Construction equipment  Diesel engines		2000/25/EC amend. 2014/43 2004/26/EC ECE R-96 Dir. 2010/22/EU 97/68/EC amend. 012/46/EU - NRMM 2004/26/EC 2001/27/EC	
f.	Emissions from Genset upto 440 kW Diesel Engines		MoRTH/CMVR/TAP/115- 116_ ISSUE-4: 2010, ISO 8178: 2008	

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**MECHANICAL TESTING**

I.	<b>AUTOMOTIVE COMPONENTS</b>			
1.	<b>Vehicle (Diesel, Petrol &amp; CNG)</b>	Power	MoRTH/CMVR/TAP/115-116_ Issue. 4: 2010	0.1 kW to 160 kW
2.	<b>Engines (Diesel, Petrol &amp; CNG)</b>	Power	MoRTH/CMVR/TAP/115-116_ ISSUE-4 Amend. 3: 2010, R-85 00 (for CI & SI engine) 80/1269/EEC Amend. 1999/99/EC R 120-01, ADR30/01 IS 14599: 1999, UNECE-R24-03, ISO 8178: 2008 72/306/EEC Amend.	0.1 kW to 440 kW
		Fuel Consumption	MoRTH / CMVR / TAP / 115 – 116 (Issue 4, Amend. 3: 2010)	0.1 kg/h to 110 kg/h