

CHAPTER 2
Essential characteristics of the vehicle and engine and information
concerning the conduct of tests

- 1.0 Description of the Vehicle -----
- 1.1 Trade name or mark of the vehicle -----
- 1.2 Vehicle Type -----
- 1.3 Manufacturer's name and address -----
- 1.4 Unladen mass of vehicle -----
- 1.4.1 Reference mass of vehicle -----
- 1.4.2 Gross Vehicle Weight -----
- 1.5 Gear box -----
- 1.5.1 Manual or automatic -----
(If it is automatic give all pertinent technical data)
- 1.5.2 Number of gears -----
- 1.5.3 Transmission ratio -----
- First Gear -----
- Second Gear -----
- Third Gear -----
- Fourth Gear -----
- Over Drive -----
- Gear Shifting Pattern -----
- 1.6 Final drive ratio -----
- 1.7 Tyres -----
- 1.7.1 Dimensions -----
- 1.7.2 Dynamic rolling circumference -----

1.7.3	Type	-----
1.7.4	Ply Rating	-----
1.7.5	Tyre Pressure	-----
	Front	-----
	Rear	-----
1.8	Wheel drive :	
	Front	-----
	Rear	-----
1.9	Vehicle performance (declared by manufacturer)	
1.9.1	Vehicle max. speed	-----
1.9.2	Acceleration, max	-----m/s ²
2.0	Description of engine	
2.1	Make	-----
2.2	Type	-----
2.3	Working principle :	-----
	four-stroke / two-stroke :	
2.4	Bore	-----mm
2.5	Stroke	-----mm
2.6	Number and layout of cylinders and firing order	-----
2.7	Cylinder capacity	-----cm ³
2.8	Compression ratio	-----
	(Specify the tolerance)	
2.9	Drawings of combustion chamber and piston crown	-----

2.10	Minimum cross-sectional area of inlet and outlet ports	-----
2.11	Cooling system : liquid / air cooling	-----
2.11.1	Characteristics of liquid-cooling system	-----
2.11.1.1	Nature of liquid Circulating pump: yes/no	-----
2.11.1.2	Characteristics of make(s) and type(s)	-----
2.11.1.3	Drive ratio	-----
2.11.1.4	Thermostat: setting	-----
2.11.1.5	Radiator : drawing(s) or make(s) and type(s)	-----
2.11.1.6	Relief valve : pressure setting :	-----
2.11.1.7	Fan : Characteristics of make(s) and type(s)	-----
2.11.1.8	Fan drive system Drive ratio:	-----
2.11.1.9	Fan cowl:	-----
2.11.2	Characteristics of air-cooling system	-----
2.11.2.1	Blower : Characteristics of make(s) and type(s)	-----
2.11.2.2	Drive ratio:	-----
2.11.2.3	Air ducting (standard production):	-----
2.11.2.4	Temperature regulating system: yes/no/ Brief description	-----
2.11.3	Temperature permitted by the manufacturer	-----
2.11.3.1	Liquid cooling: max. temperature at engine outlet	-----
2.11.3.2	Air cooling: Reference pt	-----
	Max. temperature at reference pt	-----
	Max. outlet temperature of the inlet intercooler	-----
2.11.3.4	Max. exhaust temperature	-----
2.11.3.5	Fuel temperature: -----min -----max	

2.11.3.6 Lubricant temperature: -----min-----max

2.12 Supercharger: yes/no / (Description of the system) -----

2.13 Intake System : -----

2.13.1 Intake manifold: Description -----

2.13.2 Air filter: Make &Type: -----

2.13.3 Intake silencer: Make &Type: -----

2.14 Device for recycling crank-case gases : -----

Description and diagrams -----

3.0 Additional anti-pollution devices_(if any, and if not covered
by another heading) -----

Description and diagrams -----

4.0 Air intake and fuel feed- -----

4.1 Description and diagrams of inlet pipes and their accessories
(dash pot, heating device, additional air intakes, etc.) -----

4.2 Fuel feed -----

4.2.1 By carburettor(s)_number -----

4.2.1.1 Make -----

4.2.1.2 Type -----

4.2.1.3 Adjustments -----
(Specify the tolerance)

<p>4.2.1.3.1 Jets</p> <p>4.2.1.3.2 Venturis</p> <p>4.2.1.3.3 Float-chamber level</p> <p>4.2.1.3.4 Mass of float</p>	<p style="font-size: 3em;">}</p> <p style="font-size: 2em;">OR</p> <p style="font-size: 3em;">{</p>	<p>Curve of fuel delivery</p> <p>plotted against air flow</p> <p>and settings required to</p> <p>keep to the curve</p>
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4.2.1.3.5 Float needle -----

4.2.1.3.6 Dimensions Mixture Duct -----

4.2.1.4	Manual / automatic choke , Closure setting	-----
4.2.1.5	Feed pump	-----
	Pressure or characteristic diagram (Specify the tolerance)	-----
4.2.2	By fuel injection	-----
	System description Working principle : Intake manifold / direct injection / Injection prechamber / swirl chamber	
4.2.2.1	Fuel pump	-----
4.2.2.1.1	Make	-----
4.2.2.1.2	Type	-----
4.2.2.1.3	Delivery: mm ³ per stroke at a pump of rpm (Specify the tolerance) or, alternatively, a characteristic diagram (Specify the tolerance) Calibration procedure: test bench / engine	----- ----- ----- -----
4.2.2.1.4	Injection timing	-----
4.2.2.1.5	Injection curve	-----
4.2.2.2	Injectors :	-----
	Make	-----
	Type	-----
	Opening Pressure (specify tolerance)	-----
4.2.2.3	Governor	-----
4.2.2.3.1	Make	-----
4.2.2.3.2	Type	-----
4.2.2.3.3	Cut-off point under load /min	-----
4.2.2.3.4	Max.speed without load /min	-----
4.2.2.3.5	Idle speed	-----

4.2.2.4 Cold start device	-----
4.2.2.4.1 Make	-----
4.2.2.4.2 Type	-----
4.2.2.4.3 System description	-----
4.2.2.5 Starting aid	-----
4.2.2.5.1 Make	-----
4.2.2.5.2 Type	-----
4.2.2.5.3 System description	-----
5.0 Valve timing or equivalent data	-----
5.1 Maximum lift of valves, angles of opening and closing, or timing details of alternative distribution systems, in relation to top dead centre	-----
5.2 Reference and/or setting ranges	-----
5.3 Distribution by ports	-----
5.3.1 Volume of crank-case cavity with piston at tdc	-----
5.3.2 Description of reed valves if any (with dimensional drawing)	-----
5.3.3 Description (with dimensional drawing) of inlet ports, scavenging and exhaust, with corresponding timing diagram The drawings should include one representing the inner surface of the cylinder.	-----
6.0 Ignition	-----
6.1 Ignition system type	-----
6.1.1 Make	-----
6.1.2 Type	-----
6.1.3 Ignition advance curve (Specify the tolerance)	-----

6.1.4 Ignition timing (Specify the tolerance)	-----
6.1.5 Contact point gap and dwell-angle (Specify the tolerance)	-----
7.0 Exhaust system Description and diagrams	-----
8.0 Lubrication system	-----
8.1 Description of systems-	-----
8.1.1 Position of lubricant reservoir	-----
8.1.2 Feed system (pump, injection into intake, mixing with fuel, etc.)	-----
8.2 Lubricating pump-	-----
8.2.1 Make	-----
8.2.2 Type	-----
8.3 Lub oil mixed with fuel Yes/No	-----
8.3.1 Percentage	-----
8.4 Oil cooler: yes/no	-----
8.4.1 Drawing(s) or make(s) and type(s)	-----
9.0 Electrical equipment- Generator/alternator: characteristics or make(s) and type(s) (Specify the tolerance)	-----
10.0 Other auxiliaries fitted on the engine (Enumeration and brief description if necessary)	-----
11.0 Additional information on test conditions	-----
11.1 Sparking plugs-	-----
11.1.1 Make	-----
11.1.2 Type	-----
11.1.3 Spark-gap setting	-----

11.2 Ignition coil-	-----
11.2.1 Make	-----
11.2.2 Type	-----
11.3 Ignition condenser-	-----
11.3.1 Make	-----
11.3.2 Type	-----
11.4 Radio interference suppression equipment	-----
11.4.1 Make	-----
11.4.2 Type	-----
12.0 Engine performance (declared by manufacturer)	-----
12.1 Idle rpm (Specify the tolerance)	-----
12.1.1 Idling system :Description of setting and relevant requirements	-----
12.2 Carbon monoxide content by volume in the exhaust gas with the engine idling - per cent (manufacturer's standard)	-----
12.3 Rpm at max, power (Specify the tolerance)	-----
12.4 Max. power - KW	-----
13.0 Lubricant used	-----
13.1 Make	-----
13.2 Type	-----

NOTES:

- 1) Strike out what is not applicable.
- 2) In addition to the names of suppliers of items such as ignition coil, magneto, CB point, Air filter, Silencer etc., mentioned above, the manufacturers shall inform the test agency that carried out the type approval, the names of new alternate suppliers for these items as and when they are being introduced.