



**PRODUCT MANUAL
FOR
BATTERY OPERATED MOTORIZED TRICYCLE
ACCORDING TO IS 17154:2019**

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification licence/certificate.

1.	Product	:	IS 17154:2019
	Title	:	Battery Operated Motorized Tricycle
	No. of Amendments	:	Nil
2.	Sampling Guidelines:		
a)	Raw material	:	As per requirement of clause 5, 6.1, 6.3, 6.4, 6.5, 7.2
b)	Grouping guidelines	:	Grouping guidelines is not applicable as only one variety of tricycle is covered in the Standard.
c)	Sample Size	:	1 Tricycle
3.	List of Test Equipment	:	Please refer ANNEX – <u>A</u>
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – <u>B</u>
5.	Possible tests in a day:		
	All Tests		
6.	Scope of the Licence:		
	“Licence is granted to use Standard Mark as per IS 17154:2019 with the following scope:		
	Name of the product	Battery Operated Motorized Tricycle	

ANNEX A**List of Test Equipment***Major test equipment required to test as per the Indian Standard*

Sl. No.	Tests used in with Clause Reference	Test Equipment
1.	Shape and Dimension (Cl No 4)	Measuring tape, Steel Scale, Vernier Caliper.
2.	Requirements (Cl No 6)	Micrometer, Try square for right angle testing, Level measurement instruments, Platform for tricycle dimension.
3.	Road Test (Cl No. 8.1)	Hard surface road in the locality, speedometer, Measuring tape, rider of weight 70 ± 5 kg.
4.	Maneuverability (Cl No. 8.2)	Speedometer.
5.	Static Load Test (Cl No. 8.3)	20 kg weight – 01 no, 100 kg weight – 02 no, Stopwatch.
6.	Brake Test (Cl No. 8.4)	dry hard 8 percent gradient surface and dry hard level surface in the locality without dirt and gravels, speedometer, measuring tape, rider of weight 70 ± 5 kg.
7.	Test for finish (Clause 8.5)	Apparatus for test for finish, Solid Steel ball of diameter 13mm.

The above list is indicative only and may not be treated as exhaustive.

ANNEX B

Scheme of Inspection And Testing

1. LABORATORY - A laboratory shall be maintained which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

1.1 The manufacturer shall prepare a calibration plan for the test equipment.

2. TEST RECORDS – The manufacturer shall maintain test records for the tests carried out to establish conformity.

3. LABELLING AND MARKING – As per the requirement of IS 17154:2019

4. CONTROL UNIT – Tricycles produced from same consignment of materials and under similar conditions of production in one month shall constitute a control unit.

5. LEVELS OF CONTROL - The tests as indicated in column 1 of Table 1 and the levels of control in column 3 of Table 1, shall be carried out on the whole production of the factory which is covered by this plan and appropriate records maintained in accordance with paragraph 2 above.

5.1 All the production which conforms to the Indian Standards and covered by the licence should be marked with Standard Mark.

6. REJECTIONS – Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016.

TABLE 1

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test Method			No. of Sample	Frequency	Remarks
		Clause	Reference				
5	Materials	5, 6.1, 6.3, 6.4, 6.5, 7.2	IS 17154	S	One	Each consignment	No further testing is required if accompanied with test certificate or ISI marked
4	Shape and Dimensions	4, Table 1, Fig 1		R	10% with min 1 and max 15	Each control unit	-
6	Requirements (except Materials)	6		R	One	Each control unit	-
7	Finish	7.1		--	One	Each control unit	-
8.1	Road Test	8.1		R	-	Each Tricycle	-
8.2	Maneuverability	8.2		R	One	Each control unit	-
8.3	Static Load Test	8.3		R	One	Each control unit	-
8.4	Brake Test	8.4		R	One	Each control unit	-
8.5	Test for finish	8.5		R	10% with min 1 and max 15	Each control unit	-

Note-1: Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

Note-2: Levels of control given in column 3 are only recommendatory in nature. The manufacturer may define the control unit/batch/lot and submit his own levels of control in column 3 with proper justification for approval by BO Head.