व्यावसायिक परीक्षण रिपोर्ट
COMMERCIAL TEST REPORT

संख्या / **No. : PS-128/1645/2014**
माह / **Month: September, 2014**

TRACTOR OPERATED POWER SPRAYER
'GOYAT-500'

सत्यमेव जयते

भारत सरकार
कृषि मंत्रालय
कृषि एवं सहकारिता विभाग)

GOVERNMENT OF INDIA
MINISTRY OF AGRICULTURE
(DEPARTMENT OF AGRICULTURE & COOPEARATION)

उत्तरी क्षेत्र कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान
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Cl.5.16	The engine and electric motor shall conform to the requirements as given in IS 7347 and IS 325 respectively.	Not applicable as it is tractor powered sprayer.	-
Cl.5.16.1	The exhaust outlet of the engine shall be so positioned that the smoke does not directly affect the operator or crop. A guard shall be provided on or near the exhaust pipe for the protection of the operator.	Not applicable as it is tractor powered sprayer.	-
Cl. 5.17	The fuel and chemical discharge controls shall be in easy access of the operator.	Not applicable as it is tractor powered sprayer.	-
Cl.5.18	Air pressure chamber shall with stand the test prescribed in 8.7 without any deformation or damage.	No damage found in air pressure chamber	Conforms
Cl.6. **IS 11313:2007 PERFORMANCE REQUIREMENTS**			
Cl.6.1 Discharge rate/Suction capacity	When tested in accordance with the method given in 8.3, the pump shall be capable of discharging/sucking a minimum of 8000 ml. water per minute at its rated speed and rated pressure.	The pump is capable to discharge 45440ml/min without gun at 913 rpm of pump speed and 16.0 kg/cm^2 pressure (Ref Annexure-I)	Conforms
Cl.6.1.1	The discharge rate/suction capacity shall be declared by the manufacturer	Declared as on ID plate of pump 39-50 l/min	Conforms
Cl.6.2 **Volumetric Efficiency** Cl6.2.1	When determined in accordance with 8.4.1, the volumetric efficiency of the piston/plunger type pump shall minimum 80 percent.	The volumetric efficiency is 92.29% with in specified limit	Conforms
Cl.6.2.2	The volumetric efficiency requirement for roller vane type pump shall be minimum 80%	Not applicable	-
Cl.6.3 **Power requirement**	When tested in accordance with the method given in 8.5, pump shaft power requirement shall not be more than that of the value declared by the manufacturer.	Max pump shaft power requirement is 2.26 kW against the declared value of 2.20 to 3.68 kW by the manufacturer. (See annexure II for more details)	Conforms

Cl.9	**IS : 11313-2007 WORKMANSHIP AND FINISH**		
Cl. 9.1	All the components of the sprayer shall be free from burrs, pits and other visual defects which may be detrimental for their use.	Finishing and workman ship is good.	
Cl. 9.2	The exposed metallic parts shall have a protective coating to prevent surface deterioration.	Exposed metallic parts have the protective	
Cl.10.	**IS:11313- Dec. 2007 MARKING AND PACKING**		
Cl.10.1 **Marking**	Each sprayer shall be marked with the following particulars :-		
a)	Manufacturer's name & his registered trade mark	Marked	Conforms
b)	Sl. No. and batch or code No.	Marked	Conforms

6. COMMENTS:-

6.1 Tractor operated hydraulic power sprayer 'GOYAT-500' conforms all the clauses of IS: 11313-2004 except requirement specified in the following clause.

i) IS: 4931 Oct-2004 Hub Dimension of propeller shaft.

ii) IS:4468(part-1)-2001- (a) Diameter of upper hitch pin hole, (b) Diameter of lower hitch pin & (c) Lower hitch point span (d) Diameter of linch pin for lower and upper hitch point. (please refer para 4.8 of the test report for more details)

iii) As per application the model is specified as 'Goyat 500' where as on identification plate provided on sprayer, the model is specified as 'Goyat'. It should be looked into for similarity.

iv) The material used for different components require to be declared by the manufacturer as per clause 4.3 of IS:11313-2007 which is not declared.

v) The drain plug should be provided at the bottom of the tank for cleaning.

vi) During the test, only the operator manual and parts catalogue of pump is provided. The complete operator's manual, parts catalogue should be brought out in Hindi and other regional languages for guidance of the users.

vii) The designation and marking on the spray gun is not provided. It should be provided. The spray pipe provided should be with BIS mark.

viii) The three point linkage of the sprayer does not conforms the requirements of IS:4468 (Part I)-2001. It should be looked into for conformation.

ix) The safety guards for the belt drive pulley and propeller shaft are not provided. It should be provided for the safety of the users.