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व्यावसायिक परीक्षण रिपोर्ट
COMMERCIAL TEST REPORT

संख्या / **No. : PS-103/1544**
माह / **Month: October, 2013**

TRACTOR OPERATED POWER SPRAYER
"JANAK"

सत्यमेव जयते

भारत सरकार
कृषि मंत्रालय
(कृषि एवं सहकारिता विभाग)

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

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सत्यमेव जयते
पुस्तकालय
हिसार

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 46225ml/min without gun at 900 rpm of pump speed and 6.0 kg/cm^2 pressure	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 92.30%	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 1.61kW against the declared value of 2.20-3.68 kW by the manufacturer. (See annexure 2 for more details)	Conforms
Cl.6.4 **Maximum achievable pressure**	When tested in accordance with the method given in 8.7, maximum achievable pressure shall not be less than that of the value declared by the manufacturer.	Maximum achievable pressure is more than the declared value of 15-35 kg/cm^2.	Conforms
Cl.6.5 **Endurance test**	Sprayer shall withstand the test endurance test specified in 8.8 and the variation in Discharge rate between first and last observation shall not be more than ± 5 Percent.	Endurance test of 50 hrs. Completed without any breakdown & the variation in. discharge is 1.41%	Conforms

		which is specified limit (see annexure 4 for more details)	
Cl. 7	**IS 11313:2007 OTHER REQUIREMENTS**		
Cl. 7.1	Each sprayer shall be provided with parts catalogue and manual giving detailed information about sprayer, engine, its rated speed along with operational and maintenance instructions and safety precautions.	Manual and parts catalogue is provided by the manufacturer and found adequate in contents.	Conforms
Cl. 7.2	Each sprayer shall be provided with a set of necessary tools, suction strainer having aperture size of 300μm to 425μm and a measuring jar for lubricating oil.	One set of Gaskets & spanner is provided with suction strainer of 350 μm aperture size is provided with suction pipe.	Conforms
Cl. 7.3	On the option of the purchaser, the following accessories shall be supplied		
a)	A set of spray nozzles (conforming to annexure E of IS 3652) for different discharge rates, and	Not applicable	-
b)	Spray gun conforming to Annexure – I of IS 3652	Provided	Conforms
Cl. E 1 **TYPES IS:3652:1995**	The spray guns shall be of the following two types:		
	a) Trigger type	N.A	-
	b) Screw type	Screw type gun provided	Conforms
Cl. E 2 **DIMENSIONS** Cl. E 2.1	The thickness of the wall of the barrel shall be minimum of 0.63 mm	1.5mm -	Conforms
Cl. E 2.2	The diameter of the connecting rod shall be minimum of 5mm	6.36mm	Conforms
Cl. E 2.3	The annular clearance between the barrel and the connecting rod shaft be not less than 2.5 mm	The annular clearance between the barrel and the connecting rod is 3.5mm	Conforms
Cl. E. 2.4	The total length of the spray gun when measured from top of the nozzle to the tip of the trigger or screw shall be not less than 500mm	680mm	Conforms

a)	Manufacturer's name & his registered trade mark	Marked	Conforms
b)	Sl. No. and batch or code No.	Not Marked	**Does not conform**

6. COMMENTS:-

Tractor operated hydraulic power sprayer 'Janak' conforms all the clauses of IS: 11313-2004 except requirement specified in the following clause. These should be rectified and incorporated at manufacturing level:-

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

ii) Cl. 5.5.2 IS:11313-Dec. 2007 Drain plug

iii) C1.E.5 IS: 3652:1995- Designation of spray gun.

iv) Cl. E.5 IS: 3652: 1995 – Batch or code no. of spray gun.

v) C1.7.1 IS:11313:2007- Part catalogue & manual.

vi) CI. 10.1 IS:11313 December, 2007 SI. No. and batch or code no.

TESTING AUTHORITY

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Test report complied by Maan Singh, Technical Assistant

APPLICANT'S COMMENTS

No comments received