

व्यावसायिक परीक्षण रिपोर्ट (प्रारंभिक)

COMMERCIAL TEST REPORT

(INITIAL)

संख्या / No: Machine-390/1218

माह:/Month: October, 2020

Validity: 30.09.2025



VST SHAKTI VST JOSH RT70 POWER WEEDER



भारत सरकार

Government of India

कृषि एवं किसान कल्याण मंत्रालय

Ministry of Agriculture and Farmers Welfare

कृषि, सहकारिता एवं किसान कल्याण विभाग

Department of Agriculture, Cooperation and Farmers Welfare

दक्षिणी क्षेत्र कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान

Southern Region Farm Machinery Training and Testing Institute

ट्रैक्टर नगर, गार्लदिन्ने-515 731, जिला: अनंतपुर (आं. प्र.)

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Tele./FAX: 08551-286441

Machine-390/1218	VST SHAKTI VST JOSH RT70 POWER WEEDER	COMMERCIAL (ICT)
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Manufacturer : M/s. Chongqing Hwasdan Machinery
Manufacturing Company Ltd.,
Xipeng Industry Zone, Jiulongpo Dist.,
Chongqing- 401 326, China

Applicant : M/s. V.S.T. Tillers Tractors Ltd,
Plot No. 222-224 & 229-232, 3rd Phase,
KIADB Industrial Area, Malur, Kolar Dist.,
Karnataka- 563 130, India.

Regd. Head Office:

Plot No.-1, Dyavasandra Indl. Layout,
Whitefield Road, Mahadevapura Post,
Bangalore- 560 048, Karnataka, India.

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17. COMMENTS & RECOMMENDATIONS

17.1 Engine Performance:

17.1.1 The maximum power and rated power were observed as 3.9 kW respectively under natural ambient condition against the declared value of 4.0 kW.

17.1.2 Specific fuel consumption of engine corresponding to maximum power was recorded as 401 g/kWh against the declared value of 280 g/kWh. This should be looked into for corrective action.

17.1.3 Max. Torque was observed as 12.89 Nm against the declared value of 11.9 Nm.

17.1.4 Back up torque of engine was observed as 3.78 %, against the declared value of $\geq 12\%$. This should be looked into for corrective action.

17.1.5 **During varying speed test of engine at both natural & high ambient conditions after attaining max. torque at 12.89 Nm & 12.19 Nm respectively, while further loading, sudden drop of engine speed and thick black smoke was noticed.**

17.2 Max. Noise at operator's ear level was observed as 92 dB (A), against the max. limit of ILO of 90 dB (A). This should be looked into for corrective action.

17.3 The amplitude of mechanical vibration on most of the assemblies of the Power Weeder was observed up to the maximum extent of 372 microns, which is higher than the limit of ILO microns. Therefore necessary action to dampen the vibration should be taken in to account.

17.4 The hardness of rotary blades conforms to the requirement of IS 6690:1981 (Reaffirmed 2012).

17.5 Except silicon content, remaining constituents of chemical analysis of rotary blades conforms to the requirement of IS 6690:1981 (Reaffirmed 2012). This should be looked in to for corrective action

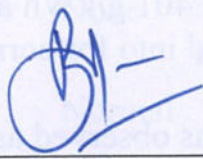

17.6 The provided labeling plate should be as per the requirement of IS.

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17.7 Technical literature:

User's manual and parts catalogue of power weeder in separate booklets were supplied with the test sample for reference during the test. It is however, recommended that same may be revised and brought out in Hindi & other regional languages as per IS 8132:1999 (Reaffirmed 2004) for the sake of user & technical personnel.

TESTING AUTHORITY:

B.N. DIXIT AGRICULTURAL ENGINEER	
Dr. P.P. RAO DIRECTOR	

18. APPLICANT'S COMMENTS

Para No.	Our reference	Applicant's comments
18.1	17.1.2	We will take necessary action to improve & correct the SFC at max. power of engine with engine supplier for production batches.
18.2	17.1.4	We will take necessary action to improve & correct the backup torque with engine supplier for production batches.
18.3	17.1.5	We will take necessary action to improve & correct the engine speed & thick black smoke at both natural & high ambient conditions after attaining max. torque with engine supplier for production batches.
18.4	17.2	We will take necessary action to reduce the max. noise at operator's ear level.
18.5	17.3	We will take necessary action to reduce the vibration of various components in power weeder.
18.6	17.5	We will take necessary action to improve the chemical composition of rotor blades in production batches.
18.7	17.7	Operator's manual & parts catalogue of power weeder will be suitably modified in-line with IS 8132:1999 (Reaffirmed 2004) for the sake of user & technical personnel.