



HUSQVARNA TF120P POWER WEEDER



भारतसरकार

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 (आ. प्र.)

Tractor Nagar, Garladinne-515 731, District: Anantapur (A.P.)

[An ISO 9001:2015 CERTIFIED INSTITUTE]

Website: <http://srfmtti.dacnet.nic.in/>

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Machine-420/1253	HUSQVARNA TF120P POWER WEEDER	COMMERCIAL (ICT)
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Manufacturer : M/s. Husqvarna AB,
SE-561, Husqvarna Sweden
(Designed and Sourced).

Applicant : M/s. Husqvarna India (Products)
Private Limited, First Floor, Swees
House, No. 5, Sir P S Sivasamy Salai,
Mylapore, Chennai – 600 004,
Tamil Nadu, **India.**

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Report No. : Machine-420/1253

Month: February

Year: 2021



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14.3 Transmission gears:

All the Gears and sprockets of the transmission system were found in normal condition.

14.4 Rotary drive unit:

The rotary drive unit was dismantled and all the components were found in normal condition.

15. COMMENTS & RECOMMENDATIONS

15.1 Engine performance:

15.1.1 The maximum power and rated power were observed as 1.4 & 1.1 kW under natural ambient condition against the declared value of 1.8 & 1.5 kW respectively. The observed power is considerably on lower side, this maybe looked into for corrective action

15.1.2 Specific fuel consumption of engine corresponding to maximum and rated power was recorded as 372 & 405 g/kWh respectively against the declared value of 450 g/kWh.

15.1.3 Max. Torque was observed as 4.2 Nm against the declared value of 12.0 Nm. This should be looked into for corrective action.

15.1.4 The backup torque of engine was observed as Nil. This should be looked into for corrective action.

15.1.5 **During varying speed test of engine at both natural & high ambient conditions after attaining max. torque at 4.2 Nm & 3.7 Nm respectively, while further loading, sudden drop of engine rpm was observed. This required corrective action.**

15.2 Max. Noise at operator's ear level & by stander's position was observed as 84 & 69 dB (A) respectively against the limit specified by the ILO.

15.3 The amplitude of mechanical vibration on most of the assemblies of the Power Weeder was observed up to the maximum extent of 430 microns, which is higher than the limit specified by the ILO. Therefore necessary action to dampen the vibration should be taken in to account.

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

15.5 Carbon and manganese content of the chemical composition of rotary blades are not as per the requirement of IS 6690:1981. This should be looked into for corrective action.

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

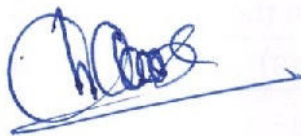


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15.7 During two hours maximum power test in high ambient condition, engine crankshaft was got cracked and broke at one end (on pulley side). This should be looked into for corrective action.

15.8 Technical literature:

Instruction manual and parts catalogue of power weeder and engine in a single booklet was 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:

D.C. MOULI AGRICULTURAL ENGINEER	
P.C. MESHAM SENIOR AGRICULTURAL ENGINEER	
Dr. P.P. RAO DIRECTOR	

16. APPLICANT COMMENTS

Para No.	Our reference	Applicant's comments
16.1	15.1.1	We will look into the same
16.2	15.3	We will be follow-up with quality control department and take corrective action to reduce mechanical vibration in future products
16.3	15.5	We will relook the chemical composition of rotor blade to ensure it meets the requirement
16.4	15.7	The crankshaft had fractured outside of the crankcase in the region butting the adaptor on the pulley side. The TF120 design comprises of a non-standa4rd tapered shaft whose fitment required an adopter and supporting jig to be developed by applicant locally. The fracture has occurred due to the said adaptor. It has hence been verified and classified as a non-design issue.