

व्यावसायिक परीक्षण रिपोर्ट
COMMERCIAL TEST REPORT

संख्या / No. : Imp.121/168
माह / Month: January, 2013



HONDA ROTARY TILLER FJ500 (POWER WEEDER)



भारत सरकार
GOVT OF INDIA

कृषि मन्त्रालय
MINISTRY OF AGRICULTURE

कृषि एवं सहकारिता विभाग
DEPARTMENT OF AGRICULTURE AND COOPERATION

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1. SCOPE OF TEST

The scope of test was limited to check and assess the following:

- 1.1 Specification and other data furnished by the applicant.
- 1.2 Noise measurement
- 1.3 Vibration measurement
- 1.4 Turning ability
- 1.5 Field performance
- 1.6 Wear analysis of rotor blades
- 1.7 Ease of operation and adjustments
- 1.8 Defects, breakdowns and repair

2. METHOD OF SELECTION

The test sample was directly submitted by the applicant, for test, at this Institute. Hence, Method of selection is not known.

3. TEST CODE/PROCEDURE

There is no Indian Standard Test Code available for testing of self propelled rotary tiller as such. The guidelines, however, have been taken from the following:

- | | | |
|---------------|---|---|
| IS: 9935-2002 | : | Power tiller - Test code |
| IS: 9980-1999 | : | Guidelines for field performance and haulage tests of power tillers |

4. SPECIFICATIONS

4.1

General

Name of machine	:	Honda Rotary Tiller – FJ500 RD
Manufacturer's name and address	:	JIALING-HONDA MOTOR CO.LTD. NO.45 , BAIHE ROAD, NANPING ECONOMIC TECHNOLOGICAL DEVELOPMENT AREA CHONGQUING, CHINA

Make	:	HONDA
Model	:	FJ 500 RD
Type	:	Rotary
Serial No.	:	GCAAH – 2810499, FY3* JH1G8F
Size of machine (mm)	:	915.0 (max.)
Year of manufacture	:	2011
Country of origin	:	China

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12. EASE OF OPERATION & ADJUSTMENTS

No noticeable difficulty was observed during the operation and adjustment of the machine, including during crossing of field bunds as well as shifting of machine from one field to another. However, one operator can operate the machine as per the ensuing work-rest cycle:

1 hour work → 20 min rest → 1 hour work → 30 min rest → 1 hour work → ... so on.

13. DEFECTS, BREAKDOWNS AND REPAIR



During inspection after completion of field operation, retainer pin of rotor shaft found broken. Other than that, no major defect/breakdown was occurred during 25.10 hours of field test.

14. COMMENTS & RECOMMENDATIONS

- 14.1 Noise at operator's ear level and bystander's level was observed on higher side against warning and danger limits of 85 dB(A) and 90 dB(A) respectively as specified by ILO for continuous exposure of 8 hours per day. This calls for reduction in noise level to improve the operational comfort and safety.
- 14.2 The amplitude of mechanical vibration on various assemblies of the machine was observed on higher side. This calls for dampening down of vibration to improve the operational comfort and service life of components.
- 14.3 The hourly percentage wear of rotor blades on mass basis was observed as 0.14 to 0.16 %, which is considered on higher side. This should be looked into.
- 14.4 Chemical composition of rotor blades, in full, does not conform to relevant Indian Standards. This should be looked into for corrective action.
- 14.5 Keeping the Indian conditions, particularly North West zone in view, a pre cleaner may be considered for providing in the engine.
- 14.6 **Technical literature:**
One Operator's manual-cum-Parts catalogue was provided for reference during the testing, however, the same as well as a service manual may be brought out as per IS: 8132- 1999.
- 14.7 Make and size of implement and H.P. should also be indicated on the labeling plate.
- 14.8 It is recommended that arrangement for checking of transmission oil and for changing the oil, drain plug should be provided.

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TESTING AUTHORITY

SANJAY KUMAR AGRICULTURAL ENGINEER	
M. K. VISHWAKARMA DIRECTOR	

Test conducted by : P.C. DIHINGIA
SENIOR TECHNICAL ASSISTANT

Report compiled by : ANSHUL PANDEY
SENIOR TECHNICAL ASSISTANT (Inst.)

12. APPLICANT'S COMMENTS

No comments have been received from the applicant on this machine.