

व्यावसायिक परीक्षण रिपोर्ट
COMMERCIAL TEST REPORT



संख्या / No. : Imp.150/199
माह / Month: February , 2014



POWER REAPER(CENTURY-XL8)

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सत्यमेव जयते

भारत सरकार

GOVT OF INDIA

कृषि मन्त्रालय

MINISTRY OF AGRICULTURE

कृषि एवं सहकारिता विभाग

DEPARTMENT OF AGRICULTURE AND COOPERATION

उत्तर पूर्वी क्षेत्र कृषि यंत्र प्रशिक्षण एवं परीक्षण संस्थान

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1. SCOPE OF TEST

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

- 1.1 Specification and other data furnished by the applicant
- 1.2 Noise measurement
- 1.3 Mechanical vibration measurement
- 1.4 Hardness and chemical analysis of critical components
- 1.5 Turning ability
- 1.6 Field performance
- 1.7 Ease operation & adjustments
- 1.8 Defects, Breakdowns & Repair

2. METHOD OF SELECTION

The test sample was submitted directly to this Institute by the applicant. Hence, the method of selection is not known.

3. TEST CODE/PROCEDURE

The following Test codes were referred for testing of Self Propelled Power Reaper:

- i) IS: 11467 – 1985 : Test code for cereal harvesting machine
- ii) IS: 6025 – 1982 : Specification for knife sections for harvesting machines
- iii) IS:10378-1982 : Specification of knife back

4. SPECIFICATIONS

4.1 General

Name of Machine	: Power Reaper/Power Harvester(Diesel)
Type of Machine	: Commercial
Manufacturer	: M/s Bharat Agro Equipments, VidyaVihar, Phase-2, Kargi Road, Dehradun (Uttarakhand)-248002
Name & Address of Applicant	: M/s Bharat Agro Equipments, VidyaVihar, Phase-2, Kargi Road, Dehradun (Uttarakhand)-248002
Make	: Century
Model	: XL-8
Serial number	: Not specified
Year of manufacture	: 2013

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Country of origin : India
 Size of reaper(mm) : 1250
 Name of crops recommended : Paddy

Constructional details(Fig. 1) :

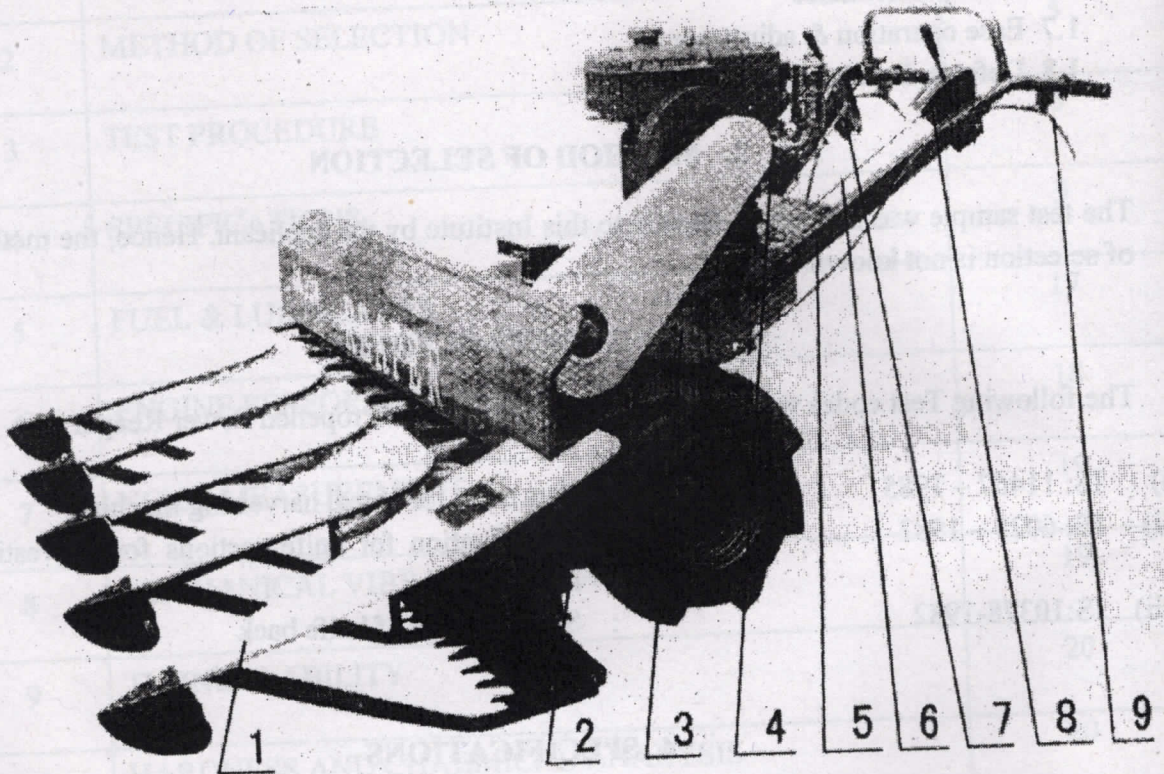


FIG. 1: SCHEMATIC VIEW OF CENTURY POWER REAPER(XL-8)

KEY WORDS:

- | | |
|-----------------------------|--------------------|
| 1. Guide | 2. Cutting rack |
| 3. Gear box assembly | 4. Engine |
| 5. Armrest frame | 6. Reaping clutch |
| 7. Main clutch | 8. Steering handle |
| 9. Direction control clutch | |

13.2 **Reaper**

All the gears and other components of the reaping bevel box were inspected visually and found to be in normal working condition.
Other components of cutter bar assembly were inspected visually and found to be in normal working condition.

14. COMMENTS & RECOMMENDATIONS

14.1 **Mechanical Vibration**

The amplitude of mechanical vibration on various assemblies of the machine was observed on higher side. It should be not more than 100(μ) as per standard, specially on steering handle. This calls for dampening down of vibration to improve the operational comfort and service life of the components.

14.2 Noise at Operator's ear level and bystander's level was observed as **90 and 109 Db(A)** respectively which is on higher side against warning and danger limits of **85 Db (A) and 90 Db (A)** 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.

14.3 **Chemical composition of Knife does not conform to relevant Indian Standards.** This should be looked into in future production level.

14.4 Specification of knife section and Specification of knife section back do not conform to IS: 6025-1982 and IS: 10378-1982 respectively. This should be looked into in future production level for standardization.

14.5 **Continuous leakage of diesel had been observed from the fuel tank cap. A standard tank cap should be provided with proper sealing to avoid leakage.** This should be looked into in future production level.

14.6 **Adequacy of literature:**

The applicant has submitted following literature with the machine:

- a) Parts catalogue
- b) Service manual

However, it is recommended that the **parts catalogue and service manual of engine also be provided** along with the machine and to bring out the manuals also in **Hindi and other vernacular languages as per IS: 8132-1999.**

15. APPLICANTS COMMENTS

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