

व्यावसायिक परीक्षण रिपोर्ट (प्रारंभिक)  
COMMERCIAL TEST REPORT (Initial)



संख्या/No.: Machine 134/508  
माह / Month: November 2024

## INCOMPLETE REPORT



**e-AgroCare EAC-EA-650 POST HOLE DIGGER**



**भारत सरकार**

**GOVERNMENT OF INDIA**

**कृषि एवं किसान कल्याण मंत्रालय**

**MINISTRY OF AGRICULTURE AND FARMERS WELFARE**

**कृषि एवं किसान कल्याण विभाग**

**DEPARTMENT OF AGRICULTURE AND FARMERS WELFARE**

**उत्तर पूर्वी क्षेत्र कृषि यंत्र प्रशिक्षण एवं परीक्षण संस्थान**

**NORTH EASTERN REGION FARM MACHINERY TRAINING & TESTING INSTITUTE**

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Machine 134/508	(INCOMPLETE REPORT) e-AgroCare EAC-EA-650 POST HOLE DIGGER	COMMERCIAL (INITIAL)
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Name of machine : Ltd., East Industrial Function Zone,  
 CaozhaiTown, Jindong District, Jinhua,  
 Zhejiang, P.R. CHINA  
 Type of machine : Post Hole Digger  
 Country of origin : Engine Powered, Manually Operated  
 Year of manufacture : CHINA  
 Recommended use : 2024  
 : For digging holes for plantation, fencing etc.

4.2 Constructional details:

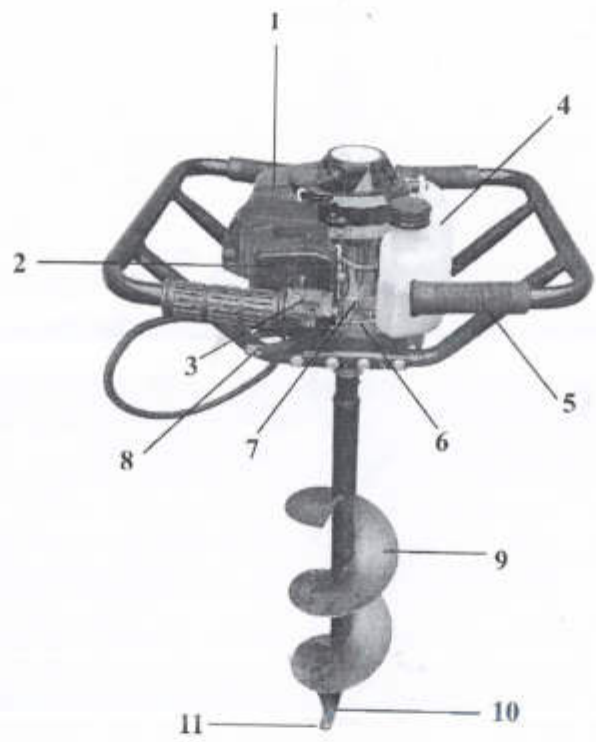


Fig. 1: e-AgroCare EAC-EA-650 POST HOLE DIGGER

Keywords:

- |                       |                 |
|-----------------------|-----------------|
| 1. Engine             | 7. Clutch Unit  |
| 2. Air cleaner        | 8. Accelerator  |
| 3. Engine Stop switch | 9. Auger        |
| 4. Fuel Tank          | 10. Auger blade |
| 5. Handle Bar         | 11. Impact bit  |
| 6. Reduction gearbox  |                 |

4.3 Details of prime mover:



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### 13. EASE OF OPERATION AND ADJUSTMENTS

Fatigue was observed just after half an hour of operation of post hole digger due to excessive mechanical vibration and noise of machine. The operator feels pain in different body parts like shoulders, back and hands fingers during the operation.

### 14. DEFECTS, BREAKDOWNS AND REPAIRS

- 1) Clutch assembly parts were found broken after 5.75 hours of field test.
- 2) Clutch housing was found damaged after 5.75 hours of field test.

### 15. COMPONENTS/ ASSEMBLY INSPECTION FOR WEAR ASSESSMENT -NR

### 16. COMMENTS AND RECOMMENDATIONS

- 16.1 Clutch assembly parts were found broken and clutch housing was found damaged just after 5.75 hours of field test and therefore the testing of this machine could not be completed and incomplete report has been prepared. This should be looked into for quality improvement.
- 16.2 During field performance test it was observed that engine exhaust gases directly come on operator's face. This shall be looked into for corrective action for safety of the operator.
- 16.3 Noise at operator's ear level was observed on much higher side against danger limit of 90 dB(A) as specified by International Labour Organization (ILO) for continuous exposure of 8 hours per day. This calls for reduction in noise level to improve the operational comfort and safety.
- 16.4 The amplitude of mechanical vibration marked as (\*) is on drastically higher side and is directly concerned with operator's health, safety and comfort. Besides, it is also adversely affecting the useful life of the component in view of above this deserves to be given priority for corrective action.
- 16.5 Safety wears such as hand gloves, mask, helmet, ear plug etc. were not provided with the machine. It is advised to provide safety wears along with each machine for safety of operator.
- 16.6 Labeling plate should be provided with information such as name and address of manufacturer, country of origin, year of manufacture, size, rated power, fuel used etc. This should be looked into for corrective action.



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### 16.7 Adequacy of Literature

The following literature in English language was provided for reference during testing:

- Operator's/ Service manual
- Parts catalogue

It is recommended to bring out the manual in Hindi and other vernacular languages as per IS: 8132-1999.

### TESTING AUTHORITY



*(Handwritten signature)*

(M.R. PATIL)  
SENIOR AGRICULTURAL ENGINEER

*(Handwritten signature)*  
(P.KAMALABAI)  
DIRECTOR

Draft Test Report Compiled by- Shri J. Bhon Singh, Sr. Technical Assistant

### 17. APPLICANT'S COMMENTS

Para No.	Our Reference	Applicant's Comments
17.1	16.1	We will ensure quality improvement in future production.
17.2	16.2	We will take up the issue with engine manufacturer and ensure quality improvement in future.
17.3	16.3, 16.4	We will take corrective action to ensure safety of operator.
17.4	16.5, 16.6	It will be done as per recommendation in future production.
17.5	16.7	Literature will be brought out as per recommended IS standards.

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ANNEXURE

**FIELD PERFORMANCE RESULTS(INCOMPLETE TEST)**

Place of test: NERFMTTI Field, Biswanath Chariali, Assam

Sl. No.	Parameters	TestI
1	Date of test	23.09.2024
2	Size of Augur (mm)	150
3	Net test duration (h)	5.75
4	Soil bulk density (g/cc)	1.62
5	Soil moisture (%)	9.65
6	Avg. Dia. of hole (mm)	163
7	Avg. dept of hole (mm)	636
8	Avg. no. of holes drilled per hour	144
9	Time required for one hole (sec.)	14.61
10	Fuel Consumption	
	- l/h	1.21
	- l/hole	0.0084

