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| C:\Users\Hp\Desktop\download.png | emblem2 |  |

**भारत सरकार** /**Government of India**

**उत्तरी क्षेत्र कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान**

**Northern Region Farm Machinery Training and Testing Institute**

**ट्रैक्टर नगर, सिरसा रोड, हिसार (हरियाणा)—125001 Tractor Nagar, Sirsa Road, Hisar (Haryana)- 125 001**

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**TECHNICAL SPECIFICATIONS FOR ENGINE OPERATED POST HOLE DIGGER/AUGER**

|  |  |  |  |
| --- | --- | --- | --- |
| **1** | **General:** |  |  |
| Name of machine | **:** |  |
| Type of machine | **:** |  |
| Name of manufacturer and address | **:** |  |
| Name of applicant and address | **:** |  |
| Make | **:** |  |
| Model | **:** |  |
| Sr. No. | **:** |  |
| Brand’s Name | **:** |  |
| Country of origin | **:** |  |
| Year of manufacture | **:** |  |
| Recommended use | **:** |  |
| **2** | **Details of prime mover:** |  |  |
| Manufacturer | **:** |  |
| Make | **:** |  |
| Model | **:** |  |
| Type | **:** |  |
| Serial No. | **:** |  |
| Year of manufacture | **:** |  |
| Country of origin | **:** |  |
| Maximum power, kW | **:** |  |
| Recommended high idle speed, rpm | **:** |  |
| Recommended low idle speed, rpm | **:** |  |
| Recommended rated speed for field operation, rpm | **:** |  |
| Speed at maximum torque, rpm | **:** |  |
| Whether the prime mover has already been tested by authorized testing centre (Yes/No) | **:** |  |
| If yes, then specify the valid test report No. & upload copy of test report | **:** |  |
| **3** | **Cylinder and cylinder head:** |  |  |
| Number | **:** |  |
| Disposition | **:** |  |
| Bore/stroke, mm | **:** |  |
| Capacity, cc | **:** |  |
| Make of spark plug | **:** |  |
| Model of spark plug | **:** |  |
| Spark plug electrode gap, mm | **:** |  |
| **4** | **Fuel supply system:** |  |  |
| Material of fuel tank | **:** |  |
| Capacity of fuel tank, (l) | **:** |  |
| Location of fuel tank | **:** |  |
| Type of fuel filter | **:** |  |
| Provision of fuel on/off cock | **:** |  |
| Make of carburetor | **:** |  |
| Serial No. | **:** |  |
| Type of carburetor | **:** |  |
| **5** | **Air cleaner:** |  |  |
| Make | **:** |  |
| Type | **:** |  |
| Type of element | **:** |  |
| Location | **:** |  |
| Recommended service schedule, h. | **:** |  |
| **6** | **Exhaust system:** |  |  |
| Type of silencer | **:** |  |
| Position of silencer | **:** |  |
| **7** | **Lubrication system:** |  |  |
| Type | **:** |  |
| Type of lubricant recommended | **:** |  |
| Ratio of mixing of lubricating oil with fuel (if applicable) | **:** |  |
| Minimum recommended engine oil pressure, kg/cm2 (if applicable) | **:** |  |
| **8** | **Cooling system:** |  |  |
| Type | **:** |  |
| **9** | **Starting system:** |  |  |
| Type | **:** |  |
| Ignition system | **:** |  |
| Aid for cold starting | **:** |  |
| Any other provision for easy starting | **:** |  |
| **10** | **Transmission system:** |  |  |
| Type | **:** |  |
| Mode of power transmission | **:** |  |
| **11** | **Gear box:** |  |  |
| No. of teeth on drive gear (Input shaft) | **:** |  |
| No. of teeth on driven gear (Counter shaft) | **:** |  |
| No. of teeth on drive gear of counter shaft | **:** |  |
| No. of teeth on driven gear of output shaft | **:** |  |
| Reduction ratio | **:** |  |
| Type of lubricant used | **:** |  |
| No. & type of bearing | **:** |  |
| **12** | **Auger:** |  |  |
| Numbers | **:** |  |
| Size, mm | **:** |  |
| Type | **:** |  |
| Material | **:** |  |
| Size of auger pipe, (mm) (L × D) | **:** |  |
| Method of fixing | **:** |  |
| Auger rpm @ rated engine speed recommended for field operations | **:** |  |
| **13** | **Auger blades:** |  |  |
| Numbers | **:** |  |
| Size of blade, mm | **:** |  |
| Dia. with auger blade | **:** |  |
| Material | **:** |  |
| Width of beveled edge | **:** |  |
| Method of fixing | **:** |  |
| **13.1** | **Auger bit** |  |  |
| Numbers | **:** |  |
| Material | **:** |  |
| **Dimensions (mm):** |  |  |
| Length | **:** |  |
| Dia. | **:** |  |
| Method of fixing | **:** |  |
| **14** | **Details of main handle** | **:** |  |
| **15** | **Details of controls** | **:** |  |
| **16** | **Overall dimensions (mm):** |  |  |
| Length | **:** |  |
| Width | **:** |  |
| Height (with auger blade assembly) | **:** |  |
| **17** | **Mass (kg)** | **:** |  |
| **18** | **Colour of machine:** |  |  |
|  | -Engine | **:** |  |
| -Chassis | **:** |  |
| -Engine cover | **:** |  |
| -Fuel tank | **:** |  |
| **19** | **Marking/Labeling plate:** |  |  |
|  | | |

**ADDITIONAL INFORMATION**

|  |  |  |  |
| --- | --- | --- | --- |
| 1. **Engine Performance:** | | | |
|  | Maximum Power kW (Ps) | **:** |  |
|  | Rated Power kW (Ps) | **:** |  |
|  | Specific fuel consumption  corresponding to maximum power  kg/kWh (g/hph) | **:** |  |
|  | Maximum equivalent crankshaft torque Nm (kgf-m) | **:** |  |
|  | Back-up torque (%) | **:** |  |
|  | Maximum Engine oil temperature (ºC) | **:** |  |
|  | Maximum Coolant (water)/liner wall temperature (ºC) | **:** |  |
|  | Lubricating oil consumption (g/kWh) | **:** |  |
|  | Coolant consumption (% of total  Coolant capacity) | **:** |  |
|  | Smoke level (Bosch No.) | **:** |  |
| **2.** | Mechanical Vibration at steering/  hands | **:** |  |
| **3.** | Air cleaner-oil pullover: |  |  |
| -Maximum oil pull over (%) | **:** |  |
| **4.** | **Noise level:** |  |  |
| -Maximum ambient noise level, dB(A) | **:** |  |
| -Maximum noise level at the operator’s ear level dB(A) | **:** |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl. No.** | **Critical engine components** | **Initial Setting** | **Discard Limit** |
| 1 | Cylinder bore dia (mm) |  |  |
| 2 | Piston to cylinder clearance at skirt ,mm |  |  |
| 3 | Piston dia (mm) |  |  |
| 4 | **Ring-end gap (mm):** |  |  |
| -Top compression ring |  |  |
| -2nd compression ring |  |  |
| -3rd compression ring |  |  |
| - Oil ring |  |  |
| 5 | **Ring groove clearance (mm):** |  |  |
| -Top compression ring |  |  |
| -2nd compression ring |  |  |
| -3rd compression ring |  |  |
| - Oil ring |  |  |
| 6 | **Clearance of big end bearings (mm):** |  |  |
| - Diametrical |  |  |
| - Axial |  |  |
| 7 | Crankshaft end float (mm) |  |  |
| 8 | Backlash of timing gears (mm) |  |  |
| 9 | Backlash of primary gear box gears (mm) |  |  |
| 10 | Backlash of secondary gear box gears (mm) |  |  |
| 11 | Overall thickness of clutch plate (mm) |  |  |
| 12 | **Spring stiffness, N/mm (kgf/mm):** |  |  |
| -Inlet |  |  |
| -Exhaust |  |  |
| 13 | **Clearance between valve guide and valve** |  |  |
| **Stem (mm):** |  |  |
| -Inlet |  |  |
| -Exhaust |  |  |

**Date:**

**Place:** **Signature:**

Name of signatory:

Designation:

Name & address of firm: