**TECHNICAL SPECIFICATIONS FOR SUGARCANE HARVESTER FOR BATCH/VARIANT/ADMINISTATIVE/TECHNICAL EXTENSION**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1**  | **General:** |  | **Previous Sample as per test report No……………….** | **Present Sample** | **Remarks** |
| **(1)** | **(2)** | **:** | **(3)** | **(4)** | **(5)** |
| **1.1** | Name & address of manufacturer  | **:** |  |  |  |
| Name & address of applicant | **:**  |  |  |  |
| Make  | **:** |  |  |  |
| Model | **:** |  |  |  |
| Brand name (if any) | **:** |  |  |  |
| Type  | **:** |  |  |  |
| Year of manufacture | **:** |  |  |  |
| Serial Number / Chassis No. | **:** |  |  |  |
| **1.2** | **Prime mover :** |  |  |  |  |
| Make | **:** |  |  |  |
| Model | **:** |  |  |  |
| Type | **:** |  |  |  |
| Serial Number | **:** |  |  |  |
| **Engine speed (Manufacturer’s recommended setting ) (rpm):** |  |  |
| Maximum speed at no load | **:** |  |  |  |
| Low idle speed | **:** |  |  |  |
| Rated engine speed  | **:** |  |  |  |
| Engine speed corresponding to maximum torque  | **:** |  |  |  |
| No load engine speed recommended for field operation |  |  |  |  |
| Whether the prime mover has already been tested at recognized testing center (Yes/No) | **:** |  |  |  |
| If yes, then specify valid test report No. & upload the copy of test report along with Application Form | **:** |  |  |  |

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| **1.2.1** | **Cylinder:** |  |  |  |  |
| Number | **:** |  |  |  |
| Disposition | **:** |  |  |  |
| Bore/Stroke, mm  | **:** |  |  |  |
| Capacity, cm3  | **:** |  |  |  |
| Compression ratio  | **:** |  |  |  |
| Arrangement of valves | **:** |  |  |  |
| No. of valves | **:** |  |  |  |
| Type of cylinder liners | **:** |  |  |  |
| Type of head | **:** |  |  |  |
| Type of combustion chamber | **:** |  |  |  |
| **Valve clearance in cold (mm):** |  |  |  |  |
| -Inlet | **:** |  |  |  |
| -Exhaust | **:** |  |  |  |
| **1.2.2 3.2.2** | **Fuel System:**  |  |  |  |  |
| Type of fuel system | **:** |  |  |  |
| **1.2.2.1** | **Fuel Tank:** |  |  |  |  |
| Capacity, l | **:** |  |  |  |
| Location | **:** |  |  |  |
| Material of construction | **:** |  |  |  |
| Provision for draining of sediment / water | **:** |  |  |  |
| **1.2.2.2** | **Fuel Strainer:** |  |  |  |  |
| Make | **:** |  |  |  |
| Model & Part No. | **:** |  |  |  |
| Location | **:** |  |  |  |
| **1.2.2.3** | **Water Separator:** |  |  |  |  |
| Make | **:** |  |  |  |
| Model/Part No. | **:** |  |  |  |
| Type | **:** |  |  |  |
| Number | **:** |  |  |  |
| Location | **:** |  |  |  |
| Capacity, l | **:** |  |  |  |
| **1.2.2.4** | **Fuel Filter:** |  |  |  |  |
| Numbers | **:** |  |  |  |
| Make  | **:** |  |  |  |
| Type | **:** |  |  |  |
| Model/ Group combination No. | **:** |  |  |  |
| Capacity of final stage filter, l | **:** |  |  |  |

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| --- | --- |
| **1.2.2.5** | **Fuel Feed Pump/Low pressure pump:** |
| Make | **:** |  |  |  |
| Model/ Group combination No. | **:** |  |  |  |
| Type | **:** |  |  |  |
| Provision of sediment bowl | **:** |  |  |  |
| Location | **:** |  |  |  |
| Method of drive | **:** |  |  |  |
| **1.2.2.6** | **Fuel Injection Pump/High pressure pump:** |  |  |
| Make | **:** |  |  |  |
| Model/Group combination No. | **:** |  |  |  |
| Serial number | **:** |  |  |  |
| Type | **:** |  |  |  |
| Method of drive | **:** |  |  |  |
| **1.2.2.7** | **Governor:** |  |  |  |  |
| Make | **:** |  |  |  |
| Model/Group combination No. | **:** |  |  |  |
| Type | **:** |  |  |  |
| Part No.  | **:** |  |  |  |
| Serial Number |  |  |  |  |
| **1.2.2.8** | **Fuel Injectors:** |  |  |  |  |
| Make | **:** |  |  |  |
| Model/Group combination No. | **:** |  |  |  |
| Type  | **:** |  |  |  |
| Injection pressure, kgf/cm2  | **:** |  |  |  |
| Injection timing, degrees | **:** |  |  |  |
| Firing order | **:** |  |  |  |
| **1.2.3** | **Air Intake system:** |  |  |  |  |
| **1.2.3.1** | **Pre-cleaner:** |  |  |  |  |
| Make  | **:** |  |  |  |
| Type | **:** |  |  |  |
| Number  | **:** |  |  |  |
| Location  | **:** |  |  |  |
| **1.2.3.2** | **Air Cleaner:** |  |  |  |  |
| Make  | **:** |  |  |  |
| Type | **:** |  |  |  |
| Number | **:** |  |  |  |
| Location | **:** |  |  |  |
| **Details of Primary filter element:** |
| Shape | **:** |  |  |  |
| Diameter (OD/ID), mm  | **:** |  |  |  |
| Length, mm | **:** |  |  |  |
| Type of element | **:** |  |  |  |
| **Details of Secondary filter element:** |
| Shape | **:** |  |  |  |
| Diameter (OD/ID), mm  | **:** |  |  |  |
| Length, mm | **:** |  |  |  |
|  | Type of element | **:** |  |  |  |
| Range of suction pressure at max. Power, kPa  | **:** |  |  |  |
| Maintenance Indicator | **:** |  |  |  |
| Service/maintenance schedule, h  | **:** |  |  |  |
| **1.2.4** | **Exhaust System:** |  |  |  |  |
| Make | **:** |  |  |  |
| Type of silencer | **:** |  |  |  |
| Size of muffler (L x Dia.), mm | **:** |  |  |  |
| Location  | **:** |  |  |  |
| Range of exhaust gas pressure at max power, kPa  | **:** |  |  |  |
| Provision of spark arresting device/any other device | **:** |  |  |  |
| Provision against entry of rain water | **:** |  |  |  |
| **1.2.5** | **Details of turbocharger:**  |  |  |  |  |
| Make | **:** |  |  |  |
| Model | **:** |  |  |  |
| Number of fan/ wheels | **:** |  |  |  |
| **Number of blades:**  |  |  |  |  |
| -Turbine wheel |  |  |  |  |
| -Compressor fan |  |  |  |  |
| Method of drive | **:** |  |  |  |
| Means of lubrication | **:** |  |  |  |
| **1.2.6** | **Exhaust treatment system:** |  |  |  |  |
| **1.2.6.1** | **Exhaust Gas Recirculation System (EGR):** |
| Make | **:** |  |  |  |
| EGR description  | **:** |  |  |  |
| Part No. | **:** |  |  |  |
| Location | **:** |  |  |  |
| **1.2.6.2** | **Diesel Oxidation Catalyst (DOC):** |
| Make | **:** |  |  |  |
| DOC description  | **:** |  |  |  |
| Part No. | **:** |  |  |  |
| Location | **:** |  |  |  |

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| **1.2.6.3** | **Selective Catalytic Reduction (SCR):** |
| Make | **:** |  |  |  |
| Description | **:** |  |  |  |
| Part No. | **:** |  |  |  |
| Location | **:** |  |  |  |
| **1.2.6.4** | **Details of Diesel Exhaust fluid tank:** |
| Capacity, l | **:** |  |  |  |
| Location | **:** |  |  |  |
| Material of construction | **:** |  |  |  |
| Provision for draining  | **:** |  |  |  |
| Recommended diesel exhaust fluid | **:** |  |  |  |
| **1.2.7** | **Intercooler/charge Air cooler:** |  |  |  |  |
| Type | **:** |  |  |  |
| Make | **:** |  |  |  |
| Model/part No. | **:** |  |  |  |
| No. of Tubes | **:** |  |  |  |
| Overall size, mm | **:** |  |  |  |
| Capacity, l | **:** |  |  |  |
| Material of construction | **:** |  |  |  |
| Location | **:** |  |  |  |
| **1.2.8** | **Lubrication system:** |  |  |  |  |
| Type | **:** |  |  |  |
| Type of oil pump | **:** |  |  |  |
| Method of drive | **:** |  |  |  |
| Oil sump capacity, l  | **:** |  |  |  |
| Total lube. oil capacity, l  | **:** |  |  |  |
| Recommended grade of lube oil | **:** |  |  |  |
| Lube oil change period, h | **:** |  |  |  |
| **1.2.8.1** | **Oil filters:** |  |  |  |  |
| Type | **:** |  |  |  |
| Make  | **:** |  |  |  |
| Part No.  | **:** |  |  |  |
| Number | **:** |  |  |  |
| Location | **:** |  |  |  |
| Oil filter capacity, l | **:** |  |  |  |
| Relief valve pressure setting, kPa  | **:** |  |  |  |
| Minimum permissible pressure, kPa  | **:** |  |  |  |
| Recommended service schedule, h | **:** |  |  |  |
| Method of oil cooling | **:** |  |  |  |

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| **1.2.8.2** | **Details of oil cooler (if provided):** |  |  |  |  |
| Type | **:** |  |  |  |
| Make  | **:** |  |  |  |
| Model | **:** |  |  |  |
| **1.2.9** | **Cooling system:** |  |   |  |  |
| Type | **:** |  |  |  |
| Coolant recommended | **:** |  |  |  |
| **1.2.9.1** | **Coolant /water pump:** |  |  |  |  |
| Make  | **:** |  |  |  |
| Type | **:** |  |  |  |
| Size of impeller Dia., mm | **:** |  |  |  |
| No. of guide Vanes | **:** |  |  |  |
| Method of drive | **:** |  |  |  |
| Pump speed corresponding to rated engine speed, rpm | **:** |  |  |  |
| **1.2.9.2** | **Details of fan:** |  |  |  |  |
| Make | **:** |  |  |  |
| Type | **:** |  |  |  |
| No. of blades  | **:** |  |  |  |
| Material | **:** |  |  |  |
| Dia. of fan, mm | **:** |  |  |  |
| Means of temperature control | **:** |  |  |  |
| Total coolant capacity, l  | **:** |  |  |  |
| **1.2.9.3**  | **Radiator:** |  |  |  |  |
| Make | **:** |  |  |  |
|  Overall size of radiator (W x H x T), mm | **:** |  |  |  |
| No. of tubes | **:** |  |  |  |
| Material of radiator core | **:** |  |  |  |
| Type of radiator cap | **:** |  |  |  |
| Radiator cap pressure, kgf/cm2 | **:** |  |  |  |
| Type of thermostat | **:** |  |  |  |
| Bare radiator capacity, l | **:** |  |  |  |
| Capacity of coolant reservoir, l | **:** |  |  |  |
| Total coolant capacity, l | **:** |  |  |  |
| Coolant water ratio | **:** |  |  |  |
| Type of radiator grill | **:** |  |  |  |
| Method of grill cleaning | **:** |  |  |  |
| Method of mounting | **:** |  |  |  |

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| **1.2.10** | **Details of hydraulic oil cooler:** |  |  |  |  |
| Number | **:** |  |  |  |
| Make | **:** |  |  |  |
| Type | **:** |  |  |  |
| Model/part no. | **:** |  |  |  |
| No. of Tubes | **:** |  |  |  |
| Overall size, mm | **:** |  |  |  |
| Material of construction | **:** |  |  |  |
| Location | **:** |  |  |  |
| **1.3** | **Electrical System:** |  |  |  |  |
| **1.3.1** | **Starting System:** |  |  |  |  |
| Type | **:** |  |  |  |
| Any aid for cold starting | **:** |  |  |  |
| Any other device provided for easy starting | **:** |  |  |  |
| **1.3.2** | **Battery:** |  |  |  |  |
| Make  | **:** |  |  |  |
| Numbers | **:** |  |  |  |
| Type | **:** |  |  |  |
| Capacity (V) and rating (Ah) | **:** |  |  |  |
| Location | **:** |  |  |  |
| **1.3.3** | **Starter Motor:** |  |  |  |  |
| Make | **:** |  |  |  |
| Type | **:** |  |  |  |
| Model | **:** |  |  |  |
| Capacity (V) and rating (kW) | **:** |  |  |  |
| Serial no. | **:** |  |  |  |
| Location | **:** |  |  |  |
| **1.3.4** | **Alternator:** |  |  |  |  |
| Make  | **:** |  |  |  |
| Model | **:** |  |  |  |
| Serial No. | **:** |  |  |  |
| Output rating (V & A) | **:** |  |  |  |
| Location | **:** |  |  |  |
| Method of drive | **:** |  |  |  |
| **1.3.5** | **Voltage Regulator:** |  |  |  |  |
| Make | **:** |  |  |  |
| Type | **:** |  |  |  |
| Capacity | **:** |  |  |  |

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| **1.3.7** | **Reverse Warning Alarm** |  |  |  |  |
| Make | **:** |  |  |  |
| Type | **:** |  |  |  |
| Number | **:** |  |  |  |
| Capacity, V | **:** |  |  |  |
| Location | **:** |  |  |  |
| **1.3.8** | **Horn:** |  |  |  |  |
| Make | **:** |  |  |  |
| Type | **:** |  |  |  |
| Number | **:** |  |  |  |
| Location  | **:** |  |  |  |
| **1.3.9** | **Circuit breaker/ Details of fuse box:** |
| Location | **:** |  |  |  |
| **1.3.10** | **Details of other electrical Accessories:** |  |  |
| **i)** |  | **:** |  |  |  |
| **ii)** |  | **:** |  |  |  |
| **iii)** |  | **:** |  |  |  |
| **1.4** | **Wheel Equipment:** |  |  |  |  |
| **1.4.1** | **Drive wheels:** |  |  |  |  |
| Make | **:** |  |  |  |
| Type | **:** |  |  |  |
| Location | **:** |  |  |  |
| Number, Size & Ply rating | **:** |  |  |  |
| Recommended tyre pressure, kPa  | **:** |  |  |  |
| Maximum permissible loading capacity of each tyre @ ----------- kPa pressure, (kgf)  | **:** |  |  |  |
| Track width, mm | **:** |  |  |  |
| Make and size of rim | **:** |  |  |  |
| Standard ballast on each wheel (if any), kg | **:** |  |  |  |
| **1.4.2** | **Steered wheels:** |  |  |  |  |
| Make | **:** |  |  |  |
| Type | **:** |  |  |  |
| Location | **:** |  |  |  |
| Number, Size & Ply rating | **:** |  |  |  |
| Recommended tyre pressure, kPa  | **:** |  |  |  |
| Maximum permissible loading capacity of each tyre @ ----------- kPa pressure, kgf  | **:** |  |  |  |
| Track width, mm | **:** |  |  |  |
| Make and size of rim | **:** |  |  |  |
| **1.4.3** | **Wheel base (mm)** | **:** |  |  |  |
| **1.5** | **Transmission System:** |  |  |  |  |
| Type | **:** |  |  |  |
| Make  | **:** |  |  |  |
| Model  | **:** |  |  |  |
| No. of speeds | **:** |  |  |  |
| Method of control | **:** |  |  |  |
| Lube oil capacity, l | **:** |  |  |  |
| Recommended grade of lubrication oil | **:** |  |  |  |
| Oil change period, h | **:** |  |  |  |
| **1.5.1** | **Final drive:** |  |  |  |  |
| Make  | **:** |  |  |  |
| Type | **:** |  |  |  |
| Reduction ratio  | **:** |  |  |  |
| Location | **:** |  |  |  |
| Lube oil capacity, l | **:** |  |  |  |
| Recommended grade of lubrication oil | **:** |  |  |  |
| Oil change period, h | **:** |  |  |  |
| **1.5.2** | **Nominal speed:** |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Movement | Position of traction lever | No. of engine revolutions for one revolution of driving wheel | No. of engine revolutions for one revolution of driving wheel | Nominal speed at rated engine speed of -------rpm when fitted with ssize of tyre of ----mm rolling radius index, (kmph) | Nominal speed at rated engine speed of ------- rpm when fitted with------size of tyre of ----mm rolling radius index, (kmph) | Remark |
| Previous sample | Present sample | Previous sample | Present sample |
| **Forward** | Maximum  |  |  |  |  |  |
| **Reverse** | Maximum |  |  |  |  |  |

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| **(1)** | **(2)** | **:** | **(3)** | **(4)** | **(5)** |
| **1.5.3** | **Brakes:** |  |  |  |  |
| **1.5.3.1** | **Service Brake:** |  |  |  |  |
| Make  | **:** |  |  |  |
| Type  | **:** |  |  |  |
| Size of brake disc (OD/ID), mm | **:** |  |  |  |
| Area of lining per wheel, cm2  | **:** |  |  |  |
| No. of disc per wheel | **:**  |  |  |  |
| Location | **:** |  |  |  |
| Over all thickness of disc, mm | **:** |  |  |  |
| Method of operation | **:** |  |  |  |
| **1.5.3.2** | **Parking Brake:** |  |  |  |  |
| Make | **:** |  |  |  |
| Type and location | **:** |  |  |  |
| Method of operation | **:** |  |  |  |
| **1.6** | **Steering System:** |  |  |  |  |
| Make  | **:** |  |  |  |
| Type | **:** |  |  |  |
| Pump | **:** |  |  |  |
| Method of operation | **:** |  |  |  |
| Outer diameter of steering control wheel, mm  | **:** |  |  |  |
| Location | **:** |  |  |  |
| **1.7 3.7** | **Hydraulic System:** |  |  |  |  |
| **1.7.1** | **Pump:**  |  |  |  |  |
| **1.7.1.1** | **Main Pump Unit:** |  |  |  |  |
| Type | **:** |  |  |  |
| Make | **:** |  |  |  |
| Part no. | **:** |  |  |  |
| Number of pump | **:** |  |  |  |
| Function | **:** |  |  |  |
| Location | **:** |  |  |  |
| **1.7.1.2** | **Tandem pump:** |  |  |  |  |
| Type | **:** |  |  |  |
| Make | **:** |  |  |  |
| Model  | **:** |  |  |  |
| Number of pump | **:** |  |  |  |
| Function | **:** |  |  |  |
| Location | **:** |  |  |  |
| **1.7.1.3** | **Transmission Pump Unit:** |  |  |  |  |
| Type | **:** |  |  |  |
| Make | **:** |  |  |  |
| Model  | **:** |  |  |  |
| Number of pump | **:** |  |  |  |
| Function | **:** |  |  |  |
| Location | **:** |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **1.7.2** | **Hydraulic Tank:** |  |  |  |  |
| Type & material | **:** |  |  |  |
| Location | **:** |  |  |  |
| Capacity, l  | **:** |  |  |  |
| Provision of breather | **:** |  |  |  |
| Provision for oil level indication | **:** |  |  |  |
| Recommended grade of oil | **:** |  |  |  |
| Recommended oil change period, h  | **:** |  |  |  |
| **1.7.3** | **Hydraulic Filter:** |  |  |  |  |
| Number(s)  | **:** |  |  |  |
| Type and its location | **:** |  |  |  |
| Recommended service schedule, h | **:** |  |  |  |
| **1.7.4** | Hydraulic cylinders, their numbers, type and locations:  |
| -For Topper up-down | **:** |  |  |  |
| -For Crop divider up-down | **:** |  |  |  |
| -For Base cutter level indicator | **:** |  |  |  |
| -For base cutter level adjustment  | **:** |  |  |  |
| -For steering  | **:** |  |  |  |
| -For elevator slew (LH & RH movement) | **:** |  |  |  |
| -For elevator up-down  | **:** |  |  |  |
| -For bin flap | **:** |  |  |  |
| Hydraulic Safety  | **:** |  |  |  |
| **1.8** | **Topper Assembly:**  |  |  |
| Function  | : |  |  |  |
| Type | : |  |  |  |
| Diameter of disc with blade, mm | : |  |  |  |
| No. of disc unit | : |  |  |  |
| Method of drive  | : |  |  |  |
| Details of Cutting disc: |  |  |  |  |
| No. of cutting blades per disc | : |  |  |  |
| Size of cutting blade (mm): |  |  |  |  |
| -Height | : |  |  |  |
| -Width at top | : |  |  |  |
| -Width at base | : |  |  |  |
| -Thickness | : |  |  |  |
| Method of mounting of cutting blade | : |  |  |  |
| Method of drive | : |  |  |  |
| Details of Hydraulic Motors: |  |  |  |  |
| Cutting Disc Motor: |  |  |  |  |
| Make  | : |  |  |  |
| Part No. | : |  |  |  |
| Serial No.  | : |  |  |  |
| Location | : |  |  |  |
| Details of movement of knife blade: |  |  |
| Cutting disc speed corresponding to no load engine speed -------------- rpm recommended for field work, rpm | **:** |  |  |  |
| Arrangement of speed variation, if any | **:** |  |  |  |
| Arrangement of vertical movement of de-topper arm | **:** |  |  |  |
|  | **Cutting height from Ground Level (mm):** |
| -Minimum | **:** |  |  |  |
| -Maximum | **:** |  |  |  |
| Arrangement of laterally swing movement of de-topper arm | **:** |  |  |  |
| Range of lateral movement, mm | **:** |  |  |  |
| Any Arrangement for locking the de-topper assembly in raised position | **:** |  |  |  |
| Hydraulic safety if any | **:** |  |  |  |
| **1.9** | **Crop divider:**  |  |  |
| Type | **:** |  |  |  |
| No. of crop divider | **:** |  |  |  |
| Spacing of crop divider shoe, mm | **:** |  |  |  |
| **Size (mm):** |  |  |  |  |
| -Length | **:** |  |  |  |
| -Diameter (Top/Middle/Bottom) | **:** |  |  |  |
| -Pitch | **:** |  |  |  |
| Range of vertical movement from Ground Level, mm | **:** |  |  |  |
| Method of vertical height adjustment  | **:** |  |  |  |
| Lateral movement (if any) | **:** |  |  |  |
| **Direction of rotation:** |  |  |  |  |
| Inner crop divider/roller | **:** |  |  |  |
| Outer crop divider/roller | **:** |  |  |  |
| Speed corresponding to no load engine speed --------- rpm recommended for field work (rpm): | **:** |  |  |  |
| Inner crop divider/roller | **:** |  |  |  |
| Outer crop divider/roller | **:** |  |  |  |
| Method of drive | **:** |  |  |  |
| **Details of Hydraulic Motors:** |
| Make  | **:** |  |  |  |
| Part No. | **:** |  |  |  |
| Numbers | **:** |  |  |  |
| Location | **:** |  |  |  |
| Method of mounting | **:** |  |  |  |
| Safety mechanism | **:** |  |  |  |
| Any Arrangement for locking the sugarcane harvester header assembly in raised position | **:** |  |  |  |
| Hydraulic safety if any | **:** |  |  |  |
| **1.10** | **Knockdown Roller:** |  |  |
| Type | **:** |  |  |  |
| Number | **:** |  |  |  |
| **Size (mm):** |  |  |  |  |
| -Overall length | **:** |  |  |  |
| -Overall dia. | **:** |  |  |  |
| No. of rows of combs and their arrangement | **:** |  |  |  |
| **Size of comb (mm):** |  |  |  |  |
| -Height  | **:** |  |  |  |
| -Base width | **:** |  |  |  |
| -Total height from base | **:** |  |  |  |
| -Spacing | **:** |  |  |  |
| Numbers  | **:** |  |  |  |
| Method of drive | **:** |  |  |  |
| **Details of hydraulic motors:** |
| Make (apa) | **:** |  |  |  |
| Part No. | **:** |  |  |  |
| Serial no. | **:** |  |  |  |
| Numbers | **:** |  |  |  |
| Location | **:** |  |  |  |
| Speed corresponding to no load engine speed-------- rpm recommended for field work, rpm | **:** |  |  |  |
| Method of vertical and horizontal Adjustment  | **:** |  |  |  |
| Range of vertical movement, mm | **:** |  |  |  |
| Horizontal movement, mm | **:** |  |  |  |
| Method of mounting | **:** |  |  |  |
| Drive safety (if any)  | **:** |  |  |  |
| **1.11** | **Finned Roller:**  |  |  |
| Type  | **:** |  |  |  |
| Number  | **:** |  |  |  |
| Size (Overall length x Max. Dia.), mm | **:** |  |  |  |
| No. of rows of combs and their arrangement | **:** |  |  |  |
| Size of comb (Height x Pitch) , mm | **:** |  |  |  |
| Number  | **:** |  |  |  |
| Details of drive | **:** |  |  |  |
| **Details of Hydraulic motors:** |
| Make  | **:** |  |  |  |
| Product No. | **:** |  |  |  |
| Serial No | **:** |  |  |  |
| Numbers | **:** |  |  |  |
| Location | **:** |  |  |  |
| Speed corresponding to no load engine speed ---------- rpm recommended for field work, rpm | **:** |  |  |  |
| Method of vertical and horizontal Adjustment  | **:** |  |  |  |
| Method of mounting | **:** |  |  |  |
| Hydraulic safety (if any)  | **:** |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **1.12** | **Base Cutter assembly:**  |  |  |
| Type | **:** |  |  |  |
| No. of Disc | **:** |  |  |  |
| Tilt angle of disc, degrees | **:** |  |  |  |
| Arrangement for changing disc angle | **:** |  |  |  |
| Number, type of blades and their arrangement | **:** |  |  |  |
| Size of blades (L x W x T), mm | **:** |  |  |  |
| **Cutting width(mm):** |  |  |  |  |
| -Without blade | **:** |  |  |  |
| -With blade | **:** |  |  |  |
| Speed corresponding to no load engine speed ---------- rpm recommended for field work, rpm | **:** |  |  |  |
| Arrangement for speed variation (if any) | **:** |  |  |  |
| Arrangement for reversal of rotation | **:** |  |  |  |
| Arrangement of cutting height adjustment | **:** |  |  |  |
| **Range of height adjustment from Ground Level (mm):** |
| -Minimum | **:** |  |  |  |
| -Maximum | **:** |  |  |  |
| Method of mounting of base cutter assembly | **:** |  |  |  |
| Details of drive | **:** |  |  |  |
| **Details of Hydraulic motors:** |
| Make | **:** |  |  |  |
| Part No. | **:** |  |  |  |
| Serial No. | **:** |  |  |  |
| Numbers | **:** |  |  |  |
| Location | **:** |  |  |  |
| Details of Gearbox: |  |  |  |  |
| Make  | **:** |  |  |  |
| Type | **:** |  |  |  |
| Reduction ratio | **:** |  |  |  |
| Oil capacity, l  | **:** |  |  |  |
| Recommended oil grade | **:** |  |  |  |
| Oil changing period, h  | **:** |  |  |  |
| Mechanism to indicate the cutting height of base cutter to the operator inside the cabin | **:** |  |  |  |
| Hydraulic safety  | **:** |  |  |  |
| Other safety mechanism if any | **:** |  |  |  |
| **1.13** | **Butt lift roller:** |
| Type | **:** |  |  |  |
| Size (L x Dia.), mm  | **:** |  |  |  |
| Max. paddle height, mm | **:** |  |  |  |
| Speed corresponding to no load engine speed ------- rpm recommended for field work, rpm | **:** |  |  |  |
| Adjustments (if any) | **:** |  |  |  |
| Details of drive | **:** |  |  |  |
| **Details of Hydraulic motors:** |
| Make  | **:** |  |  |  |
| Part No. | **:** |  |  |  |
| Serial No. | **:** |  |  |  |
| Numbers | **:** |  |  |  |
| Location | **:** |  |  |  |
| Method of mounting | **:** |  |  |  |
| Hydraulic safety  | **:** |  |  |  |
| **1.14** | **Feed rollers:** |  |  |  |  |
| Type | **:** |  |  |  |
| Number (s) | **:** |  |  |  |
| Size (L x Dia.), mm | **:** |  |  |  |
| Speed corresponding to no load engine speed --------- rpm recommended for field work, rpm: | **:** |  |  |  |
| Details of drive | **:** |  |  |  |
| **Details of Hydraulic motors:** |
| Make  | **:** |  |  |  |
| Part No. | **:** |  |  |  |
| Serial No. | **:** |  |  |  |
| Numbers | **:** |  |  |  |
| Adjustments (if any) | **:** |  |  |  |
| Method of mounting | **:** |  |  |  |
| Hydraulic safety  | **:** |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **1.15** | **Chopper drum assembly:**  |  |  |
| Type | **:** |  |  |  |
| No. of drum per chopper unit | **:** |  |  |  |
| Size of drum (Working Dia. X Width), mm | : |  |  |  |
| Type of blade | **:** |  |  |  |
| Arrangement of blades | **:** |  |  |  |
| Size of blade (L x W x T), mm | **:** |  |  |  |
| No. of blades and spacing, mm | **:** |  |  |  |
| Type of drive | **:** |  |  |  |
| **Details of Hydraulic motors:** |
| Make  | **:** |  |  |  |
| Part No. | **:** |  |  |  |
| Serial No. | **:** |  |  |  |
| Numbers | **:** |  |  |  |
| Location | **:** |  |  |  |
| Method of mounting | **:** |  |  |  |
| Chopper gearbox oil capacity, l  | **:** |  |  |  |
| Recommended grade of oil |  |  |  |  |
| Oil change period, h | **:** |  |  |  |
| Balancing flywheel size, mm | **:** |  |  |  |
| Speed corresponding to no load engine speed ----------recommended for field work, rpm | **:** |  |  |  |
| Any method of reversal direction movement  | **:** |  |  |  |
| Method of speed variation | **:** |  |  |  |
| Safety mechanism | **:** |  |  |  |
| Method of adjustment of cutting clearance and its range of adjustment in, mm | **:** |  |  |  |
| **1.16** | **Deflector Plate:** | **:** |  |  |  |
| Size, mm | **:** |  |  |  |
| Location | **:**  |  |  |  |
| **1.17** | **Elevator Bowl:** | **:** |  |  |  |
| Shape | **:** |  |  |  |
| **1.18** | **Elevator:** | **:** |  |  |  |
| Type | **:** |  |  |  |
| Overall length, mm | **:** |  |  |  |
| Number of pads/elevator flight | **:** |  |  |  |
| Size of pads/elevator flight, mm | **:** |  |  |  |
| Spacing between the pads, mm | **:** |  |  |  |
| Type of chain | **:** |  |  |  |
| **Details of chain:**  |  |  |  |  |
| Total length, mm | **:** |  |  |  |
| No. of rollers | **:** |  |  |  |
| No. of links | **:** |  |  |  |
| Roller dia., mm  | **:** |  |  |  |
| Pitch, mm | **:** |  |  |  |
| Method of tensioning the chain | **:** |  |  |  |
| Type of drive | **:** |  |  |  |
| **Elevator sieve/separating grate:** |  |  |  |  |
| Type | **:** |  |  |  |
| Total area of sieve, m2 | **:** |  |  |  |
| Horizontal reach (Min. & Max.), mm | **:** |  |  |  |
| Discharge height above ground level (Min. & Max.), mm  | **:** |  |  |  |
| Clearance height (Min. & Max.), mm  | **:** |  |  |  |
| Method of vertical movement of elevator | **:** |  |  |  |
| Range of vertical movement at top of elevator from GL (Min. & Max.), mm | **:** |  |  |  |
| Method of horizontal swing movement | **:** |  |  |  |
| Range of horizontal swing  | **:** |  |  |  |
| Provision to watch continuous operation of elevator from operator seat | **:** |  |  |  |
| Speed corresponding to no load engine speed -------- rpm recommended for field work, rpm | **:** |  |  |  |
| Arrangement of leveling/ controlling elevator feed | **:** |  |  |  |
| Drive safety mechanism (if any) | **:** |  |  |  |
| **1.19** | **Bin flap:** |  |  |  |  |
| Type | **:** |  |  |  |
| Size L x W x T), mm | **:** |  |  |  |
| Adjustments (if any) | **:** |  |  |  |
| **1.20** | **Extractor Fan:** |  |  |  |  |
| Type | **:** |  |  |  |
| Number and their location | **:** |  |  |  |
| Working Diameter | **:** |  |  |  |
| No. of blades | **:** |  |  |  |
| Size of fan blade (L x W x T), mm | **:** |  |  |  |
| Opening area of Extractor unit, m2 | **:** |  |  |  |
| Type of drive | **:** |  |  |  |
| **Details of Hydraulic Motors:** |  |  |  |  |
| Make  | **:** |  |  |  |
| Model/ Part No. | **:** |  |  |  |
| Numbers | **:** |  |  |  |
| Arrangement of speed variation | **:** |  |  |  |
| Arrangement for changing direction of extractor outlet | **:** |  |  |  |
| Speed corresponding to no load engine speed ----------- rpm as recommended for field work (Min. & Max.), rpm | **:** |   |  |  |
| Range of movement of extractor outlet from centre of harvester, degrees | **:** |  |  |  |
| Location | **:** |  |  |  |
| Hydraulic safety  | **:** |  |  |  |
| **1.21** | **Operators control and instrumentation:**  |
| **1.21.1** | **Details of Instrument cluster** | **:** |  |  |  |
| **1.21.2** | **Details of controls** | **:** |  |  |  |
| **1.22** | **Operators’ cabin** |  |  |  |  |
| Make | **:** |  |  |  |
| Model | **:** |  |  |  |
| Material | **:** |  |  |  |
| Dimensions, mm | **:** |  |  |  |
| Height of operator’s platform for Ground Level, mm | **:** |  |  |  |
| Cabin cooling/heating arrangement | **:** |  |  |  |
| **1.23** | **Operator’s seat** |  |  |  |  |
| Make | **:** |  |  |  |
| Model | **:** |  |  |  |
| Type | **:** |  |  |  |
| Type of suspension | **:** |  |  |  |
| Type of dampening | **:** |  |  |  |
| Details of adjustments | **:** |  |  |  |
| **1.24** | **Details of air conditioning system:** |  |  |
| **1.24.1** | **Compressor:** |  |  |  |  |
| Make | **:** |  |  |  |
| Model | **:** |  |  |  |
| Serial no. | **:** |  |  |  |
| Refrigerant | **:** |  |  |  |
| Location | **:** |  |  |  |
| Drive | **:** |  |  |  |
| **1.24.2** | **Condenser unit:** |  |  |  |  |
| **Fan** | **:** |  |  |  |
| **Condenser:**  |  |  |  |  |
| Size, mm | **:** |  |  |  |
| No. of tube | **:** |  |  |  |
| Location | **:** |  |  |  |
| **1.24.3** | **Evaporator & blower unit** |  |  |  |  |
| **Evaporator:** |  |  |  |  |
| Type | **:** |  |  |  |
| Size, mm | **:** |  |  |  |
| **Blower:** |  |  |  |  |
| Make | **:** |  |  |  |
| Model | **:** |  |  |  |
| Number of blower | **:** |  |  |  |
| Size (Dia. x Length), mm | **:** |  |  |  |
| Location | **:** |  |  |  |
| **1.25** | **Provision for safety and comfort of operator:** |
| **i)** |  |
| **ii)** |  |
| **iii** |  |

|  |  |
| --- | --- |
| **1.26** | **Labeling plate:** |
|  |
| **1.27** | **Total number of lubricating points:** |  |  |
| -Greasing points | **:** |  |
| **-Oiling points** | **:** |  |
| **1.28** | **Overall dimensions (mm):** |  | Transport position | Working position |
| -Length | **:** |  |  |
| -Width | **:** |  |  |
| -Height | **:** |  |  |
| Ground clearance  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **(1)** | **(2)** | **:** | **(3)** | **(4)** | **(5)** |
| **1.29** | **Mass (kg):** |  |  |  |  |
| Mass of harvester with coolant, fuel, lubricants full and 75 kg mass on operator’s seat |  |  |  |  |
| -Total | **:** |  |  |  |
| -Front | **:** |  |  |  |
| -Rear | **:** |  |  |  |
| **1.30** | **Colour of Harvester:** |  |  |  |  |
| Cabin and Radiator door, hydraulic oil coolers | **:** |  |  |  |
| Crop divider, Chassis, sheet metal, and elevator | **:** |  |  |  |
| Wheel rim | **:** |  |  |  |

**2.** **SELECTED PERFORMANCE AND OTHER CHARACTERISTICS AS PER IS: 15806-2018.**

**Though the IS: 17626-2021 does not have “Selected performance and other characteristics”, to give a fair idea regarding the performance of Sugarcane harvester, the “Selected Performance and other characteristics” adopted from IS: 15806-2018, is reproduced below for information. However, it is informed that “Selected Performance and other characteristics” are not applicable to Sugarcane harvester.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| S. No.  | Characteristics | Category (Evaluative/ Non evaluative) | Requirement | Tolerance | Declaration by applicant(Previous/Present sample)  | Remark |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| **1.** | **Prime mover performance:** |  |
| **a)** | Max. Power (absolute) - Average max. power observed during 2 hrs. max. power test in natural ambient condition, kW | Evaluative | To be declared by manufacturer | ± 5 % of declared value |  |  |
| **b)** | Max. power observed during test after adjusting the no load engine speed as per recommendation of the manufacturer for field work, kW | Evaluative | To be declared by manufacturer | ± 5 % of declared value |  |  |
| **c)** | Power at rated engine speed, kW (under natural ambient condition) | Non-evaluative | To be declared by manufacturer | ± 5 % of declared value |  |  |
| **d)** | Specific fuel consumption corresponding to average maximum power under 2 h maximum power test, g/k Wh. | Evaluative | To be declared by manufacturer | +5 % of declared value |  |  |
| **e )** | Max. Smoke density at 80 % load between the speed at max. Power & 55 % of speed at max. power or 1000 rpm whichever is higher | Evaluative | As per CMV Rules, | Nil |  |  |
| **f)** | Max. Crank shaft torque, (Nm) observed during the test after no load engine speed is adjusted as per manufacturer’s recommendation for field work | Evaluative | To be declared by manufacturer | ± 8 % of declared value |  |  |
| **g)** | Back up torque, % | Evaluative | 7 % min. | Nil |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** |
|  | **h)** | **Max. Operating temperature ( ºC):** |
| **i)** | Engine oil | Evaluative | To be declared by manufacturer | Nil  |  |  |
| **ii)** | Coolant l | Evaluative | To be declared by manufacturer | Nil  |  |  |
| **i)** | Lubrication oil consumption, g/kWh | Evaluative | Not exceeding 1 % of SFC at maximum power (high ambient) | Nil |  |  |
| **2.** | **Brake performance at 24 km/h or maximum speed whichever is less:** |  |
| **a)** | Max. Stopping distance at a force equal to or less than 600 N on brake pedal (m)- (cold brake and hot brake) **CMVR does not prescribe hot brake** | Evaluative | As per requirement of CMVR | Nil |  |  |
| **b)** | Max. Force exerted on brake pedal to achieve a deceleration of 2.5 m/sec2 | Evaluative | ≤ 600 N | Nil |  |  |
| **c)** | Effectiveness of parking brake at a force of 600 N at foot pedal or 400 N at hand lever | Evaluative | As per requirement of CMV Rules | -- |  |  |
| **3.** | **Mechanical vibration:** |  |
| **a)** | Operator’s platform | Non evaluative | 120 μm max. | Nil |  |  |
| **b)** | Steering wheel | Non evaluative | 150 μm max. | Nil |  |  |
| **c)** | Seat with driver seated | Non evaluative | 120 μm max. | Nil |  |  |
| **4.** | **Air cleaner oil pull over:** |
| a) | Air cleaner oil pull over in % when tested in accordance with IS: 8122 part (II) 2000 | Evaluative | 0.20 max | Nil |  |  |
| **5.** | **Noise measurement** |
| **a)** | Max. ambient noise emitted by sugarcane harvester at bystander’s position, dB (A) | Evaluative | 88 dB (A) as per CMVR | Nil |  |  |
|  | **b)** | Max. noise at operator’s ear level, dB (A) | Evaluative | 98 dB (A) as per CMVR | Nil |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** |
| **6.** | **Hydraulic Test/ Lifting test of different units:** |  |
| **a)** | Satisfactory completion of base cutter, topper and crop divider | Evaluative  | - | Nil |  |  |
| **7.**  | **Discard limit:** |  |
| **a)** | Thickness of brake disc, mm | Evaluative | 1.17 | --do-- |  |  |
| **b)** | Thickness of clutch plate, mm | Evaluative | NA | --do-- |  |  |
| **8.** | **Safety requirement:** |  |
| **a)** | Guards against all moving parts | Evaluative | Belt and chain drives pulleys hydraulic pipes around operators work place | - |  |  |
| **b)** | Lighting arrangement | Evaluative | As per CMVR | - |  |  |
| **c)** | Spark arrester in engine’s exhaust in case naturally aspirated engine | Evaluative | Essential | - |  |  |
| **d)** | Rear view mirror | Evaluative | Essential | - |  |  |
| **e)** | Fire extinguisher | Evaluative | Essential | - |  |  |
| **f)** | Anti slip surfaces at operator platform & ladder & proper gripping for the control levers. | Evaluative | Essential | - |  |  |
| **g)** | Labeling of control and gauges | Evaluative | Essential | - |  |  |

 Place: Signature------------------------------------------

Date: Name of the applicant---------------------------

 Designation---------------------------------------

 Address-------------------------------------------

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