



भारत सरकार/ Government of India

उत्तरीक्षेत्रकृषिमशीनरीप्रशिक्षणएवंपरीक्षणसंस्थान/ Northern Region Farm Machinery Training and Testing Institute

ट्रैक्टरनगर, सिरसारोड, हिसार) हरियाणा(/Tractor Nagar, Sirsa Road, Hisar (Haryana)- 125 001

Website: <http://nrfmtti.gov.in> E-mail: fmti-nr@nic.in Tel./Fax: 01662276984 GSTIN:06AAAGN0273F

[ISO – 9001 : 2015 CERTIFIED]

TECHNICAL SPECIFICATIONS FOR POWER WEEDER

1	General:		
	Type of machine	:	
	Make	:	
	Model	:	
	Brand name	:	
	Serial no.	:	
	Name and address of manufacturer	:	
	Name and address of applicant	:	
	Year of manufacture	:	
	Country of origin	:	
2	Details of prime mover:		
	Name and address of manufacturer	:	
	Type	:	
	Make	:	
	Model	:	
	Sr. No.	:	
	Country of origin	:	
	Year of manufacturer	:	
	Engine speed (recommended setting), rpm:		
	High idle speed	:	
	Low idle speed	:	
	Rated speed	:	
	Speed at maximum torque	:	
	No load engine speed for field operation, if any	:	
	Whether the prime mover has already been tested by authorized testing centre (Yes/No)	:	
If yes, then specify the valid test report No. and upload the copy of test report	:		
3	Cylinder & cylinder head:		
	Number	:	
	Disposition	:	
	Bore/stroke, mm	:	
	Capacity, cc	:	
	Type of valve	:	
	Valve clearance (mm):		
	Inlet	:	
	Exhaust	:	
Compression ratio	:		

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4	Fuel supply system:		
	Type of fuel feed	:	
4.1	Fuel tank:		
	Material	:	
	Capacity of fuel tank, l	:	
	Location of fuel tank	:	
	Provision for draining of sediments/ water	:	
	Fuel filter	:	
	Fuel on/off	:	
4.2	Governor:		
	Make	:	
	Model	:	
	Type	:	
4.3	Carburetor:		
	Make	:	
	Type	:	
5.0	Fuel injection pump (If applicable):		
	Type	:	
	Make	:	
	Model	:	
	Sr. No.	:	
	Method of drive	:	
6	Fuel Injector (If applicable):		
	Type	:	
	Make	:	
	Model	:	
	Sr. No.	:	
	Injection pressure, MPa	:	
	Injection timing	:	
7	Air intake system:		
7.1	Pre-cleaner:	:	
7.2	Air cleaner:		
	Type	:	
	Make and model	:	
	Location	:	
	Recommended service schedule	:	
	Recommended grade of oil	:	
8	Exhaust:		
	Type of silencer	:	
	Location of silencer	:	
	Spark arresting device, if any	:	
9	Lubrication system:		
	Type	:	
	Oil filter	:	

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	Oil capacity, l	:	
	Recommended grade of lubricant oil	:	
	Oil change period, h	:	
	Minimum permissible lubricating oil pressure (kg/cm ²)	:	
10	Cooling system:		
	Type	:	
	Dia. of blower, mm	:	
	No. of vanes	:	
11	Starting system:		
	Type	:	
	Ignition system	:	
	Any other provision for easy starting	:	
	Aid for cold starting	:	
12	Spark plug:		
	Make	:	
	Model	:	
	Spark plug electrode gap, mm	:	
13	Power Transmission system:		
	Type	:	
13.1	Clutch:		
	Make	:	
	Type of clutch	:	
	Number of friction plate	:	
	Dia. of friction plate, mm	:	
	Thickness, mm	:	
	Method of operation	:	
	Location of operation	:	
13.2	Transmission system:		
	Type	:	
	Make	:	
	No. of speed	:	
	Grade of oil	:	
	Oil capacity, l	:	
	Oil change period, h	:	
13.2.1	Rotary gear box:		
	Type	:	
	No. of teeth on drive pinion	:	
	No. of teeth on driven crown	:	
	Reduction ratio	:	
	No. of teeth on drive pinion	:	
	No. of teeth on driven crown	:	
	Reduction ratio	:	
	Oil capacity, l	:	

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	Oil change period, h	:	
	No. of engine revolution in one revolution of rotor shaft:		
	L – 1	:	
	H – 1	:	
	Reverse gear	:	
14	Rotor:		
14.1	Rotor cover:		
	Material	:	
	Length, mm	:	
	Width, mm	:	
	Thickness, mm	:	
	Method of fixing	:	
14.2	Rotor shaft:		
	Material	:	
	Type of rotor axle	:	
	Width across flat of rotor axle, mm	:	
	Length of shaft, mm	:	
	Length of extension shaft, mm	:	
	No. of flanges	:	
	Type of flanges	:	
	Size of flanges, mm	:	
	Thickness of flange, mm	:	
	Distance between two flanges, mm	:	
	No. of blades on each flange	:	
	Overall length of rotor, mm	:	
	Diameter of rotor with blades, mm	:	
	Method of fixing of blade	:	
	No. of disc	:	
	Diameter of disc, mm	:	
14.3	Rotor blades:		
	Number	:	
	Type	:	
	Material	:	
	Thickness, mm	:	
	Width of beveled edge, mm	:	
	No. and size of hole on each blade for fixing it to the flanges, mm	:	
	Arrangement of blades on the axle	:	
15	Depth control mechanism:		
	Type	:	
	No. of flat	:	
	Material	:	
	Size of flat (L x W x T), mm	:	
	Provision for depth adjustment	:	
16	Steering handle bar:		
	Material	:	
	Dia. of pipe, mm	:	
	No. of hand grips	:	
	Length of grip, mm	:	

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	Material of grip	:	
	Dia. of grip, mm	:	
	Provision for handle height adjustment	:	
	Height of handle bar from ground level, mm	:	
	Provision for angle adjustment	:	
	Stand	:	
	Transport wheel	:	
	Type	:	
	Make	:	
	Number	:	
	Size, mm	:	
	Recommended pressure at 150 kg load, kPa	:	
17	Controls		
	At LHS	:	
	At RHS	:	
18	Overall dimensions, mm:		
	Length	:	
	Width	:	
	Height	:	
	Mass, kg	:	
19	Color of machine		
	Engine	:	
	Main drive cover & transmission system	:	
	Rotary drive cover	:	
	Fuel tank	:	
	Handle bar	:	
20	Labeling /Identification plate		

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ADDITIONAL INFORMATION			
1. Engine Performance:			
i.	Maximum Power, kW (Ps)	:	
ii.	Rated Power, kW (Ps)	:	
iii.	Specific fuel consumption corresponding to maximum power, kg/kWh (g/hph)	:	
iv.	Maximum equivalent crankshaft torque Nm, (kgs-m)	:	
v.	Back-up torque (%)	:	
vi.	Maximum temperatures (°C):		
	-Engine oil	:	
	-Coolant (water)/liner wall	:	
vii.	Lubricating oil consumption (g/kWh)	:	
viii.	Coolant consumption (% of total Coolant capacity)	:	
ix.	Smoke level (Bosch No.)	:	
2.	Mechanical Vibration at steering/hands (micron)	:	
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)	:	

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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		
	-2 nd compression ring		
	-3 rd compression ring		
	- Oil ring		
5	Ring groove clearance (mm):		
	-Top compression ring		
	-2 nd compression ring		
	-3 rd 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 valve		
	-Exhaust valve		

Place:

Signature: -----

Date:

Name of the applicant: -----

Designation: -----

Address: -----

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