



भारत सरकार / Government of India

उत्तरी क्षेत्र कृषि मशीनरी प्रशिक्षण एवं परीक्षण संस्थान / Northern Region Farm Machinery Training and Testing Institute

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[ISO - 9001 : 2015 CERTIFIED]

TECHNICAL SPECIFICATIONS FOR SELF PROPELLED WALK BEHIND/RIDE ON TYPE PADDY TRANSPLANTER

1.1	General:		
	Name and address of manufacturer	:	
	Name and address of applicant	:	
	Name of the machine	:	
	Type	:	
	Make	:	
	Model	:	
	Size of transplanter, mm	:	
	Serial No. /Chassis No.	:	
	Month and year of manufacture	:	
Country of origin	:		
1.2	Details of prime mover:		
	Type	:	
	Make	:	
	Model	:	
	Serial no.	:	
	Country of origin	:	
	Rated power in rating test of engine , kW	:	
	Rated engine speed, rpm	:	
	Maximum speed at no load, rpm	:	
	Low idle speed, rpm	:	
	Speed at maximum torque	:	
	Recommended no load engine speed for field operation, rpm	:	
	Whether the prime mover has already been tested at authorized testing center (Yes/No)	:	
If yes, then specify the valid test report No. and upload copy of the test report along with the Application Form	:		
1.2.1	Cylinder:		
	Number	:	
	Disposition	:	
	Bore / Stroke, mm	:	
	Capacity, cc	:	
	Compression ratio	:	
Type of cylinder liner	:		

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	Type of cylinder head	:	
	Arrangement of valves	:	
	Valve clearance in cold condition, mm:		
	-Inlet	:	
	-Exhaust	:	
	No. of compression rings	:	
	No. of oil rings	:	
1.2.2	Fuel supply system:		
	Type	:	
	Type of fuel filter	:	
	Provision of water separator	:	
	Type of ignition device	:	
1.2.2.1	Fuel tank:		
	Capacity, l	:	
	Location of fuel tank	:	
	Material of fuel tank	:	
1.2.2.2	Carburetor:		
	Type	:	
	Make	:	
	Product identification no.	:	
1.2.2.3	Governor:		
	Make (apa)	:	
	Type	:	
	Governed range of engine speed, rpm	:	
	Rated engine speed, rpm	:	
1.2.2.4	Fuel injection pump (If applicable)		
	Type	:	
	Make	:	
	Model/Group combination No.	:	
	Sr. No.	:	
	Method of drive	:	
1.2.2.5	Fuel Injector (If applicable)		
	Type	:	
	Make	:	
	Model/Group combination No.	:	
	Sr. No.	:	
	Injection pressure, MPa	:	
	Injection timing	:	
1.2.3	Air intake system:		
1.2.3.1	Pre-cleaner:		
	Type	:	
	Make	:	
	Model/Group combination No.	:	

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1.2.3.2	Air cleaner:		
	Type of air cleaner	:	
	Recommended grade of oil	:	
	Recommended service schedule, h	:	
	Location	:	
1.2.3.3	Exhaust:		
	Type of silencer	:	
	Provision against entry of rain water	:	
	Location	:	
1.2.3.4	Lubrication system:		
	Type	:	
	Engine sump capacity, l	:	
	Maximum permissible oil temperature, °C	:	
	Provision of oil level checking	:	
	Recommended grade of lubricating oil,	:	
	Oil change period, h	:	
	Minimum permissible lube oil pressure, kg/cm ²	:	
1.2.3.5	Cooling system:		
	Type	:	
	Details of blower:		
	Dia., mm	:	
	Number of fins	:	
	Size of fins, mm:		
	-Height	:	
	-Width (top/bottom)	:	
	-Thickness	:	
	Radiator (if applicable):		
	Make	:	
	Type of radiator cap	:	
	Radiator cap pressure, kgf/cm ²		
	Means of temperature control	:	
	Type of thermostat	:	
	Bare radiator capacity, l	:	
	Total coolant capacity, l	:	
	Means of grill cleaning, if any	:	
Recommended grade of coolant	:		
Coolant water ratio	:		
1.2.4	Electrical system:		
1.2.4.1	Starting system:		
	Make	:	
	Type	:	
	Aid for cold starting	:	
	Any other device for easy starting	:	

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1.2.4.2	Spark plug:		
	Make	:	
	Model	:	
	Type	:	
	Gap of spark plug electrodes, mm	:	
1.2.4.3	Starter motor:		
	Make	:	
	Type	:	
	Model/ Group combination No.	:	
	Capacity/Power, kW	:	
	Location	:	
1.2.4.4	Alternator:		
	Make	:	
	Model/Group combination No.	:	
	Output rating	:	
	Location	:	
	Method of drive	:	
1.2.4.5	Voltage regulator	:	
1.2.4.6	Battery:		
	Make	:	
	Model/Type No.	:	
	Type	:	
	Capacity	:	
	No. & location	:	
1.2.4.7	Lighting system:		

Details of lights:

Description	No. & capacity of bulb	Height above ground to the centre of beam (mm)	Size of beam, (mm)	Distance from centre of the beam to outside edge of combine (mm)

1.2.4.8	Horn	:	
1.2.5	Engine mounting frame:		
	Type	:	
	Shape	:	
	Size, mm	:	

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	Thickness of sheet, mm	:	
	Method of fixing	:	
1.3	Transmission system:		
	Make	:	
	Model	:	
	Type	:	
	Description	:	
	Location	:	
	No. of speeds (Froward & Reverse)	:	
	Method of drive	:	
	Method of gear shifting	:	
	Oil capacity, l	:	
	Recommended grade of oil	:	
	Oil change period, h	:	
	Nominal speed:		

Movement	Gear No.	No. of engine revolutions for one revolution of driving wheel		Nominal speed at rated engine speed of ----- rpm when fitted with ----- size of tyre of ----- mm radius index. (kmph)	
		Variator setting		Variator setting	
		Minimum	Maximum	Minimum	Maximum
Forward	1				
	2				
	3				
Reverse	1				
	2				

1.3.1	Main clutch:		
	Make	:	
	Type	:	
	Location	:	
	Mode of operation	:	
	Location	:	
1.3.2	Rear wheel clutch/Steering clutch:		
	Function	:	
	Make	:	
	Type	:	
	Location	:	
	No. & size of pressure plate	:	
	No. & size of friction plate	:	
	Mode of operation	:	

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1.3.3	Planting clutch:		
	Function	:	
	Make	:	
	Type	:	
	Mode of operation	:	
	Location of lever	:	
1.3.4	Final drive:		
	Make	:	
	Type	:	
	First reduction details:		
	No. of teeth on 1 st pinion shaft	:	
	No. of teeth on 1 st crown shaft	:	
	Speed reduction ratio	:	
	Second reduction details:		
	No. of teeth on 2 nd pinion shaft	:	
	No. of teeth on 2 nd crown shaft	:	
	Speed reduction ratio	:	
	Lubrication	:	
	No. and type of bearing	:	
1.4	Wheel equipment (drive wheel):		
	Type (2WD/4WD)	:	
1.4.1	Front wheel (if applicable):		
	Type	:	
	Number	:	
	Dia. of wheel, mm	:	
	No. of lugs	:	
	Size of lugs (H × W × T), mm	:	
	Track width, mm	:	
	Wheel mounting	:	
1.4.2	Rear wheel:		
	Type	:	
	Number	:	
	Dia. of wheel, mm	:	
	No. of lugs	:	
	Size of lugs (H × W × T), mm	:	
	Track width, mm	:	
	Wheel mounting	:	
	Wheel base	:	
	Details of differential lock	:	
Details of torque multiplier	:		
1.5	Brakes:		
1.5.1	Service brakes:		
	Type	:	
	Location	:	

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	Method of operation	:	
1.5.2	Parking brake:		
	Type	:	
	Location	:	
	Method of operation	:	
1.6	Hydraulic system:		
	Hydraulic pump:		
	Type	:	
	Make and model	:	
	Number	:	
	Drive details	:	
	No. of teeth on drive gear	:	
	No. of teeth on driven gear	:	
	Speed reduction ratio	:	
	Location	:	
	Capacity, l	:	
	Recommended grade of oil	:	
	Oil change period, h	:	
	No. of hydraulic cylinder	:	
	Internal dia. of cylinder tube, mm	:	
	Dia. of cylinders rod, mm	:	
	Stroke of piston, mm	:	
	Relief valve setting, MPa (Kg/cm ²)	:	
Details of distributor	:		
Details of hydraulic lock	:		
1.7	Steering:		
	Make	:	
	Type	:	
	Material	:	
	Size, mm		
	Peripheral length	:	
	Dia.	:	
	Height of centre of handle grip from ground level, mm	:	
	Method of fixing	:	
	Handle grip size (L × Dia.), mm	:	
	Method of adjustment of height	:	
	Range of height adjustment, mm	:	
	Outer dia. of steering control wheel, mm (if applicable)	:	
	Details of hydraulic system	:	
Method of operation	:		

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1.8	Planting mechanism:		
	Type	:	
	No. of rows	:	
	Spacing of rows, mm	:	
	Method of changing row to row spacing	:	
	Range of hill to hill spacing, mm	:	
	Method of changing hill spacing	:	
	Number of seedlings per hill	:	
	Arrangement for adjusting the number of seedling per hill	:	
	Provision for planting depth adjustment	:	
	Provision for independent operation of pair of planting claw & seedling feed	:	
	Provision for automatic leveling of seedling platform	:	
	Recommended grade of lubricant	:	
	Grease/oil changing period, h	:	
1.8.1	Planting Finger:		
	Type	:	
	Number	:	
	No. of speeds available for fingers	:	
	Size, mm	:	
	Width of jaw/beak, mm	:	
	Length of beak, mm	:	
Total length of planting finger, mm	:		
1.9	Seedling Feeding system:		
1.9.1	Seedling platform assembly:		
	Type	:	
	Material	:	
	Size (L × W), mm	:	
	Number of compartment	:	
	Size each component (L × W), mm	:	
	Inclination of tray, degrees	:	
	Seedling platform drive	:	
	Provision of left and right movement of tray	:	
	Platform Extension:		
	No. of extensions	:	
	Type	:	
	Material	:	
	Size, mm	:	
1.9.2	Longitudinal feeding system:		
	Type	:	
	Material	:	
	Details of star wheels:		
	No. of star wheel	:	
Size of star wheel, mm	:		

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	Dia.	:	
	No. of teeth	:	
	Details of belts (if applicable):		
	No. of belts	:	
	Seedling mat contact area, cm ²	:	
	Method of drive	:	
1.9.3	Seedling support rod/stay-bars/retainer:		
	Type	:	
	Number	:	
	Size (L × Dia.), mm	:	
	Method of fixing	:	
1.9.4	Cross feed system:		
	Type	:	
	Size of shaft, mm	:	
	Speed of seedling platform, m/s	:	
	Method of changing speed	:	
	Stroke length of cross feed platform, mm	:	
	No. of strokes per min.	:	
	Recommended grade of lubricant	:	
	Grease changing period, h	:	
1.10	Floating system:		
	Type	:	
	Number	:	
	Material	:	
	Location	:	
	Method of fixing	:	
	Float adjustment for planting depth	:	
	Provision for automatic depth control	:	
	Details of float:		
	Parameters	Center float	Side float
	Length, mm		
	Maximum width, mm		
	Minimum width, mm		
	Mass, kg		
	Ground contact area, m ²		
	Angle of curvature, deg.		
1.11	Spare seedling carrier:		
	Type	:	
	Material	:	
	Location	:	
	Number	:	
	Size (L x W), mm	:	

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1.12	Operator's seat (if applicable):		
	Type	:	
	Method of suspension	:	
	Method of dampening	:	
	Adjustment, mm:		
	Horizontal	:	
	Vertical	:	
1.13	Details of safety provisions	:	
1.14	Details of controls and instrument panel	:	
1.15	Overall dimensions, mm:		Transportation Field
	Length	:	
	Width	:	
	Height	:	
1.16	Ground clearance, mm	:	
1.17	Mass, kg	:	
1.18	Colour of machine	:	
1.19	Marking/ Labeling Plate:		

Place: _____ **Signature**-----

Date: _____ **Name of the applicant**-----

_____ **Designation**-----

_____ **Address**-----

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