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Ministry of Agriculture and Farmers Welfare
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1. SPECIFICATIONS

1.1 General:

Manufacturer :

Name of machine :

Make :

Model :

Type :

Serial number :

Year of manufacture :

Type of blade :

Working width of implement (mm) :

Recommended power source :

Prime Mover Used during test :

1.2 Constructional Details (Refer Fig.1):

1	Mainframe	5	Primary reduction gear box
2	Side plate	6	Secondary reduction gear box
3	Rotor shaft	7	Skid
4	Rotor blade	8	Hitch pyramid

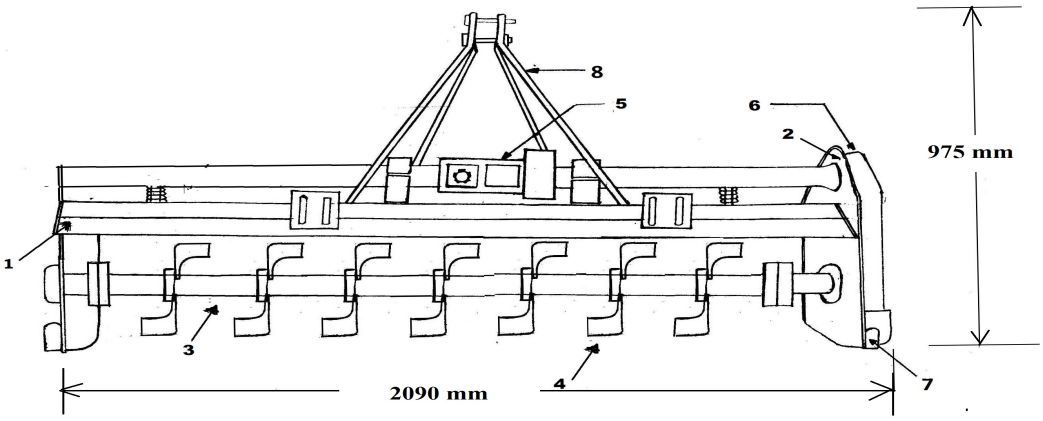


Fig.1: ----------Rotavator

1.2.1 Main Frame

Constructional Details :

Material :

Dimensions of frame (mm) :

1.2.2 Side plates

Number(s) :

Material :

Dimensions (mm):

LHS :

RHS :

Method of fixing : .

1.2.3 Trailing board

Number (s) :

Material :

Size of MS Sheet(mm) :

Method of fixing :

Provision for locking :

1.2.4 Rotor

1.2.4.1 Axle

Material :

Constructional details :

No. & type of flanges :

Size of flanges (mm) :

No. &size of holes on each flange for fixing blades (mm) :

No. & size of holes on outer flange for fixing the axle (mm) :

Distance between two flanges (mm) :

Diameter of roller with blades (mm) :

Method of fixing :

1.2.4.2 Rotor blades

Numbers :

Type :

Material :

Trade Mark :

Thickness (mm)

- Overall :

- Beveled edge :

Length of beveled edge (mm) :

Width of beveled edge (mm) :

No.; size & spacing of the holes on each blade for fixing it to the flanges (mm) :

Arrangement of blades on the axle :

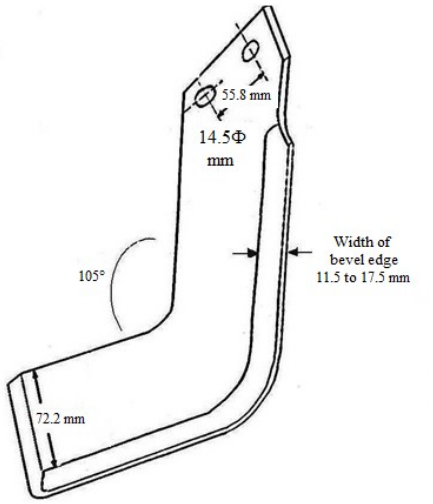


Fig. 2: Dimensions of hatchet blade

1.2.5 Primary reduction

Type :

Mode of power transmission :

No. of teeth on bevel gear :

No. of teeth on idle pinion :

No. of teeth on driven pinion

Reduction ratio :

Type of lubricant recommended :

Lubricating oil capacity (L)

- As specified :
- As observed :

Length & max dia. of splined/pinion shaft (mm) :

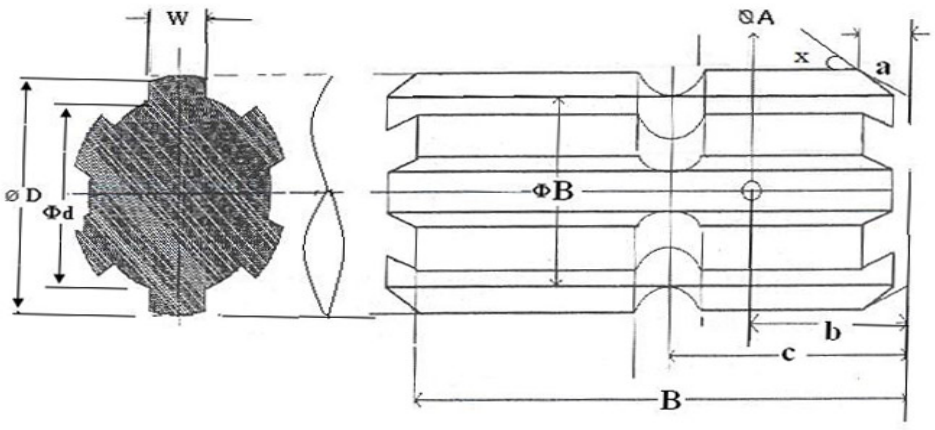
Length & dia. of jack shaft (mm) :

No. & type of bearings on splined/pinion shaft :

No. & type of bearings on jack/bevel shaft :

No. of oil seals provided on splinted shaft :

No. of oil seals provided on bevel shaft :



Dimensions of Power Input Connection (PIC) of Implement (Refer fig. 3) :

Specification	As per IS:4931-1995	As observed	Remarks
Nominal speed (rpm)	540 ± 10	540	
No of splines	6	6	
Direction of rotation	Clockwise	Clockwise	
Dimensions (mm)			
DΦ	34.79 ± 0.06		
d Φ	28.91+ 0.05 - 0.15		
B Φ	29.4 ± 0.1		
A Φ	8.3 (Optional)		
W	8.69 – (0.09 to 0.16)		
a	7		
b	25 ± 0.5		
c	38		
x	30 degree		
B	76 (min)		
Horizontal distance between PIC and Lower Hitch Point	150* (IS:10318:2002)		
Vertical distance between PIC and Lower Hitch Point	100 ± 100* (IS:10318:2002)		

*Recommended dimensions. It may be necessary to vary them in the case of specialized implements.

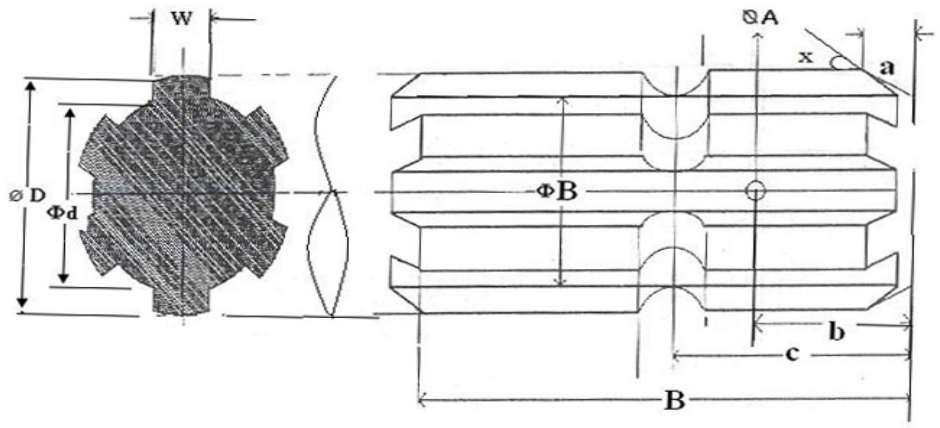


Fig.3: DIMENSIONS OF POWER INPUT CONNECTION (PIC) OF IMPLEMENT

1.2.6 Secondary Reduction:

Type :

Mode of power transmission :

Location :

Type of lubricant recommended :

Lubricating Grease capacity (Kg)

- As specified :

- As observed :

No. of Gears :

No. of teeth on drive Gear :

No. of teeth on Idler Gear :

No. of teeth on driven Gear :

Reduction ratio :

Diameter (mm)

- Drive Gear :

- Driven Gear :

- Idler Gear :

1.2.7 Power Take Off Drive Shaft:

Type :

Length of the shaft (mm)

-Closed :

-Extended :

Mass of shaft (kg) :

Locking Device :

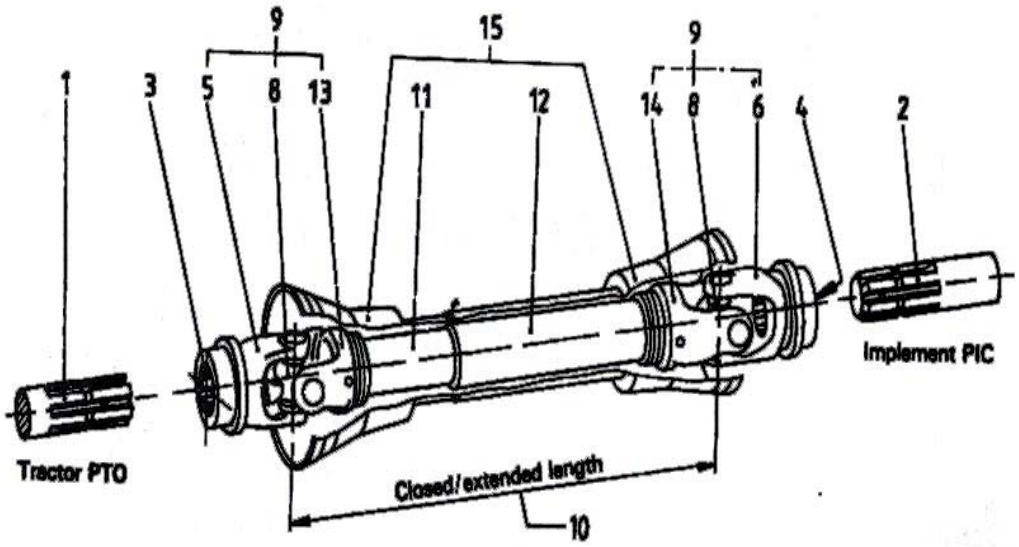


Fig. 4 PTO Drive Shaft

KEYWORDS:

1 PTO
2 PIC
3 PTO Yoke Bore
4 PIC Yoke Bore
5 PTO Yoke
6 PIC Yoke
8 Journal Cross- Assembly
9 Universal Joint
10 PTO Drive Shaft, Closed and Extended Length
11 Inner Shaft
12 Outer Shaft
13 Inner Shaft Yoke
14 Outer Shaft Yoke

Dimension of PIC yoke bore (Ref. Fig 5)

S. No	Notation	Dimensions (mm)		Conformity to IS
		As per IS:4931-1995	As Observed	
1	D∅	34.93 ± 0.03		
2	d∅	29.7 ± 0.1		
3	W	8.69 + (0.02 to 0.05)		

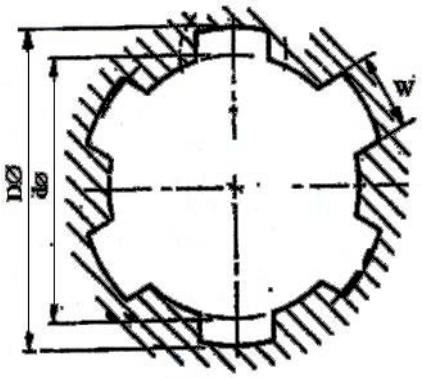


Fig.5 Dimension of PIC Yoke Bore

1.2.8 Depth control mechanism

1.2.8.1 Skid Assembly

Number(s) : Two (one on each side)

Material : MS flat

Constructional details :

1.2.8.2 Rack

Number(s) :

Material :

Size of rack (mm) :

Method of arrangement :

Provision for depth Adjustment :

1.3 Hitch Pyramid

Constructional details :

Specification of Hitch Pyramid As per IS: 4468 - 1997 (Part-1), (Refer Fig. 6)

Notations	Specifications	Dimensions in mm		Remarks
		As per IS (Cat. II)	As measured	
Upper hitch points				
A	Dia. of hitch pin	24.37 – 25.50		
B	Dia. of hitch pin hole	25.7 ± 0.2		
F	Width between inner faces of yoke	52 (Min)		
E	Width between outer faces of yoke	86 (Max)		
D	Linch pin hole distance	76 (Min.)		
L	Dia. of linch pin hole	12.0 (Min.)		

4.4 Lubricants:

Sl. No.	Particulars	As recommended by the manufacturer	As used during test	Lubricant change period
1	Primary Gear box	SAE 140		
2	Secondary Gear box	EP1 Grease		
3	Rotor Hub	Grease		
4	Propeller Shaft	Grease		

Lower hitch point				
H	Dia. of hitch pin hole	28.7 ±0.3		
-	Width between inner face of yoke	52 (Min)		
-	Width between outer face of yoke	86 (Max.)		
G	Dia. of hitch pin	27.8 – 28.0		
K	Linch pin hole distance	49 (Min.)		
L	Dia. of linch pin hole	12.0 (Min.)		
M	Mast height	610 ± 1.5 (min)		
N	Lower hitch point span	825 ± 1.5		

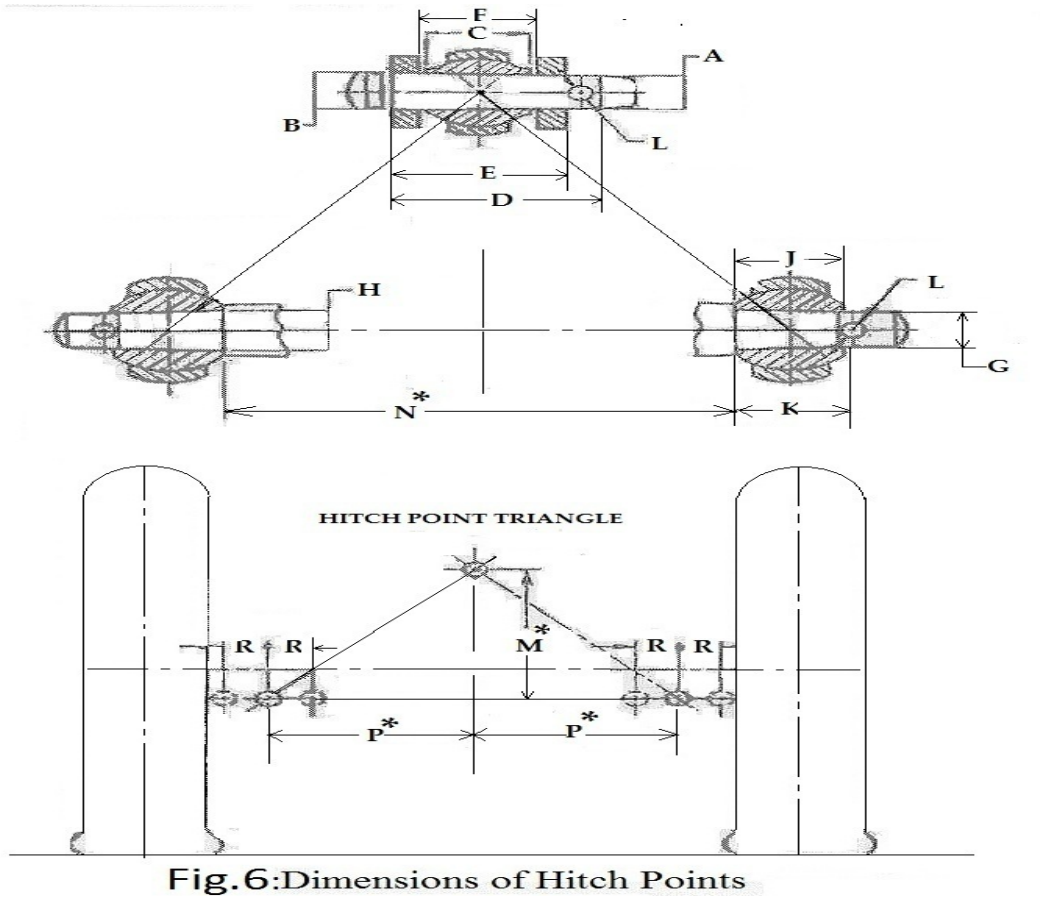


Fig.6:Dimensions of Hitch Points

1.5 Marking/Labeling of implement:

Labeling plates and stickers are provided on the implement as under:

Sl. No.	Parameter	Details
1.	Make	
2.	Serial No.	
3.	Model	
4.	Type	
5.	Year of manufacturing	

1.6 Overall Dimensions (mm):

Length :

Width :

Height :

1.7 Operational Mass (kg) :

Colour :

Place: ……..

Dated: ……..

Signature: …….

Name: …….

Designation: …….

Address: ……..