



# USER'S MANUAL

A PRODUCT OF RuTAG IIT DELHI



## SHEEP HAIR SHEARING DEVICE

MODEL: --



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**Revision sheet**

<b>Revision no.</b>	<b>Date</b>	<b>Revision description</b>	<b>Created by</b>
Revision 0	09/07/2020	User's manual created	Ashish Dahiya

## 1 INTENDED USE

The machine is strictly used to remove the woollen fleece from the body of the sheep.

## 2 SAFETY PRECAUTIONS

 <b>WARNING</b>	Failure to follow these instructions properly may result in personal injury or loss of life
 <b>CAUTION</b>	Failure to follow these instructions properly may result in property damage or personal injury, which may be serious depending on the circumstances

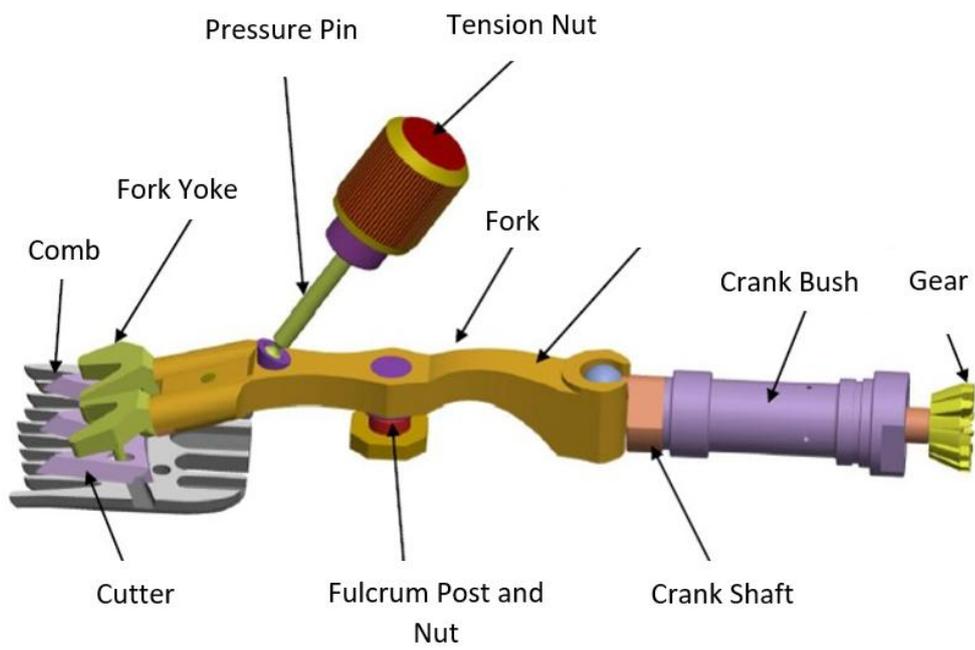
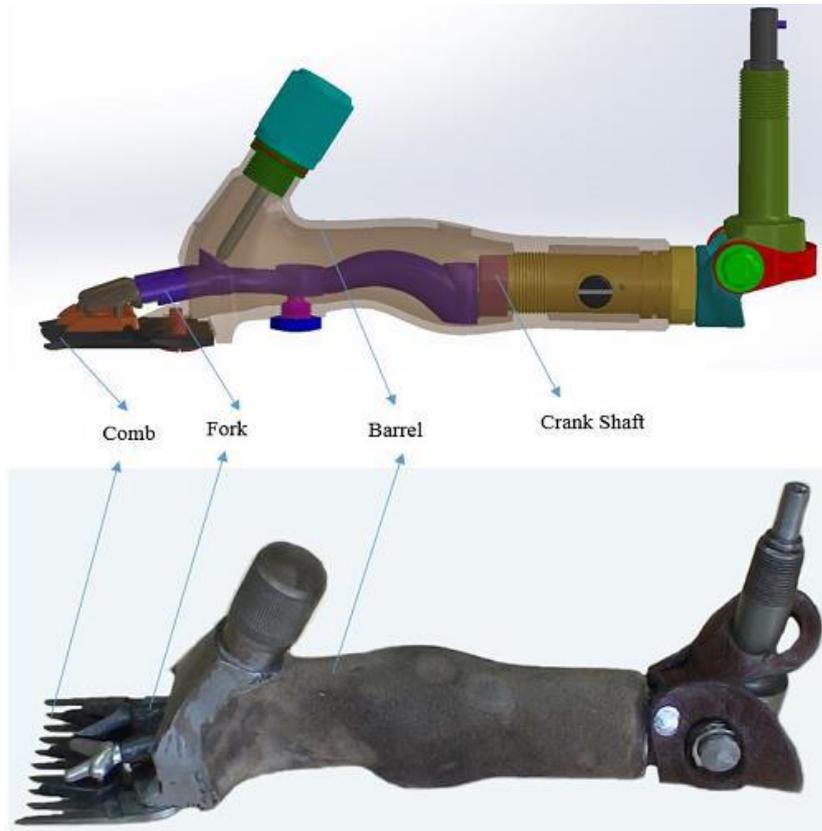
 DO NOT ATTEMPT

 BE SURE TO FOLLOW INSTRUCTIONS.

 BE SURE TO ESTABLISH EARTH CONNECTION.

 <b>WARNING</b>	 <b>CAUTION</b>
<ul style="list-style-type: none"> <li>To avoid injury, keep the motor switch within reach of the hand while shearing. </li> </ul>	<ul style="list-style-type: none"> <li>Do not use the Sheep Hair Shearing Device for the purpose other than for which it is intended. It may cause adverse effects. </li> </ul>
<ul style="list-style-type: none"> <li>Do not attempt to repair device yourself without proper understanding. Improper workmanship may damage the product. </li> </ul>	<ul style="list-style-type: none"> <li>Only connect with the specified power source. </li> <li>Rotate the driving shaft of Handpiece by hand before connecting to motor.</li> <li>Adjust the tension nut pressure accordingly.</li> <li>Make sure that the workplace has proper earthing connections </li> <li>Protect the device from water ingress. It may damage it.</li> <li>Check the insulation of all electrical connections</li> <li>Apply oil and grease through dedicated holes.</li> <li>Align the comb and cutter properly before running the device.</li> </ul>

3 PARTS AND THEIR FUNCTIONS



1. **Motor:** 0.75 HP, 2800 rpm, Single Phase AC motor (Make: Sunner India)
2. **Pull Cord switch:** on/off switch for motor
3. **Flexible Shaft:** 8mm inner core dia, 2m length, flexible driving shaft for transferring rotary motion from motor to the Handpiece.
4. **Handpiece:** Assembly of various parts as given below:
  - a) Comb
  - b) Cutter
  - c) Barrel
  - d) Comb Screw
  - e) Fork
  - f) Fork Yoke
  - g) Tension Nut
  - h) Pressure pin
  - i) Pressure pin spring
  - j) Fork Fulcrum cup
  - k) Fork fulcrum post
  - l) Fork fulcrum nut
  - m) Sliding Ball
  - n) Crank Bush
  - o) Crank Shaft
  - p) Inner Joint
  - q) Outer Joint
  - r) Joint cap
  - s) Joint clip (U-clip)
  - t) Driving End Shaft
  - u) Leather Cover
  - v) Joint cover
  - w) Sliding Sleeve
5. **Comb and Cutter:** Sharp blades used for cutting of wool.
6. **Ferrole/Sleeve:** Used for protection of rotating joint of Flexible Shaft and Handpiece.
7. **Grinder:** To regrind the comb and cutter after use.

## 4 DEVICE FEATURES

1. Depth of penetration is more which increases the staple length of sheared wool
2. Light weight flexible shaft is used to make shearing comfortable.
3. Removable comb and cutter are used for easy replacement when damaged
4. Reduced shearing time
5. Long life of components
6. User friendly and risk of injuring animal is minimal

## 5 PREPARATION BEFORE OPERATION

### 5.1 PRESETTING TOOLS

1. A bamboo rod (or a straight metal pipe) to tie up the motor so that it hangs vertically, and the weight of the device doesn't bother the shearer.

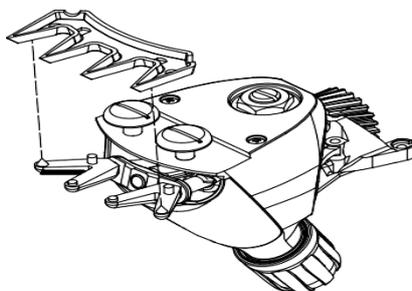
### 5.2 PRESETTING STEPS

### Assembling the Handpiece

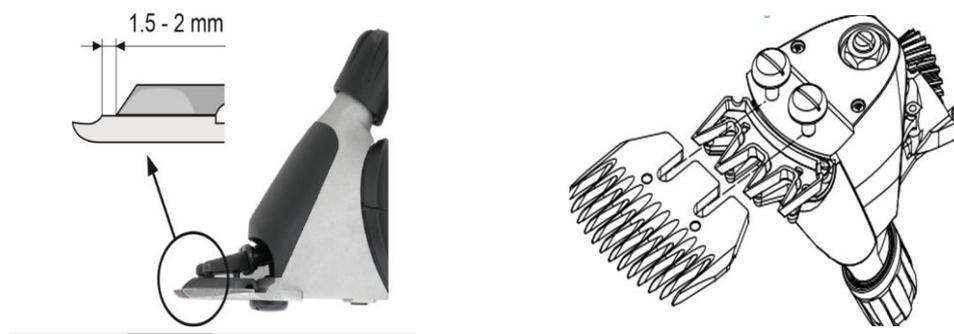
1. First put the Crank Shaft inside Bush and Inner Joint and tighten it with the Cog. Then take Driving End Shaft and insert it in Outer Joint and tighten it with another Cog. This will complete the Back Joint assembly.
2. Insert the Back Joint assembly from the back of the Handpiece in a way that the Bush can be tightened by the inbuilt threads of the Handpiece.
3. Put some grease on the back of the Fork and put the sliding ball in the groove.
4. Insert the fork and the sliding ball into the Handpiece in a way that the ball will mount on the crank shaft.
5. Put the sliding pin and sliding sleeve from the top of the Handpiece resting on the Fork and tighten them with the help of Tension Nut.
6. Put Adjustable Nut and Bolt from the bottom of the Handpiece on which the Fork Fulcrum will rest. Tighten them accordingly.

### Installing comb and cutter

1. Fit the cutter into the fork yoke such that the tapered pin of the yoke fits into the small round hole of the cutter and the pegs of the fork fits into the oblong hole of the cutter as shown in the picture.



2. Slide the comb with the ground surface of the comb against the cutter underneath the combs screws, and align it properly such that ground surface of the comb plate protrudes approx. 1.5 - 2 mm above the point of the cutter.
3. Now tighten the comb plate screws.



### Assembling Motor and Flexible shaft

1. Take the threaded end (Motor side) of the Flexible drive and tighten it on the Motor shaft with the help of two pins.

### Assembling Flexible Shaft and Handpiece

1. Insert the Protection sleeve on the Flexible Shaft.
2. Insert the Driving End Shaft into the groove of Flexible shaft (Handpiece side) attachment. Simply press it down then twist to lock it.
3. Tighten the protection sleeve to the Outer Joint of the Handpiece.



## WARNING

Tighten all the screws carefully, any kind of misalignment may lead to device failure.



## CAUTION

Note: Add oil and grease to the rotating parts thoroughly while assembling the handpiece and other parts.

## 6 OPERATION

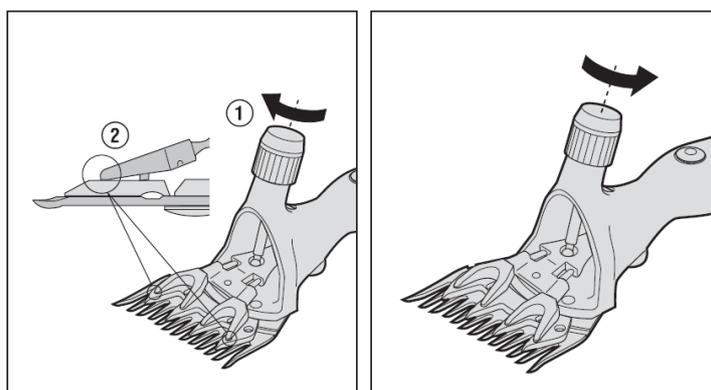
### 6.1 SETUP TOOLS

1. Bench Vice/Pipe wrench
2. Plier
3. Screwdriver
4. Flexible shaft pins: to attach flexible shaft with motor
5. Spanner keys

### 6.2 DEVICE SETUP

### 6.3 OPERATING PROCEDURE

1. Adjust the clipping pressure: When the machine is switched off, turn the adjusting knob in the clockwise direction until you feel some resistance. Then turn the knob another 1/4 turn in the direction of the arrow.



2. Adjust the Fulcrum Post Nut accordingly to maintain the pressure on the cutter.
3. Oil the parts.
4. Plug in the motor cable to an AC supply.
5. Wear gloves and other safety equipment.
6. Approach the animal and hold it in suitable position
7. Rotate the Pull Cord Switch 90° to turn ON the switch
8. Start shearing the wool fleece of the sheep.
9. When finished, rotate the Pull Cord Switch 90° to turn OFF the switch.



## WARNING

Turn off the device immediately in case of any failure.



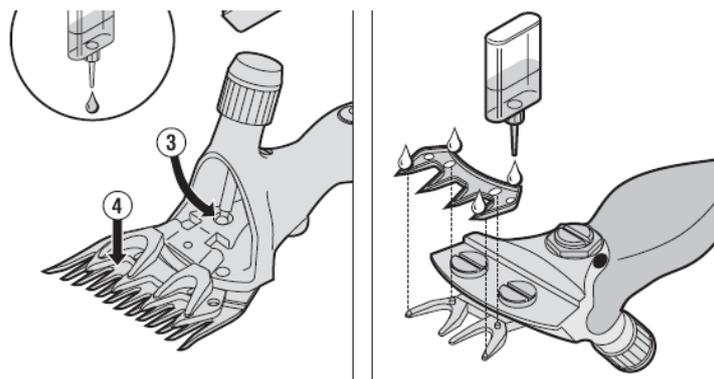
## CAUTION

Hold the animal tightly.  
Start sheering only after having suitable grip on the handpiece.

Note:

## 7 MAINTENANCE

1. To ensure a well-clipped animal and to increase the life of the device, apply a thin coat of oil between the cutter and comb plate. All other moving parts of the clipping head must also be lubricated.



2. Oil the clipping blades adequately during the clipping session, at least once every 15 minutes, so that they do not run dry.
3. Immediately replace damaged or notched cutter and comb in order to avoid injuries.
4. Clean the device with a dry cloth after every use.

Note: Use quality oil and grease only for lubrication.  
 Keep out of reach of children.  
 Protect the device from any kind of water damage.  
 Do not operate in direct sunlight for a long period.



## 8 SPECIFICATIONS

1. Voltage: 220-240V
2. Current: 5A
3. Speed: 2800 rpm
4. Weight: 42 kg
5. Volume: x-x mm
6. Material: Mild Steel, Cast Iron, D2 Steel, etc.

## 9 WARRANTY/ GUARANTEE

RuTAG IIT Delhi provides 1-year warranty for the device. Any damaged part will be repaired/replaced according to the circumstances if within warranty period.

## 10 DISPOSAL REQUIREMENT

The damaged parts must be removed and disposed separately in accordance with relevant local and national legislation.

## 11 CONTACTS

**Technical support:** RuTAG IIT Delhi

Address: #343, Block III, IIT Delhi, Hauz Khas, New Delhi – 110016

Ph.: 011-26591385

**Local support NGO:**

Manufacturer: