Instructions for the set-up, use, and care of the “DD” Sheep Shearing Grinder

Horner Shearing

www.HornerShearing.com
Motor Specification
Model: YLJ 9052-30
Single Phase Induction motor  Power 750 watts
Voltage: 220 - 240 v, Frequency: 50 Hz, Insulation Class: B
FLA: 4.98 amp, Efficiency: 76
Enclosure: IP44, Speed: 2800 rpm
Power factor: 85, Cooling: IC411
Capacitor: 20/150 uF, Duty Cycle: 51
Ambient: 40 degree C.

Accepting Delivery
This DD shearing grinder is checked and in good condition when leaving our premises. It is guaranteed against faulty workmanship for 12 months after purchase. We cannot oversee the conditions during transport/delivery. It is important that the box is carefully inspected on arrival, before signing for the goods, and any damage noted alongside your signature. Any claims for damage in transit will have to be met by the carrier.

Contents
Remove all the parts in the small compartment and check all are present. The motor has the discs fitted during transport, and is bolted to the floor of the box.

List of Contents
- 1 Motor with 2 discs fitted - 1 left hand thread, 1 right hand thread, 2 pendulum holders attached to the motor in the transport position, with 2 back guards fixed in position.
- 1 Double sided clamp plate, with bolt and nut.
- 1 Spanner.
- 2 Front guards.
- 2 Front guard support strips.
- 4 Rubber feet
- 1 or 2 Pendulums.
- 3 Coarse grit cloths (40 grit) for combs.
- 3 Fine grit cloths (80 grit) for cutters.
- 1 Glue
Grinder Parts, all ready for assembly.

The front guard support strips are in place. The front guard locates in the holes in the end of the support strips.
Assembly

Remove and check all loose items from the box, leaving the motor. Now carefully lift the edge of the grinder box to access and unscrew the retaining nuts from underneath. Carefully lift out the grinder motor - 2 people needed.

Fitting The Feet And Front Guard Supports
The 4 rubber feet are fitted one on each corner of the grinder. The feet also hold in place the 2 supporting strips for the 2 front guards, one either side of the motor.

Check The Front Guards Fit
The outer guards have 2 pegs on the bottom edge, which locate into the holes on the 2 support strips. The top of the front guard is fastened with the bolt at the top.

Check that the outer guards fit properly. They are removed each time the cloths need replacing, but must always be in place before using the grinder.

Pendulum Supports
Unscrew the nut on the base of one pendulum support. Lift straight up to its full height, then twist through 180 degrees, so that it locks in position. Tighten the nut again. Repeat with the other pendulum support.

Adjusting the Pendulum Arm
The pendulum must hang straight, with the magnet holder halfway between the edge of the disc and the centre. The top arm is adjusted so that the HEEL of the comb or cutter touches the disc first, before the tips.

The length of the pendulum rod is adjusted so that at the finish position, the sparks travel straight up the disc, evenly from all teeth.

Tighten all nuts.
Lifting the first Pendulum support.

Lift straight up to full height. Then twist through 180 degrees, to lock in position. Tighten nut at base. Repeat at other side.
Choosing the site for the grinder

Essentials

- Clear access to both ends of the grinder and switch.
- Adequate light - preferably natural light.
- Firm, level surface where it cannot move or tip.
- Clear floor space, free of objects & flammable debris.
- Working height suitable for the operator.
- Adequate working space.
- Out of a busy traffic area.

Additional Safety checks

- Nuts are tight on the discs. Note: one is right hand thread, one is left hand thread.
- Always use the washers; ensure all are free of grit, etc.
- Check emery papers are correctly glued, and not torn or lifted, and do not extend outside of the disc.
- Guards are always in place throughout grinding.
- Always switch off at the plug in the wall, as well as the switch.
- Never leave the grinder until the discs have stopped spinning.
- Keep the power cable up out of harm’s way.
- Always unplug the machine from the mains electric supply before starting any maintenance work.
- Safety glasses, ear protectors and dust masks ready.

Personal Safety Checks

- Never wear loose fitting clothing.
- Ban spectators from your working area.
- Which side the comb paper is on before switching on.
- Use in a well ventilated area - or use an air extractor.
- Never use damaged discs or worn pendulums.
Care of Grinder

Metal Discs

- Discs are best kept either on the grinder, or on the clamp plate. Discs can be damaged by careless handling, or dropping and can then become hazardous.

- Never use damaged discs.

Motor

- Keep the switch cover clean.

- Prevent a build up of dust by regular cleaning of the motor and housing.

- Prevent mishandling during transit.

- Keep electric cables up out of the way of danger.

Pendulums

- The comb bed must be flat. Rounded corners will not give a sharp comb - replace. Prevent damage in transit.

- Remove papers, and all traces of glue, from the discs if the grinder is not to be used for extended periods.

Before using this grinder, the operator must be fully trained in its safe use.
Grinding Combs

- Check which side is the comb side - coarse 40 grit emery.
- Hook the pendulum on the arm. Hold the top of the pendulum with your spare hand.
- Place a comb on the comb pendulum, sharp side to the emery.
- Check the pins do not stick out beyond the comb surface.
- Hold the pendulum between thumb and bent index finger.
- Push firmly to make contact with the emery paper. The heel should touch first.
- Hold firmly, evenly, move the pendulum from side to side.
- Make sure sparks travel straight up, evenly across the comb.
- After 3 or 4 strokes, finish in the centre, hold firmly, and pull away smoothly to remove the comb.
- Look at the ground surface. Check for dull tips, or white lines along the edge of the teeth, which show it is still blunt. Repeat the process if these are visible, until the whole comb surface is a uniform appearance.

Grinding cutters

- Move to the fine emery paper (80 grit) side to grind cutters.
- Hook the pendulum from the arm and place a cutter on the pins.
- Repeat as with the comb, but with only moderate, but even, pressure on the cutter. The sparks should come off vertically, and evenly across the cutter.

It is easy to “blue” a cutter by using too much pressure, or a worn emery. Check: look for any smooth tips. Regrind, until all the surface is the same appearance.

Always wait until the discs are at full speed before grinding. Switch off at the wall plug, as well as the grinder switch, and wait until the discs have stopped spinning, before leaving.
Position of comb at start and finish of grinding.

Clamp both discs on the clamp plate every time.
Setting The Emery Papers

Preparation

Using the spanner, unscrew the motor spindle nuts and remove the two metal discs and 2 washers from the motor.

Use the latex type glue provided to glue the emery papers to the metal discs. This glue is easy to remove when regularly replacing papers.

The metal discs must be completely free of oil or grease. Degrease with hot soapy water and brush if necessary. When replacing, rub off any old glue or other debris, and thoroughly clean, before applying new emery papers.

Setting

Put one of the washers on the clamp plate bolt, place one metal disc on top, face up. Support underneath with a cloth or towel. Place the other metal disc face up on a clean surface.

Shake the glue pot. Apply glue to first disc on the bolt, spreading it thinly but evenly over the whole disc in a thin layer. Repeat on the second metal disc.

Take the comb paper, 40 grit, and place it over the bolt, smooth side down, on to the first metal disc.

Take the clamp plate and place on top of the emery on the bolt.

Place the fine emery, 80 grit for the cutters, emery side down, on to the clamp plate. Add second metal disc, face down, over the bolt.

Put the washer on top of the second plate, then the nut, and tighten on to the clamp bolt hand tight, using the spanner.

Allow to set in a warm, dry place until dry - a minimum of 3 hours.
Please note: the two metal discs must be clamped at the same time with the double-sided clamp plate, even if only one paper is being set.

Before using, undo the bolt and separate the discs carefully and allow to dry off for an hour, again in a dry, warm place.

**Fitting the Grinding Disc**

Before tightening the nuts, always make sure the collar of the grinder spindle, the washers, and the backs of the metal discs are clean and free from grit or dirt. This is to ensure a tight connection. A disc which could become loose would present a serious hazard.

Check the discs are tight by placing a hand on the top of each, and try to rotate against each other. If there is any play, tighten securely with the spanner.

Always replace the front guards before using.
WARNING (1)
The person in charge of this sheep shearing grinder must ensure that the operator has been trained, and can identify any potential risks, and is proficient in its safe use, before he/she starts work.

WARNING (2)
The box containing grinder and cast iron discs weighs in excess of 60 kgs.