

## *Ashford Spinning Wheel Maintenance – 2013*

The most important aspect of spinning wheel maintenance is to ensure the three main elements of the spinning wheel are free to rotate. Please use the following check list to ensure your wheel is smooth and light to treadle.

Start by removing the drive and brake bands. Use Ashford Spinning Wheel oil or 30# grade motor oil on all the nylon bearings. Wipe off any surplus oil.

**Wheel** - Spin the wheel. It should rotate freely for 20 + revolutions on nylon bearings and 100 + on ball bearings. All our spinning wheels are now supplied with ball bearings which are sealed for life and do not need any lubrication. However if not:

- Check to see if any fibre has accumulated on the shafts or in the bearings. If necessary remove it with tweezers.
- Lubricate the nylon wheel bearings. On the Traditional Spinning Wheel prise the wheel supports apart and let the oil drop onto the crank between the hub and the bearings.
- Check the conrod (pitman) bearing isn't binding as it rotates. If necessary apply a drop of oil.
- Treadle rail pins. Use either candle wax or a drop of oil to reduce noise and friction.
- If you have a double treadle wheel, lay it on its back and apply a drop of oil to each treadle hinge pins (since 2012 we have used polyurethane hinges which do not need lubrication).
- On the Traditional Spinning Wheel, if the wheel appears to be pinched between the wheel supports, loosen the bolts or screws holding the frame until it is free. Then spin the wheel and gradually retighten the bolts or screws.
- On the Traveller and Elizabeth Spinning Wheels the gap between the wheel bearings and hub can be altered by loosening the two bolts holding the wheel supports and twisting or moving them in or out. Once correct gradually retighten the bolts or screws. Apply a drop of oil to the bearings.
- On very old Traditional Spinning Wheels the conrod was secured to the crank with a bolt and two nuts either side of the crank which can come loose and jam against the conrod. If this has happened use a small spanner and loosen the 2 x 1/4" Whitworth nuts. Adjust the bolt until the con rod bearing has clearance on the bolt, retighten and apply a drop of oil.
- If your wheel has a leather conrod joint that has become soft or floppy, replace it with a new leather conrod joint.
- If your wheel has a round polyurethane conrod joint, check that the gap between the bottom of the conrod (pitman) and the treadle rail is around 12 - 18mm (1/2 - 3/4"). If greater than this it can cause ankle strain and if closer the two can bind thus stretching the joint. If necessary, replace the joint and cut off any surplus underneath. Since 2012 we have used moulded polyurethane conrod joints which do not need any adjustment.
- If your Traditional Spinning Wheel is very old and has a clunk in the crank, it is most likely the hole in the crank has worn. To overcome this we recommend fitting either a Double Treadle Kit or a Clunky Wheel Kit. Both kits include a new crank, hub pin and conrod.
- If the drive band is worn or the knot is lumpy, replace it with a new soft cotton drive band or if you have a single drive a Turbo Kit.

**Flyer** - Spin the flyer. It should spin very freely, however if not:

- Check the flyer bearings are at right angles to the flyer shaft. If not, loosen the screws holding the maiden uprights to the maiden bar, realign the bearings and retighten the screws.
- Check that there are large washers between the screw heads and maiden bar.
- Check there is approx. 1/8" (2-3mm) end-float between the flyer, bobbin and flyer bearings. If the bobbin is tight, it may be necessary to use a craft knife to pare a little wood away where the bobbin bearing rubs against the flyer.
- Apply a drop of oil to the flyer and bobbin bearings.
- If the wheel has been finished with polyurethane, lacquer or wax, check there isn't any surplus material on the spindle, flyer or bobbin bearings that may be causing friction. If necessary scrape this off with a craft knife.
- Check the alignment of the wheel and flyer whorl. On the Elizabeth, Traditional and Traveller Spinning Wheels it is possible to move the maiden bar horizontally. If the wheel and the whorl you are using do not line up, loosen the screws holding the maiden bar, align the wheel with the whorl (whorls) and retighten.
- All our spinning wheels now have two tension springs attached to the brake band either side of the bobbin whorl. These allow the brake band to work freely when both spinning and plying. If your wheel only has one tension spring, add a second tension spring on the opposite side.
- Check and remove any lanolin grease that can build up in the flyer orifice.
- If the yarn gets caught or wont feed onto the bobbin, check for metal burrs on the inside of the flyer orifice exit hole. If necessary remove with a file or sandpaper.
- If the flyer hooks are worn or rough replace with new hooks.
- On the Elizabeth, Traditional and Traveller Spinning Wheels, turn the drive belt tension adjustor until the maiden is closest to the wheel. Then re-tie or replace the drive band with a soft cotton cord or Turbo Kit (single drives only).

**Bobbin** - Spin the bobbin on the flyer shaft. It should rotate freely, however if not:

- Apply a drop of oil to the bobbin bearings.
- If the bobbin is still tight on the flyer shaft, ream the bearings with a 1/4" (6.25mm) round fine chain saw file or fine sandpaper wrapped around a pencil. Bobbins more than 30 years old were made from solid timber. If the timber has warped or the hole is worn then it is time to replace them with new bobbins.
- Check there is approx. 1/8" (2-3mm) end float between the flyer, bobbin and flyer bearings.
- Check the bobbin doesn't touch the flyer arms. This can happen when a new bobbin is fitted to a very old wheel. If necessary use a file or sandpaper to remove the wood where the bobbin touches the flyer arms.
- On double drive wheels the flyer whorls have "V" grooves and the bobbin whorl is smaller and "U" shaped. This difference enables the wheel to drive the flyer at a constant speed and allows the bobbin to accelerate when feeding in or slow down when drafting. Check the bobbin whorl is smooth and "U" shaped. If necessary sand it smooth with fine sandpaper.

**Timber** - Our spinning wheels are made from native New Zealand Silver Beech hardwood.

To enhance the natural beauty of the timber, restore, nourish, protect and give your wheel a rich smooth luster, apply a coat of Ashford Wax Polish and buff off with a soft cloth.

**For more hints and video tutorials visit our web site [www.ashford.co.nz](http://www.ashford.co.nz)**