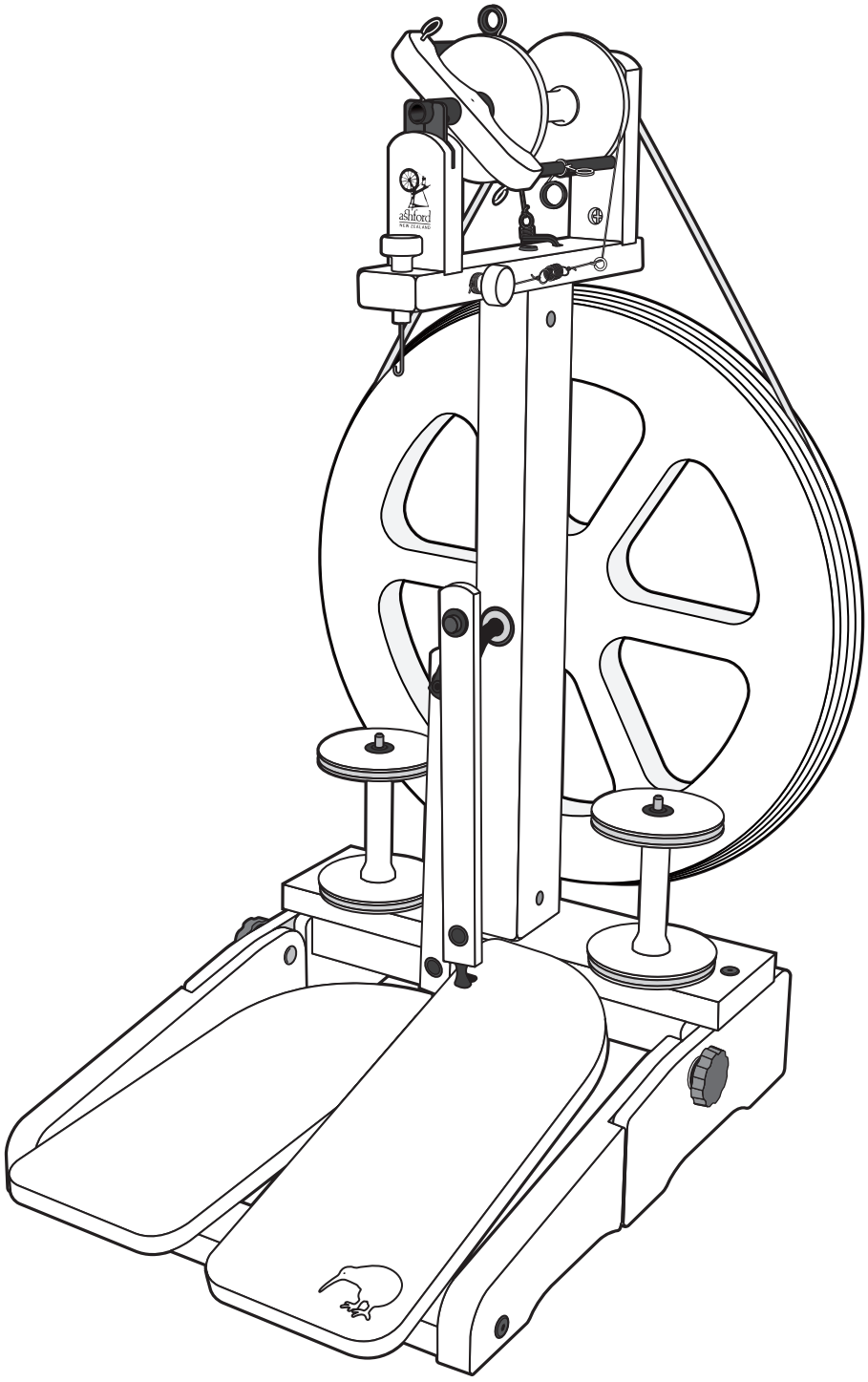
ASSEMBLY INSTRUCTIONS

KIWI 3 SPINNING WHEEL



Ashford Wheels & Looms LP
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Ashburton 7700, New Zealand
Telephone 64 3 308 9087
sales@ashford.co.nz
www.ashford.co.nz

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KSW3-060726

Before Assembly

Please read these instructions from beginning to end, identify all parts and hardware and understand the assembly sequence.

Remove any sharp corners or edges and smooth the surface of the wood with the sand paper provided.

Check and sort the sizes and quantities against the full-size drawing on the real scale hardware list.

Rub candle wax on the threads of the wood screws to make assembly easier.

Finishing the wood

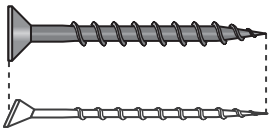
We recommend that the wood surfaces be waxed or sealed before assembly. This protects the kiln dried wood from climatic changes and prevents it getting dirty or stained. The Beech timber has a lovely variety of colour and grain. For a silky smooth matt finish, use the Ashford Finishing Wax Polish to enhance the natural colours and character of this timber.

MDF

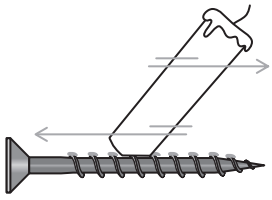
The Kiwi3 wheel is made from timber veneered, New Zealand manufactured, MDF (Medium Density Fibre board). MDF is an engineered wood-based product made by bonding wood fibres with a synthetic resin adhesive. This resin has been known, in very rare cases, to cause irritation if dust is inhaled or comes in contact with the skin. We recommend wiping away any dust with a moist rag and then sealing the surfaces with a 3 coat application of wax or polyurethane. MDF is an extremely versatile material that can be machined and finished to a high standard and has been used to make furniture for over 50 years. The Kiwi 3 Spinning Wheel is also available factory finished in clear lacquer.

Tools Required

Hints

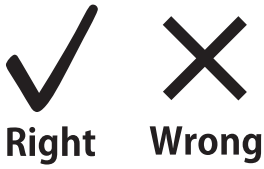


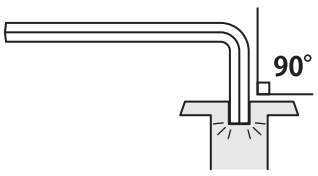
Check hardware against full size illustration.



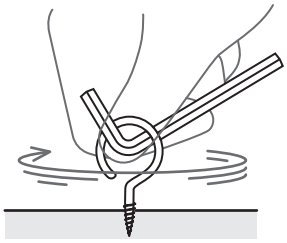
To make assembly easier use candle wax on the screws.

Check the directions carefully.





When you use the Hex wrench, make sure it is at 90 degrees and is at the bottom of the hole.



If the hook is hard to turn use the Hex wrench.

More Information

How-to videos on YouTube

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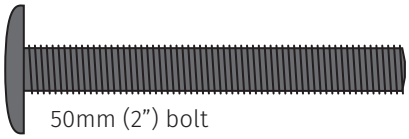
Real Scale Hardware List

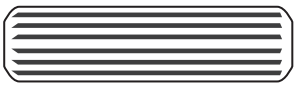


x8

50mm (2”) bolt

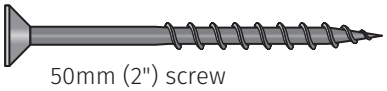
x8

barrel nut



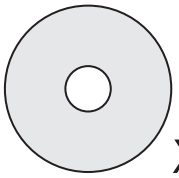
x10

Wooden dowel



x2

50mm (2") screw



x2

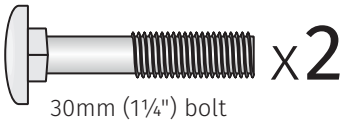
22mm (⅞”) washer

x3

Hook

x1

Eye



x2

30mm (1¼") bolt

x16

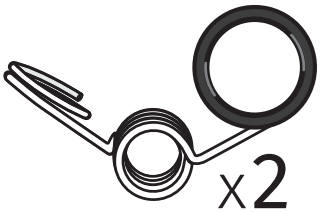
16mm (⅝”) screw

x1

Hub pin

x1

Nylon bearing

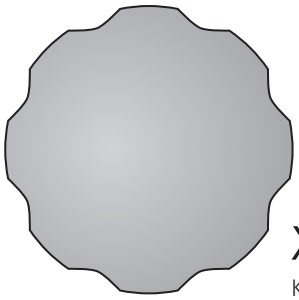


x2

Yarn guide

x2

Spring



x2

Knob

x1

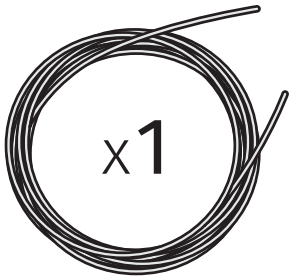
Brass spacer

x1

Inner shell

x2

Polyurethane hinge

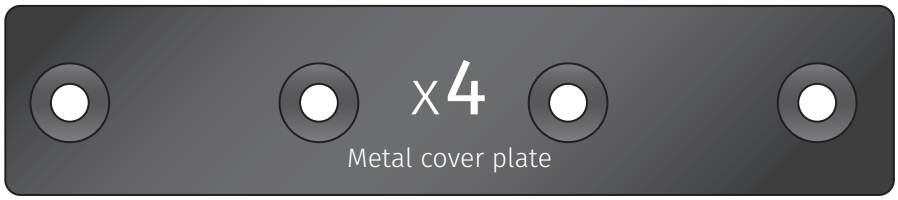


x1

Nylon brake band

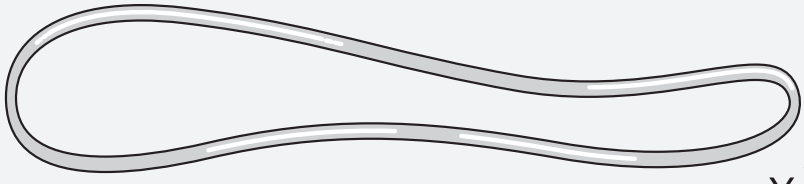
x1

Hex wrench



x4

Metal cover plate



Drive band x1

x2

Lazy kate pin

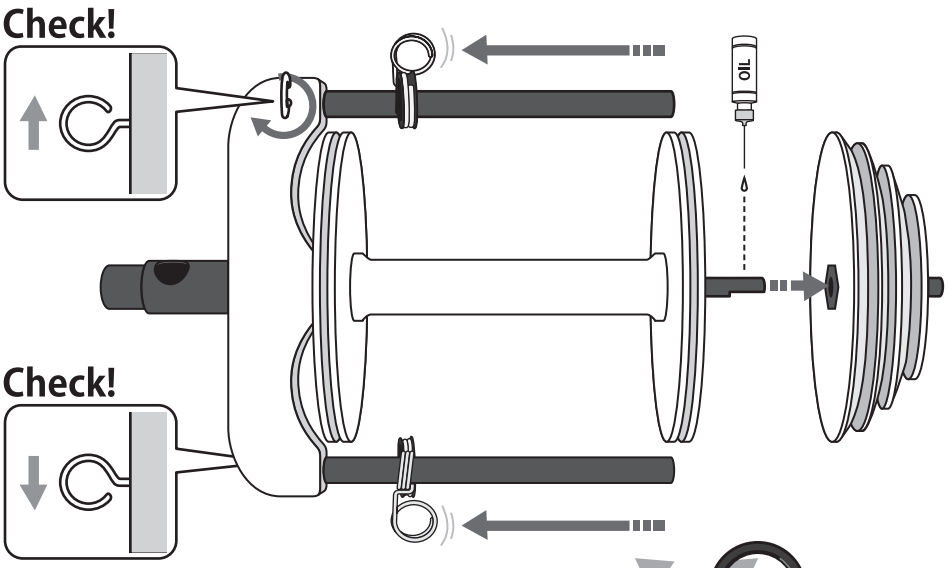
1

Oil

Thread 2 hooks into the flyer base. Squeeze and slide the yarn guides onto the flyer arms.

Apply a drop of oil to the flyer shaft and slide the bobbin on. Ashford spinning wheel oil is ideal for this purpose.

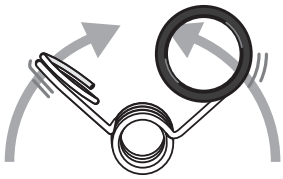
Partially locate the whorl onto the flyer shaft and rotate the whorl until the flat on the flyer shaft aligns with the flat in the whorl. Then push the whorl on.



x2

Caution: Do not twist the whorl, only slide the whorl on or off. If it is tight apply a drop of oil to the end of the flyer shaft.

To change the bobbin, grip the whorl with one hand and the flyer with the other and pull the whorl directly off.

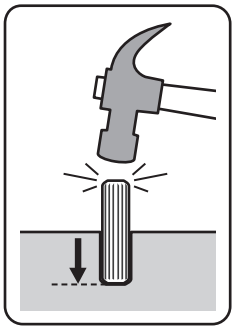


x2

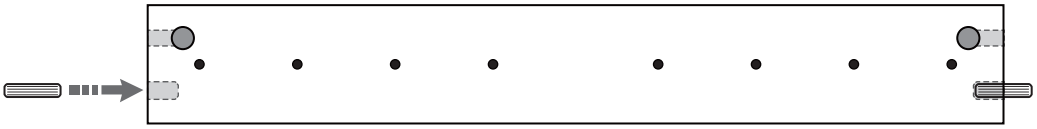
2

Hammer

Tap wooden dowels to the bottom of the holes in either end of the treadle rail.



x2



FRONT

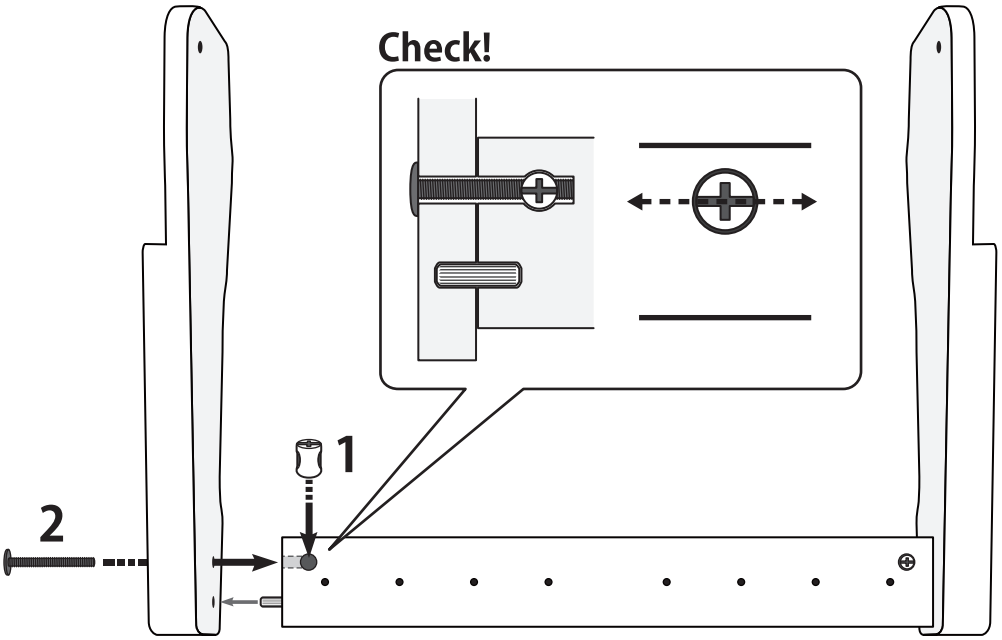
3

Hex Wrench

Loosely attach the front feet to the treadle rail with 50mm (2”) bolts and barrel nuts. Sit the base on a flat surface and check the feet are level. Then tighten the bolts.

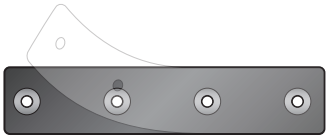
x2

x2

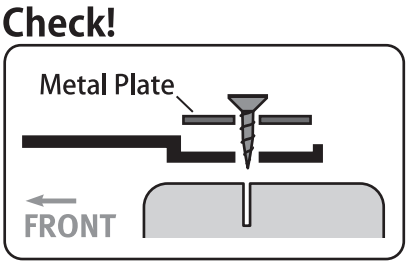


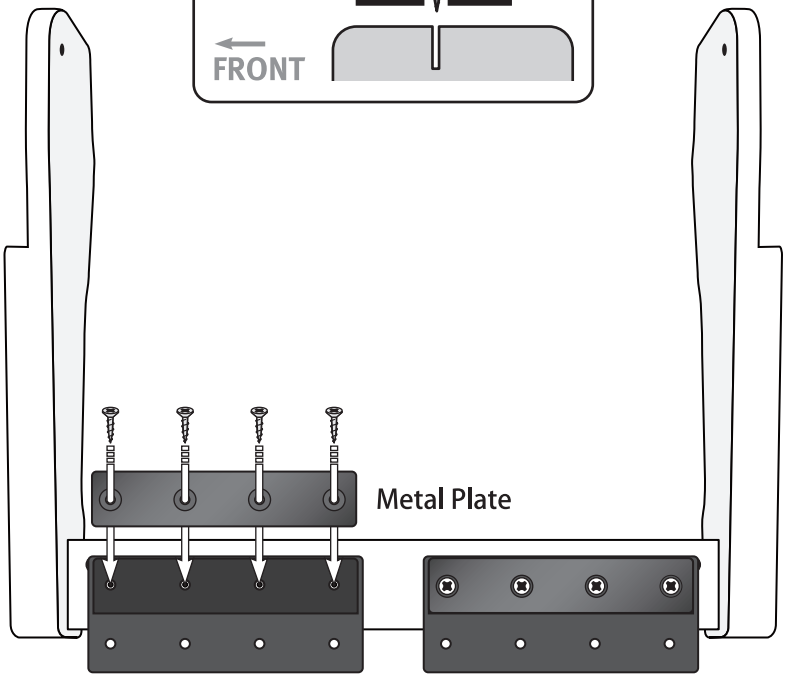
4 Screwdriver Candle Wax

Remove the protective film and locate the metal cover plates into the polyurethane hinges. Then attach the hinges to the treadle rail with 16mm (⅝”) screws.



x8



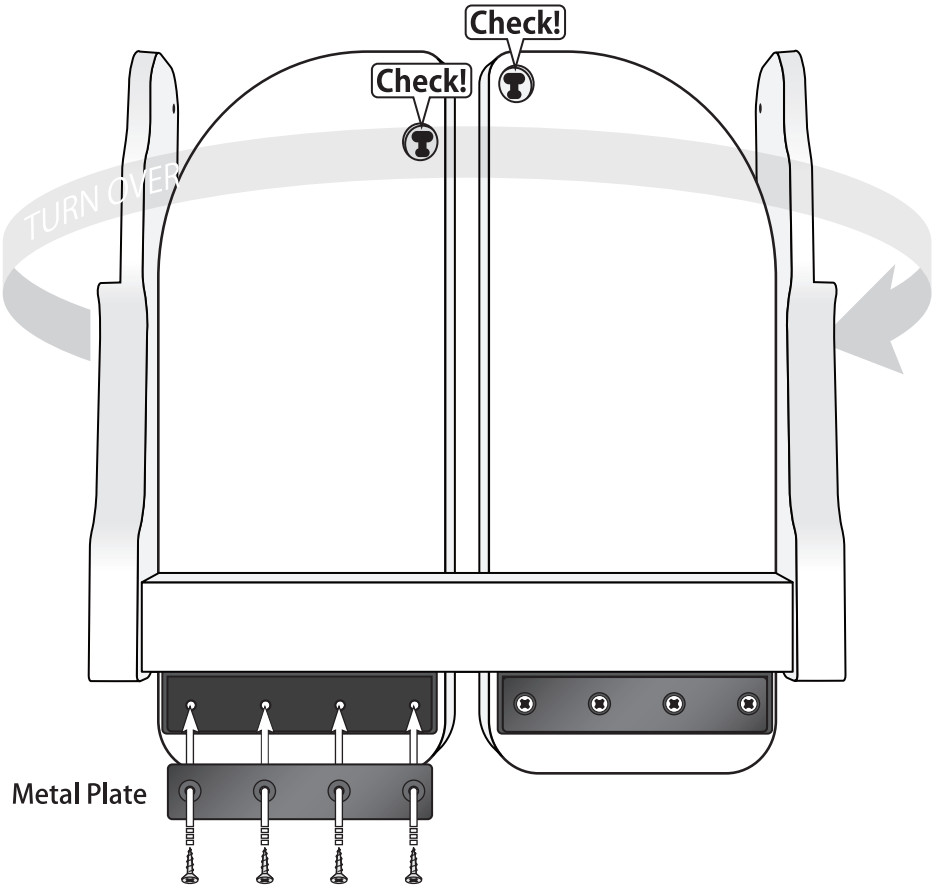


FRONT

5 Screwdriver Candle Wax

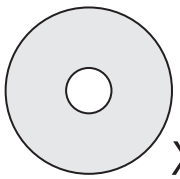
Lay the base on its back. Remove the protective film and locate the metal cover plates into the polyurethane hinges. Then attach the treadle boards to the hinges with 16mm (⅝”) screws.

x8

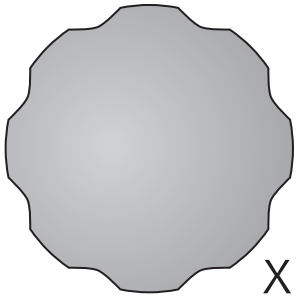


6

Attach the back feet to the front feet with 30mm (1¼") bolts, washers and knobs.

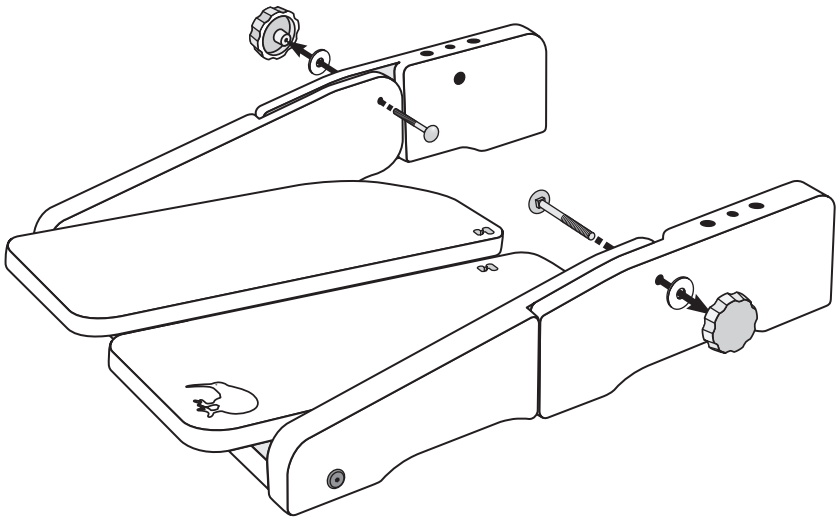


x2



x2

x2

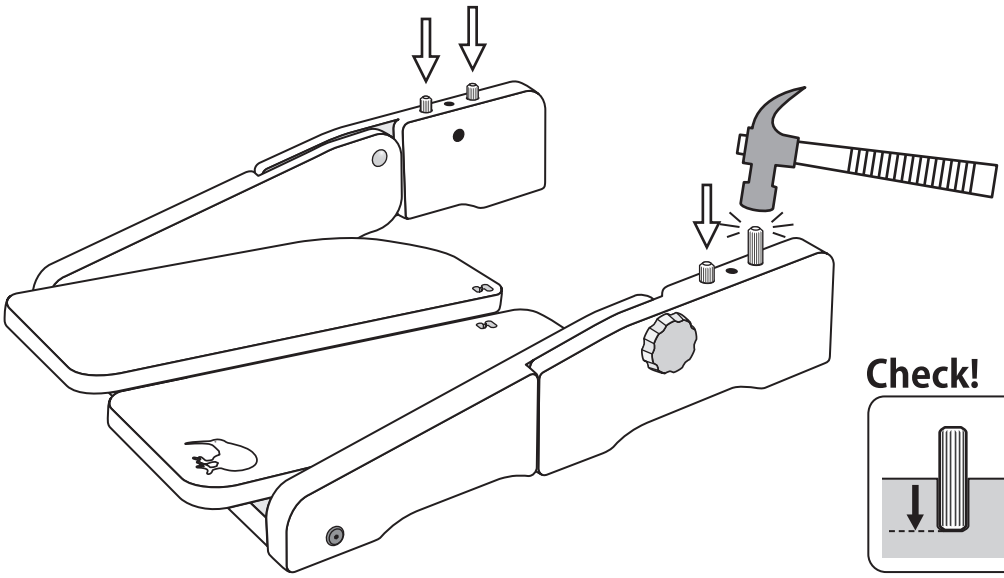


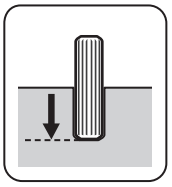
7

Hammer

Tap wooden dowels down to the bottom of the holes in the back feet.

x4



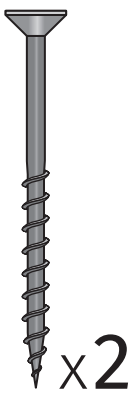


8

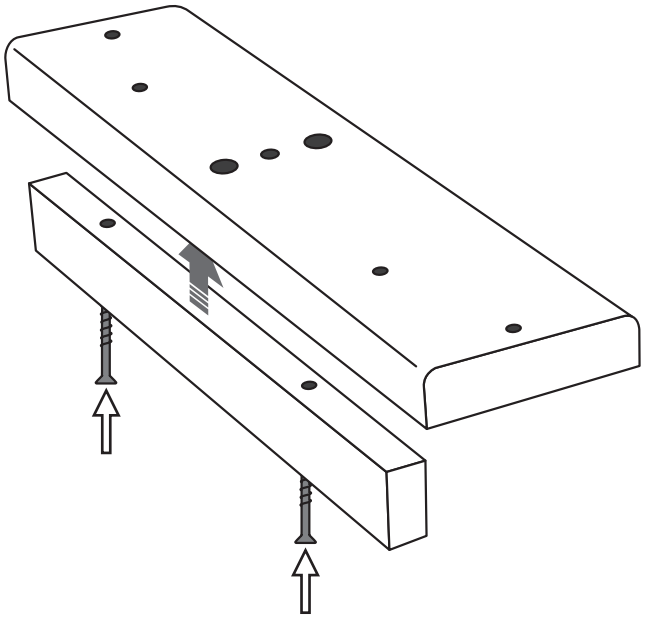
Screwdriver

Candle Wax

Attach the "toe saver" to the base with 50mm (2") screws.

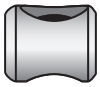


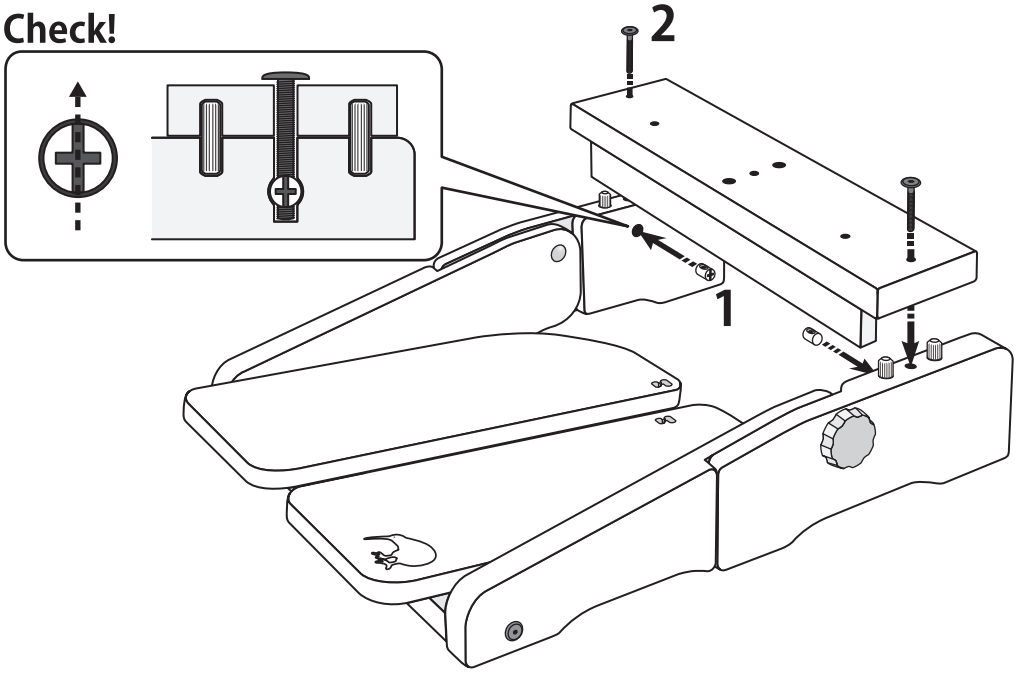
x2



9 Hex Wrench

Locate the base onto the dowels and secure the base to the back feet with 50mm (2”) bolts and barrel nuts.
Note the “toe saver” is towards the front.

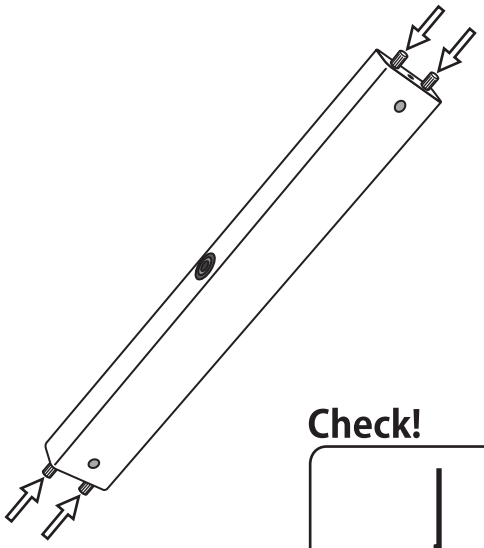
x2  x2



10 Hammer

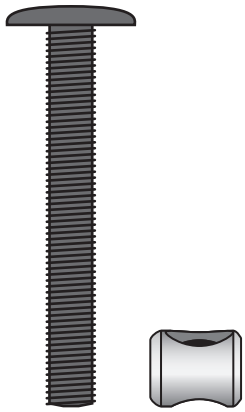
Tap wooden dowels to the bottom of the holes in both ends of the main upright.

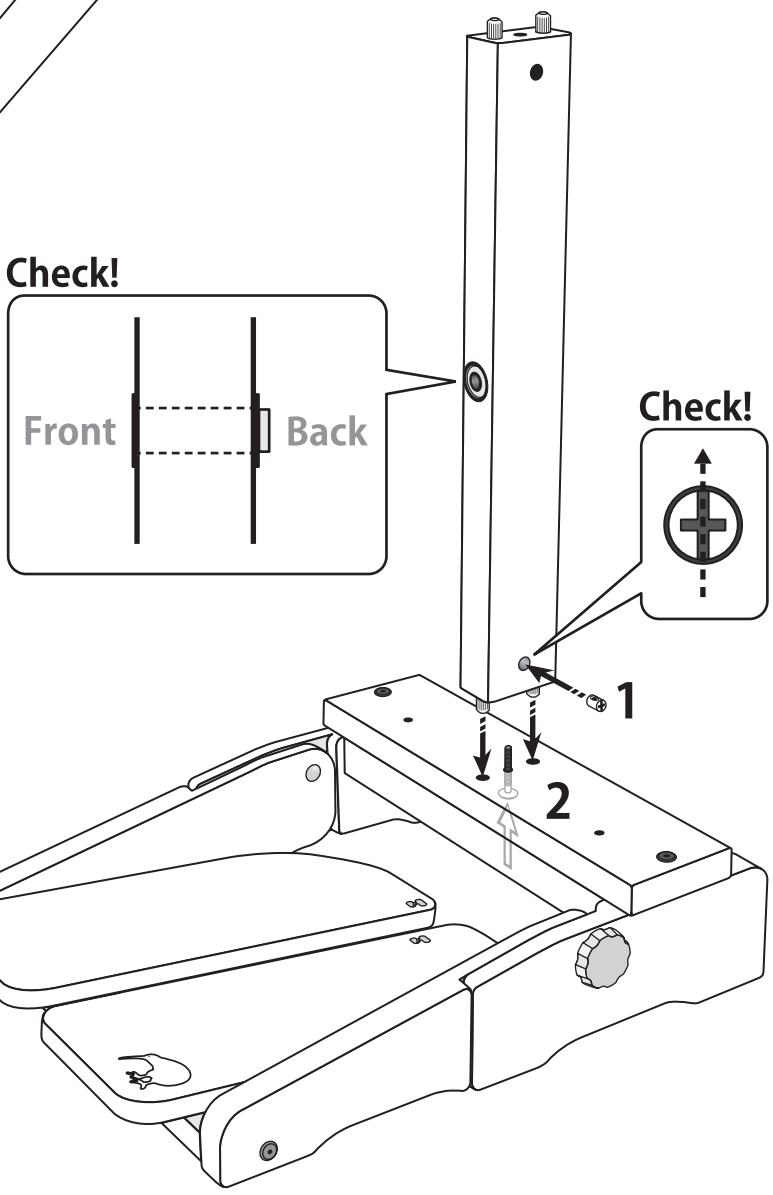
x4



11

Position the main upright onto the holes in the base. Check that the ball bearing with the extension faces the back.
Secure main upright in place with a 50mm (2”) bolt and barrel nut.

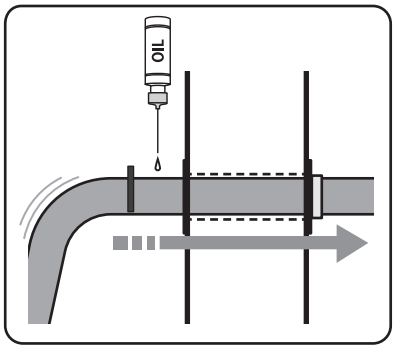


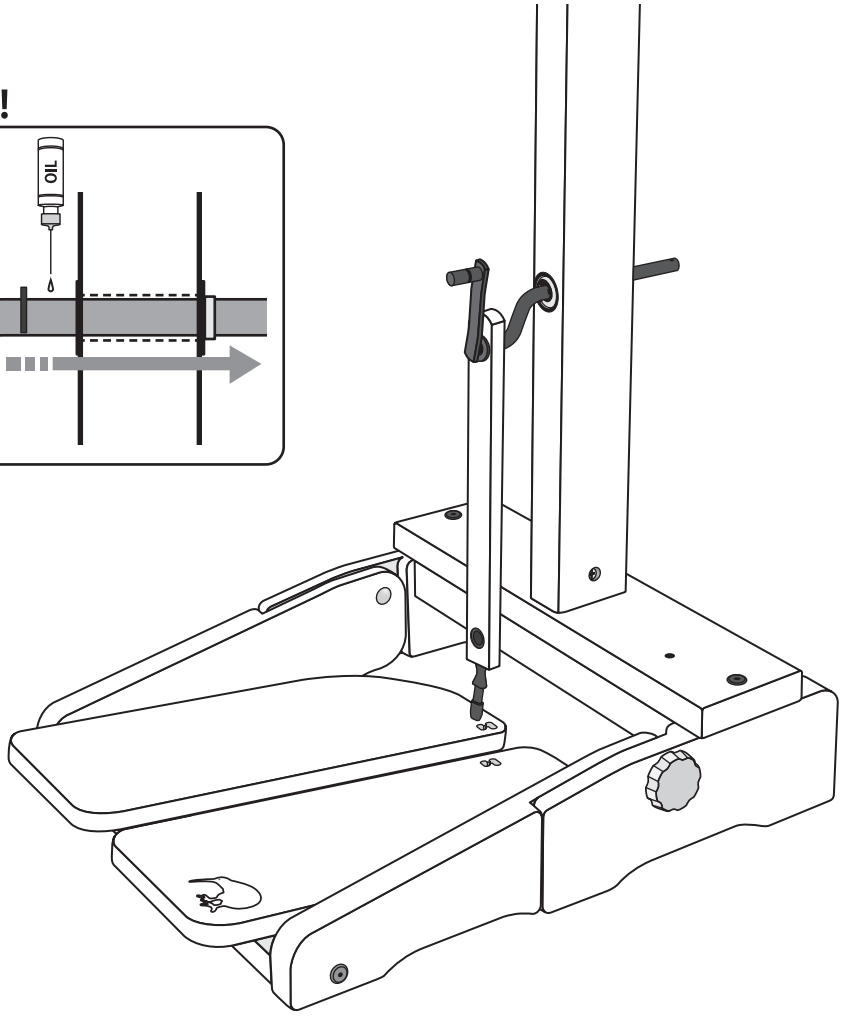


12

Slide the crank through the ball bearings. If necessary apply a drop of oil to the crank.

Check!

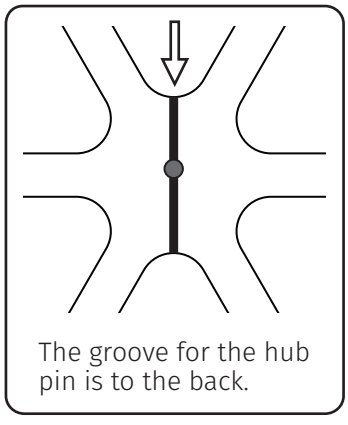




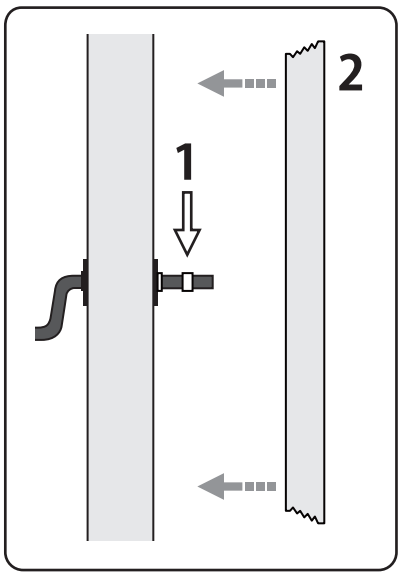
13

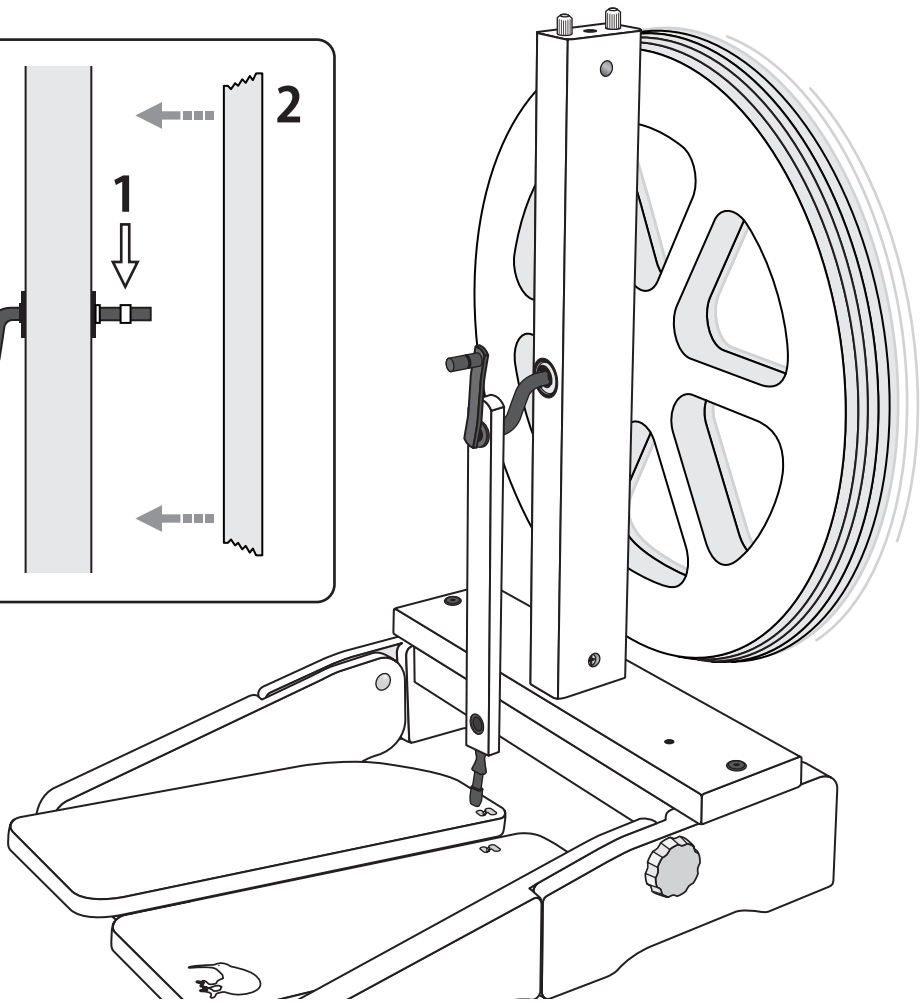
Slide the brass spacer onto the crank. Then slide the wheel on.

Check!



The groove for the hub pin is to the back.





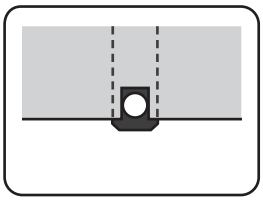
x1

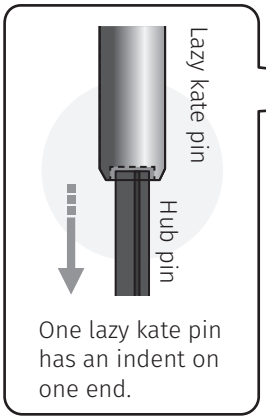
14

Hammer

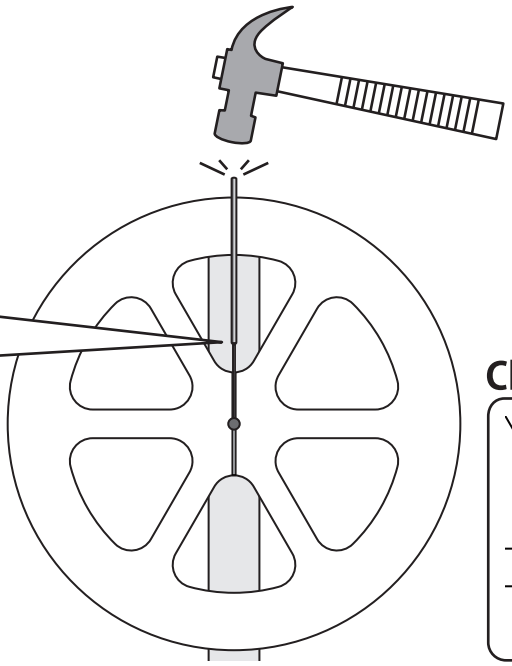
Align the groove in the wheel with the hole in crank. Locate the hub pin into the groove and tap partially into the hole in the crank. Place the indented end of a lazy kate pin over the hub pin and carefully tap until level with the wheel.

Check!

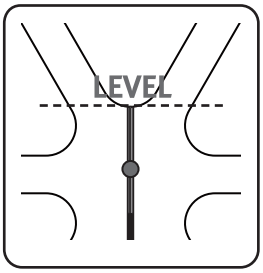




One lazy kate pin has an indent on one end.



Check!



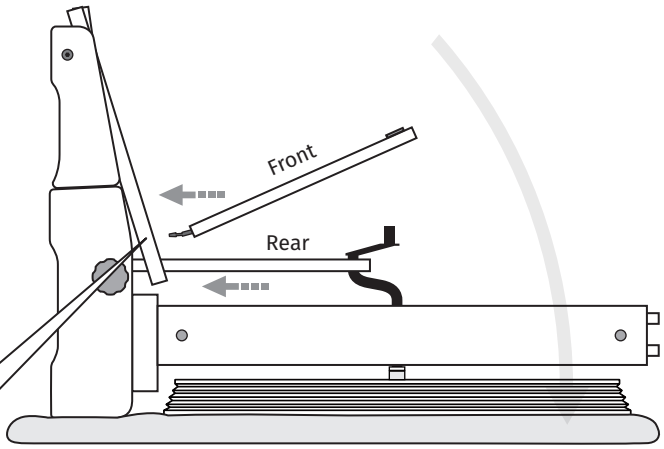
15

Lay the wheel on it's back. (protect your table with a towel or piece of cardboard)

Insert the ***front*** conrod joint into the ***right*** treadle board.

Then repeat this sequence for the ***rear*** conrod and the ***left*** treadle board.

NOTE: It easier to insert the rear conrod joint into the treadle board when the treadle board is at the lowest point - turn the wheel until the rear conrod is in the lowest position.



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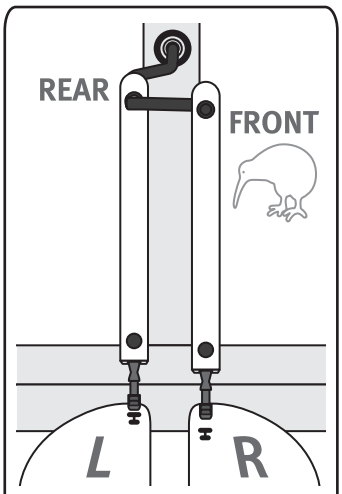
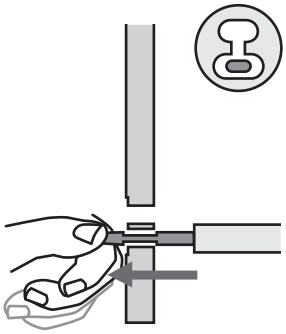
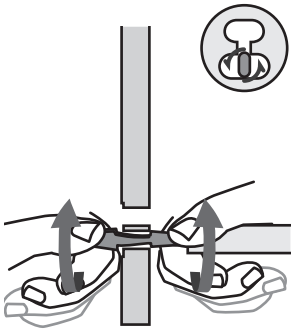


Note that the rear conrod attaches to the left treadle board and the front conrod attaches to the right treadle board.

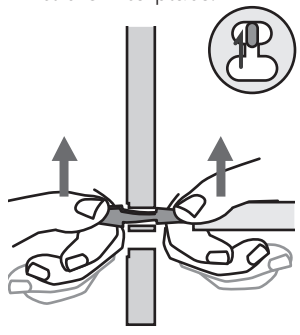
1 Hold the conrod joint with one hand on either side of the treadle board.



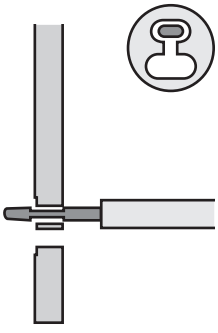
2 With both hands turn the conrod joint a ¼ turn towards you.



3 Slide it up into the small slot and turn it back a ¼ turn until it clicks into place.



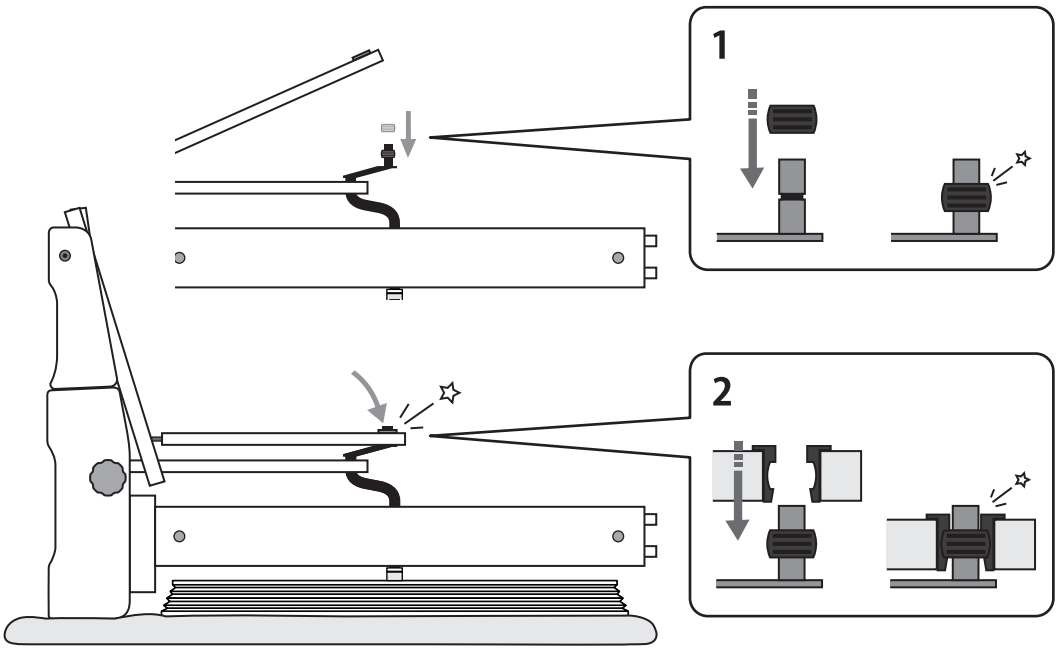
4



16

Oil

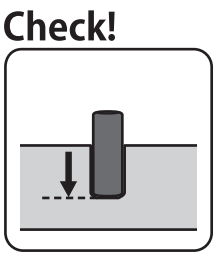
Slide the inner shell of the conrod universal joint onto the front crank until it clicks into the groove. Apply a drop of oil to the inner shell.
Then click the front conrod onto the universal joint on the crank.

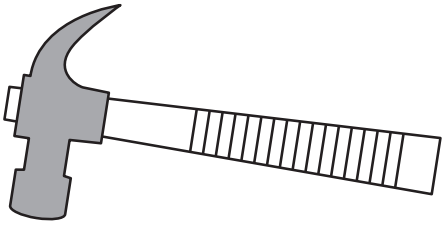


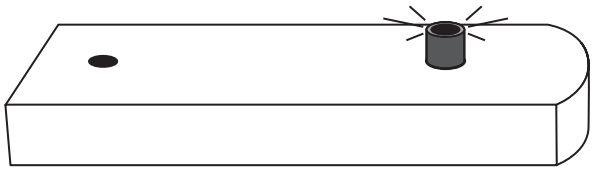
17

Hammer

Tap the nylon bearing down to the bottom of the hole in the rear flyer support.





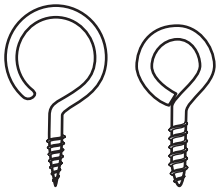


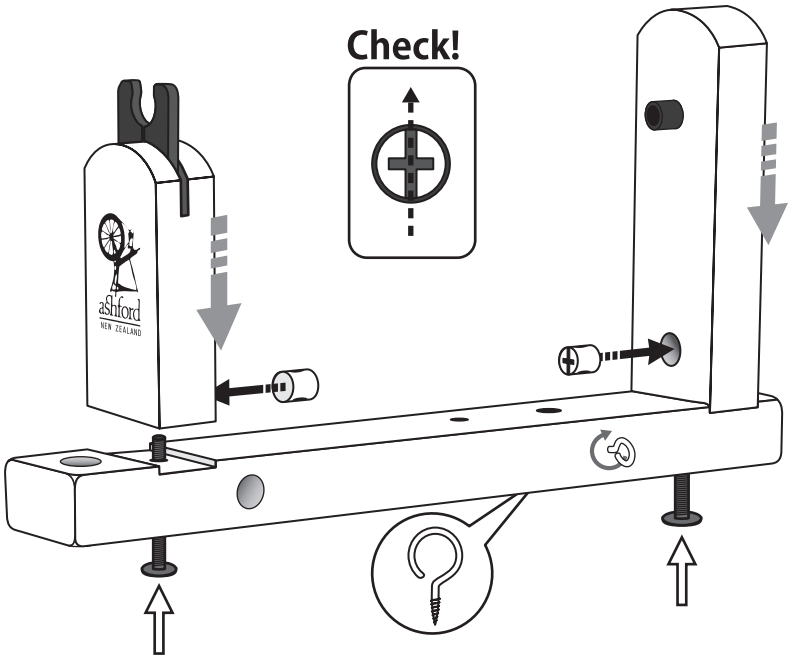
18

Hex Wrench

Secure the front and back flyer supports to the maiden bar with 50mm (2”) bolts and barrel nuts.
Check the supports are level with the edges of the maiden bar, then tighten.

Screw the hook and eye into the maiden bar.

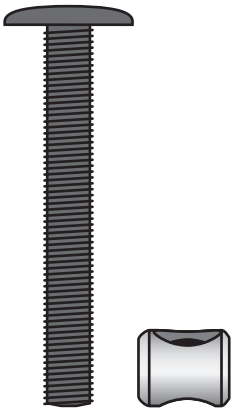


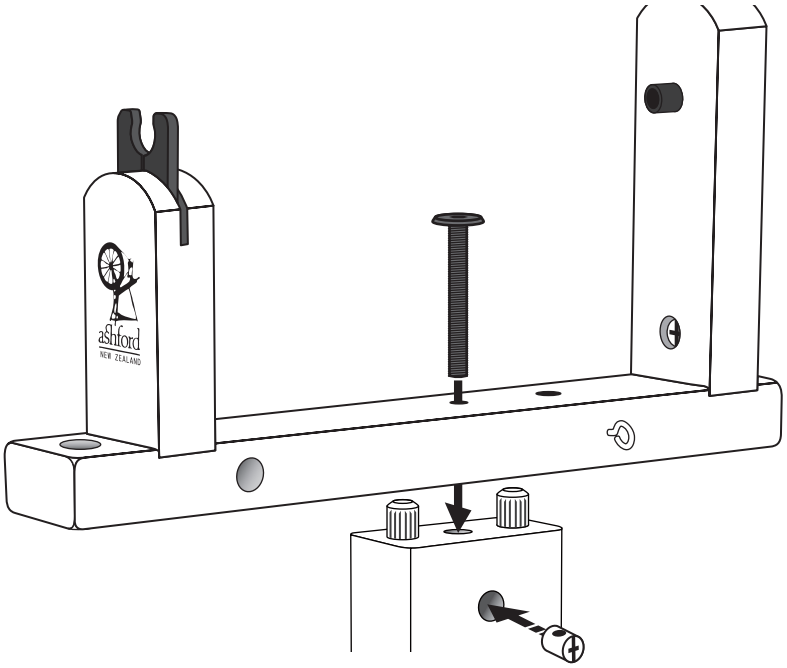


19

Hex Wrench

Place the maiden bar onto the dowels in the main upright and secure with a 50mm (2”) bolt and barrel nut.





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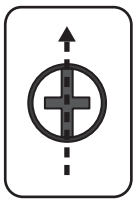


20

Tape Measure

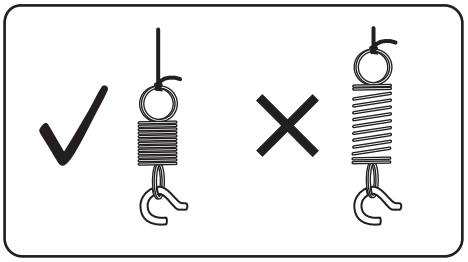
Scissors

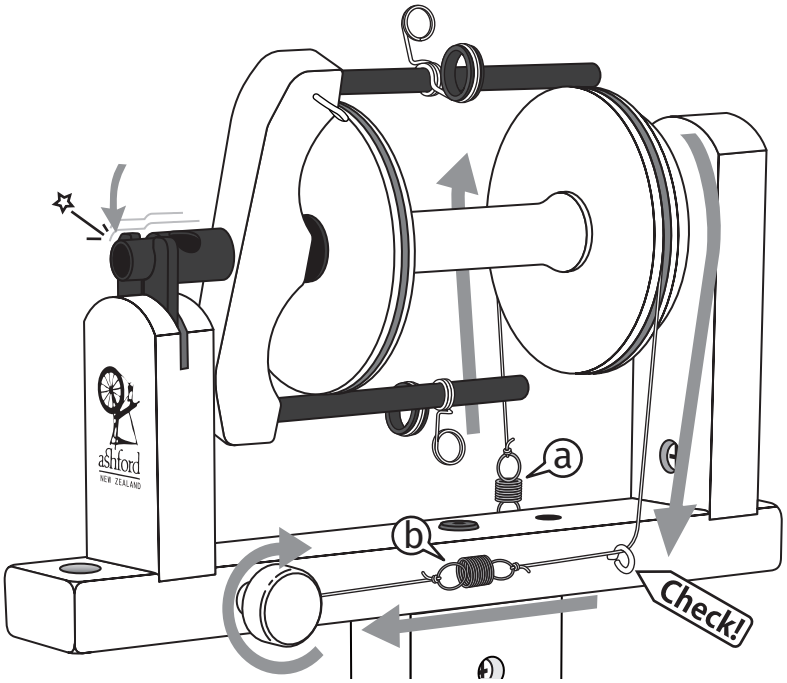
Insert the end of the flyer shaft into the rear flyer bearing and click the flyer orifice into the front flyer bearing.

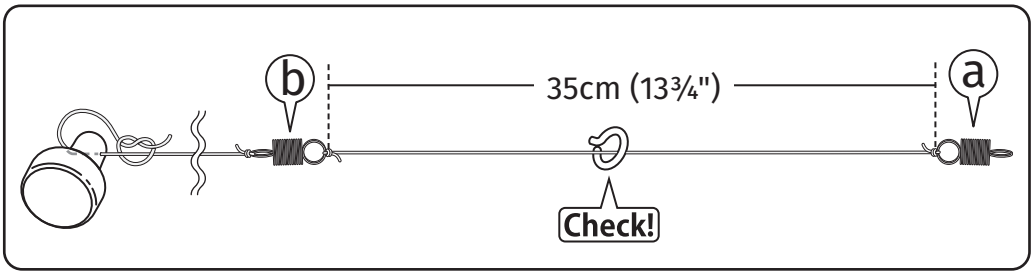
Tie the nylon brake band to spring ⓐ . Thread the nylon brake band through the eye and tie spring ⓑ 35cm (13¾”) from spring ⓐ, then cut the surplus nylon off and tie it to the other end of spring ⓑ.

Take the nylon brake band up and over the groove in the bobbin and place spring ⓐ onto the hook. Insert the tension knob into the maiden bar, thread the end of the nylon brake band through the hole in the tension knob and tie a knot. Turn the tension knob to wind on excess nylon.
Take care not to over-stretch the springs.

Check!





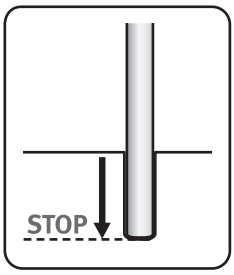


21

Hammer

Gently tap the indented end of the lazy kate pins into the base and locate the bobbins on them for storage and plying. Stop tapping when the pins reach the bottom of the holes.

Check!



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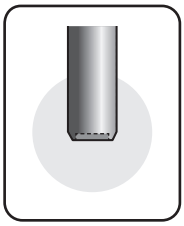
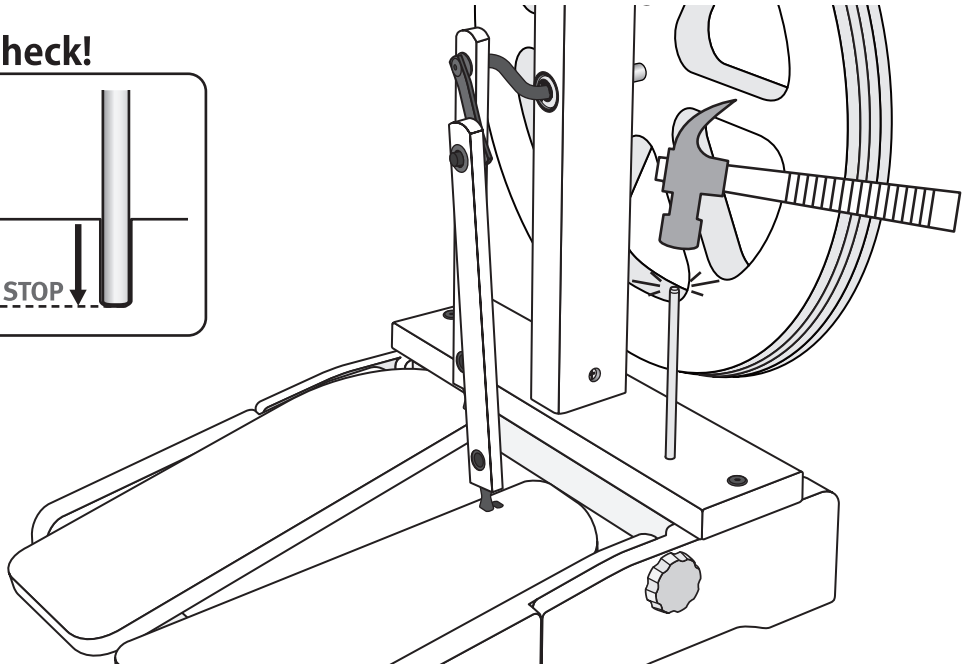
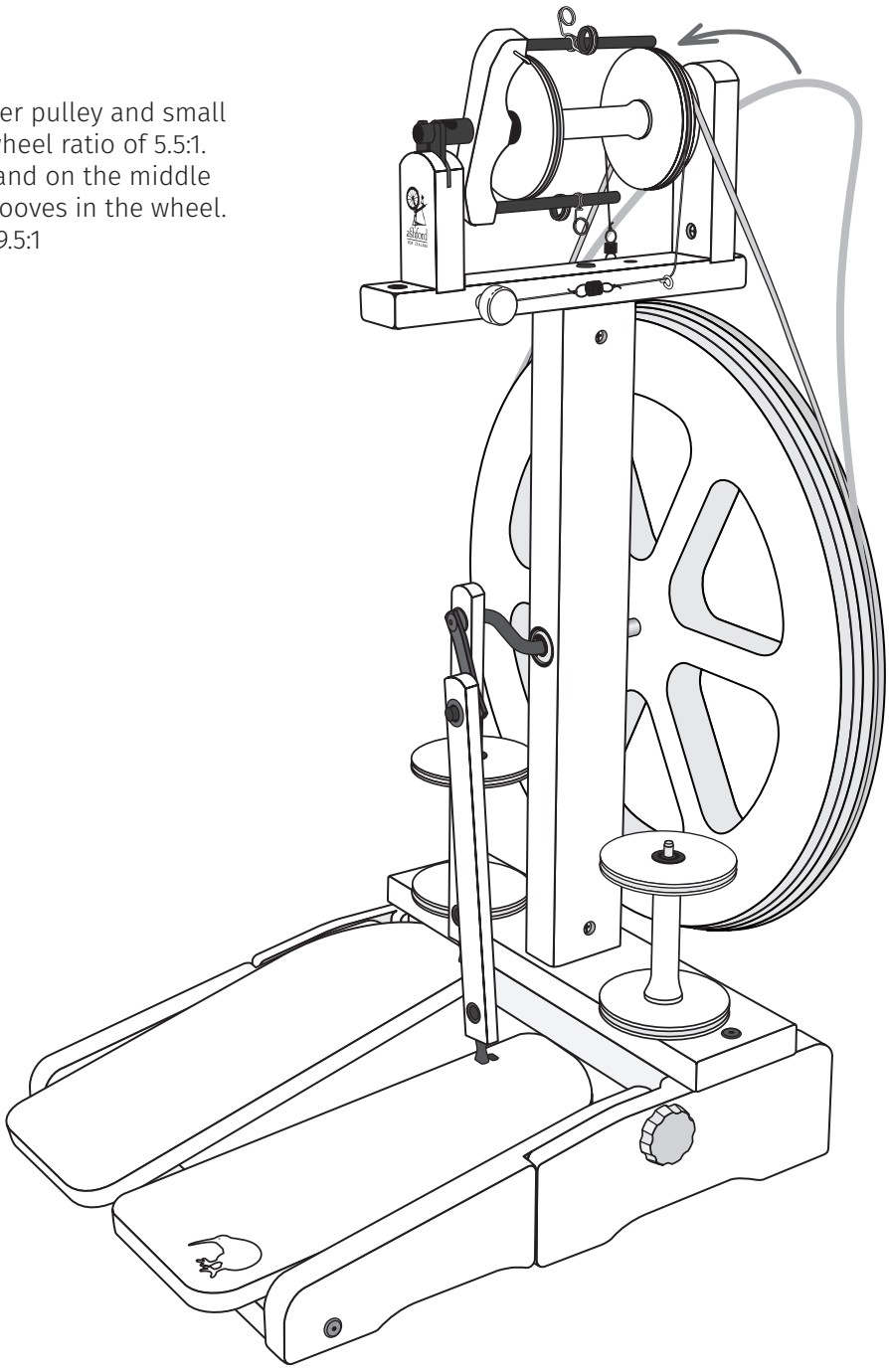


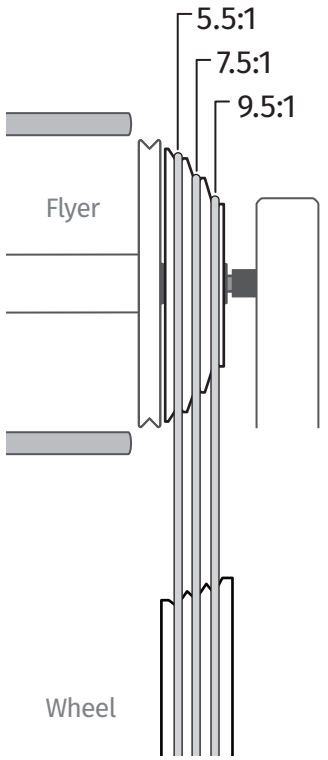


22

Locate the drive band around the large flyer pulley and small groove in the wheel. This gives a flyer to wheel ratio of 5.5:1. For higher flyer speeds, locate the drive band on the middle or small flyer pulley and corresponding grooves in the wheel. These give flyer to wheel ratios of 7.5 and 9.5:1

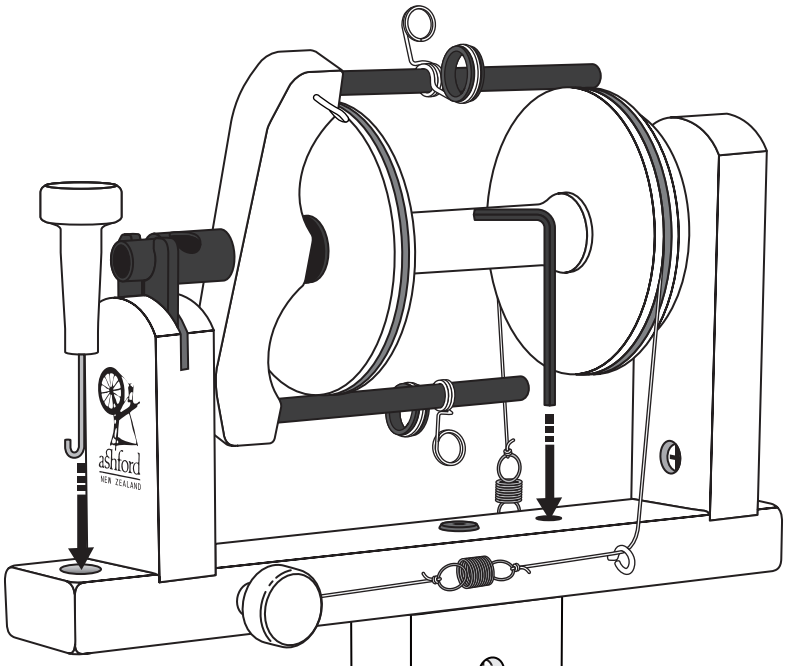


Ratios



23

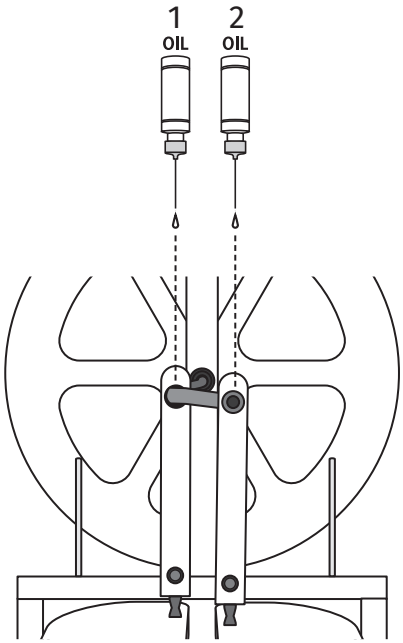
Locate the threading hook and Hex wrench into the holes in the maiden bar.

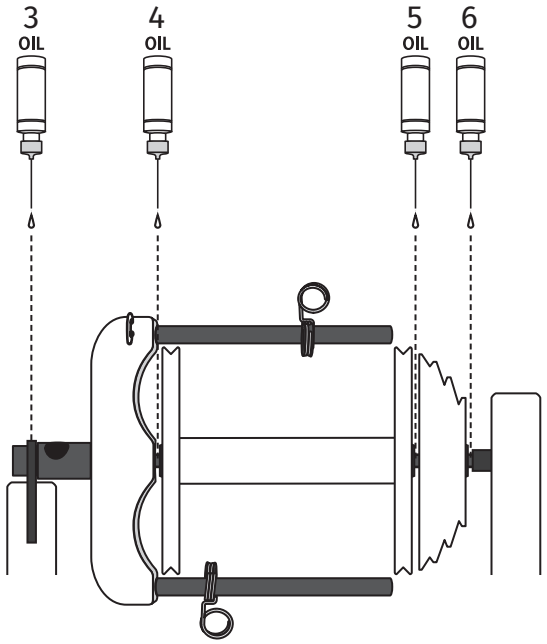


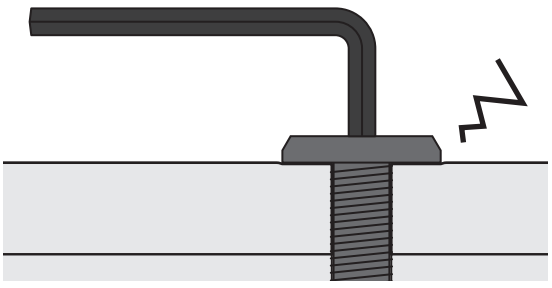
Maintenance

To make spinning easier apply a drop of Ashford Spinning Wheel Oil to the flyer, bobbin and conrod bearings.

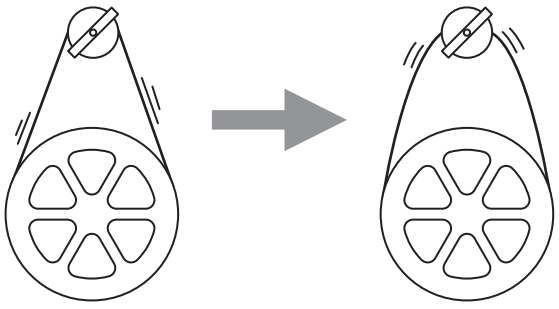
Note: The ball bearings are sealed for life and do not require oiling.





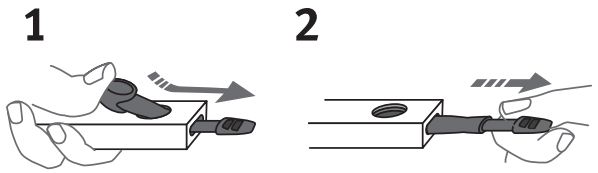


Use the Hex wrench to occasionally tighten the bolts.



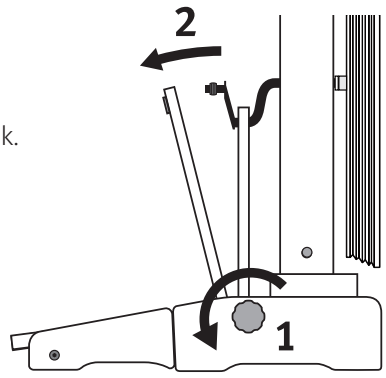
When not using your spinning wheel please loosen the drive belt to avoid it stretching.

*How to insert the polyurethane conrod joints into the conrod. *This has been pre-assembled in the factory.*

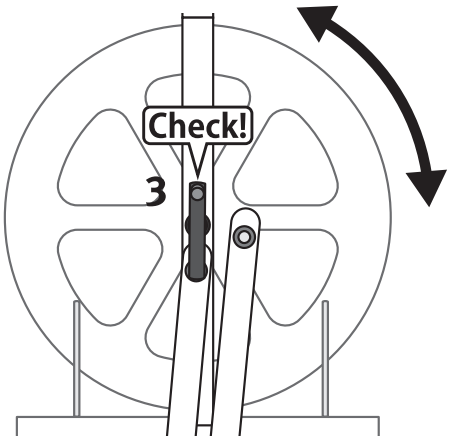


How to fold your spinning wheel

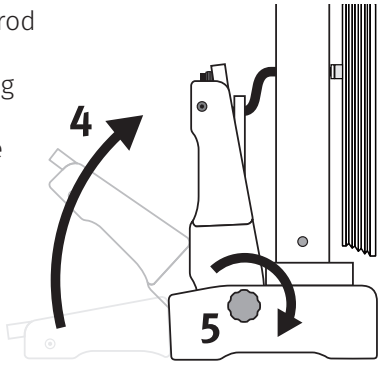
1. Loosen the knobs locking the feet.
2. Click the front conrod off the crank.



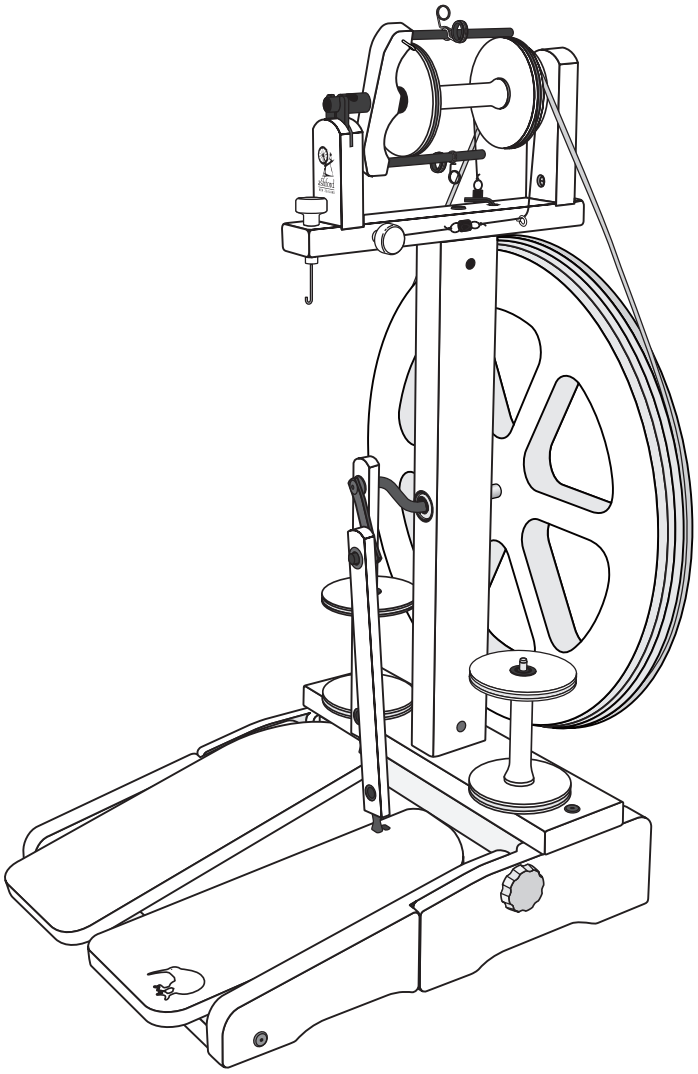
3. Rotate the wheel until the front crank is at the top.



4. Place the front conrod in front of the rear conrod while folding the treadles taking care to position the crank between the treadle boards.
5. Then tighten the knobs to lock in the upright position.

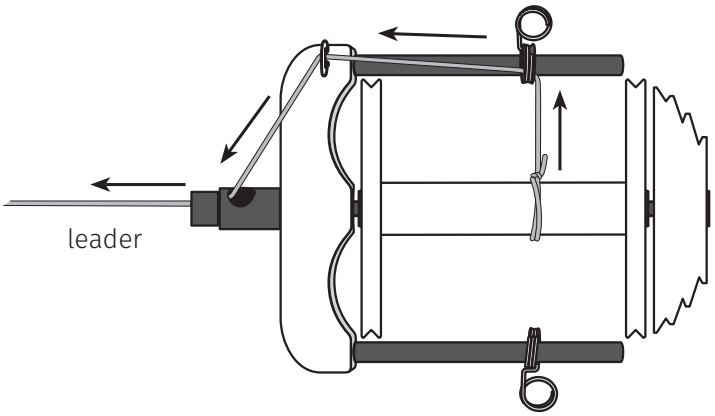


Carry your Kiwi 3 either by the main upright, wheel or maiden bar.



Spinning

Before you begin spinning you need to tie a piece of yarn called a leader, approx. 1.5m (5') long, on to the bobbin. Thread it through the yarn guide, around the flyer hook on the **left-hand side of the flyer** and out through the orifice.



* For further spinning and plying information refer to **"The Ashford Book of Hand Spinning"** by Jo Reeve, a 116 page book full of ideas and inspirations for spinners or visit our website www.ashford.co.nz