## NILUS II <br> 4 SHAFT JACK-TYPE LOOM



On receiving the loom, unpack and lay out the loom components.

Check the parts received against the parts list on pages \#2 to \#7 of the assembly instructions. Report any discrepancies to Leclerc or your

To assemble this loom, a minimum of 2 people are needed but 3 are recommended.

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## PARTS LIST




2 breast beams (43½'", 52 5/8")

1 left sword (345/8")

1 right sword (345/8")


1 cloth (front) beam (38½" , 47 4/8")

1 warp (back) beam (38½", 47 5/8")

1 batten handtree with bumpers (463/4", 553/4")

1 batten sley with shuttle race (463/4", 553/4")

1 lower-middle cross-member (40 1/8", 49")

1 treadle set cross-member (40 1/8", 49")

1 lower cross-member connecting back posts
(34½", 52 5/8" )
1 cross-member connecting the stabilizing posts

1 apron

1 cloth take-up motion handle

## PARTS LIST



4 shafts


3 treadle supports


1,18 " treadle set rod with one pushnut


1 more treadle set pushnut $7 / 16$ "


1 Crank

1 reed


2 lease sticks

4 warp rods


3 Screwdrivers (Black, Red and Green)

1 Aluminum wrench

1 adjustable wrench

1 set of 6 treadle hooks (7") 3000-4521

1 set of 12 treadle cords (9") \#3400-7011 (9")

1 boat shuttle (Reg.)

12 plastic bobbins 4"

1 reed (heddle) hook

2 pk cord (5 yd each)

1000 heddles (36" loom)
1200 heddles (45" loom)
1500 heddles (60" loom)
12 1/2"


1 VHS instruction Video showing all stage of installation.

## PARTS LIST



## PARTS LIST



4111111


4 screw eyes $R 6$ for back post


2X eye screws



Place right-hand side A of the loom on its front.

Insert the tenon of lower front cross-member B into the lower front mortise of right-hand side A. (Fig. 1)
NOTE: The lower front cross-member has 3 holes drilled through it.
Using the wrench supplied with the loom, affix cross-member B with a 3/8" $\times 5$ " ( $10 \mathrm{mrn} \times 125$ mm ) machine bolt, a $3 / 8 \mathrm{l}$ ( 10 mm ) steel washer, and a square nut. (Fig. 1)

Insert a tenon of lower back cross-mernber C into the lower back mortise of right-hand side A . (Fig. 1)
NOTE: The lower back cross-member C has 2 holes drilled through it.
Affix cross-member $C$ with a $3 / 8^{\prime \prime} \times 5^{\prime \prime}(10 \mathrm{~mm} \mathrm{X} 125 \mathrm{~mm})$ machine bolt, a 3/8" (10 mm) steel washer, and a square nut (Fig. 1)


After having placed left-hand side D of the loom on its front, insert the tenons of cross-members B and C into the lower mortises of left-hand side D. (Fig. 2)

Use 3/8" $\times 5$ " (10 mm X 125 mm ) machine bolts, 3/8" (10 mm) steel washers, and square nuts. (Fig. 2)


Using four $11 / 2^{\prime \prime}(40 \mathrm{~mm})$ round-headed screws No 12, affix back cross-member E to back posts C and D. (Fig. 3)

## NOTE:

If cross-member $E$ does not fit between posts $A$ and $B$, insert it higher between the posts then slide it down. Application of soap to the screws will make their insertion easier.

Using two,2½" (65 mm) round-headed screws No. 14, affix the cross-member for the stabilizing posts F.


Unfold the back section of the loom and lock it in place with metal hooks A. (Fig• 4)
Insert a $1 / 4^{\prime \prime} \times 21 / 2^{\prime \prime}$ carriage bolt into the holes of the uprights. The nylon washer is already installed in the upright. Fasten the bolt with a $1 / 4^{\prime \prime}$ wing nut.

Be sure that the stabilizing posts are open and flat on the floor. Affix two hooks into the predrilled holes.
(Fig•4A)
Put loop cord B in place. These cords need to be tight, so they will secure the stabilizing posts. (Fig. 4)


Slide jack box B along the middle posts A, from bottom to top, and affix it to blocks $C$ using eight $1 \frac{1}{2} 2^{\prime \prime}$ ( 40 mm ) round-headed screws no. 12. (Fig. 5)


Fig. 7
Remove Saran Wrap from the jack box and put the " S " hook of the jack D inside the eyelet of the lam E. (Fig. 7)

NOTE: The upper side of the lams have hooks.

Install the heddles in the shaft frames. (see "WARP AND WEAVE" on page 10)

Slide shaft frames $G$ between dividers $F$. The shaft frames must rest on the plastic supports of the jacks (harness guides).
(Fig. 8)

The Leclerc Logo must be on top, facing the front of the loom.

NOTE: Some shafts may be tight between the castle frame until the castle top is affixed.



Assemble the treadle set as illustrated. (Fig. 10)


If you do not want to have the wing nuts on the top of the treadle set, insert the carriage bolts (from the top) into the treadle set supports and the treadle cross-member. Affix them using $3 X 5 / 16$ " square nuts and $3 X 5 / 16 "$ steel washers. (Fig. 11)
For more information see the Video.

NOTE: Install the second side push nut only after the set is affixed to the loom.


NOTE: 1) You will have to remove the brake treadle temporarily in order to be able to insert the right side

## carriage bolt.

2) Hammer the carriage bolt inside the hole so it will lock while you will screw the auto lock

Using $5 / 16^{\prime \prime} \times 31 / 2^{\prime \prime}(8 \mathrm{~mm} \times 89 \mathrm{~mm})$ carriage bolts, affix swords $A$ and $B$ to lower front cross-members $C$ and $D$. Insert the bolt from the inside into the upper hole (jack type loom). Place a $5 / 16^{\prime \prime}(8 \mathrm{~mm})$ steel washer between the cross-member and the sword and another on the outside, and secure with a $5 / 16$ " ( 8 mm ) nylon auto lock nut. (Fig. 12)

The grooves on top of the swords must be in front.


Using $5 / 16^{\prime \prime} \times 21 / 2^{\prime \prime}(8 \mathrm{~mm} \times 65 \mathrm{~mm})$ carriage bolts, $5 / 16$ " ( 8 mm ) steel washers, and square nuts, affix batten sley $C$ to the lower holes of swords $A$ and B. (Fig. 13)

NOTE: The batten sley does not have polyvinyl bumpers but it has a shuttle race.
Using 5/16" X 2'½" (8 mm X 65 mm ) carriage bolts, 5/16"' ( 8 mm ) steel washers, and wing nuts, affix batten handtree $D$ to swords $A$ and $B$. (Fig. 13)

NOTE: The batten handtree has polyvinyl bumpers.
The slots of the batten sley and handtree must face each other.


Hold the circular wire brake shoe A slightly to the rear of the loom, but do not unroll

Loosen the tension on the circle by unscrewing the turnbuckle.

Insert the brake drum B into the wire brake shoe $A$. Then, install the ends of the warp beam C into the grooves of the back posts.
(Fig. 14)

Hook turnbuckle A to flat wire circle B.
(Fig.15)

Fig. 15


Using metal rod E , join treadle C to lever D . First insert the double-cornered end of the metal rod into lever D; then insert the other end of the metal rod into treadle $C$ while the treadle is depressed. (Fig. 16)

Raise treadle $C$ as high as possible then hook spring $F$ to lever D. (Fig. 17)
BRAKE ADJUSTMENT:
Release the brake by depressing treadle $C$ and locking it down with the catch G. (Fig. 16) The warp beam should turn freely but the circular brake wire should not be too slack. If the tension is too great, unscrew the wing nut H slightly and then loosen the turnbuckle I. If the tension is too slack, tighten the turnbuckle I slightly and then the wing nut H .
(Fig. 17)
Insert the black rubber ring $J$ to the lower end of the rod $E$, to prevent the rod from slipping out. (Fig. 17)


Fig. 18
Place the reed between batten sley C and handtree D. (Fig. 18)

When the wing nuts are loose, the batten handtree can slide vertically in the sword slots. The
reed must then be secured between the batten sley and handtree by tightening the wing nuts.
If the batten does not touch the two bumpers equally, loosen the bolts of the batten sley and handtree and exert pressure on the batten centering it in its proper place. Tighten the bolts again.

(Fig. 19)
Fig. 19
Note: Ratchet gear $M$ must be on the right-hand side and ratchet pawls $N$ must be lifted up.


Affix one of the breast beams $A$ on the top of the front posts $B$ and C. (Fig. 20)

Affix the other breast beam on top of the back posts.

NOTE: To avoid splitting the front posts, slightly insert the breast beam onto the metal pin. Be sure that it is in the right position before inserting it completely.


FOLDING LOOM AND BEAMING:
Release the brake by depressing treadle C and by locking it down with catch G . (Fig. 21)

WEAVING:
To advance the warp, depress brake treadle C and turn cloth beam H at the same time. Then release brake treadle C and advance the cloth beam until the next notch in the ratchet gear is reached. If this is too much tension, gently depress the brake treadle until the desired tension is obtained. (Fig. 21)

See "WARP AND WEAVE", page 87.


## FIRST TREADLE TIE-UP

Select any treadle and tie the Lams to the Treadles using the 9" cords supplied with the loom. Take the heddle hook to help make passing the cord through each hole of the lam easier.


Slide the Treadle Hook through the Screw Eyes and Cord Loops. (Fig. 23)


## SCREW EYES FOR LEASE STICKS

Affix screw eyes $F$ to the holes inside middle posts $G$.
Pass a string $E$ throught the holes on each side of the lease sticks $D$, and tie to the screw eyes $F$ and to the thread beam $A$.
The lease sticks will now be held at the right height and distance from the shaft frame for easy threading. (fig 24)

If the loom is equipped with a sectional warp beam, affix the rake-like pieces (following the instructions supplied with the sectional warp beam) and do the following procedures on the cloth beam only.

If the loom is not equipped with a sectional warp beam, affix the apron to the warp beam with tacks and do the following procedures on the warp and cloth beams.


Insert a warp rod into the apron border.

For the 36 " and 45 " looms ( 90 cm and 115 cm )

Cut the 5 yard ( 4.5 m ) cord in half. Use one half of the cord to lace the apron apron warp rod to a second warp rod. warp rod to a second warp rod. This This second warp rod will be used to second warp rod will be used to attach warp threads. (Fig. 25)

For the 60" loom ( 150 cm )

Use a 5 yard (4.5m) cord to lace the attach warp threads. (Fig. 25)

For more information see the book "Warp \& Weave" supplied with the loom.

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HAPPY WEAVING

