# CRANBROOK LOOM Double Back Beam

## HARDWARE

- 7 5/16" washers 6 - 3/8" washers
- 7 1/2" washers
- 1 aluminum brake bar and cable assembly
- 1 brake spring
- 1 1/4" lock nut
- 1 5/16'' lock nut
- 1 5/16" hex nut
- 4 3/8" barrel nut
- 1 1/2'' lock nut
- $1-1/4"\ge 1-1/2"$  hex head bolt
- $1-5/16"\ge 3"$  carriage bolt
- 4 3/8" x 6" hex head bolt
- $1-3/8"\ge 6\ 1/2"$  hex head bolt
- 1 1/2" x 5" hex head bolt
- $2-\#10\ge 1\;3/4"$  flat head screws
- 1 turnbuckle
- 2 1/4" metal collars

# PARTS

- 1 steel beam with 2 fender washers
- 1 warp beam
- 2 1/2" x 3" hex head bolts
- 1 brake lever release assembly (=brake lever bolted to strut)
- 2 warp beam hanger blocks
- 1 brake hold
- 1 7/8" x 3-1/2" dowel\*
- 1 brake pivot block\*

\*attached to left frame side of loom if ordered with loom

## **TOOLS NEEDED**

Phillips head screwdriver wrenches drill with 9/64" drill bit wood glue

## **1. ATTACH SECOND STEEL BACK BEAM**

• Remove bolts and washers from end of the new steel beam

• Leaving washers on these bolts, insert bolt(s), from the outside to the inside, through the upper 1/2" hole(s) in the rear upright(s), then through painted fender washer(s), into the end(s) of the steel beam, and fasten firmly.

## 2. ATTACH WARP BEAM BEARING BLOCK ASSEMBLIES TO THE REAR UPRIGHTS

• Insert two 6" hex head bolts, from the inside to the outside, into the two pre-drilled holes in each rear upright. Position the two bearing block assemblies on these bolts. Pull the bolts forward somewhat to leave space to insert the barrel nuts into the holes on the inside of the bearing block assemblies. Insert two barrel nuts into each block assembly and tighten the bolts into the nuts.

• Remove the wooden pin from the bearing blocks and remove the center (sliding portions) of the bearing blocks.

• Set the beam into the opening in the bearing block, so that the brake hub is on the left side of the loom (as seen from the front of the loom), and replace the sliding portion of the bearing blocks and the pins.



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#### 3. MOUNT BRAKE PIVOT BLOCK ON LEFT MID UPRIGHT

• Locate the 1/2" x 5" hex head bolt and place a 1/2" washer on the bolt. Insert the bolt and washer into the 1/2" hole at the bottom of the left mid upright from the outside to the inside.

• Place the brake pivot block on this bolt. Hold the block level against the upright and mark the position for the two mounting holes to be drilled in the upright.

• Remove the bolt and pivot block, and drill two holes with 9/64" drill bit to approximately 1/2" deep.

• Attach the block to these holes on the inside of the mid upright with two  $#10 \times 1-3/4$ " flat head screws.

• Replace the 5" bolt and washer into the upright and the brake pivot block.

• Add 1/2" washer to the inside end of the bolt, and proceed to part 4 below.

## 4. ATTACH THE BRAKE LEVER RELEASE ASSEMBLY

Locate the brake lever release assembly and let it into the left side of the loom, oriented as follows:
Set the brake release lever assembly parallel to the

treadles – Set the pivot (bolted) end of the assembly to the

- Set the pivot (bolted) end of the assembly to the rear of the loom

- Set the strut (the smaller of the two wood pieces) closest to the left side of the loom.

• Locate the rearmost 1/2" hole in the Brake Release Lever Assembly and slide the assembly onto the 5" bolt which is waiting in the brake pivot block (see part 3, above). Add another 1/2" washer and fasten with a 1/2" lock nut.

#### 5. INSTALL THE BRAKE CABLE MECHANISM

• Locate the 3" carriage bolt and insert it from the outside to the inside into the hole directly above the steel beam attachment site of the left rear uprights. Add a 5/16" washer and the 5/16" hex nut, then tighten so as to draw the head of the carriage bolt into the outside of the upright. Add a 5/16" washer and proceed to step B, below.

• Locate the Brake Cable Assembly, and mount the aluminum brake bar onto the bolt just assembled in part A, above: place the bar on the bolt, through the end of bar with the single hole and with the cable exiting at the top of the bar. Add another 5/16" washer and proceed to step C, below.

• Wrap the cable onto the brake hub as follows: begin by laying the cable over the top of the hub, at the outermost edge of the hub; then wrap the cable 3 times around the hub, and end by placing the end loop of the cable on the carriage bolt, waiting from step B, above. Add a 5/16" washer and 5/16" lock nut.

## 6. ATTACH THE STRUT TO THE BRAKE BAR

Locate the  $1/4" \ge 1-1/2"$  hex head bolt, and place it through the frontmost hole of the brake bar from the outside to the inside. Add a 5/16" washer, slide the bolt into the hole in end of strut, add 5/16" washer and fasten with 1/4" lock nut. Tighten the lock nut, leaving some play for the strut to pivot freely.

## 7. INSTALL THE BRAKE TENSION ADJUSTMENT

• Remove the original upper 6" bolt (from the inside of the rear upright) which is holding the lower bearing block assembly. Locate the turnbuckle and the 3/8" x 6-1/2" bolt which will replace the 6" bolt. Hold the turnbuckle with the shorter eyebolt up, and attach the longer (lower) end of the turnbuckle to the leg: slide a 1/2" washer, the upper end of the turnbuckle, then another washer on the 6-1/2" bolt. Next place the two metal collars and lastly, another washer on the bolt. Insert the bolt into the leg and fasten into the barrel nut.

• Hang the upper end of the spring from the remaining hole in the brake bar.

• Attach the upper eye of the turnbuckle to the spring

• Tighten the turnbuckle to desired brake tension. The brake should release when the brake lever is depressed, and should be engaged when the brake lever is at rest.

## 8. INSTALL THE BRAKE HOLD

• At the front of the loom, locate the 7/8" hole on the inside of the left side front upright, approximately 14" from the floor. Place some glue into the hole.

• Gently tap the slotted end of the wooden dowel into hole. Locate the brake hold lever and hang the lever on the dowel.

• To engage the brake hold, slide the brake hold lever out along the dowel and position it to hold the brake release lever in a depressed position. Use the brake lever hold to release the brake when beaming a warp to save wear and tear on the friction brake hub.



DIAGRAM 1



DIAGRAM 2