

Section 0.1

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0. OPERATION

0.1 Overview

All operations of the weaving machine can be controlled from the switches located on the main control box "C" and two switch boxes "SL" and "SR" (three switch boxes "SL," "SM" and "SR" for the reed space 280 or more), as listed below. The main control box "C" is provided at the right rear of the machine, and the switch boxes "SL" and "SR" are at the left and right of the front side.

C: Main control box

1: Main power switch

2T: Emergency stop button

SL: Switch box, Left

2L: Emergency stop button

3L: Operation panel

4: Function panel

SR: Switch box, Right

2R: Emergency stop button

3R: Operation panel

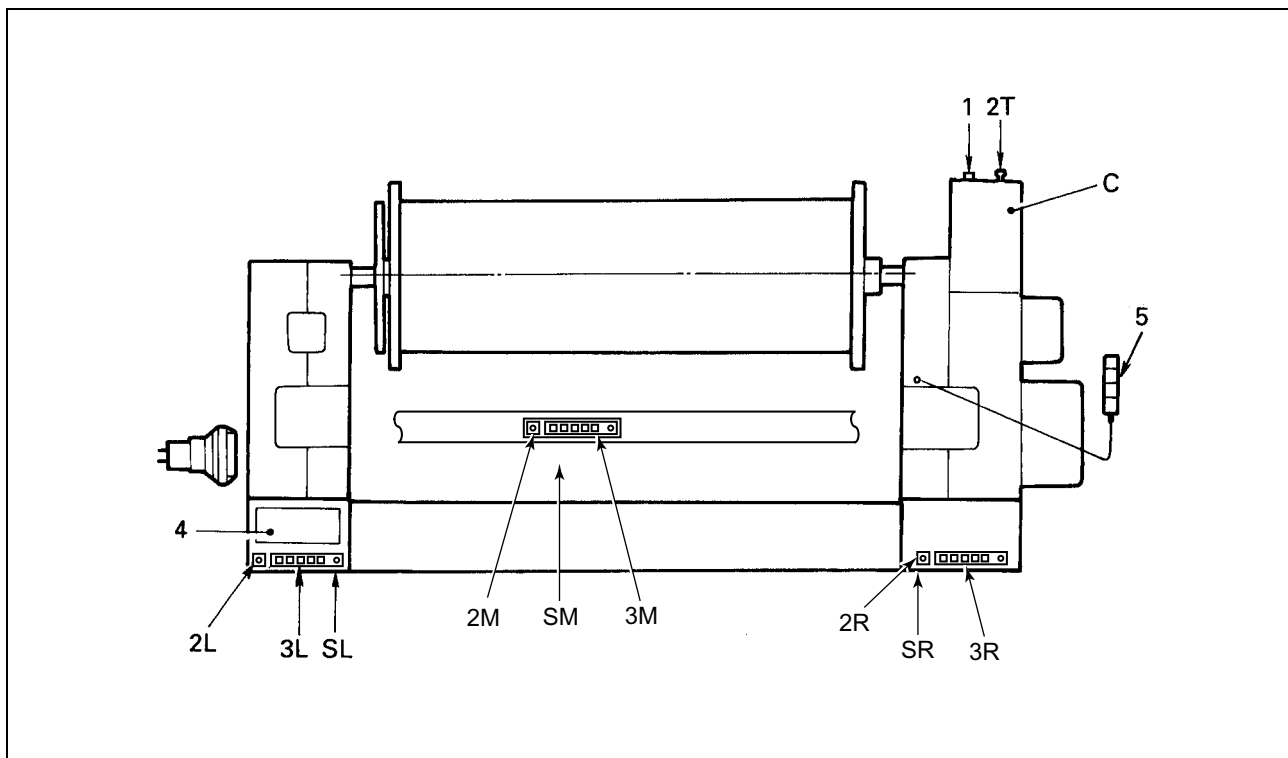
SM: Switch box, Center (Provided for the reed space 280 or more)

2M: Emergency stop button

3M: Operation panel

As listed above, this machine has a total of three emergency stop buttons (four for the reed space 280 or more).

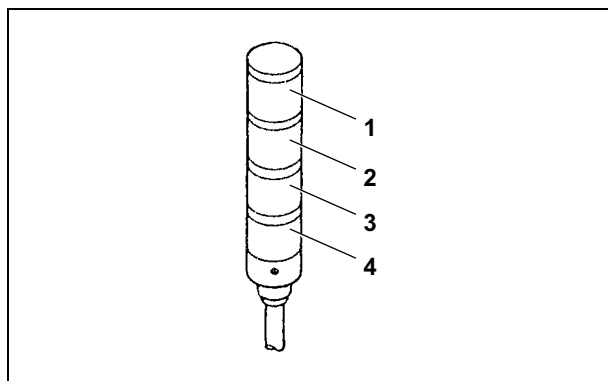
At the middle of the right front side of the machine is a signal indicator 5 which shows the reasons for machine halt.



0.1.1 Operation Guide for TOYOTA JAT710

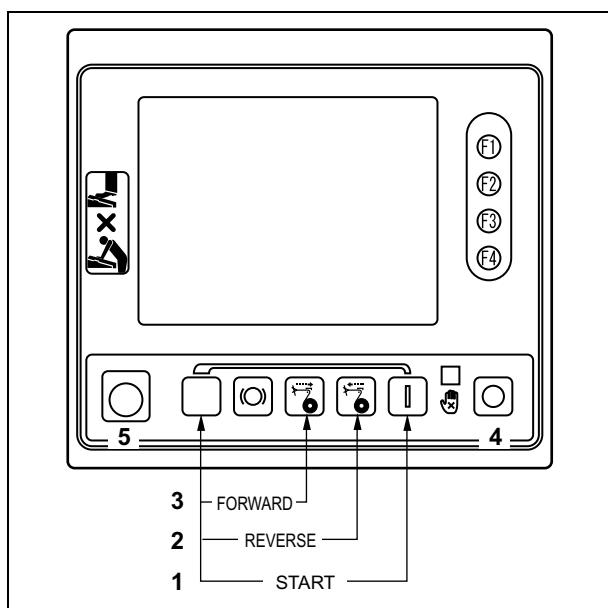
At the starting time of practical production, use this operation guide for training operators.

[1] Signal indicator



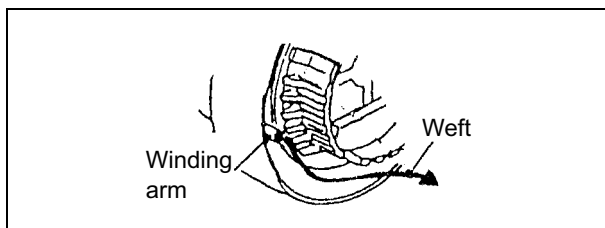
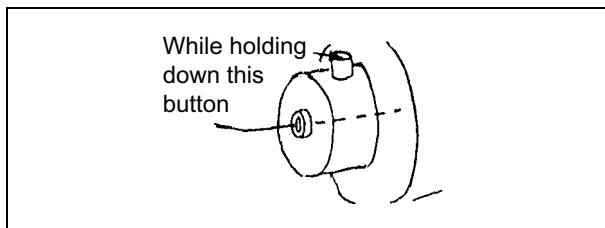
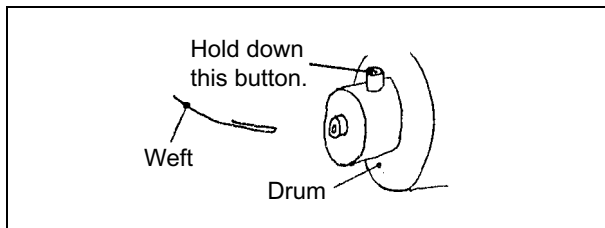
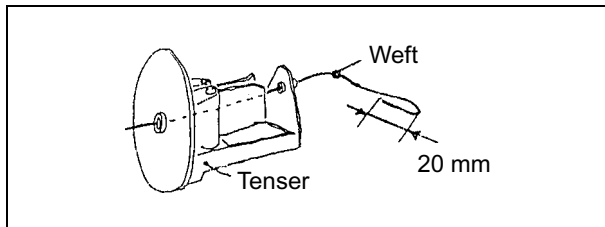
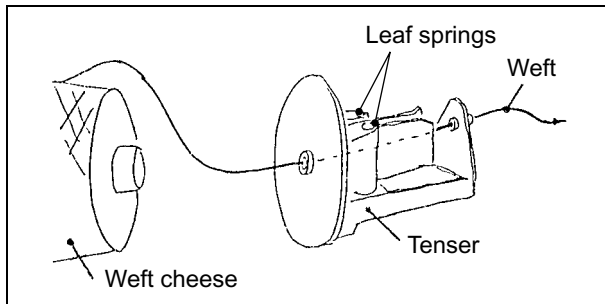
| No. | Signal lamp | Lamp state | |
|-----|-------------|---------------------------------|---|
| | | ON | Flashing |
| 1 | Red | Warp stop or waste-selvage stop | <ul style="list-style-type: none"> Let-off related electric problems Warp detector electric problems |
| 2 | Green | Weft stop | Feeler-related faults |
| 3 | White | STOP switch pressed | <ul style="list-style-type: none"> Cloth beam to be doffed Optical safety sensor ON RH cover sensor ON |
| 4 | Yellow | Full-leno selvage stop | Electric problems |

[2] Operation switches



| No. | Switches | Functions |
|-----|-------------------------------|--|
| 1 | START switch | Starts the automatic operation. |
| 2 | REVERSE inching switch (SLOW) | Holding down this switch runs the machine in the reverse direction up to the preset "Reverse angle at weft stop." |
| 3 | FORWARD inching switch (SLOW) | Holding down this switch runs the machine in the forward direction at a low speed. Releasing it stops inching. |
| 4 | STOP switch | Stops the machine at the preset stop angle. |
| 5 | Emergency stop button(s) | Locks itself and the machine in order to make the machine inoperable even if any of the operation switches is pressed. |

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[3] How to thread a weft from cheese to drum

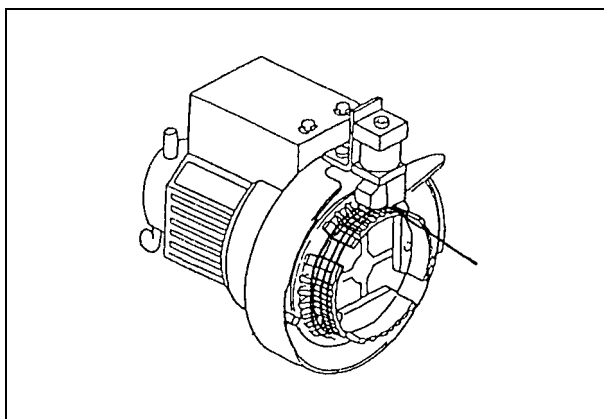
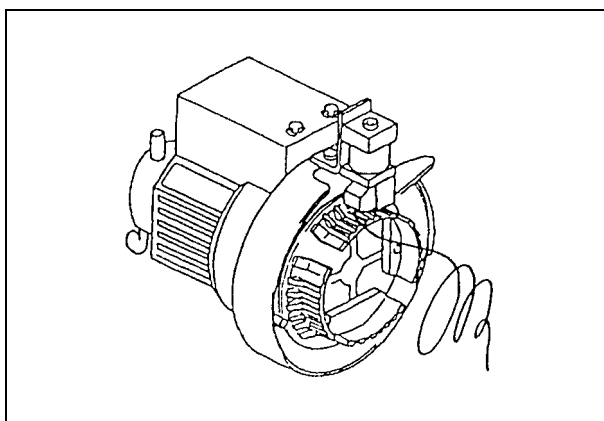
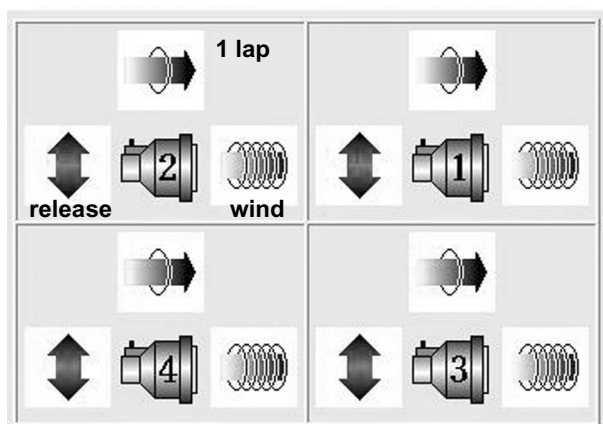
■ Threading a weft from cheese through tense

Thread a weft through the tenser. (Be sure to thread a weft between the leaf springs of the tenser.)

If it is difficult to thread a weft, use a warp threader.

■ Threading a weft from tenser through drum

- (1) Fold the leading end of a weft by approx. 20 mm to make threading easy.
- (2) Hold down the push button to blow air.
- (3) While holding down the push button, insert the leading end of a weft into the entrance of the drum.
- (4) When the weft comes out of the winding arm, release the push button.





[4] How to release or wind a weft

This screen always appears when the machine stops.


Each drum number is displayed.

■ Releasing a weft

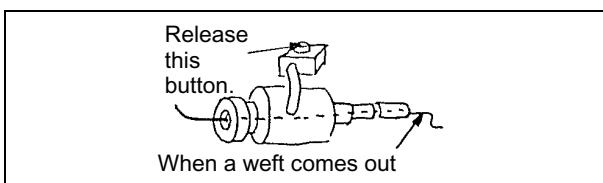
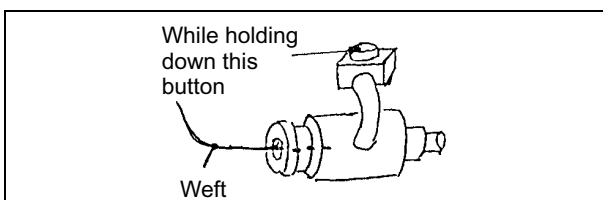
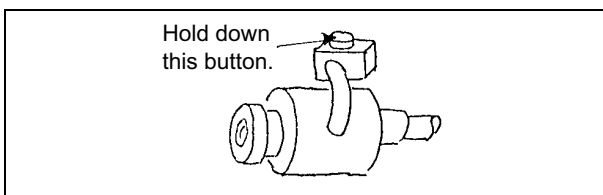
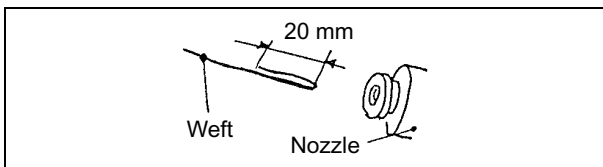
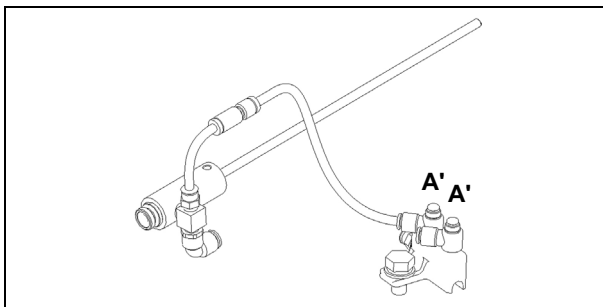
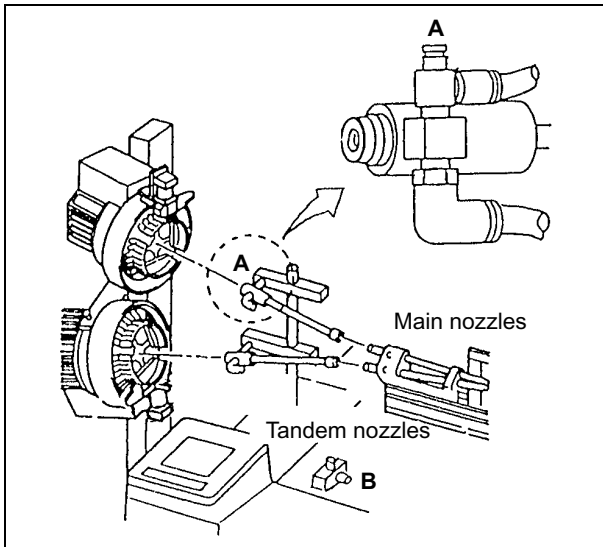
 : **Release Single Turn** switch
This switch releases a single turn of weft on the drum.

 : **Release Turns** switch
This switch releases turns of weft on the drum.

■ Winding a weft

 : **Base Wind** switch
This switch winds weft on the drum by rotating the arm by the number of the base turns registered.

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[5] How to thread a weft through nozzles

- **Threading a weft through the tandem nozzle**
Press push button A to blow air, and a weft will be drawn into the tandem nozzle.
Some models have push button A' located as shown at left.
- **Threading a weft through the main nozzle**
Press push button B to blow air, and a weft will be drawn into the main nozzle.

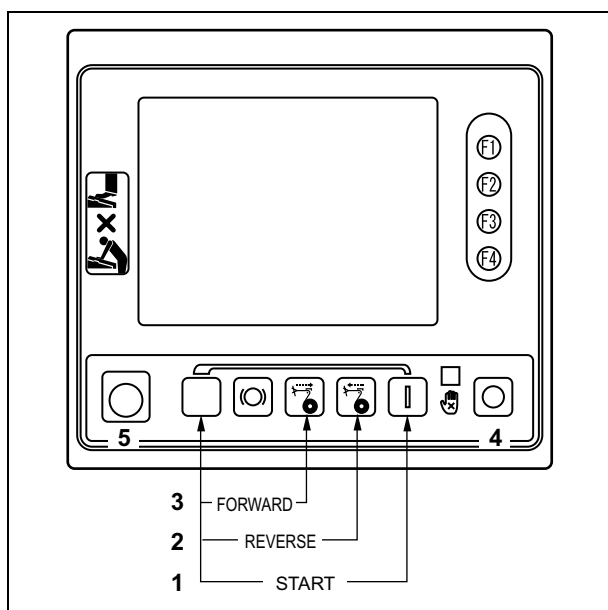
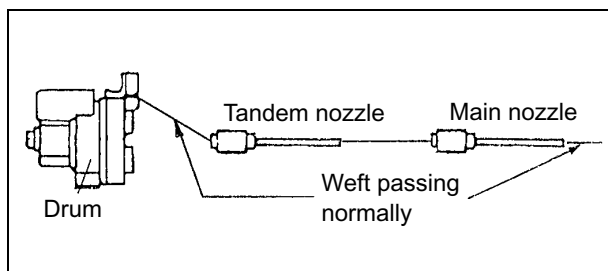
For proper preparation before weft insertion, release a weft on the drum, thread a weft through the tandem and main nozzles, and then wind the weft onto the drum in this order.

■ Weft threading procedure

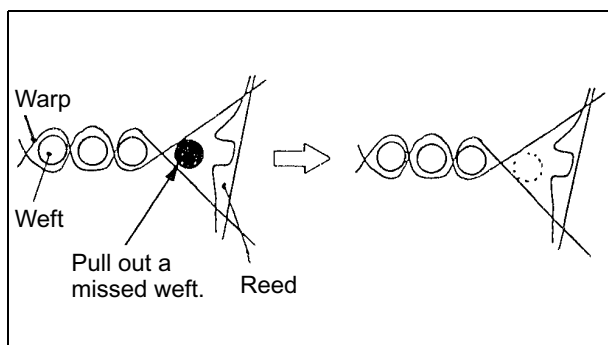
- (1) Fold the leading end of a weft by approx. 20 mm for making threading easy.
- (2) Hold down the push button to blow air.
- (3) While holding down the push button, insert the leading end of a weft into the nozzle (thread guide).
- (4) When the weft passes through the nozzle, release the push button.

[6] How to correct missed wefts

[6.1] If a weft passes through the tandem and main nozzles normally:



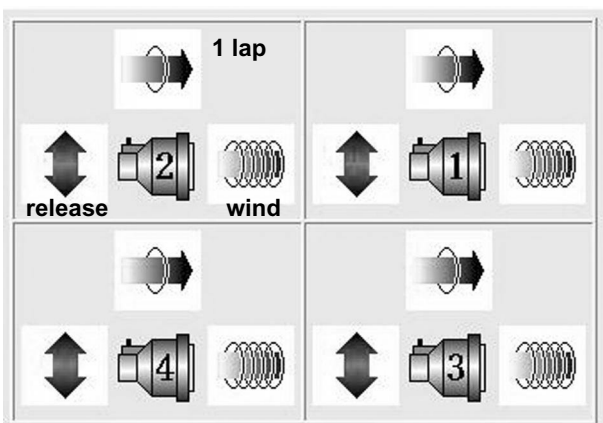
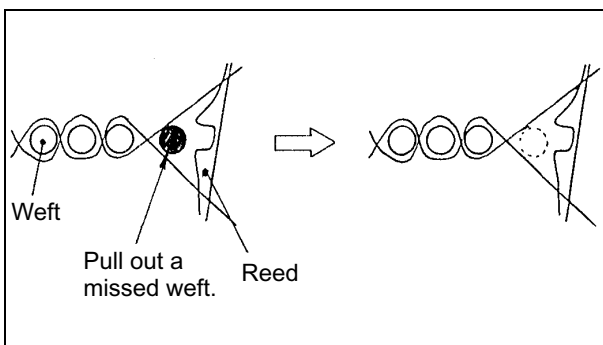
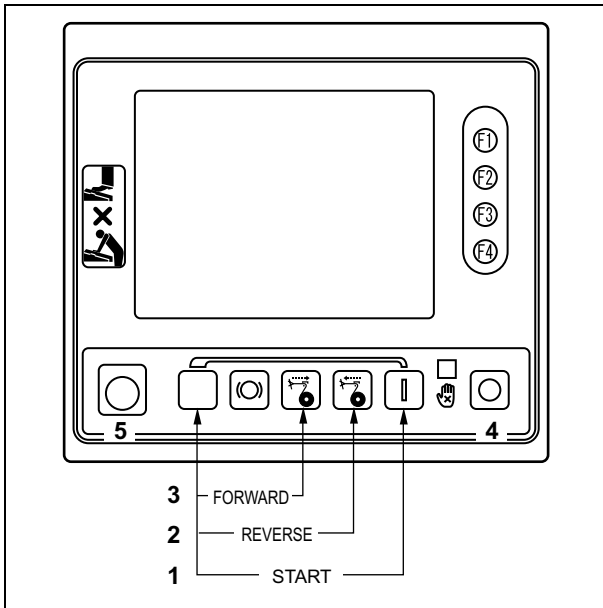
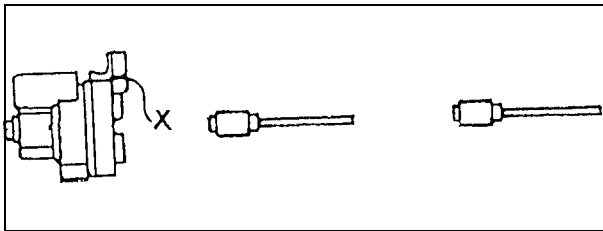
(1) Keep the REVERSE inching switch **2** down until the reed reaches the rear position (preset "Reverse angle at weft stop").



(2) If a missed weft remains within woven fabrics, pull it out.

(3) Press the START switch **1** to run the machine.


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[6.2] If a weft does not reach the main or tandem nozzle:

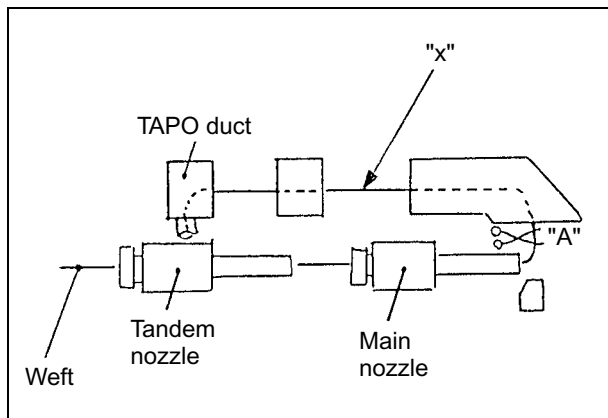
(1) Keep the REVERSE inching switch **2** down until the reed reaches the rear position (preset "Reverse angle at weft stop").

(2) If a missed weft remains within woven fabrics, pull it out.

(3) Touch the "Weft Release" switch  to release the weft wound on the drum.


(4) Press the push button for the tandem nozzle to thread weft through the tandem nozzle.

(5) Press the push button for the main nozzle to thread weft through the main nozzle.



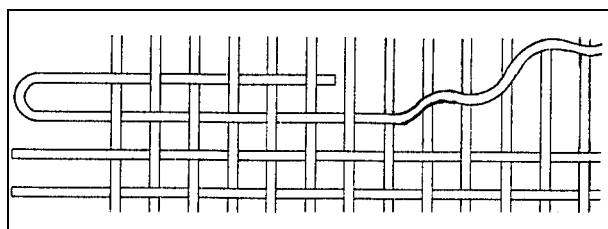
(What follows applies to those machines equipped with a TAPO.)

(6) Pull weft in the direction of arrow "x" until the leading end of the weft is drawn into the TAPO duct.

(7) Touch the "Base Wind" switch  to wind weft onto the drum.

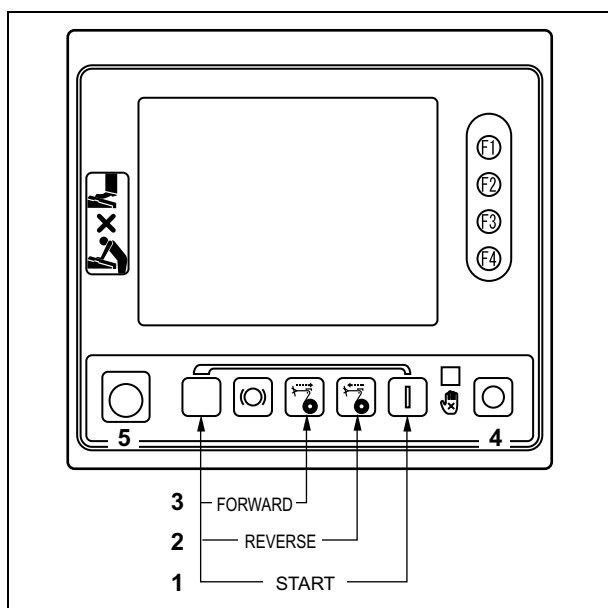
- Upon completion of winding, the machine automatically cuts weft near tip "A" of the main nozzle.
- If weft is not cut, the machine cannot restart operation.

(8) Press the START switch 1 to run the machine.

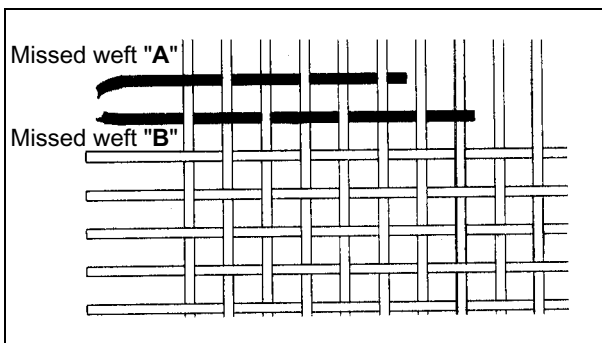
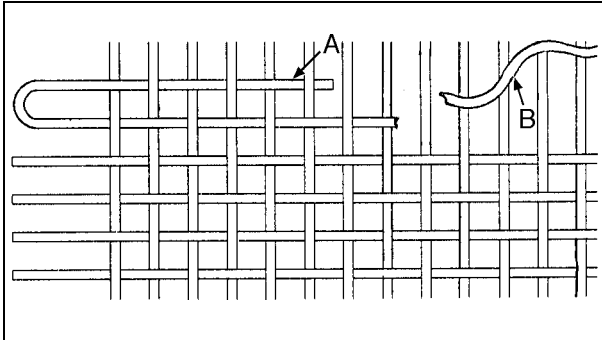


**[6.3] If you fail to completely pull out a missed weft by one reverse turn of the machine:
(To minimize a bad effect on the fabric quality)**

(1) Keep the REVERSE inching switch 2 down until the reed reaches the rear position ("Reverse angle at weft stop" preset on the function panel).



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- (2) If your attempt made for pulling out a missed weft in a usual way has resulted in the remaining missed weft as shown at right, then it means that the TAPO failed to find missed weft "A" so that "lashing-in" occurred.

In such a case, proceed to steps (3) through (7).

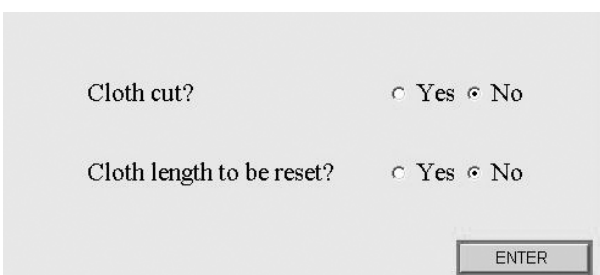
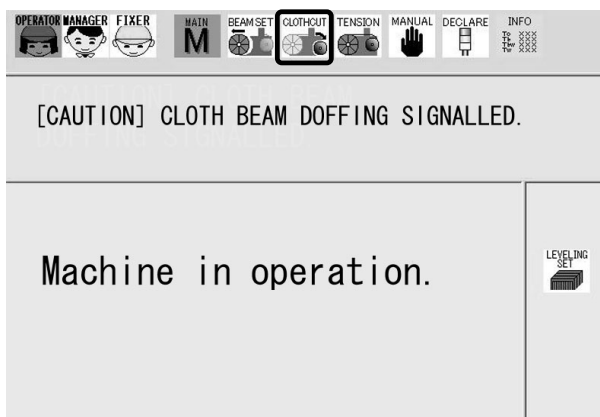
NOTE: If you run the machine in the reverse direction to remove missed weft "A" and then run it in the reverse direction again to remove missed weft "B", a critical stop mark may occur.

- (3) Keep the FORWARD inching switch **3** down until the reed reaches the rearmost position (approx. 180°). (Never reverse the machine.)
- (4) Pull out missed weft "A."
- (5) Keep the REVERSE inching switch **2** down until the reed reaches the rear position ("Reverse angle at weft stop" preset on the function panel).
- (6) Pull out missed weft "B."
- (7) Press the START switch **1** to run the machine.

CAUTION: Pressing the REVERSE inching switch **2** or FORWARD inching switch **3** repeatedly may cause stop marks. Do not use these switches for the purposes other than adjustment.

[7] How to doff a cloth beam

- (1) Check that the machine is in operation with the white signal indicator (of the signal indicator) flashing and with the "CLOTH BEAM TO BE DOFFED" message displayed on the function panel as shown at left.
- (2) Stop the machine.
- (3) Touch the **CLOTH CUT** switch as shown at left.



- (4) The window shown at left appears.
 - 1) Touch **Yes** switch for the "Cloth doff?" question.
 - 2) Touch the **ENTER** switch.

If "Cloth due?" is set to "Yes," the cloth length will be automatically reset to zero and an alarm message will appear even if the "Cloth length to be reset?" is set to "No."