

Section 10.1

Water Extraction System

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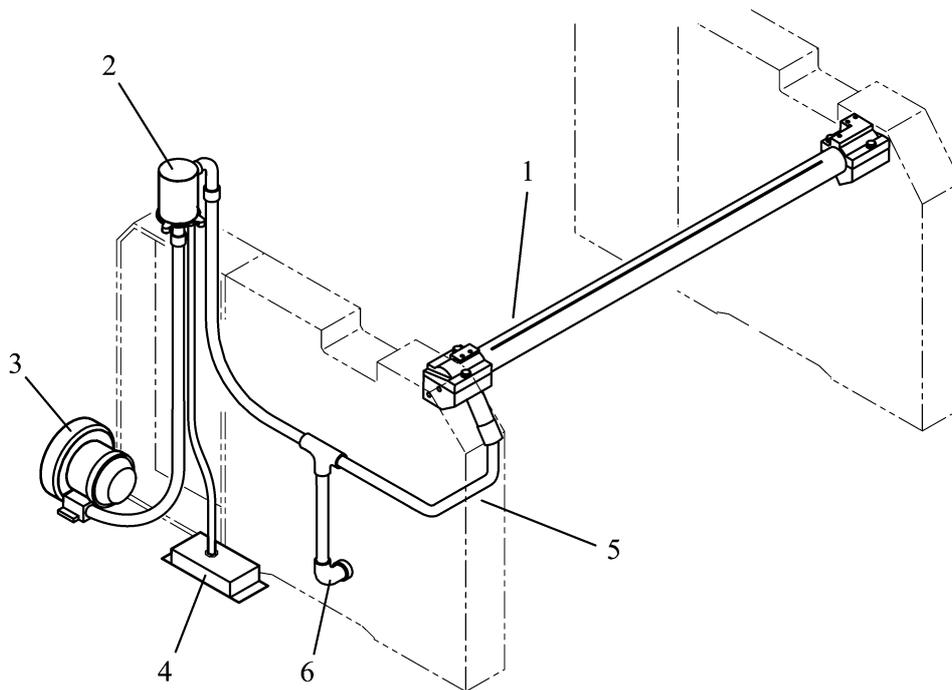
10.1 Water Extraction System

10.1.1 Outline

This device is to remove water contained in the woven cloth by suction when the cloth passes the slit of the water extraction tube "1". Sucked water is led into the separator "2", where water and air are separated.

Separated water is drained into the reservoir tank "2".

Since atmospheric pressure exists in the suction hose "5" while the blower is stopping, the valve "6" opens automatically to drain residual water from the suction hose "5".



No.	Part name
1	Water extraction tube
2	Separator
3	Blower
4	Reservoir
5	Suction hose
6	Valve

Fig. 10.1-1 Water extraction system

10.1.2 Water Extraction Tube

[1] Handling of Water Extraction Tube

The slit “2” length of the water extraction tube “1” is longer than the standard reed space, namely longer than the weaving cloth width. Therefore, tape the exposed slit beyond the cloth width to prevent the suction force drop.

When the cloth was changed to a wider one, peel off the overlapping tape and be sure to remove the attached bonding waste carefully.

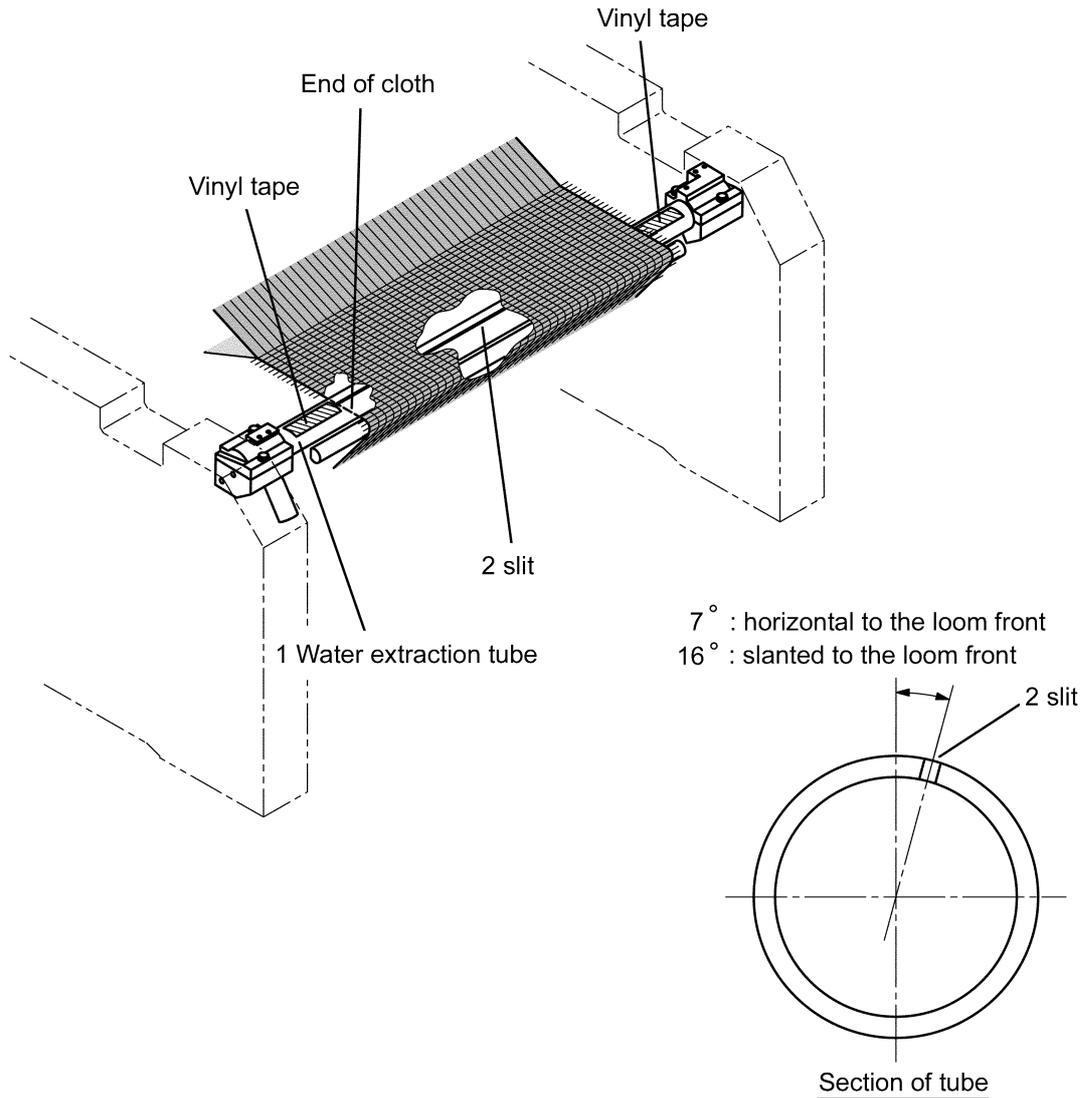


Fig. 10.1-2 Outline of water extraction tube

10. DEHYDRATING DEVICE

[2] Cleaning of Water Extraction Tube

Clean the inside of the water extraction tube periodically to remove the sticking sizing material or dirt.

Step	Procedure
1	Remove the bolt "1" that fixes the left cap "3". Then, loosen the setscrew "2" of the right support "5" to remove the cap "3" from the loom.
2	Move the water extraction tube in parallel with the loom and remove it from the support "5". Caution: Place the tube not on the floor but on wooden blocks, etc. so as not to deform the O-rings "6".
3	Remove sizing or oiling materials adhered to the slit using a thin metal plate. Caution: Do not damage or burr the edges of slit opening then. If damaged or burred, repair with sandpaper.
4	Pour water from one end of the water extraction tube "4" to remove sludge inside the tube.
5	After cleaning, engage the U notch "8" of the water extraction tube "4" with the U projection "7" in the RH support "5" to assemble the tube. At this time, apply grease to the O-rings "6".
6	Fix the cap "3" by tightening bolts "1".
7	Tighten the setscrew "2".

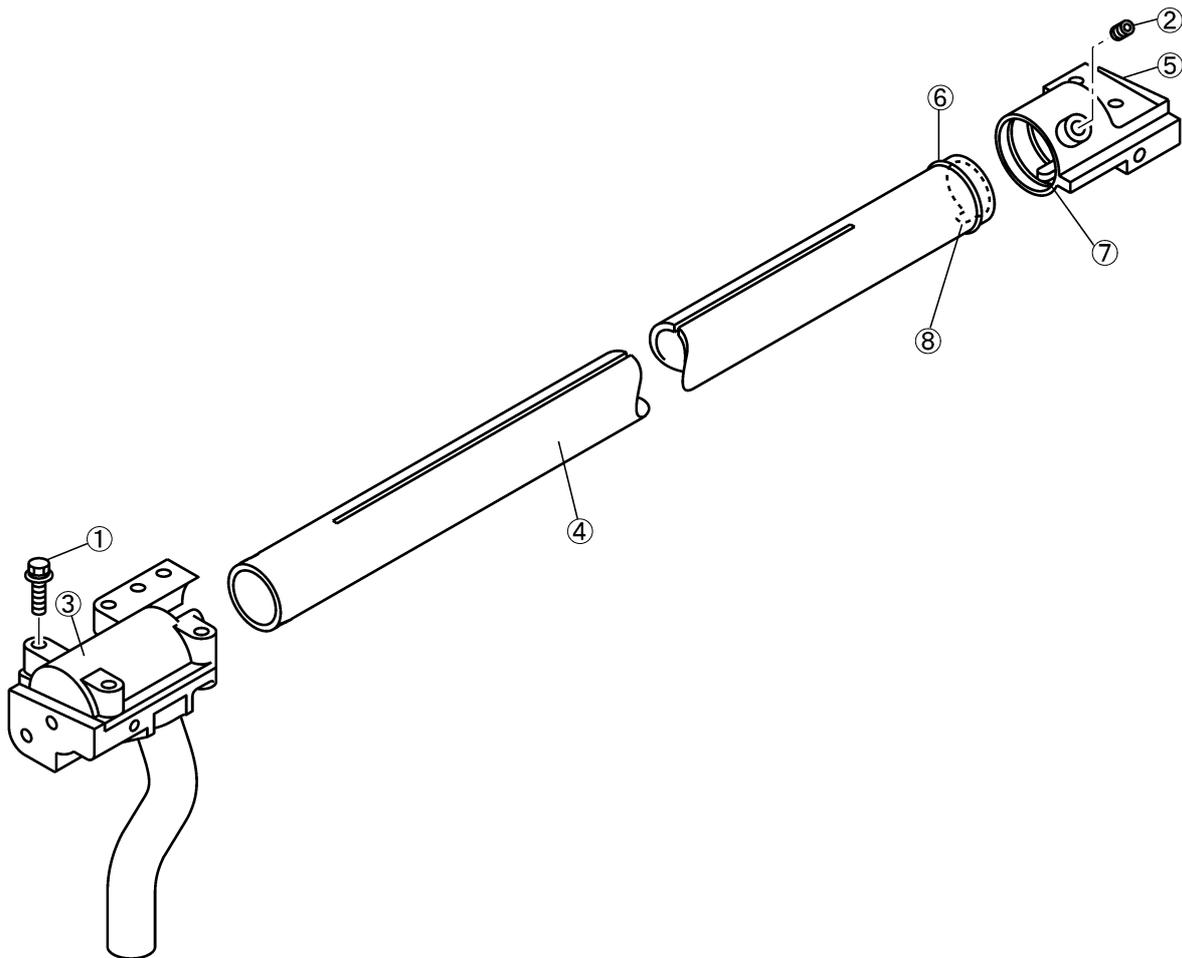


Fig. 10.1-3

[3] Separator

This device is to separate air and water absorbed from the water extraction tube and drain water into the reservoir tank.

Air is sucked by the blower through the center tube "1". Water is drained through the bottom hole "2" to the reservoir "5".

Before operating the loom, fill the reservoir "5" with water and put an end of the drain hose "6" into the hose insertion port provided at an end of the reservoir.

Caution: If the reservoir water level is not sufficient, the blower may absorb air and water through the drain hose "6".

Insert the drain hose "6" until it comes into contact with the bottom of the reservoir "5". At this time, 10-mm clearance is provided between the hose end and the reservoir. Without such clearance, the separator fails to separate air from water. As a result, water comes up to the blower.

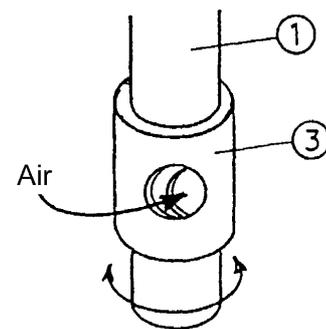
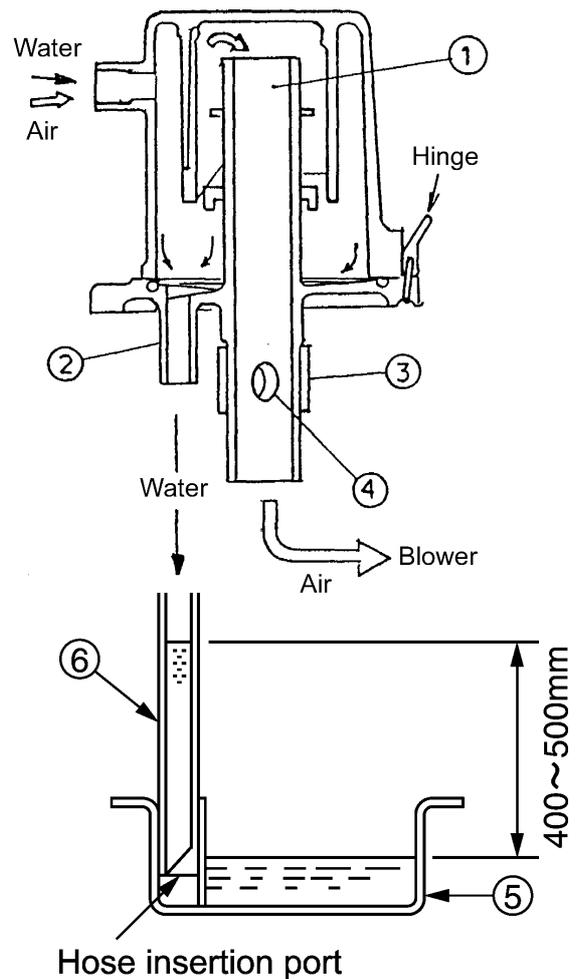
A water head of 400 - 500mm is enough. The water head is adjusted by turning the valve "3" to change the air vent area.

(Even if the pressure is increased to 500 mm or over, the moisture content after water extraction remains the same.)

Clean the inside of the separator periodically because it gets dirty as time elapses.

- 1) Inside of the separator upper body.
- 2) Around the air vent.
- 3) Around the inlet of air and water.
- 4) Hose
- 5) Reservoir

CAUTION
 After cleaning, wipe off the water or dirt on the floor for the safety sake. The wet or dirty floor is slippery and dangerous.



Adjustment of air vent

Fig. 10.1-4 Separator

10. DEHYDRATING DEVICE

10.1.3 Inspection and Maintenance of Blower

[1] Cleaning of Blower Inside

Step	Procedure
1	Soak and rinse the silencer in tepid water, squeeze it, and dry it off.
2	Clean the fan cover, fan, fan case, etc. with a brush in neutral detergent or tepid water. Caution: Do not splash tepid water onto ball bearings and shafts.
3	Assemble the blower in the reverse order of disassembly.

[2] Replacement of Blower Motor Bearings

Step	Procedure	Remarks
1	Remove the cover "1" and the fan "2".	Use the exclusive puller to pull out the fan "2".
2	Pull out the key "3".	
3	Remove the fan cover "4".	
4	Unfasten the bolts "5" to separate the fan case "6" and the motor "7".	Handle the motor "7" together with the shaft "8".
5	Remove the counter-sunk screws "9" and the cap "10".	Replacement of the fan side bearing "2".
6	Replace the bearing "11" with new one.	
7	Remove the snap ring "12", cooling fan "13" and key "14".	
8	Remove the case "15".	
9	Replace the bearing "16" with new one.	
10	After replacing the bearing, assemble the motor in the reverse order of disassembly.	

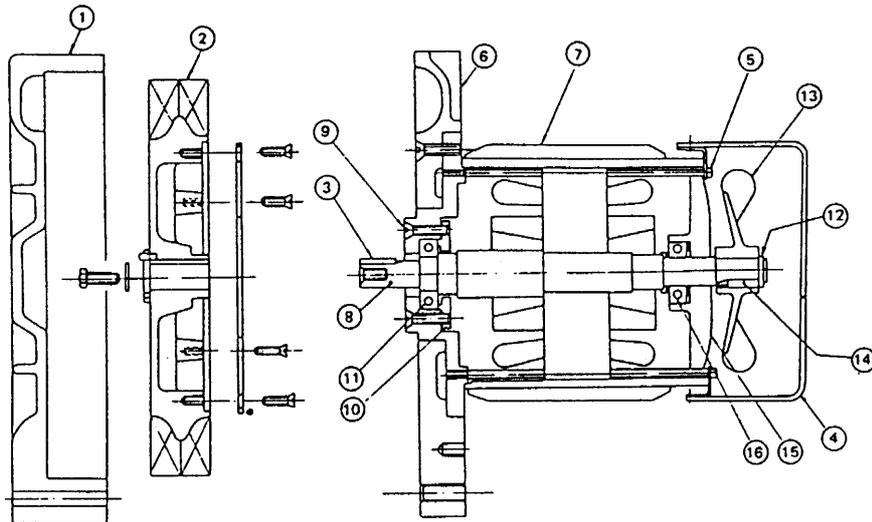
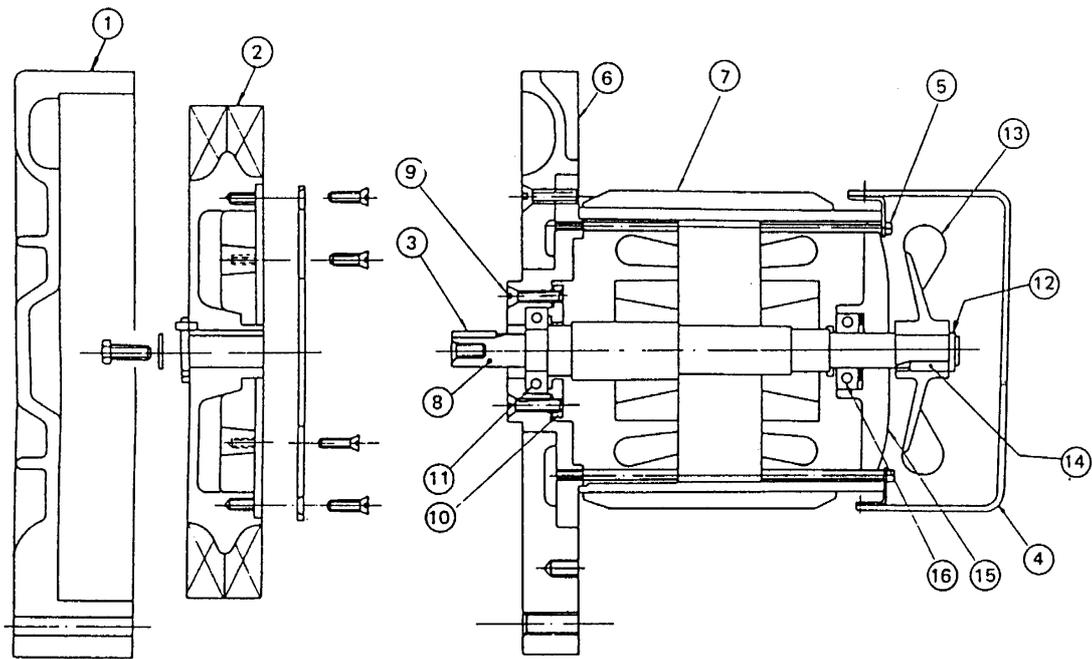


Fig. 10.1-5



No.	Part name	No.	Part name
1	Fan cover	9	Counter-sunk screw
2	Motor fan	10	Bearing cap
3	Key 050520	11	Bearing
4	Cooling fan cover	12	Snap ring
5	Bolt	13	Cooling fan
6	Fan case	14	Key
7	Motor	15	Fan case
8	Shaft	16	Bearing

Fig. 10.1-6 Replacement of blower bearings

