

Operating Instructions

For The
12-0000 Series

Weavexx TENSOMETER™ Instrument



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Description

The Weavexx TENSOMETER* is a patented instrument for measuring tension in flexible, thin textile conveyor belts, paper, and the like, or webs, generally encountered in paper mills such as:

Forming Fabrics
Press Felt
Dryer Fabrics

The operation is based on the principle that the amount of deflection of a flexible membrane under load is dependent upon the tensile stresses in the membrane.

The load is provided by an internal spring, and the amount of web deflection is measured by a dial indicator calibrated in thousandths. Using the chart included in this booklet, deflection in thousandths is converted to tension in pounds per linear inch (PLI).

TENSOMETER is a trademark of Weavexx.

The Weavexx TENSOMETER has been designed to minimize "operator variation" caused by the different pressures applied by the operator. Further, the unique "picture frame" bearing surface eliminates the effect of stress in adjacent areas of the web.

The Weavexx TENSOMETER instrument can be used on webs running in any angular attitude, and it can be applied on either side of the web. The magnitude of readings is independent of speed or moisture content of the web. The dial face, however, should always be directed toward the same side (usually the front side) of the machine.

The instrument can be used safely in wet surroundings since the mechanisms are protected by seals and rubber bellows.

The range of tension measurable with the instrument is 10 to 50 pounds per linear inch. Accuracy is +/- 10 percent of the converted tension reading.

Operation

1. Set the pointer of the dial indicator to the zero mark by pressing the push button at the bottom of the instrument.
2. Hold the instrument by the outer housing assembly. DO NOT contact the picture frame while taking measurements.
3. With the longer side of the frame oriented in the machine direction, press the instrument slowly against the web until the pointer of the indicator stops. (This will occur at approximately 4 pounds hand pressure.)
4. Remove the instrument and read the dial. Then use the appropriate table to convert the dial reading (thousandths) to web tension (pounds per linear inch) for the give or equivalent membrane.
5. Reset the pointer of the dial to the zero position and perform the measurement at least once more to check repeatability.
6. Always make sure that the web is running over the frame of the Weavexx TENSOMETER in the same direction. This will eliminate a slight directional bias.

Recommendations

To ensure your own safety and to prevent machine damage, do not apply the instrument to a moving web in the vicinity of an ingoing nip.

Where lapped seams are present, avoid seam impact on the instrument by timing the measurement to correspond with the web cycles.

When measuring slack spans, avoid wrinkling the web by measuring close to a support roll.

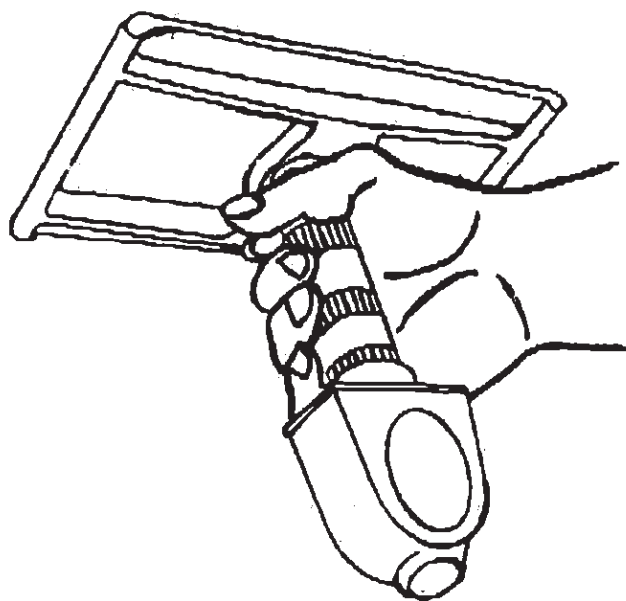
Maintenance

No special maintenance procedures are required. However, the Weavexx TENSOMETER instrument should be cleaned externally and dried after each use.

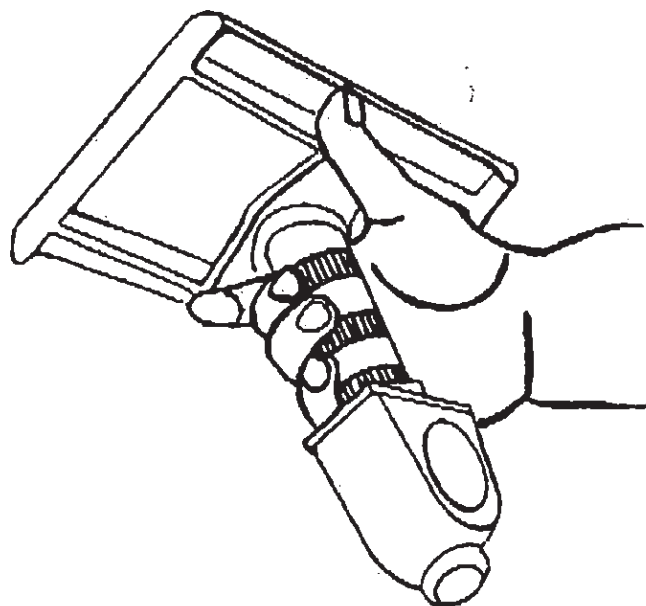
Service

For service contact Customer Service, Weavexx, Post Office Box 471, Wake Forest, North Carolina 27588-1709. Telephone number (919) 556-7235.

Do Not Disassemble The Instrument



Right



Wrong

Figure 1.

Do not contact the picture frame while taking measurements with the TENSOMETER instrument.

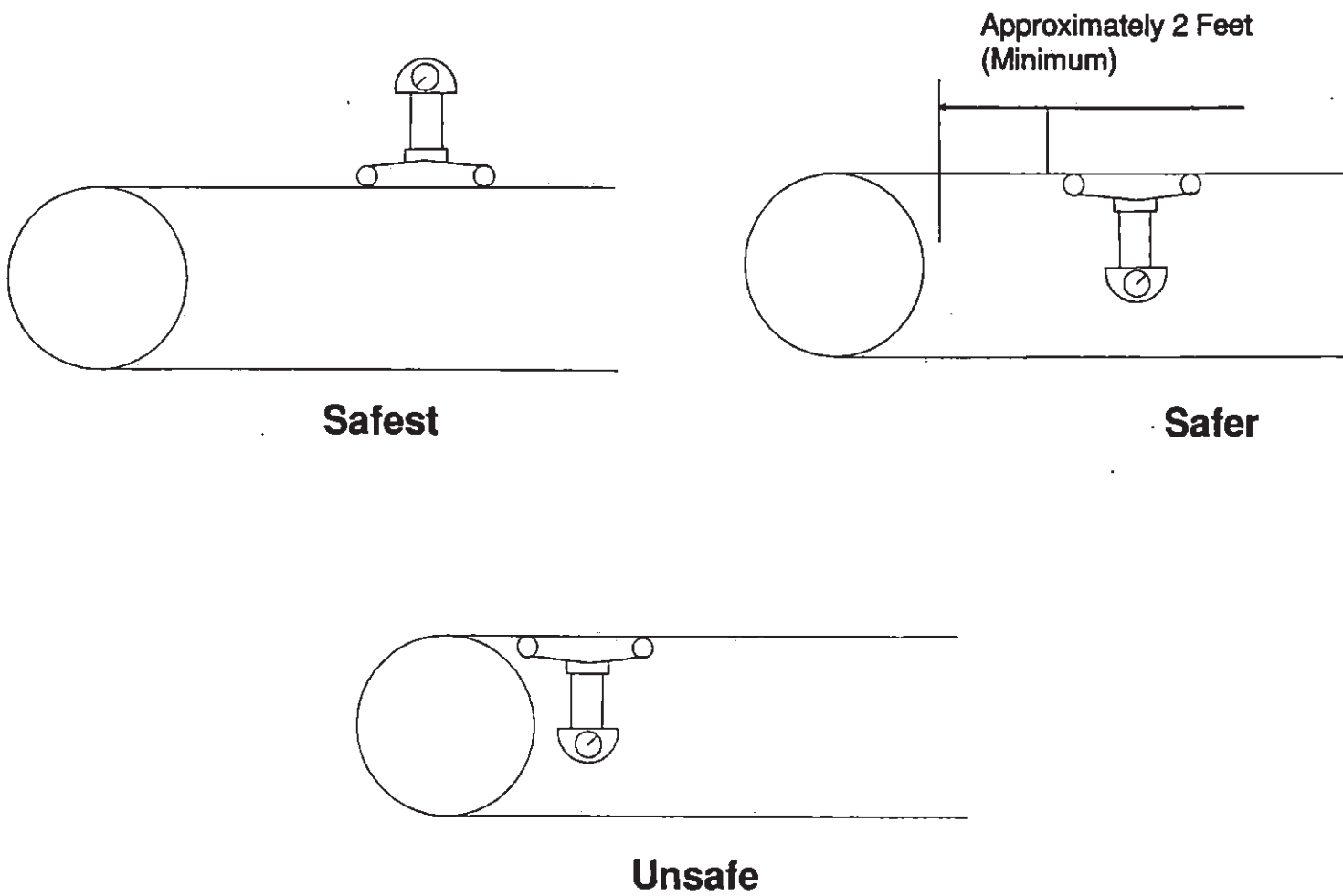
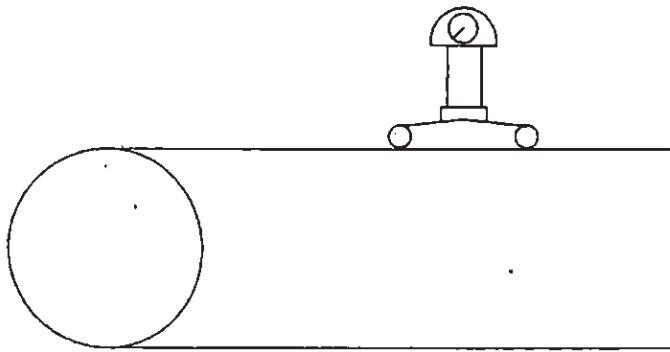
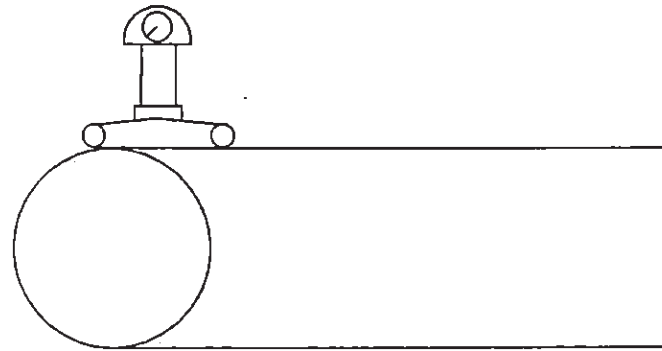


Figure 2.

Do not apply the TENSOMETER instrument in the vicinity of an ingoing nip.



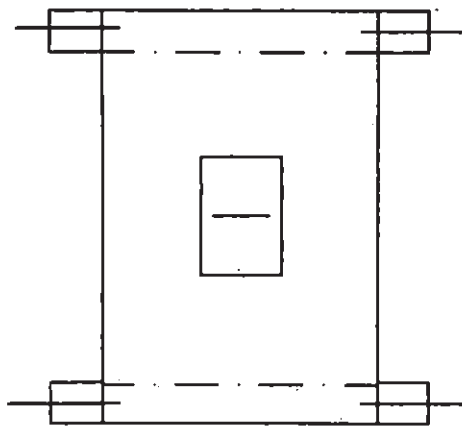
Right



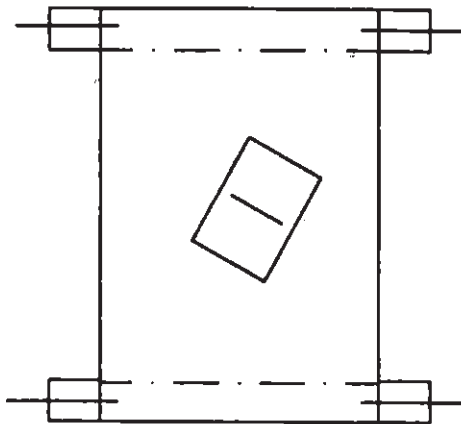
Wrong

Figure 3.

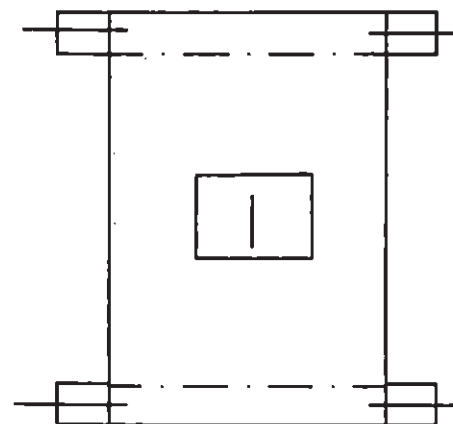
Do not use the TENSOMETER instrument on top of a roll.



Right



Wrong



Wrong

Figure 4.

The longer side of TENSOMETER instrument frame must be oriented in the machine direction.

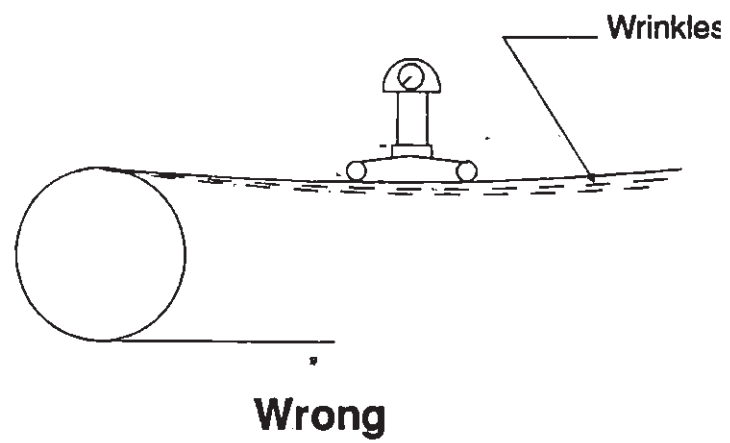
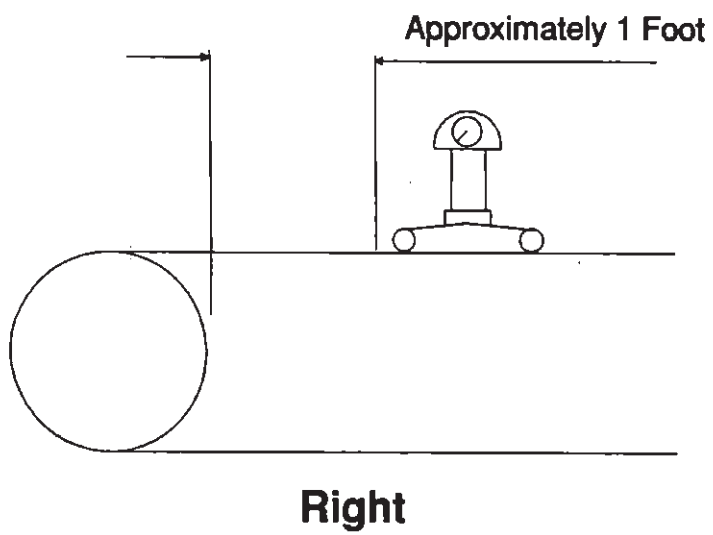
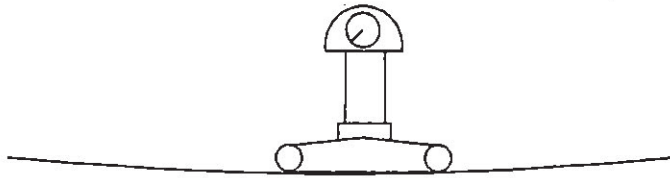
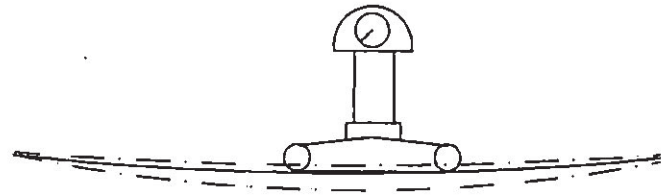


Figure 5.

To prevent wrinkling of slack webs, measure close to a support.



Right



Wrong

Figure 6.

Gently apply the TENSOMETER instrument.

Other Products From

Weavexx

Weavexx Fabrics

Weavexx Hydrofoil Dewatering Equipment

Vacufoil Units

Contact your local Weavexx Service/Sales Engineer or our Wake Forest office for details about how these products can improve your machine productivity and sheet quality. Weavexx, P.O. Box 471, Wake Forest, NC 27588-1709. Telephone (919) 556-7235.

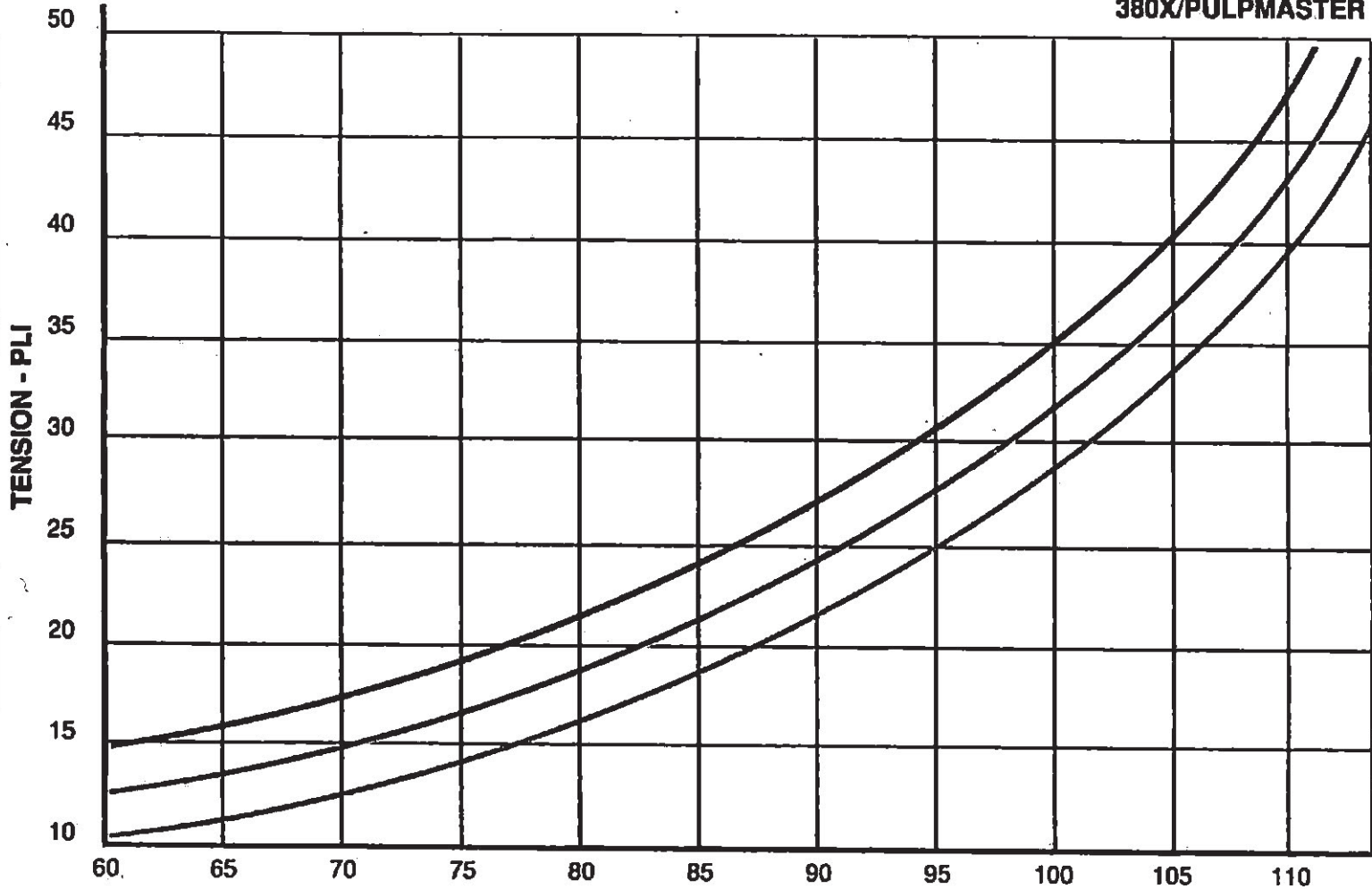


WEAVEXX TENSOMETER

GX/ES

STD. DUPLEX/FINE SINGLE LAYER

ALL TRIPLE LAYER/TRI-X
MEDIUM-COARSE SINGLE L
380X/PULPMASTER



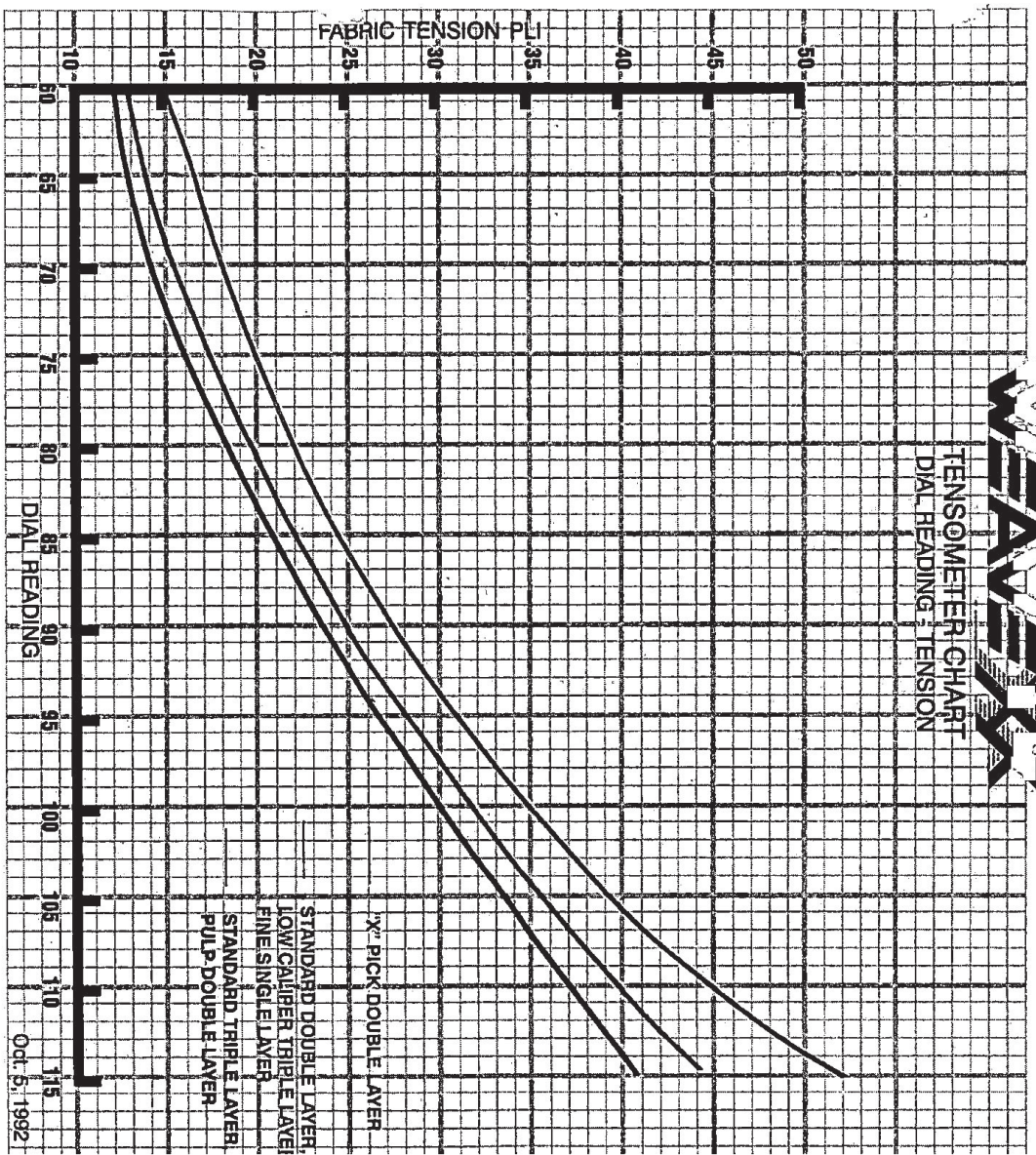
DECEMBER 1992



WEAVER

TENSOMETER CHART

DIAL READING TENSION



Oct. 5, 1992