S. O. 1121

THE BOTTOM DEFLECTOR

(See sketch next page)

The bottom deflectors, key elements of the Top Flyte 'C' Former, consists of two identical units, each carrying one (1) interchangeable 45 degree ceramic blade, and mounted on a common stainless steel base. Their purpose is to drain and collect the lean white water being deflected down from the Fourdrinier wire. This lean white water is diverted downwards into the Fourdrinier main saveall system.

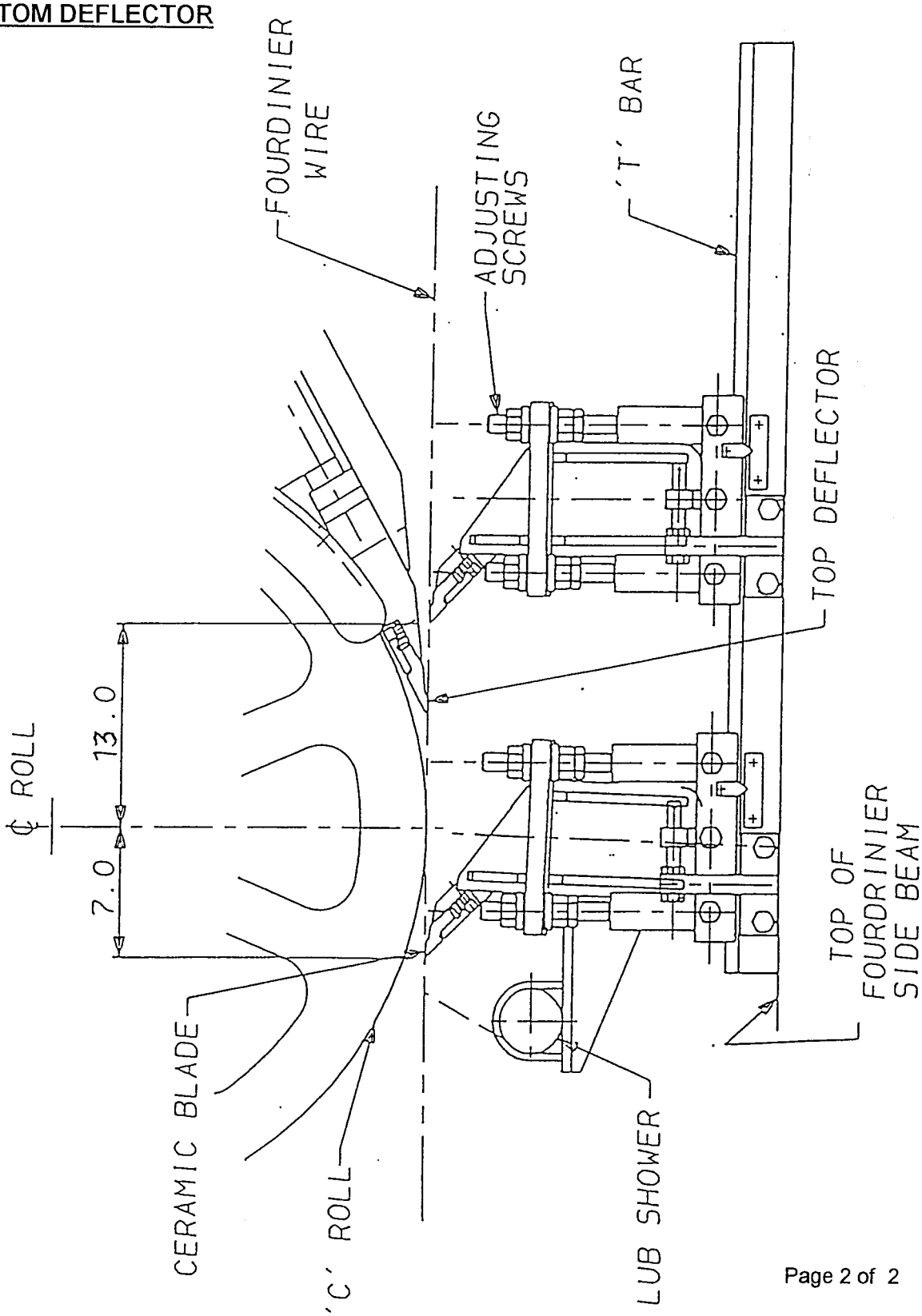
Each unit is manually adjustable horizontally on 'T' bars and vertically on screws. This adjustment is done at mill erection only or at the papermaker's convenience.

The bottom deflector is mounted on the existing Fourdrinier side beams.

The ceramic blades are slide-on, slide-off type. For more information, see write-up on ceramic blades, S.O. 1121/1122.

S. O. 1121

THE BOTTOM DEFLECTOR



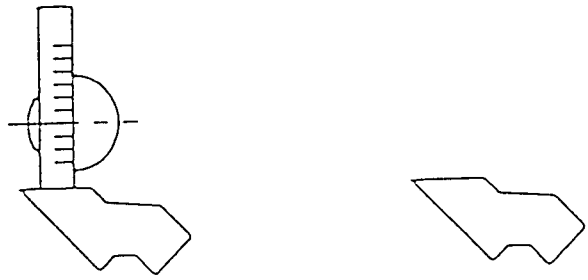
S. O. 1121 / 1122

PROCEDURE FOR ALIGNMENT OF TOP FLYTE 'C' FORMER DEFLECTORS

Remove Fourdrinier and Top Flyte 'C' Former wires. See reference drawing for this job. Raise open roll lifting mechanism so that the top deflector is at maximum clearance above the bottom deflectors.

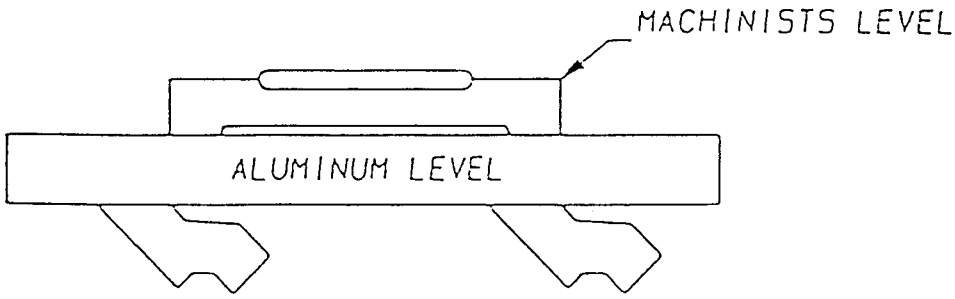
Datum for level of bottom of the deflector blades is a straight line between the top of the breast roll and the top of the couch roll.

Using a transit 1st bottom deflector blade should be leveled and checked for straightness every 12 inches across the full length of the blade. It will be necessary to adjust the leveling screws to obtain a zero-zero reading front and rear before leveling across the full face width. Limit across full width for straightness is .203 mm (.008").



The use of an aluminum level and machinist's level is now required. The aluminum level is used to protect the ceramic deflector blades.

The aluminum level and machinist's level should be set-up as shown:

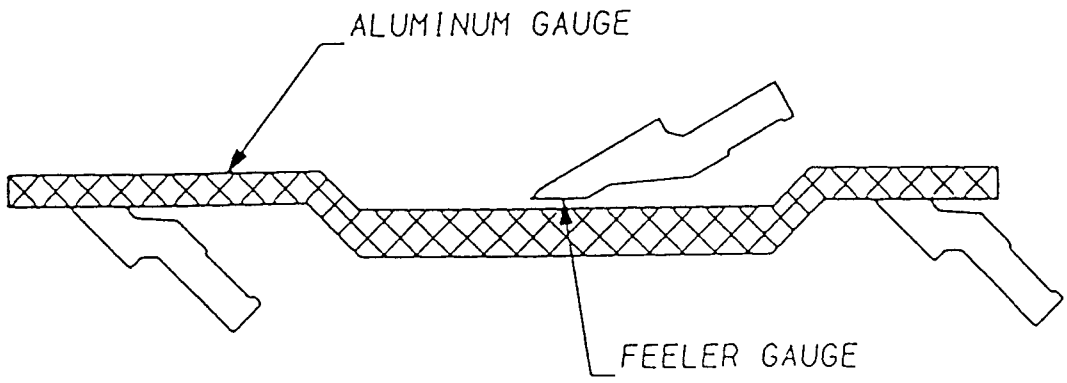


The 2nd bottom deflector is to be raised until it is level with the 1st bottom deflector, then every 12 inches across the full width, this level is to be checked. When any adjustments have been made this would now mean that the 1st and 2nd bottom blades are level and straight across the full width, alternately set-up to a piano wire similar to set-up procedures of foils.

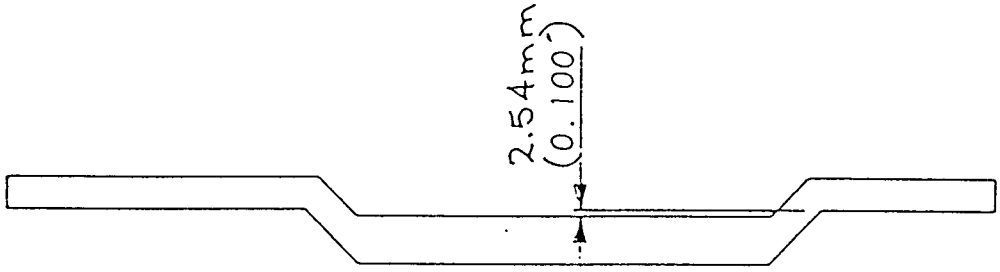
S. O. 1121 / 1122

PROCEDURE FOR ALIGNMENT OF TOP FLYTE 'C' FORMER DEFLECTORS

The top deflectors alignment will be accompanied by the set-up shown.



The front and rear of the top deflectors will be adjusted by the screw adjuster mechanism until it is zero front and rear, then every 305 mm (12 inches) the straightness is to be checked and adjusted within the .127 mm (.055") limits.

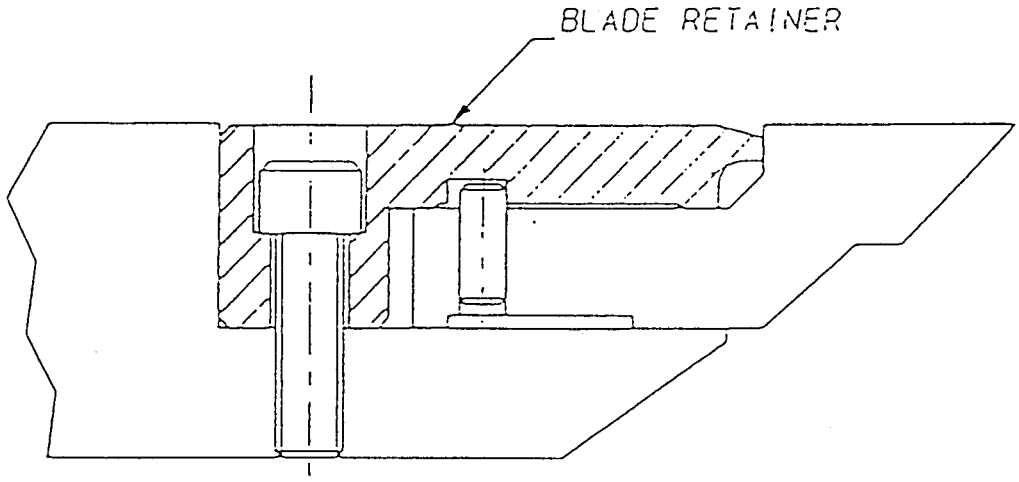


S. O. 1121 / 1122

CERAMIC DEFLECTORS

The ceramic deflector blade consists of an aluminum oxide nosepiece fixed into a reinforced resin. The ceramic blade is wire width 152.5 mm + (6") long, and should be handled and treated as fragile. The blade slides into a blade retainer, shown below.

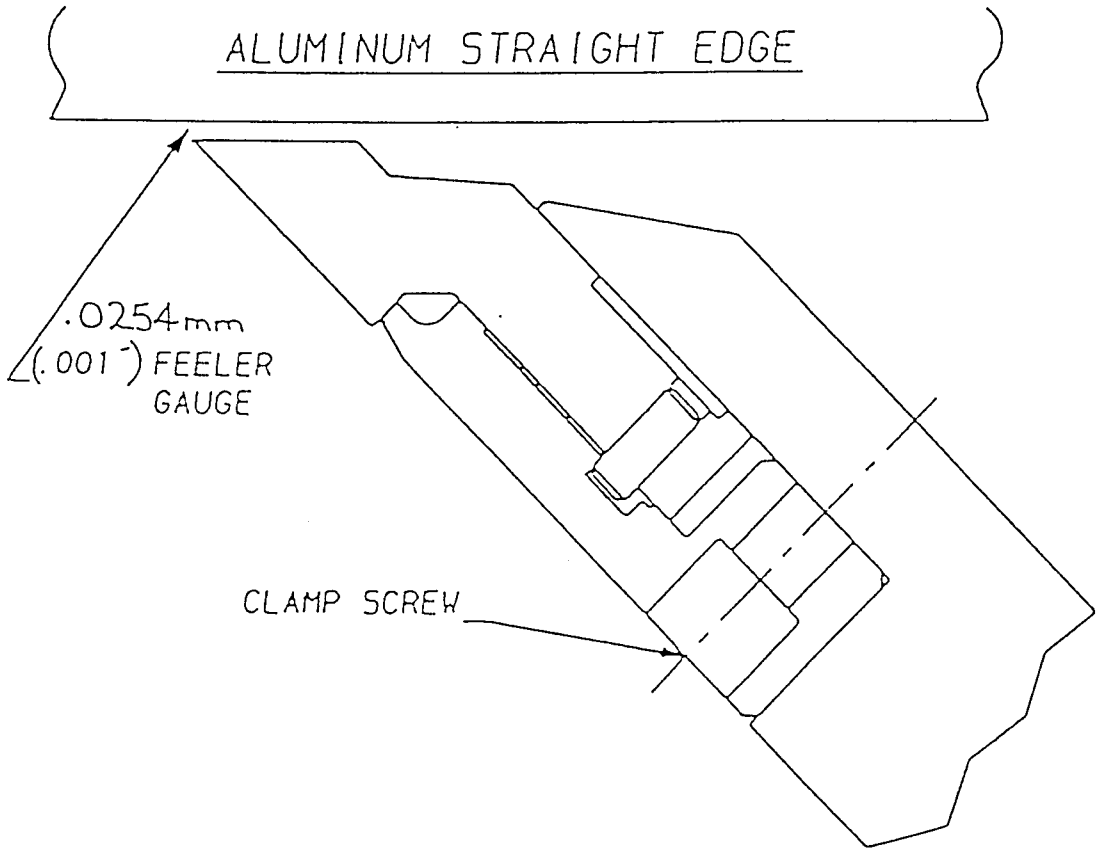
There is no reason these blades should be removed from the machine once they are running properly. Expected wear life is approximately 3-5 years, however if damaged by accident, a ceramic segment can be replaced by Black Clawson while the spare blade is inserted.



Ceramic deflector blades more often get damaged while they are out of the machine. It is therefore recommended not to remove the ceramic blades unless absolutely necessary.

S. O. 1121 / 1122

CERAMIC DEFLECTORS



PROCEDURE FOR ALIGNMENT OF THE TOP FLYTE 'C' FORMER DEFLECTORS

S. O. 1121 / 1122

CERAMIC DEFLECTORS

There are two types of deflectors, the bodies of which are identical. The bottom deflector nose angle is 45 degrees and the top defector nose angle is 27 degrees. All the deflectors, other than the angle, are interchangeable. If high density Polyethylene are used instead of ceramic deflectors, sheet quality will be reduced as the H. D. P. E. wears. H. D. P. E. is only to be used for a short period of time and only for emergency, i.e. ceramic blade damaged.

S. O. 1121 / 1122

BLADE HANDLING PROCEDURES

1. SHIPMENT.

1.1 Ceramic deflector blades are made of supporting profiles bearing ceramic surfaces. These ceramic elements must be handled with utmost care at all times in order to prevent breakage or chipping of ceramic segments, which are very hard and brittle.

1.2 Before shipment, each ceramic deflector blade will be packed separately and/or secured in a transport crate by means of elastic spacers.

1.3 On arrival, the transport crate should be moved close up to the paper machine (fork lift trucks). Crates longer than 4 meters should be supported in transport at maximum intervals of 2 meters. Hoisting slings must be looped around the ends of the crate, not in the middle. Crates must be handled carefully and must never be dropped.

1.4 After having been exposed to extreme cold, the crate must not be unpacked before contents have reached room temperature. Always store at room temperature.

2. OPENING OF CRATE AND TRANSPORT.

2.1 The ceramic blade must be lifted out of the packing by at least two persons, with ceramic surfaces facing upwards, put on a rigid support (such as a plank) and checked for transport damage (chipped or displaced ceramic segments).

2.2 Ceramic deflector blades are self-supporting once mounted on their supports on the paper machine, but outside the machine, deflection must be avoided. In particular, the deflector blades must never be lifted with one or both ends pointing downwards. The resulting forces acting on the joints of the ceramic segments could dislodge the segments in relation to each other, which in turn, would cause damage to the paper machine wires or felts.

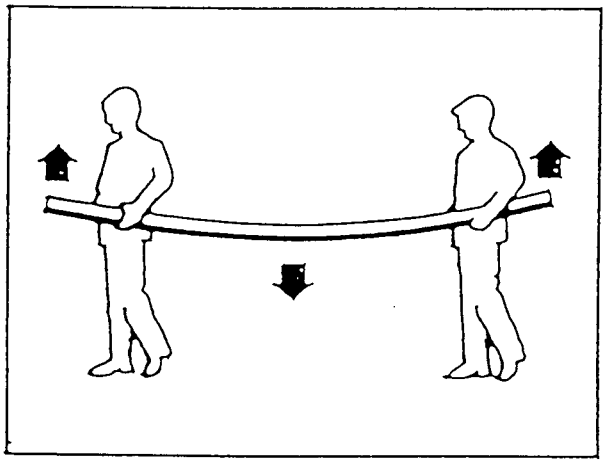
S. O. 1121 / 1122

BLADE HANDLING PROCEDURES (Cont'd...)

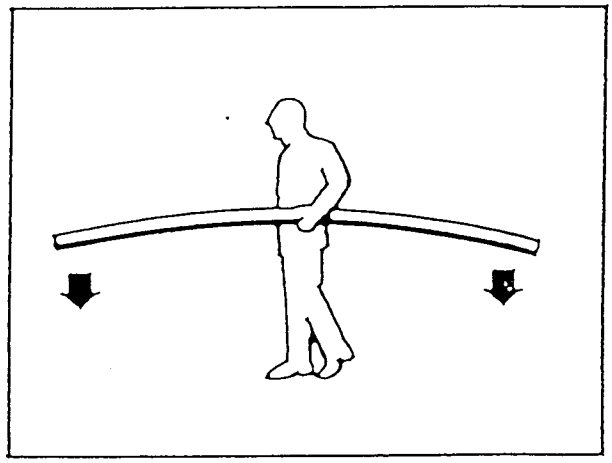
2. OPENING OF CRATE AND TRANSPORT.

2.3 Ceramic deflector blades must always be lifted at their ends, not in the middle. Maximum unsupported length must not exceed 2 meters. The ceramic surfaces must be directed upwards at all times and must never be turned around to face downward.

When carried, vibration must be avoided.



YES



NO

3. MOUNTING.

3.1 A wooden or rigid support (plank) must be used to raise the blade to the correct height when it is being inserted or removed from the machine. ALWAYS support the full length of the blade.

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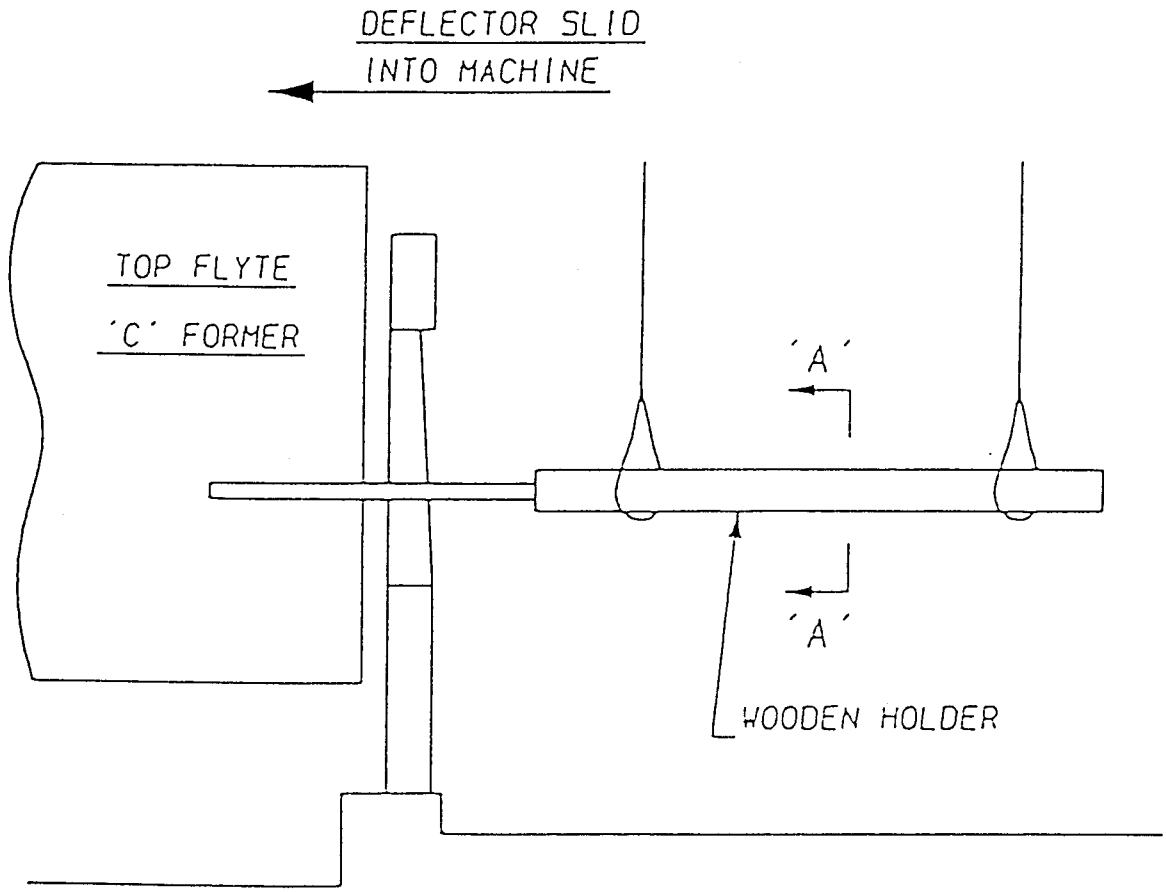
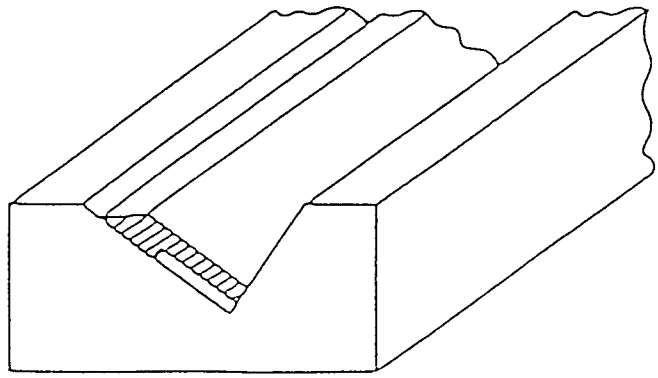
BLADE HANDLING PROCEDURES (Cont'd...)





WOODEN SUPPORT
SECTION 'A-A'

S. O. 1121 / 1122

BLADE HANDLING PROCEDURES (Cont'd...)

3. MOUNTING.

3.2 The blades must fit the supports snugly and slide in without undue resistance. If the fit is too tight, the dimensions of the supports must be verified. Depending on element length, tolerances of up to 1 mm (0.04") are required. Sharp scrapers or sandpaper should be used to remove localized area of excess profile thickness.

3.3 Ceramic deflector blades must not be mounted by force or moved latterly to and fro during sliding in or out operations. Ceramic deflector must never be left partially inserted without support; ceramic deflector ends hanging down may result in dislocation of ceramic segments.

3.4 Before and after mounting, the surface of the ceramic deflector blades must be checked for damage (chipping, cracks, differences in height).

3.5 When ceramic deflector blades are dismounted, a rigid support (plank) must be used.

3.6 Deflections of the ceramic deflector blades must be avoided. Please observe paragraphs 3.3, 3.4 and 3.5.

4. OPERATION.

4.1 In operation, ceramic deflector blades must be protected against mechanical and thermal impingement. Walking on the ceramic deflector blades for example during wire or felt changes or the dropping of tools and other objects can lead to cracks or breaks of the ceramic surfaces.

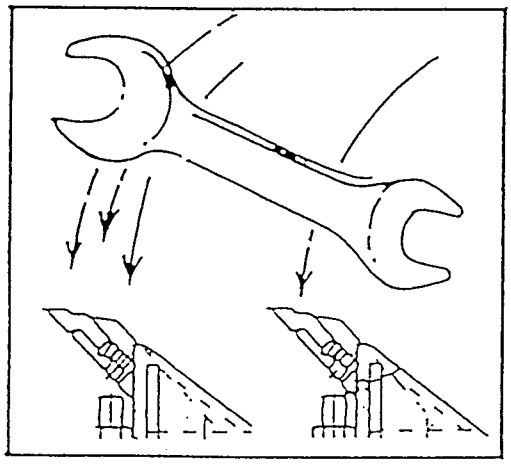
4.2 Operation temperature should not exceed 70°C. (150°F). Abrupt changes of temperature must be strictly avoided (e.g. hosing off hot ceramic deflector blades with cold water after the machine shut off).

BLADE HANDLING PROCEDURES (Cont'd...)

4. OPERATION.

4.3 The deflector body on which ceramic deflectors are mounted, must be rigid enough to prevent vibration in operation, which may cause ceramic breaks or dislodgment of the ceramic segments.

THIS IS IMPORTANT!



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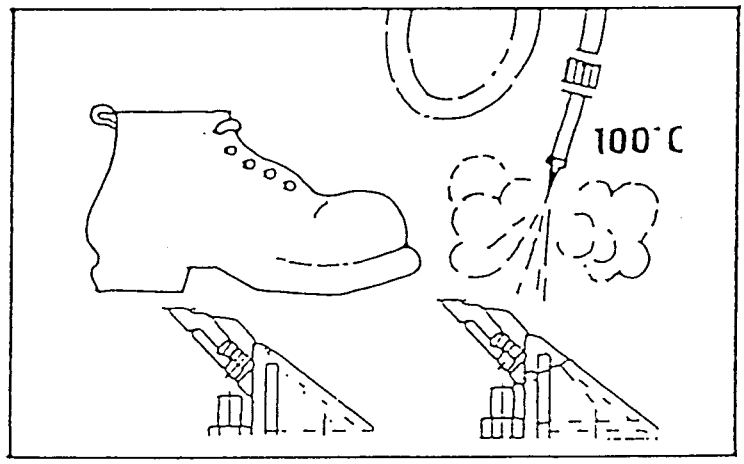


NO

S. O. 1122

TOP DEFLECTOR (See sketch next page)

The top deflector is mounted on a box type stainless steel structure which in turn is mounted on the pivoting side beams. Water is expelled into the main saveall by the action of the 'C' roll and wrap-around saveall. Once mounted in position on the pivoting side beam, the deflector assembly has vertical and lateral adjustments in order to optimize maximum performance. The range of the adjustments are shown on the following pages. Deflectors are ceramic slide on-off type. See following section.

LATERAL ADJUSTMENT

1. Release lateral locking screws.

2. Turn lateral adjustment nut 'A' for movement toward wet end and lateral adjusting nut 'B' for movement toward dry end.

3. Once desired setting is achieved lock into position with lateral locking screws.

This lateral movement is only to set-up the clearance between the 'C' roll and the deflector body, the gap is proportional to the water removing or the carrying capacity of the roll. Once this gap has been optimized it should not be adjusted, it is not a papermaking adjustment only a set-up adjustment.

VERTICAL ADJUSTMENT (ON AN INCLINED PLANE)

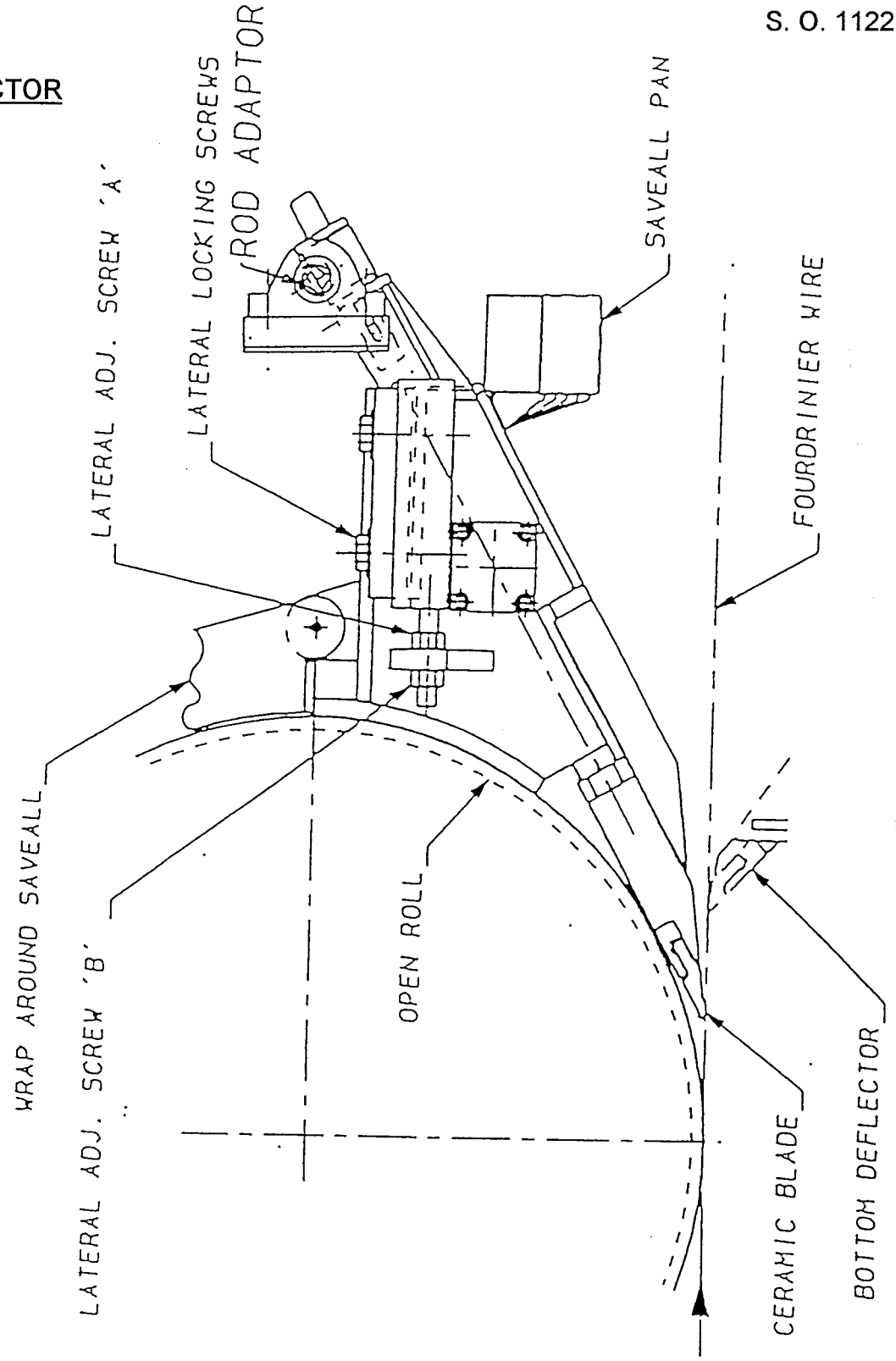
1. Turn rod adapter clockwise to raise the deflector blade away from the wire and counter-clockwise to penetrate the deflector blade into the wire.

2. By monitoring the from the position transducer located in the top deflector body, the amount of penetration or withdrawal of the blade can be kept consistent from front to rear.

   Alternative to position transducer are dial indicators mounted from front to rear.

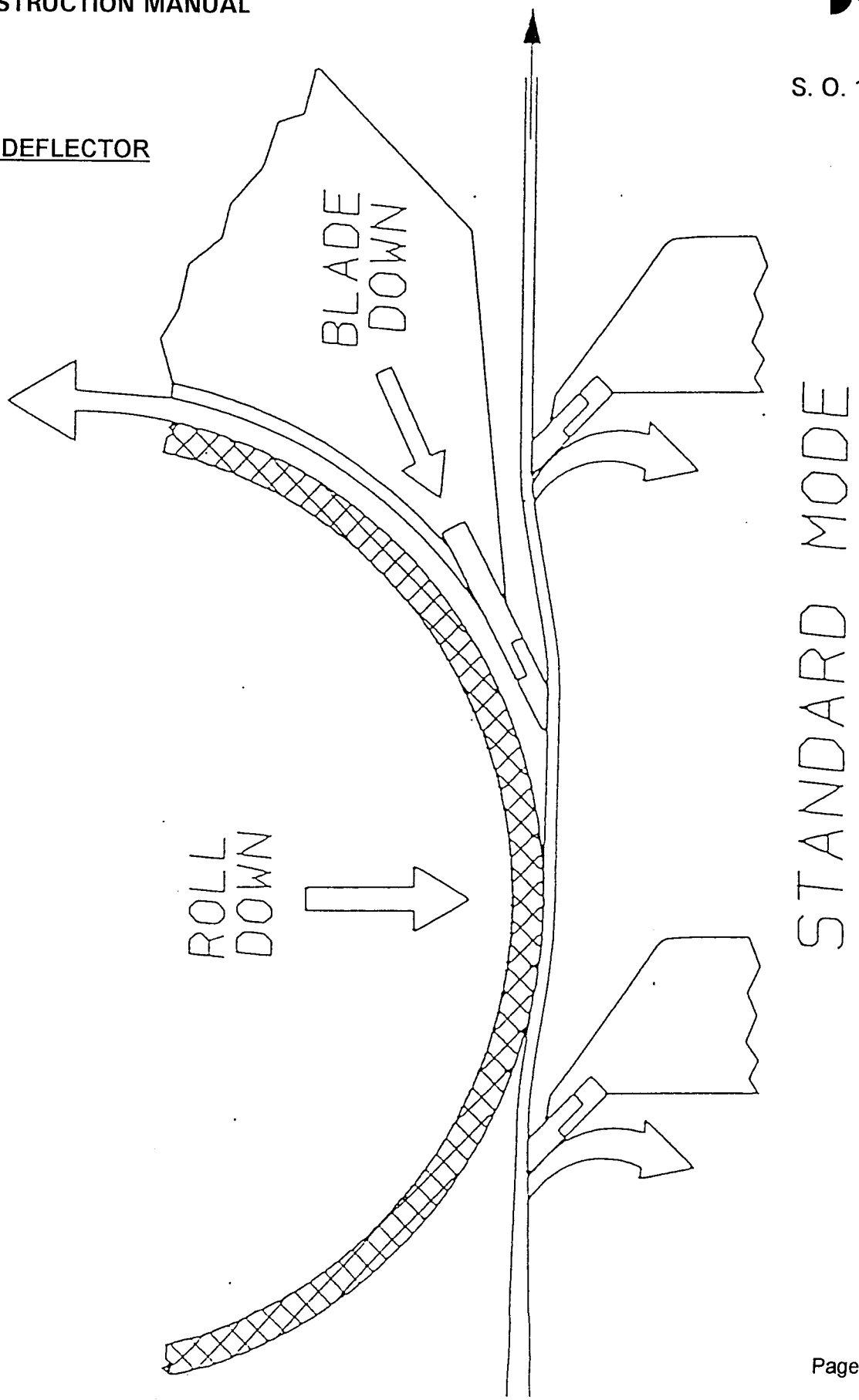
S. O. 1122

TOP DEFLECTOR



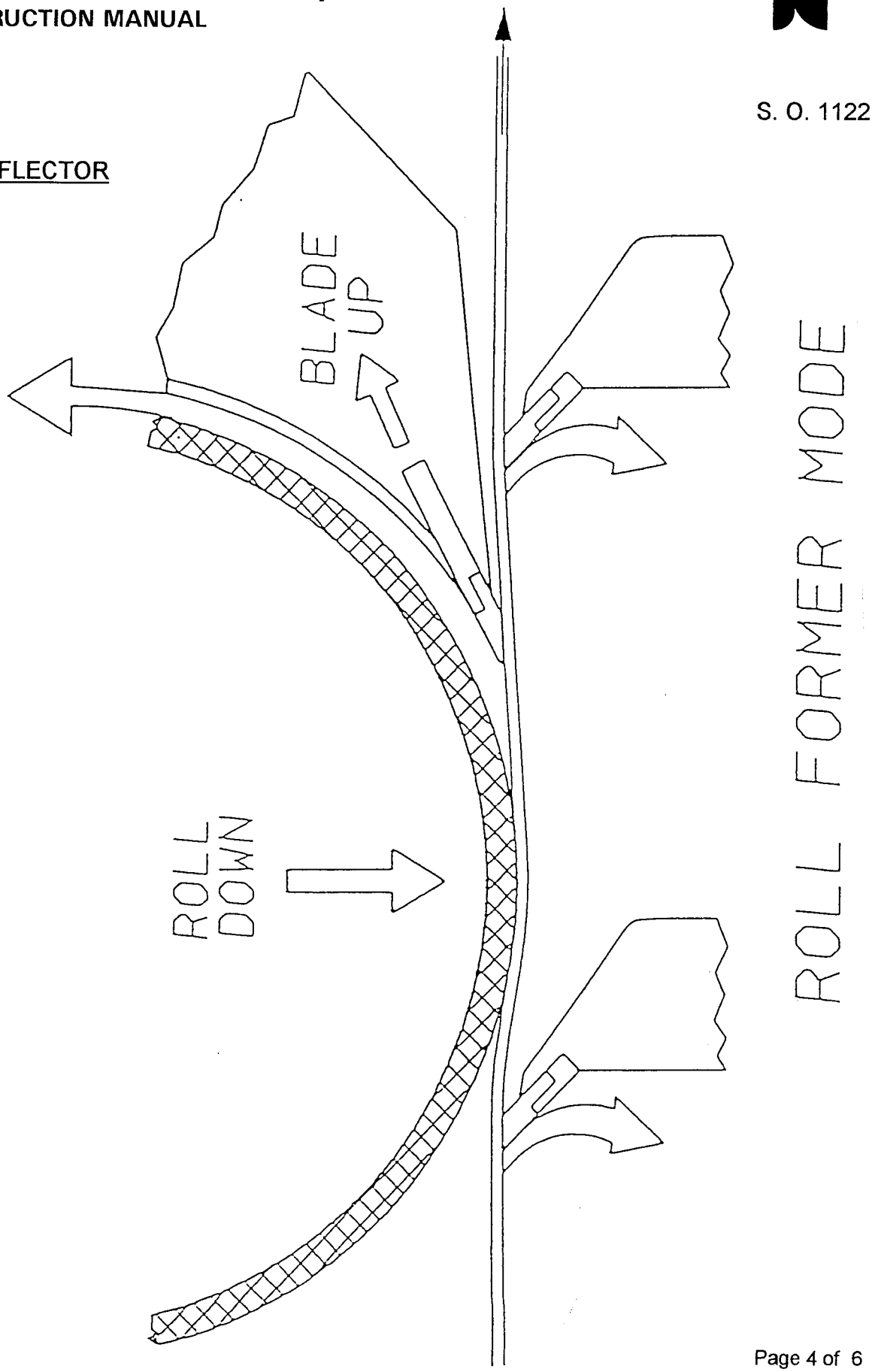
S. O. 1122

TOP DEFLECTOR



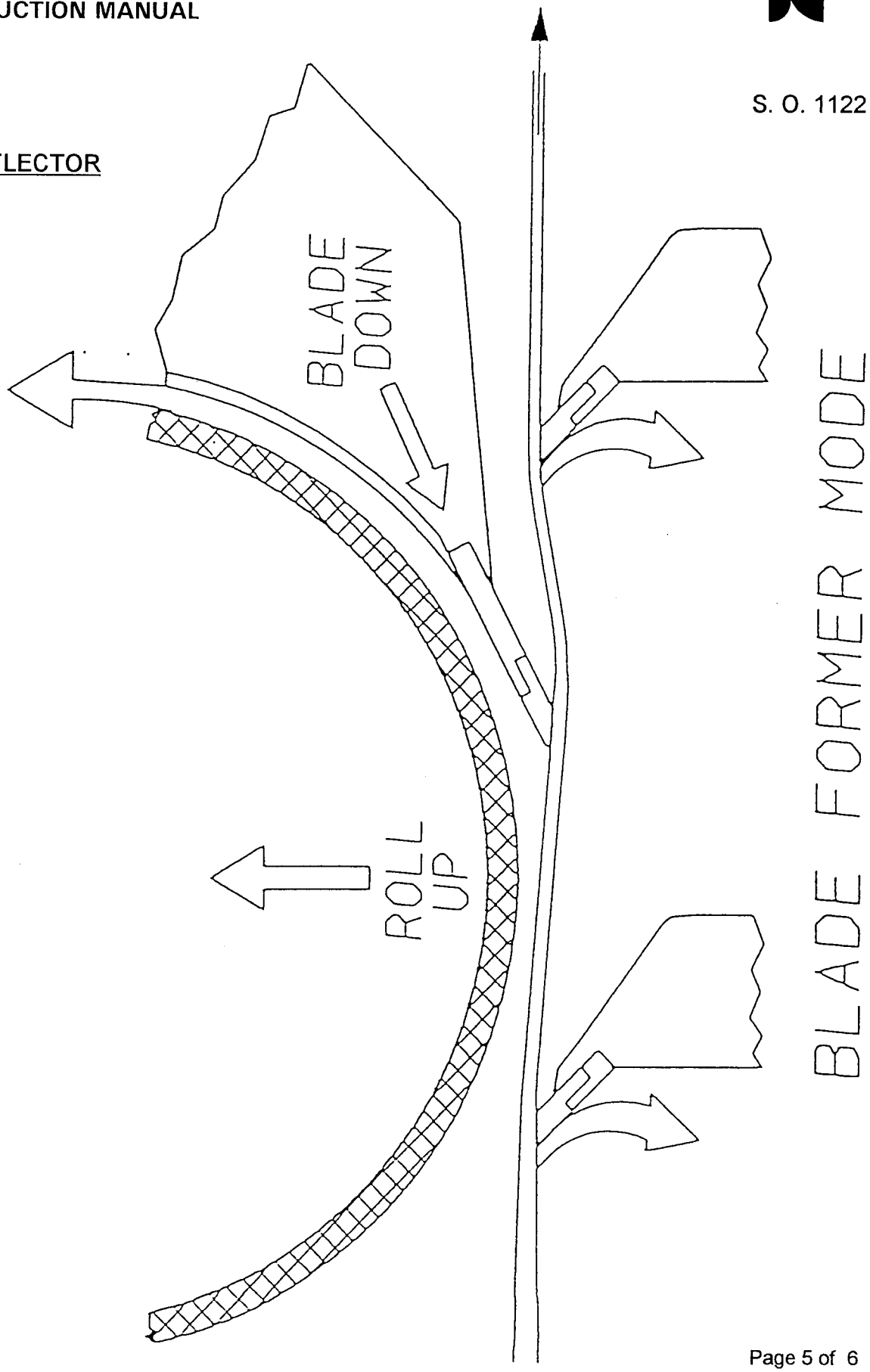
S. O. 1122

TOP DEFLECTOR



S. O. 1122

TOP DEFLECTOR



S. O. 1122

TOP DEFLECTOR