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## PROBLEM: FILM SNAPPING WHEN WRAPPING

### Description:

Silage stretchfilm is a very strong, yet very delicate material. It is only 25 micron thick, but needs to be stretched by up to 70% and required to securely wrap and seal valuable silage bales.

One problem encountered with stretchfilm is of the film snapping when wrapping the bale, a problem that affects every make and brand of film, and can happen on every bale wrapper. Very often, the frustrated operator immediately blames the film's quality, however there are many reasons why a film can break.

First, before any action can be taken, it is important to discover where the damage is happening, and by examining the shape of the tail of film on the roll it is easy to see where the break began. Once this is known, a closer examination of the possible reasons for the break can be better understood.

### Check the shape of the film break



#### Edge Break

This shape indicates break started at the top edge of the film.



#### Edge Break

This shape indicates break started at the bottom edge of the film.



#### Centre Break

This shape indicates break started at the centre of the film.



#### Tension Break

This shape indicates break caused by over-tension to roll

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## EDGE BREAK

### Roll damage

If the film has a long tail on one edge and short on the other – the break started on the short edge side of the film. This damage usually ends up with a 'spiral' tear of the film, leaving a spiral of film on the roll. By carefully un-winding the spiral tail on the roll, it is easy to see which edge the break started.



### Damaged rolls

Slightly scuffed or damaged film rolls cause most Edge Breaks. Un-packing and loading of the film roll are the main reasons that such damage can occur, and great care must be taken not to scuff or mark the roll edges. Sometimes a break can occur if the film has simply been flattened on the edge of the roll.



### Film Winding

If the film has not been wound evenly onto the core, it is possible that some film layers will have over-lapped others, trapping them when the film is un-wound and causing the film to break.





### Film Roll Alignment

If the film is not correctly aligned to the bale, the turntable below can easily damage it. This can happen if the roll location is not central to the bale, but also if the film is not centred on the core, meaning that the height the film is touching the bale may be wrong. Check carefully that the film roll has the core protruding evenly at both ends.



### Bale Shape

Badly shaped bales, or bales with poor netwrap coverage, can leave exposed 'shoulders' which can easily cause damage to the film when being applied to the bale. This problem is worse when wrapping crops with a higher Dry-Matter (DM) content, such as haylage.





## CENTRE BREAK

### Dirty PSU rollers

If the PSU rollers on the wrapper are dirty or sticky, dirt and crop debris can easily become stuck to the rollers, causing damage to the film as it passes over them. It is not necessary for the film to have been punctured to cause it to break, often the smallest piece of dirt or debris can create a weakness in the film as it is being stretched that will cause it to fail.



### Dirty PSU rollers

If the PSU rollers are sticky with film tack residue, the film will begin to stick to the rollers instead of stretching over them and going to the bale. Apart from the fact that this will cause the film to over-stretch, causing excessive neck-down, the film can stick fast to the roller which can tear holes in the film causing it to break.

To over-come this, PSU rollers should be cleaned regularly, by rubbing vigorously with a cloth soaked in a solvent based cleaner. If the PSU has rubber coated rollers, it may be necessary to clean the surface then rub down with a hard wire brush, to create grip on the rollers.





## Damaged Film Roll

If the film roll has been scuffed, either during loading or before being un-packed, surface damage to the roll may result in a break when being stretched through the PSU rollers. It is not necessary for the film to have been punctured to cause this type of break, if the film surface has been marked in any way it can cause a weakness in the film that will cause it to break under tension in the PSU.



## TENSION BREAK

### PSU Gear Box

Worn or damaged gears in the PSU head can cause the gears to jam during the wrapping cycle. The bale will continue to turn, pulling the film through the PSU, however, the jammed gears will not allow the film to run, thus causing a tension break of the film.



### Film Over-Run

If the film roll is allowed to over-run at the end of the wrapping cycle, particularly a full roll that will have a lot of turning momentum, it is possible the film will over-lap and stick to itself. If this happens, the film will come together on the sticky surface of the film, making it stick fast. As the wrapper begins the next wrapping cycle, the film will not run freely, as it is now stuck to itself. The bale will continue to pull against the film roll until, eventually, the film will snap, though over-tension.

This can also easily occur when travelling between bales when the film is not running, if the web of film between the film roll and the bale come together, particularly in windy conditions.



The film roll has over-run here, allowing the film to touch and stick together, as shown by the high-lighted edge of the film in the picture.