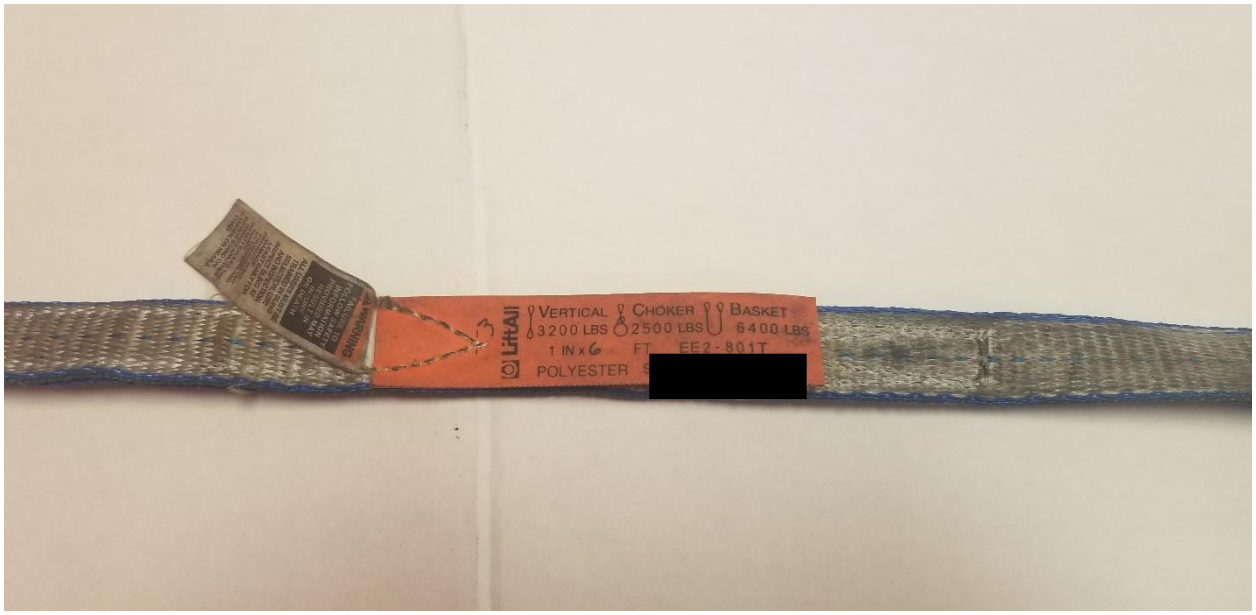
D.E.L.L PET

Incident Report from Dropped Extruder Head

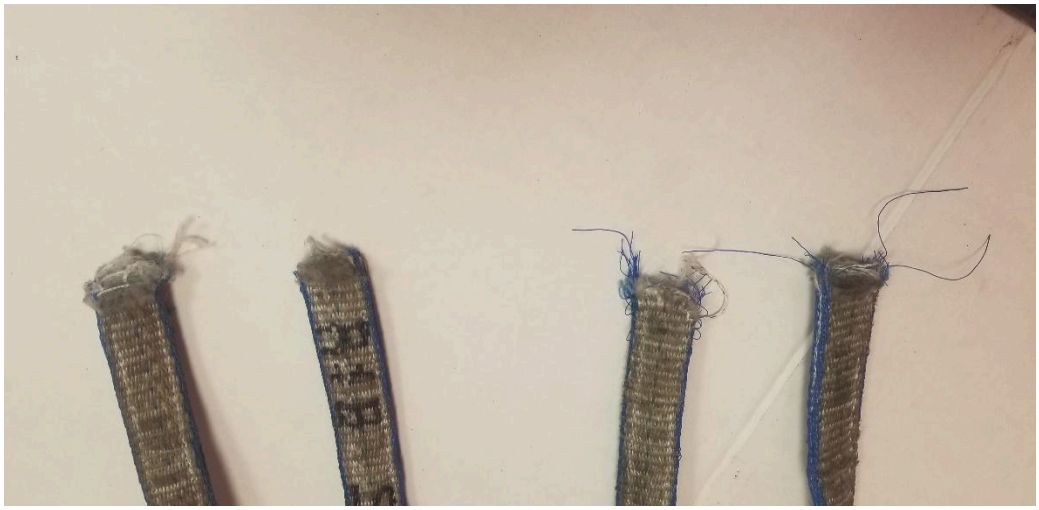
Wednesday, technicians were in the plant to repair a leaking extruder nozzle that was not properly torqued when installed. The extruder head was dropped on to the top of the molds and displaced two molds, moving them down from their mounted position.

Investigation Report

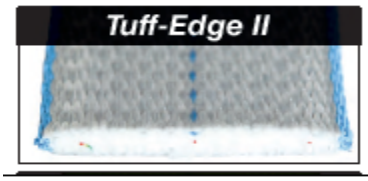
No injuries or damage occurred when the extruder head was dropped, and the head was re-rigged, and the work was completed in the time allotted. Preliminary findings suggested that the rigging straps did not have the proper load rating needed for such work. With the straps in hand and inspected, the tag rating from the manufacturer indicated that they were properly rated and were not damaged or abraded in any way that would cause a premature failure. Additionally, the way they were used allowed for a maximum load rating of 6400#. More than enough for the extruder head with two straps in basket.



15178 Park Lane • Conroe. Texas 77302
Tel [redacted]



Manufacturer Data

	Approx. Thickness	Single-Ply Capacity Per Inch of Width	Material	Identifier	Applications*
	3/16"	1600-lbs.	Polyester	Blue edge. Blue center stripe. Silver surface.	Daily use under good to rugged lifting conditions. 2X more edge cut resistance. Our most popular.

Anti-Abrasion Treatment

Lift-All webbing is treated for abrasion. Heavy duty treatments are available as a supplemental process for greater protection. Natural, untreated webbing is available upon request.

Elasticity

The stretch characteristics of web slings depends on the type of yarn and the web treatment. Approximate stretch at rated sling capacity:

NYLON		POLYESTER	
Treated	10%	Treated	7%
Untreated	6%	Untreated	3%

Length Tolerance for Web Slings

Sling Type	Tolerance*
1-Ply	± (1.5" + 1.5% of sling length)
2-Ply	± (2.0" + 2% of sling length)
3-Ply & 4-Ply	± (3.0" + 3% of sling length)

* For web sling widths wider than 6", add 1/2" to these values. For tighter tolerance or matched set lengths, please consult with Customer Service prior to Ordering.

Temperature

Nylon and polyester slings degrade at temperatures above 200°F.

Chemical Environment Data

Many chemicals have an adverse effect on nylon and polyester. The chemical chart below is a general guide only. For specific temperature, concentration and time factors, please consult *Lift-All* prior to purchasing or use.

CHEMICAL	NYLON	POLYESTER
Acids	NO	OK*
Alcohols	OK	OK
Aldehydes	OK	NO
Alkalis	OK	NO
Bleaching Agents	NO	OK
Dry Cleaning Solvents	OK	OK
Ethers	OK	OK
Halogenated Hydro-Carbons	OK	OK
Hydro-Carbons	OK	OK
Ketones	OK	OK
Oils Crude	OK	OK
Oils Lubricating	OK	OK
Soap & Detergents	OK	OK
Water & Seawater	OK	OK
Weak Alkalis	OK	OK

* Disintegrated by concentrated sulfuric acid.

Investigation Findings

After some additional investigation, and a brief search for the manufacturer it was found that the rigging strap failure was due to heat. The machine had been running all morning, and the die head was heat soaked at operating temperature. I contacted the manufacturer of the strap and found that the maximum heat rating for the strap had been exceeded by 150° F. The operating temperature of the head is 355° F. According to the manufacturer rating for the strap the maximum heat load is 200° F.