



Technical Information

EVALUATING WORN SYNTHETIC WEB SLINGS

To the cautious sling user, many good and still operable slings have been thrown away because of the appearance of the “red wear indicator” on the body of the sling; and in other cases, its rejection has been justified.

The first consideration should be to evaluate the nature and cause of the worn section and its severity.

Is the wear due to dragging the sling and rupturing its selvaged edge?

This is a common situation on production type small boat lifting or other similar operations where the sling is repeatedly dragged over black top or rough concrete surfaces.

Selvaged edge wear is progressive and should be shown immediate attention. A piece of Cordura webbing can be sewn around the fraying edge bringing the sling back to 100% efficiency. If ignored, the fray will progressively unravel into the body of the sling leaving only the tensile strength of the “gut” members to carry the load. It will also create an unbalanced condition when lifting, throwing most of the load on that portion of the sling that is not frayed.

Has the sling been physically cut or sliced by a sharp object?

The usual cause is carelessness. For example, running the sling over with heavy machinery such as a truck or forklift, dropping

metal plates or other heavy objects on the sling, etc. Bear in mind that most sling type webbing carries about 80% of its tensile strength in the longitudinal gut members and about 20% in the “pick threads or warp” (the threads that travel across the width of the webbing holding the “gut” tensile members in a flat plane). If the cut or slice is shallow and does not involve the gut members, the sling is worth repairing. Punctures can be repaired.

Sharp corner abrasions or scrape condition?

This condition is usually the result of lifting a sharp corner or angular load with slings that have a low tensile strength and/or insufficient dunnage was used between the sling body and sharp corner. We are referring to loads such as pallets, boxes, lumber and any load other than a round or radii configuration.

Another cause is “jerking” or lifting a load too fast. Other than its strength, the greatest attribute to synthetic webbing is its shock-absorbing, stretch ability. If an angular load is lifted too fast, this load under a lifting condition around a sharp corner may momentarily work up a “friction temperature” great enough to fuse the webbing surface and partially destroy the original tensile strength of the webbing.

Usually this type of abrasion takes place across the full width of the sling and we do not recommend repair.



olympic synthetic products, inc.