

Tow straps:

Presented by Willie Worthy at the May 9,2013 club meeting.

Every one here has a tow strap or should have one! I am **not** referring to a solid polyester strap that is used to tie down loads on a trailer. Some times the strap we use is call a tugging strap or a snatch strap and is generally made from a nylon material. Tie down straps are made from a different material that will not stretch.

The strap does its job of pulling stuck vehicles by the principle of **“stored elastic potential energy”**. **When used--it turns into kinetic energy**. For example a bow when pulled back has potential energy, a rubber band stretched has potential energy, the elastic in your underwear has potential energy.

Never use your tow strap as a winch cable extension. If it breaks, it has a really bad cable return whip lash. “Remember stored elastic potential energy”!

Exceptions: There are always exceptions! If absolutely necessary, it may be used with a **winch rope** in a real emergency as the winch rope will absorb some of the energy released by the strap.

I will admit I have used it as such when by ourselves and didn't have enough cable to reach the anchor but only when the strap was wrapped around a tree so both loops were attached to the winch cable. If you have to use a strap combined with a winch cable or rope, keep it as short as possible.

One can also use their “tree saver strap” as a extension for the winch cable. Generally they are made of that same material that tie down straps are made of and don't stretch.

Never use a clevis to hook two straps together for longer length. If one strap should break, the clevis will fly through the air. Again, I will admit to having done it in the past using straps in excellent shape when tugging vehicles way lighter than the rated capacity of the straps.

If you need to hook two straps together, run one loop of the tow strap inside the other and pull it through. The two loops will get tight and then be difficult to take part. A trick: put a stick or magazine in the loop to prevent them from getting too tightly bound.

Another way that I have never tried on a tow strap is to push one loop of one strap through the loop of another and hold it in place with a straight object. A large stick could work due to the fact that it is double sheer. When teaching high angle rescue classes we would use this in practice on Static (non stretching) ropes but should also work on Dynamic lines but always keep in mind the “rubber band effect” under quick release.

Hooks on the end of a tow strap are definitely a “no no”. I have seen hooks come off attachment points. Had it happen once 30 years ago when it came off my vehicle and it hit the roll cage of a buggy that I was pulling. Would have killed the guy if it had hit him.

Be sure of your attachment points and that the strap cannot come loose during a slack period in the pull. This can not be stressed enough. An axle is not the best place to hook to, but if necessary, make sure the strap does not contact tie rod, drag link or other steering components. Make sure that the attachment point has a capacity of what is needed.

I am not a fan of the type of tow hooks that curve back on themselves with an opening such as the factory hooks on JKs. I have seen straps come off of these. Think of the strap as a giant rubber band and the towing vehicle as a rubber band gun.

Make sure that the strap is up to the capacity of the pull. Those round, shiny small diameter straps with chrome hooks on the end that you can buy at places like your local hardware store or Harbor Freight are flat out dangerous. A quality strap will have a load rating printed on them. It's up to you as to where it is made. I like to use a strap that has at least three times the capacity of what you plan to pull. And use one that says “made in the USA”.

Inspect the strap! Get rid of it when you see fraying of the fibers both in the length of the strap and at the eyes. Remember the strap has

elastic potential energy in it and should it break can cause lots of damage. Better quality straps have an additional piece of leather on the inside of the eye to prevent wear at these attachment points.

When using a strap to “un stick” a vehicle, try your first pull with just a bit of slack in the strap. If it doesn’t “pull the stuck vehicle out”, try again with each time leaving a bit more slack in the strap. Don’t leave 20 feet of slack between two vehicles and go like heck. This puts a tremendous amount of load not only on the two vehicles but the strap itself.

A bit about ropes:

There seems to be a lot of popularity with ropes, especially the heavily advertised “Bubba Rope”. The ropes work great. I have had one for over 30 years. The big problem with them is not in their ability to extract a vehicle, but the storage issue. They just plain take up a lot of storage room compared to a folded strap. I found that I can shove the rope into the area between the tire carrier and the inside of the wheel on my JK and it is easy extracted. While my rope has little stretch, ones like the Bubba Rope will stretch about 30 % of its length while a strap is about 15%

Oh a couple more thing, don’t carry your strap in the bottom of your tool box! Make it easily accessible. Keep it free of dirt, grease, oil etc. When it get frayed fibers, cut it up and toss it. Yes, hard to do but cheaper than a damaged vehicle when it breaks.

Most important part:

Think safety

And

It is generally accepted that the person being pulled out will hook up their own strap, even if it means wading into waist deep mud! You got stuck – you get dirty!