

Safety Bulletin

Parks and Regions group
2018



Welcome to another edition of a Safety Bulletin for the Parks & Regions Group for 2018. This particular bulletin is produced by the staff from Eyre Peninsula Region and their WHS Committee on behalf of the Group's Workplace Health and Safety Committee. Throughout the year a different Parks and Regions branch or region will provide a safety bulletin to keep staff updated on new workplace safety initiatives, a particular theme, and other information in regards to workplace safety.

*"Safety within the Group is vital and improving safety to all Group staff is of highest priority.
Look after your workmates!"*

Theme – SAFE USE OF VEHICLE RECOVERY STRAPS

"a very dangerous big rubber band"

Vehicle recovery straps are a critical piece of equipment and make it possible to recover a vehicle from very difficult situations.

When used correctly they work very well; they are in effect a large supersized elastic band that as the recovery vehicle pulls its torque or pulling effort is multiplied by the elastic 'kinetic spring' of the strap.

However that stored energy can be deadly if things go wrong.

Last year a recovery strap broke whilst staff were trying to 'unbog' a truck. The metal shackle sprang back and hit the rear of the truck and bent and cracked the ring feeder which is designed to withstand very considerable forces. If anyone was stuck by the shackle it's likely they would have been seriously injured if not killed.

Broken recovery straps, metal components from vehicle chassis, shackles etc, can all become airborne missiles that pose a risk of death or serious injury when vehicle recoveries are not thought through and done safely, using the appropriate equipment.



In March this year a man was killed in those same circumstances during a recovery operation in central Queensland.

Staff on the Eyre Peninsula traverse some very challenging terrain and the following sets out how they undertake a recovery and their tips on doing it safely.



Before attempting a recovery:

- Check the recovery strap for any wear or tear. **Damaged straps must not be used and should be disposed of.**
- Look for information either on a tag or in the straps packaging relating to the stated Minimum Breaking Strength (MBS).
- The Minimum Breaking Strength (MBS) of the strap should be between 2 and 3 times the Gross Vehicle Mass (GVM) of the 'lighter' of the two vehicles used in the recovery process.
- The strap must never be used for lifting or conventional towing.
- The strap's strength and stretch are reduced when the strap is saturated.
- Something like a recovery damper, heavy bag or blanket **must be** draped over the strap during use to reduce any unintentional rebound of the strap.
- Only connect to correctly rated recovery points on the vehicle(s) (Refer the vehicles hand book).
- Only use rated shackles if they are required to attach the strap to either vehicle. Load ratings are marked on shackles as WLL (Working Load Limit). If they are not marked, they are not rated and are not to be used. Shackles suitable for this purpose should be rated to at least 3.25t.
- Never attempt to recover a vehicle without all the correctly rated equipment

Step back and size it up

Yes those golden words; step back and assess the circumstances of the stranded vehicle. Make sure you understand the risks and best techniques to avoid damage to the vehicles or injury to you or any bystanders. EP staff are all trained in recovery techniques, including the use of snatch straps, as part of their 4WD training.

If the vehicle has bottomed out, clear under the vehicle body so it rests on its wheels. Ensure tyre pressures are suitable for the terrain.

The recovery vehicle should be placed in line (no more than 10 degrees off the straight line) with the stranded vehicle, for either a forward or reverse recovery operation.

Carefully inspect the Recovery Strap to determine that it is in good condition. If the strap is wet, dirty, cut or chaffed, it will not perform properly. A wet strap may be 20% under strength. Damaged straps are not to be used. Do not allow the strap to contact hot surfaces or sharp edges.

Roll the strap out between the vehicles and make sure it is not twisted. Distance between vehicles should be 2-3 metres less than the un-stretched length of the Recovery Strap. The joining of straps should be avoided wherever possible (Retailers carry varying lengths of strap).

Check your vehicle hand book for recovery point locations or use correctly rated and fitted aftermarket recovery points. Connect the recovery strap to a recovery point, for any recovery point requiring the use of a shackle to attach the strap, use only load rated shackles. To correctly tighten shackle pins, screw the pin until it seats then back off about ½ to 1 turn. Due to the force exerted during recovery operations, over tightening may lead to seized pins. To reduce the risk of vehicle damage and personal injury, hang a suitable recovery strap damper blanket over the strap, approximately mid-distance to restrict the whipping action of a strap should it break.

Keeping people safe

Only the drivers of the stranded and recovery vehicle should be in those vehicles. Nobody else should be in or on either vehicle.

BEFORE YOU START THE RECOVERY CHECK ALL CONNECTIONS AND CLEAR BYSTANDERS TO A SAFE DISTANCE (1.5 TIMES THE LENGTH OF THE UNSTRETCHED RECOVERY STRAP) TO THE SIDE OF THE RECOVERY OPERATION AND NEVER IN THE LINE OF THE RECOVERY.

Also consider the movement of other vehicles through the area and if some sort of traffic control may be needed.

Establish agreed signals between the vehicle drivers, by radio (preferably), hand signals or vehicle horn.

Both drivers must agree on the point to which the stranded vehicle is to be recovered to and the signal (radio, hand or horn blast) when the recovery point is reached.



MAKING THE RECOVERY

With communications maintained between both vehicle drivers, and Recovery Strap secure, the recovery vehicle should gently accelerate, taking up the slack and proceeding at no faster than 10-12kph. For best results the stranded vehicle should be in gear, and the driver should assist the recovery by trying to drive out carefully as soon as they feel the momentum of the towing vehicle pulling them.

If the vehicle is not recovered on the first attempt, check under the stranded vehicle, again, for obstacles, reset the slack in the Recovery Strap and try a little more speed by the recovery vehicle.

NOTE: Recovery Straps require rest periods between use to return to their original length and capacity. Excessive pulls over a short period of time can cause heat build-up and possible failure.

When the stranded vehicle reaches the agreed recovery point, the driver should communicate as agreed and the recovery vehicle should stop, then the stranded vehicle should stop.

If you can't successfully recover the vehicle using a recovery strap, abort the operation. Use of an appropriate sized recovery winch or tractor may be required.

After the vehicle is recovered?

- Inspect the strap, any shackles used and recovery points to ensure they are not damaged in any way.
- Pack up all your equipment to ensure it is ready for the next time.
- Vehicles should be checked for damage, often a lot of energy has been applied to both the recovery and the stranded vehicle; ensure they are safe to continue the journey.

General care and maintenance

There is nothing worse than being stranded or bogged and going to your 'emergency' equipment and finding it is in-operable or not up to the task. Remember to ensure you do the following after using the strap and when you return it to storage;

- Never allow your recovery strap to rub against sharp or hot surfaces.
- Avoid twists and kinks, after washing, and when dry; always coil your strap for storage.
- Check full length of straps for nicks and cuts before and after use. If damaged, replace it.
- Inspect shackles for damage; if pins are hard to turn it may be a shackle has been overstressed. Replace it.

Conclusion

The use of recovery straps is one of a number of options of recovering vehicles. When using snatch straps please consult with the user manual.

REMEMBER - SAFETY IS PARAMOUNT!

