

# Orion® Soft Shackle

Instructions and Warnings

---



# ORION® SHACKLE



The Soft Rigging Solutions Orion® Soft Shackle is a vehicle recovery shackle made of HMPE fibre rope, which is a lightweight, synthetic fibre. It is designed to significantly reduce the potential of manual handling incidents, save time, resources and minimize downtime when recovering surface mobile equipment.

The incredible lightness of these soft shackles allows a single person to connect to whatever machine, plant, boat or barge you are using this item with.

It also allows persons who were typically physically unable to be involved in connecting shackles due to their heavyweight, can now take part or do the job entirely.

The following instructions explain how to safely use and care for the Orion® Shackle when attaching to slings/strops, tow hitches/tow points on machines, vehicles, oth. The care instructions are essential to maximising the life of these crucial parts of the recovery kits.

## Features

- Minimum Breaking Strength (MBS): from 1500 kgs to 450,000kgs
- Core Material: Dyneema SK75
- Covers: Double over braided Dyneema
- High grade, tensile 4140 steel.
- Weight, 21.9 kgs
- No tools required for use.

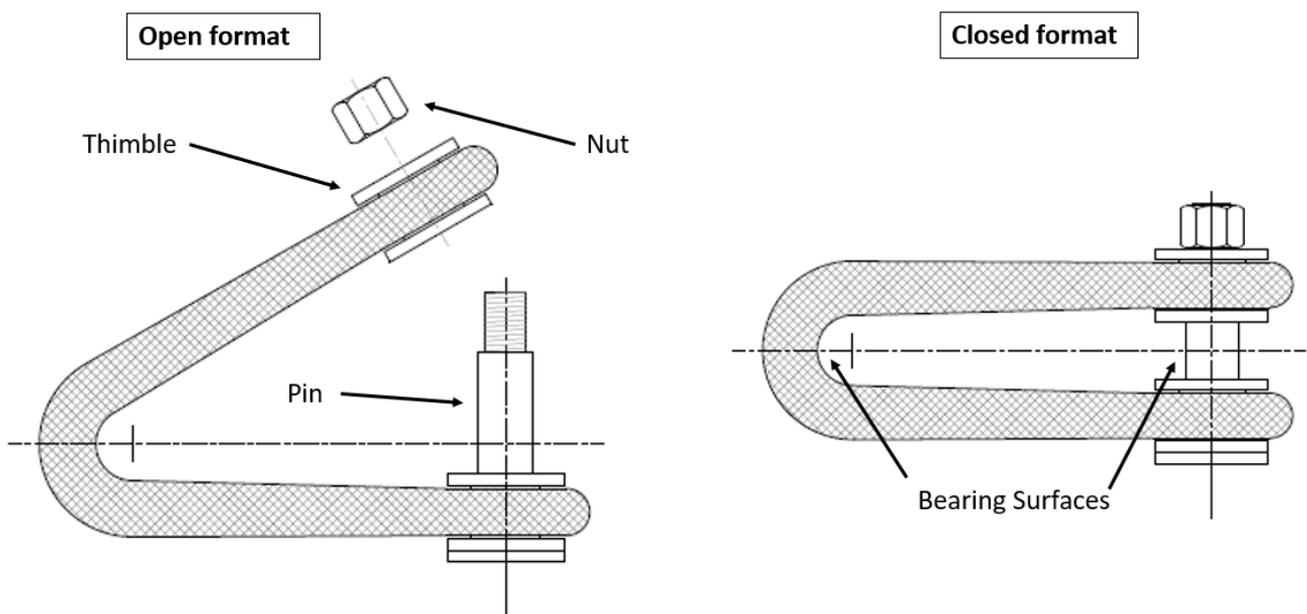
## Instructions

- Orion® shackle is designed to be a metal on metal, fibre on fibre shackle, this means the pin is attached to the square tow point, the rope part is attached to the sling, the Orion® shackle is NOT to be used around a dozer ripper.
- Ensure the fibre part of the shackle or slings surfaces, do not come into contact with any burrs or sharp edges.
- ALWAYS, the person intending to use the Orion® Soft Shackle shall be fully trained, competent, and authorized in vehicle recovery systems for the relevant industry.
- ALWAYS remember the breaking strength (tonnes) is the applied load at which the shackles/strop/sling will fail, not safe to use as a working load limit.
- ALWAYS use the dedicated OME approved vehicle recovery points.
- NEVER pull from an angle more than 10 degrees off directly ahead when at full load, once towed object is rolling, pulling of centre is ok.

- MUST NOT shock load the soft recovery shackle, DO NOT use a jerking, snatching action or an uneven acceleration during a recovery process. VERY IMPORTANT as the weights the shackles/slings will endure during such a motion cannot be ascertained, potentially resulting in the minimum breaking strength being exceeded.
- NEVER stand within 2 X the length of the slings/strops, of the machines used in the recovery.
- ALWAYS ensure that the gross vehicle mass (GVM) of the smallest machine/vehicle being used in the recovery is less than 2-3 times the minimum breaking strength (MBS) of the coupling or strop/sling being used. For example, a Caterpillar D11 dozer weighs 105tons, a Cat 797 ultra-class truck that weighs 680tons loaded. If these machines were used in the recovery, the MBS for the recovery gear would have to be a minimum of 2-3 times stronger than the weight of the lightest machine; in this case, it would be the dozer; therefore, you would need at a minimum a shackle/sling/strop with an MBS of 210tons.

### Pre-Recovery and Post-Recovery inspections by competent persons

- Check that all markings and tags are clearly visible.
- Check for cuts, burns or damage to the covers.
- Check for cracks in the spools, nut, and pin assembly, if found, please refer to below,
- Check for exposed core material (silver Dyneema rope) if more than 100mm of the exposed core, blue or silver fibre is found, place an out of service tag on the item and return to the manufacture Soft Rigging Solutions, for repairs or replacement if deemed necessary.



### **To Attach Orion Soft Shackle®**

1. Identify the OEM tow points on the vehicle/machine that will be using in the recovery.
2. Remove/undo nut and place in a clean area.
3. Pull thimble/rope off pin taking care, so no damage is done to the thread.
4. Pass thimble/rope of the shackle through the eye of the sling and lift into position. The pin can now be placed through the recovery tow point on the machine to be recovered.
5. Slide thimble back over the pin and push together.
6. Place the nut on the pin and wind nut up until its hand tight against the thimble, then undo nut  $\frac{1}{2}$  a turn, so the nut does not become over tightened when pressure is applied during the recovery.
7. Take up the slack in tow rope with tow vehicle/machines, stop machines and inspect that the soft shackles and sling/strop is the correct position for the recovery.
8. Remove yourself to a safe position far away from the recovery in line with your sites SOP's, but not closer than 2 x the length of the sling/strop from the vehicles while recovery is underway.

### **Detach Orion Shackle®**

1. Once machines recovery is completed, ensure soft shackles and strop/slings are entirely slack. Park machines in a safe manner in accordance with your sites SHMS system, which should mean they are fundamentally stable.
2. Remove the nut on the end of the pin and place it in a safe area.
3. Remove thimble of the pin, ensuring no damage is done to the thread.
4. Pull the pin out of tow point/lug and then slide thimble and rope out of the eye of the sling/strop.
5. Soft recovery shackle should now be free of everything, place thimble/rope back over the pin and push together.

6. Take nut and screw back onto the pin doing up by hand. When nut pulls tight, undo ½ a turn so the nut doesn't become wedged on pin
7. Check the Orion® Shackle after each use for cuts or damaged areas. If any damage is found, have it inspected by a qualified rigger or OEM inspector before any further use.

## Care & Maintenance

If dirty after use, wash with fresh water and hang to dry before storing away in a clean, cool, dry, and odourless place away from direct sunlight and freezing temperatures.

Mildew does not attack HMPE fibre ropes, although surface contamination may provide nutrients that permit its growth. This will not affect the strength of the coupling or slings, though please take steps to ensure the slings are dry and free of mildew as it can affect the stitching and metal parts.

Shackles shall **never** pass over sharp edges and should only be used in connection with clean, smooth, and non-rusty surfaces. Rust and dirt over time can cause internal and external abrasion, which can also impair the performance of the coupling.

Sharp edges can and will cut through the protective covers and into the Dyneema core that gives strength to the couplings, which will impair the performance and its service life. Any tear longer than 60mm to the Dyneema cover, which means you can see the sliver Dyneema core (which gives the shackle its strength), will require it to be placed out of service. An inspection is to then be completed by a qualified rigger or OEM appointed inspector who will determine if the item is to be returned to the manufacture for either repairs or in some cases, retirement (if the core has been damaged).

If misused and these guidelines are not followed, the manufacturer take no responsibility for the safety or effectiveness of the Orion® Shackle.

|   |  |   |
|---|--|---|
|    | <p style="text-align: center;"><b>WARNING</b></p> <p style="text-align: center;"><b>INCORRECT USE MAY RESULT IN INJURY OR DEATH!</b></p> |  |
| <p>Vehicle <b>OCCUPANTS</b> and <b>BYSTANDERS</b> have been <b>KILLED</b> by flying projectiles (such as tow balls) when recovery straps have been attached incorrectly.</p> <p><b>NEVER</b> attach recovery straps to vehicle fittings such as tow balls, tow bars, tie-down points or tow hooks.</p> <p><b>ONLY</b> attach recovery straps to an <b>APPROVED</b> recovery point/device that is suitably rated for use with the strap.</p> <p><b>BEFORE</b> attempting a vehicle recovery all passengers must exit the vehicles and stand as far away as possible.</p> |  |   |