

Pre-Trip Recovery Gear Inspection Checklist

A condition check, not a buying list: run this before every trip and after every hard pull, spec-sourced to WARN, Samson Rope, CCOHS, WSTDA, Factor 55, Master Pull, OSHA, JACO, and MAXTRAX. No prices shown, no signup required. Full citations and the complete guide: riggingops.com/printable-recovery-gear-inspection-checklist/

Check every item on gear you plan to use before this trip. These are independent gear categories, not additive tiers: inspect only the types you're carrying. Where a manufacturer's manual differs from anything here, the manual wins.

KR Kinetic Recovery Rope

Stretches up to ~30% elongation to store energy for a snatch pull

- ☐ Any fraying or cut fibers anywhere on the rope. No partial credit, retire it. *(RiggingOps guide)*
- ☐ Permanent elongation: rope no longer snaps back to close to its original length. Retire. *(RiggingOps guide)*
- ☐ Stiff sections: flex the full length by hand; a spot that doesn't move like the rest signals internal fiber damage. *(RiggingOps guide)*

ST Tow / Recovery Strap

Minimal stretch, 5-10% elongation, built for steady towing loads

- ☐ Holes, tears, cuts, or snags anywhere in the webbing. Automatic removal condition. *(WSTDA)*
- ☐ Broken or worn stitching in a load-bearing seam, or excessive abrasive wear. Immediate removal. *(WSTDA)*
- ☐ Discoloration or brittle, stiff patches: chemical or UV damage. *(WSTDA)*
- ☐ Nylon webbing degrades from UV and oxidative aging even sitting unused in storage; check the material tag, not just visible wear. *(SZ Onier Webbing)*

SS Soft Shackle

UHMWPE fiber knot; no field repair exists for damaged fiber

- ☐ Sinking crown or rising wall: any of the 4 crowns sits 1-2 rope diameters lower than the others, or a wall rises above the knot's halfway point toward a crown. Retire. *(Samson Rope)*
- ☐ Any cut or fray. Cut means retired; there's no field repair. *(RiggingOps guide)*
- ☐ Chalky texture or stiffness: sign of UV degradation, retire immediately. *(Engineer Fix)*
- ☐ Heat glazing near the knot or the recovery-point contact area (UHMWPE melts around 144-152°C, sustained-use limit about 70°C). *(FibrXL)*

HS Hard / Steel Shackle

Diameter, bend, holes, markings, pin, and repair checks

- ☐ Wear exceeding 10% of the original material diameter at any point. Replace. *(CCOHS)*
- ☐ Any visible bend in the body or pin. Replace, full stop. *(CCOHS)*
- ☐ Elongated eye or pin holes; stretching changes the geometry the rating was built for. *(CCOHS)*
- ☐ Illegible markings: manufacturer name, WLL, or serial number unreadable. Replace. *(CCOHS)*
- ☐ A repaired shackle without professional-engineer certification. Never use it. *(CCOHS)*
- ☐ Pin still threads and moves freely; check for pitting under any surface rust. *(CCOHS)*

Winch Line, Steel Cable, and Traction Boards

After a hard pull, run the post-pull check below in addition to whichever gear-type sections above you used.

SW Synthetic Winch Line

Inspect rope, hook, and fairlead before every operation

- ☐ 25% strand volume reduction from abrasion in any section. Retire. *(WARN)*
- ☐ Two adjacent cut strands. Replace. *(WARN)*
- ☐ "Haircut test": shaggy, fuzzy throughout from accumulated abrasion. Replace. *(WARN)*
- ☐ A sliced (clean-cut) line: always replace, never field-repair. *(WARN)*
- ☐ All 12 strands intact on a 12-strand line. *(Master Pull)*
- ☐ UV-faded, chalky, or "crunchy" rope, or any melted or glazed section. Retire. *(Factor 55)*
- ☐ Hawse fairlead: nicks or abrasion there can cut a currently-fine rope on the next pull. *(WARN)*

WC Steel Winch Cable

OSHA 1926.1413 governs crane/derrick wire rope, not winch cable directly; the inspection habit transfers

- ☐ Kinking, crushing, unstranding, birdcaging, core failure, or steel-core protrusion. Immediate removal. *(OSHA 1926.1413)*
- ☐ Significant corrosion, or electric-arc or heat damage. Immediate removal. *(OSHA 1926.1413)*
- ☐ Six randomly distributed broken wires in one rope lay, or three in one strand in one lay. *(OSHA 1926.1413)*
- ☐ Diameter reduction of more than 5% from nominal. *(OSHA 1926.1413)*
- ☐ Damaged, frayed, kinked, crushed, heavily rusted, or corroded cable. Replace before use. *(WARN)*
- ☐ Inspection cadence: a pre-use inspection every time, PLUS a documented periodic inspection at least every 12 months. *(OSHA)*

TB Traction Boards

Teeth, flex, and storage condition

- ☐ Teeth missing more than 20% of their count. Past useful life on aggressive terrain. *(JACO)*
- ☐ Teeth burned, melted, or broken from wheel spin, a documented failure mode. *(MAXTRAX)*
- ☐ Board flexes excessively under a heavier vehicle: a failure mode under sustained wheel spin. *(JACO)*
- ☐ Storage condition: hose off after every recovery (dried mud and sand grind the teeth down), dry before storing (trapped moisture rusts metal hardware), store out of direct sun. *(JACO)*

After a Hard Pull

- ☐ Winch cables and synthetic ropes: check for kinks, frays, and abrasion introduced by that specific pull. *(BM Off-Road)*
- ☐ Shackles and D-rings: check for rust, cracks, or weak threads, and confirm the pin still moves freely. *(BM Off-Road)*
- ☐ Soft shackles: check the knot and the section that rode through the recovery point first, heat damage isn't always visible. *(Engineer Fix)*

INSPECTION CADENCE

- Before every use, every piece of gear you're taking
- After every hard pull, immediately, not at next trip
- Daily or per shift under heavy multi-day use (WSTDA)
- A full seasonal check: flex ropes and straps for stiff spots, check pins for play, review UV exposure

READ BEFORE YOU RIG

A recovery under load stores real energy. Stand clear of the line of pull, use a damper on winch line recoveries, never exceed a component's rated capacity, and never substitute improvised gear for rated recovery equipment. Follow your gear manufacturers' instructions; where anything here differs from your owner's manual, the manual wins. This card is spec-and-evidence analysis, not field instruction from a certified instructor.