

November 30, 2018

# SWP-04 CARGO SECUREMENT AND TRAILER USE

## **PURPOSE/APPLICATION**

To protect workers and the public from injuries/incidents associated with cargo that could shift or fall from a vehicle or trailer during transport.

Transporting material is a potential source of harm to workers, the public, property and environment. The purpose of this Safe Work Practice is to outline the importance of driver training, competency, pre-use inspection, load securement and journey management.

This practice applies to all Canadian Plains Energy Services (CPES) vehicles (owned, leased, rented and/or contracted) traveling on private or public roads. Note: Any time a CPES-owned vehicle is used to pull a trailer and the combined GVW exceeds 4500kg, NSC requirements apply.

## PPE TRAINING HAZARDS & CONCERNS

- CPES minimum requirements
- NSC Training
- Property damage loss
- Traffic violation
- Personal injury
- Spill/release











## Responsibilities

#### **Supervisor**

- Provide training, proper tools and equipment
- Ensure drivers are competent in coupling trailers
- Ensure drivers are properly trained in loading/unloading and hauling trailers

## **Driver**

- Responsible for the safe operation and securement of all loads (on trucks and on trailers)
- Perform all pre-use inspections of equipment to be used
- Know the manufacturer's recommendations for equipment
- Responsible for the load during transport, whether you secured it initially or not
- Responsible for all traffic violations and fines

#### **Cargo Securement**

#### DO'S

- **DO** Store items/materials in secure compartments when possible
- **DO** Ensure that appropriate permits are in place
- DO Plan your route and ensure adequate clearance of all structures and overhead power lines
- DO Allow sufficient time and schedule stops to assess/re-assess the securement of your load
- **DO** Stop at required intervals to inspect your load and to ensure securing devices are not loose and are properly tensioned. Required intervals are when there is a change in the duty status of the driver, the first 80 kilometers of your trip, and at a maximum of every 3 hours or 240 km
- **DO** Record each inspection in the Driver's Daily Log for the journey
- **DO** Follow manufacturer's specifications when using load securing devices
- **DO** Set up your tie downs so they can be adjusted and tightened during transportation
- **DO** Use rated equipment (straps, tie points, chains, etc.)

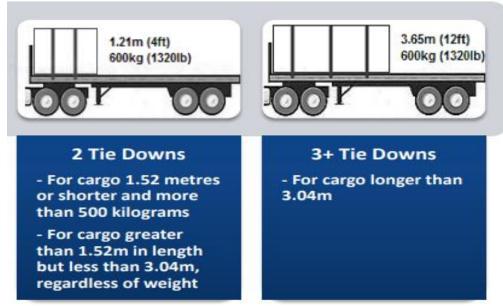


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## **DO** Inspect tie downs for:

- Broken stitching in the stitch patterns
- Weld splatter, or any areas of melting or charring
- Damage caused from UV rays: color looks bleached or webbing feels stiff
- Small particles embedded in the webbing
- Burnt areas caused by acid, alkali, or other chemicals
- Cracks, pits, or corrosion on ratchets, cam buckles, hooks, and other fittings.
- Unusual wear patterns of webbing at the point of contact with the fitting
- Tag: work load limit information must be legible
- **DO** Destroy and discard tie down straps that are in an unacceptable condition (to prevent future use)
- DO Use the proper amount of tie downs for the length and weight of the cargo you are hauling: 2 tiedowns for all cargo up to 10 feet, and then 1 tiedown for every additional 10 feet or any portion of 10 feet
- **DO** Strap across the width of the truck or trailer and not the length



- **DO** Inspect ratchet load binders before each use for wear, bending, cracks, nicks or gouges. If bending or cracks are present, do not use the ratchet load binder; turn it in for a replacement
- **DO** Routinely lubricate pivot and swivel points of ratchet load binders and the pawl part and screw threads to extend product life and reduce friction wear
- **DO** Cross-chain machinery, equipment
- **DO** Block and/or brace your cargo if it is required to assist in stabilizing the load
- **DO** ensure materials used for blocking, bracing, chocks or cradles are strong enough to withstand being split or crushed by the tie downs
- **DO** Use edge protectors if a tie down could be cut or torn when touching an article of cargo
- DO Put all load securement devices away after use and keep them out of the elements
- **DO** Utilize a tarp or cargo net if hauling small items or aggregate (fill, gravel, etc.)

## **DON'Ts**

- **DON'T** Transport cargo until you have measured the length, height, width, and scaled the truck and trailer to ensure compliance with applicable regulations
- **DON'T** Overload the vehicle or trailer
- **DON'T** Use unmarked tie downs. Tie downs must be marked with the working load limit by the manufacturer

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**DON'T** Use tie downs that are not rated for the weight of the load being secured

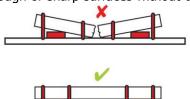
**DON'T** Use lever type load binders. Always use ratchet type load binders with chains

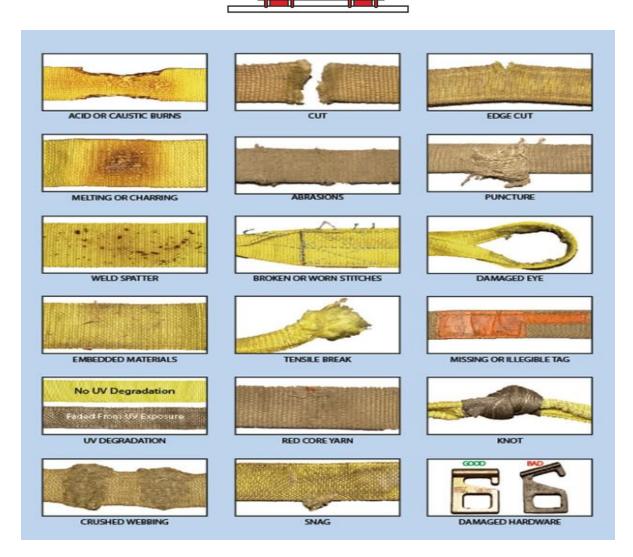
**DON'T** Use rub rails as anchor points (It is acceptable if the tiedown is fitted with a flat hook end and if it is not possible to attach the hook to another more suitable anchor point. However, best practices would have tiedowns routed inside the rub rail)

**DON'T** Use less than the required amount of tie downs

**DON'T** Use tie downs that are not in proper working order

**DON'T** Use tie down straps on rough or sharp surfaces without using an abrasion pad/softener





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## **Inspection and Loading of Trailer**

## DO'S

- DO Pre-Use inspection of truck, trailer, hitch, receiver and complete required documentation
- **DO** Ensure the vehicle, trailer and hitch are rated for the load
- **DO** Match the proper coupler with the proper hitch
  - Check the size of the ball with the size of the ball hitch
  - Make sure the correct pintle hitch size and towing capacity are used
- **DO** Ensure the coupler mechanism is free from dirt or rust and all parts move smoothly and freely
- **DO** Ensure coupler pins and fasteners are in good condition
- **DO** Inspect axle springs and ensure they are attached to both anchor and pivot points
- **DO** Ensure the wheel bearings and spring pivots are adequately greased
- DO Inspect the tires on both trailer and truck for wear, proper inflation, bulges, cuts or cracks
- **DO** Check the wheel studs/nuts are properly tightened and in good condition
- **DO** Check the trailer frame for signs of bending or twisting and signs of cracked or broken welds
- **DO** Properly level the trailer and truck when using all types of hitch combinations (ball/pintle/5<sup>th</sup> wheel/gooseneck)
- DO Make sure the load is distributed on the trailer properly, with 10–15% of the load weight on the hitch (aka tongue weight)

## **DON'Ts**

- **DON'T** Use a trailer without inspecting the braces, struts, spring hangers, fenders etc. are securely welded or bolted in place
- **DON'T** Use a truck that is not rated to tow the trailer size and weight
- **DON'T** Use a truck that does not have the proper mirrors for towing
- **DON'T** Exceed the maximum gross trailer weight
- **DON'T** Proceed until the load is properly secured to prevent shifting
- **DON'T** Cover the load with a tarp that isn't strong enough and securely tied down
- **DON'T** Use a 5<sup>th</sup> wheel hitch that is not properly greased and lubricated

# **Coupling a Trailer (General Requirements for All Trailer Types)**

## DO'S

- **DO** Chock the trailer wheel on both sides of the front axle
- **DO** Use a spotter when required and follow SWP for backing up
- **DO** Walk around the area where you will be coupling and check for obstructions, ground conditions
- **DO** Stop and check the height and position of the trailer pin when 30 60cms from the hitch and pin
- **DO** Use emergency brake when getting out of the truck
- DO Use the safety pins to lock latches closed and cotter pins or locking pins (bolts can fall out)
- **DO** Ensure safety chains are connected, crossed, and not dragging.
- **DO** Ensure electrical wires, breakaway cables are properly connected, functional, and not dragging
- DO Verify that the trailer is coupled properly if you are the driver, but did not attach trailer yourself
- **DO** Verify that the emergency brakes on the trailer (if so equipped) are functioning properly
- DO Remove chocks from wheels and raise the gear to travel position

## **DON'Ts**

- **DON'T** Attempt to couple a 5<sup>th</sup> wheel trailer until you check that the receiver is adjusted, and the jaws are open
- **DON'T** Continue if you lose sight of the spotter
- **DON'T** Back into trailer until all connecting lines are up and out of the way from being run over
- **DON'T** Use safety chains that drag on the ground



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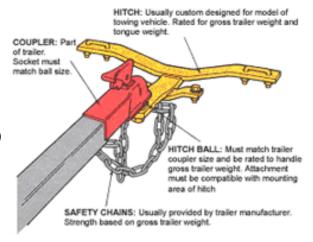
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**DON'T** Use damaged chain hooks that don't freely open and close, or have non-functional latches **DON'T** Connect the breakaway cable to the safety chains, always connect to the vehicle

## **Coupling a Trailer - Ball & Pintle Hitch Type**

DO Use trailer jack to verify that hitch lock is functional (raising jack should pull truck up too) on empty and lightweight ball-style trailers

**DO** Pull test to verify secure coupling of trailer

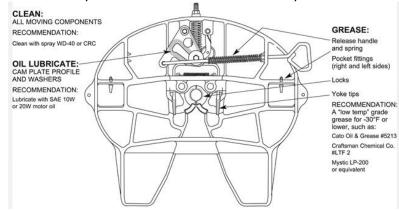


## **Coupling a Trailer - 5th Wheel Hitch Type**

DO Leave the landing gear down and do not attach any chains or electrical wires to truck yet

**DO** Shift truck into drive and give the trailer a tug to ensure the 5<sup>th</sup> wheel has properly locked

- **DO** Release the forward pressure by shifting into neutral and then park
- **DO** Apply parking brake
- DO Check to ensure the 5<sup>th</sup> wheel is locked and secured. Use safety pin when required



# **Uncoupling a Trailer**

#### DO'S

- DO Park on even grade and apply brakes
- **DO** Park the tow vehicle and trailer in a straight line
- **DO** Chock the trailer wheels on both sides of the front axle
- **DO** Lower the trailer landing gear with a dolly pad set up underneath, just enough to remove the weight of the trailer from the towing vehicle
- DO Disconnect all safety and electrical lines from the towing vehicle and unhook the trailer

#### DON'Ts

**DON'T** Pull fully away without completing a walk around

**DON'T** Leave the hitch sticking out from vehicle; take it off and store it properly

**DON'T** Leave the 5<sup>th</sup> wheel receiver open, flip it down and bolt it closed (for picker trucks with flip 5<sup>th</sup> wheel receivers)

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# **REFERENCES / ADDITIONAL INFORMATION**

SWP 28 Driving & Journey Management

SWP 29 Loading/Hauling/Unloading Equipment

SWP 75 Vehicle and Equipment Spotting

Enform Training Video – Backing/Spotting Vehicles, Equipment

Developed by:	1.	Carol Vincent	2.		Date:	April 17, 2006
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