

CONTRACTOR TOOLBOXES

Contractor toolboxes are sets of tools and resources that employers and drivers can use to address the risk of injury from load securement activities based on their operational needs and preferences. These toolboxes include descriptions, musculoskeletal injury (MSI) risk reduction measures, time requirements, costs, safe work procedures, risk exposure, risk controls and other implementation resources.

As per WorkSafeBC OHS regulation section 4.46 to 4.53, employers must identify the factors that may expose workers to the risk of MSI in their workplace. Employers can refer to [BCFSC's load securement risk assessment tool for risk identification \(reg 4.47\) and risk assessment \(reg 4.48\) related to load securement](#) (BCFSC 2021).

It should be noted that the tools or methods identified in the contractor toolboxes reduce but do not eliminate the risk of MSI.

To use the toolboxes effectively, the employers and drivers must:

- Make sure that they become familiar with the tools and resources provided, and understand how to use these tools in their operations;
- Ensure users are trained on safety procedures;
- Be aware of risk exposures and controls;
- Conduct regular safety inspections and stay current with new safety regulations and best practices.

For all toolboxes, there are general risk reduction considerations for drivers that need to be followed:

- Train or refresher training to increase effectiveness and the confidence of workers.
- Remember the importance of stretching throughout the day / during breaks to reset muscles and avoid further strain, targeting especially the shoulders and back before and after load securement activities.
- Consult supervisor or health & safety reps for considering the most appropriate toolbox for drivers with previous injuries, low fitness level or restricted mobility.
- Assess the condition of the load and the work area available on both sides of the truck before using any tool or method.
- Where possible, practice the throwing motion using both dominant and non-dominant hands so that they may alternate and spread the load between both arms throughout the day.
- Avoid throwing multiple wrappers in one throw.

Toolbox A – Improved Throwing - Method C

Description

This method relies on proper leg work, momentum, and keeping the throw weight as low as possible. The traditional 10 m (30 ft) 9.5 mm (3/8") wrapper (Figure 20) weighs around 4.2 kg and throw weight may vary from 1.6 to 2.94 kg depending on the length of coiled wrapper. Throwing this wrapper over the load from ground level is the common method used in the industry today in the load securement process.



Figure 20. 3/8" steel wrapper.

MRS and MRS Risk Level

Table 3 shows the risk level associated with the use of improved method C and the safe work procedures described below. The method relies on more use of legs and a straight back to create momentum when throwing the wrapper over the load.

Table 11. MRS and MRS risk level for improved throwing method C

Movement Risk Score	Risk Level
21	Moderate

Safe Work Procedure

1. Stay 2.4 to 3.0 m (8 to 10 ft) away from the load (if the ground conditions allow).
2. Keep the weight to be thrown as low as possible. The chain length is generally enough weight to throw the wrapper over the load. (Figure 21). Avoid throwing the fully coiled wrapper.

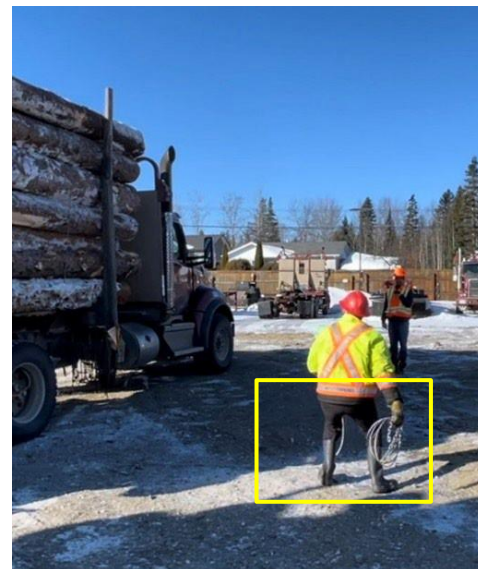


Figure 21. Reducing the throw weight of traditional 3/8" wrappers.

3. Step a foot back with a hand holding the chain behind the body (Figure 22a).
4. Leverage the lower limb muscles by bending the knees before throwing. Avoid twisting the body (Figure 22b). Bend knees and push with the stronger lower limb muscles to generate the force required to throw the wrapper, reducing strain on the lower back and shoulders.
5. Stride forward with the momentum generated (Figure 22c).
6. Release the wrapper prior to the arm extending above the shoulder and follow through (Figure 22d). Avoid twisting the upper body during throw and follow through.



a) Step back a bit



b) Bend knees (leg work) with minimal body twist



c) **Stride forward with built momentum**



d) **Release and follow through**

Figure 22. Steps for throwing a wrapper while minimizing risk of injury.

Time

5 to 10 seconds per throw. To take less time, do not coil the wrappers, simply hold one end of the chain for throwing.

Cost

Standard 3/8 or 5/16 wrapper - \$50/unit

Risk Exposure

When throwing wrappers, drivers are exposed to risk of musculoskeletal related injury (MSI) because of repetitive movement, force required (throwing weight) and non-ideal posture. Other factors such as previous injuries, age, fitness level, throwing multiple wrappers in one throw can also increase risk. Other risks are falling logs, wrappers or debris and slips, trips and falls on uneven and poor ground conditions.

Technique Demonstration

The following YouTube video demonstrates the steps to properly use Improved throwing – Method C.

<https://youtu.be/6iU7jmb6G0E?si=DfcalaDslllozahYM>

ADDITIONAL RESOURCES

Other resources on wrapper throwing method, training and injury management that employers and drivers can refer to:

- BC Forest Safety Council: Throwing Wrappers – Method for Reducing Injuries
<https://www.youtube.com/watch?v=hDD5gzrjFJM>
- BC Forest Safety Council: Shoulder Injury Management for Log Truck Drivers
<https://www.youtube.com/watch?v=emmPSSL3aDE>
- BCFSC and Total Physiotherapy (2018) Throwing procedure
https://www2.bcforestsafesafe.org/files/BCFSC_Logging_Poster_Method_Throwing_Wrappers_0.pdf

There are additional resources from BCFSC and FPInnovations that can be used in risk assessments for loader assist methods:

- BC Forest Council: Loader Assist Procedure
 - https://www.bcforestsafesafe.org/wp-content/uploads/2021/10/Risk-Assessment-Tool-MSI-Load-Securement_14-Oct-21_FINAL.pdf
 - <https://www.youtube.com/watch?app=desktop&v=QhORC4T7ABc>
- FPInnovations: Reducing Repetitive Strain Injuries Resulting from Installing Log Load Wrappers
<https://www.youtube.com/watch?v=WX2nWni4FOI>