EAGLEHOOK

SAFETY MANUAL

FALL RESTRAINT SYSTEM

Safe work procedure for the use and handling of the Eaglehook Fall Restraint System.

The Eaglehook Fall Restraint System was developed to prevent workers from falling from transport trailers/containers that are 96” or 102” inches wide. This system was designed to comply with CSA standard Z-259.16-04, ANSI Z359.0-2007 and OSHA Standard for fall protection. The Eaglehook Fall Restraint System prevents workers from traveling to the edge of the trailer/container or to a surface that may present a fall. It is ergonomically designed and made of lightweight aluminium to enable the worker to lift the unit to the trailer/container top without difficulty.

All workers who use the Eaglehook Fall Restraint System must be trained following the instructions provided prior to use. These instructions include the following:

1. Warnings
2. Equipment
3. Pre-Work Inspection
4. Site Preparation
5. Installation
6. Egression
7. Letter of Safety Certification, Fortlock Enterprises Ltd.
8. Standard Qualifications

WARNING

THIS DEVICE SHOULD ONLY BE USED PER MANUFACTURES SPECS. FAILURE TO DO SO MAY RESULT IN INJURY OR DEATH.

CET APPAREIL DOIT ÊTRE UTILISÉ UNIQUEMENT SELON LES SPÉCIFICATIONS DE FABRICATION. OMETTRE DE LE FAIRE POURRAIT ENTRAINER DES BLESSURES OU LA MORT.

DANGER

THIS DEVICE IS MEANT FOR SINGLE PERSON APPLICATION. MORE THAN ONE PERSON MAY RESULT IN INJURY OR DEATH.

CET APPAREIL EST CONÇU POUR UN SEUL UTILISATEUR. L'UTILISATION PAR PLUS D'UNE PERSONNE PEUT ENTRAINER DES BLESSURES.

SAFETY FIRST

PLEASE READ THE INSTRUCTION MANUAL CAREFULLY BEFORE USE.

VEUILLEZ LIRE LE MANUEL D'INSTRUCTION AVEC ATTENTION AVANT L'UTILISATION.

1. WARNINGS

- Carefully read all instructions and warnings on the Eaglehook Fall Restraint System, lanyards, harness, and hardware.
- This product was created to **protect** you, not to hinder you. Follow all the steps, and if you are unclear about any step or the function of any piece of equipment, **ask a supervisor**.
- Review all pictures of equipment in these instructions and be familiar with all pieces and components.
- **This product is not a fall arrest;** rather it prevents falls.
- Pay close attention to all material as it is essential to maintaining your safety, and should be taken with all seriousness.
- Before any repair is initiated, inspect the trailer/container and its components, including its top rails, roof surface and structural integrity, for imperfections.
- ONLY use the Eaglehook Fall Restraint System with trailers/containers that do not have any structural damage or imperfections.
- It is your responsibility to ensure that the trailer/container is capable of withstanding fall prevention forces. If you feel the trailer is unfit or unsafe for any reason including environmental conditions such as precipitation and winds, **do not continue**.
- The Eaglehook Fall Restraint System and lanyard assembly are made to prevent falls. This device, if used properly, will not allow you to stand on any edge that threatens a fall.
- Do not under any circumstance allow a truck to be connected to the trailer/container in service.
- Never operate this system under the influence of drugs or alcohol.
- Always attach end stops when working four feet from the front and four feet from the back of trailer/container.

2. EQUIPMENT

- There are three main components that make up a fall protection system. These are the ABC's of fall protection:

A	**ANCHORAGE**
B	**BODY SUPPORT**
C	**MEANS OF CONNECTION**

Each component must be in place and in working condition to provide maximum worker protection.

- The Eaglehook Fall Restraint System and its cable assembly is the **Anchorage**.
- The harness is the **Body support**.
- The lanyards are the **means of Connection**. Fall prevention systems such as the Eaglehook Fall Restraint System require restraint/work positioning lanyards made to restrict the worker from reaching a threat of a fall.

Rail Assembly

The Eaglehook Fall Restraint System assembly consists of a spring-loaded cross member (a) with slide assemblies (b) mounted to each end. A cable assembly (c) is connected to each slide assembly using connectors.

Trailers

A. Spring-Loaded Cross Member

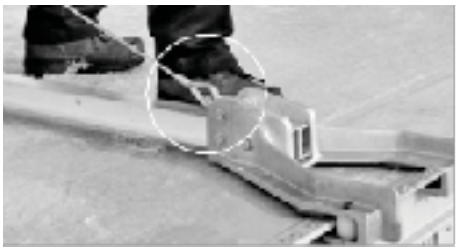
B. Slide Assemblies Mounted to Each End

C. Cable Assembly

Containers

a. **Cable Assembly**

Cable connector (d) consists of two equal length cable legs (e).



d. Cable Connector

e. Cable Legs

b. **End Stops**

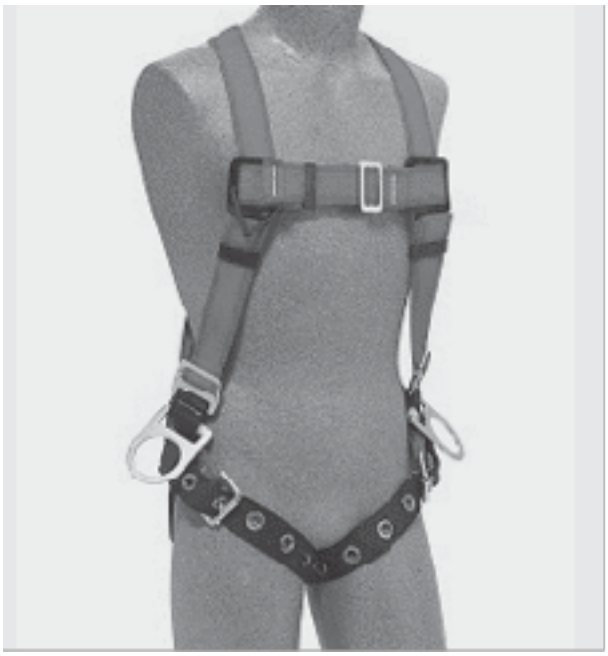
The Eaglehook Fall Restraint System employs two end stops (f).

f. End Stops

c. **Harness/Body Support**

The full-body harness provides the necessary body support with straps that fasten around the user and distribute fall protection forces over the upper thighs, pelvis, chest and shoulders.

Full-Body Harness



Full-Body Harness (Detail)

d. Lanyard/Restraint

A lanyard, such as a restraint/work positioning lanyard, is a device that links the user's full-body harness to an anchor. When used with a fall restraint system, the connector must be short enough so that the worker cannot reach a fall hazard.

Extendable Lanyard

Short Web

3. **PRE-WORK INSPECTION**

All protection equipment must be inspected prior to use. A checklist should be completed and signed before each use. A qualified inspector must make documented inspections of all equipment at least annually, having records maintained by a cognizant equipment supervisor.

Harness Inspection

Webbing

- Grab the webbing with your hands 6 to 8 inches apart and bend the material in a U shape. Inspect for damage and cuts.
- Follow this procedure for the entire length of the webbing.
- Look for frayed edges, broken fibers, cuts, burns, and chemical damage. If any of these imperfections exist retire the equipment immediately.

D-Rings

- Inspect for distortion, cracks, breaks, and rough or sharp edges.
- The D-ring should pivot freely.

Attachments and Buckles

- Inspect for any unusual wear, broken rings, torsion, or broken stitching.

Tongue Grommets

- Inspect all tongue grommets before use.
- Retire harness if grommets are loose, broken, or damaged.
- Be sure to carefully inspect webbing for additional holes or wear.

Buckles

- Buckles should be in working condition and free of distortion.
- Buckles should overlap and be free of movement.
- Rollers should turn freely and be free of sharp edges.

Lanyard Inspection

- Begin at one end and make your way to the opposite end.
- Slowly rotate the lanyard so that the entire circumference is checked.
- Carefully inspect all connectors for distortion, cracks, corrosion, and broken springs.

For Retractable Lanyards:
- Carefully inspect the entire lanyard for rips, tears, broken fibers, burns, and corrosion.
- Pull the lanyard completely out and make sure that it stops itself and automatically retracts.
- Carefully inspect that carabiners are in working condition and free of distortion, broken fibers or broken springs.

Site Inspection

- Inspect the trailer side rails to ensure that there are no defects for their entire length.
- Inspect the top of the trailer, marking off any areas that will not hold weight of maintenance personnel. It is critical that the point of access and egress from the trailer top is able to withstand weight of personnel and is free of defect.
- Check the weather; do not use during high winds.
- Be sure your work area is free of broken wires and other electrical hazards.

Eaglehook Fall Restraint System Inspection

- Inspect the cable assembly to ensure that all fasteners are securely tightened.
- Ensure that springs are free of debris and are in working condition.
- Inspect wheels for free movement and ensure all wheels are tight.
- Ensure there are no cracks or breaks anywhere.

Wire Rope Inspection

DO NOT USE IF ANY OF THE FOLLOWING CONDITIONS EXIST:

- Ten randomly distributed broken wires in one rope lay, or five broken wires in one strand.

NOTE: One of more randomly distributed broken wires should prompt the user to conduct a more detailed inspection.

- Wear or scraping of one-third the original diameter of the outside individual wire.
- Kinking, crushing, birdcaging, or any other damage resulting in distortion of rope structure.
- Evidence of heat damage, acid or caustic burns.
- End attachments that are cracked, deformed, or worn.
- Corrosion of the rope or end attachments.
- Missing or illegible capacity tag.

DO NOT USE AND REMOVE FROM SERVICE IF ANY OF THE FOLLOWING CONDITIONS EXIST:

- Acid or caustic burns.
- Melting or charring of any part of the surface.
- Snags, punctures, tears, or cuts.
- Broken or worn stitches.
- Wear exceeding the amount recommended by manufacturer.
- Missing or illegible capacity tag.

4. **SITE PREPARATION**

1. Ensure that the trailer/container is stable, level, secure from movement, and a safe distance from any possible safety hazard.

2. There should be no more than two feet between the trailer/container and the working platform.

3. Place cautionary signs on service air lines warning of work overhead.

5. **INSTALLATION**

STEP 1. Put on the harness.

a) Getting Started

• Hold harness by back D-ring pad, and ensure straps are not twisted.

b) Shoulder Straps

• Slip harness over arms and onto shoulders.
• Ensure all straps are not tangled and hang freely.
• Shoulder straps should be kept vertical, not pulled into center of body.

c) Leg Straps

• Reach between your legs and grab strap on your left side. Bring the strap up
• between the legs and connect it to buckle on hip. Repeat for right leg.
• Pass excess strap through loop-keepers.
• Leg straps should fit snugly.

d) Chest Strap

• Attach chest strap by passing male buckle through female.
• Strap should be six inches below top of shoulders.
• Pass excess strap through loop keeper.

STEP 2. Adjust harness to fit snuggly.

a) Shoulders:

- To tighten, pull up on free ends of straps.
- To loosen, push down on parachute adjuster buckle frame.
- Straps should be adjusted to same length.

b) Chest Strap

- To tighten, pull free end of strap.
- To loosen, push on strap from free end through adjuster buckle and take up slack by pulling on adjuster buckle.
- To position, slide keeper up or down shoulder strap.

c) Back D-ring:

- Centre between shoulder blades, slide D-ring and pad up or down along the
- webbing to position.

STEP 3. Ensure all lanyards are in place.

- One retractable lanyard on your back,
- One restraint lanyard (the short, web, work positioning lanyard) attached at your hips.

STEP 4. Put the trailer/container anchor against your working platform in a place that you can access it while you are on top of your working platform or ladder.

NOTE: It is highly recommended to be no more than two feet away from the trailer/container you are servicing.

STEP 5. If you have a service truck fall prevention system, climb the ladder.

Once you can reach the truck anchor and can obtain three point connection, attach the retractable, webbed lanyard attached at your back to the cable connector on top of your service truck. You can now safely get on to the truck.

NOTE: It is not recommended to mount a ladder to the top of the trailer/container, unless the ladder is attached to an anti-fall prevention device.

STEP 6. If you have a service truck fall prevention system, bring the trailer/container anchor to the top of your service truck.

Attach the retractable lanyard to the red circle ring that is connected to the anchor, by the lanyard's carabiner.

STEP 7. Place the anchor on the trailer/container, and lay it parallel to the interior roof bows. Ensure the anchor is connected before mounting.

Ensure that you can read the Eaglehook label on the device nearest you. Pull it open to fit over the top rail on BOTH sides. If the repair is four feet or less from the front or back of the trailer, attach the red security stops to the top rail by opening the stop and griping it to the roof skin. Ensure both bolts are tightened to prevent the anchor from running off the top of the trailer/container. Ensure your anchor is always behind your security stops.

You can now mount the top of the trailer/container.

STEP 8. The work positioner will slide through the circle ring and back on to your hip, creating a U shape from one hip to the other.

NOTE: This is the most essential part of the system; without the restraint/work positioning lanyard the system will still allow for a fall.

STEP 9. Ensure the anchor mount is stable, in a secure position, and will roll on the top rail.

NOTE: If the anchor is not gliding along the top rail, there may be something wrong. Immediately make sure the device is secured.

STEP 10. As it is now safe, perform necessary repairs atop the trailer/container.

6. EGRESSION

Once the repair is complete:

STEP 1. Move to where your truck or working platform is located, and move your tools and equipment to the top of your service truck.

Do not detach the restraint lanyard until you are safely away from the edge of the trailer/container. Do not remove the anchor from the top rail.

STEP 2. Once the trailer/container is clear of all tools, you may make your way toward your working platform.

Connect the retractable lanyard to the red circle ring. Detach the yellow work position lanyard, and immediately make your way to the truck.
Under no circumstances should you remain on top of the trailer/container without a restraint lanyard (the short work positioner lanyard on your hip).

STEP 3. As soon as you reach the top of the service truck/working platform, attach the retractable lanyard to the service truck anchor.

It is now safe to remove the anchor by pulling on the foot.

STEP 4. Move the anchor off of the service truck/working platform and to a safe place, and make your way to your ladder.

Once you are in a safe place and have made three points of contact, detach the retractable lanyard and you're on your way!

7. Letter of Safety Certification, Fortlock Enterprises ltd.

Fortlock Enterprises Ltd.
1 Concorde Gate, Suite 500
Toronto, Ontario. M3C 3N6
Phone (416) 391-2322 Fax (416) 391-3133

Dear Sir:

I have witnessed a demonstration of the use of the restraint system designed to prevent personnel from falling from the roof of a trailer. The tether length used with the system is four feet long. In addition I have examined the design of the system as presented and find that its strength exceeds regulation requirements.

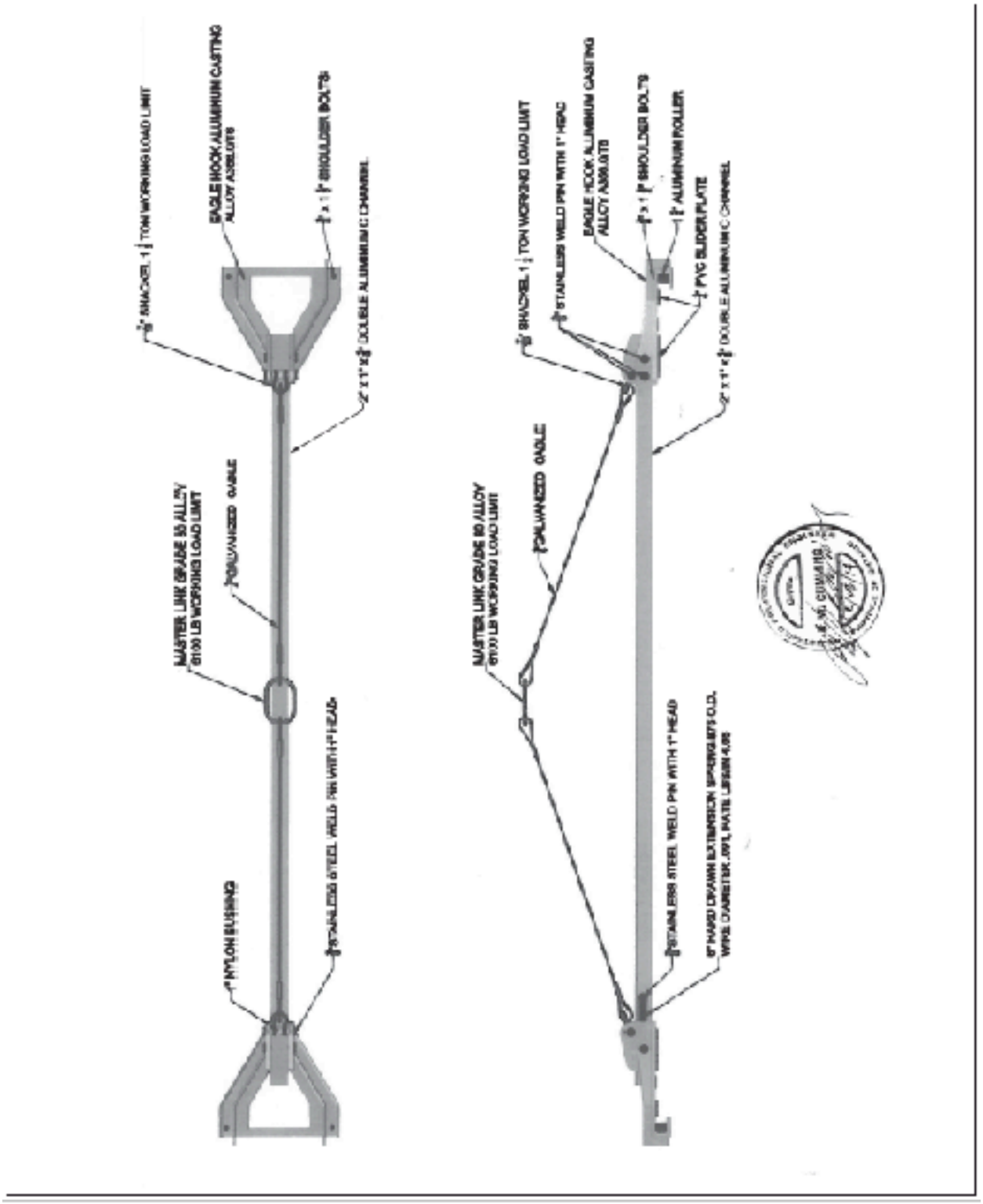
The system as configured has the tendency to bind on the roof of a trailer when the operator is attempting to travel. It has been discovered that binding does not occur when a light vertical force is applied to the center of the tie bar.

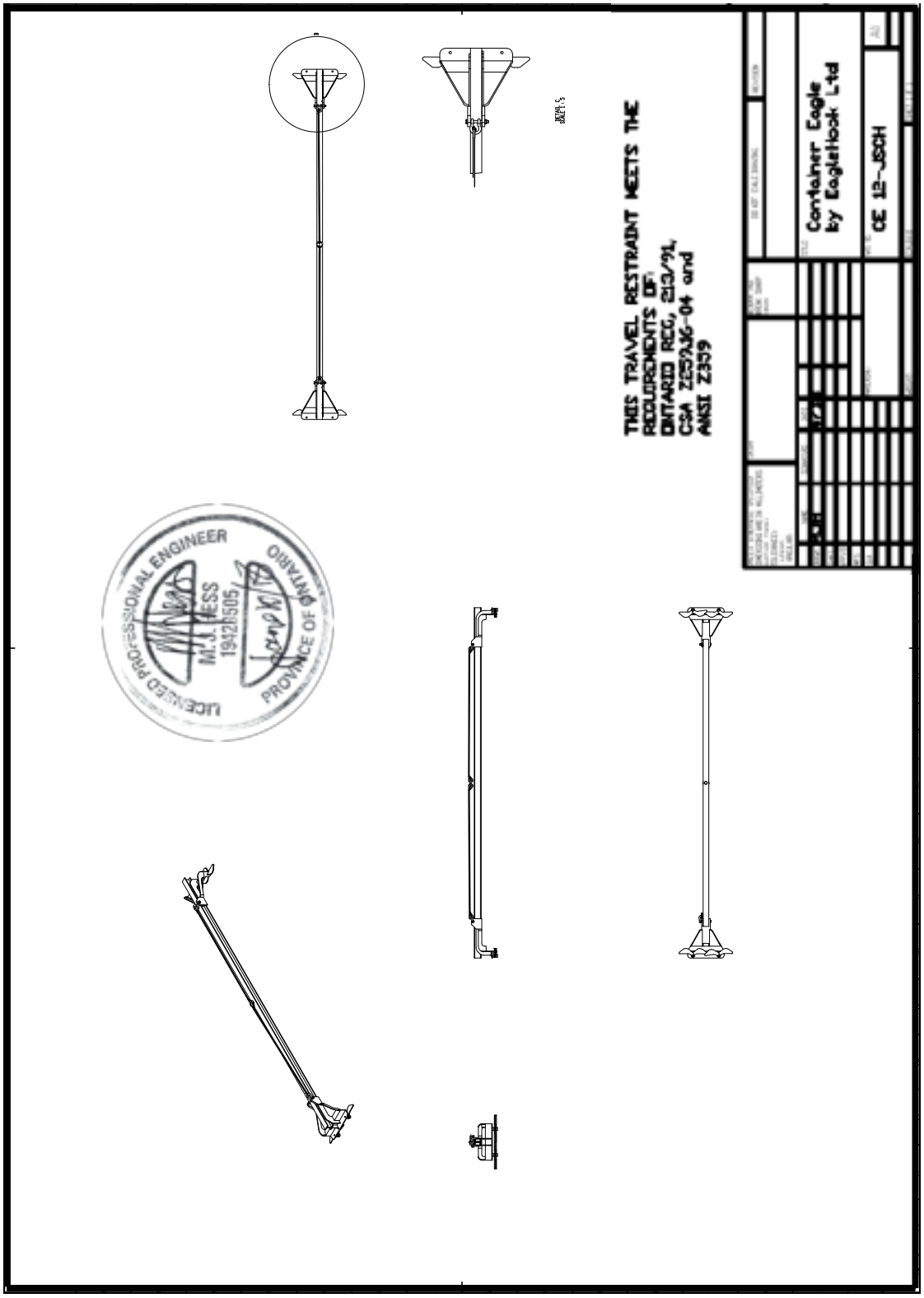
In order to provide the uplift force required without manually lifting the bar, the Master Link joining the two cables is being clamped to the top of the bar. The force on the clamp from the operator's tether is not expected to break the clamp. However, should the clamp break, there will be no danger to the operator since he/she will still be fully protected by the restraint system.

The clamp holding the Master Link is an attached device that has no effect on the safety of the system, but makes the system easier to operate.

Fortlock Enterprises Ltd

R.W. Cumming, P.Eng.
President


SHACKLE 1 TON WORKING LOAD LIMIT
EAGLE HOOK ALUMINUM CASTING ALLOY A356.0T6
MASTER LINK GRADE 80 ALLOY 6100 LB WORKING LOAD LIMIT
GALVANIZED CABLE
SHACKLE 1 TON WORKING LOAD LIMIT
STAINLESS WELD PIN WITH 1" HEAD
EAGLE HOOK ALUMINUM CASTING ALLOY A356.0T6
PVC SLIDER PLATE
MASTER LINK GRADE 80 ALLOY 6100 LB WORKING LOAD LIMIT
GALVANIZED CABLE


THIS TRAVEL RESTRAINT MEETS THE
REQUIREMENTS OF:
ONTARIO REG. 213/91,
CSA Z259.16-04 and
ANSI Z359
Container Eagle
by EagleHook Ltd
CE 12-JSCH
LICENSED PROFESSIONAL ENGINEER
M.J. JESS
19421505
PROVINCE OF ONTARIO

8. Standard Qualifications

The submitted sample met the minimum strength requirement of 450 lb. (2 kN) for a travel-restraint anchor specified by **Ontario Regulation 213/91, Section 26.7(2)**.

The submitted sample met the minimum strength requirement of 405 lb. (1.8 kN) for a travel-restraint anchor by **CSA Z259.16-04**.

The submitted sample met the minimum strength requirement of two times foreseeable force for a travel-restraint anchor specified by **ANSI Z359**. The foreseeable force is considered maximum 300 lb. generated by a person walking, or leaning against the anchor on a flat surface.

OSHA has no specified standards for restraint system. However, based on its website information, OSHA suggested “twice the maximum expected force that is needed to restraint the person from exposure to the fall hazard”. The submitted sample met this requirement based on an expected maximum 300 lb. of force generated by a person walking, or leaning against the anchor on a flat surface.

The submitted sample met the minimum static force of 1,800 lb. (8 kN) without exceeding allowable unit stress for each material used for a fall arrest system specified by **Ontario Regulation 213/91, Construction projects Section 26.7(2).1**.

EAGLEHOOK

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