

STANDARD OPERATING PROCEDURE LOAD RESTRAINT – PENDANT OCTAGONAL STEEL REELS

1. PURPOSE

The purpose of this procedure is to ensure product and material delivered to and produced by Bekaert wire Ropes Australia and carried on octagonal 'spider' reels complies with industry safety standards for positioning and restraint of the load.

2. SCOPE

This procedure applies to Bekaert wire Ropes Australia (primarily Warehouse/Despatch), customers, transport drivers and providers responsible for loading, restraining and transporting Ropes material and products via road transport.

3. REFERENCES

National Load Restraint Guide (2018), Published by National Transport Commission

WRW-WH-SOP-001 Bekaert Wire Ropes Australia Transport Specification

WRW-WH-SOP-113 Load Restraint - Equipment Guidelines

4. RESPONSIBILITIES

Process owner Operations Manager

5. QUALIFICATION, TRAINING & COMPETENCE REQUIREMENTS

Load restraint training.

6. DEFINITIONS

7. RECORDING / REPORTING REQUIREMENTS

These guidelines are provided by Bekaert Wire Ropes Pty Ltd (trading as Bekaert Wire Ropes Australia) for guidance only. Compliance with applicable laws and standards remains your responsibility.

They are based on guidelines provided to preceding entities under license from BlueScope Steel. Whilst Bekaert Wire Ropes, in co-operation with transport operators, has taken considerable care to develop load restraint guidelines that are effective and comply with all requirements, Bekaert Wire Ropes makes no warranty as to the applicability of these methods in all circumstances.

It remains your responsibility, at all times, to ensure that the methods you use are adequate for the particular situation and, where applicable, you should take further precautions.

These guidelines are confidential to, and the property of, Bekaert Wire Ropes and you may only use these guidelines with permission of Bekaert Wire Ropes.

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OCTAGONAL 'SPIDER' REELS

This Guideline applies for:

- Restraint of Octagonal Wire Rope Reels with a height of 3500mm to 3600mm, a width of 2100mm or more, loaded with the WLL but with not more than 10 tonnes of wire rope.

Essential Requirements

- ✓ All restraints **MUST** be **8mm transport** chains, with a Lashing Capacity of **3.0 tonnes** or greater, and comply with AS4344.
- ✓ All reels **MUST** be transported on low loaders or drop deck trailers with standard steel suspension and a maximum height of 1m when loaded.

Assumed 40/60 load sharing between front and rear axle groups.

- ✓ Rubber or rough sawn timber, with assumed minimum coefficient of friction $\mu=0.4$, must be placed between reel and the trailer deck.

For example, two lengths of 190 mm x 45 mm x 1500 mm hardwood timber dunnage is typically sufficient (130mm x 45mm x 1500mm minimum).

- ✓ Reel **MUST** be positioned centrally on timber/rubber, which must extend a minimum 50mm longitudinally at both ends – See Figure 2 & 3.

- ✗ Do not allow reels to touch the trailer deck. There is to be **no steel-on-steel contact**.

- ✓ Chain numbers and configurations **MUST** comply with 'Load Restraint – Full Octagonal Reels' on Page 4.

- ✓ At least two chains **MUST** go through reel centre bore.

- ✓ An additional chain each side around flange to prevent reel from twisting / lateral movement.

Attach to lashing point **WITHIN** trailer deck, where available.

- ✓ Chains angled towards the rear **MUST** be anchored a minimum of 600mm from the centre of the reel.

- ✓ Reel **MUST** be positioned so that the bore is aligned with a combing rail upright to enable the front chain is vertical. See Figure 1.

- ✓ Reel to be positioned centrally across width of trailer.

- ✓ Ensure overall height is known, noting all factors such as rubber or timber thickness.

- ✗ Do **NOT** operate vehicles with an **overall height** which exceeds the legal limit (generally **4.3m**) without obtaining relevant state regulatory notices and/or permits.

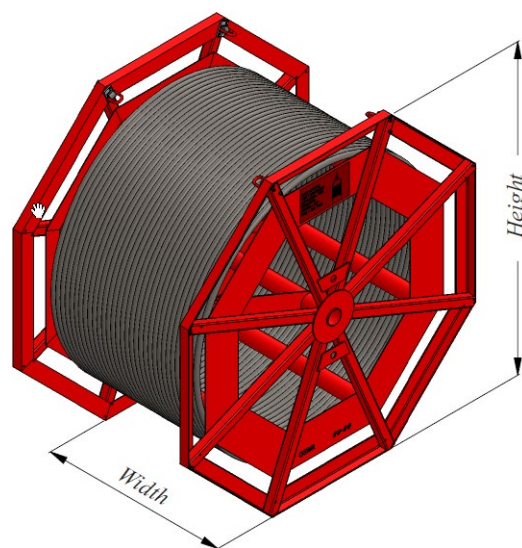


Figure 1: Octagonal Wire Rope Reel

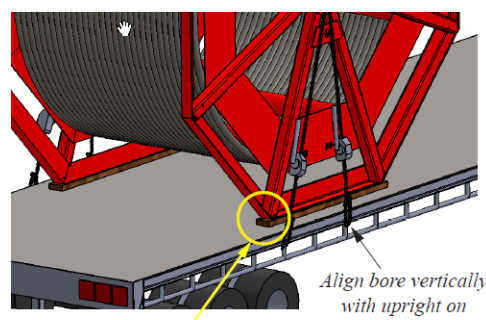


Figure 2: Wire Rope Reel on Timber on Trailer

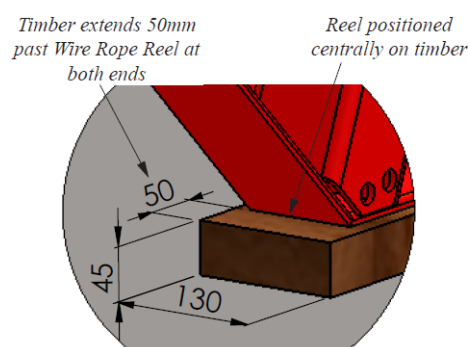


Figure 3: Detail View – Minimum Timber Dimensions

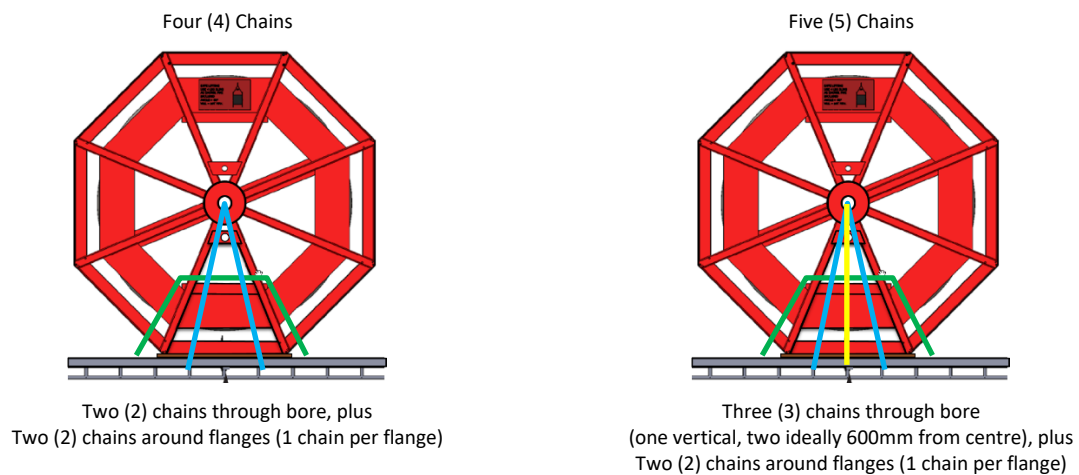
Load Restraint – Full Octagonal Reels

Table 1: Weight Limits and Chain Requirements

Maximum Total Mass ^{1,2} (tonnes)	Minimum Number of Chains Required	Total Number of Chains Required ³
0 – 9	2	4
9 – 13	3	5

Notes:

- 1 Maximum total reel mass includes both reel mass and wire rope mass (including any fittings) combined
- 2 Maximum total mass possible is governed by reel WLL specified on reel.
- 3 An additional chain around each flange is required (i.e., 2 chains per reel) to further restrain lateral movement.



In both cases, up to 2 chains on the same tie point is acceptable.

Figure 4: Chain Configurations

Load Restraint – Empty Reels

- ✓ All *Essential Requirements* outlined on page 3 apply to Empty Octagonal Steel Rope Reels.
- ✓ Ensure overall height of the loaded vehicle is within relevant regulations, as suspension height is likely to be higher due to the reduction in mass of the empty reel.
- ✓ Empty reels require a minimum of 1 chain vertically through the bore.
- ✓ Empty reels must also be on rubber or timber; **no steel-on-steel contact**.
- ✓ As with full reels, an additional chain each side around flange, to prevent reel from twisting.

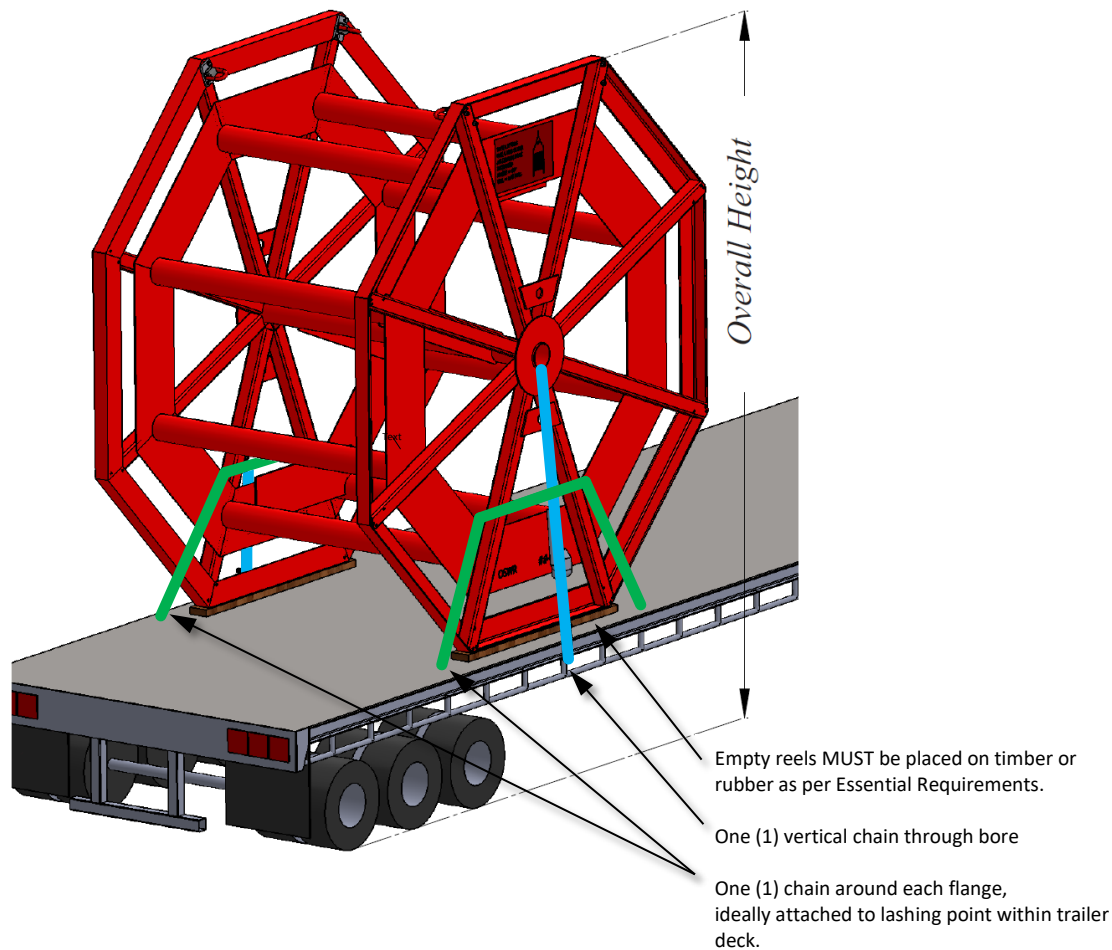


Figure 5: Empty Wire Rope Reel

VERSION HISTORY

Version	Issue Date	Key Changes	Authorised by	Review Date
1	23/10/2018	Migrated from 'WH-0007- HEX REEL LOAD RESTRAINT' Point Lesson (in use since 2009) and previous entity (MolyCop/OneSteel) guidelines (BlueScope Steel LRG148 Draft1A 7/3/14)	BR	23/10/2020
2	21/09/2021	Version Update – no changes	GC	21/09/2024
3	07/08/2024	Re-Branding	PB	07/08/2027