LTSC Trailer Lifting Chain Check and Compliance Certificate Procedures

LTSC Trailer Lifting Chain Inspection Requirements

All Log trailer lifting chains must be inspected **prior to every lift,** and as part of a regular service schedule and also on an **annual basis every 12 months** to ensure they are in safe working condition and remain within the manufacturer's specified working load limits.

Important: *This document may only be completed by a competent person as per guidelines below.*

Competent Person Definition: A person with knowledge of truck servicing and measurement tools such as a mechanic, transport manager or experienced vehicle inspector, trained service manager, engineer or manufacturer's representative.
IF IN DOUBT CONTACT YOUR TRAILER MANUFACTURER.

Inspection Checklist

1. **LTSC Trailer Lifting Chain Check & Compliance Certificate**
    - All fields must be **accurately and completely filled out**.
2. **Component Inspection**
    - **Bridle links, Hammer locks, Uni locks, lifting rings, and chains** must be inspected for wear.
    - No component should show **more than 10% wear**. If wear exceeds this limit, the component **must be replaced**.
    - Ensure there is no twist in the chains.
3. **Chassis Attachment Points**
    - Inspect all chassis attachment points for **signs of wear, deformity, or cracks**.
4. **Height Ratio & Lifting Limits**
    - Measure the height ratio and ensure it **meets lifting requirements**.
    - Refer to the **drawings and calculations** included in this document for compliance.

NOTE: Replacement Documentation
It is recommended that you keep good documentation of all replacement components and consider taking photographs of all replacements.

Wear limits

The maximum allowable wear of any component is 10% of the original dimension. This applies to the link itself, including the pin, and any other components within the lifting assembly. E.g. 16mm – 10% = (16mm-1.6mm) = 14.4mm minimum for 16mm chain and components.

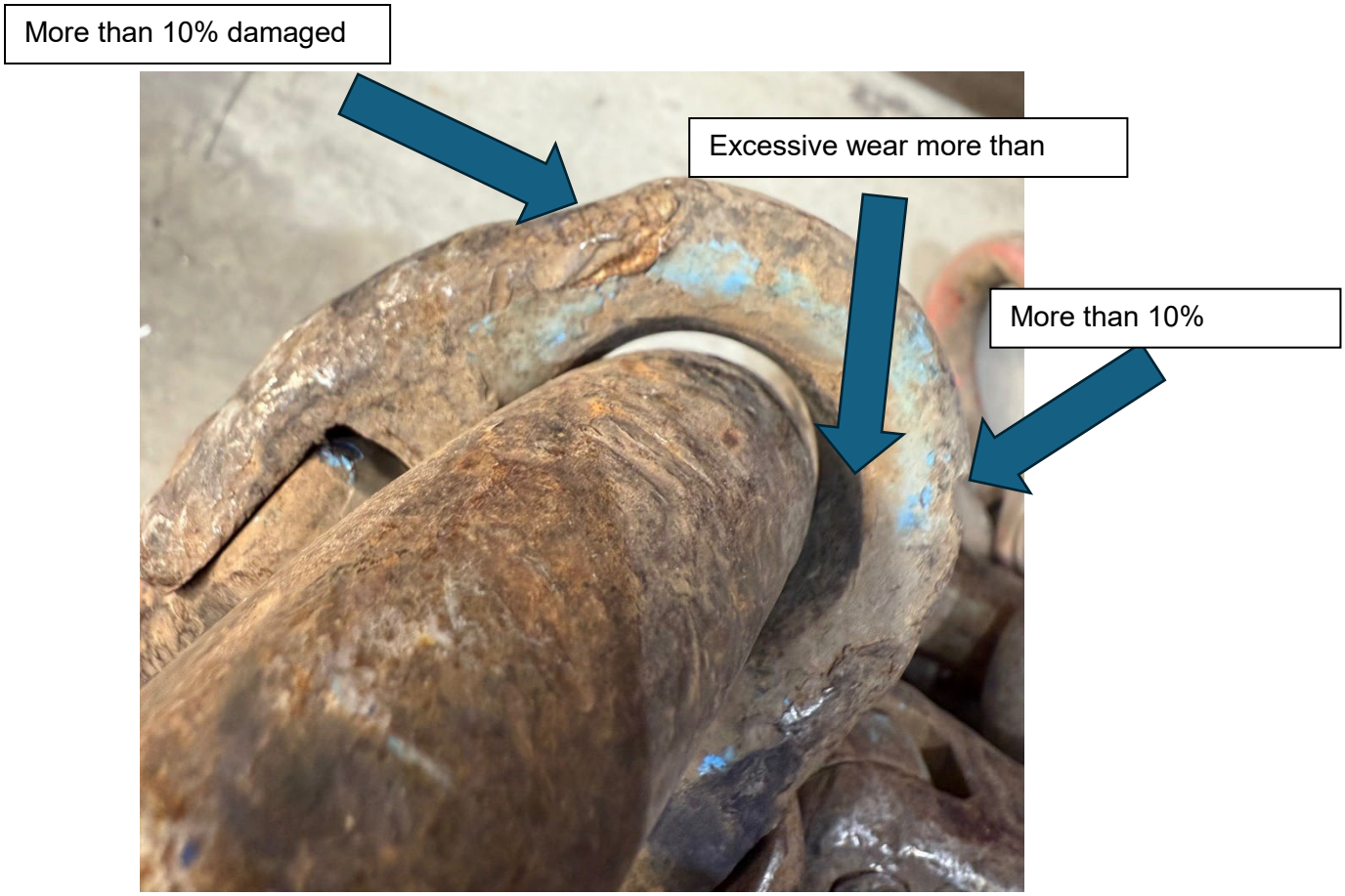
Exceeding this wear limit means the link must be removed from service.

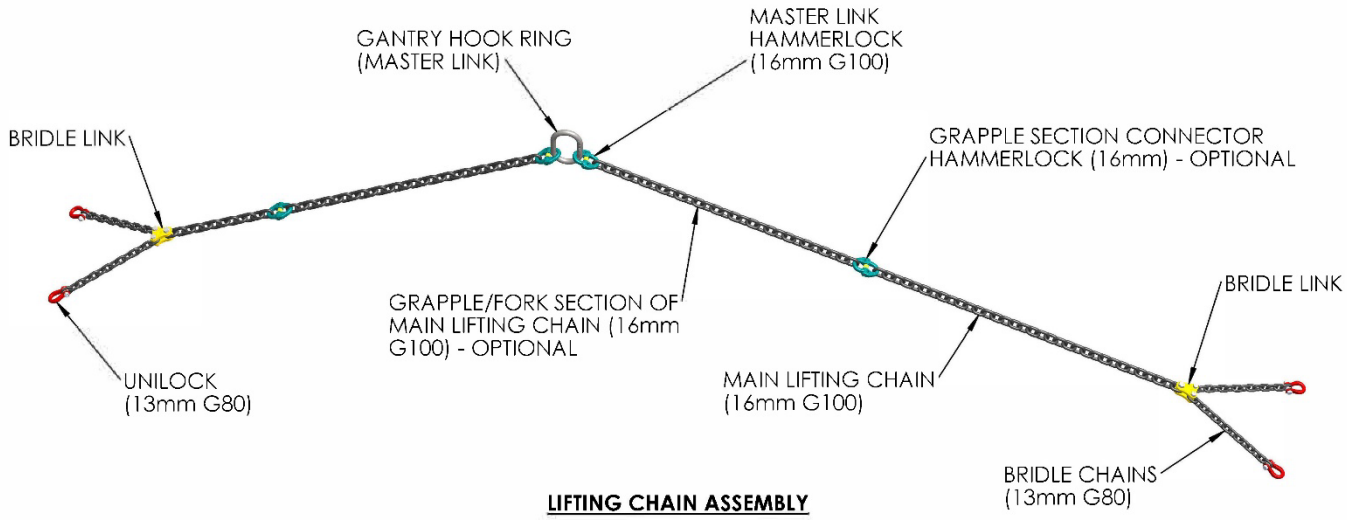
Visual Inspection:
Regularly inspect connecting links for signs of wear, deformity, or damage, including bent master links, deformed chains, or any fittings showing signs of damage.

Removal from Service:
If the wear limit is exceeded, or if any damage is detected, the connecting link must be removed from service and replaced.

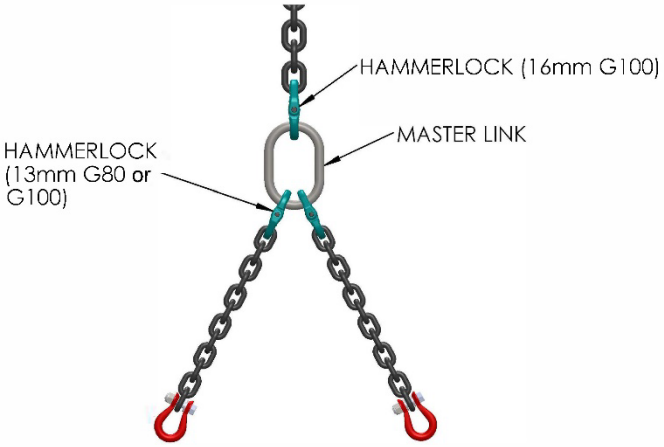
Proper Maintenance:
Following the manufacturer's recommendations for inspection, maintenance, and usage is crucial to ensure the safety and integrity of the lifting assembly.

Example below.
Same wear and damage applies to the chain, lifting ring, Uni locks and chassis mount





LIFTING CHAIN ASSEMBLY



STANDARD BRIDLE ASSEMBLY

MANUFACTURERS BRIDLE ASSEMBLY
REFER TO MANUFACTURER FOR RATING,WEAR LIMITS AND COMPONENTS

A PRODUCER STATEMENT SHOULD BE PROVIDED BY THE BRIDLE LINK MANUFACTURER

1. PURPOSE:

The purpose of this Control Sheet is to assess each individual trailer lifting chain for conformance to the LTSC code, regardless of trailer manufacture as a minimum Code of Compliance to the industry standard.

The assessment is of the chain, including the lifting ring and joining mechanisms only.

The chassis attachment points are presumed to be manufacturer designed, approved and tested but should be visually checked for damage, wear or cracking.

2. TOOLS REQUIRED:

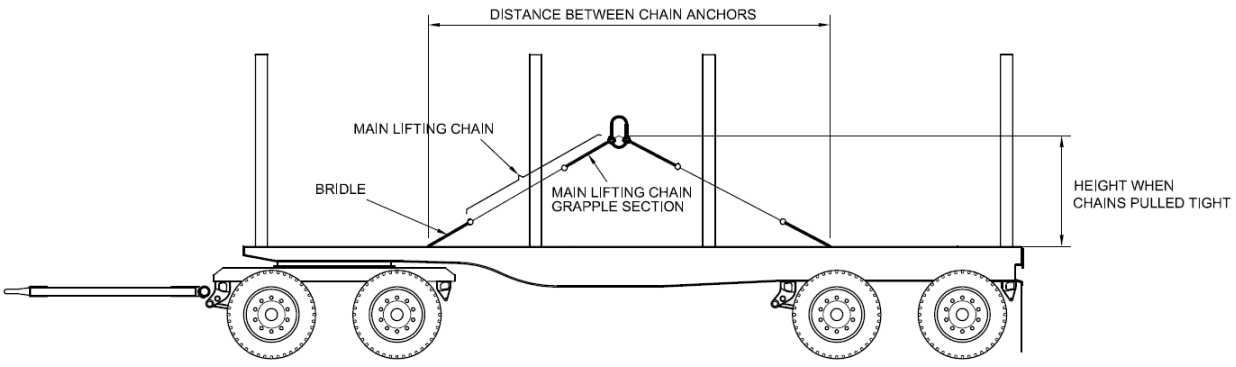
2.1 Tape measure
2.2 Measuring callipers
2.3 Lifting device to extend and hold chain taut.

3. PROCESS:

3.1 TRAILER DETAILS

Make	
Model	
Registration Number / VIN Number	
Owner/Operator	
Fleet Number	
TARE Weight (kg)	
Distance between Chain Anchors (m)	
Measured height when chain pulled tight if known (m)	

NOTE: TARE Weight rounded to 100kg upwards: i.e.: 6120kg = 6200kg for calculation purposes.



3.2 Complete the Height Ratio Indicator Calculations

3.2.1 Determine minimum chain height ratio for tare weight from table

Height ratio = _____

Height ratio	Tare (16mm Grade 100 chain)
0.22	6.45
0.23	6.69
0.24	6.93
0.25	7.15
0.26	7.38
0.27	7.61
0.28	7.82
0.29	8.02

3.2.2 Calculate minimum chain height

Minimum height when chain pulled tight = **Height ratio** × **Distance between chain anchors**

Minimum height when chain pulled tight = _____ × _____

Minimum height when chain pulled tight = _____

3.2.3 What is the final measured height when chain pulled? _____

Note: when deciding how high to set your chain, other than the minimum height from the above calculation, the usability of the chain needs to be considered. For example, it is recommended to use a maximum height of 1600mm for use with wheel loaders to ensure the trailer can be lifted high enough. This will vary depending on individual use cases.

3.2.4 Is the measured height when chain pulled greater than the minimum?

Yes ☐ No ☐

3.3 Check chain for wear visually, particularly looking for worn or damaged links, hammerlocks and lifting rings.

3.3.1 Check several links for wear with calipers through the end of the link and in the middle of the link plus anywhere showing any signs of wear on contact.

NOTE: Wear is normally more prevalent close to the lifting ring 6 to 10 links each side but a full check of the whole chain is necessary.

NOTE: If chain marking is obscured and can't be identified, chain is deemed to be unfit, unless other evidence can prove its grade authenticity (e.g. invoice, documentation or producers statement from the chain supplier).

NOTE: If Nylock nuts are removed during inspection or replacement of parts they must be replaced with new Nylock nuts.

NOTE: REFER TO LTSC GUIDELINES IF NOT COMPLIANT

3.4 Any chain link, hammerlock, joining device or lifting ring showing deformity or wear of 10% or more must be condemned as soon as possible. NB: Before lifting the trailer safely again

NOTE: Any and all replacement equipment must be procured from an approved supplier.

4. INSPECTION DATE AND COMMENTS

I confirm I am competent to complete this inspection, and that the above information is true and correct at the date below

Signature: _____ Date: _____

Name: _____

Useful Tables below with boxes for recording relevant information

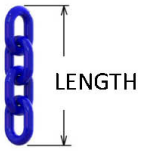
SPECIFY CHAIN MAKE UP as provided by APPROVED SUPPLIER.

	APPROVED SUPPLIER	GRADE G80 - G100	SIZE mm	WLL (Work Load Limit) Rating (tonne)
Bridle Chains				
Bridle Connectors at ring*				
Bridle Ring / link				
Bridle Connectors at chassis				
Main Lifting Chain				
Main Lifting Chain – Grapple region				
Master link Ring				
Main Lifting Chain Connectors				

Parts Replaced	Why	Location on assembly

Chain sling configuration

All components to be identified and confirmed



CHAIN

MAIN LIFTING CHAIN FRONT			
SIZE	GRADE	LENGTH	LINKS

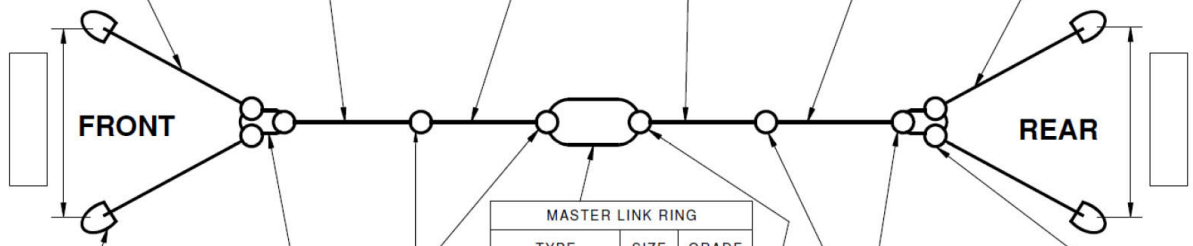
GRAPPLE CHAIN REAR			
SIZE	GRADE	LENGTH	LINKS

BRIDLE CHAINS REAR			
SIZE	GRADE	LENGTH	LINKS

BRIDLE CHAINS FRONT			
SIZE	GRADE	LENGTH	LINKS

GRAPPLE CHAIN FRONT			
SIZE	GRADE	LENGTH	LINKS

MAIN LIFTING CHAIN REAR			
SIZE	GRADE	LENGTH	LINKS



MASTER LINK RING		
TYPE	SIZE	GRADE

BRIDLE RING / LINK		
TYPE	SIZE	GRADE

BRIDLE RING UPPER CONNECTOR		
TYPE	SIZE	GRADE

MASTER LINK RING CONNECTOR		
TYPE	SIZE	GRADE

CHASSIS CONNECTOR		
TYPE	SIZE	GRADE

BRIDLE RING LOWER CONNECTOR		
TYPE	SIZE	GRADE

MAIN LIFTING CONNECTOR		
TYPE	SIZE	GRADE