

WAGON TYPE	COMMODITY
KWA Fastrol	Plant Machinery Bulldozers & Excavators
<p><b>Carrying Capacity:</b> Gross Laden Weight 43.50 tonnes Tare Weight 25.2 tonnes Max Weight in Well 14.00 tonnes. For Exact Loading Limits see individual Wagon on TOPS.</p>	
<p><b>Load Positioning:</b> The Bulldozer or Excavator is to be positioned in the well such that the tracks at the rear of the vehicle are backed up against the steel chock. The vehicle whenever possible is to be positioned centrally across the width of the wagon with the vehicle track permitted to overhang the sides of the wagon although it is imperative that this is equal on both sides. The blade is to be offset to give the narrowest possible width. The blade is permitted to overhang the wagon deck by a maximum of 90 mm. The D4/D41 Bulldozer is permitted to be loaded offset laterally to accommodate the blade to be in gauge. Excavator arms shall be lowered to the wagon floor with the bucket tucked under. Where scraper blades are fitted these also need to be lowered. Integral locking devices where fitted shall be used to secure the operator cabs from rotating. Ramp and staging is positioned adjacent to the locating brackets and positioned over the four twistlocks. Care should be taken to confirm that the underside of the ramp/staging is clean of any debris to allow the staging to be correctly positioned and seated on the wagon.</p>	
<p><b>Stanchions:</b> N/A</p>	
<p><b>Bolsters:</b> N/A</p>	
<p><b>Dunnage:</b> A steel chock is positioned at the rear of the wagon well, and the vehicle is to be reversed up tight and square to the chock.</p>	
<p><b>Unsecured Loads:</b> Not Permitted.</p>	



Laser Dozer



Tracked Excavator

**Securing Equipment:**

Securing straps and tensioners are not supplied with the wagon.

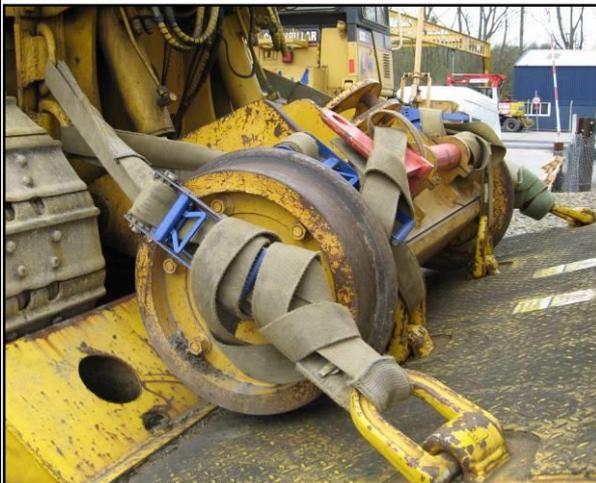
**Bulldozer Type D4/D37/D41**

The bulldozer has four 'D' rings to the rear of the vehicle that are permanently attached, two to the right and two to the left.

**Dozer Upper/Outer Ring:** - an endless ratchet strap is to be passed through the 'D' ring and secured to the outer 'D' ring position (on the same side) of the wagon.

**Dozer Lower/Inner Ring:** - an endless ratchet strap is to be passed through the 'D' ring and secured to the inner 'D' ring position (on the same side) of the wagon.

**Note** Position the ratchets in the best position to avoid obstructions and to permit ratchets to easily be released.



Where road rail wheels are present these should be lowered as far as possible and securing straps positioned over the top.

**D4/D37 FRONT:**

To the front of the bulldozer are two 'D' rings fitted to the outside of the blade 'A' frame. Straps are to be placed through the 'D' rings on both the bulldozer and the wagon and tensioned via a hand tensioner. The side cargo winches may be used as securing points if the 'D' rings along the wagon solebar are not accessible due to the position of the bulldozer in relation to the strap angle. Straps are to be placed across the tracks at the front of the bulldozer from cargo winch to cargo winch.



A strap is to be placed over the bulldozer blade and tensioned via the cargo winches.

**D41 Front:**

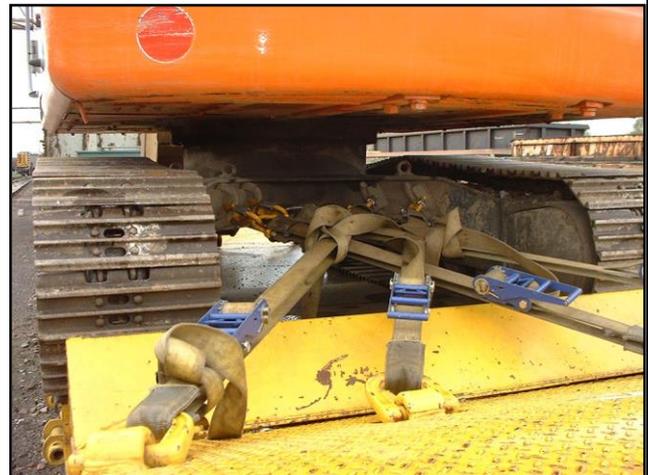
The front of the bulldozer has 'D' ring securing points on top of the blade 'A' frame; an endless ratchet or wagon strap is secured through these rings and secured to the opposite side wagon winch or wagon 'D' ring. (it is permissible to position the ratchet strap around the winch barrel if the 'D' ring is not in a suitable position.) The blade is secured via a strap placed around the blade and to the cargo winches on the wagon side. It may be necessary to position the blade on the upslope of the wagon well, care shall be taken to check that laser masts remain in gauge. Straps are to be placed around the tracks at the front of the bulldozer from cargo winch to cargo winch.

### Excavators

Excavators have four securing rings on the front and rear of the track frame.

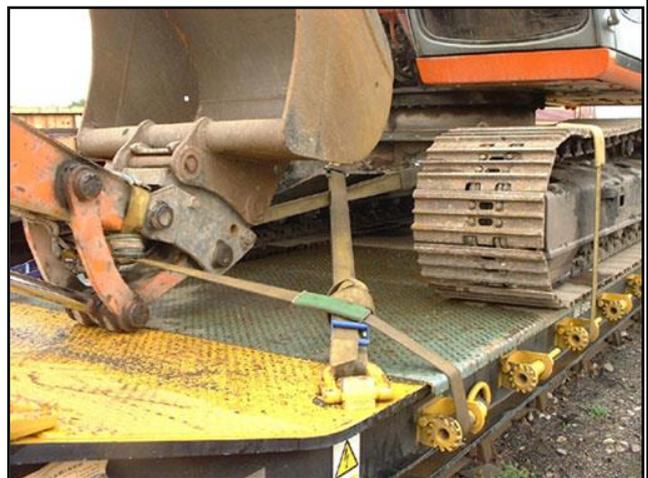
**Rear:** - Four endless ratchet tensioner straps are placed through the excavator 'D' rings to the wagon 'D' rings.

The outer 'D' ring strap of the wagon shall cross to the opposite side of the excavator and secure to the inner 'D' ring. The inner 'D' ring strap of the wagon shall cross to the opposite side of the excavator and secure to the outer 'D' ring. The four rear straps are cross-braced.



**Front:** - There are two straps to the front of the excavator, cross-braced from the outer wagon deck securing points, passing under the bucket and secured to the excavator securing point on the opposing side. A single strangle wrap secures the jib arm/bucket, attached to opposing side winches.

A throw over strap over the front of the tracks to each side winch.



**Voids:** N/A

**Doors/ Sides:** N/A

**Special Equipment:**

**Ramps & Staging**

The ramps and staging have been fitted with twist-locks that secure the staging and ramps at all 4 corners.



Due to the ramp and staging being on raised twist-locks it is important to check that the under-frames ledges on both sets of equipment is clean of all ballast/stone etc.

Plant can not be loaded without adequately rated securing rings fitted. All plant should have this information indicated in the plant 'log book' held in the cab. If there is any doubt advice should be sought from the plant supplier.

Delta hooks may be used if endless assemblies are not available but need to be rated at 20 tonnes. All straps to be rated at 20 tonnes and are to be endless. Heavy-duty strap protection is required where the straps pass through rings and securing points and areas where abrasion may take place. Secutex heavy-duty sleeves are to be used for strap protection across the vehicle tracks.

Plain yellow straps are to be used to secure the blade / bucket and tensioned via the wagon winches.

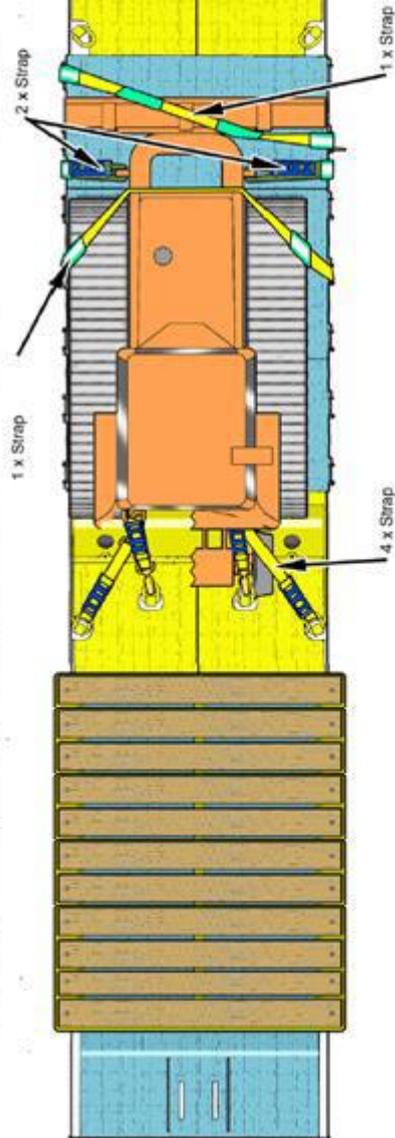
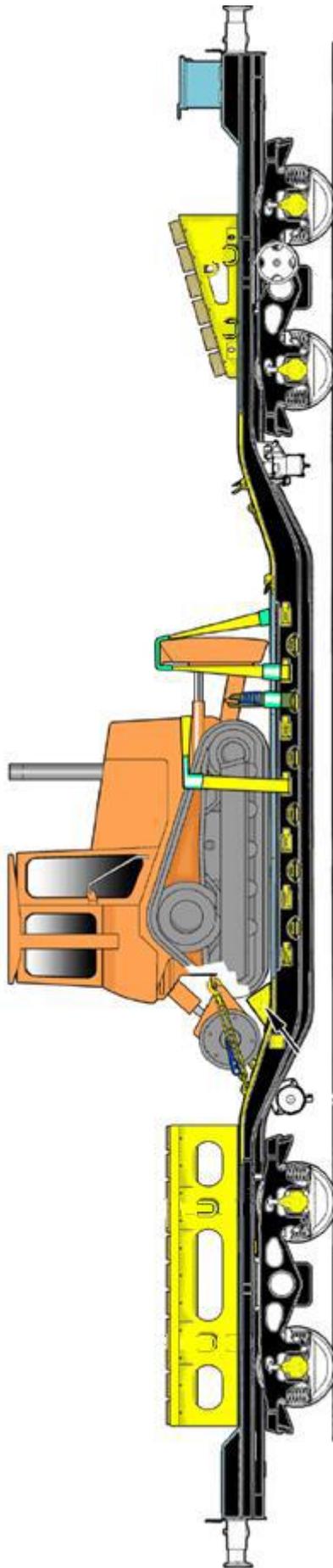
If due to the positioning of the tracked plant it is not possible to use the 'D' rings on the side of the wagon solebar, it is permissible to use the cargo-winch on the solebar as a 'D' ring would be used.

**Note** If hand ratchet tensioners are used across the tracks an 'Out of Gauge' Situation may apply due to the increased width over the hand tensioner.

**Competency Level:** LE Fastrol

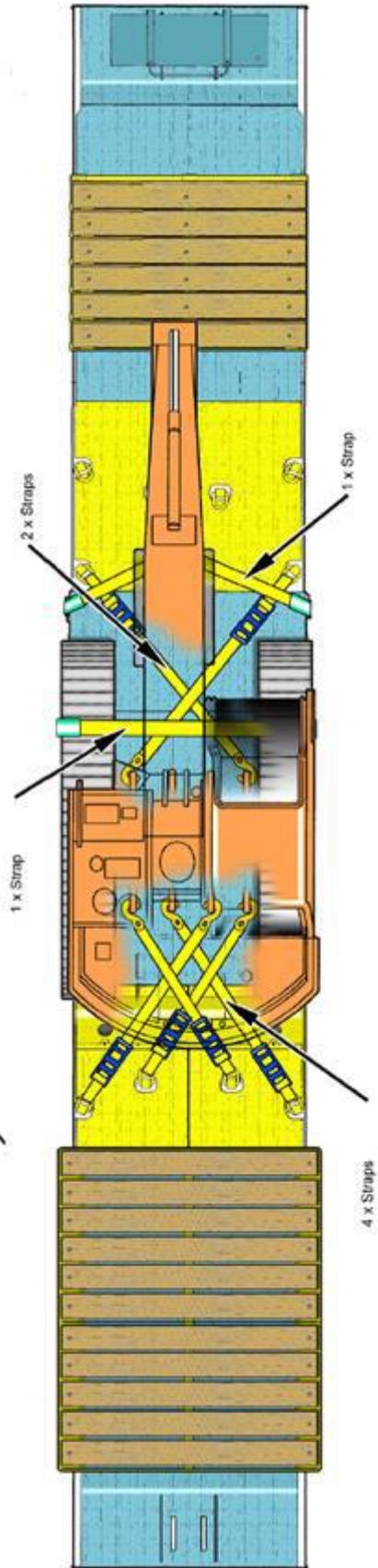
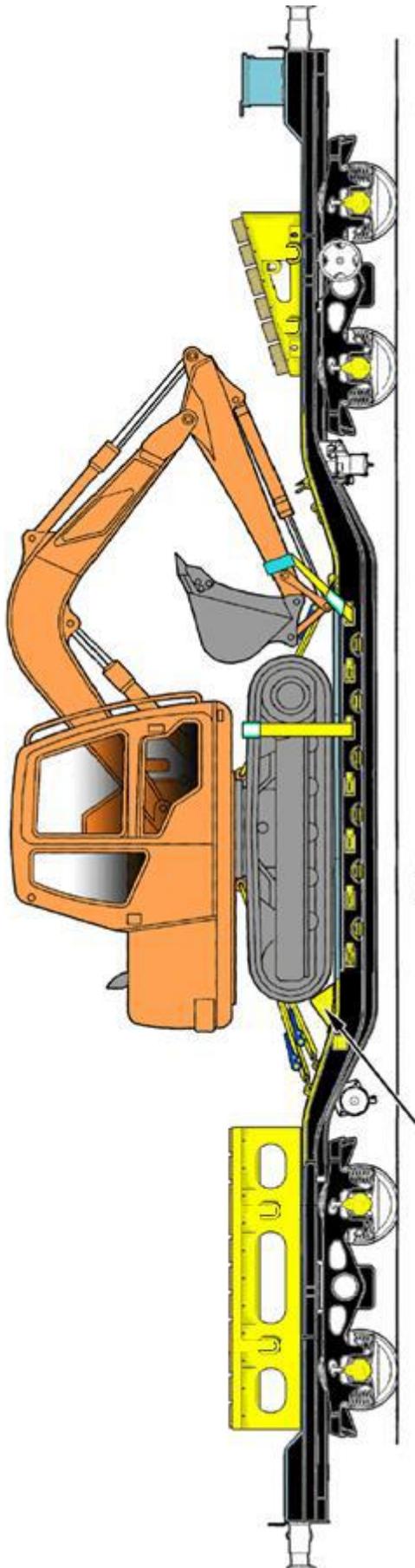
**Safety:** Wear P.P.E at all times.

Reversed to chock



Laser Dozer securing

Reversed to chock



Tracked Excavator securing