Teesoutdoors Mobile Climbing Tower

Operation Guidance

2018

Installation

The Hydraulics and the setting up and installation of the tower will be done by Teesoutdoors authorised staff trained in this operation. Other than in extreme weather changes, there should be no reason for anyone to need to raise or lower the tower.

Once set up the tower operates in the same way as any climbing wall with ground belaying.

Important factors:

There are no ground anchors and no part of the trailer or wall is designed for a direct belay. If needed in an emergency, a sling around one of the wall feet could be used as an indirect and improvised solution. NEVER attach a sling to any part that looks oily, damp, sharp, or is carrying hydraulic or electrical components.

There are no components suitable for lead climbing. Only top roped climbing is permitted.

Helmets are not used in general operations.

Climbing is still hazardous minor injuries can occur!

Belayers MUST remain within 2 metres (3 or 4 paces) of the base of the tower and never walk backwards away from the tower further than this distance. The Belay arms draw a climber away from the wall, don't encourage jumping out!

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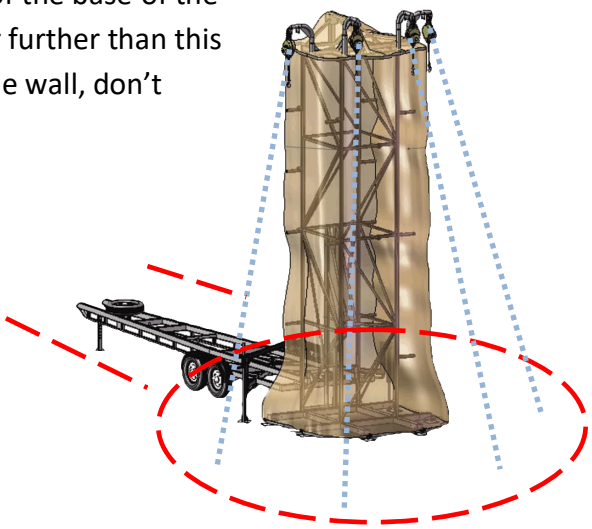
Rough Plan of the belay area

The entire trailer and the belay area need to be marked out to restrict access.



Belaying Systems

Any MTA or BMC recognised belaying system is acceptable, as is any CE marked traceable equipment that is in good condition and if fabric or plastics, less than 10 years old. Its use and history must be known and logged by the owner or user. All operators retain the right to refuse any item of equipment on the basis of being unhappy with it, unfamiliar with it, or uncertain of its origin & history

Risk assessment

The following operations are assessed

Installation ONLY BY TEESOUTDOORS APPROVED PERSONS

Hazard	Impact	Control	Effect
Driving and moving	Collisions	Spotters briefed and deployed around vehicle. Appropriate licensed driver	Risk minimised
Lifting and installing	Hydraulic failure Tower returns to horizontal. Crush Injury	ALL CLEAR of lifting area	Risk Minimised
Weather	High winds Lightning	LOWER at F5 Lower in audible thunder	Risk Minimised
Soft ground	Sinking, consequent toppling risk.	Continuous monitoring Lowering if concern noted	Risk Minimised

Activity Overseen by QUALIFIED CLIMBING LEADERS. SPA, CWA, or higher.

Hazard	Impact	Control	Effect
Rock climbing and Rope Belaying	Falls, slips, impact injury	Use of governing body approved climbing practices. Overseen by Qualified leaders.	Risk Minimised
Auto Belay	Helmet snagging (Choking) Failure	NO HELMETS on wall & only use belays within 6 months of inspection and inspect each deployment day.	Risk Minimised
Wall and holds in a	Head impacts	Swing arms draw climber away from the wall	Risk Minimised

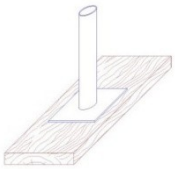
INSTALLATION GROUND LOADING INFORMATION

The tower can be installed on any relatively flat firm surface including grass and tarmac, all technical data is academic and the real world delivery relies on the skills and experience of the operators, their field judgement and estimates.

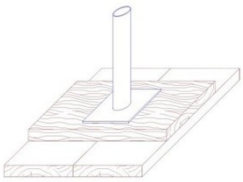
During installation, the weight of the trailer is lifted from the four wheels and temporarily supported on two hydraulic legs and the nose of the trailer plus an axle stand. This load is transferred to six screw adjusted feet supporting the tower during operation. Because during installation there are very few people at risk, the focus of the loadings is for the operational phase.

The following are rough POINT LOADING ESTIMATES:

The tower weighs 1500 to 2000kg and thus exerts a force of about 20kn through six feet each of which is 0.2m x 0.2m. Evenly spread this is 4kn per foot (4kn / 0.04m^2) =100kn/m^2 load per foot.



This is spread by bearing boards. As shown right, (4kn / 0.08m^2) = 50kn suitable for tarmac and solid ground.



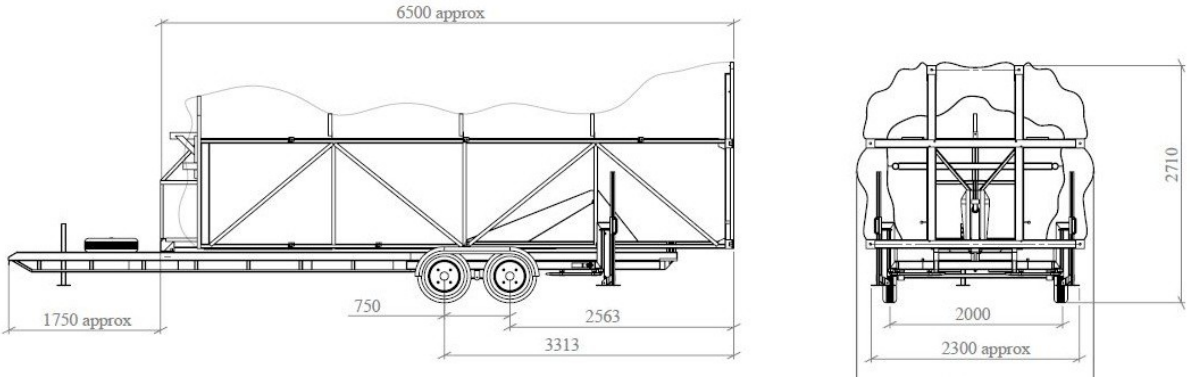
This pattern (Left) can be used on suspect or soft ground. Spreading the point load to approximately (4kn / 0.203m^2) = 20kn per square metre, well below scaffold loads. Note the two hydraulic legs carry higher loads temporarily.

This multiple board system may be used under the hydraulic legs to manage installation.

This guidance is to support trained users making field based judgements on a site on the day. It does not replace ongoing observation and monitoring

TOWING CRITERIA & THE LAW (As we see it)

According to the Department of transport towing guidance, October 2016, “a trailer can be a maximum of 7m long by 2.55m wide.” & “where the trailer is specially designed to carry long loads (eg boats, gliders), the 7m limit does not apply.” The Rock-n-road tower is at the legally permitted maximum dimensions. Drivers will all need Cat E on their licence.



The following is our interpretation of the current driving guidance from VOSA and DVLA. It makes it clear that despite the commercial element of our work, the trailer and towing vehicle are subject to UK legislation but exempt from operator licence and tachograph law.

The trailer and load weigh a total of 2,200 kg GVM this must be added to the GVM of the towing vehicle to establish Gross Train Weight and as a result the appropriate licence. This guidance assumes the combined GTW does not exceed 7.5 tonnes.

The climbing tower is exempt from operator licensing because on Page 5 of the VOSA Goods Vehicle Operator Guidance (GV74 revised Dec 2011) the following are excluded:

1. A vehicle with equipment permanently attached to it for the life of that vehicle.
2. Tower wagons and associated tools and equipment.
3. Dual purpose vehicles are exempt (e.g. Landrovers)

According to DVSA Drivers’ hours and tachograph rules: goods vehicles (GV262) The Towing vehicle and trailer is exempt from EU tachograph requirements legislation:

1. Vehicles or combinations of vehicles with a maximum permissible mass not exceeding 7.5 tonnes that are used for carrying materials, equipment or machinery for the driver’s use in the course of their work and which are used only within a 100 km radius from the base of the undertaking and on the condition that driving the vehicle does not constitute the driver’s main activity.

This means that UK domestic restrictions apply; in summary driving is limited to 4 hours per day, no records are required to be kept. Actual distances may exceed 100km but remain within a 100km radius of the operating base.