

# Choosing a loader crane



Lorry loaders that are fitted with grabs will have had much more use than those with hooks.

Before making a new or used purchasing decision, consider the following:

- The reach required.
- The weight to be lifted at the required reach.
- Is the loader crane to be used with an attachment.
- The weight of any attachments and how they affect the capacity of the loader crane and vehicle.
- The expected life of the loader crane.
- Lifetime costs.
- The remaining payload of the chassis once a loader crane is installed.
- Operator position - Ground Control, Platform, Top Seat, Remote Control.
- The type of lifting (lifting cabins may require a control system with higher precision than a grab crane).
- The availability of parts and service facilities.
- Re-sale value of the equipment.
- If an oil cooler should be included in the specification.

#### Choosing an installer

The installer should have access to the chassis manufacturer's bodybuilder guidelines and the installation instructions from the crane manufacturer. The installer should work within a quality procedure,

using coded welders and traceable materials. The finished loader crane installation must be subject to a thorough examination and load test, which must be carried out by a competent person. The competent person must have adequate knowledge of the equipment and be sufficiently independent and impartial to allow objective decisions to be made.

Check that the installer has the knowledge and equipment to commission and calibrate any crane bound systems. Many new cranes have complex, programmable safety systems, which must be set before the crane can be placed into service (the crane's life expectancy can be affected if the loader crane is incorrectly calibrated). Ask if the installer is an ALLMI member.

Remember, an incorrectly mounted loader crane is not only unsafe to use but can also render the vehicle unsafe.

#### The Operator

Operators have a duty to operate lorry loaders safely, but this can be made extremely difficult by ill-informed specification choices, which can put pressure on the operator to use the crane at the limits of its operating capability and can sometimes encourage improper use. This not only affects the safe use of the equipment but can also reduce the crane's life expectancy.

#### Sale

Should you agree to purchase the loader crane, you need a bill of sale stating what you've bought, the vendor's name and how much you've paid. The safest way to pay is by cheque or bank draft. A request for cash may indicate that the seller is not the rightful owner or that he/she is not registered for VAT or paying tax. Also, a cash transaction will be

untraceable if the seller and/or the vehicle disappear after you have paid for the equipment.

#### Second Hand Loader Cranes

As with buying new equipment, before purchasing a second hand lorry loader you need to understand what will be required of it. Ask yourself, what will it be used for, at what radius and lifting what type of load. If a clamshell bucket or brick grab is to be used, check that the loader is fitted with the necessary hydraulics, hose and pipe work, as these can be expensive to retro fit. It is also important to check that the chassis meets with your requirements for use in terms of axle loads, available payload and body length. In addition, check that the chassis has a current MOT certificate and logbook.

#### Legislation

A loader crane which is sold on to another company will be regarded as new work equipment (this includes attachments), and as such the purchasing company will have to ensure that the equipment meets the requirements of the Provision and Use of Work Equipment Regulations (PUWER) and the Lifting Operations and Lifting Equipment Regulations (LOLER) before being put into use (please note that this law affects both complete lorry loaders, i.e. chassis plus crane, being sold second hand as well as second hand cranes being re-mounted on to a new or second hand chassis). Regulation 7b of LOLER requires relevant equipment to be fitted with devices such as rated capacity indicators and rated capacity limiters. Contact the loader crane manufacturer or dealer to check that the loader crane meets the requirements of PUWER and LOLER.



Do you need a top seat for your application?



When buying a crane for lifting cabins greater precision is required. Work At Height Rules also come to mind with this pic.

It's also important to note that a loader crane or an attachment that carries the manufacturer's CE mark should meet these requirements. If the loader crane or attachment does not carry a CE mark it will be necessary to check with the manufacturer (or competent person) to determine how it can be brought into line with these regulations.

#### Documentation

Ask to see all of the loader crane's documentation. This should include:

*Certificate of Thorough Examination not more than 12 months old (Note: even when the loader crane has a current Certificate of Thorough Examination it would be wise to have a new examination and test carried out by an independent competent person.*

*Log Book (i.e. continuous record of maintenance, services inspections, etc)*

*CE certificate for cranes manufactured after 1st January 1995*

*Proof of ownership*

*Operator's Manual*

*Crane serial plate*

Examine the documentation closely to see if any alterations have been made to it. Confirm that the loader crane's manufacturer, model, type and serial number correspond with the loader crane documentation. When mounted on a vehicle, confirm that vehicle registration and VIN numbers correspond with the vehicle documentation.

Loading Group	Typical operation	Average load cycles	Full rated load cycles
B2	Hook Duty	60,000	20,000
B3	Grab or Bucket	200,000	60,000
B4	Timber or Scrap	600,000	200,000

#### Life Expectancy

Loader cranes do not have an infinite life. The Loader crane is designed around the fatigue life of the materials used in its manufacture. The fatigue life of a loader crane can be expressed in cycles and these are categorised depending on the type of operation.

Before purchasing a used loader crane, its remaining life expectancy should be established. It is important to note that loader cranes equipped for bucket or grab operation will almost certainly have performed a much greater number of load cycles than a loader crane equipped with only a hook. A loader crane that is over five years old will in all probability have exceeded its maximum load cycles. The Nov/Dec 05 issue of ALLMI Focus dealt with life expectancy, Guidance Note 001 on the ALLMI website also deals with this.

#### Checking it out

If you're not confident in your ability to check a used loader crane, ask a person with specialist knowledge to accompany you. In any case two pairs of eyes are

better than one, and a second opinion can often sway an undecided buyer one way or another. When you go to look at a loader crane, wear sensible clothes that won't get ruined when you make the inspection. Check that no modifications have been made to either the crane structure, the hydraulics or the safety systems.

If you have any doubts about the crane's condition, seek advice from a qualified engineer. If the seller won't agree, you can only assume that there is a problem with the equipment. Never let yourself be pressured into buying a loader crane if you have any misgivings about the product or the seller.

For further information on any of the issues mentioned in this article, please visit the ALLMI website and download the ALLMI Guidance Notes free of charge.

If you're a fleet owner that might benefit from ongoing advice relating to all issues concerning lorry loaders, ask for details on membership of the ALLMI Operators' Forum.



## ALLMI accredited Lorry Loader Operator Training Providers

### Nationwide

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