

Safety of **Lorry-mounted Cranes**

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Considerations when Purchasing and Assembling Lorry-mounted Cranes (including brand-new and second hand):

Lorry-mounted Crane Owner (Crane Owner) and relevant persons should consider thoroughly and comply with the following requirements on purchasing and assembling lorry-mounted cranes (Cranes):

Planning the procurement of lorry-mounted cranes

- The Crane Owner should obtain specifications of a loader crane (e.g. Safe Working Loads, Technical Specifications, Configurations and any other relevant information) from the Loader Crane Supplier. The Crane Owner should make reference to the above information to select an appropriate lorry for the loader crane.
- The Crane Owner after choosing an appropriate lorry should pass the relevant information of the lorry to the Loader Crane Supplier and secure the basic information and specifications of a suitable mounting frame for the relevant lorry from the Loader Crane Supplier.

Local assembly and testing of lorry-mounted cranes

- The Crane Owner should pass relevant information of the mounting frame and loader crane, which includes design requirements and installation specifications provided by the Loader Crane Supplier to the Body Builder.
- The Body Builder should design and manufacture a suitable mounting frame for assembling the loader crane onto the chosen lorry according to the relevant information provided by the Loader Crane Supplier.
- After completion of the assembly, the Body Builder should conduct Functional Test, Performance Test and Stability Test (including both Dynamic and Static Tests), and provide relevant reports to the Crane Owner.
- Moreover, the Body Builder should also confirm whether the Safe Working Load Chart provided by the Loader Crane Supplier is still applicable for use. If it is not applicable, the Body Builder and/or Loader Crane Supplier should prepare a new Safe Working Load Chart after the assembly of the lorry-mounted crane, calibrate and test the Automatic Safe Load Indicator and Overload Cut-out Device accordingly.

Independent inspections and tests of the lorry-mounted crane after installation

Having had passed all of the above tests and confirmed the crane's Safe Working Load Chart, the Crane Owner should appoint an independent Competent Examiner to carry out independent inspections and tests based on the purchasing requirements and the lorry-mounted crane's overall technical parameters provided by the Body Builder.



Disclaimer

Whilst reasonable efforts have been made to ensure the accuracy of the information contained in this publication, the CIC nevertheless would encourage readers to seek appropriate independent advice from their professional advisers where possible and readers should not treat or rely on this publication as a substitute for such professional advice for taking any relevant actions.

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- The Competent Examiner should confirm that the installation has fulfilled the Loader Crane Supplier's requirements; and revalidate those tests performed by the Body Builder, which include but not limited to conduct the verification of the following items:
 - I. Review of the proposed design by the Body Builder;
 - II. Functional test:
 - III. Performance Test;
 - IV. Stability test (including both Dynamic and Static Tests);
 - V. Testing of the Automatic Safe Load Indicator and Overload Cut-out Device;
 - VI. The Safe Working Load Chart for the assembled lorry-mounted crane and;
 - VII. Verification of the entire assembly and validation of the test reports provided by the Body Builder.
- After the above checking, the Competent Examiner should reinstate and seal / record appropriately the relief valves of the main boom cylinder and the second boom cylinder, the main valve and the Automatic Safe Load Indicator with the assistance from Crane Owner, Body Builder and Loader Crane Supplier if necessary, and provide a relevant signed independent report to the Crane Owner (including items I to VII above).

Statutory requirements of lorry-mounted crane before use

- Upon completion of the above procedures, the Crane Owner should properly keep the related reports, and place a set of copies with the lorry-mounted crane for reference.
- The Crane Owner shall, among other things, follow the requirements of the Factories and Industrial Undertakings (Lifting Appliances and Lifting Gear) Regulations, Cap. 59J, to conduct periodical testing, thorough examination and inspection of the lorry-mounted crane after change of ownership of the crane and/ or before its first use.



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Definitions:

- Lorry-mounted crane means a power-driven loader crane mounted on a lorry with a load carrying capability.
- Crane Owner includes the lessee or hirer thereof, and any overseer, foreman, agent or person in charge or having the control or management of the lorry-mounted crane, and the contractor who has control over the way any construction work which involves the use of the lorry-mounted crane is carried out and, in the case of a lorry-mounted crane situated on or used in connection with work on a construction site, also includes the contractor responsible for the construction site.
- Loader Crane Supplier means a/an manufacturer/ supplier/ agent producing, supplying or selling loader cranes.
- Body Builder means a company or person who performs any kind of work in connection with the installation of loader cranes in lorries, and includes designing and manufacturing of mounting frames for the lorry-mounted cranes' installation work according to the relevant information provided by the Loader Crane Supplier (if applicable).
- Competent Examiner means a Registered Professional Engineer registered under the Engineers Registration Ordinance (Cap.409) within the disciplines of Mechanical Engineering or Marine & Naval Architecture.

Reference Documents:

- Factories and Industrial Undertakings Ordinance, Cap. 59
- Factories and Industrial Undertakings (Lifting Appliances and Lifting Gear) Regulations, Cap. 59J
- Code of Practice for Safe Use of Mobile Cranes, Labour Department
- Guidance Notes on Inspection, Thorough Examination and Testing of Lifting Appliances and Lifting Gear, Labour Department
- EN 12999: 2011+A1:2012 Cranes Loader Cranes
- BS 7262 Specification for automatic safe load indicators



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