



OBJECT HANDLING – Guidance Note

November 2006

Application of the loading control requirement of the Machinery Directive to Backhoe loaders – ref. 98/37/EC Annex I clause 4.2.1.4

The revision of the harmonised safety standard EN 474-1 and EN 474-4 for backhoe loaders is nearing completion (anticipated publication Qtr 3 2006) and contains many new and clarified requirements. When published, a transitional period of 24-months will exist to enable manufacturer to transition from the current to the new standard for demonstrating conformity to the requirements of the Machinery Directive.

With the pending release of this new standard, the CEA is providing to manufacturers a clarification for the requirements for loading control on backhoe loaders.

The standard requires that the backhoe portion used in object handling operation (suspended loads) and with a rated object handling capacity equal or greater than 1 000 kg, or an overturning moment greater than 40 000 Nm, be equipped a boom lowering control device, an with an acoustic or visual warning device to indicate when the rated object handling capacity/corresponding load moment is reached, and a load capacity chart.

Note: the rated object handling capacity is the maximum handling capacity (machine performance) determined in the most favourable condition. The rated object handling capacity of a machine cannot be limited by specific components i.e. the rating of a shackle.

Therefore to comply with the standard, the backhoe portion of backhoe loaders, designated by the manufacturer as being capable for lifting, should, where the rated object handling capacity is equal to or greater than 1 000 kg, or where the overturning moment is greater than 40 000 Nm, be fitted with:

1. **Boom safety valve** (Lowering control device)
2. **Acoustic or visual warning device** (Load indicator)
3. **Load table/Diagram** (warning sign) to be placed in cabin of machine concerned.

Note: the boom lowering control device is only required on the excavator boom. There is no requirement, at this time, to fit a dipper stick with a lowering control device.

An **excavator lifting point** should not be fitted without the above items of equipment being fitted also (unless the rated object handling capacity is less than 1 000 kg).

This new text now brings in-line the Backhoe Loader with other excavator machinery.

This information is provided by CEA as guidance to manufacturers and is not intended to replace the requirements of the standard or those relevant parts of the Machinery Directive. For compliance, the standards EN 474-1 and EN 474-4, plus the Machinery Directive, must be consulted.

With this information, prior guidance from the FMCEC (now the CEA) issued in April 1997, concerning Object Handling for Excavators, is withdrawn.

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