



This Technical Information Note sets out arrangements for ensuring that replacement components for tower cranes are correctly specified, verified on receipt and (where required) set to the appropriate parameters for the specific crane on which they are to be fitted.

Issues with the supply of replacement components for tower cranes were highlighted by a recent incident involving a replacement trolley motor/brake assembly supplied by a tower crane manufacturer. The replacement motor/brake was installed on the crane and the air gap on the brake release mechanism checked in accordance with the crane manufacturer's manual. Unfortunately the brake torque was incorrectly set by the brake manufacturer and had not been checked by the crane manufacturer before dispatch to the tower crane owner. When the rated load was lifted and moved out to the maximum radius for the rated load, the brake did not have sufficient torque to hold the trolley and it continued to move out until the load hit an obstruction, overloading the crane by a significant amount.

It is essential when ordering replacement components for a tower crane that the following steps are taken:-

1. Replacement components should always be obtained from the crane manufacturer.
If this is not possible, it is essential that they meet the original manufacturer's specification. Ensuring that this is the case is often a complex process involving a full engineering assessment of the component to be replaced.
2. When ordering replacement components the following information should be supplied:-
 - a. Tower crane model;
 - b. Tower crane serial number;
 - c. Part number and description.
3. On delivery, the replacement component should be checked against the order document to ensure that the component meets the required specification. This may be carried out by checking any labels or data plates on the components and if necessary carrying out a comparison with the parts list or carrying out dimensional checks.
4. Where components are adjustable, such as brakes; or require programming with crane specific parameters, such as inverter drives, it is essential that a check is made to ensure that the setting are correct for the specific crane on which the component is to be installed. Carrying out these checks may require the crane owner to request additional data from the crane manufacturer.

If a component is specifically marked to indicate that setting has been carried out by the supplier, this check is not necessarily required.

NOTE: Additional information on the setting of inverters is given in TIN 029 - Repair and Reprogramming of Inverters