

Troubleshooting Crane Problems

Question: Can we troubleshoot crane problems without prior review of work documents? When the end user of a crane has a problem of some type, the description of the problem is usually of insufficient detail to determine the proper repair action. Troubleshooting efforts by qualified individuals are required to determine the cause of the problem of failure and set a course of action for repair.

Troubleshooting of crane problems often requires the disassembly, temporary replacement, or adjustment of load bearing or load controlling parts or operational safety devices. Additionally, the troubleshooting of a crane problem does not always follow a detailed pre-approved written course of action. In many cases, these troubleshooting efforts are accomplished by a crane OEM or BOS contractor, as is often the situation for mobile cranes or cranes under warranty. Requiring the troubleshooting documents to describe the work to be done and requiring review of the work documents prior to starting work is unrealistically burdensome and will extend the mean time to repair a crane beyond reasonable limits. This question was discussed during the recent P-307 training course conducted by the NCC at Bangor. NCC personnel indicated that it was not the intent of the document to require a detailed description of troubleshooting efforts and have this description reviewed by engineering or a designated inspector prior to accomplishment.

Request deviation of P-307 to conduct troubleshooting of crane problems without all aspects of the troubleshooting effort being described in the work documents and without review by engineering or a designated inspector. Once the root cause of a problem has been identified, the repair process will be documented in advance to clearly describe the work to be done, including replacement parts to be installed, and etc., as required by the P-307. This deviation will only be valid until the NCC can revise the wording in the P-307.

Answer: The request to deviate from P-307, paragraph 2.3, is disapproved. However, the following clarification is provided:

Your request is directed to the troubleshooting effort necessary to determine the root cause of a crane problem. Troubleshooting can be divided into two levels. The first level is the initial visit to the crane to determine if there really is a problem. This could involve visual inspections that would not affect certification or require disassembly, repair, replacement, alteration, or adjustment of load bearing parts, load controlling parts, or operational safety devices. Once a problem is verified and a general idea of the nature of the problem is identified, a work authorizing "troubleshooting" document must be issued to proceed to the next level and must be reviewed by the inspector or engineer prior to disassembly, repair, etc.

The intent of P-307 is not to make the process cumbersome but to ensure that critical information vital to the proper resolution of the problem is not lost and to assure that required re-certification actions are taken.