

How can an independent, impartial set of eyes increase the value of your crane? **D. Ann Shiffler** reports.

# Inspection importance



Independent, third-party crane inspections are among the most important aspects of owning a crane. “It’s prudent and very smart,” said Jeff Johnson, president of Professional Service & Repair, based in Columbus, GA. “Probably the primary benefit is having an impartial set of eyes on your machine and who looks at it from an independent standpoint.”

With a third-party inspection report a crane owner gets an accurate analysis of problems, potential problems and deficiencies.

“A guy who works on the crane all the time and then does the inspection maybe can’t see the forest for the trees,” Johnson said. “It’s easy to overlook something you see day in day out.”

Crane inspections are a mandate of

OSHA and generally the rules say the full crane inspection should be conducted at least once a year and under certain conditions more frequently.

## OSHA mandates

There are two OSHA regulations that are used in mobile crane inspections. The General Industry regulation is 29CFR 1910.180. The Construction Regulation is 29 CFR 1926 Subpart CC, most of which falls under 1926.1412. Per this subsection the equipment must be inspected when it is modified, repaired or adjusted, post-assembly (upon completion of assembly), prior to each shift, monthly and annually. Sub-section 1926.1413 mandates that wire rope also needs to be inspected prior to each shift, monthly, and annually. ANSI/ASME B30.5 Best Industry Practices should be used to help guide the mobile crane inspection criteria.

The subject matter experts at Crane Inspection & Certification Bureau consider a third-party inspection to be instrumental in a company’s quality control program.

“True unbiased third-party inspectors have no financial interest in the crane or the maintenance of the crane,” according to CICB.

Many companies see third-party inspectors as a set of objective eyes inspecting the crane. They consider the third-party inspector’s report a “quality control” function, comparing it to the reports submitted by the operators and/or maintenance personnel. The benefits of the inspections performed by a professionally trained, experienced and NCCCO certified inspector can decrease maintenance costs, increase the life and reliability of the equipment, decrease accidents and injuries, achieve OSHA and ANSI/ASME compliance, and improve worker safety and productivity.

What are the major check points of a mobile crane inspection? Boom inspections, oil leaks at cylinders, previous documentation, wire ropes, pendant lines, hydraulic systems and welding, just to name a few, according to CICB. Typical recommendations are repair of leaks on cylinders, replacement of hoses, tires, warning labels or fire extinguishers.

After inspecting the crane, a certified crane inspector will provide copious documentation of the inspection and also will make recommendations for what needs to be done, if necessary, to get the crane in tip-top shape.

## Dealing with deficiencies

Typically, Johnson said recommendations fall into two categories. The first category is a deficiency that is a documented safety issue. Under OSHA rules the inspector has to notify the crane owner of the deficiency and it’s up to the owner to get it fixed.

Other recommendations that aren’t a safety issue but could be fall into another category, which is preventive maintenance.

“This recommendation is not a safety issue at the moment, but if something is starting to show wear or if there’s something that could prolong the life of the equipment, it might be in the owner’s best interest to go ahead and make the repairs or modification,” said Johnson. “These recommendations can absolutely save you maintenance costs in the long run. We may point out that a machine is not being lubricated properly. While it hasn’t caused a problem yet, if it’s not done it will become a problem. You can get the issue resolved before it results in untimely parts replacements or premature wear.”

The most common issues are simple and easy to fix. In Johnson’s experience the three most common deficiencies are missing safety/control decals and labels; data plate on the load plate or overhaul

TOP THREE DEFICIENCIES



Unreadable labels or control stickers



Missing operator’s manual

Overhaul ball missing data plate





## Crane inspection certifications surge

During the first five months of 2016, the number of CCO-certified mobile crane inspectors jumped by 19 percent.

Ensuring crane inspectors have the requisite knowledge and skill to do their job is as important as requiring that of crane operators, according to Graham Brent, CEO, National Commission for the Certification of Crane Operators.

"All personnel, from the operator to the rigger to the signalperson to the lift planner to the lift director to the crane inspector, must be competent to carry out their designated duties," said Brent. "That's where accredited certification such as that offered by NCCCO comes into play as a proven and effective risk management tool."

We talked to Brent about the surge in crane inspector certification and what is driving this increase.



ball unreadable; and missing operator's manuals in the cab.

"Every control on a crane needs to be labeled with its function," said Johnson. "It's common to see labels missing or unreadable. Often operations and safety decals are bleached from the sun or from chemicals used in washing the machine."

Labels are easily obtainable from the manufacturer or after-market sources.

The data plate on the load plate must also be readable. "The operator has to know the capacity of the block and ball and weight of block and ball to accurately calculate his load chart," said Johnson.

Manuals get a lot of wear and tear and have to be replaced. "Some crane manufacturers have their manuals online so you can just download and print them out," said Johnson.

Crane inspections are also increasing. "A market condition we have seen is that third-party inspections are often driven by the insurance company or the general contractor," said Johnson. "Many contractors are requiring an independent third-party inspection when a machine arrives at the jobsite."

One of the most important elements of a crane inspection is the documentation. On completion of an inspection, CICB produces a deficiency/recommendation form and another form that lists the equipment that was inspected and the type of inspection that was performed (annual, load test, maritime) noting the recommendations and deficiencies, if any. This documentation is vital for showing a paper trail on the machine should a breakdown or incident occur in the future.

Professional Service & Repair provides inspection documents digitally. Clients are emailed the report within minutes of its completion. Multiple reports can be sent to the general contractor or other compliance organization all at once. ■

### THE NCCCO/CAA CRANE INSPECTOR CERTIFICATION PROGRAM IS ABOUT FIVE YEARS OLD. HAS IT BEEN SUCCESSFUL?

It has been very successful. CCAA approached NCCCO to develop a certification program for crane inspectors in much the same way as the industry first requested a program for crane operators back in 1995. It was very important to CCAA that the program meet the accreditation requirements of – and in fact be accredited by – ANSI. And it was, on first application. More and more employers are realizing the benefits of having their cranes inspected by third-party inspectors, and knowing that those individuals' knowledge and skills essential to a properly functioning piece of equipment have been assessed by a third-party agency simply adds to the risk management benefits that accrue.

### HOW MANY PEOPLE HAVE BECOME CERTIFIED CRANE INSPECTORS? WHAT ARE THE GENERAL DEMOGRAPHICS OF A CCO CERTIFIED CRANE INSPECTOR?

Since its launch in 2012, NCCCO has issued over 450 crane inspector certifications to more than 200 individuals in 30-plus states. NCCCO offers certified inspector programs in three categories – mobile crane, tower crane and overhead crane – to ensure that the knowledge and skills required for each type of crane are fairly, reliably and accurately assessed.

### WHO ON A JOBSITE SHOULD BE A TRAINED/CERTIFIED CRANE INSPECTOR?

Of course there are different types of inspections required, and it's important not to confuse either them or the individuals assigned to them. Crane operators usually do the daily or pre-shift inspection. At the other end there's the annual inspection which is more thorough and requires specialist knowledge and skill. It is this latter inspection at which the CCO Certified Inspector program is targeted.

### DO YOU SEE AN INCREASE IN THE NEED FOR CRANE INSPECTOR TRAINING?

Training is vitally important of course, even though to safeguard its independence as a third-party certification body NCCCO does not offer it. As the demand for certified crane inspectors rises, so too will the need for training.

### CRANE INSPECTORS GENERALLY HAVE SEVERAL YEARS' EXPERIENCE WORKING AROUND CRANES OR OPERATING THEM. WHAT ARE THE BASIC REQUIREMENTS FOR GETTING CERTIFIED?

Experience is one of the eligibility requirements for CCO certification. All applicants must be able to demonstrate at least five years of crane-related experience. The five years can include duties such as crane inspector, crane operator, crane mechanic/technician or crane shop foreman.

■ Full eligibility details can be found at <http://nccco.org/nccco/certification-programs/crane-inspector>

■ The Experience Form is at [http://nccco.org/docs/default-source/handbooks-forms-2016/crane-inspector--experience-form\\_0616.pdf?sfvrsn=2](http://nccco.org/docs/default-source/handbooks-forms-2016/crane-inspector--experience-form_0616.pdf?sfvrsn=2)