



# Assembly and disassembly of a crane boom

## Context

Two fatal accidents occurred at Vinci Construction job sites in less than a week, both related to the disassembly of a crane boom. During disassembly operations, an element of the crane boom collapsed and struck the crane operators. The circumstances of the accidents are not yet determined. The investigations are in progress and we will communicate the result related to these accidents once completed.

In the meantime, **please communicate imperatively and as soon as possible the below principles of disassembly of a crane boom to all your personnel.**

For more information, several materials such as documents and videos regarding those operations are available in the training database of the group, in three languages, at the following link:  
<https://www.vincilearning.com/learn/course/1194/play/5561/2-disassembly-of-a-lifting-boom-2017>



- 1 Assembly and disassembly video training of a crane boom available on the training database
- 2 Crane boom laid on the ground during dismantling

## Requirements

- The assembly and disassembly of a crane boom must be carried out with utmost caution.
- To undertake the safe assembly / disassembly of a crane boom, you need;
  - ✓ A **trained and competent team** including but not limited to a crane operator, a rigger and a helper
  - ✓ Fall protection equipment for working at height (harnesses and other fall arrest systems)
  - ✓ A working platform for **safe works at height**
  - ✓ Standard tools for assembly, including lump hammer, snips, degreasing products, **timber supports for positioning boom sections**
  - ✓ **Crane instruction manual issued by the manufacturer**, specific local regulatory requirements and any other relevant company instruction
  - ✓ Mandatory Personal Protective Equipment (PPE)
  - ✓ The disassembly is carried out on a **flat surface**, taking into account the total length of the boom

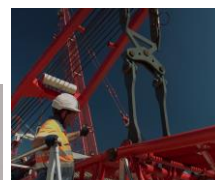
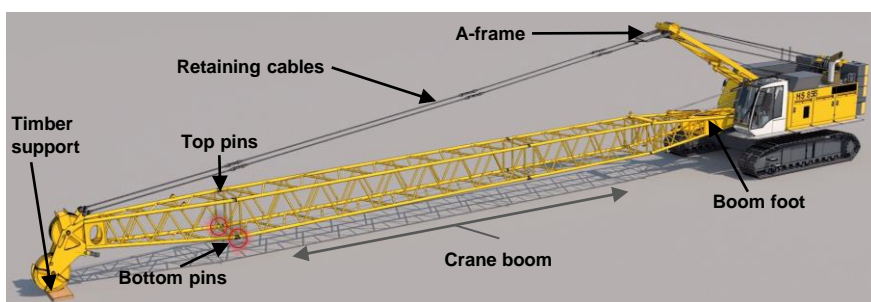




## Disassembly of crane booms



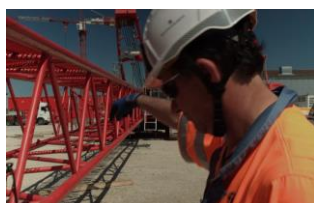
- The disassembly is carried out starting from the head, element by element
- The boom is laid on the ground, on a flat surface and well secured onto a timber support
- The a-frame is lowered in order to unpin the retaining cables
- The a-frame connecting rods are fixed to the boom foot
- Be careful ! If the a-frame has not been fixed to the boom foot when removing the bottom pins, the boom breaks at the upper pins. **There is a high risk of being crushed !**



- The a-frame is tightened slightly to ease the removal of the crane boom pins
- The bottom pins are removed while remaining positioned in the exterior of the boom



- The a-frame is lowered to lay the element **onto a timber support**



- The retaining cables are dismantled
- The top pins can be removed by the operator **ONLY WITH BOTH ELEMENTS OF THE BOOM STABILIZED ON THE GROUND** and supported by a timber piece
- The crane is moved back, The operation is repeated to the boom base, element by element

