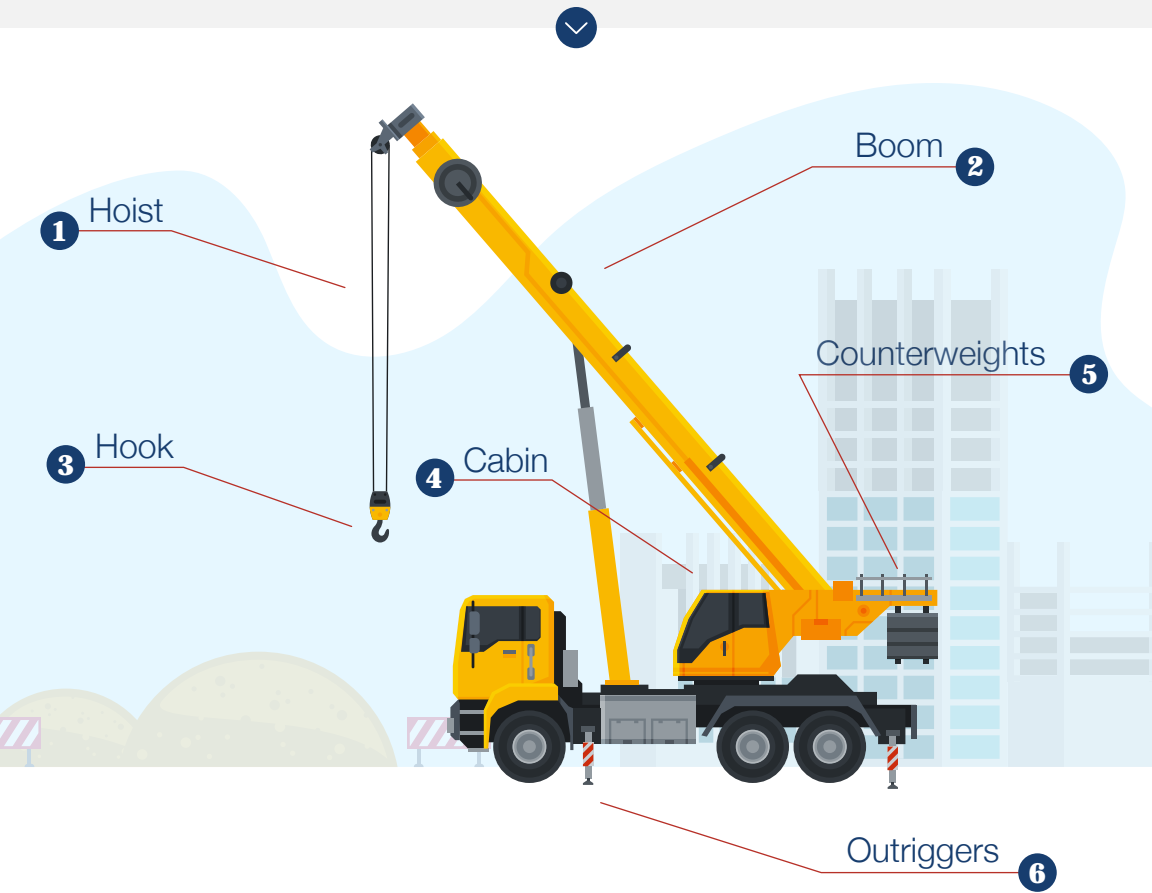


Rising high into the air, cranes are essential pieces of equipment when it comes to construction. They lift, move, and put materials into place. They do this by lowering a rope and hook to ground level where the construction workers are. Then the workers attach a load securely to the hook and the crane hoists it up with the guidance of a crane operator. In construction, it is important to be familiar with crane parts and their functions to exercise proper crane safety. Here are the essential parts of a construction crane:



## WHAT EACH PART DOES

### 1. Hoist

The hoist is a system of wire rope running up and down the crane. This is what gives the crane its lifting power. In cranes, they are powered by an electric or hydraulic motor that turns gears and helps the ropes to move, which is referred to as the hoist drum.

### 3. Hook

At the end of the boom and connected to the hoist is a metal hook, which is where the load gets attached to. The hook also features a system of "sheaves." These are to increase the lifting force in a crane. The more sheaves a crane has, the more weight it can carry.

### 5. Counterweights

Counterweights are weights that are mounted to the back of the crane, opposite of the load. Their purpose is to offset the weight of the load being lifted. Essentially, this is what will keep the crane from toppling over when lifting heavy things.

### 2. Boom

The boom of a crane is probably the most noticeable feature of it. It is what you typically see up dozens of feet in the air. Think of it as the arm of a crane. The boom is used to lift and move construction materials.

### 4. Cabin

The crane operator's cabin is where the operator sits and controls the functions of the crane. It has a lot of windows to promote optimal visibility—this is important so that the operator may see the crane's range of motion.

### 6. Outriggers

The outriggers have a similar purpose to a counterweight as they help stabilize the crane. They are metal beams that extend from the chassis of a crane.