



# “Concrete Pumping”

The important points for Safety and health

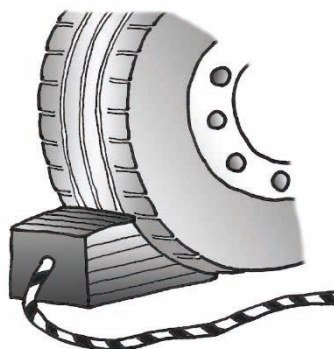
## Precautions for installing a concrete pump vehicle

### (1) Setting of car stoppers

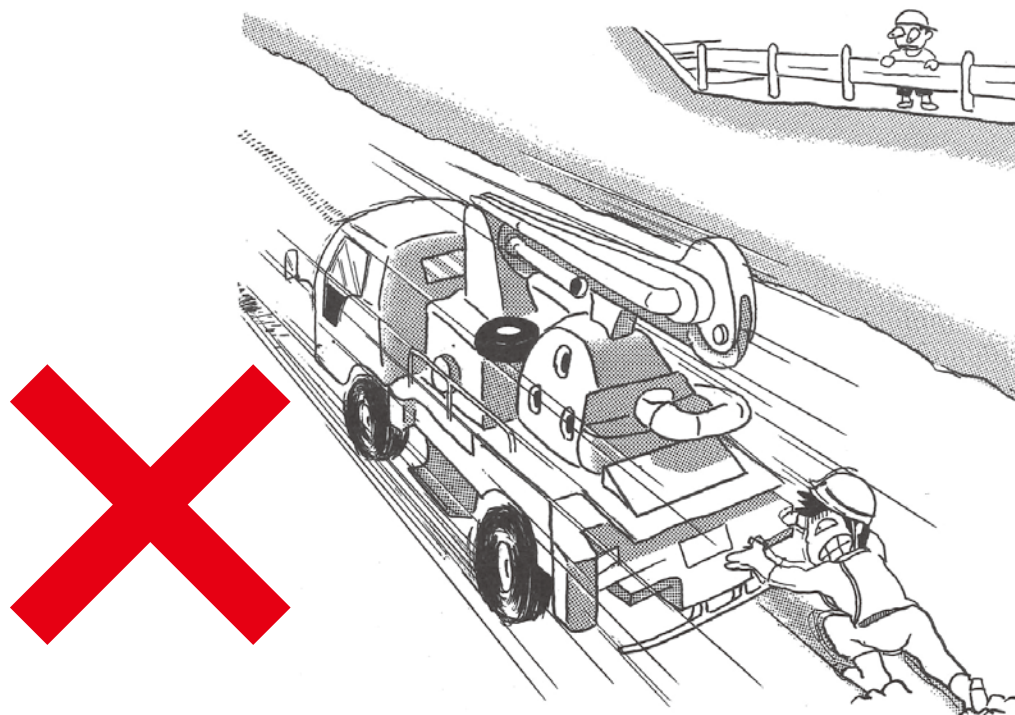
When installing a concrete pump vehicle, make sure to attach car stoppers to tires to prevent it from self-propellent.



Example of a car stopper



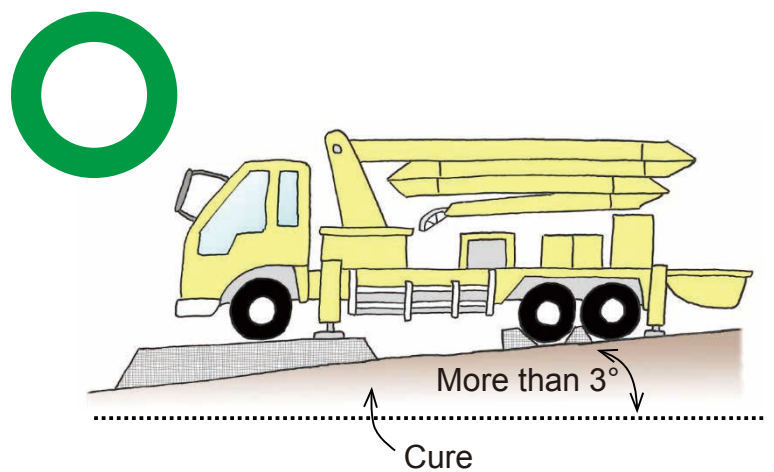
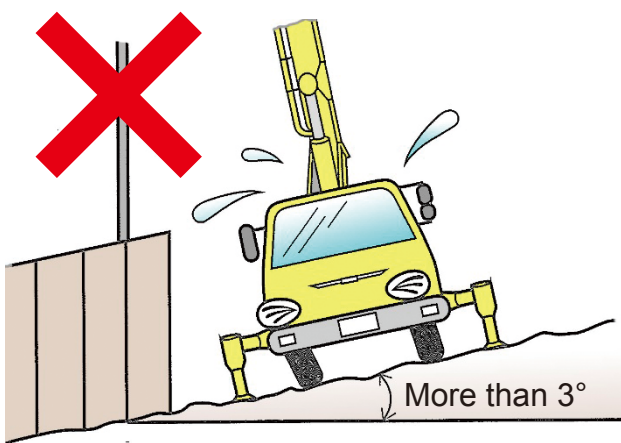
Example of usage of a car stopper



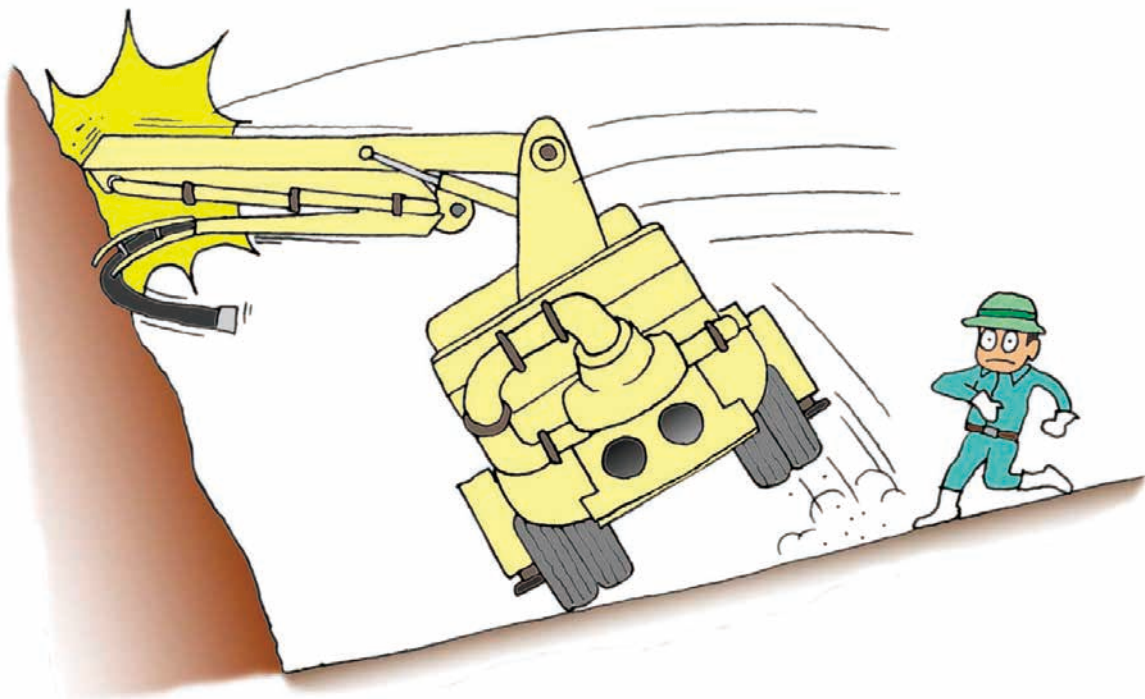
Example of a self-propelled accident of a concrete pump vehicle

## (2) Installing a concrete pump vehicle on a slope

Generally, concrete pump vehicles are installed on a horizontal surface. If it is unavoidable to install on a slope, adjust the horizontal angle of the vehicle within 3 degrees with the outrigger jacks to avoid a falling accident.



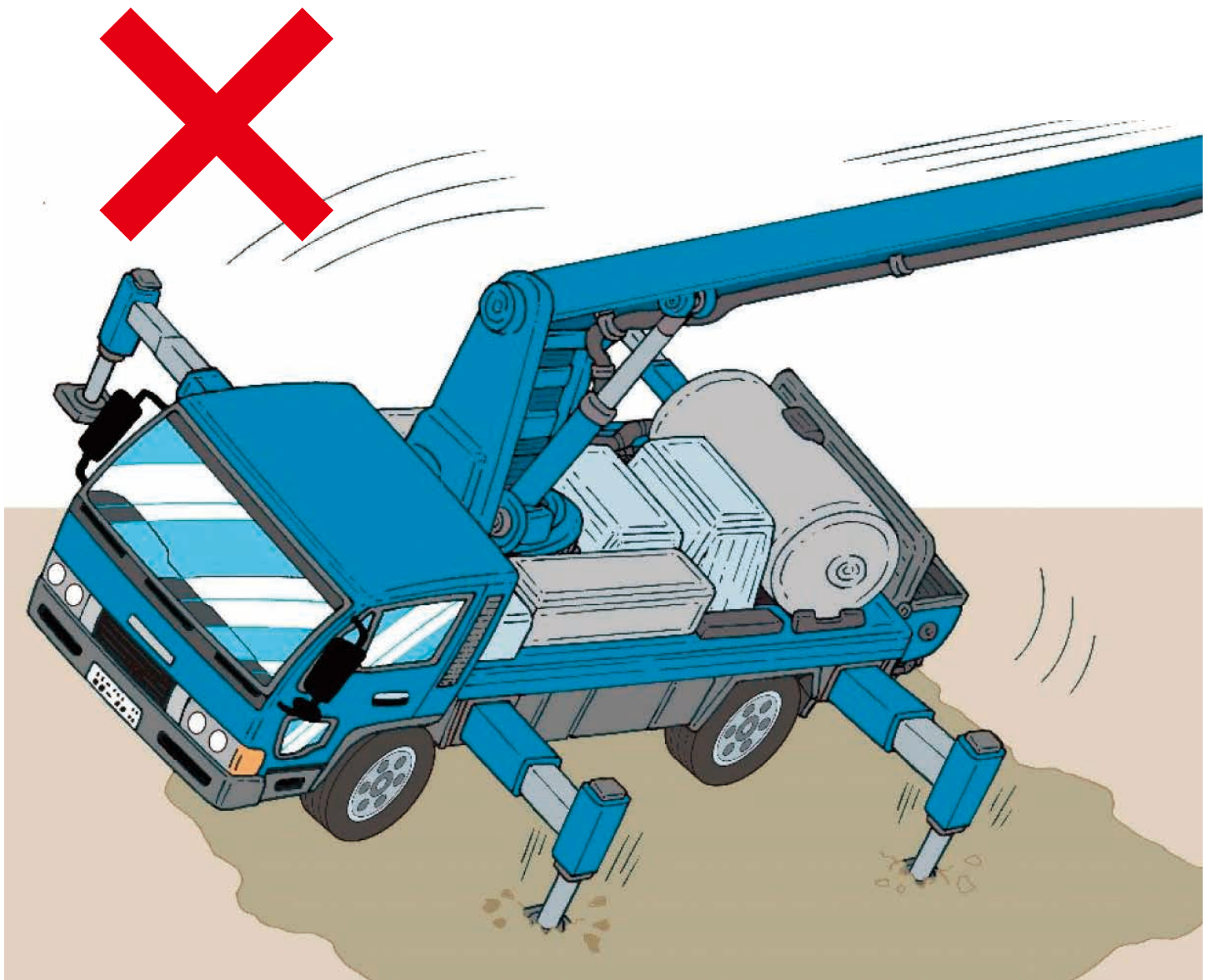
Setting on a slope



Example of a falling accident caused by installing a concrete pump vehicle on a slope

### (3) Avoid installation at backfill area

Close to the building structure, since backfilling is often carried out if a concrete pump vehicle is installed, the outriggers may be buried in the ground that causes the vehicle fall over during the pumping operation. Avoid backfilling areas close to the building structure and install in a safe place.

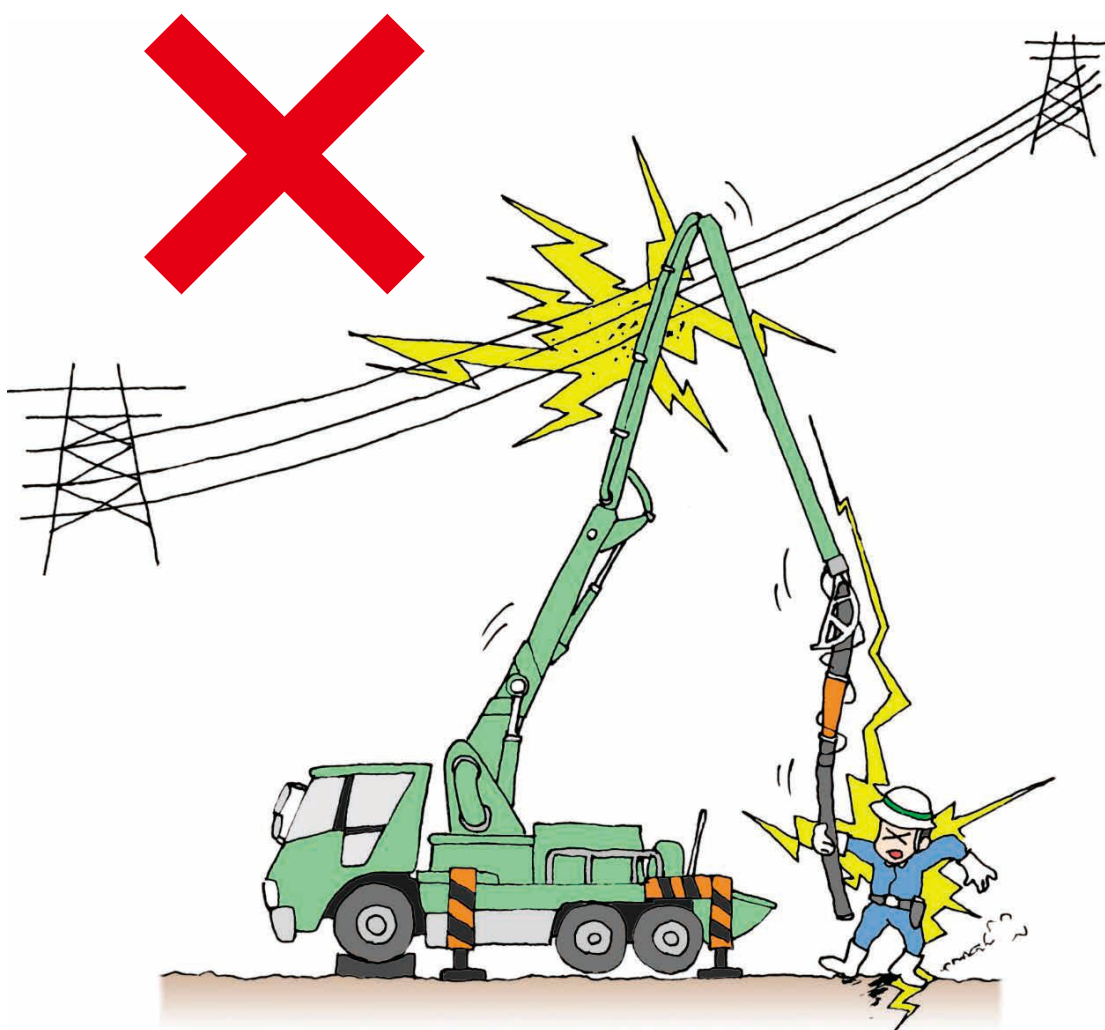


Example of a falling accident due to the installation of a concrete pump vehicle at the backfill area



#### (4) Installation near electric distribution and transmission lines

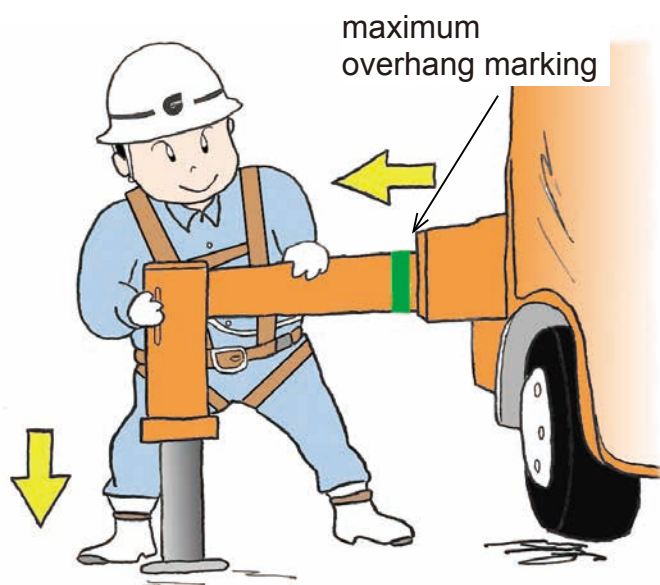
When installing a concrete pump vehicle with a boom close to the distribution lines or transmission lines, install in a place where the working range of the boom can be kept at a certain distance from the electric wires. When the boom approaches a high voltage wire, there is a risk that causes the electric shock, even if it does not touch the wire directly, electricity flows by spark discharge, leading to an electric shock accident.



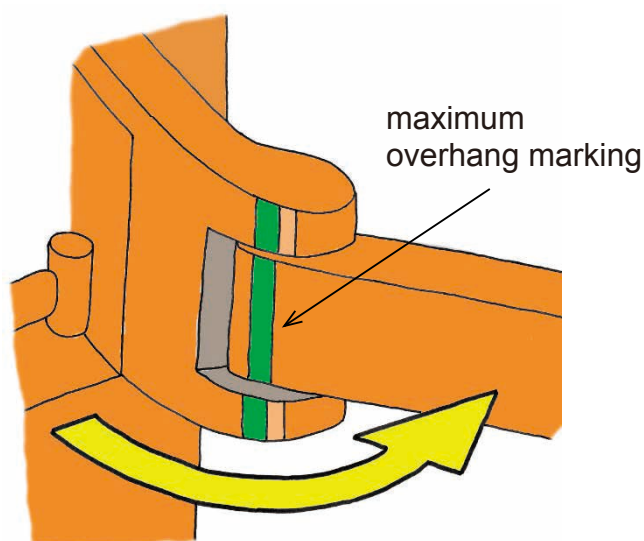
Example of an electric shock accident due to the boom has approached the transmission line

## (5) Outrigger must be over-hanged in maximum length

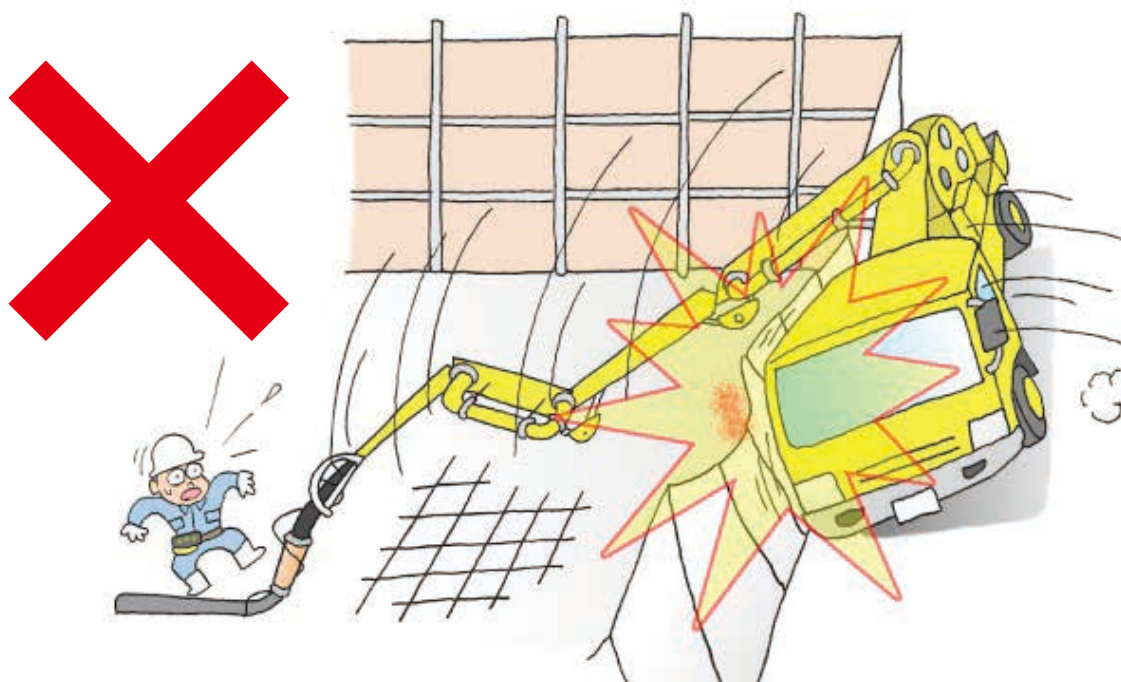
When pumping with a boom, the outriggers of a concrete pump vehicle are always installed with both sides extended to the maximum width to prevent a falling accident.



In case of the slide type



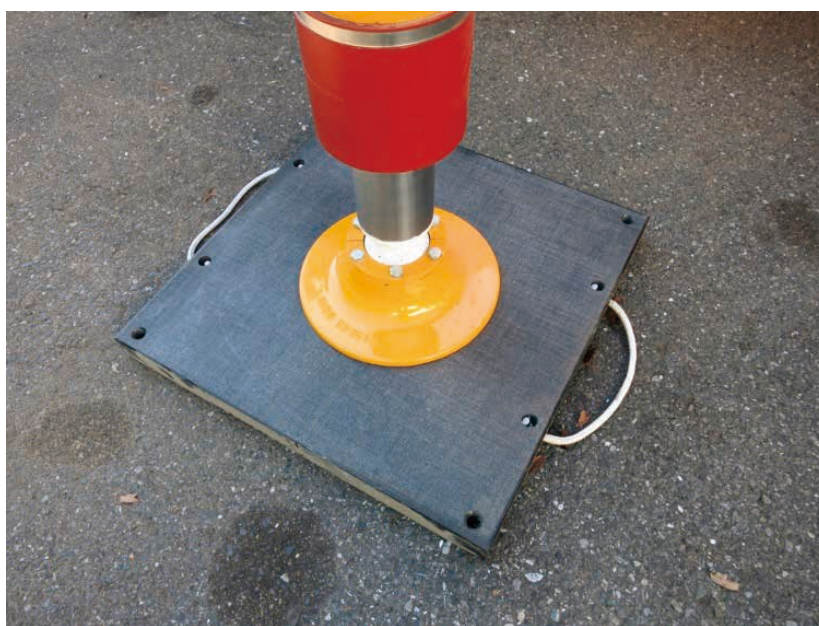
In case of the wing type



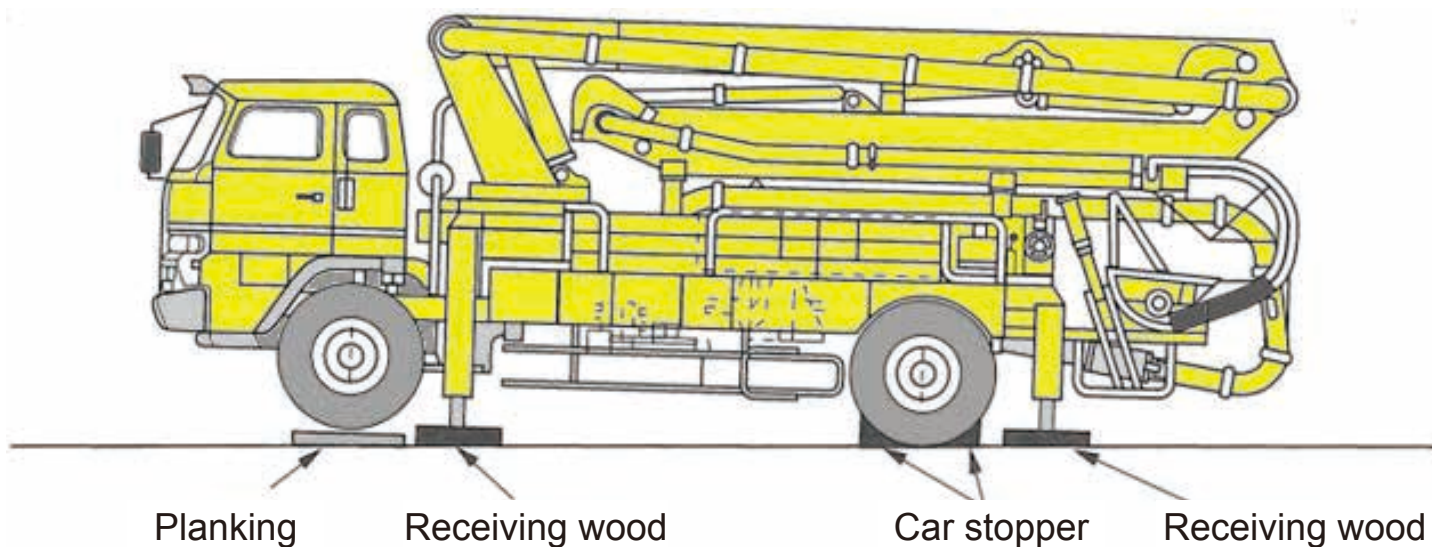
Example of an accident that a concrete pump vehicle was fallen without use of outriggers

## (6) Installation using a receiving wood

When installing a concrete pump vehicle, lay the receiving wood between the outrigger float and the installation ground to prevent the accident that the outrigger sinks to the ground and vehicle falls due to the weight of its body and vibration during pumping.



Example of a receiving wood

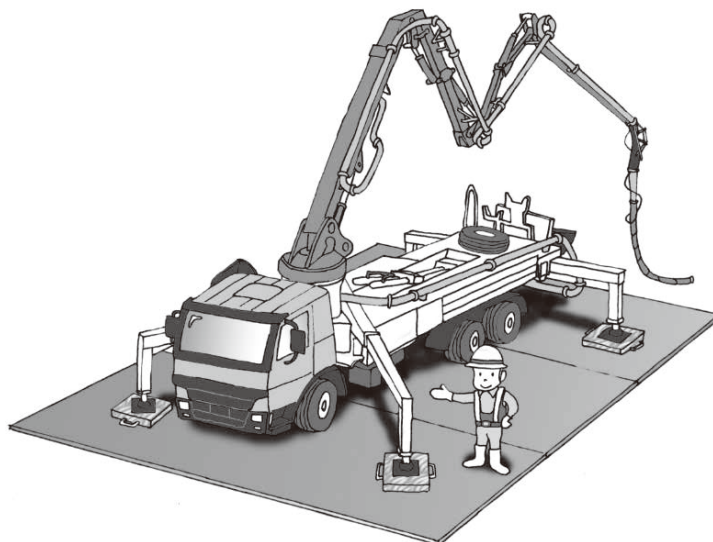


Example of installation of concrete pump vehicle using receiving woods

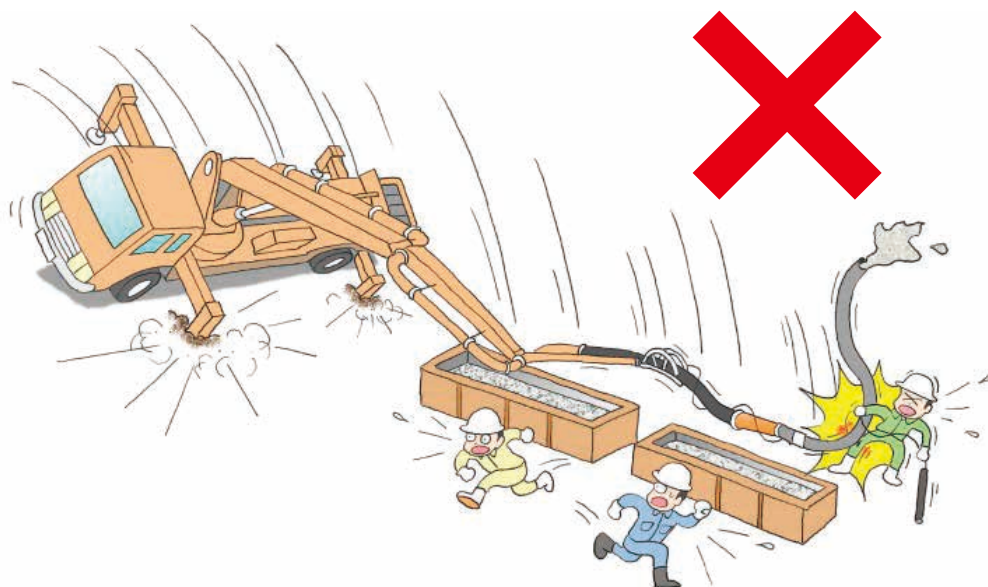


## (7) Install using a laid iron plate in soft ground

When installing a concrete pump vehicle in places other than solid ground such as a temporary loading platform and concrete pavements, ground surface must be covered and reinforced with laying iron plates to prevent the vehicle falling over due to sinking of outriggers to the ground that caused poor support by receiving woods.



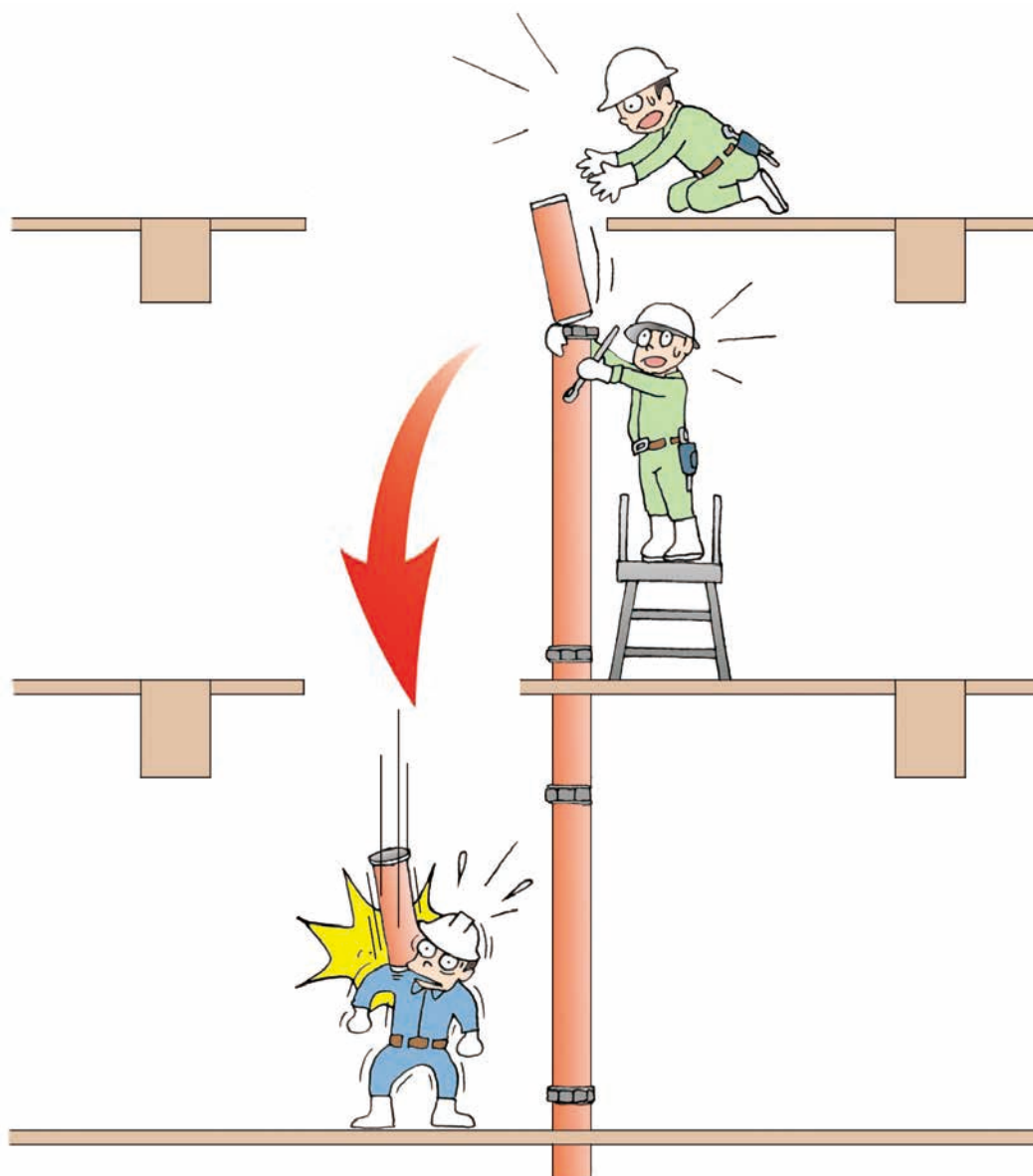
Example of installing a concrete pump vehicle by curing on a laid iron plates



Example of an accident where a concrete pump vehicle fell due to outriggers sink without being cured by laying iron plates

## (8) Be careful not to drop equipment from scaffolding etc.

Dropping transport pipes, joint fittings, tools, etc. from the scaffolding may injure a passerby at the lower floor. Take sufficient measures and caution not to drop objects from above.



Example of an accident in which a transport pipe was dropped and hit a passerby at the lower floor