ABCs of Personal Fall Arrest Systems –
Connecting Devices

Working at height can be an extremely
dangerous part of your job. Falls are a common
form of workplace accidents, so it is important
that employees utilize proper protection when
working at heights.

When not using rigid fall protection, such as a
railing, employees can use personal fall arrest
systems for safety. Fall arrest systems are
complicated, but generally consist of three
different elements: anchorages, body harnesses
and connecting devices.

"C" is for Connecting Devices
In the ABCs of fall protection, the "C" refers to
connecting devices and, when talking about
connecting devices, typically we are referring to
lanyards.

Lanyards are pieces of equipment used to
connect the body harness being worn by a
worker to the anchorage that can catch and
support their weight in the event of a fall.

When selecting connecting devices, be certain
that they are compatible with the other parts of
the fall arrest system. Other key points to
remember regarding connecting devices include:

- Limit the maximum possible force on a
  worker to 1,800 pounds.
- Workers should not be able to fall more
  than 6 feet or contact a lower level
  before being caught.
- If used, a deceleration device should not
  extend more than 3 ½ feet.
- Snaphooks must be a locking type and
  be designed so that they will not
disengage.

Shock-absorbing Lanyards
One of the most common types of lanyards used
in fall arrest systems are shock-absorbing
lanyards. This type of connecting device can vary
in length and live up to their name in that the
lanyard is designed to stretch as it receives the
worker’s falling weight, allowing the fall to be
broken in a controlled and gradual manner.
Shock-absorbing lanyards must have one end
connected to the D-ring on the body harness
and the other to the anchorage; they cannot be
connected to each other.

Self-retracting Lanyards
Self-retracting lanyards (SRLs) are usually much
longer than traditional lanyards and are
somewhat unique in how they operate. SRLs
allow attached workers to move about freely by
extracting more length as necessary. SRLs get
their name from the security that the line is not
able to become slack and will automatically
retract to create consistent, slight tension. In the
event that the line is extracted too rapidly, such
as when a worker falls, the lanyard locks in place and does not allow further extension. An SRL may sometimes operate better as a fall prevention device than as a fall arrest system.

Positioning Lanyards
Positioning lanyards are fixed in length and are not meant to be used as part of a fall arrest system. They are more suited to keeping workers in place, rather than stopping a fall. Positioning lanyards are often used for tasks such as rebar assembly, pour-in-place concrete walls or while working in boom lifts. They can be made from a variety of different materials, including webbing, cables, ropes or chains.

Inspections and Selections
Being certain that your fall arrest system is in good working order is of critical importance, as even a slight defect in just one piece can result in serious injury.

Make sure that you are checking connecting devices before each and every use to find any possible problems. Damaged pieces must be removed from service. When inspecting equipment, keep an eye out for these possible issues:

- Frayed, worn or cut webbing
- Damaged or misshapen hardware
- Missing parts
- Ripped stitching

It is of vital importance that a qualified fall protection individual is involved in the selection of connecting devices and other components of fall arrest systems. Fall protection systems are only reliable if every single piece is compatible, in good condition and used properly.

Our Commitment to You
Your safety is our first priority at Fox Enterprises Inc. If you have any questions or concerns about connecting devices, personal fall arrest systems or fall protection in general, speak to your supervisor or a qualified fall protection employee.