

## **Section 7 - Load Attachment and Movement**

### **Objectives**

When you have successfully completed this section, you should be able to

- Describe the proper use of spreaders and equalizer beams.
- Identify several common materials used as softeners and know how to use them to protect the load.
- Describe how to safely
  - Avoid the hazard of roll out.
  - Turn a load with one or two hoists.
  - Use tag lines.
- Know hand signals and how and when to communicate using them or other communication methods.

### **Load Attachment**

Spreader bars, equalizer beams, and softeners are accessory pieces of equipment often used when attaching a load. This type of equipment improves stability and/or protects the load.

#### **Spreaders and Equalizer Beams**

**Spreaders** ( bars) and **equalizer beams** are used between the hoist hook(s) and the hitch on the load. They are typically made from beams or structural steel. Although both pieces of equipment look similar, spreaders and equalizer beams have different applications.

**A spreader** makes it possible to grab the load vertically with a wider reach, while maintaining sling angle when lifting loads with a single hook. They reduce the possibility of the load tipping, sliding, or being crushed by the slings. As with other rigging components, spreaders have safe working loads marked on them which must not be exceeded. Spreaders are often fabricated on site. When this is the case, a person competent in design needs to determine the safe working load. A typical use of a spreader is shown in Figure 7.1 on the next page.