



Section 1: SAFETY

The prestressing operation can be a potentially dangerous one. Due to the tremendous forces involved, if a failure occurs, there is a good possibility that high velocity projectiles will be produced. The Field Engineer should always stay alert and be aware of the Contractor's operations. In preparation, a pre-operation safety meeting should be held at the jobsite with the prime/subcontractor to discuss the following safety concerns:

1. Stay clear of the area when the Contractor is unpacking the strands. Securing bands may spring in any direction when released, causing injury.
2. Before the Contractor begins the stressing operation, check all of the high-pressure hoses for leaks and/or poor condition. Worn or damaged hoses are to be replaced only with hoses that can withstand the high pressures involved.
3. Never stand behind, alongside, or directly above the prestressing jack during the stressing operation. Never stand behind the "dead" end of the tendon during the stressing operation. Use caution around tendons until after they are grouted. For additional information and safety requirements, refer to Cal/OSHA *Construction Safety Orders*,² and to the Structure Construction, *Code of Safe Practices*.³ Always be aware of the Contractor's operation and equipment during the stressing operation.
4. The pressure cell indicator box is an expensive piece of equipment. Do not leave the box unattended, and make sure the Contractor does not damage it with his equipment. After verifying gage pressures, the pressure cell and readout box should be relocated to a safe location away from the immediate area.
5. If the Contractor uses a corrosion inhibitor, avoid contact with the eyes or skin. Have the Contractor provide a product data sheet and a material safety data sheet. Goggles, coveralls, boots, and impervious gloves should be worn for protection.
6. The cross slopes of bridge decks may require the Contractor to use additional rigging (i.e., cables, blocking the wheels) to secure the equipment from moving during jacking operations.
7. Have the Contractor confirm that there is sufficient counter balance (i.e., tank is full) for when the hydraulic jack is extended. The jack can weigh up to two tons and can easily cause all the equipment to topple over.

² Section 1721. <http://www.dir.ca.gov/title8/1721.html>.

³ <http://dschq.dot.ca.gov/OSCHQDownloads/misc/Code%20of%20Safe%20Practices%207-7-08%20Updated%20Version.doc>.



Photo 1-1 – Example of Failure During Prestress Operations.