

To continually examine our processes to provide greater value to our customers without waste.

# The Lean Line

## A Wrenching Idea



### The Situation:

In order to minimize installation labor, our Fire Protection business now uses flex drops on sprinkler heads whenever possible. This speeds up installation time and removes the wasted step of revisiting to cut back the drop towards the end of the job. It also allows for easy repositioning of the sprinkler head if there are any coordination problems with other trades. One more benefit is that a hydro test only has to be completed one time when the head is installed.



### The Problem:

Sometimes during construction, the flex drop can receive rough treatment by other trades. The heads can be moved, hit, or handled in ways that can cause a leak to develop at the connection between the flexible hose and the drop nipple. When the flex drop is installed above a hard ceiling, obtaining access to the connection is extremely difficult and costly. Normally the resulting leak would cause damage to drywall or stains to stucco, so an access hole would have to be cut to tighten the leaky joint, then later patched and repainted; these are all wasted steps of rework. Another difficulty is that the joint needing to be tightened is about 5-6 inches above the finished ceiling and the flex bracket design holds the drop nipple securely in place so it cannot move.



### The Solution:

Our Orlando, FL office brainstormed to develop a custom tool. Using common items from the shop and tool room (pipe nipples, 2x1 bell reducer, 1½" socket) and a little work on the plasma cutter and welder in accordance with tool standards, the solution is shown in the photos to the left. This customized flex wrench has a small enough profile to go through the existing hole for the head, and is long enough to reach the nut. With a twist from a pair of channel locks, the problem is solved and no more access holes need to be cut.

### Continuous Improvement Idea:

Add an arrow showing the direction to turn for tightening, so even the newest helper will not make a mistake. Orlando has planned ahead so they can eliminate waste by using this new custom flex wrench; what a great idea!

If you have developed any ideas to share, please contact a Lean Team Steering Committee member.

