

Situational Awareness: A key to avoiding errors

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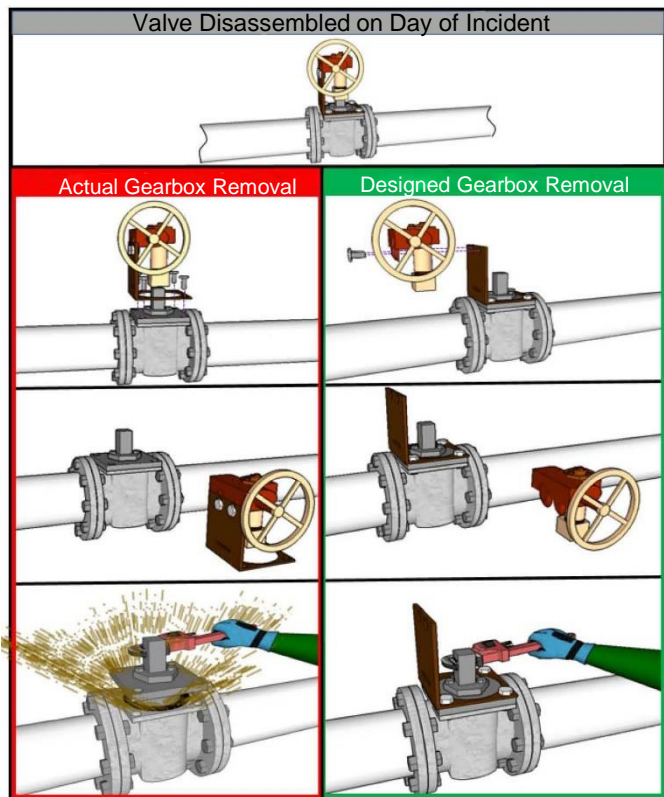


Figure 1: Diagram showing correct and incorrect ways to remove the handwheel described in the incident (Ref. Figure 3 CSB report 2016-02-I-LA)

Two operators were sent to change valve positions and bring a pump on-line. When the valve would not open, the operators decided to remove the gearbox to access the valve stem directly and open the valve with a wrench. This activity could be done without affecting the valve top cap on most valves of this type. However, this valve was a different model. When the operators removed the gearbox from this valve, the operators also removed the mounting bolts that secured the valve top cap.

When the valve was opened manually, a large vapor leak occurred, ignited, and caused serious damage.

Did You Know?

- Situational awareness is recognizing where you are and what is needed to perform the task safely.
- Inadequate situational awareness is a major factor in accidents caused by human error.
- Having several configurations for equipment in an area or unit can be confusing and create an error trap – making it easier for someone to make a mistake.
- Having a second person to observe the operation is sometimes called the ‘4-Eyes Principle.’ However, this practice improves safety only if the observer knows how to perform the task and is willing to intervene if an error is made or an unsafe situation develops.
- Prepare for an activity by reading the procedure **BEFORE** going to the field.

What Can You Do?

- Take two minutes before doing the task to ask yourself “*What could go wrong?*”, to review/check if you have the procedure, PPE and equipment needed to perform the job safely.
- If you observe an error trap, notify your supervisor and file a safety report.
- If an error trap cannot be corrected quickly, tag the device to alert others.
- Make sure all valve positions, the status of the equipment, and expected process conditions are identified in task procedures to reduce errors.
- If asked to perform a task that you haven’t done in a while, review the procedures and ask a coworker if anything has changed.

Situational Awareness: Check Before You Act