



SECTION 4

CHAPTER 13

PERFORMING A PRESSURE TEST

Purpose This chapter explains the safety procedures for pressure-testing equipment.

Scope This policy applies to all Company employees involved in performing pressure tests, whether doing so in a Company facility or in the field.

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General Guidelines

Purpose

This section describes general guidelines for performing pressure testing on equipment, including guidelines for:

- training
 - lifting equipment
 - monitoring testing
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Training

All test personnel must receive:

- two weeks of on-the-job training
 - designation by the Yard Manager as an authorized test operator
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Lifting equipment

Always use a hoist or an overhead crane to lift:

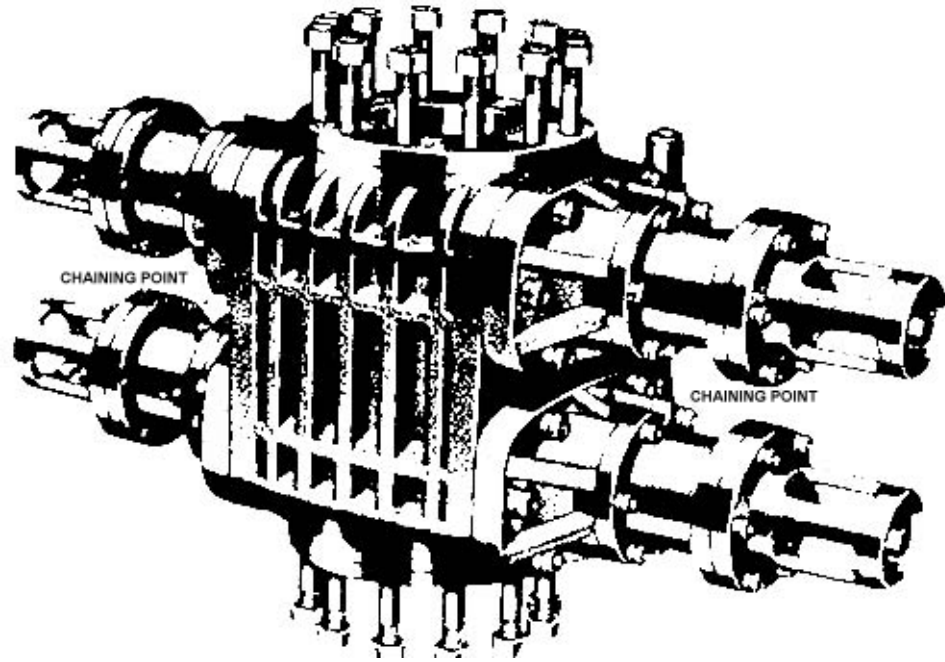
- rams
- doors
- any equipment weighing over 40 pounds

Attach the chains to the eyes on the Blowout Preventer (BOP) to lift it. Do **not** lift the BOP by attaching the chain to the cylinders. This will prevent the BOP from working correctly by damaging the:

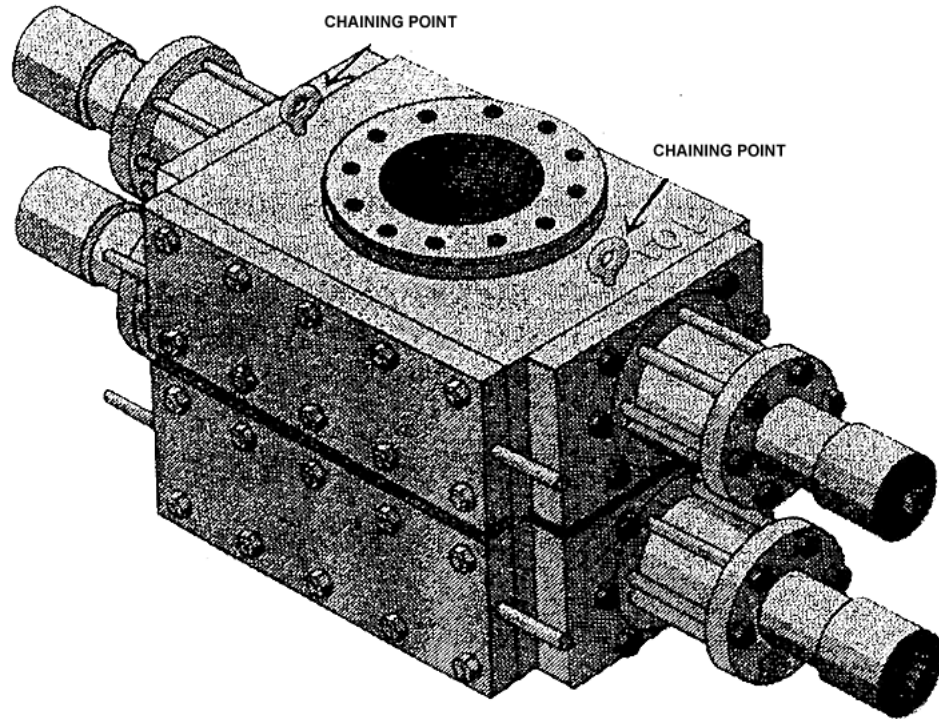
- cylinders
- piston assembly
- ram shaft

To lift some models, wrap the chains around the body of the pieces. The following diagrams illustrate the chaining points on the different BOPs.

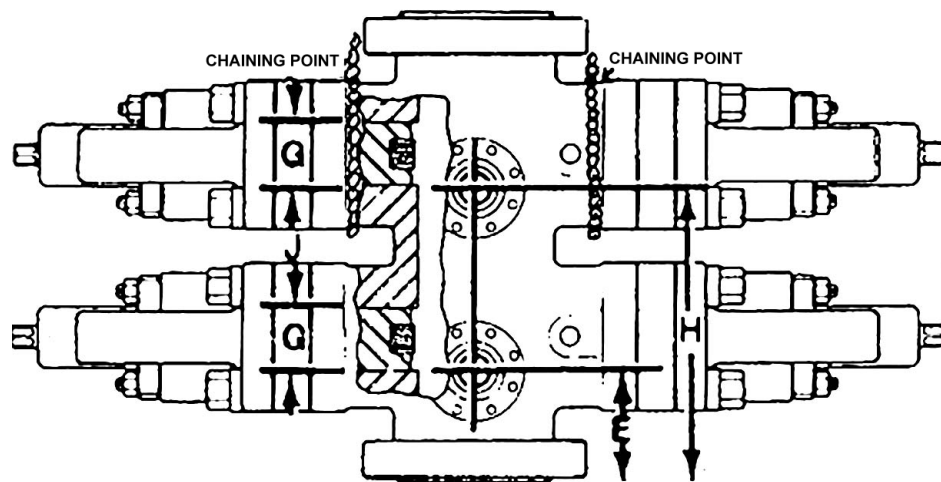
Example 1: Model LWP BOP



Example 2: Sentinel BOP



Example 3: Double U BOP



Monitoring testing

Testing must be monitored in an area with:

- a expanded metal cage or barrier (minimum 3 sided – recommended 4 sided) around BOP
- an expanded metal screen to protect the operator
- an audio-visual warning system

(In lieu of meeting

these standards tests may be performed by a third party with such facilities)

As long as the equipment is under pressure, the test operator must:

- remain behind a protective screen
- remain in the pressure-testing area
- watch for:
 - leaks
 - defective hoses
 - loose nipples

Never:

- attempt to tighten or loosen a connection, union, or fitting while equipment is under pressure
 - leave the testing facility unattended during pressure tests
 - **perform a test in excess of 5000 psi**
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Setting Up a Safe Pressure-Testing Area

Purpose This section outlines the required safety features of a pressure-testing area.

Visual inspection of testing facility Inspect the test facility prior to each use for leaks in the piping and/or items that could cause slips, trips and falls.

Audio-visual warning system The minimum warning standard for pressure-testing is an audible alarm and a warning light that flashes when the testing area is under pressure to alert employees that a pressure test is in progress.

The warning system should be activated by test pressure. However, a manual switch is acceptable.

Other features In addition to the audio-visual warning system, the pressure-testing area must have:

- a permanent pressure-testing stump or approved skid mounted stump (if skid mounted, the pressure test must be completed in the designated testing area)
 - protective screens that enclose the area on three sides (recommended four sides)
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Performing Pressure Testing Safely

Purpose This document outlines the safety requirements for performing pressure testing safely.

Common hazards Common hazards include:

- flying objects (test plugs may fly loose)
- explosions

Never look down the well-bore opening while testing because rubbers may fail and objects may fly up.

Personal protective equipment Required personal protective equipment (PPE) for pressure-testing includes:

- safety glasses
- hard hats
- steel toed boots or safety footwear
- cotton coveralls

Following up on testing IF the equipment does not hold the rated pressure, **THEN** tear the equipment apart and repair it.

Do **not** allow the equipment to be used until it is repaired or replaced.

Blowout Preventer Field Maintenance

Purpose This section describes the procedures for performing field maintenance on the Blowout Preventer.

Responsibility The well service or rig hands will do the maintenance work themselves.

Preparing for field maintenance Take the following steps to prepare for field maintenance of the Blowout Preventer.

Step	Action
1	Report to the operating company’s field representative.
2	Determine the well conditions.
3	Conduct a JSA with wellsite employees.
4	Lockout/ Tagout/Try any mechanism that could activate the accumulator for a hydraulic BOP.
5	Manually lock out the rams.

During field work During field maintenance:

- keep all wellsite personnel clear of the work area
- prevent anyone from operating pressure controls

Documenting Test Results

Purpose

Document testing to:

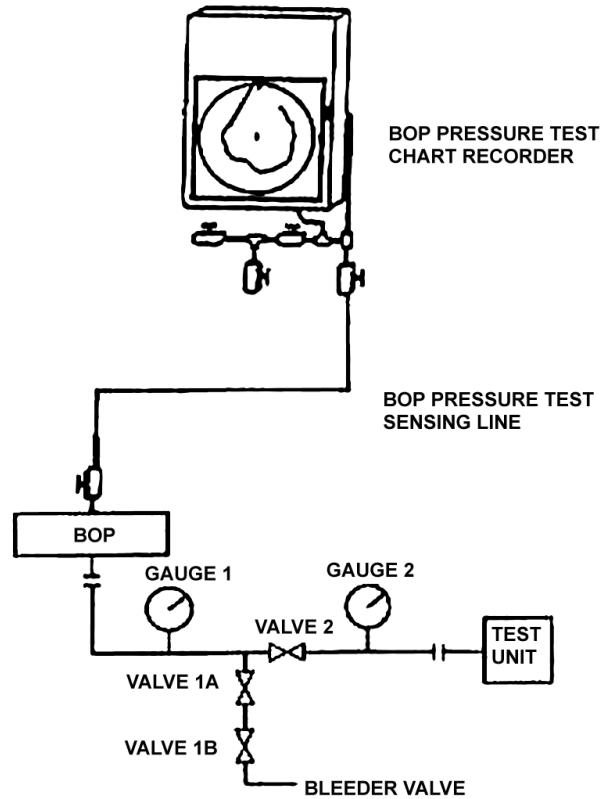
- provide data for warning of potential leaks
- determine the scope of future repairs
- offer proof of testing in the event of customer complaints

This section describes the Company requirements for documenting pressure testing.

Setting up the recorder

The recording element of the pressure-testing recorder must have the correct pressure rating for the recorder.

Calibrating the recorder



Pressure-testing recorders must be calibrated:

- by testing personnel before each use
- by a qualified third-party technician when they malfunction or fail to “zero” out

Use the following procedure to calibrate or “zero” the recorder before each pressure test.

Step	Action
1	Inspect the recorder and replace parts that will cause an obvious malfunction; e.g., a hose that will not attach correctly because it is worn.
2	Turn off pressure to the test recorder.



3	Adjust the stylus up or down until it comes to rest on the chart zero line.
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Documenting testing

Log each BOP that is tested. Write the following on the front or back of the chart:

- description of the BOP
- test date
- equipment serial number
- equipment's rated pressure as listed on the ASME stamp on the engineering drawing and note the
 - working pressure (3,000 PSI)
 - burst pressure (5,000 PSI)
- number of minutes the equipment held test pressure
- signature of the person conducting the pressure test

Keep this information on file. Include the chart with the customer file and delivery ticket.
