

Texas Pumpdown & Torque Solutions, LLC Standard 125hp Testing Procedures

I. PRE-JOB TASKS

- a. The TXPTS employee will ensure test unit turns on and all safety devices are fully function for job task.
- b. The TXPTS employee will load and ship equipment to the jobsite.
- c. The TXPTS employee will arrive at location, check with company representative to outline the scope of the job procedures.
- d. The TXPTS employee will prepare a JSA and review with all personnel involved including rig crews.

Hazard: not gathering all of the information needed to properly assess the job. **Preventive Measure**: ensure to find out from company representative all aspects of the job to be done.

Hazard: not properly communicating the hazards to all personnel.

Preventive Measure: ensure everyone is attentive and understands the task.

II. EQUIPMENT INSPECTION

- A. The TXPTS employee will check tool inventory. The operator will verify that he has everything needed to complete the job.
- B. The TXPTS employee will ensure all lifting devices are properly rated for job being done.
- C. The TXPTS employee will inspect hoses and fitting for any sign of damages.
- D. The TXPTS employee will check wellhead and valves for the manufacturer's max

working pressure.

Hazard: not having proper equipment or inventory to safely and successfully complete the job.

Preventive Measure: ensure to have proper PPE and equipment needed to safely complete job.

Hazard: lifting devices failure.

Preventive Measure: ensure all hoses and lifting devices are visually inspected and have up-to-date certifications.

III. EQUIPMENT START-UP

- A. The TXPTS employee will ensure both water tanks are filled with fresh water.
- B. The TXPTS employee will lay out test hose and install a 1502 test fitting with a needle valve on the end of the hose with the valve in the fully open position.
- C. The TXPTS employee will connect chart recorder to hose fitting on the back of the recorder.
- D. The TXPTS employee will rope off the entire test area using "red danger tape" and display the high pressure signs.
- E. The TXPTS employee will start up test unit while all nonessential personnel are away from unit during start up and test.
- F. The TXPTS employee will engage test pump troll valve pumping water until all air is displaced from 1502 test fitting and test hose.
- G. The TXPTS employee will disengage pump and close needle valve on the 1502 fitting.
- H. The TXPTS employee will turn on chart recorder
- I. The TXPTS employee will engage test pump and pressure up the test unit to max testing pressure and chart for 5 minutes.
- J. The TXPTS employee will sign, date, add serial number of chart recorder and note time on the chart noting that the unit was tested satisfactory and turned in with job paperwork.

Hazard: hydraulic hose bursting, leaking connectors

Preventive Measure: ensure hoses are in good shape and kept off sharp edges.

Hazard: unit not working properly, stalling or not starting.

Preventive Measure: ensure all ball valves connected to the fuel and hydraulic lines are open during operations. Inspect the ESD for proper adjustment. Ensure that the kill switch is in the open position and not stuck in the closed position.

Hazard: air hose coming off unit or bursting.

Preventive Measure: ensure hoses are in good shape and use safety pins and whip checks.

Hazard: slips, trips and falls.

Preventive Measure: wear proper shoes, keep hoses & equipment out of walk area and watch your footing.

Hazard: pinch points.

Preventive Measure: wear impact gloves and watch hand and body placement.

Hazard: environmental impact.

Preventive Measure: ensure in the event of a leak to repair the connection and clean up.

Hazard: test hose isolation valve installed in the wrong direction.

Preventive Measure: ensure hose block valve is installed with hose connection on the pressure side. Note: the bleed off side will have an arrow pointing downstream of the magnum needle valve.

IV. VERIFICATION OF WORK AREA

- A. The TXPTS employee will conduct a walk-through of the work area and ensure adequate conditions to conduct job safely.
- B. The TXPTS employee will prepare a JSA after assessing the work area and identifying any hazards.
- C. The TXPTS employee will set his Murphy switch to desire maximum testing pressure and ensure override switch is in the off position before starting task.

Hazard: hazards not identified.

Preventive Measure: ensure any potential hazards are documented and repaired or clearly marked and the entire crew informed as to the existence of the hazard before starting of job.

Hazard: personnel not understanding the task or not attentive during the safety meeting.

Preventive Measure: ensure everyone is attentive and understands the task.

Hazard: personnel walking in areas with pressurized equipment.

Preventive Measure: all areas with pressurized equipment will be marked danger tape.

Hazard: over pressuring equipment

Preventive Measure: ensure Murphy is working properly by testing it and making sure override switch is off.