TRAINEE ASSESSMENT

+

ARMIN

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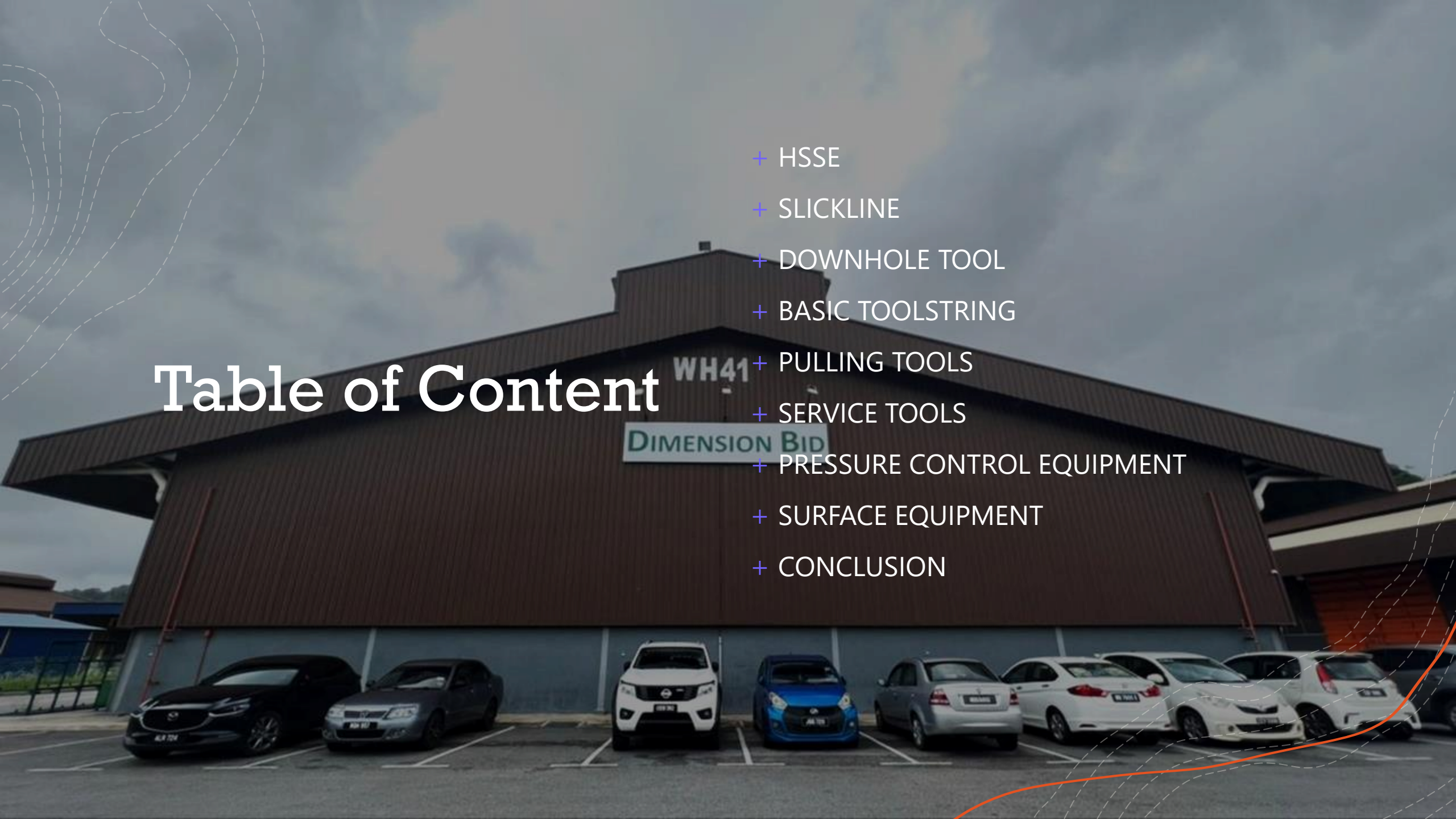


Safety Policy

+ **DB Management cares about the safety and health of its employees and the environment.**
+ **We have rules in place to keep everyone safe:**
- **Driving:** Be safe when driving for work.
- **Drugs and Alcohol:** Don't use drugs or alcohol at work.
- **Harassment:** We don't tolerate harassment.
- **Safety:** We follow safety rules.
- **Protective Gear:** Wear the right safety gear.
- **Smoking and Vaping:** No smoking or vaping on company property.
- **Stop Work:** If something is unsafe, stop working.

Golden Safety Rule

- Designed to set boundaries for work.
- •Spell out the minimum requirement to all employees to follow to ensure for safe work.

- 1.Personal ownership of Safety
- 2.Stop Work
- 3.Risk Assessment
- 4.Management of Change
- 5.Full Compliance of PPE
- 6.Working at Height
- 7.Lifting Operations
- 8.Approved PTW (Permit to work)
- 9.Operate Vehicles Safely
- 10.Avoid position in the line of fire

Personal Protective Equipment (PPE)

+ Coverall
+ Hard Hat
+ Ear Plug
+ Safety Glasses
+ Gloves
+ Safety Boot

Why is PPE important?

+ **Personal protective equipment (PPE) is designed to safeguard workers from various hazards, including physical injuries, electrical shocks, heat, chemical exposure, and infections.**
+ **Employees must wear PPE when:**
- Working in conditions that could cause slips, trips, or falls (e.g., hot, wet, or slippery surfaces).
- Working near electrical hazards.
- Handling hazardous substances or working with uncontained chemicals.
- Working in areas with a high risk of falling or falling objects.
- Working near overhead tools or machinery.
- Working with highly toxic chemicals or in dusty environments.

Permit To Work (PTW)

+ **A Work Permit (PTW) is a written document that authorizes specific work activities in a designated area for a defined period.**
+ **Not all work carries the same level of risk.** The degree of hazard involved determines the necessary safety measures to protect workers.
+ **Common types of work permits include:**

- **Hot Work Permit:** For activities involving heat, such as welding, cutting, or grinding.
- **Cold Work Permit:** For general work that doesn't involve heat.
- **Electrical Work Permit:** For work related to electrical equipment or systems.
- **Radioactive Work Permit:** For activities involving radioactive materials.
- **Lifting Permit:** For work involving heavy lifting or hoisting operations.

Job Hazard Analysis (JHA)

+ A job hazard analysis (JHA), also called a job safety analysis (JSA), is a technique to identify the dangers of specific tasks in order to reduce the risk of injury to workers.

JOB STEP	DESCRIPTION OF JOB STEP	POTENTIAL HAZARD	POTENTIAL CONSEQUENCES	CONTROL BARRIERS	ACTION PARTY	RECOVERY BARRIERS	ACTION PARTY
1	Check Condition Diesel	• Incorrect refueling method	• Spill oil • Sharp edge	• Wear rubber glove.	wireline	Apply first aid and get medical assistance if the injuries are severe	wireline
2	Check diesel level in power pack and air compressor	• Overheat and leaking oil • Hydrocarbon • Flammable liquid	• Hand injury • Broken equipment	• Standby P.D.C at work site • Grounding Cable • Wear rubber glove	wireline	Medical treatment	wireline

Example JHA - Epoms

EPOMS

JOB HAZARD ANALYSIS [JHA] WORKSHEET

JHA NO.		**PTW NO**		**WORK PERMIT TYPE**	FW
FACILITY :		**LOCATION**	MAINDECK	**SPECIFIC WORKSTATION**	
EQUIPMENT NO. :		**WORK DESCRIPTION**	Refilling diesel on wireline equipment		

NOTE

1. JHA shall be applicable for all work activities which requires PTW.
2. The pre-prepared JHA and JHA prompters will be used as a reference/guide during the development of JHA.
3. Personnel carrying out the work shall be fully familiar with the written Work/Operating Procedures developed for the job. The Work/Operating Procedures shall describe, in step-by-step instructions, the correct method of executing the specified work.
4. Prior to commencement of work (after PTW has been approved), the task-specific JHA shall be discussed amongst all personnel involved in the execution; and requirements contained therein shall be fully understood and agreed by all involved personnel.

JOB STEP	DESCRIPTION OF JOB STEP	POTENTIAL HAZARD	POTENTIAL CONSEQUENCES	CONTROL BARRIERS	ACTION PARTY	RECOVERY BARRIERS	ACTION PARTY
1	Preparation for PTW	• Wrong job or task. • To avoid clash of work at platform • Incomplete detail of work.	To avoid clash of work at platform	• PTW approval from in charge personal. • Competent personal to conduct the operation. • Inform to all crew on location and description of work	wireline	Ensure all team member review jha	wireline
2	Pre Job Meeting	• Wrong job or task. • To avoid clash of work at platform • Conflict of work.	Other parties are not aware where you are performing the job	• Inform to all crew on location • Inform the hazard involved at place of work	wireline	Ensure team member not miss toolbox meeting	wireline

Slickline

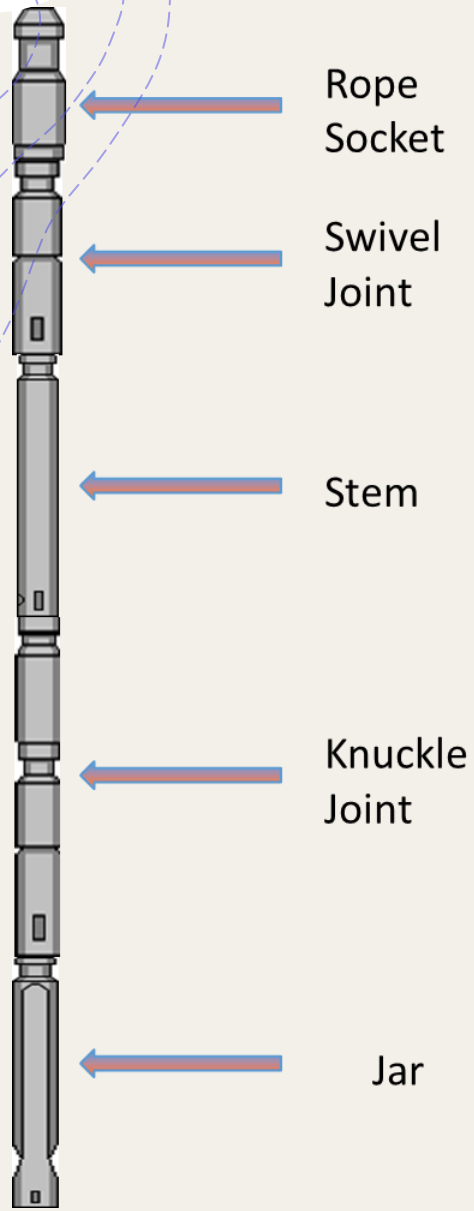
- Slickline is a single-strand wire used to deploy various tools into a wellbore for various purposes.
- It's a crucial component of well drilling operations in the oil and gas industry.
- Slickline is used to lower specialized tools downhole to perform specific maintenance tasks within an oil or gas well.

Slickline Wire

+ **Solid wireline comes in various diameter sizes, with 0.092", 0.108", 0.125", 0.140", and 0.160" being common in DB operations. Among these, 0.140" is particularly popular for fishing operations.**
+ **There are three primary types of wire used in solid wireline:**

- **ZERON:** Made from 100 HS stainless steel.
- **EIPS:** Constructed from carbon steel EIPS grade.
- **ZAPP:** Composed of SUPA 75 alloy.

OPERATION
TCC (TUBING CLEARANCE CHECK) : Tubing Drift, Gauge Ring, LIB
Gas Lift Job (Retrieve & Set GLV/Dummy)



Basic Tool String

+ Rope Socket
+ Swivel Joint
+ Stem
+ Knuckle Joint
+ Jar

OD (in)	Fish Neck (in)
1”	1.000”
1.1/4”	1.187”
1.1/2”	1.375”
1.7/8”	1.750”
2.1/8”	1.750”
2.1/2”	2.313”

Rope Socket

+ **To connect the wire to the tool string, various types of Running Shoes (RS) are used.**
+ **There are three primary types of RS:**
- **Tear Drop:** Available in 0.108", 0.125", and 0.140" sizes.
- **Regular Knot Type:** Available in 0.092" and braided clamp styles.

Make Up Rope Socket

1. Get in the wire into rope socket and follow up by thimble eye sleeve.

2. Bend the wire 90 degree, measure wire with thimble eye, bend the other side.

Continue…

3.Put the wire into thimble eye, measure and cut the wire.

4.Make sure wire fit on thimble cross section.

Continue…

5.Put thimble eye into the thimble sleeve.

Final

6. DONE

Swivel Joint

+To reduce the impact of wire twisting caused by running downhole tools.

O.D. (in.)	Fishneck O.D. (in.)
1.1/4	1.187
1.1/2	1.375
1.3/4	1.375
1.7/8	1.750
2.1/8	1.750
2.1/2	2.313

Stem

+Adds extra weight to the tool string

+Available in 2, 3, and 5-foot lengths

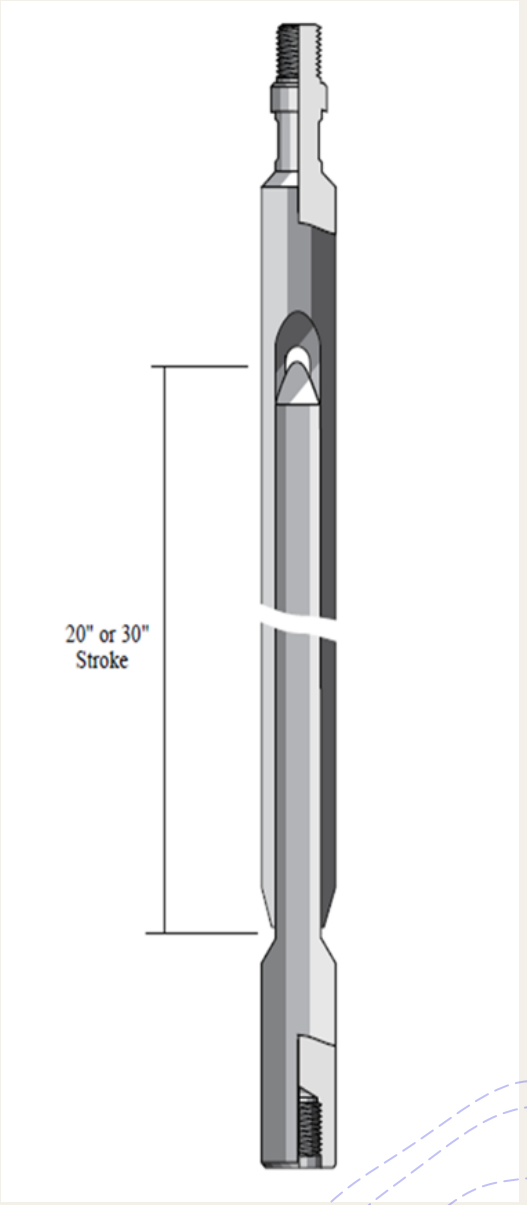
OD (inc)	Weight lb/ft	Fishing Neck
1	2.5lbs	0.875”
1.1/4	4.2lbs	1.187”
1.1/2	6.0lbs	1.375”
1.7/8	9.4lbs	1.750”
2.1/8	12lbs	1.750”
2.1/2	16.7lbs	2.313”

Knuckle Joint

- Generates tool bending during the run-in-hole process
- Features a 15-degree angle

Jar

- Delivers upward and downward impact as a downhole hammer
- Available in 20” and 30” stroke options
- Types include Mechanical Jar, Hydraulic Jar, Spring Jar, Tubular Jar, etc.



O.D. (in.)	Fishneck O.D. (in.)
1.1/4	1.187
1.1/2	1.375
1.7/8	1.750
2.1/8	1.750

Hydraulic Jar

Spring Jar

Tubular Jar

Downhole Tools Connection

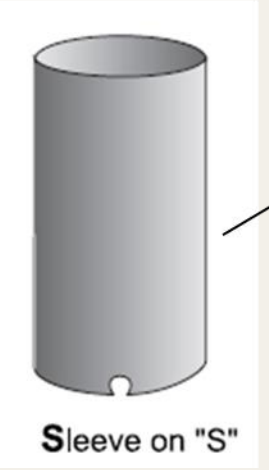
- Sucker Rod Thread
- Quick Lock System
- Shear pin Size
- 1/8
- 3/16
- ¼
- 5/6
- 3/8

Sucker Rod	Quick Lock System (QLS)
1.1/2	15/16
1.7/8	1.1/16
2.1/2	1.9/16

Pulling Tools

+Otis `S type (Jarring down to shear)
+-SB
+-SS
+Otis `R type (Jarring up to shear)
+-RS
+-RB
+Otis `GS (Jarring down to shear)
+Otis `GR (Jarring up to shear)

OTIS `S Series Pulling tool



- The S Series pulling tool is designed to engage an external fishing neck.
- SB model: Long Core – Short Reach.
- SS model: Short Core – Long Reach.
- Operates by jarring down to shear the pin.
- The top sub is not directly connected to the core.

Tool Size (in)	Fishing Neck (in)	Pulls F/Neck
1.1/2 SB	1.187”	1.187”
2 SB	1.375”	1.375”
2.1/2” SB	1.375”	1.750

OTIS S' Series Pulling Tool

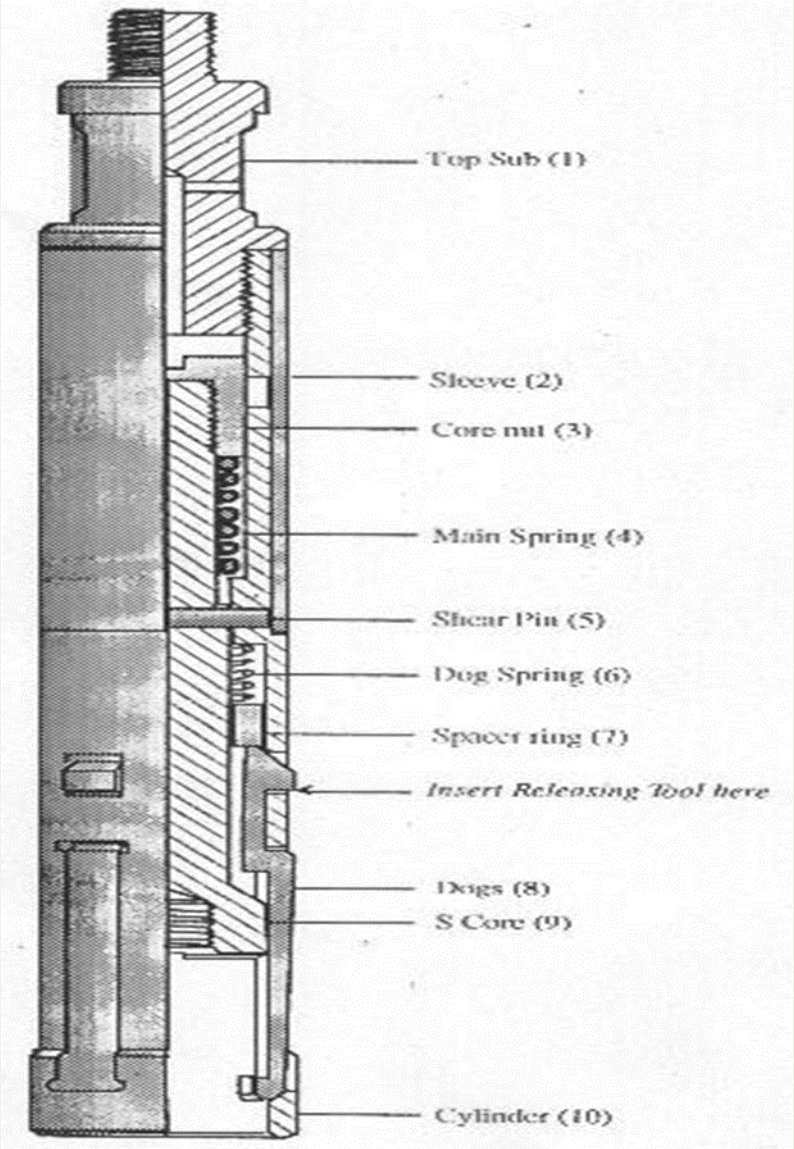
SB

Size (ins)	OD (ins)	Fish Neck
1.1/2	1.437	1.187
2	1.766	1.375
2.1/2	2.188	1.375
3	2.734	2.313

SS

Size (ins)	OD (ins)	Fish Neck
1.1/2	1.430	1.187
2	1.770	1.375
2.1/2	2.180	1.375
3	2.840	2.313

COMPONENT OTIS `S PULLING TOOL



OTIS `R Series Pulling Tool

- Engages an external fishing neck.RB model: Long Core – Short Reach.
- RS model: Short Core – Long Reach.
- Operates by jarring up to shear the pin.

Ring on "R"

OTIS `R Series Pulling Tool


RB Pulling Tool


RS Pulling Tool

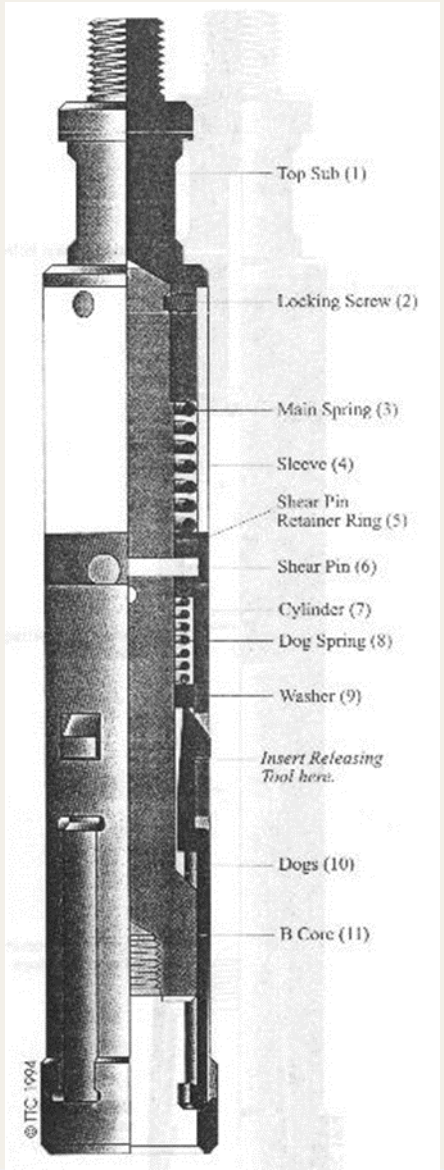
RB

Size (ins)	OD (ins)	Fish Neck
1.1/2	1.430	1.187
2	1.770	1.375
2.1/2	2.180	1.375
3	2.740	2.313

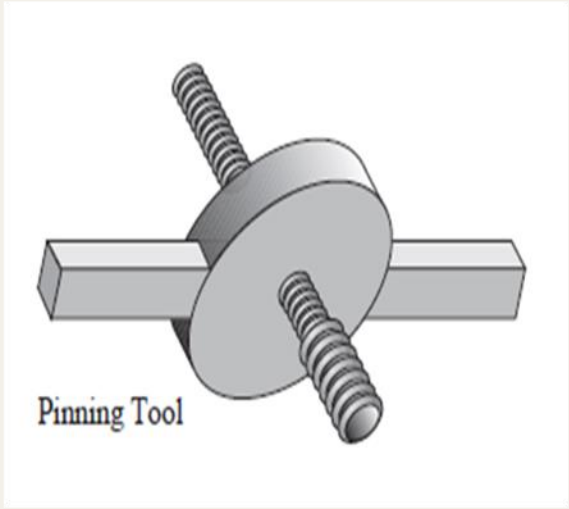
RS

Size (ins)	OD (ins)	Fish Neck
1.1/2	1.430	1.187
2	1.770	1.375
2.1/2	2.180	1.375
3	2.740	2.313

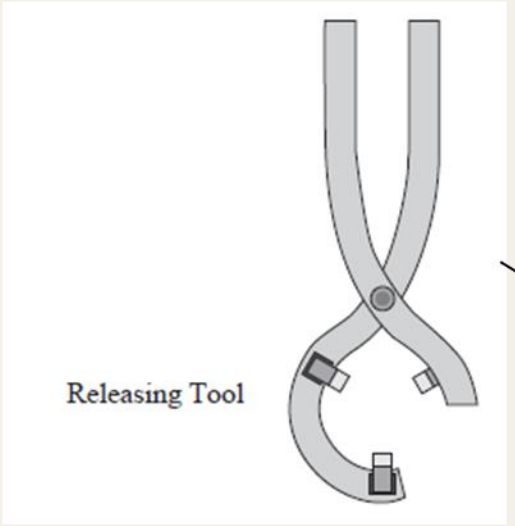
COMPONENT OTIS `R SERIES PULLING TOOL



Tools for ‘R’ and ‘S’ series



Used to re-pin the pulling tool ‘R’ and ‘S’ Series
**Inserting it into the bottom of tool*



Used to release pulling tool ‘R’ and ‘S’ Series from the fish engaged

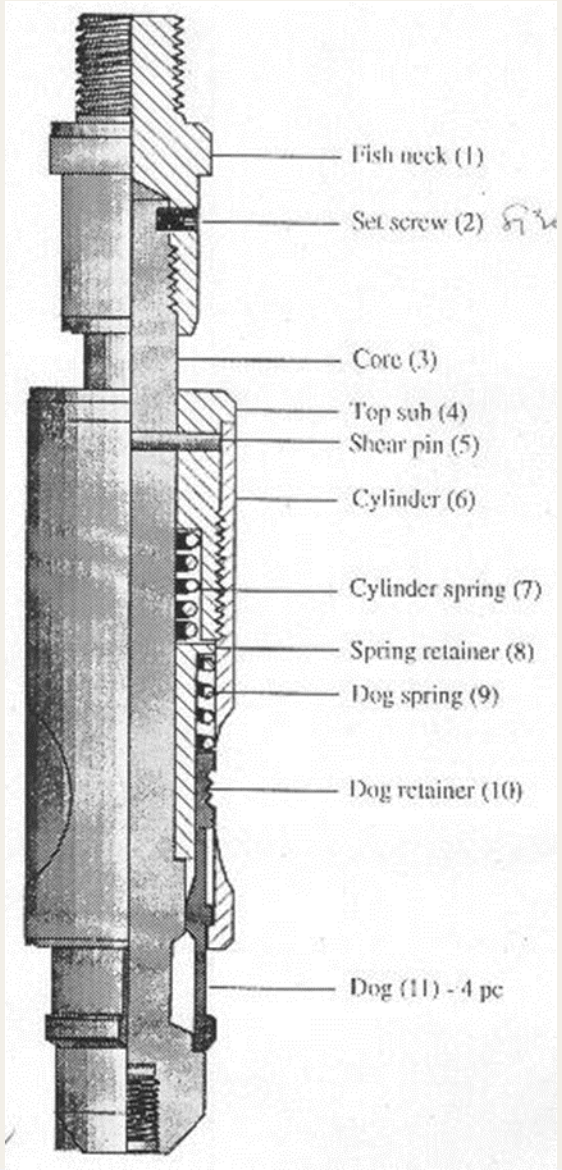
OTIS GS Pulling Tool

+Jarring down to shear the pin.

+Used to retrieve subsurface flow control devices with internal fishing necks.

Nominal Size (ins)	Tools O.D (ins)	Tool Fish Neck (in)
2	1.875	1.375
2.1/2	2.313	1.750
3	2.750	2.313
5	4.562	2.125

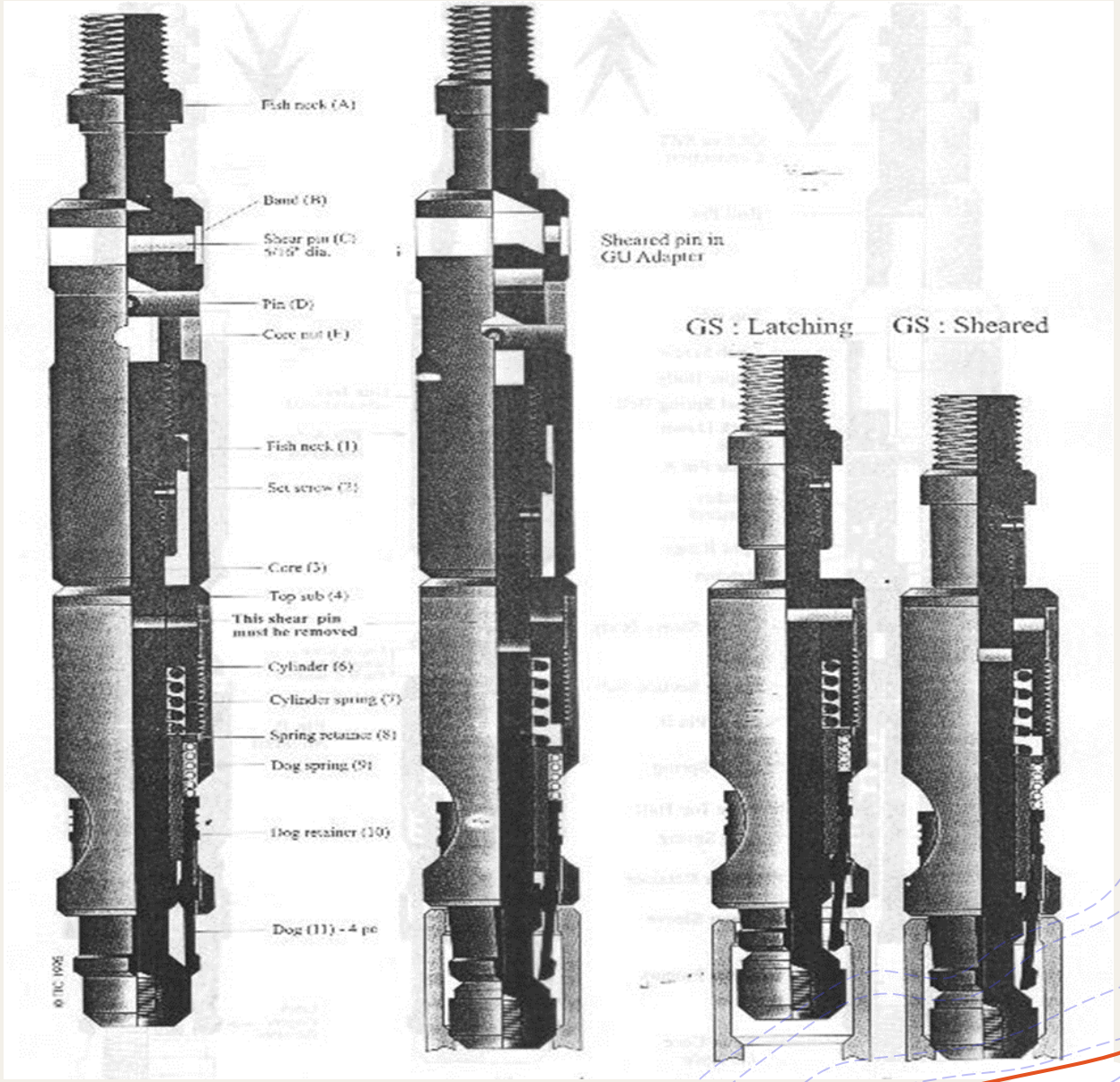
COMPONENT OTIS GS PULLING TOOL



OTIS GR Pulling Tool

- Jarring up to shear.
- Used for setting and retrieving items with internal "Otis" type fishing necks.
- The pin must be removed from the GS; otherwise, the tool will not shear in either direction.
- Combines the functions of the GS and GU tools.

COMPONENT OTIS GR PULLING TOOL



Service Tools

- Tubing Drift
- Gauge Cutter
- Wire Scratcher
- Lead Impression Block
- Fluted Centralizer
- Blind Box
- Tubing Swage
- Tubing Broach

Tubing Drift

- Drift runs are required before any wireline well intervention work.
- The drift tool is the first to be run in the hole to assess the condition of the tubing along its path.
- A fishing neck is located at the top of the tool for retrieval in case of tool loss downhole.
- A hole below the tool allows for pressure/fluid bypass.

Fluid Bypass

Gauge Cutter

- Function: To check tubing ID, measure total depth, locate the nipple ID and No-Go, and remove sand, scale, or paraffin from the tubing wall.
- Also known as a Tubing Gauge or Gauge Ring.
- Features an open space in the body to allow fluid bypass.

Gauge Cutter		
O.D. (in.)	Fishneck O.D. (in.)	Bottom Connection (in.)
1.25 – 1.50	1.187	15/16
1.50 – 2.00	1.375	15/16
2.00 – 2.50	1.375	15/16
2.50 – 3.00	1.750	1.1/16

Wire Scratcher

- Function: To clear wax, scale, and sand from the tubing wall, nipple profiles, SSD sleeves, and Side Pocket Mandrels.
- The wire scratcher is a brush-like tool.
- If the wire scratcher is ineffective at removing deposits, a gauge cutter/ring and tubing brush will be used.

Wire Scratcher		
O.D. (in.)	Fishneck O.D. (in.)	Bottom Connection (in.)
1.000	1.375	15/16
1.500	1.375	15/16
1.875	1.750	1.1/16
2.125	1.750	1.1/16

Lead Impression Block

- Function: Used during fishing operations to inspect the shape or size of the top of the fish and select the appropriate tool for the operation.
- Also known as a ‘slickline bottom-hole camera’.

Lead Impression Block		
O.D. (in.)	Fishneck O.D. (in.)	Bottom Connection (in.)
1.25 – 1.50	1.187	15/16
1.50 – 2.00	1.375	15/16
2.00 – 2.50	1.375	15/16
2.50 – 3.00	1.750	1.1/16

Fluted Centralizer

- **Function:** Is used in deviated wells to ensure the toolstring remains in a centralized position.

Fluted Centralizer		
O.D. (in.)	Fishneck O.D. (in.)	Bottom Connection (in.)
1.50 – 2.50	1.375	15/16
2.50 – 3.50	1.750	1.1/16
3.50 – 4.50	2.313	1.9/16

Blind Box

- Function: Used when heavy downward jarring is needed to dislodge a fish or push objects down the hole.
- Acts as a “Cutter Bar” to break the wireline at the top of the rope socket of the toolstring that cannot be retrieved.
- The flat bottom surface is hardened to minimize wear and damage.

Blind Box		
O.D. (in.)	Fishneck O.D. (in.)	Bottom Connection (in.)
1.25 – 1.50	1.187	15/16
1.50 – 2.00	1.375	15/16
2.00 – 2.50	1.375	15/16

Tubing Swage

- Function: To restore light collapse in the tubing and remove large obstructions.
- It is recommended to use in conjunction with a hydraulic or spring jar to allow the operator to jar up and free the swage if it becomes stuck.

Tubing Swage		
O.D. (in.)	Fishneck O.D. (in.)	Top Connection (in.)
1.25 – 1.50	1.187	15/16
1.51 – 2.50	1.375	15/16
2.51 – 3.00	1.750	1.1/16
3.01 – 5.00	2.313	1.1/16

Tubing Broach

- Function: To remove burrs and buildup within the wellbore, as well as scale and rust from the internal diameter of the tubing.
- Available types:
- Diamond Cut Broach
- Straight Cut Broach

Diamond Cut broach

Straight Cut broach

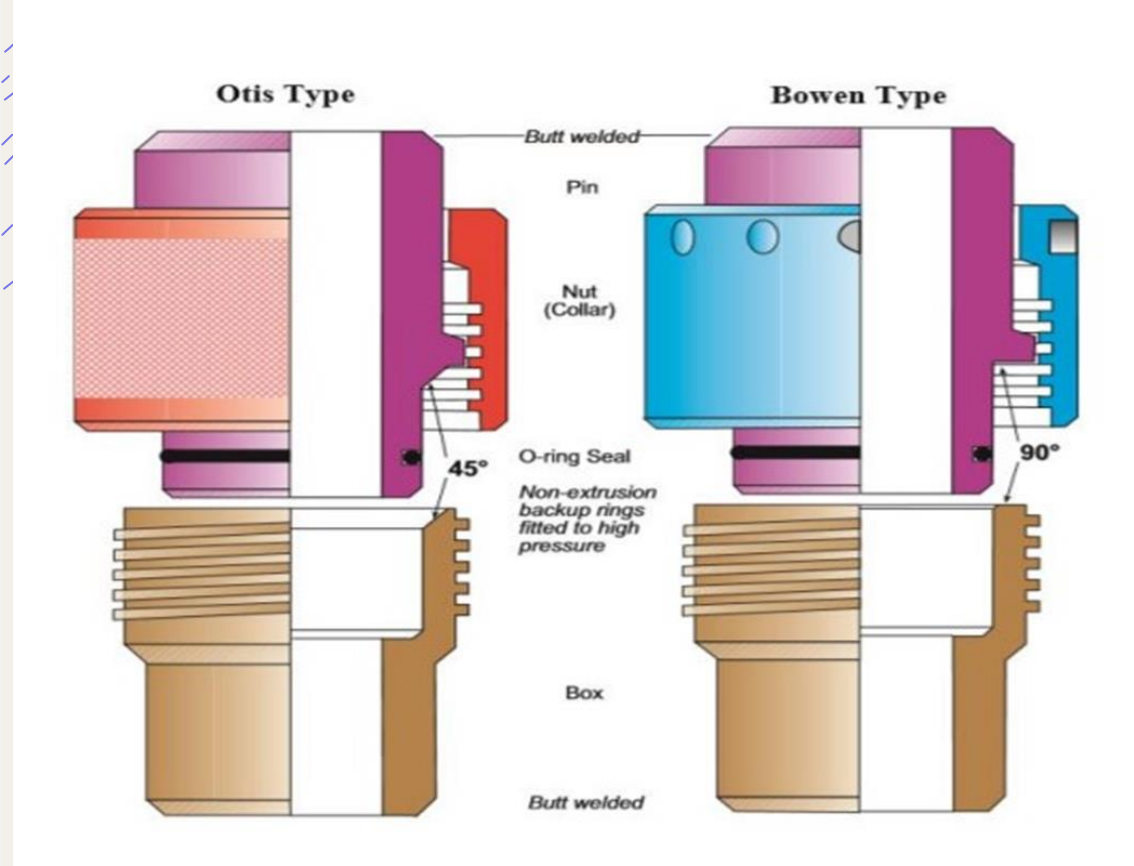
Tubing Broach Size

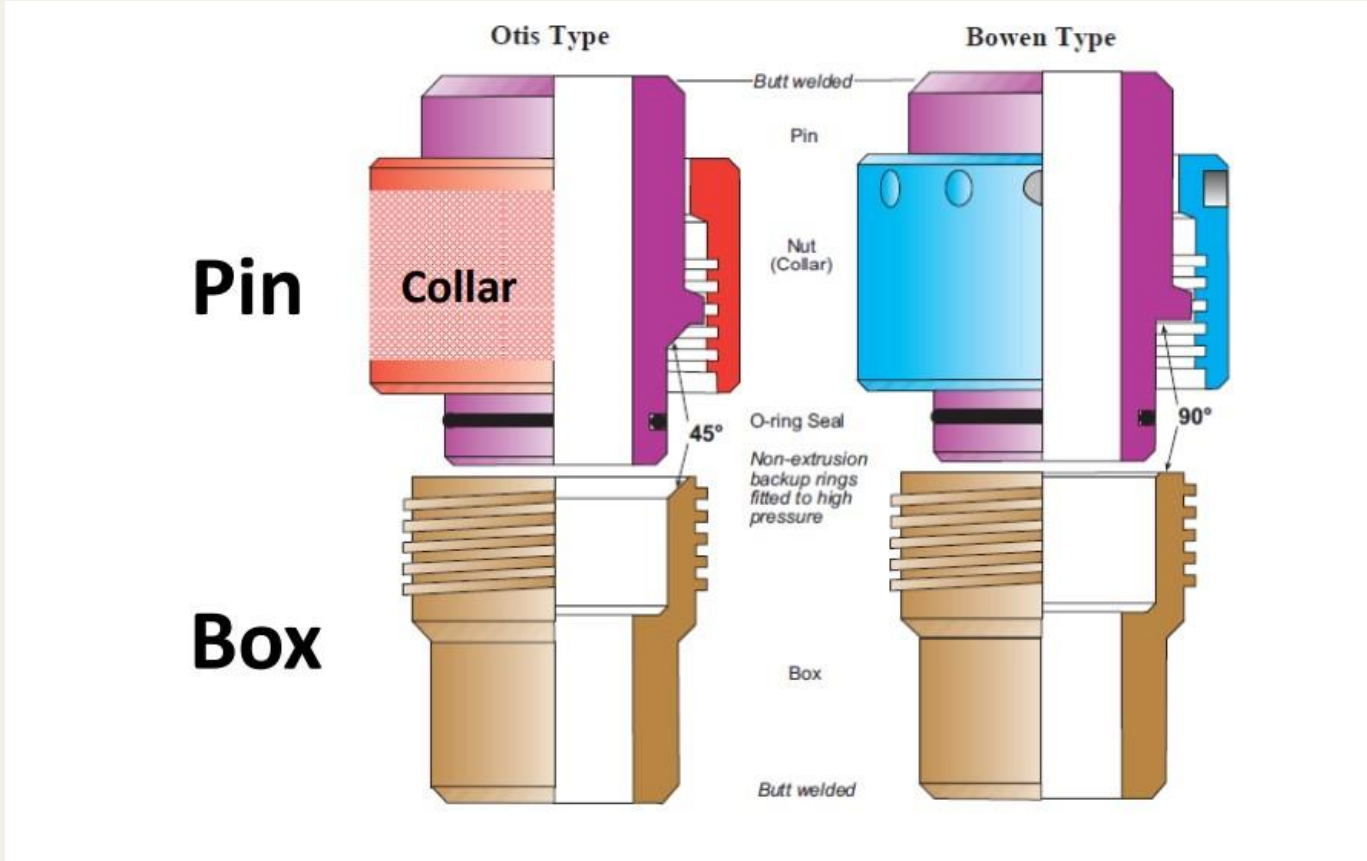
Tubing Broach		
O.D. (in.)	Fishneck O.D. (in.)	Top Connection
1.50 – 2.50	1.375	15/16
2.51 – 4.00	1.750	1.1/16
4.01 – 5.00	2.313	1.1/16
5.01 – 6.00	3.125	1.9/16

Pressure Control Equipment (PCE)

+Stuffing Box
+Lubricator
+Quick Test Sub
+Blowout Preventer
+Ball Valve
+Wellhead Crossover
+Control Panel
+Single Well Control Panel

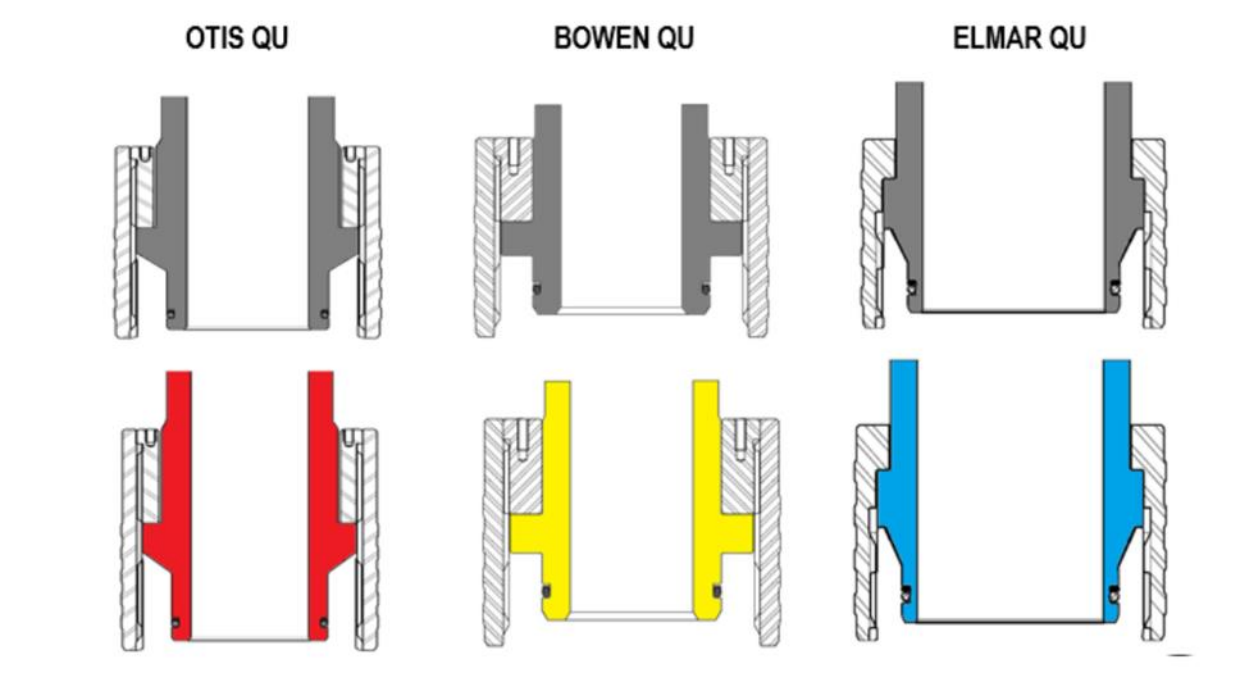
Quick Union


Otis Type
Bowen Type
Butt welded
Pin
Nut
(Collar)
45°
O-ring Seal
Non-extrusion
backup rings
fitted to high
pressure
90°
Box
Butt welded


Pin
Box
Otis Type
Bowen Type
Collar
Butt welded
Pin
Nut
(Collar)
45°
O-ring Seal
Non-extrusion
backup rings
fitted to high
pressure
90°
Box
Butt welded

Components / Parts

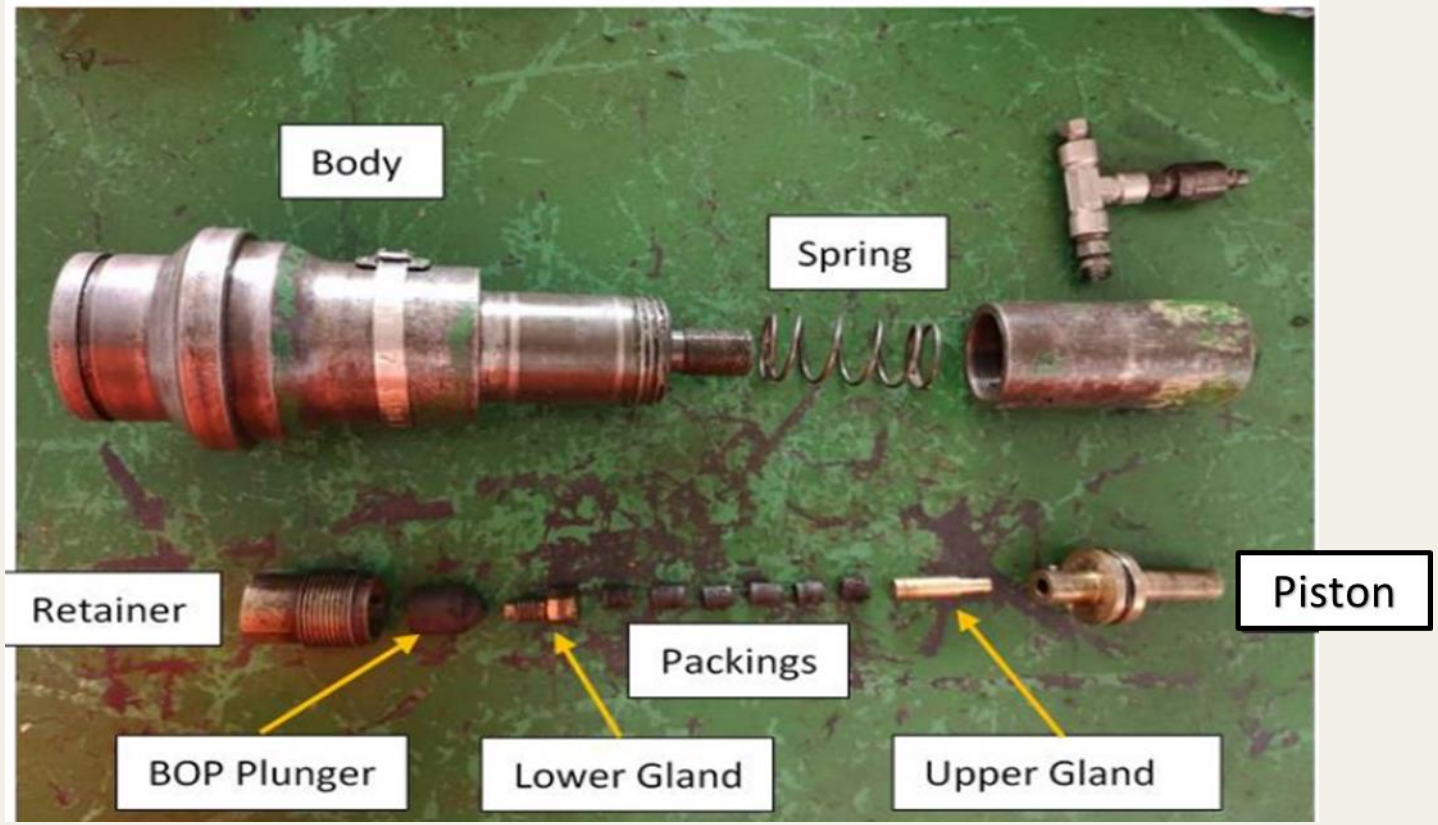
- Otis type connection - 45 degree angle.
- Bowen type connection- 90 degree angle.



Stuffing Box

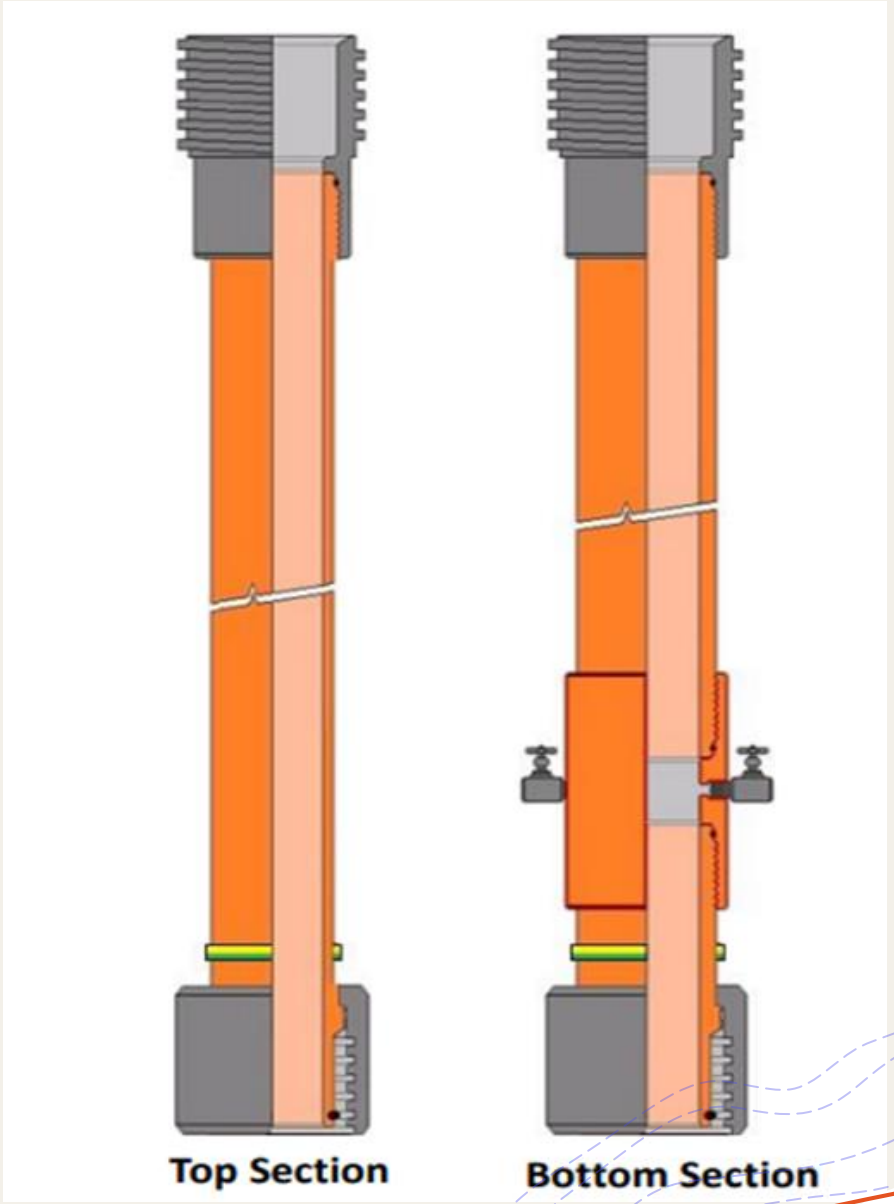
- A sealing device attached to the top of the lubricator sections.
- Serves as the primary barrier.
- The wire-to-sheave size ratio is 1:120.
- Hydraulically controlled packing nuts are available and can be operated with a hand pump.

Components / Parts



Lubricator

- The lubricator allows for the insertion and removal of the wireline toolstring from a well while maintaining pressure.
- Available in ported and non-ported versions.
- The ported lubricator includes a bleed-off valve to vent pressure from the well.
- Features an 8-foot lubricator.
- Pup Joints are available in 2, 3, and 4-foot lengths.

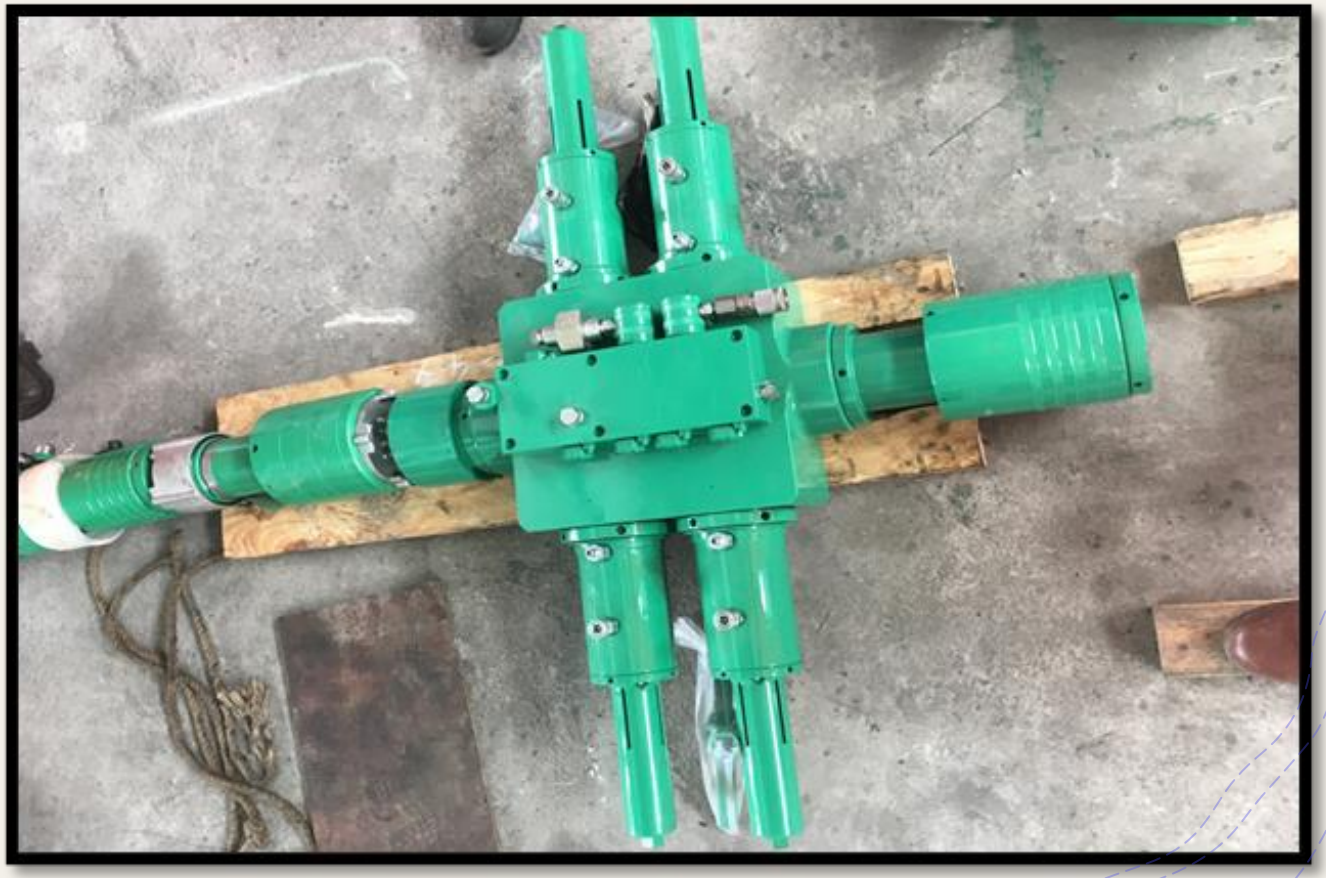


Quick Test Sub

- Used for pressure testing pressure control equipment (PCE).
- Includes two O-rings at the disconnection point, which can be tested with hydraulic pressure to confirm that the PCE can still maintain pressure.

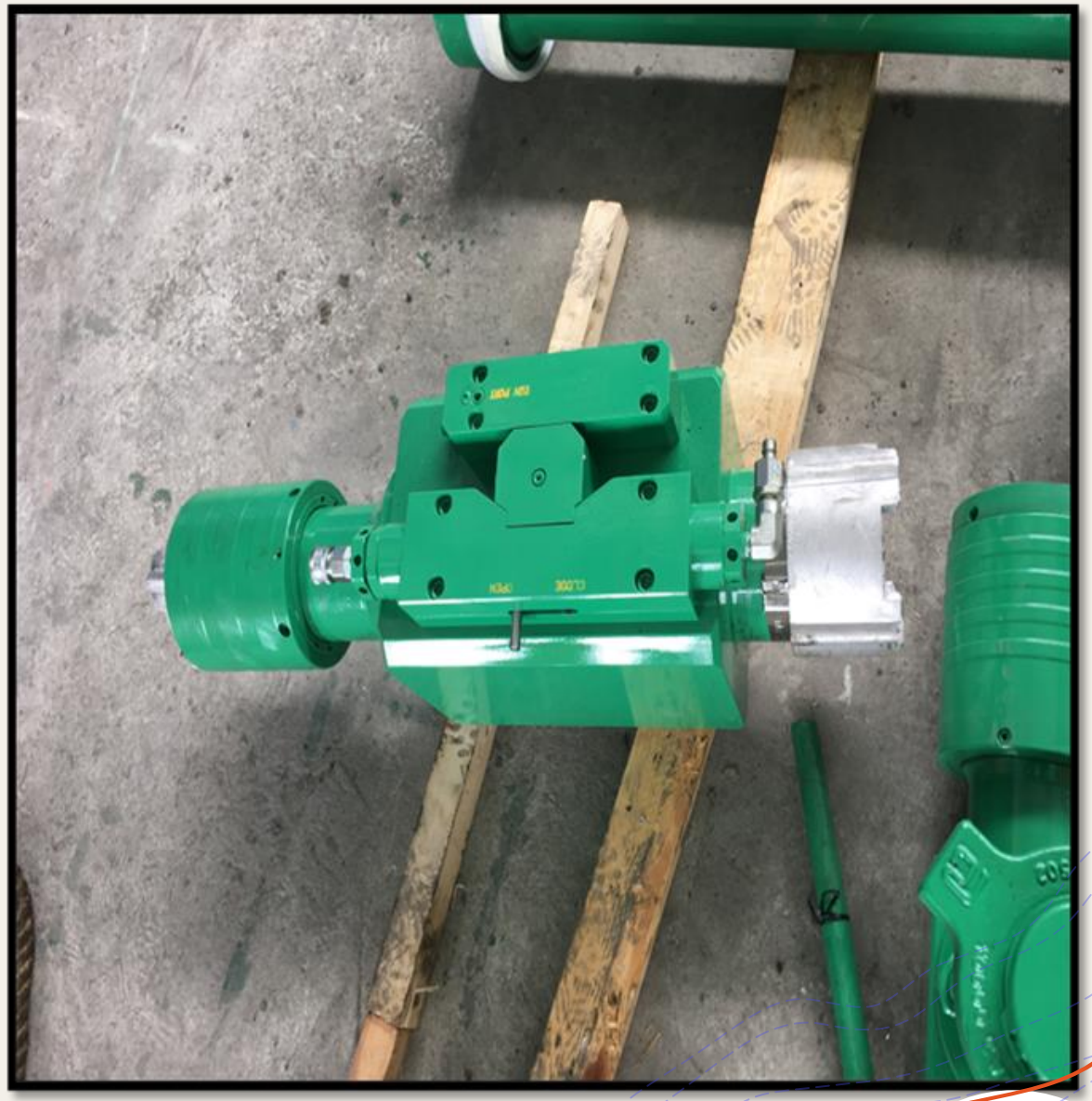
Blowout Preventer (BOP)

- Serves as a secondary barrier.
- Maintains pressure from one direction.
- Hydraulic force closes the rams, which seal around the wire.
- Controlled via a control panel.



Ball Valve

- Designed to hold pressure from both below and above.
- Operated either hydraulically or with a manual handle.
- Equipped with ball valves that can cut the wire.
- Provides additional safety for shutting the well. Positioned below the wireline valve/BOP and above the wellhead.



Wellhead Crossover

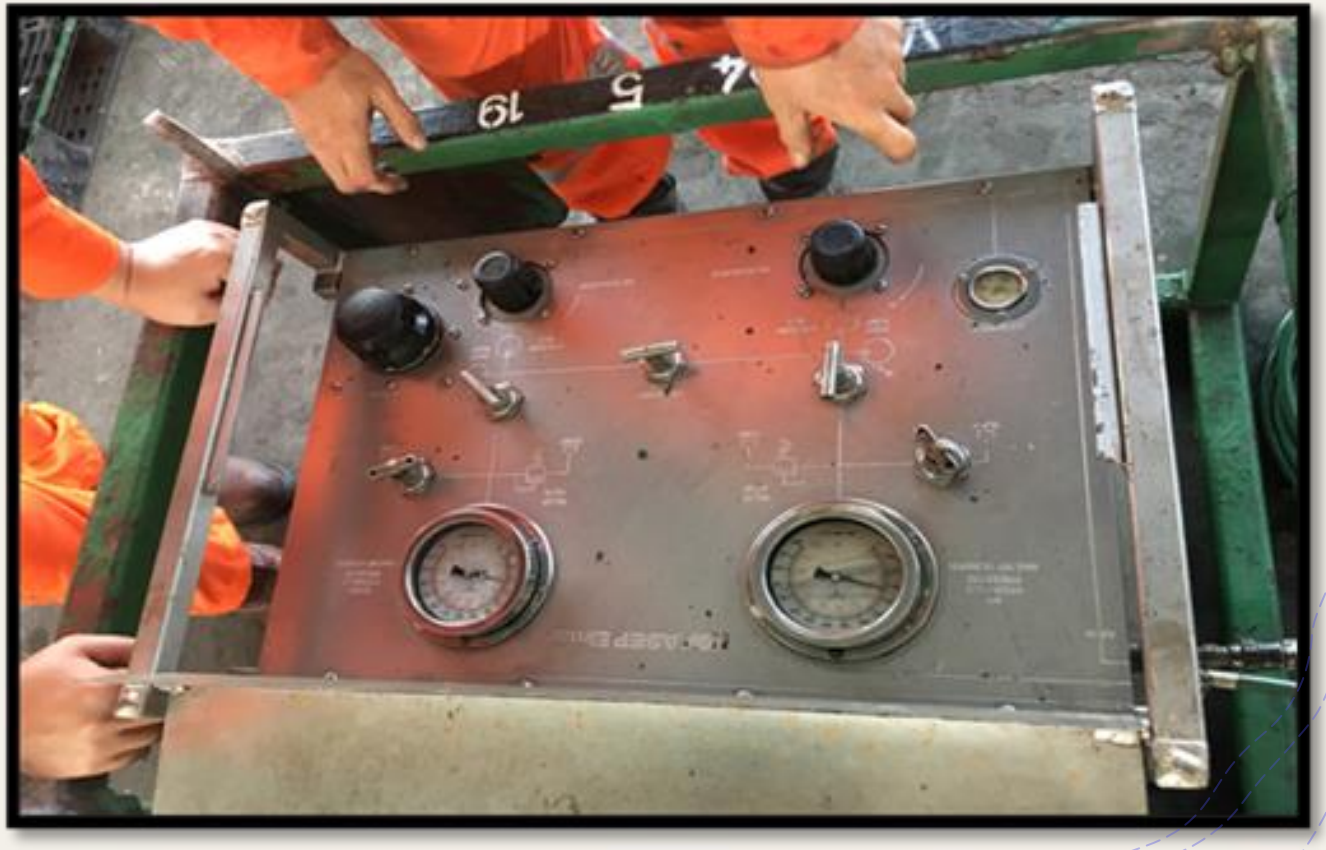
- Connected to the wellhead, allowing pressure measurement and control equipment to interface with it.
- Provides pressure seals for casing strings extending from the surface to the bottom of the wellbore.
- Wellhead adapters come in various sizes to match different wellhead configurations.

Control Panel

- Operates dual ram BOP, stuffing box, safety valve, master valve, and test line.
- Provides emergency shutdown capability.
- Function tests at pressures ranging from 2000 psi to 3000 psi.

Single Well Control Panel

- Ensures the safe and reliable operation of Xmas tree valves by supplying hydraulic power and controls.
- Operates SSV (actuator pressure of 2800 psi) and TRSCSSV (3800 psi).Equipped with two Haskel pumps.
- Maximum working pressure is 10,000 psi.
- Function tests at pressures ranging from 5500 psi to 6500 psi.



PCE Accessories

Enerpac Hand Pump

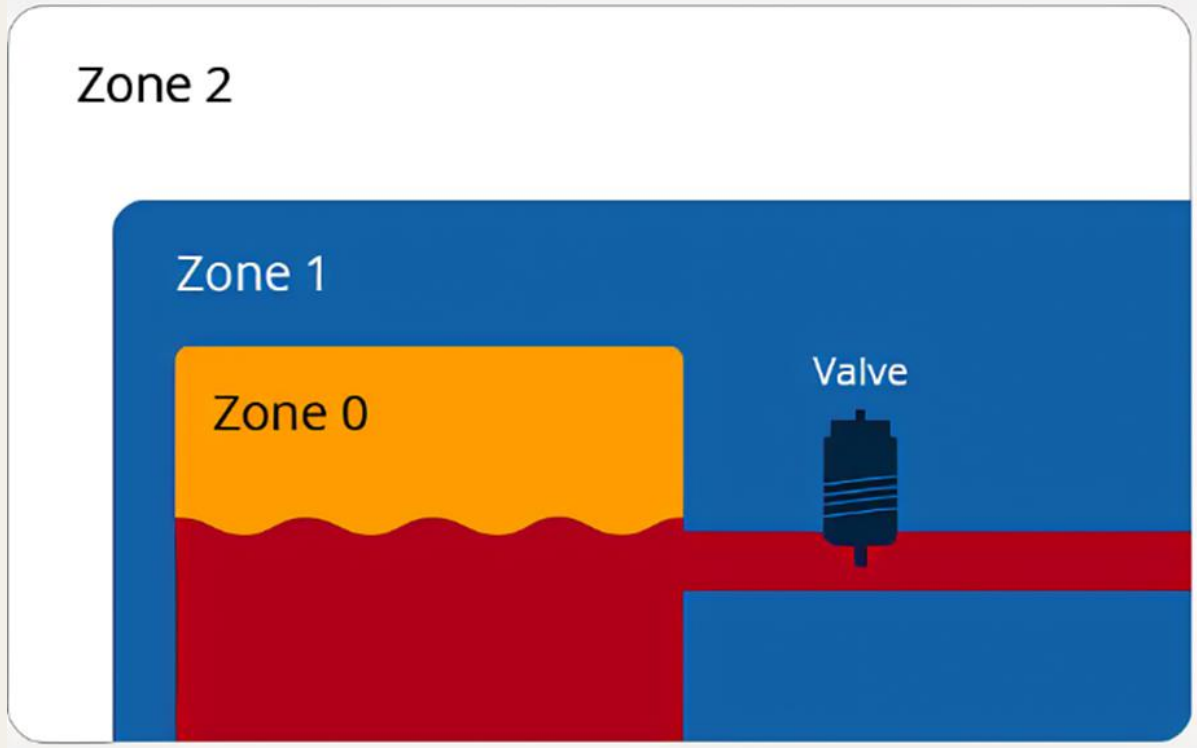
Hunting Lifting Clamp

Hunting Lifting Cap

Surface Equipment

+ Wireline Mast
+ Air Compressor
+ Power Pack
+ Reel Skid Unit

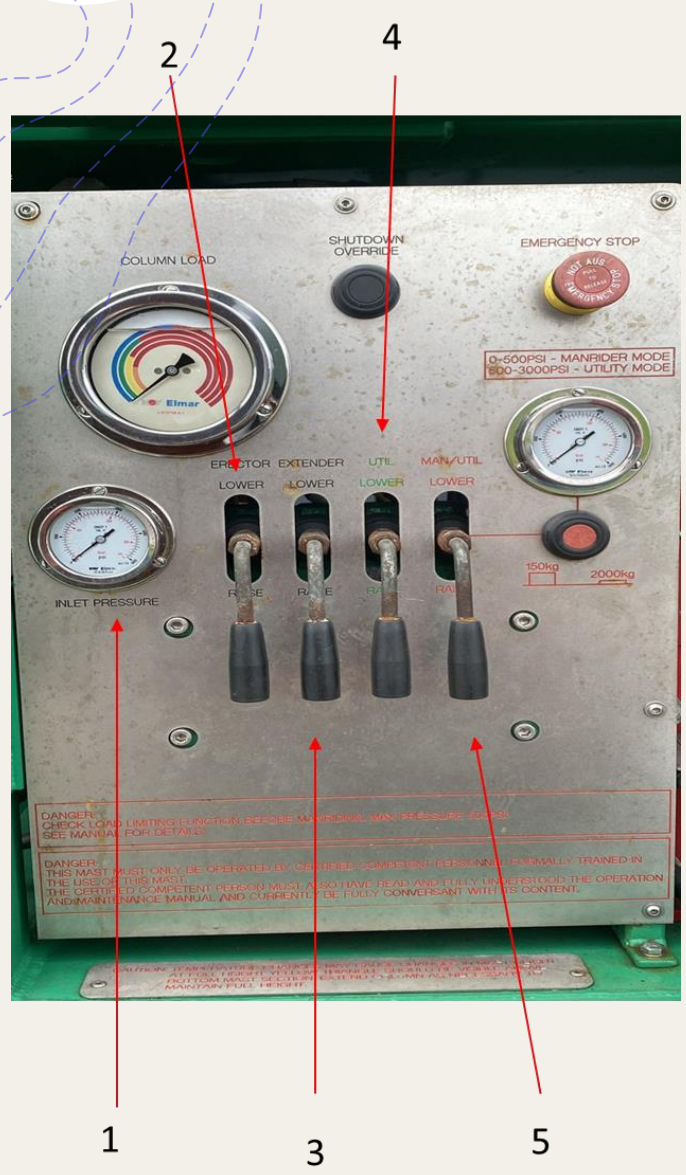
Oil and Gas Hazardous Zone



- Flammable material in liquid form
- Flammable material in gaseous form mixed with oxygen and in very high concentration
- Flammable material in gaseous form mixed with oxygen in high concentration
- Flammable material unlikely, or for a very short period and in no concentration

Wireline Mast

+ Lifts and suspends the lubricator during wireline operations.
+ Zone 1.



+ Inlet pressure gauge
+ Erector
+ Extender
+ Block (green)
+ Block (red)

Air Compressor

- Provides air supply.
- Zone 2 rated equipment.
- Equipped with both spring and hydraulic starters.

Power Pack

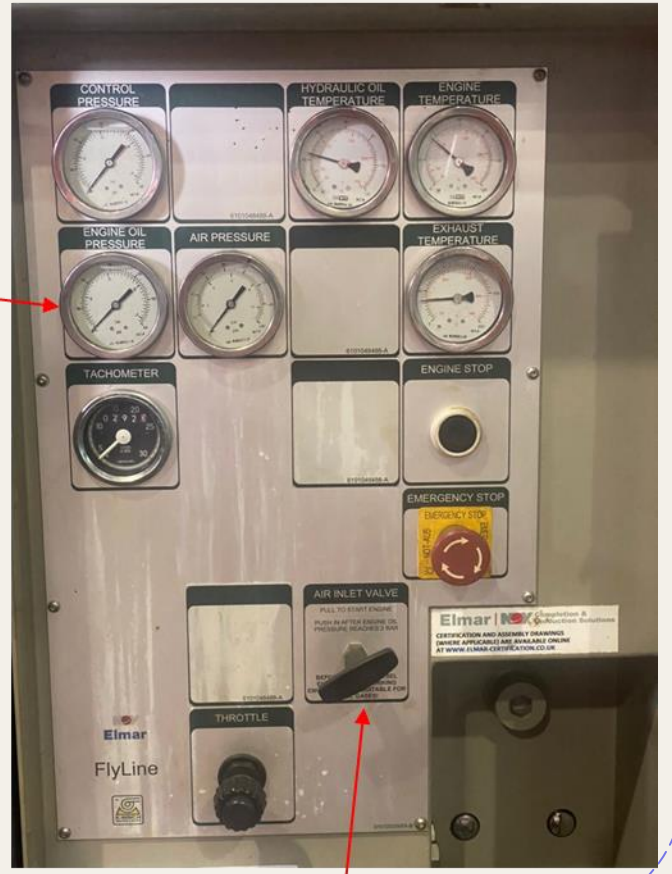
- Diesel-driven power pack.
- Certified for use in Zone 2 hazardous areas.
- Features spring, hydraulic, and air starters.
- Supplies hydraulic power to the reel skid unit and wireline mast.
- Delivers hydraulic pressure of 2500 psi from the power pack to the reel skid unit.
- Requires a hot work permit.

Powerpack Daily Checklist

- Hydraulic oil
- Engine oil
- Radiator
- Coolant
- Oil filter
- Connection hose

1. Rotate the sentinel valve clockwise.

2. turn the winding nut till the spring tension sight glass turn to green.



4. Engine oil pressure at 40-60psi

3. Pull the air inlet valve up.

Reel Skid Unit

- A wireline winch is used for lowering and raising the toolstring in the well.
- The direction lever selects the drum's rotation direction.
- The drum brake keeps the drum stationary or is used during jarring.
- The hydraulic control valve regulates the drum's rotation speed.
- The odometer indicates wireline depths.
- The weight indicator measures the tension on the wireline.

CONCLUSION

- Understand the function of equipment and tools.
- Learn the basic rig-up process.
- Familiarize yourself with slickline operation procedures.
- Acquire skills in performing preventive maintenance.

JOB SUMMARY

Perform Gas lift and perforation Job (Vestigo)

Perform Monitor Control Panel (CHESS)

Perform Sand Pump Bailer (CHESS)

Perform Gas Lift and Set PXX Plug (VESTIGO)