SLICKLINE OPERATOR WORKBOOK

IMPORTANT NOTE:

1. Your point of reference to complete this workbook may be obtained from the following
   - Training Manual and any other training materials provided together with this workbook
   - Your Trainer, Assessor (Slickline Operator), Verifier (FSM) or senior colleagues
   - SOP / Quality Procedures & Processors
2. The completion of this Workbook is a joint effort and responsibility between you and your assessor therefore you have the obligation to request from your assessor to be assessed upon your completion of each topic
3. The completion of this Workbook is part of the MANDATORY requirements which you must fulfill to qualify for a promotion
4. Your training program is mostly self-driven, including this Workbook. It requires individual initiatives, dedication and commitment to complete the process.

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DATE OF JOIN	**DECEMBER 2012**
CONTACT NO.	**011-39109091**
RECEIVED DATE	
DATE COMPLETED	**30 JUNE 2024**

C. MAINTENANCE

Legend: **C**-Competent, **NME**-*Need More Exposure*

Document No.	KNOWLEDGE ON EQUIPMENT AND SKILLS IN MAINTENANCE AND TROUBLESHOOTING	Assessment / Verification	Competency		Assessment Date
			C	NME	
Form C.1	**EQUIPMENT DETAILED SPECIFICATION**				
	1 Explain what is equipment specification of wireline tool example 3.0" GS pulling tool * Technical data sheet. *Manual for the wireline tool		✓		01/07
	2 How do you place an order for wireline tools? What are the requirements to look for? * Fill up ESTR (equipment specification technical review) form and submit to technical department.		✓		01/07
	3 If given a basic drawing of wireline tools are you able to service the tool? *No. * Need manual while servicing tool.		✓		01/07
	4 When you received a new equipment or wireline tool what are things you should do and what to look for. * Do an acceptance check and fill up the acceptance form. * Function test the tool/equipment.		✓		01/07
	5 Where do you look for specification of pressurized vessel or container? What is written there? * Data plate on equipment. * Pressure rating * Validity of container. * Containment inside vessel		✓		01/07

Form C.2	EQUIPMENT OPERATION PROCEDURES				
	1. What is an equipment operating procedure? * An equipment operating procedure is a documented set of instructions that outlines the specific steps and guidelines for safely and effectively operating a piece of equipment or machinery. It serves as a comprehensive guide for personnel to follow during equipment setup, operation, maintenance, and shutdown.		✓		01/07
	2. Does all the equipment have an operating procedure and what is it for? * Yes. It is set of instructions that outlines the specific steps and guidelines for safely and effectively operating a piece of equipment		✓		01/07
	3. Explain what will be the consequences if you are not following the operating procedures. * Injury or Fatality: Without adherence to safety protocols, the risk of accidents increases, potentially leading to serious injuries or death. * Delays and Downtime: Incorrect processes can cause equipment failures or operational bottlenecks, leading to delays.		✓		01/07
	4. Does Dimension Bid have operating procedures and where are they kept? * Yes. In server		✓		01/07

	5. Explain how the Reel Skid Unit Operating. * Position the power pack such that it is located in the downwind position from the wireline * Position the wireline winch such that it is directly in line with the well to be worked * Check diesel fuel, engine oil and hydraulic oil. * Check and ensure that the hydraulic hoses and quick couplings are in good condition. * Connect the hydraulic hoses from the power pack to the wireline winch. * Move the control lever on the winch to mid position and brake in parking mode. * Start up the power pack and run the engine at idling speed for a few minutes to warm up, then run it at 1/4 throttle for another few minutes to observe for any signs of possible problems. * Set the depth counter (odometer) and spool out a short length of wire (e.g. 5 to 6 ft.) from the winch drum. Measure the length of this wire with a measuring tape and compare it with the counter reading to ensure that the right counter and the correct ratio of right-angle drive have been provided on the winch. * Ensure that the counter head is installed with the correct size of wire measuring wheel and pressure wheels, and the wheel bearings are in good condition. * Check that the pressure wheels are tight by turning the tensioning bolts or idler clamp screw till hand-tight. * Check for wire grooves in the guide rollers and ensure they can rotate freely. Guide rollers with wire grooves in them must be replaced. * Ensure that the counter head post does not twist, and the traverse carriage assembly can traverse freely on the traverse support bar(s) which should be coated with light grease. * Spool out sufficient length of wire for making the rope socket.		✓		01/07

	6. Explain how the following Power Pack operating: i. Diesel Power Pack * Use engine to power up power pack and moving the hydraulic system. * Use hydraulic or spring starter to start the power pack. * Hook up hydraulic hose inlet and outlet line to RSU. ii. Electrical Power Pack * Use electric motor to power up power pack and moving the hydraulic system. * 415 v socket need to hook up to power supply to start the power pack. * Hook up hydraulic hose inlet and outlet line to RSU.		✓		01/07
	7. Explain how to start the Diesel Power Pack and show how to hook-up 1" and 1 – ¼" Hydraulic Hose * Check power pack condition as per pre-job checklist. * Hook up Hydraulic hose INLET and OUTLET line to RSU. * Pump hydraulic to compress and use kick starter to start the power pack.. * Start up the power pack and run the engine at idling speed for a few minutes to warm up, then run it at 1/4 throttle for another few minutes to observe for any signs of possible problems. * Try spool out and spool in RSU to check hydraulic system from power pack.		✓		01/07

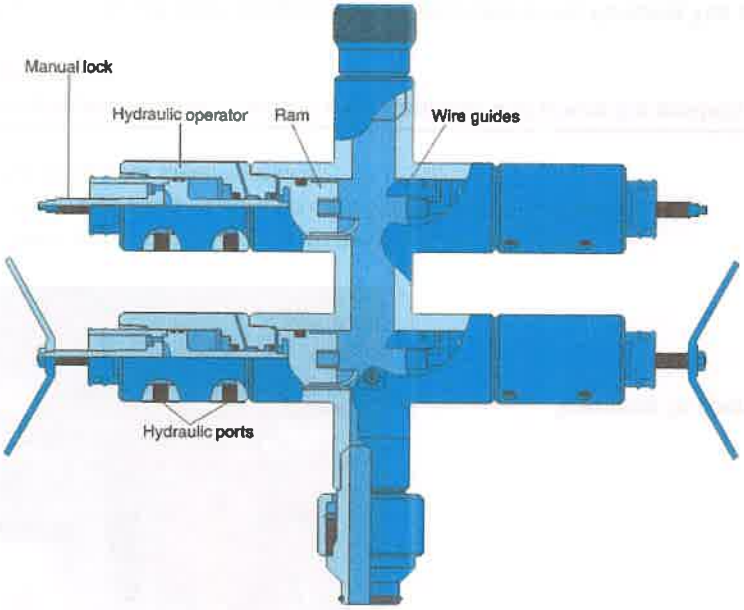
	8. Explain how to start the Air Compressor * Check air compressor condition as per checklist. * Check emergency stop button. Make sure the button not activate. * Crank the spring starter. * Pull the start lever and push spring starter until power pack start.		✓		01/07
	9. Identify the Portable Control Panel and explain its function. * Portable control panel is small. Different from WHCP. * Use only for OPEN/CLOSE HMV and SCSSV.		✓		01/07
	10. Explain how to operate Control Panel – TRSCSSV, SDV, BOP, Accumulator Tank and Stuffing Box • Hook up air hose from air supply to control panel. • Check ESD button make sure in closed position. • Open air supply valve and make sure air supply 110 psi. • Turn dial regulator clockwise for TRSCSSV and set at 5000 psi. For MV set dial regulator at 3000 psi and top up pressure into accumulator tank to desire Pressure. • For stuffing box use hand pump that attached to the control panel when Necessary.		✓		01/07

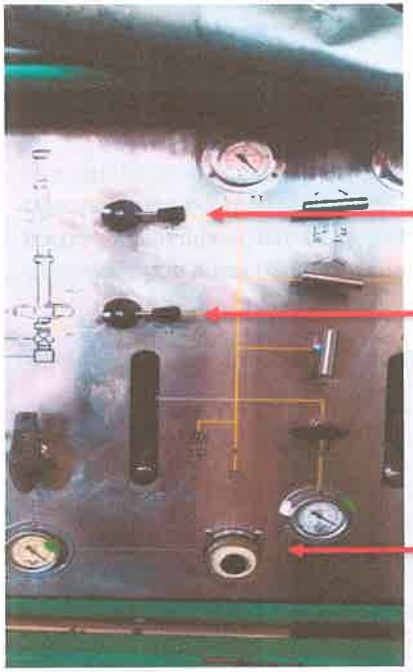
	11. Show how to hook – up ¼" Hydraulic Hose to the following system i. Pressure Manifold /TRSCSSV * Pull out ¼" hydraulic hose from control panel and hook up to TRSV manifold thru 10k snap tite. ii. Stuffing Box * Pull out ¼" hydraulic hose from control panel and hook up to stuffing box thru 5k snap tite. iii. BOP * Pull out ¼" hydraulic hose from control panel and hook up to BOP using T-Hose thru 5k snap tite.		✓		01/07

	12. Explain how to operate Test Pump * Check test pump condition. Ensure all hoses, connections, and components are in good condition. * Check the hydraulic fluid level in the test pump tank and top it up if necessary. Ensure the fluid is clean and free of contaminants. * Hook up air hose from test pump to air compressor. Ensure all connections are secure and leak-free. * Hook up hose from test pump to charted recorder. Ensure all connections are secure and leak-free. Confirm that all connections and fittings are tight to prevent any leaks or pressure loss during testing. * Check ESD button. Make sure in normal position. * Check dump valve. Make sure in close position. * Push start button before operate. * Set air shut valve to open position. * Adjust high flow pump to fill up water into item to test. * Use the control panel to set the initial pressure. Gradually increase the pressure to the desired test level. Continuously monitor the pressure gauge to ensure the pressure is increasing steadily and there are no leaks or sudden pressure drops. * Check paper charted inside charted recorder. Make sure pressure reading at test Test pump same with charted recorder. * After finish back off regulator for high pressure pump to 0 psi. * Open dump valve to bleed off water and pressure inside the hose		✓		01/07
	13. Identify the Air Receiver Tank and explain its function * The primary function of an air receiver tank is to store compressed air generated by an air compressor system. Compressed air is often used as a source of power for pneumatic tools, equipment, and processes.		✓		01/07

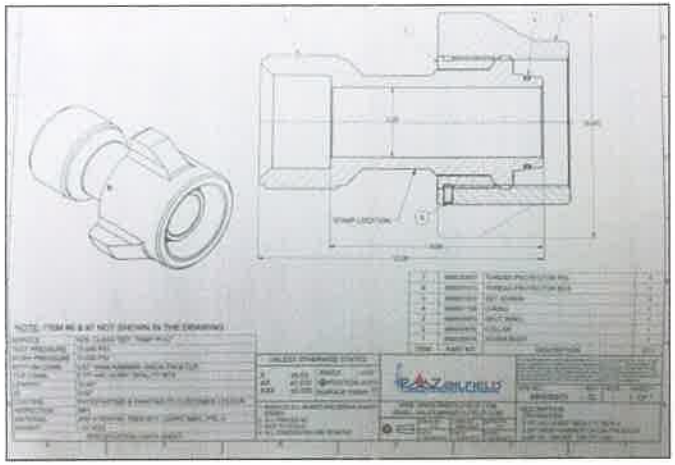
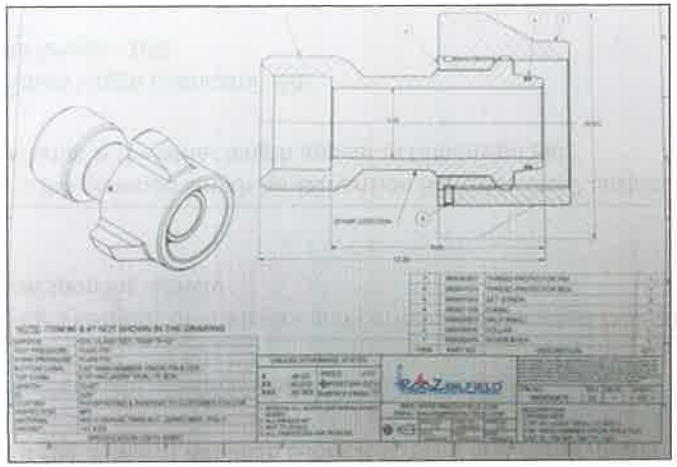
	14. Explain how to operate Air Receiver Tank * Hook up air hose from air compressor to air receiver tank. * Make sure to secure hose with whip check and safety pin. * Open the valve from air compressor to air receiver tank. * Air inside air receiver tank will distributor to other equipment using another air hose. * Use bleed point under the air receiver tank to bleed water build up inside the tank frequently		✓		01/07
	15. What is the Working Pressure for Air Receiver Tank * 150 psi		✓		01/07
	16. Identify the Spooling Unit and explain its function * Spooling unit function as a device to spool in or spool out wire from RSU. 		✓		01/07

	17. Show where the following components allocated at Spooling Unit and explain the function i. Pressure Control Valve – To control the hydraulic pressure ii. Braking System – To stop and control the spooling unit.		✓		01/07
	18. Participate in spooling wire activity at least 3 times. Explain what are the other equipment required besides Spool * Empty wire drum, spooling unit, RSU, weight indicator, hay pulley, wire clamp and securing device (tie down chain).		✓		01/07
	19. What do "SPOOL-IN" and "SPOOL-OUT" wire mean? When do these activities take place? * Spool in – Spool wire from spooling device to RSU. * Spool out – Spool out wire from RSU to Spooling device. * To replace the old wire and to spool new wire.		✓		01/07
	20. Why is it compulsory to secure Spooling Unit with Tie Down Chain During spool-in / our wire activity? * To secure and prevent the Spooling Device from accidently moving forward to RSU.		✓		01/07
	21. Explain how the Stuffing Box operating * By apply pressure to energize the piston to compress the packing and if slickline breaking wire in hole, the stuffing box blow out plug seal the well pressure/fluid from come out to atmosphere.		✓		01/07
	22. Show how to connect the Stuffing Box with lubricator and where to hook-up the Stuffing Box hydraulic hose * Hydraulic hose hooks up at hydraulic pack off circuit		✓		01/07

	23. Identify the BOP and explain its function  * A Blowout Preventer (BOP) is a critical safety device used in slickline operations, particularly in oil and gas wells. Its primary function is to prevent the uncontrolled release of hydrocarbons (oil or gas) from the wellbore during drilling, completion, and intervention activities.		✓		01 /07

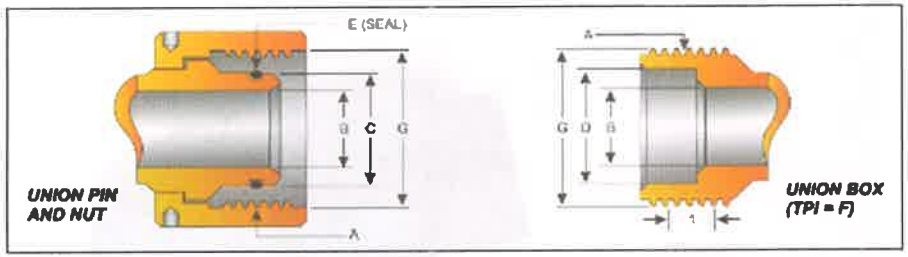
	24. Identify the BOP hydraulic hose required and hook-up to the Control Panel. Explain how to Close and Open BOP Upper & Lower Ram  * Select upper ram BOP lever to open or close position. * Using regulator pressure up until BOP ram open or close position. * Same step for lower ram BOP.		✓		০১/০৭
	25. Show how to connect the BOP with lubricator and where the position of BOP during wireline job * For routine job BOP position on main deck above the Pumping Tee and for none routine (fishing), closed to the wellhead valve		✓		০১/০৯

	26. What is the different between Lubricator, Riser and Pump Joint? * Different length, position while rig up and function.		✓		01/07
	27. Make-up 3 sections of lubricator and perform pressure test max 2000 psi ing Unit to perform spooling activity n/a				
	28. What is the common length for Dimension Bid Lubricator? Besides the common length, what is the other length appear in Dimension Bid? * Common length Lubricator: 8ft Other length : 10ft		✓		01/07

	29. Identify the following threaded size i. 5 – 5/8" WKM Hammer Union to suit 3-1/8" WKM Single X-mass Tree  ii. 5 – 5/8" WKM Hammer Union to suit 2-9/16" WKM Single X-mass Tree 		✓		01/07

	iii. 5 – 1/5" WKM Quick Union to suit 3-1/8" WKM Single X-mass Tree 				
	iv. 3 – ½ " EUE Pin 		✓		01/07

v. 8.25" – 4 ACME Type 'O'



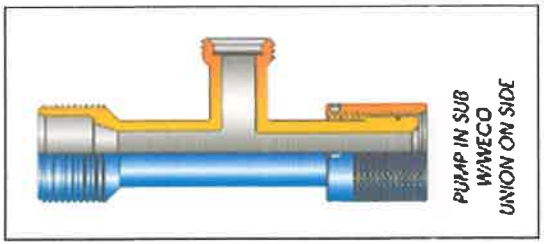
PARVEEN QUICK UNION IDENTIFICATION CHART

PARVEEN (A)	W.P.(PSI)	SERV	B	C	D	E	F	G	PART NO.
5.000-4 ACME TYPE O	5000	STD	2.50 3.00	3.494	3.5	50236	4	5.000	440100
5.000-4-ACME TYPE O	10,000	STD	2.50 3.00	3.494	3.5	50338	4	5.000	440100
5.000-4 ACME TYPE O	15,000	STD	2.50	3.494	3.5	50338*	4	5.000	440101
5.750-4 ACME TYPE O	5,000 10,000	H2S	2.50 3.00	3.994	4.00	50342*	4	5.750	440200
6.250-4 ACME TYPE O	15,000	H2S	2.50	3.994	4.00	50342*	4	6.250	440301
6.500-4 ACME TYPE O	5,000 10,000	STD	4.00	4.744	4.750	50348	4	6.500	440400
7.500-4 ACME TYPE O	15,000	H2S	3.00	5.494	5.500	50354*	4	7.500	440701
8.250-4 ACME TYPE O	5,000 10,000	STD	5.00	6.182	6.188	50435	4	8.250	440800
8.375-A ACME TYPE O	5,000 10,000	H2S	4.00	5.244	5.250	50427	4	8.375	440900
8.750-4 ACME TYPE O	5,000	STD	6.38	7.494	7.500	50441	4	8.750	441100
9.000-4 ACME TYPE O	5,000 10,000	H2S	5.00	6.744	6.750	50438	4	9.000	441200
9.500-4 ACME TYPE O	15,000	H2S	4.00	6.244	6.250	50435*	4	9.500	441601
9.500-4 ACME TYPE O	5,000	H2S	6.38	7.994	8.000	50443	4	9.500	441400
11.500-4 ACME TYPE O	10,000	H2S	6.38	8.244	8.250	50444	4	11.500	441800

✓ 01/07

	30. What is the common length of Wellhead X-over in Dimension Bid? Why? * 1ft * 2ft * To make sure length for PCE stack up is enough while rig up on well.		✓		01/07
	31. Show how to rig-up Wellhead X-over and explain step by step * Make sure no trap pressure before open xmass tree cap. * Using chain tong open xmas tree cap carefully. * Use crane to lift up xmass tree cap to maindeck. * Use crane to lift down x-over to the wellhead. * Check o-ring and put lubricant before hook up to xmass tree cap. * Use hand to tighten x-over collar.		✓		01/07
	32. What is the ID for: 3-½" , 4-½" and 5-½" nominal lubricator * 3-1/2" lubricator = 3.0" * 4-1/2" lubricator = 4.0" * 5-1/2" lubricator = 5.0"		✓		01/07

33. Identify the Pump-in Tee and TIW Valve and explain its function



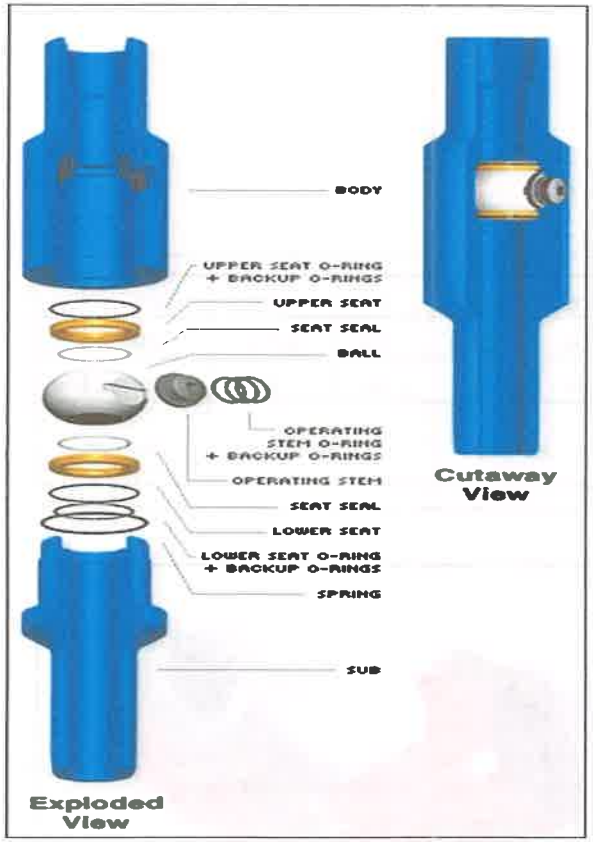
Engineering Data for Pump-In Sub		
ID	W.P (PSI)	SERVICE
2-1/2	5,000	STD
2-1/2	5,000	H2S
2-1/2	10,000	STD.
2-1/2	10,000	H2S
3	10,000	STD
3	10,000	H2S
4	10,000	H2S
5.12	10,000	H2S
6-3/8	10,000	H2S

PUMPING TEE :

The pump in sub places between BOP and the wellhead. It is basically used to pump the fluid in the well when BOP closed. Pump in sub also can be used for injection of inhibitor and for collection sample.

✓

01/07



TIW VALVE :

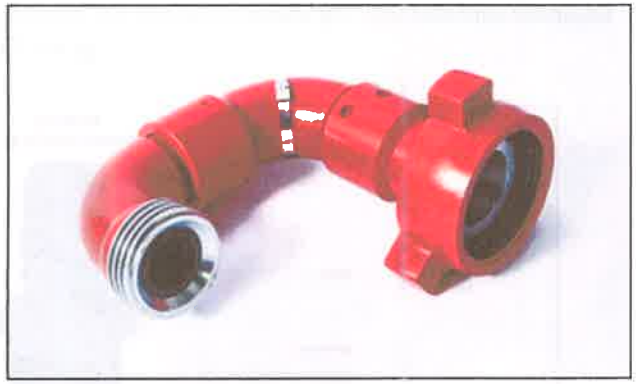
TIW Valve are ball valve design for high pressure condition. These ball valve can hold pressure from both direction. TIW valve are called "full opening" because when the ball valve is opened the flow path has a smooth inside diameter.

✓

01/07

34. Identify the following threaded size and ball valve

i. 1502 Thread Half Union Side Outlet (For Chicksan Line)

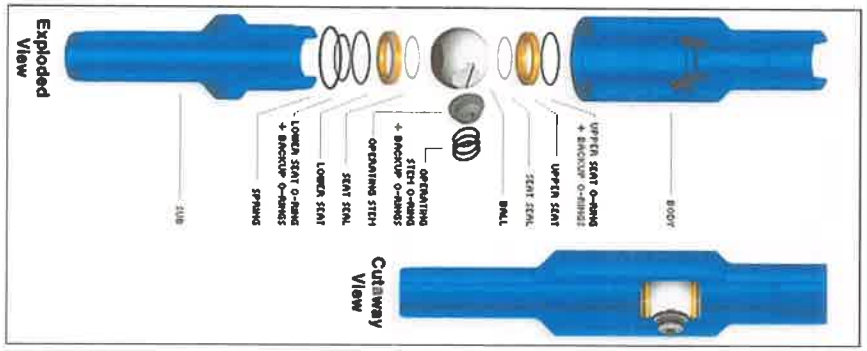


Size (inch)		Total Length		Nut Radius		Material		Weight	
						Nut	Subs		
in	mm	in	mm	in	mm			lbs	kgs
1	25.4	2-11/16	68.3	1-15/16	49.2	SC/SF	SF	1.75	0.8
2	50.8	3-5/16	84.1	2-29/32	73.8	SF	SF	5.25	2.4

✓

01/07

ii. 3" Ball Valve



Safety Valve Specifications

Complete Valve		310-412200-25	310-478276-27	310-638234-28	310-738314-30
Size, Connection, & Weight		4-1/2" OD 2" EUE (55 lb)	4-7/8" OD 2-7/8" EUE (93 lb)	6-3/8" OD 3-1/2" EUE (136 lb)	7-3/8" OD 4-1/2" EUE (186 lb)
Valve Components	Quantity	2" ID	2-7/16" ID	2-3/4" ID	3-1/4" ID
Body	1	310-412200-25B (23 lb)	310-478276-27B (36 lb)	310-638234-28B (69 lb)	310-738314-30B (88 lb)
Sub	1	310-412200-25S (22 lb)	310-478276-27S (41 lb)	310-638234-28S (50 lb)	310-738314-30S (76 lb)
Ball*	1	100016 (4 lb)	200015 (4 lb)	100011 (6 lb)	100003 (9 lb)
Seat*	2	100017 (2 lb)	200018 (2 lb)	100012 (2 lb)	100004 (2 lb)
Seal Ring: PTFE-568*/**	2	PTFE-568-228	PTFE-568-145	PTFE-568-234	PTFE-568-238
Operating Stem*	1	100007-478 (.2 lb)	100007-478 (.5 lb)	100005-1 (1 lb)	100005-2 (1 lb)
Stem O Ring: BUNA 70*/**	1	70-568-125	70-568-125	70-568-229	70-568-229
Spring*	1	SSR-0275-S17	SSR-0325-S17	A3917-042	A-4627-047
Stop Ring*	1	120007	127607	123407	131407
Body O Ring: BUNA 70*/**	1	70-568-339	70-568-342	70-568-347	70-568-430
Seat O Ring: BUNA 70*/**	2	70-568-231	70-568-234	70-568-240	70-568-245
Operating Wrench	1	KVW-412-L	KVW-412-S	KVW-412-L	KVW-412-L
Seal Kit		210-200-SK	210-276-SK	210-234-SK	210-314-SK
Repair Kit		210-200-RK (9 lb)	210-276-RK (10 lb)	210-234-RK (12 lb)	210-314-RK (15 lb)

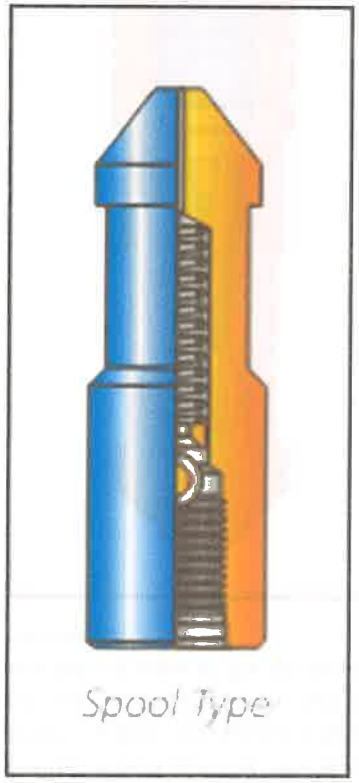
✓ 01/07

	35. Where is the pump-in Tee and TIW Valve should be rigged-up during wireline job? i. Pump-in Tee * Below the BOP ii. TIW Valve * Below the pump in tee		✓		01/07
	36. Explain step by step how to rig-up Pump-in Tee and TIW Valve * Open xmas tree cap. * Install xmas tree xover. * Install riser * Install TIW valve * Install Pump in tee		✓		01/07

37. Identify the following wireline tools and explain the function

i. Tie knot Rope Socket

The knot type rope socket consists of a body, spring, spring support and disc. The wire is bent around itself between 3 to 8 turns dependent upon the required weak point value required. For general wireline operations, 8 wraps are wound. The rope socket incorporates a FISHING NECK at its top end. This allows a fishing tool to latch on to a stuck or dropped tool string to fish it from the well.

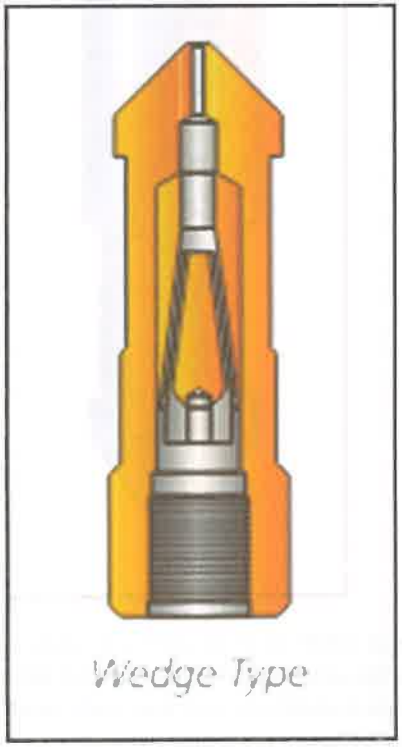


Spool Type

✓ 01/07

ii. Tear Drop Rope Socket

For 0.108-inch wireline, the most commonly used rope sockets are the "Tear Drop" sockets,.This socket is easy to make-up and little experience is necessary to reliably "tie the knot". The wire is bent around a slotted "Tear Drop" and the loose end held in place at the top by an Allen screw or by the friction of the mating sleeve itself.

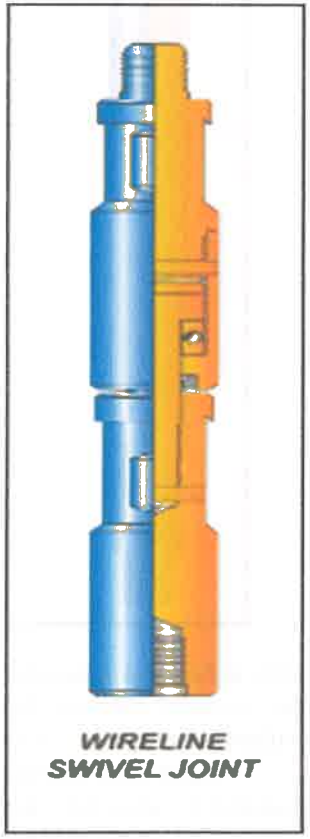


Wedge Type

✓ 01/07

iii. Swivel Joint

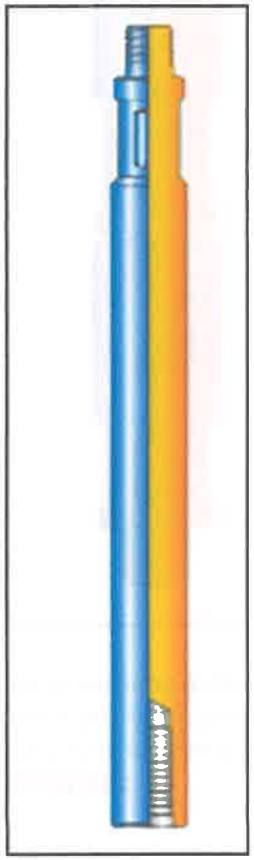
The Swivel Joint used to minimize the effect of line twist cause of by subsurface device being run. The swivel joint has a bearing incorporated into its design and is use to minimize rotation while RIH.

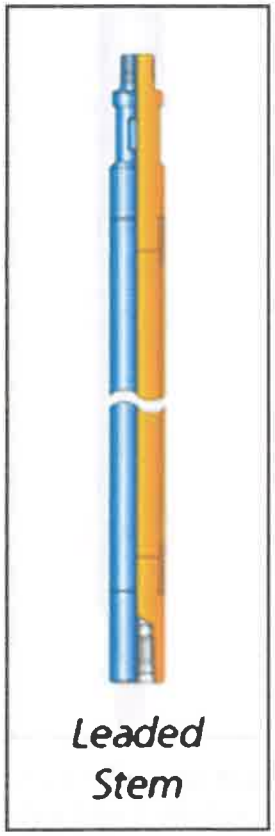


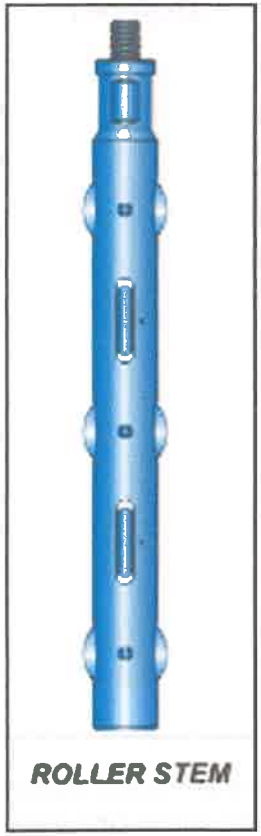
WIRELINE
SWIVEL JOINT

✓

01/07

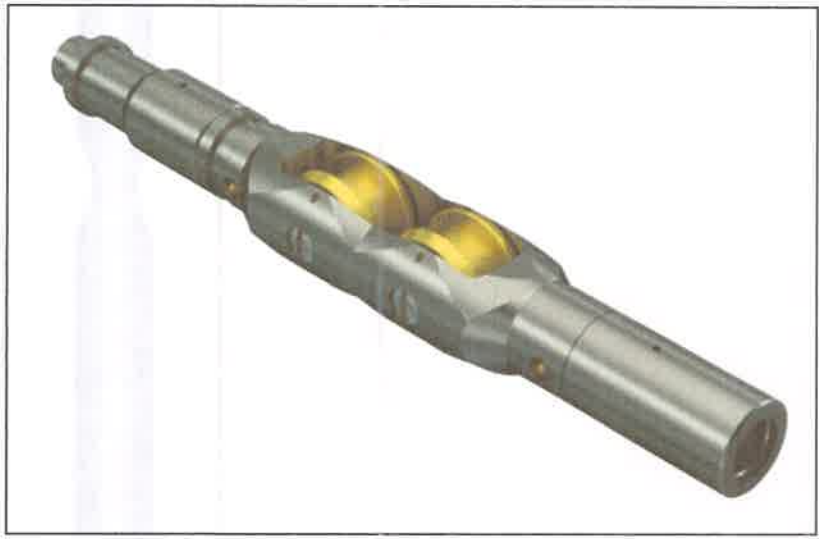
	iv. Wireline Stem WIRELINE STEM or SINKER BAR is required as part of the wireline toolstring to increase the weight. An increase in stem weight increases the impact force delivered by the jars. The toolstring should not be over-weighted as excessive mass dampens the "feel" and premature shearing of shear pins may occur. 		✓		01/07

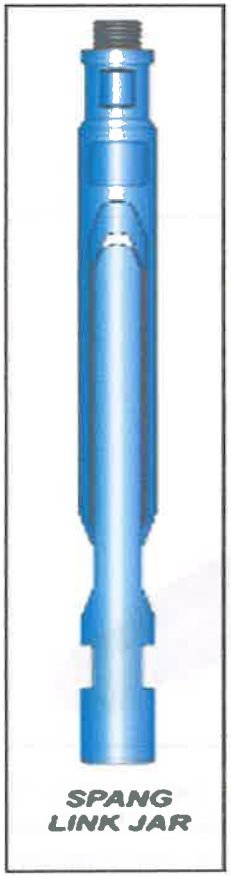
	v. Tungsten / Malory Stem Lead Filled Stems are used to provide additional weight to tool string, without change in OD & Length. These are normally used in well bores with high pressure, to eliminate friction with elastomers of stuffing box and for smooth running of wireline against well pressure.  Leaded Stem		✓		01/07

	vi. Roller Stem Roller stem is use with toolstring in deviated wells. Its application is use to reduse friction agains tubing ID.  ROLLER STEM		✓		01/07

	vii. Tungsten Roller Stem Tungsten Roller stem,Same like roller stem but with extra weight is used for work on deviated wells, or in wells with the paraffin, asphaltine etc. on the tubing internal walls. It allows the stem to roll down the tubing wall.  ROLLER STEM		✓		01/07

	viii. Multiwheel Roller Stem Multi roller stem, is used for work on high deviated wells, or in wells with the paraffin, asphaltine etc. on the tubing internal walls. It allows the stem to roll down the tubing wall and hence, cut down the friction incurred when using regular stem. 		✓		01/07

	ix. Roller Boggie Wireline Rollers manage the effects of friction, enabling access during wireline and slickline operations. The unique design of these tools allows the wireline operator to reach extended depths and higher deviations 		✓		01/04

	x. Mechanical Spang Jar Spang Link or Mechanical Jars are used in wireline fishing operations with stems. The weight of stems and jars can be used by operator for jarring by pulling and then releasing wireline. These Jars are available in various sizes and strokes.  		✓		01/07

	xi. Tubular Jar Tubular Jars are used in tool string for effective jarring. Tubular Jars are commonly used to remove obstacles from the tubing ID by jarring. This is an effective tool during fishing of wire as possibility of Tubular Jar getting jammed with wire is minimal.  *TUBULAR JAR*		✓		01/07

	xii. Upstroke Spring Jar Spring Jars are used to provide upward jarring during wireline fishing operations. Spring Jars can be used in place of Hydraulic Jar. These Jars are run between Stem and Mechanical Jar in toolstring  Spring Jar		✓		01/07

	xiii. Hydraulic Jar Hydraulic Jars are used for jarring when difficulty is face to obtain good jarring action with Mechanical Jars, particularly due to deviated wells or wells with highly viscous fluids. These jars provide only up stroke and are run between stem and Mechanical Jar  *Hydraulic Jar*		✓		01/07

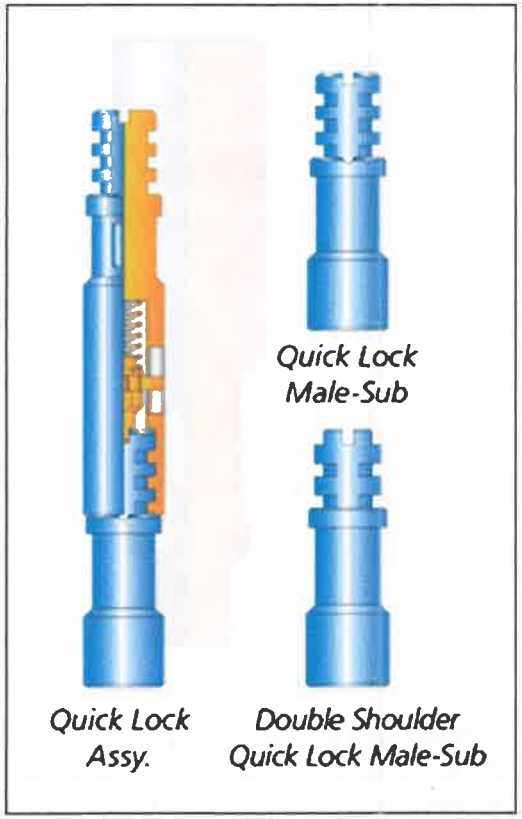
xiv. Knuckle Joint

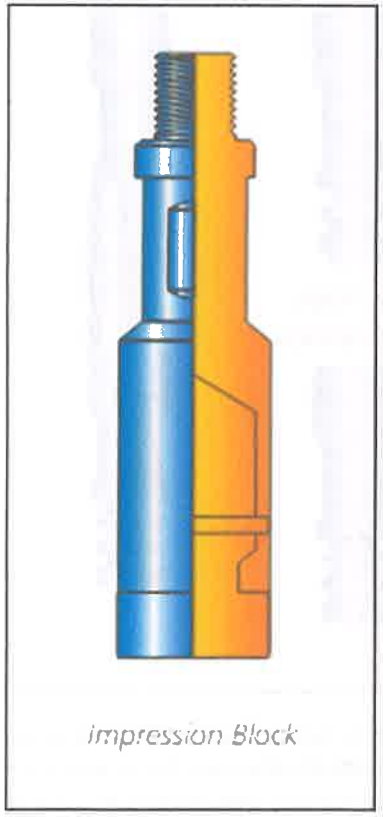
Knuckle Joints are used to add flexibility to the tool string and Knuckle Joints are effective in deviated wells. Whenever Stem and jar are not aligned or not moving freely it is impossible to operate tools. However adding knuckle joint in a string this situation can be avoided. Knuckle Joints are run immediately below Mechanical Jar.For additional flexibility additional Knuckle Joint can be included between Stem and Jar.

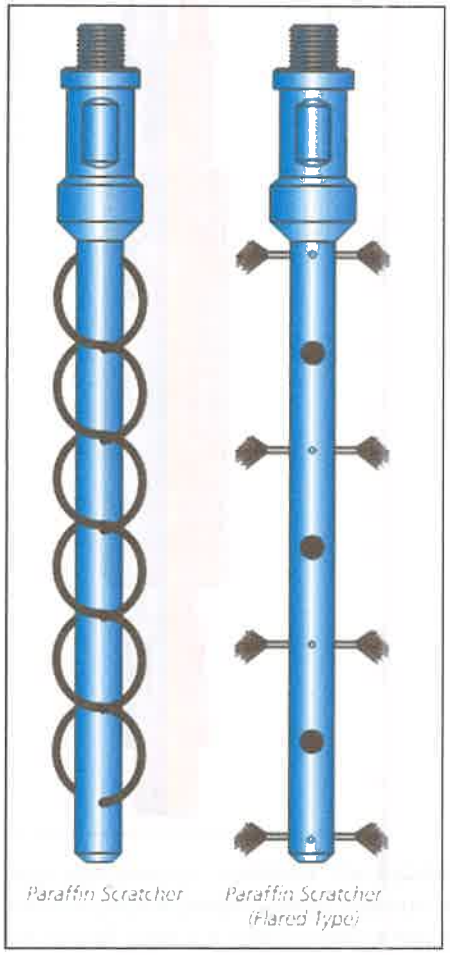
Knuckle Joint

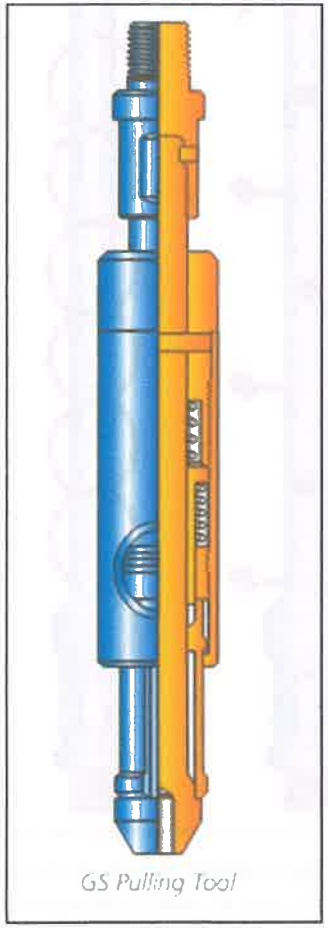
✓

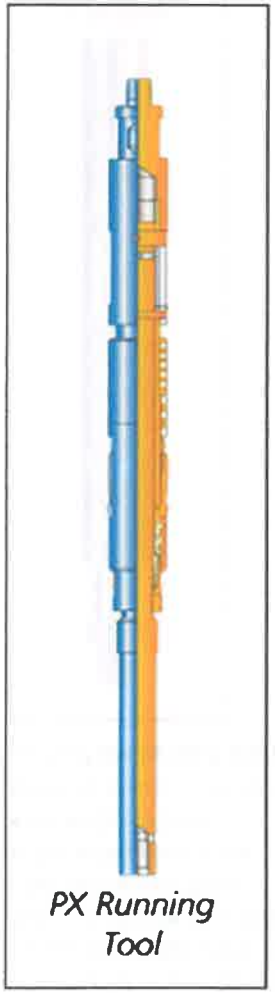
01/07

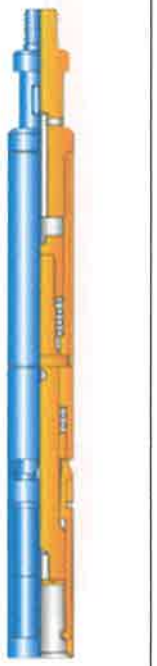
	xv. Quick Connect Quick Lock Connections provide a fast safe and strong method of attaching and releasing tools by hand. The male half is mated with the female half, then rotated through 90 deg. Whereon a spring loaded spade in the female section engages a slot in the male section and locks the assembly in place. It is released by pushing upon the spring and rotating again through 90 deg. It eliminates the chance of items backing off and does away with the need for pipe wrenches.  		✓		01/07

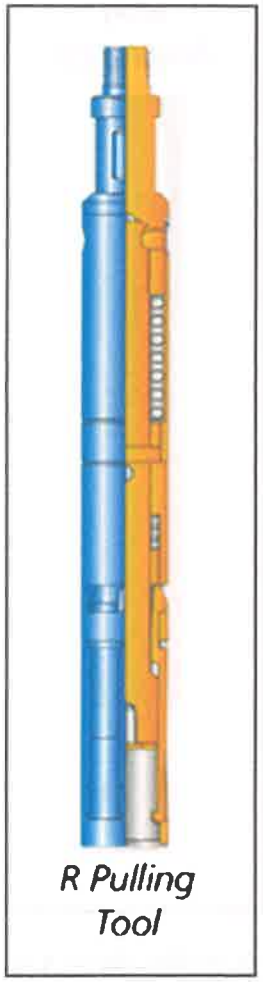
	xvi. Lead Impression Block Impression Blocks are used during fishing operations to check the shape / size of the top of fish and to determine tool appropriate for fishing operation. Lead is filled within body of Impression Block and a pin is fixed thru body of Impression Block and lead to stabilize lead within body.  Impression Block		✓		01/07

	xvii. Wire Scratcher Paraffin Scratchers or wire scratcher are used to clean the paraffin deposition on the ID of tubing, nipple profile etc.  Paraffin Scratcher — Paraffin Scratcher (Flared Type)		✓		01/07

	xviii. GS Running & Pulling Tool GS Pulling Tools are used to unlock and pull various down hole equipment with Internal Fishing Necks. These tools are designed to shear with Jar Down action. With addition of GU Adapter, complete assembly is changed to GR Shear Up Tool.  GS Pulling Tool		✓		01/07

	xix. OTIS X-Line Running Tool "PX" Running Tool is to enable X Lock to run selectively in the profile required.  *PX Running Tool*		✓		01/07

	xx. OTIS SB & RS Pulling Tool S Pulling Tools are used to retrieve equipment with external fishing necks by Jar-Up action. These tools are also used to run and release equipment by jarring down. Available in 3 different types: • SB: w/Longest Core • SM: w/Medium Core • SS: w/Short Core Either of above tools can be changed to other types by changing core. All other parts of above tools are interchangeable .  *S Pulling Tool*		✓		01/07

	*RS puling tool is a jar up pulling tool used to either set or retrieve pulling necks.  *R Pulling Tool*		✓		01/07

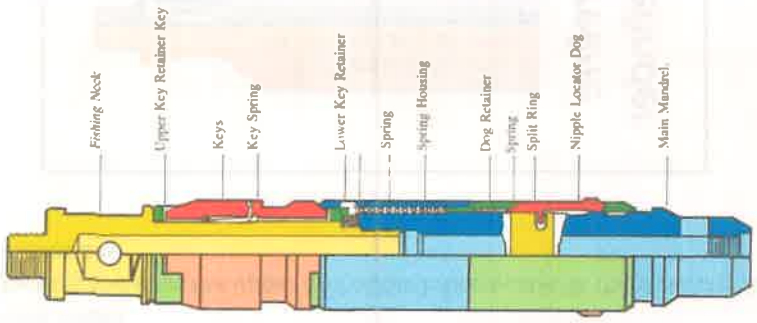
	xxi. CAMCO JDC & JUS pulling Tool The Camco 'JD' series pulling tool is designed to engage external fishing necks on Sub-surface devices within the well-bore.  *JD Pulling Tool*		✓		01/07

	The Camco 'JU' series pulling tool is designed to engage external fishing necks on Sub-surface devices within the well-bore.  JU Pulling Tool		✓		01/07

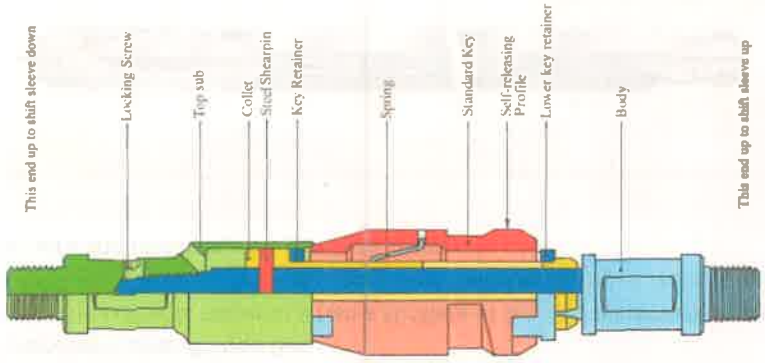
	xxii. 1 – ¼" PCE Heavy Duty Pulling Tool Heavy duty recovery of items with standard external type fishing necks 				
	xxiii. CAMCO OK – 6 KOT Designed to set and retrieve 1" (OK) & 1-1/2" (OM) Gas Lift Valves in various Side Pocket Mandrels 		✓		01/07

xxiv. OTIS 142 BO & 42 BO Shifting Tool

The Otis® 142BO Selective Positioning tools are designed to selectively shift the inner sleeve of a sliding side door circulating device into the down position only. These
tools are designed for tubing strings with multiple sliding side door devices of the same size so that one sleeve can be shifted into the down position without shifting any other sleeve in the tubing string.



The Otis B positioning (shifting) tool is designed to move the inner sleeve to an open or closed position in the type XA, RA, XO and XD Otis sliding side doors.

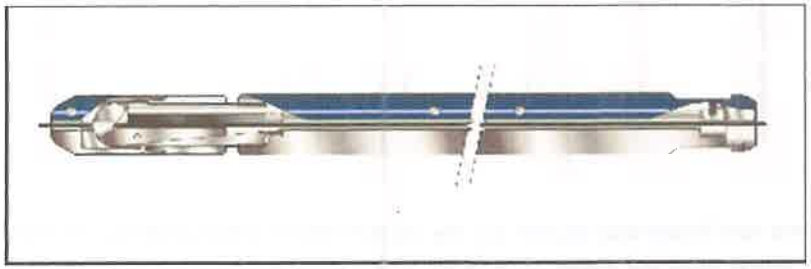


✓

01/07

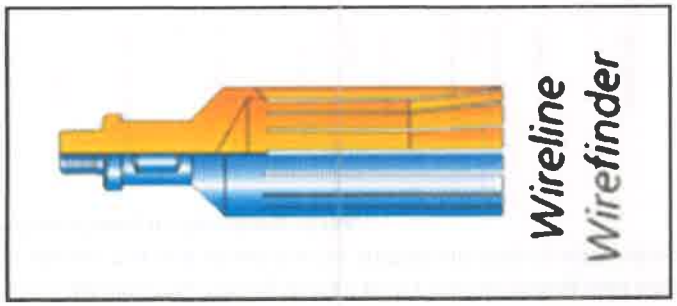
xxv. Flowpetrol Cutter & Drop Bar

A wireline cutter is required when a slickline or braided wireline must be cut in the well. The Flopetrol cutter is attached over the wire, dropped from surface, cutting the wire and retrieving the wire and cutter.



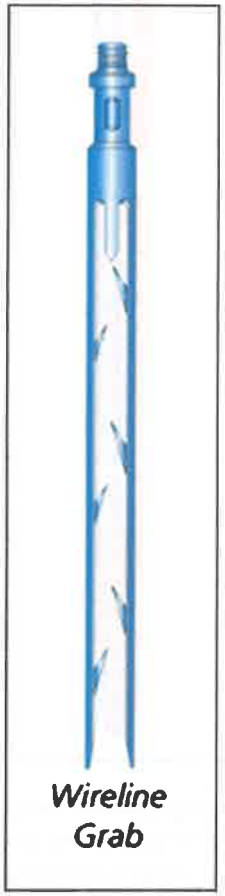
xxvi. Wire Finder

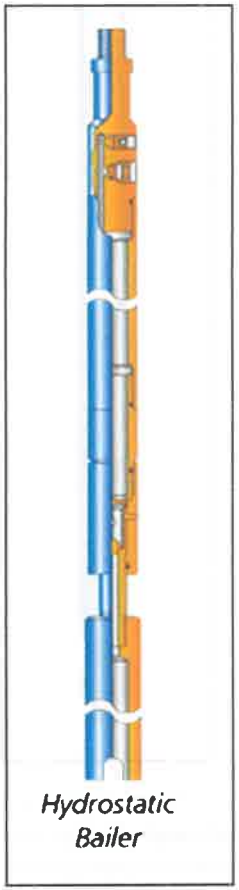
Locates and balls the upper end of the broken cable in the wellbore during fishing operations

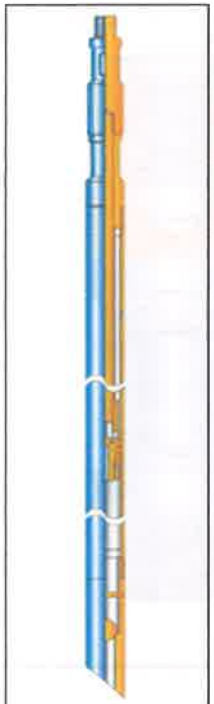


✓

01/07

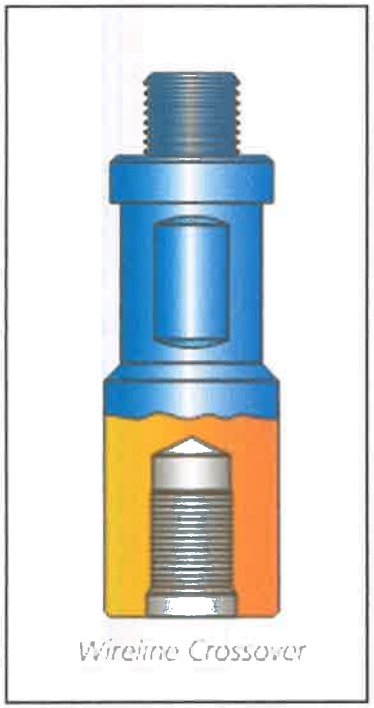
	xxvii. Wireline Grab Wireline Grab is used to fish broken wire from the wellbore. It consists of two or three flexible prongs extending downwards. After locating the top of the parted wire, the Wireline Grab is then run to snag the wire in the upward facing barbs of the grab arms.  *Wireline Grab*		✓		01/07

	xxviii. Hydrostatic Bailer Hydrostatic Bailer is used to clean off sand or foreign materials from around a fishing neck of tools. Hydrostatic Bailer is used in situation where Pump Type Bailer are not effective.  *Hydrostatic Bailer*		✓		01/07

	xxix. Sand Pump Bailer Sand Pump Bailer are used when a sand bridge is encountered during operations. The bailer pulls sand into cylinder, to remove sand bridge. Bailer are available in 3 types: 1. W/Flat Bottom : for easy bailing of sand 2. W/Angled Bottom : for bailing hard packed sand 3. W/Flapper Bottom : for bailing metallic particles which cannot pass thru ball & seat  *Sand Pump Bailer*		✓		01/07

xxx. Thread Cross Over

Wireline Crossover are used to connect two tool string items with different threads.



Wireline Crossover

✓ 01/07

	38. What do PULLING and RUNNING tools mean? * Pulling tools refer to tool we used to retrieve downhole tool components from a wellbore. * Running tools are used to lower downhole tool equipment into a wellbore.		✓		01/07

	39. How to connect the following tool string in HORIZONTAL & VERTICLE position: From top – 1 – ½" Rope Socket, 1 – ½ x 5' Wireline Stem, 1- ½ " Knuckle Joint, 1 – ½ " x 20" Mechanical Spang Jar VERTIVAL POSITION  HORIZONTAL POSITION 		✓		01/07

	40. Why is Fishing Neck appear at wireline tools * During wireline operations, tools or equipment may occasionally become stuck or lost in the wellbore due to various reasons such as mechanical failure, debris accumulation, or unexpected conditions. A fishing neck is a designed feature that allows other tools, known as fishing tools, to engage and retrieve the stuck tool or debris.		✓		01/07
	41. List down 20 Hand Tools in Dimension Bid and explain when and how to use them * Pipe wrench – to loose and tighten toolstring. * Chain tong – To loose and tighten xmass tree cap * Filter opener – to loose and tighten any filter * Thread pitch – To measured thread * Wire cutter – To cut wire * Slash hammer – to loose and tighten LTV * Center punch- To punch shear pin. * Screw driver – To loose and tighten any screw * Wire brush – To clean the toolstring / thread * Pin punch – To punch shear pin * Chisel – to remove any iron debris * File – to clean any sharp edge * Screw extractor – to loose any damage screw * Tubing cutter – to cut tubing * Eclipse hacksaw – to cut shear pin * Measuring tape – to measure toolstring length * Pliers – To grip anything * Allen Key – to loose and tighten allen screw type * Stuffing box packing puller – to pull out packing from inside stuffing box. * Spannar – to loose and tighten manifold tubing.		✓		01/07

	42. Why it is Compulsory to screw -in by hand before tightening wireline tool with pipe wrench * To prevent cross thread		✓		01/07
FORM C.3	**EQUIPMENT MAINTENANCE AND SERVICNG**				
	1. What is equipment maintenance about and what is the frequency of surface equipment, single well control panel and wireline unit. * Equipment maintenance involves the systematic process of ensuring that equipment and tools,are kept in optimal operating condition. It encompasses various activities aimed at preventing breakdowns, prolonging equipment life, and maintaining safety standards. * Maintenance frequency at offshore is every 200 hours. * Maintenance frequency is every 200,400,600,800,1000 and 1200 hours.		✓		01/07
	2. Why is it important to maintain your equipment at all time? * Minimizing Breakdowns: Regular maintenance reduces the likelihood of unexpected breakdowns and malfunctions, ensuring equipment operates reliably when needed. * Optimizing Performance: Properly maintained equipment performs at its peak efficiency, achieving optimal output and quality in production or operations. * Minimizing Downtime: Planned maintenance reduces unplanned downtime, preventing production delays and associated losses in revenue.		✓		01/07
	3. If you found expired equipment offshore what should you do? * Inform to WSS and FSM. * Raise MR for new equipment.		✓		01/07

	Wireline unit maintenance 4. Prior to sending out of wireline unit to offshore what are the check list to look for Zone 2 compliance. * Zone 2 certificate. * Daily checklist		✓		01/07

	5. What do you check and why for the following items:- i. exhaust flame trap * The flame trap should be inspected regularly for any signs of damage, clogging, or excessive buildup of carbon deposits. This is crucial because a blocked or damaged flame trap can impair engine performance and potentially lead to safety hazards due to improper flame containment. ii. exhaust spark arrestor * An exhaust spark arrestor is a device designed to prevent sparks or hot debris from exiting the exhaust system of an internal combustion engine, particularly in applications where fire hazards are a concern. * Visual Inspection: Examine the outside of the spark arrestor for holes, cracks, and metal corrosion. Look for any visible damage or wear. * Internal Examination: With the engine stopped, use a flashlight to inspect the spark arrestor outlet tube. Ensure there are no obstructions or buildup that could affect its performance iii. static fan belt * Belt Tension: Ensure the belt tension is tight enough but not overly so. Proper tension prevents slippage and ensures efficient power transmission1. * Cleanliness: Check for dirt buildup on the belts and clean as needed. Dirt can affect performance and cause premature wear1. * Wear and Damage: Look for signs of wear, cracks, or fraying on the belt. Replace worn-out belts promptly to prevent unexpected failures1. * Alignment (for Direct Drive): If you have a coupled direct drive, check and adjust the coupling alignment. Regular greasing is also essential for smooth operation		✓		01/07

	iv. flame trap of engine breather Element Inspection: Regularly examine the flame element for any signs of clogging or damage. If the element is obstructed, it may compromise the arrester's effectiveness in quenching flames. v. Joints, connections of induction, exhaust and fuel system of the engine. * Check for any loose joint, make sure the exhaust is not clogged and the fuel system is not leak so that the equipment can be running in its full potiential. vi. non- metallic cooling fan blades ,belt/s and pulleys Belt Tension: Ensure the belt tension is tight enough but not overly so. Proper tension prevents slippage and ensures efficient power transmission. Cleanliness: Check for dirt buildup on the belts and clean as needed. Dirt can affect performance and cause premature wear. Wear and Damage: Look for signs of wear, cracks, or fraying on the belt. Replace worn-out belts promptly to prevent unexpected failures. Alignment (for Direct Drive): If you have a coupled direct drive, check and adjust the coupling alignment. Regular greasing is also essential for smooth operation		✓		
	6. Why do you keep minimum stock level of critical spares offshore? * Offshore operations are often remote and may have limited access to immediate supply sources. By maintaining a minimum stock of critical spare parts onsite, operators can quickly replace failed components without waiting for extended delivery times, thereby minimizing downtime and optimizing operational efficiency.		✓		01/07

	7. What do you do with aging, tear and worn out wireline tools offshore? * Separated it from other tools. * Tagging / remarks damage tool. * Request new one to replace.		✓		01/07
	8. For the wireline diesel power pack to operate in Zone 2 Hazardous Areas, and as per EEMUA 107, what are the safety features that are required to be incorporated into the power pack? *(Answer in bullets points)* * The diesel power pack should be housed in an explosion-proof enclosure that is designed to contain any potential sparks or heat generated by the engine. This enclosure must meet Zone 2 classification standards and prevent the ignition of surrounding flammable gases or vapors. * Install spark arrestors on the exhaust system of the diesel engine to prevent sparks and hot particles from exiting the exhaust and potentially igniting flammable atmospheres in the area. * Ensure all electrical components, including wiring, switches, and control panels, are rated for use in hazardous areas (ATEX or similar certifications). Use explosion-proof or intrinsically safe electrical equipment to prevent electrical sparks or arcs that could ignite flammable gases.		✓		01/07
	9. How do you hook up and operate the hydraulic mast to the power pack? * Check hydraulic hose condition before hook up. Make sure no leak at hose connection. * Connect hydraulic hose (supply and return) from power pack to hydraulic mast and make sure it is correct position. * Slowly function test the mass by pull up/down the mast lever.		✓		01/07

	EQUIPMENT MAINTENANCE AND SERVICE				
	10. What must you do before hooking up the hydraulic hoses to the unit or mast? * Make sure no trap pressure inside the hose * Check thread connection. * Check any abnormalies at connection. * Check o-ring * Use whip check to secure hydraulic hose before operate.		✓		01/07
	Wireline surface equipment 11. How does the BOP operate and how do you change the ram? Name how many type of BOP and rams. * BOP operate by closing off the rams by hydraulic pressure from well control panel. * To change the BOP rams required fully redress on BOP and opening the chamber. * Type of BOP : - Single BOP, Dual BOP, Tripled BOP and Quad BOP. * Type of RAM : - Blind RAM, Multi RAM & Shear and seal RAM.		✓		01/07
	12. How do you change the stuffing box packing? * Using stuffing box packing puller		✓		01/07
	13. What must you do if there is a leak in the hydraulic system in SWCP and how do you know when there is a leak. * ESD the SWCP. We can identify the leak when the SWCP continuously pumping/stroking.		✓		01/07
	14. What is SWL? Where do you find this? * SWL – Safe working load * Can be find on equipment data plate, stencil and equipment certificate.		✓		01/07

	15. Explain in steps how you service the following wireline tools i. Pulling tool * Redress and check the parts for any wear and tear. * Replace if needed * Assemby back and perform function test to make sure work properly. ii. Running tool * Redress and check the parts for any wear and tear. * Replace if needed * Assemby back and perform function test to make sure work properly iii. Positioning tool * Redress and check the parts for any wear and tear. * Replace if needed * Assemby back and perform function test to make sure work properly iv. Circulation and flow control device * Redress and check the parts for any wear and tear. * Replace if needed * Assemby back and perform function test to make sure work properly		✓		01/07

	16. Show how to carry out the following basic maintenance: i. Greasing bearing * Apply grease to the bearing and test and spread evenly. ii. Re-tighten bolt and nut * Use spanner/adjustable and turn clockwise to tighten iii. Lubricate wire while RIH * fill hydraulic oil into bottle and spread then evenly on wire. iv. Re-Tension Dual Drive Chain * loosen the nut that hold the tension gear. Adjust the tensioner gear to tension the chain and hold and re tighten the nut to secure the tensioner gear. v. Lubricate Odometer and Odometer Cable * Use grease and apply to the odometer cable. vi. Protect bolt, nut, fitting etc with Denso Tape (Grease Tape) * Apply denso type to protect the bolt, nut and fitting to prevent from corroded.		✓		01/07
	17. What should you check BEFORE operating the Reel Skid Unit (Show the start-up Maintenance Checklist and understand the requirements) * Inspect istallation, leakage at this section – fitting/joints * Check grounding cable for proper installation * Inspect leak and abnormality – hydraulic hoses * Inspect tension , condition and abnormality – drive chain * Check installation,functioning and abnormality – depth and tension system		✓		01/07

	18. Show how to carry-out following basic maintenance i. Protect bolt, nut, fittings etc with Denso Tape (Grease Tape) * Apply denso type to protect the bolt, nut and fitting to prevent from corroded. ii. Re-tighten bolt & nut * Use spanner/adjustable and turn clockwise to tighten iii. Protect 1" & 1 – ¼ " Hydraulic Hose connection * Use denso tape to prevent corroded at hydraulic hose connection. iv. Take –out Air Starter from 'Crane Case' * Open the nut the hold the starter and slowly remove the starter from the crank case. v. Clean – up Air Filter with air * Open cover air filter. Bring out air filter and use air to clean up air filter. vi. Re – tension Fan Belt * loosen the nut that hold the tension pulley. Adjust the tensioner pulley to tension the chain and hold and re tighten the nut to secure the tensioner pulley.		✓		01/07

	19. What should you check BEFORE start the Power Pack (Show the Start – Up Maintenance Checklist and understand the requirement) * Check fuel level (fill up as needed) * Check and take sample fuel (drain if needed) * Check oil level (fill up as needed) * Check coolant level (fill up as needed) * Inspect engine beltings (tension & conditon) * Check oil level (fill up as needed) * Inspect any leakage at this section – fitting/joint * Check grounding cable for proper installation * Check cap, radiator & fan condition * Check condition and clean if needed exhause flame trap * Inspect leak and abnormality * Inspect abnormality & in start mode * Record running hour		✓		01/07
	20. What are the safety precautions to be alert while Power Pack running? * Ensure the operational area around the power pack is clear of obstacles and hazards. Maintain a safe distance from moving parts, especially belts, chains, and rotating components. * Be cautious of hot surfaces, especially around the engine and exhaust system. Use heat-resistant gloves and avoid contact with hot components to prevent burns. * Keep flammable materials, such as oils, fuels, and rags, away from the power pack. Regularly inspect for leaks and ensure that spark arrestors are in place to prevent ignition of flammable vapors.		✓		01/07

	21. Show how to carry-out the following basic maintenance: i. Protect bolt, nut, fittings etc with Denso Tape (Grease Tape) * Apply denso type to protect the bolt, nut and fitting to prevent from corroded. ii. Re-tighten bolt & nut * Use spanner/adjustable and turn clockwise to tighten iii. Service battery terminal and assemble back (+ve & -ve) * Service the screw that hold the negative and positive terminal and clean any debris on the terminal. And install back the cable. Tightem back the screw. iv. Check battery water level and fill – up battery water if necessary * Open the battery water cap and fill up until reach full level. Closed back water cap when done. v. Check Compressor Hyd Oil Level and fill – up if necessary * When air compressor oil at red mark fill up the compressor oil by opening the filling cap on the tank. Fill up the oil until full. vi. Re – tension Fan Belt * loosen the nut that hold the tension pulley. Adjust the tensioner pulley to tension the chain and hold and re tighten the nut to secure the tensioner pulley vii. Service ON/OFF switch * Change with a new one if damage		✓		01/07

	22. What should you check BEFORE start the Air Compressor (Show the Start-Up Maintenance Checklist and understand the requirement) * Check fuel level (fill up as needed) * Check and take sample fuel (drain if needed) * Check oil level (fill up as needed) * Check coolant level (fill up as needed) * Inspect engine beltings (tension & conditon) * Check oil level (fill up as needed) * Inspect any leakage at this section – fitting/joint * Check grounding cable for proper installation * Check cap, radiator & fan condition * Check condition and clean if needed exhause flame trap * Inspect leak and abnormality * Inspect abnormality & in start mode * Record running hour		✓		01/07
	23. What are the safety precautions to be alert while Air Compressor running? * Understand the compressor's pressure relief valve and ensure it is in proper working condition. This valve releases excess pressure to prevent over-pressurization and potential equipment failure. * Do not stand at line of fire while air compressor is running.		✓		01/07
	24. Why contaminated water should be drained from Compressor Tank before start the Air Compressor? * To prevent water from migrate and enter to the equipment to be supply.		✓		01/07

	25. Show how to carry-out following basic maintenance i. Protect bolt, nut, fittings etc with Denso Tape (Grease Tape) * Apply denso type to protect the bolt, nut and fitting to prevent from corroded. ii. Re-tighten bolt & nut * Use spanner/adjustable and turn clockwise to tighten iii. Caring of pressure gauge * Make sure zero point is correct. Liquid inside pressure gauge is enough and the cap is not missing. Wrap with cotton rags to avoid the glass from broken. iv. Service Air Operated Pump Exhaust * Take out the pump exhaust and clean for any debris. Check oring in good condition. Apply grease on the oring and install back the pump exhaust. v. Check Hydraulic Oil Level and fill – up if necessary * Open the hydraulic tank cap and fill up until reach full level. Closed back hydraulic cap when done. vi. Release contaminated water from Air Isolator * Open the valve at water separator to drain water inside the water separator. vii. Release pressure in system upon completed job * Close air supply and bleed off pressure inside hose / system by activate the pump until pump stop. viii. Take – out ¼ " Snap Tite from Control Panel and service * Disconnect snap tite from control panel. * check any leak at snap tite * if ok put Teflon tape and install back.		✓		01/07

	ix. Pressure Manifold to be installed at Control Panel * Check new pressure manifold condition. * Pressure test manifold as per rating instruction. * If ok and no leak install to control panel.				
	26. What should you check BEFORE start the Control Panel (Show the Start-Up Maintenance Checklist and understand the requirement)? * Check pressure gauge * Check regulator * Check hydraulic oil * Check connection / fitting * Check air hose * Check hydraulic hose * Check manifold * Check alarm * Check ESD * Check water drain * Check hydraulic pump		✓		01/07
	27. What are the safety precaution to be alert while operating Control Panel? * Do not stand at line of fire while operating control panel. * Closely monitor the control panel for any abnormal and check if any leaking * Make sure alarm in good condition.		✓		01/07
	28. Why contaminated water should be drained from Air Hose before start the Control Panel ? * To prevent water from enter to the control panel system/line.		✓		01/07

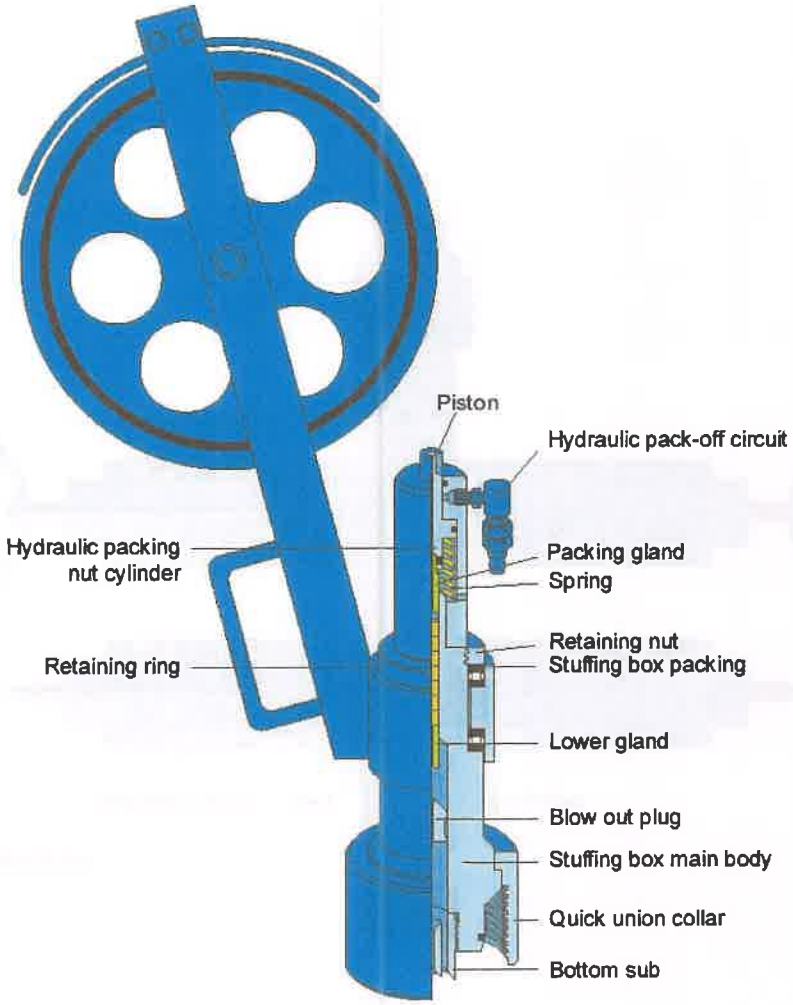
	29. Show how to carry – out following basic maintenance i. Protect bolt, nut, fittings etc with Denso Tape (Grease Tape) * Apply denso type to protect the bolt, nut and fitting to prevent from corroded. ii. Re-tighten bolt & nut * Use spanner/adjustable and turn clockwise to tighten iii. Caring of pressure gauge * Make sure zero point is correct. Liquid inside pressure gauge is enough and the cap is not missing. Wrap with cotton rags to avoid the glass from broken iv. Service Air Operated Pump Exhaust * Take out the pump exhaust and clean for any debris. Check oring in good condition. Apply grease on the oring and install back the pump exhaust. v. Check Water Level and fill – up if necessary * Open the water tank cap and fill up until reach full level. Closed back water cap when done. vi. Release contaminated water from Air Isolator * Open the valve at water separator to drain water inside the water separator. vii. Release pressure in system upon completed job * Close air supply and bleed off pressure inside hose / system by activate the pump until pump stop viii. Flush the system with Hydraulic Oil * Connect hydraulic hose to the pump. * Flush old oil out from the system with new oil.		✓		01/07

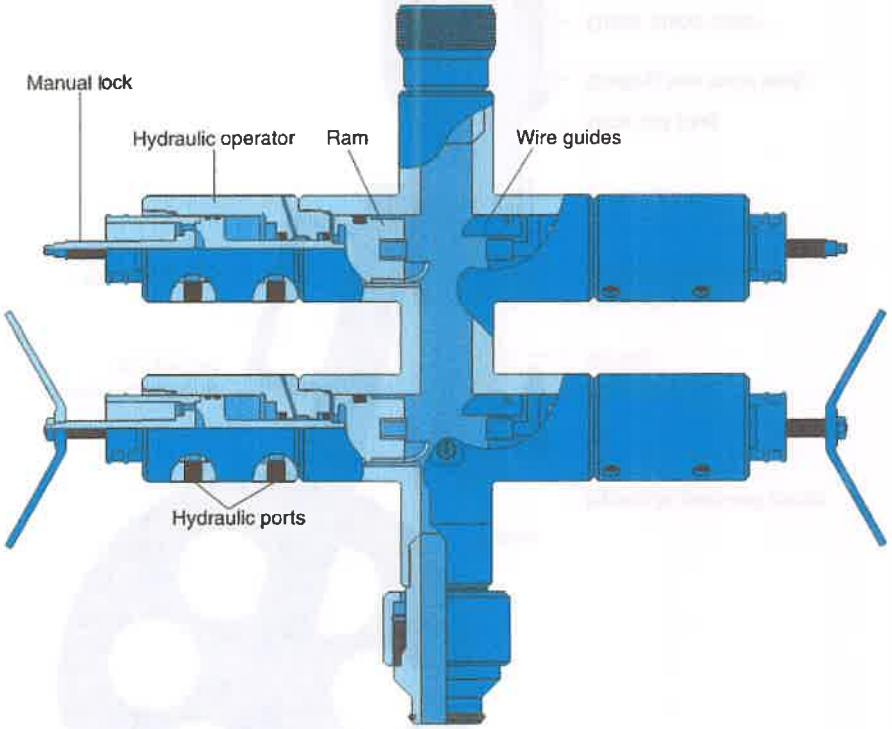
	30. What should you check BEFORE start the Test Pump? (Show the Start – Up Maintenance Checklist and understand the requirement) * Check water level * Check air hose * check hydraulic hose. * Check tubing / any leak		✓		01/07
	31. What are the safety precautions to be alert of while operating Test Pump? * Closely monitor the for any abnormal and check if any leaking. * Do not stand at line of fire while operate test pump.		✓		01/07
	32. Why the system should be flushed with Hydraulic Oil? * To ensure no air trap in system.		✓		01/07

	33. Show how to carry – out following basic maintenance i. 1"Air Chicago Coupling * Check chichago coupling. Make sure no crack. * Check Chicago rubber seal. If tear change with new one. ii. Drainage Valve * Check and clean if have any bloackage iii. Check Valve * Inspect it for scratches on the valve seat and the disc. Then, wash all parts in clean fluid that is used in the system. As you reassemble the valve, inspect the housing and trim parts for any corrosion or erosion. Replace the valve if there is corrosion or excessive roughness due to erosion. iv. Relief Valve * Check the tightness of fittings and look for water leaking from the joint. Compressible air in the pilot system can result in incorrect pressure readings. Relief valves can even become unstable. If you see an air pocket in the sight glass (above the water level), you'll need to vent the main valve bonnet. v. Protect following items with Denso Tape – Air Chicago Coupling, Drainage Valve & Relief Valve * Put denso tape at Chicago coupling, drainage valve and relief valve to prevent corroded while at offshore.		✓		01/07
	34. What is the safety precaution to be alert of during spooling activity? * Keep the area around the spooling operation clear of unnecessary personnel and obstacles. Establish a safe perimeter to prevent unauthorized access and to keep bystanders at a safe distance. * Monitor and control the tension of the material being spooled. Excessive tension can lead to breakage or sudden release, posing a risk of injury. Use appropriate tension control devices and techniques to manage tension safely		✓		01/07

	35. Show how you perform for the following basic maintenance i. Service O ring and O ring set * Check o-ring condition. If found any tear or blister change with new one. ii. Service Sheave Wheel * Check sheave wheel condition. * Check groove at sheave wheel iii. Greasing Sheave Wheel bearing * Dismantle sheave wheel from stuffing box. * Check bearing condition. * If ok put grease at bearing and install back sheave wheel bearing, iv. Greasing Staff Am bearing * Dismantle sheave wheel from stuffing box. * Dismantle staff arm from stuffing box. * Check bearing condition. * If ok put grease at bearing and install back staff arm. v. Take-out used Stuffing Box packing * Using packing puller pull out all used stuffing box packing * Chnge all stuffing box packing with a new one. vi. Change – out Sheave Wheel bearing * Dismantle sheave wheel from stuffing box. * Check bearing condition. * If found any damage change with a new bearing. * Check size and part no before install new bearing. * Put grease at bearing and install back sheave wheel bearing,		✓		01/07

	36. Explain the Stuffing Box element to be checked during Pre-Start-up Job * Check stuffing box packing. * Check type of stuffing box to use. * Check upper gland and lower gland size. * Check piston size. * Check spring condition. * Check size of sheave wheel.		✓		01/07
	37. What is the safety precaution to be alert of during handling of Stuffing Box? * Check body position while using packing puller to pull out packing. * Use kong glove while entering wire inside stuffing box. * Use safety glass to prevent wire bounce back to eye.		✓		01/07
	38. How to identify if the Stuffing Box require Standard Service or H2S Service? * Check stuffing box packing from normal type to H2S type * Normal type for standard service. * H2S type (dark cord) for H2S service		✓		01/07

	39. Strip the Stuffing Box and service completely (2 times)  		✓		01/07

	40. Strip the BOP and service completely (1 time)  		✓		01/07

	41. Show how to carry-out following basic maintenance: i. Manual Stem * Exercise and greasing manual stem to prevent corroded. ii. Inner and Outer Seal * Check any blister at inner seal and outer seal. * Change with new inner seal ang outer seal if the old one is damage. iii. Equalizing Port * Check thread port. * Check any blockage at equalizing port. * Check o-ring condition iv. Box – up thread connection * Clean tread using diesel and wire brush. * Make sure thread clean from any old grease and any debris. * Check any damage at thread or o-ring seal area. * Use needle file to repair any damage at thread or 0-ring seal area. v. Pin & Collar Down Thread Connection * Clean tread using diesel and wire brush. * Make sure thread clean from any old grease and any debris. * Check any damage at thread or o-ring seal area. * Use needle file to repair any damage at thread or 0-ring seal area. vi. Internal BOP body * Check any scratch inside BOP body * Check any corroded area and clean it.		✓		01/07

	42. What do you do during mob / de mob BOP from one location to other location * Secure BOP thread with protector to prevent damage while DEMOB. * Put hydraulic inside BOP to protect sealing element before mob to other location.		✓		01/07
	43. What are the safety precaution be alert of while BOP running? * Check manifold block. Make sure open the right valve. * Check any leakage at BOP body. * Make sure pressure from control panel is enough to operate BOP if any emergency.. * Check manual handle condition. Make sure no corrosion at handle thread.		✓		01/07
	44. How to identify if the BOP requires Standard Service or H2S Service? * Check the certificate * Check sealing element * Check inner seal and outer seal.		✓		01/07

	45. Show how to perform for the following basic maintenance for Lubricator and Pump Joint i. Clean – up and greasing internal * Clean up inside pump in tee using fresh water. * Clean any corroded inside. * Put a lubriplate after cleaning to prevent any corroded. ii. Service box-up thread and o' ring seal area * Clean tread using diesel and wire brush. * Make sure thread clean from any old grease and any debris. * Check any damage at thread or o-ring seal area. * Use needle file to repair any damage at thread or 0-ring seal area. iii. Service pin & collar down thread, o' ring and o' ring groove * Clean tread using diesel and wire brush. * Make sure thread clean from any old grease and any debris. * Check any damage at thread or o-ring groove. * Use needle file to repair any damage at thread or 0-ring groove iv. Service bleed – off port * Clean the thead with wire brush.		✓		01/07
	46. What is the safety precaution to be alert of during handling lubricator section? * Check hand placement while rig up lubricator. Do not put finger at thread area. * Check Body position while hook up lubricator section * Use harness or ledder if needed.		✓		01/07
	47. If the Lubricator working pressure is 5000 psi, how many Test Pressure to be carried out? * 7500 psi		✓		01/07

	48. Show how to carry – out following basic maintenance for wellhead x-over i. Clean up and greasing internal * Clean up inside xover using fresh water. * Clean any corroded inside. * Put a lubriplate after cleaning to prevent any corroded. ii. Service box – up thread and o'ring seal area * Clean tread using diesel and wire brush. * Make sure thread clean from any old grease and any debris. * Check any damage at thread or o-ring seal area. * Use needle file to repair any damage at thread or 0-ring seal area. iii. Service pin & collar down thread, o'ring and o'ring groove * Clean tread using diesel and wire brush. * Make sure thread clean from any old grease and any debris. * Check any damage at thread or o-ring groove. * Use needle file to repair any damage at thread or 0-ring groove		✓		01/07
	49. What are the safety precaution to be alert of during handling wellhead x-over section and rig –up on top of x-mass tree * Check hand placement while rigup on xmas tree. Do not put finger at thread area. * Check Body position while hook up xover to xmas tree. * Use harness or ledder if needed.		✓		01/07

	50. Show how to carry – out following basic maintenance for Pump – in Tee i. Clean – up and greasing internal * Clean up inside pump in tee using fresh water. * Clean any corroded inside. * Put a lubriplate after cleaning to prevent any corroded. ii. Service box – up thread and o'ring seal area * Clean tread using diesel and wire brush. * Make sure thread clean from any old grease and any debris. * Check any damage at thread or o-ring seal area. * Use needle file to repair any damage at thread or 0-ring seal area. iii. Service pin & collar down thread, o'ring and o'ring groove * Clean tread using diesel and wire brush. * Make sure thread clean from any old grease and any debris. * Check any damage at thread or o-ring groove. * Use needle file to repair any damage at thread or 0-ring groove. iv. Service 1502 thread and rubber seal * Clean tread using diesel and wire brush. * Make sure thread clean from any old grease and any debris. * Check any damage at thread. * Use needle file to repair any damage at thread * Change rubber seal if wear.		✓		01/07

	51. What are the safety precaution to be alert during handling Pump – in Tee? * Hand placement while rigup pump in tee to PCE stack up. * Body position while using slash hammer to connect LTV to pump in tee. * Make sure wear safety glass while slash the hammer to prevent debris come into the eye.		✓		01/07
Form C.4	**EQUIPMENT HANDLING/EQUIPMENT PASSPORT**				
	1. What is Material Handling Equipment (MHE)? Name some example:- * Strap ratchet belt * Sling belt * Wire belt		✓		01/07
	2. How do you check for expired date of lifting equipment? * At data plate at equipment * At sling tag		✓		01/07

	3. What is Equipment Passport? * Equipment certificate		✓		01/07
	4. List down what are the maintenance schedule for the following:- i. 6-Monthly Planned Maintenance – Wireline Unit Power Pack * Clean air inlet valve * Drain diesel tank * Test hydraulic system unit ii. 12-Monthly Planned Maintenance – Wireline Unit Power Pack * Test/Adjust maximum angle speed * Clear air inlet valve. iii. 6-Monthly Planned Maintenance – Wireline Unit Reel Skid * Hydraulic motor coupling : Inspect if damage replace * Calibrate mechanical depth indicator * Calibrate mechanical weight indicator * Complete performance test iv. 12-Monthly Planned Maintenance – Wireline Unit Reel Skid * Replace right angle drive * Replace gear box oil * Replace hydraulic oil v. General Overhaul – Wireline Unit Power Pack * Overhaul engine vi. General Overhaul – Wireline Unit Reel Skid * Rebuild gear box * Rebuild all hydraulic hoses		✓		01/07

	5. What is the colour code for lifting equipment? * Red * Blue * Yellow * Green		✓		01/07
	6. What is SWL? Where do you find this? * SWL is Safe Working Load * Available at data plate on equipment and equipment certificate.		✓		01/07
	7. What is MPI? And load test date validity for a container, lub skid, and wireline unit * MPI is Magnetic Particle Inspection * This method used for the detection of surface and near surface flaws in ferromagnetic material and is primarily used for crack detection.		✓		01/07
	8. How long is the validity test date for Equipment passport and if you find one expired offshore what is your next course of action * Valid for 1 year. * Request for inspector to revalidate the certificate.		✓		01/07

Form C.5	PERFORM PROBLEM TROUBLESHOOTING AND REPORT				
	1. Why do you report for any abnormalities observed during wireline operation? * To prevent any problem that effected the wireline operation.		✓		01/07
	2. List the daily prestart check point? * Check the fuel * Check the engine oil level * Check fan belt for any loose. * Check emergency button. * check hydraulic level. * Check starter (spring, hydraulic or air)		✓		01/07
	3. If the diesel engine will not start what 2 things should you check point? * Check Fuel level. * Check the emergency button. Activate or not. * Check fuel valve. * Check sentinel valve position.		✓		01/07
	4. If the engine run out of diesel what must you do to restart? * Fill up diesel into the tank. * Open fuel injection system and check for any air trap. * Flush the fuel system so that the air trap can be remove. * Pump fuel until come out from the system. * After confirm that there is no air trap in the fuel system, the engine can be restarted normally.		✓		01/07

	5. Why do you report for each break down of particular equipment? * Detailed reports help in identifying recurring issues and patterns in equipment failures. This information can be used to implement preventative maintenance measures, reducing the frequency and severity of future breakdowns. * Timely and accurate reporting of breakdowns helps in quickly addressing and resolving issues, minimizing downtime, and maintaining operational efficiency.		✓		01/07
	6. How do you carry out trouble shooting of equipment? * Collect as much information as possible about the problem. This includes understanding the symptoms, when they occur, and any recent changes or events that might have led to the issue. * Conduct a thorough visual inspection of the equipment. Look for obvious signs of damage, wear, loose connections, leaks, or any abnormalities.		✓		01/07

Assessed By:		Verified By	
Name	JAMES BRODY WILSON SANABONG	Name	AFIQ AIMAN BIN HASSAN Field Service Manager DIMENSION BID (M) SDN BHD
Position	SGO	Position	
Date	01/07/2024	Date	01/07/24