



**Overseas Technical Services Kish**



# **Hydraulic Release Overshot**

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## CONTENT

- ◆Introduction of Tool
- ◆Disassembly
- ◆Assembly

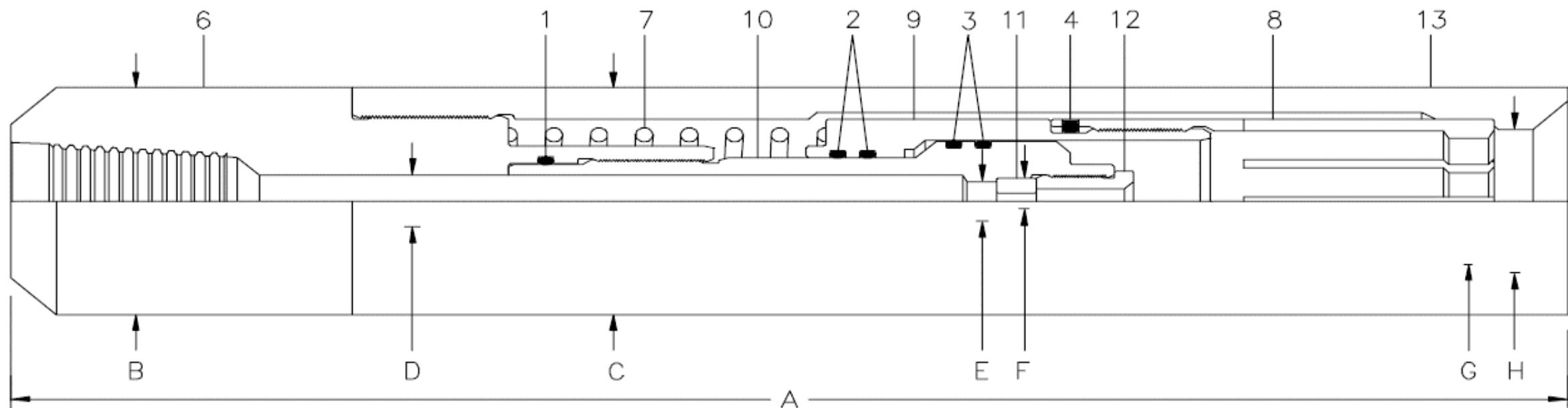


**Overseas Technical Services Kish**





# Overseas Technical Services Kish





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No.	Description	Amount
1	O-ring	1
2	O-ring	1
3	O-ring	1
4	Set Screw	2
5	O-ring	2
6	Top Sub	1
7	Spring	1
8	Grapple	1
9	Grapple Sub	1
10	Mandrel	1
11	Orifice	1
12	Orifice Retainer	1
13	Body	1



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## Flow Rates to Release vs. Orifice Size

Tool Size (in.)	Pressure (psi)	Orifice Diameter and Dash Numbers				
		0.125"	0.188"	0.250"	0.313"	0.375"
1.44	500	-13	-19	-25	-31	-38
1.63	500	11	-	-	-	-
1.81	300	9	16	28	-	-
2.13	600	10	-	40	-	-
2.25	600	10	23	40	44	63
2.28	600					
2.63	230	7	16	28	44	63
2.80	230					
3.00	230					
3.38	230					
3.50	230					
3.75	230					
4.00	230					
4.50	230					
5.50	230					

All flow rates are in Gallons per Minute (1 barrel per minute = 42 Gallons per minute)

Activate Windows



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## Specification Guide

Tool Size (in.)	Fishing Neck to Catch (OD) (in.)	Minimum Tensile Strength■ (lb)	Orifice Size (in.)	Grapple Piston Area (Sq in.)	Standard Box Thread
1.44	0.88	15,000	0.13	0.408	3/4" CS Hydril
	1.00	17,000			
1.63	1.19	19,000	0.13	0.592	1" MT
	0.88	12,000			
	1.00	19,000			
	1.19	24,000			
2.13	1.38	28,000	0.25	0.535	1-1/2" MT
	1.00	16,000			
2.25	1.19	21,000	0.25	1.137	1-1/2" MT
	1.38	28,000			
	1.75	24,000			
2.28	1.19	20,000	0.25	1.010	1-1/2" MT
	1.38	30,000			
	1.75	54,000			
2.63	1.125	30,000	0.25	1.137	2-3/8" PAC DSI
2.70	1.75	54,000			
2.75	2.31	41,000			
2.80	2.00	46,000			
3.00	1.19	24,000	0.25	1.382	2-3/8" PAC DSI
	1.38	32,000			
	1.75	41,000			
	2.31	59,000			
3.38 and 3.50	1.19	27,000	0.25	1.588	2-3/8" Reg
	1.38	34,000			
	1.75	63,000			
	2.31	86,000			
3.75	2.687	101,000	0.25	1.588	2-3/8" Reg
	2.75	117,000			
4.00	3.13	103,000	0.25	1.588	2-3/8" Reg
	2.875	116,000			
4.50		89,000			

■Strength calculation based on 80% of ultimate tensile strength of materials used for standard service. Other applications requiring different materials may have different strengths.



## Introduction:

➤ The Hydraulic Release Overshot has been designed to allow engagement with a fish having a standard external type wireline fishing neck looking up. The Hydraulic Release Overshot was designed specifically for coiled tubing applications, therefore the tool has pump through capability. The Overshot is latched up to the fish neck by applying slight set down weight at the tool. If the fish can not be free, the Overshot may be released from the fishing neck by flowing through the work string. This feature prevents having to leave any part of the fishing tool string in the hole if the fish is left in the hole. Leaving any part of the fishing string in the hole will hamper subsequent fishing operations.

The Hydraulic Release Overshot has been designed to be used with jarring systems and is able to handle the high impact loads impacted by the jar. The design uses a collet grapple to latch up to the fishing neck, however the collet grapple fingers are not subjected to tensile loading.



## Features and Benefits:

- - Maximum ID catch
- High Strength
- Improved design used for jarring operations
- Pump-thru permits washing sand or debris from top of the fish
- Multiple Catch Load Carried by the Main Body



## ➤ Required hand tools

- Pipe Wrench
- Rubber Hammer
- Hex. Socket

Tool Size (in.)	Socket Hex Size (in.)
1.44	1/2
1.63	
1.81	
2.13	5/8
2.25	
2.63	
2.70	
2.75	
2.80	
2.88	
3.00	1
3.38	
3.50	
3.75	
4.00	
4.50	





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## How Overshot Engages With a Fish Neck

A



B





# Overseas Technical Services Kish

## Disassembly

➤ Place top sub (6) in vice.





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- Unscrew body (13) from top sub (6) and remove.

A



B

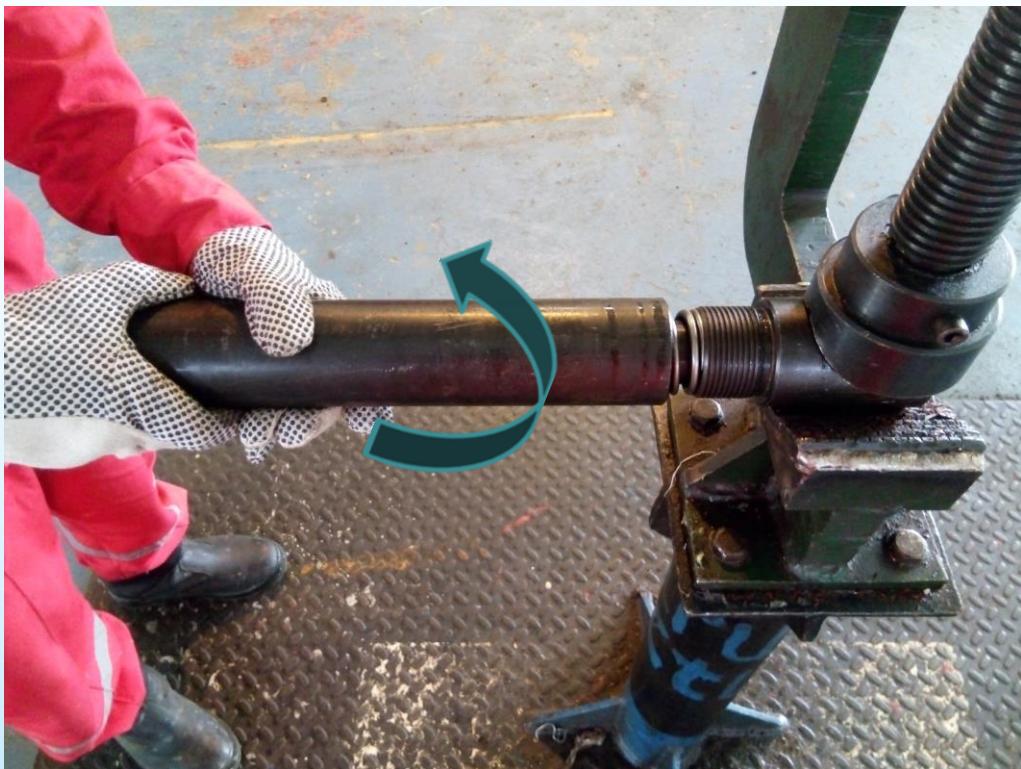




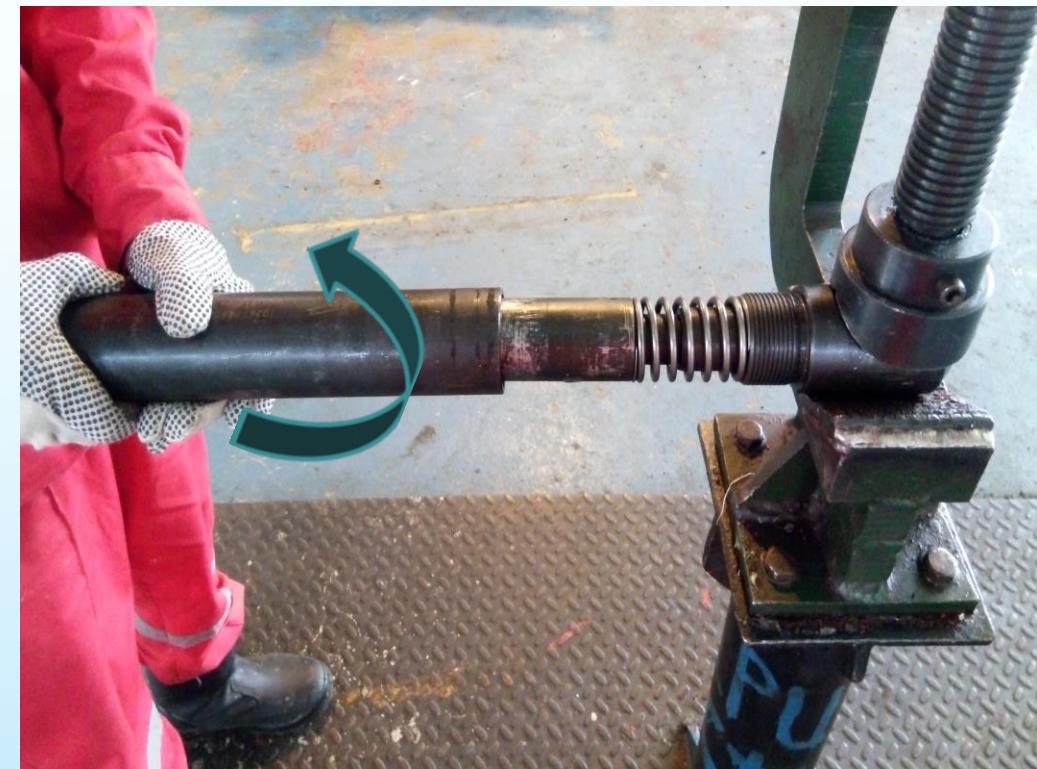
# Overseas Technical Services Kish

➤ Unscrew body (13) from top sub (6) and remove.

C



D





# Overseas Technical Services Kish

- Remove the body (13) from the assembly.

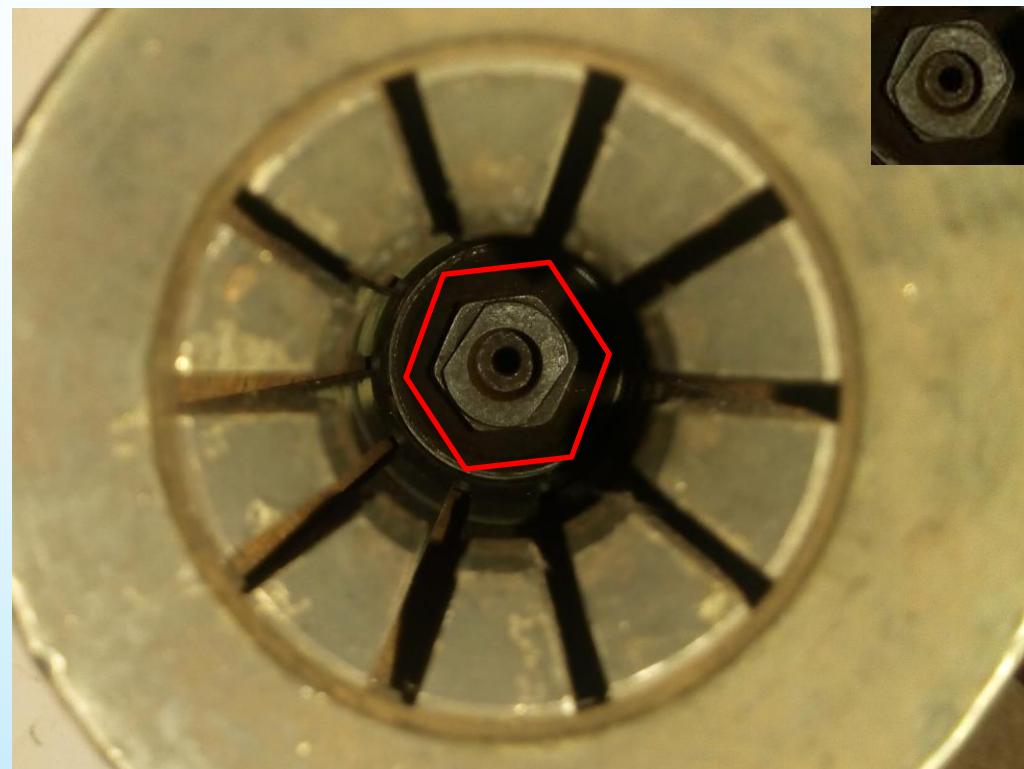
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# Overseas Technical Services Kish

- Reach inside the grapple (8) with a hexagonal socket and engage the hexagonal in the end of the mandrel (10).  
Break out the thread between the top sub (6) and the mandrel (10).





# Overseas Technical Services Kish

- Reach inside the grapple (8) with a hexagonal socket and engage the hexagonal in the end of the mandrel (10).  
Break out the thread between the top sub (6) and the mandrel (10).

C



D





# Overseas Technical Services Kish

- Reach inside the grapple (8) with a hexagonal socket and engage the hexagonal in the end of the mandrel (10).  
Break out the thread between the top sub (6) and the mandrel (10).

C



D





# Overseas Technical Services Kish

- Remove the spring from the top sub (6).

A



B





# Overseas Technical Services Kish

➤ Unscrew the grapple (8) from the grapple sub (9).



**A**



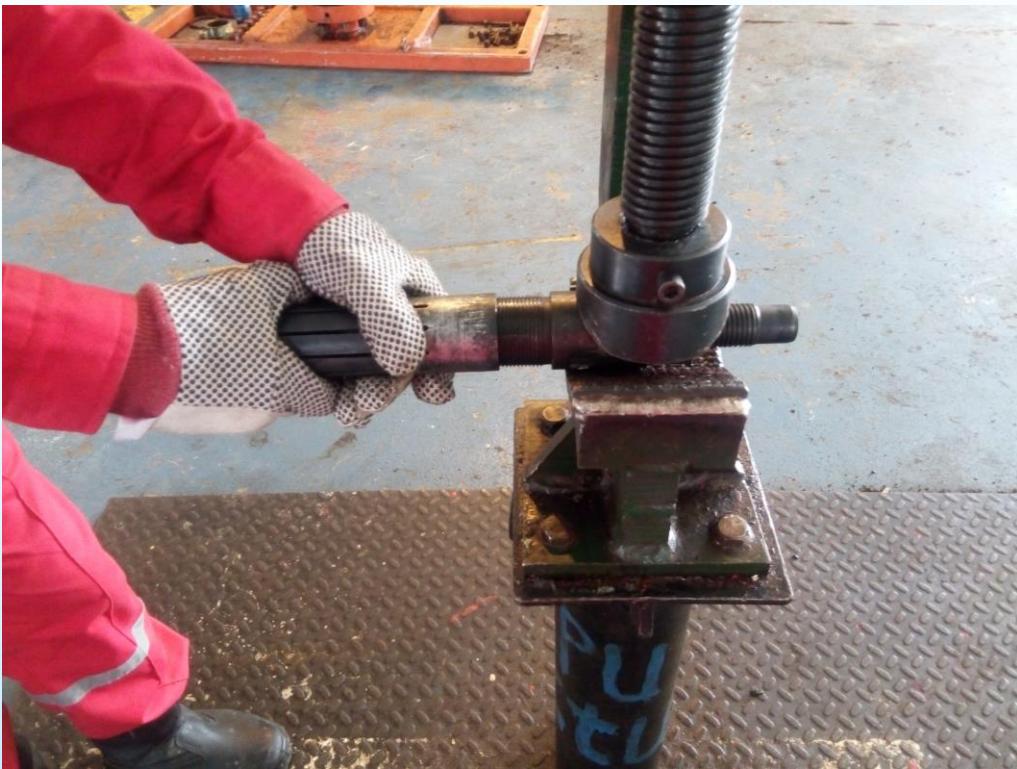
**B**



# Overseas Technical Services Kish

- Unscrew the grapple (8) from the grapple sub (9).

C



D





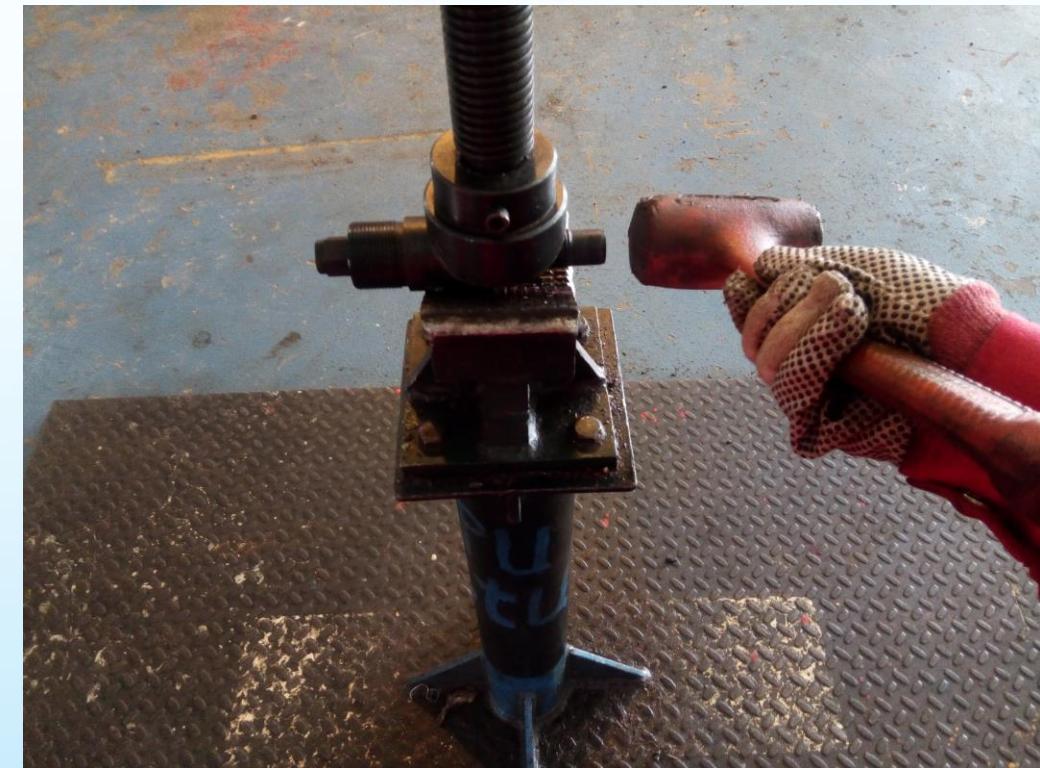
# Overseas Technical Services Kish

- Remove the grapple and the grapple sub (9) from the mandrel (10).

A



B

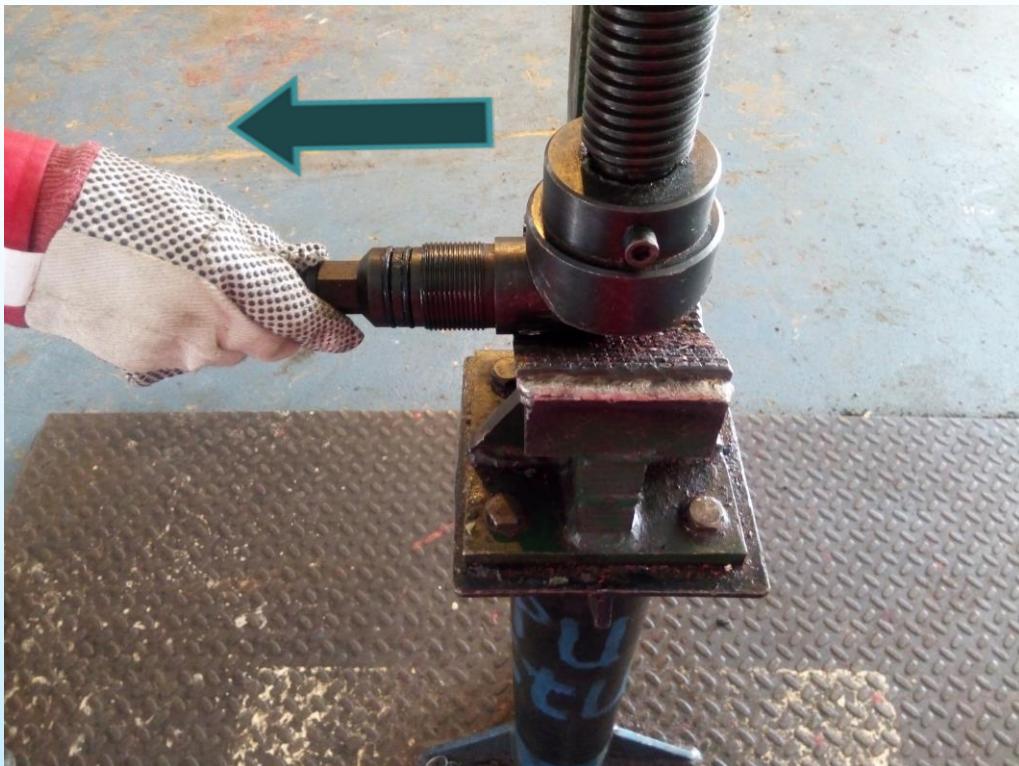




# Overseas Technical Services Kish

- Remove the grapple and the grapple sub (9) from the mandrel (10).

C



D





# Overseas Technical Services Kish

➤ Unscrew the orifice retainer (12) from the mandrel (10). Remove the orifice (11) from the mandrel (10).

A



B





# Overseas Technical Services Kish

➤ Unscrew the orifice retainer (12) from the mandrel (10). Remove the orifice (11) from the mandrel (10).



C



D



# Overseas Technical Services Kish

➤ Unscrew the orifice retainer (12) from the mandrel (10). Remove the orifice (11) from the mandrel (10).





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13	Body	1



## Assembly

- Install the orifice (11) inside the end of the mandrel (10) and secure it in the place with the orifice retainer (12).



A



B



# Overseas Technical Services Kish

➤ Install the orifice (11) inside the end of the mandrel (10) and secure it in the place with the orifice retainer (12).

C



D





# Overseas Technical Services Kish

➤ Install the orifice (11) inside the end of the mandrel (10) and secure it in the place with the orifice retainer (12).

E



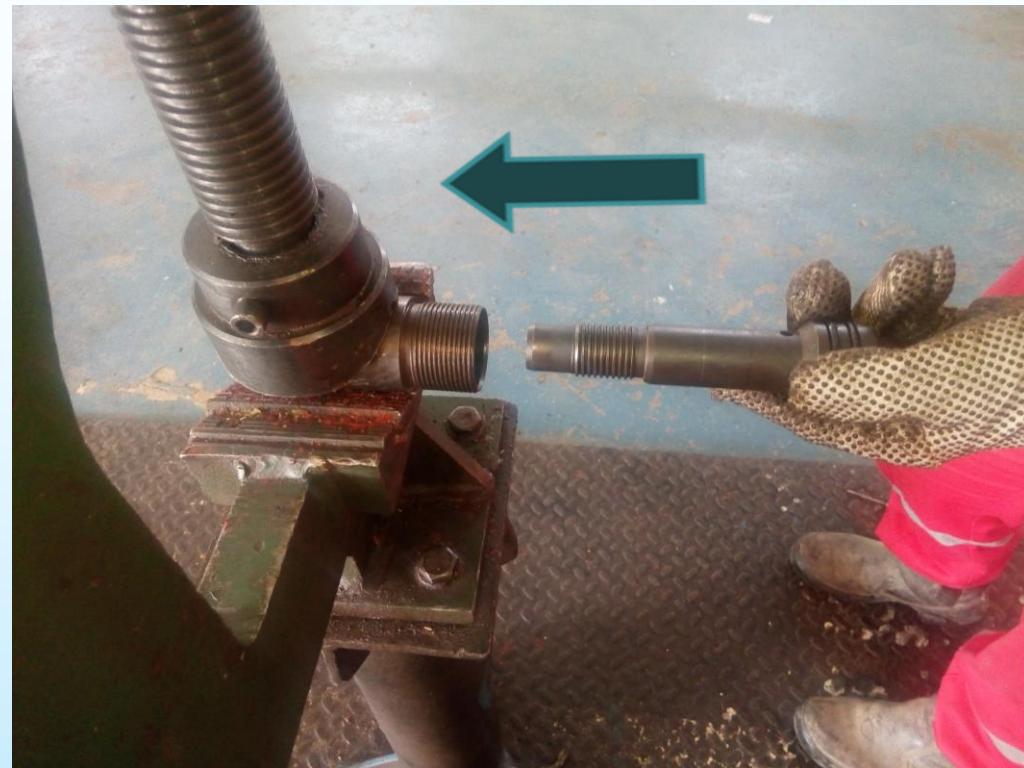
F





# Overseas Technical Services Kish

- Slide the grapple sub (9) over the top end of the mandrel (10) until the grapple sub (9) bottoms out. Make up the grapple (8) onto the grapple sub (9).



A



B



# Overseas Technical Services Kish

- Slide the grapple sub (9) over the top end of the mandrel (10) until the grapple sub (9) bottoms out. Make up the grapple (8) onto the grapple sub (9).

C



D





# Overseas Technical Services Kish

➤ Slide the grapple sub (9) over the top end of the mandrel (10) until the grapple sub (9) bottoms out. Make up the grapple (8) onto the grapple sub (9).



E

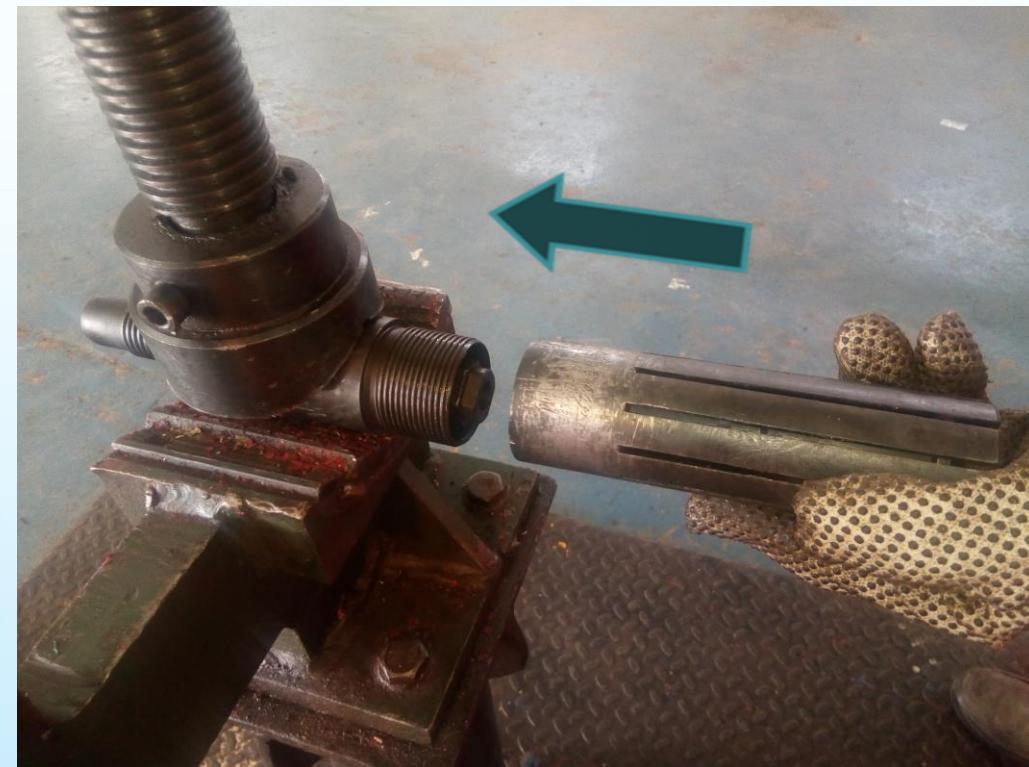


F



# Overseas Technical Services Kish

➤ Make up the grapple (8) onto the grapple sub (9).



A



B



# Overseas Technical Services Kish

➤ Make up the grapple (8) onto the grapple sub (9).

C



D





# Overseas Technical Services Kish

- Place top sub (6) in vice and slide spring (7) over recessed end of the top sub (6).

A



B





# Overseas Technical Services Kish

➤ Place pin end of mandrel (10) through spring (7) and make up to top sub (6).



A



B



# Overseas Technical Services Kish

- Tighten this joint by using a hexagonal socket with an extension. Socket will attach to hexagonal cut into end of mandrel (10) and can be accessed through the end of the grapple.



A



B



# Overseas Technical Services Kish

- Tighten this joint by using a hexagonal socket with an extension. Socket will attach to hexagonal cut into end of mandrel (10) and can be accessed through the end of the grapple.

C



D





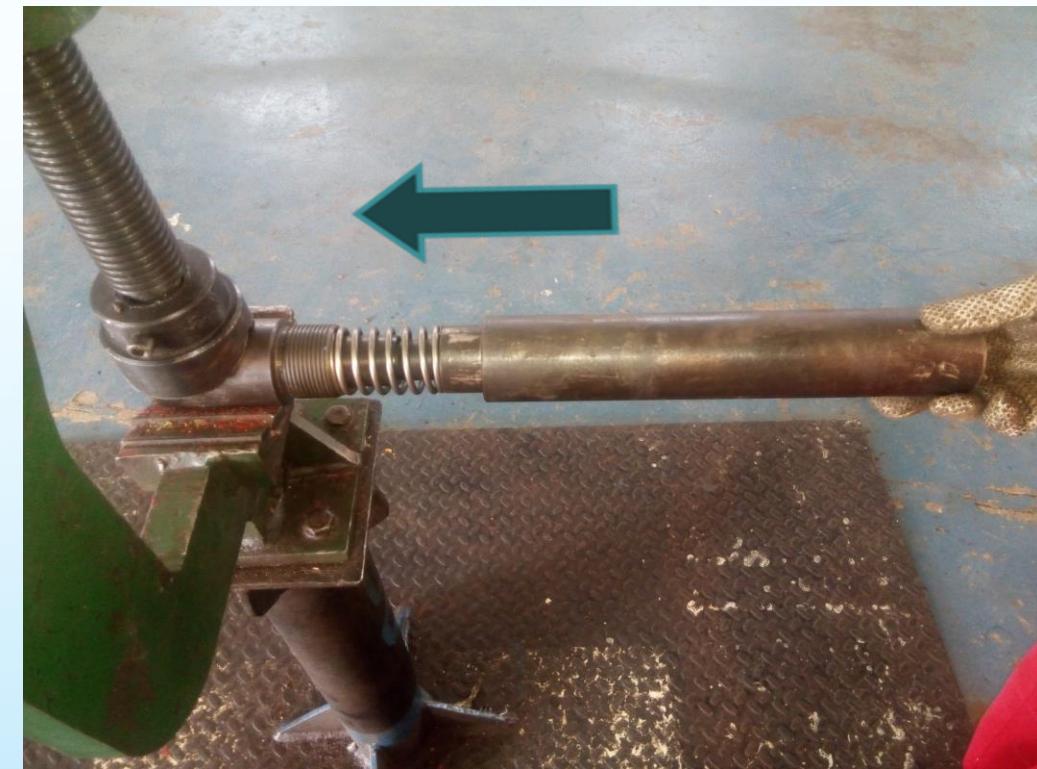
# Overseas Technical Services Kish

➤ Make up body (13) to top sub (6).

A



B





# Overseas Technical Services Kish

➤ Make up body (13) to top sub (6).

C



D





# Overseas Technical Services Kish

➤ Make up body (13) to top sub (6).

E



F





**Overseas Technical Services Kish**



**Well Done!**