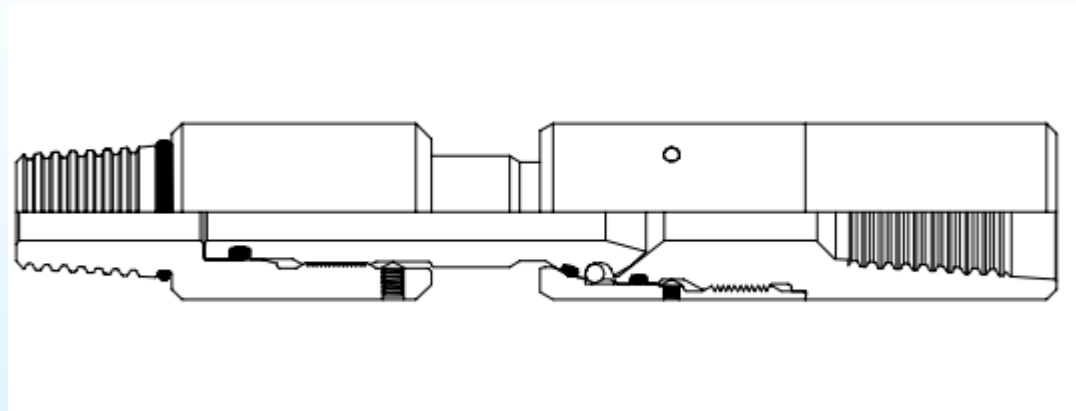




# Thru-Tubing Fishing Single Knuckle Joint



**Editor: Jalal Alali**

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- ◆ Introduction of Tool
- ◆ Disassembly
- ◆ Assembly



## Introduction:



The Thru-Tubing Single and Double pivot Knuckle joint are used in fishing operations in deviated wellbores , or in any situation requiring centralization of the catch tool in the casing . The Knuckle joints are used in conjunction with a Thru-Tubing hydraulic or mechanical centralizer in order to allow centralization of the catch tool without having to overcome the weight of the work string against the bottom side of the casing . The hydraulic or mechanical centralizer therefore only has to support the weight of itself and the catch tool run below .





## ➤ Required hand tools

- Pipe Wrench
- Allen key

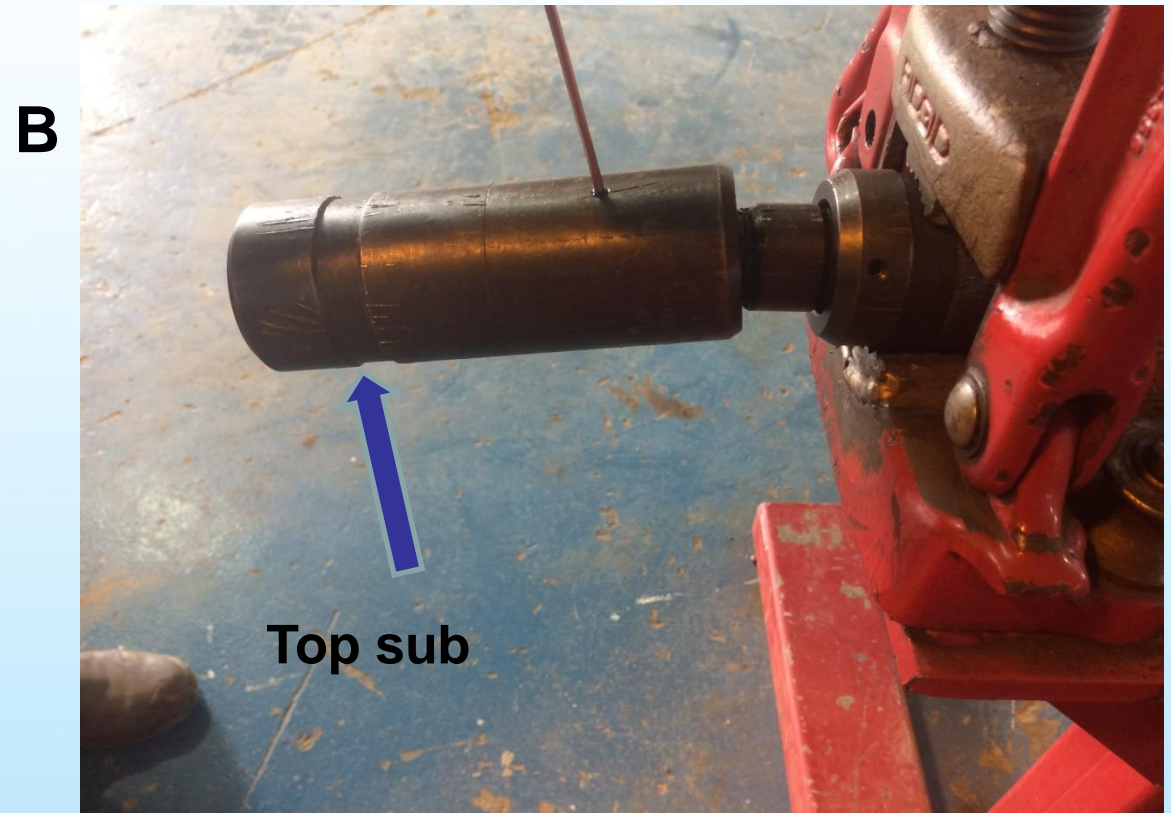
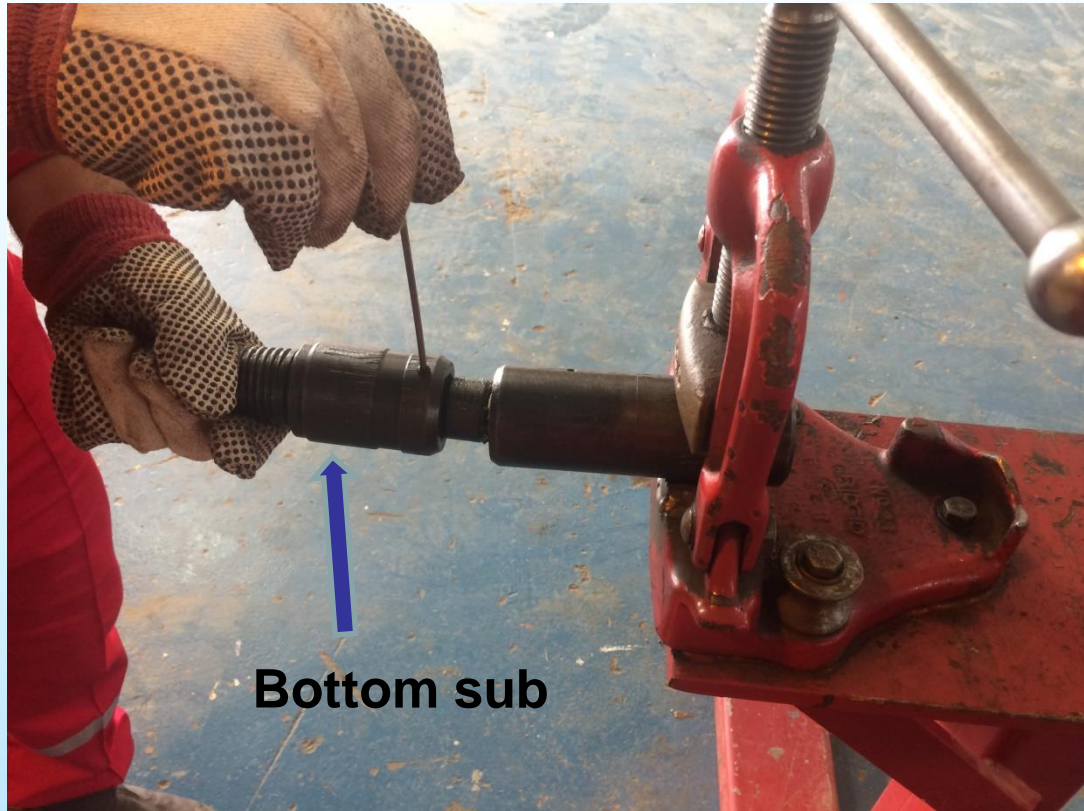






## Disassembly

➤ 1- Remove the Set screws from the ball retainer and bottom sub .

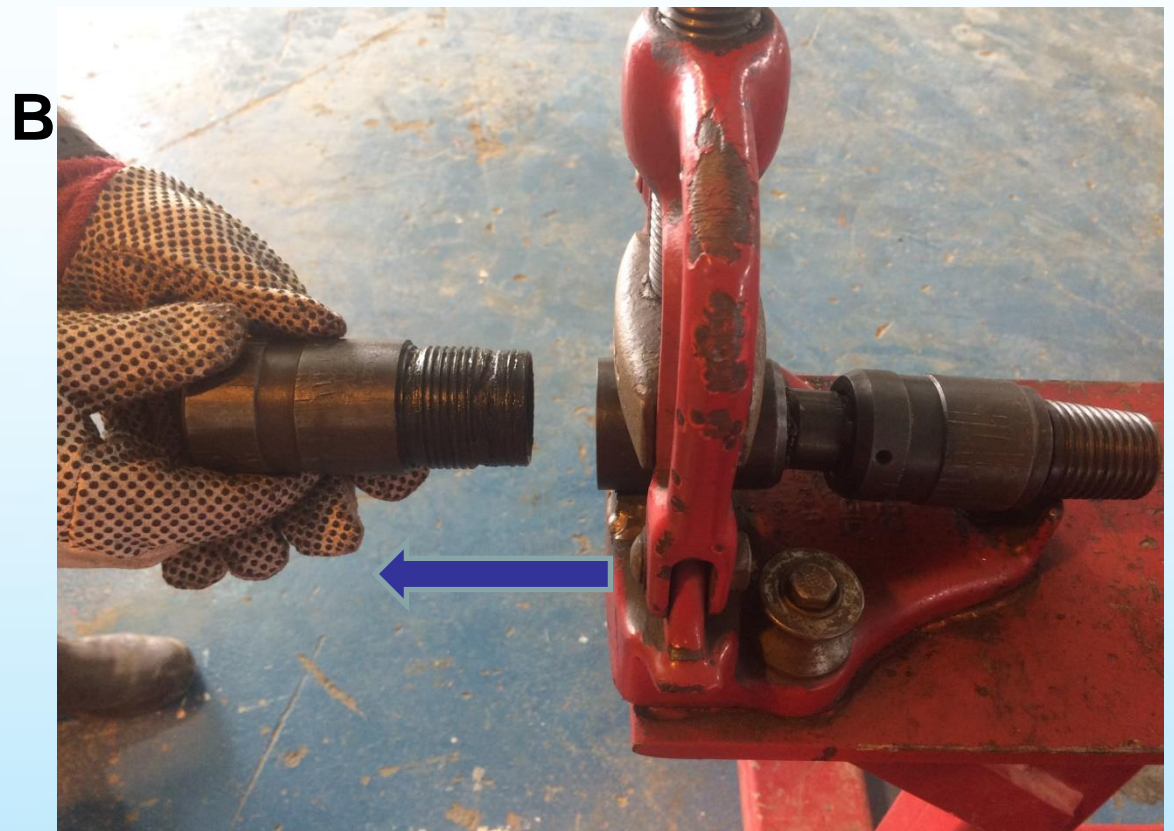
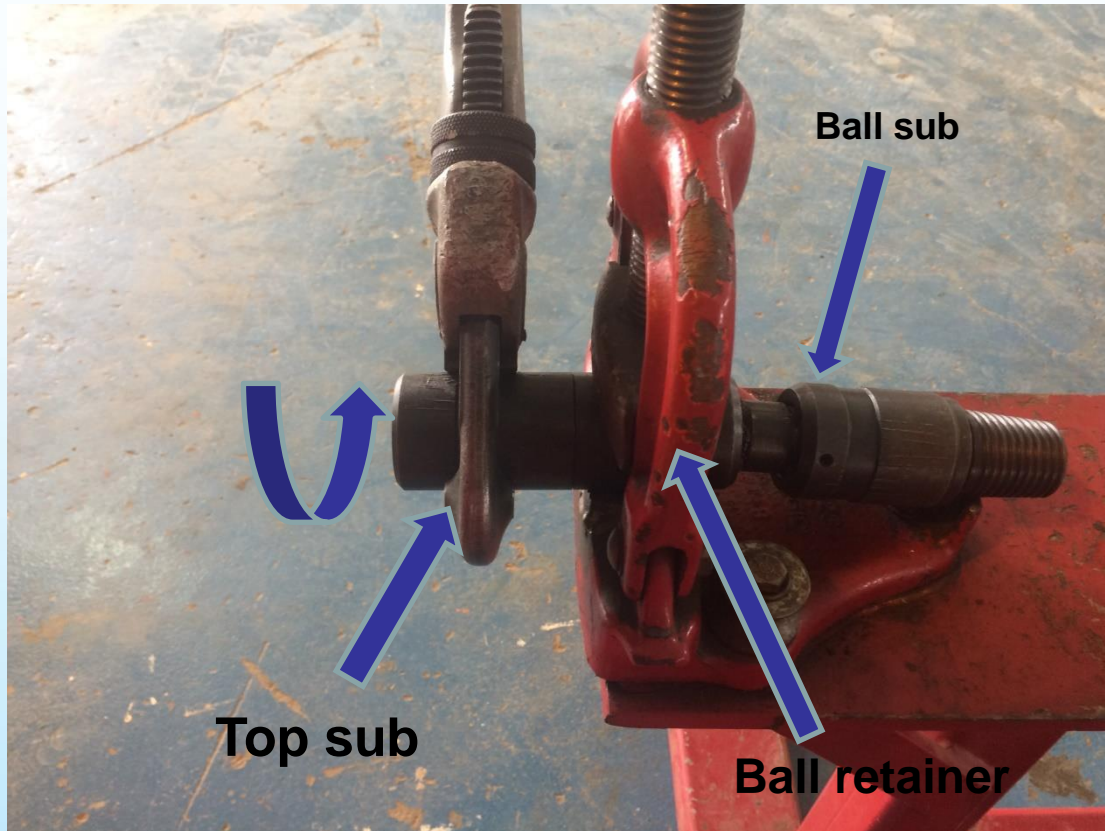






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➤ 2-Unscrew the Ball retainer from the top sub .

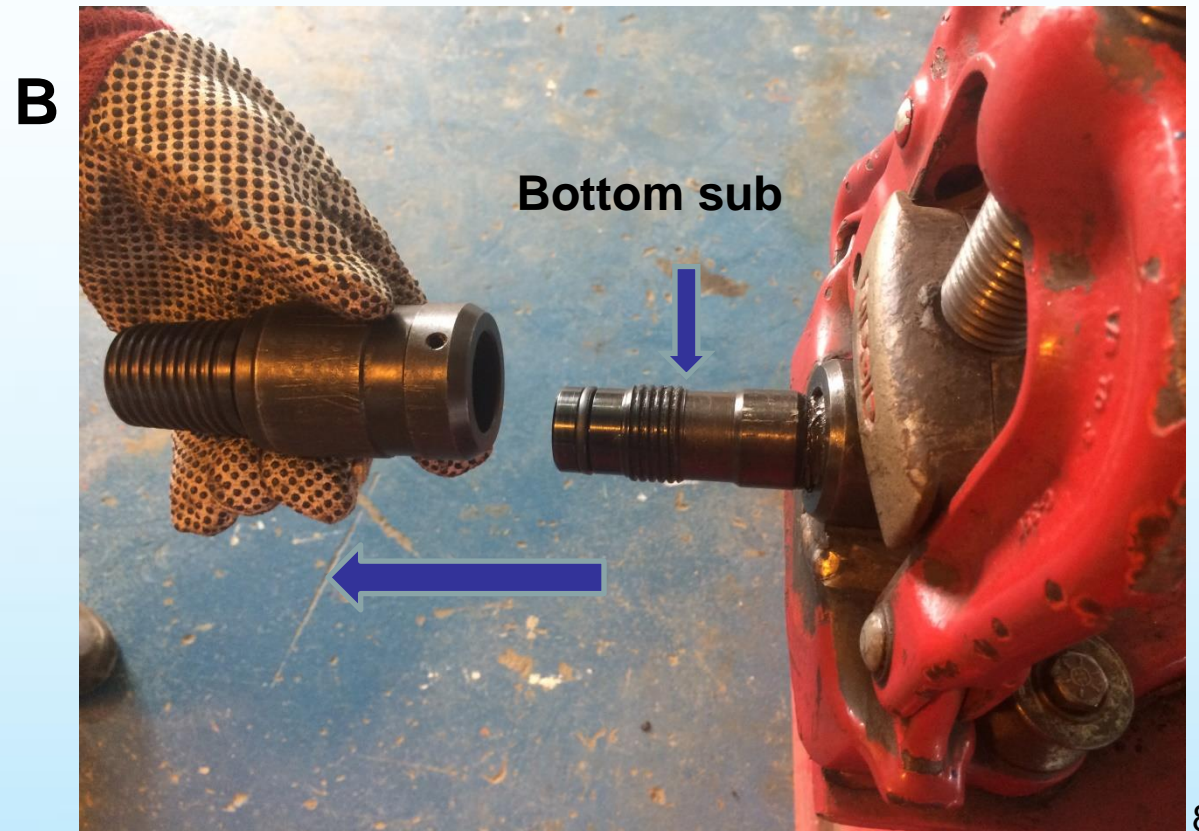
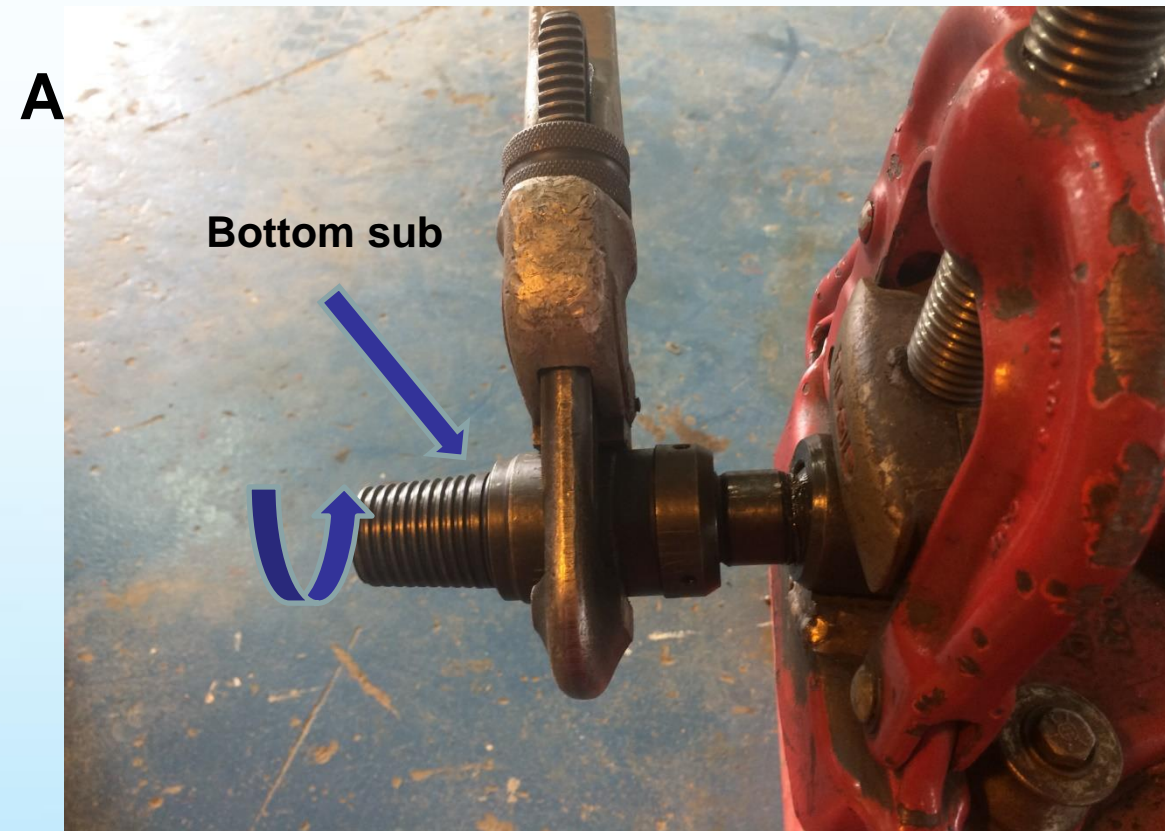






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➤ 3- unscrew the ball sub from the bottom sub

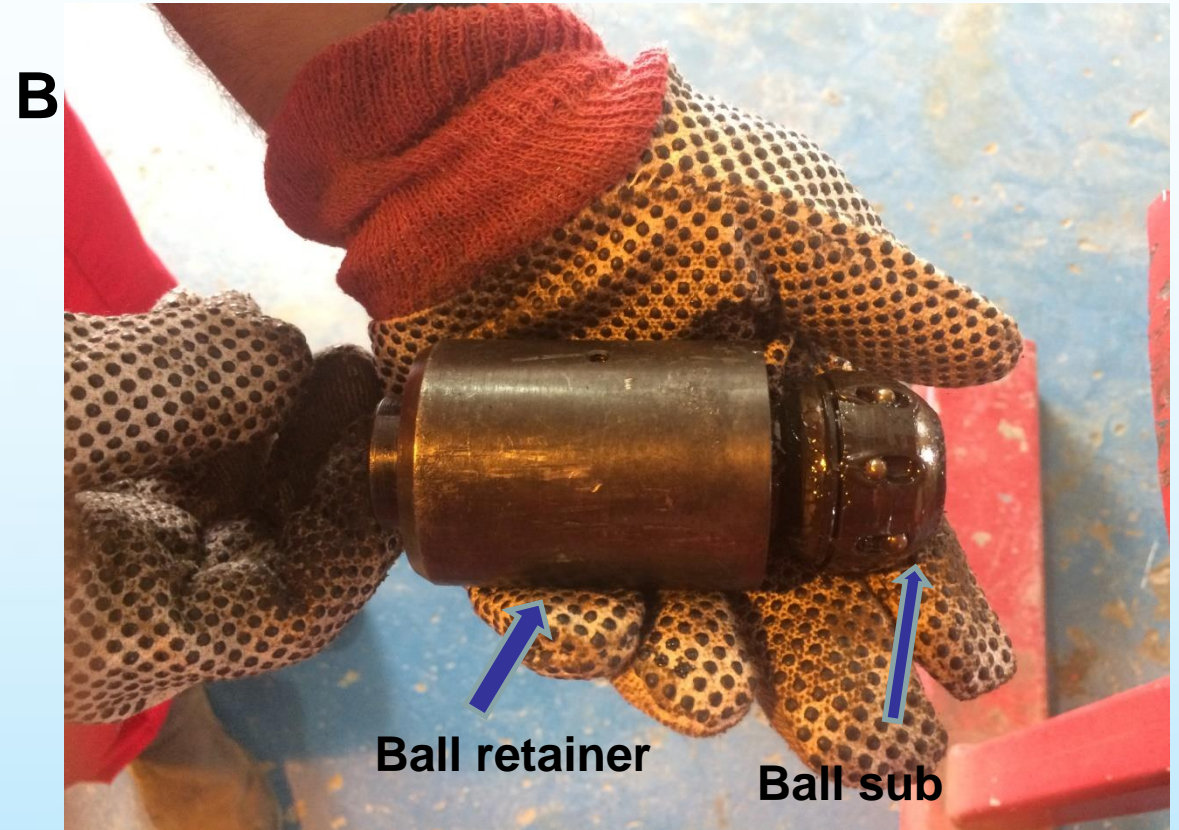
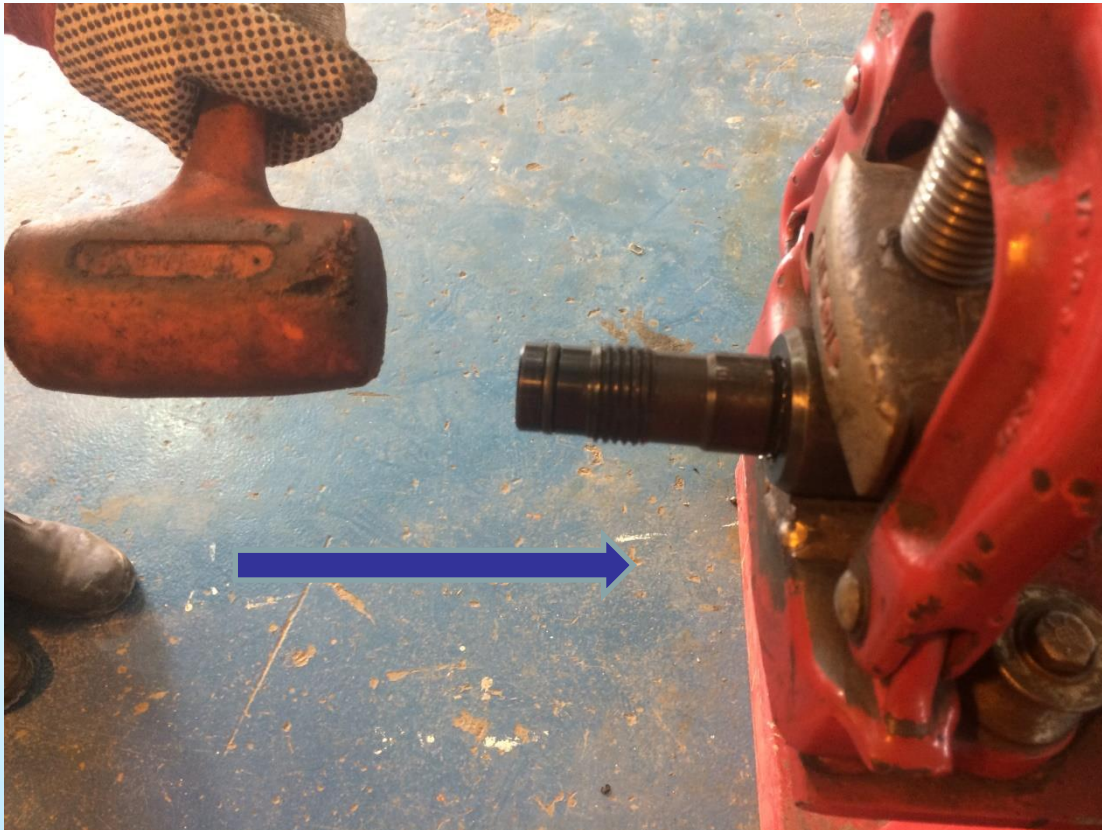






# Overseas Technical Services Kish

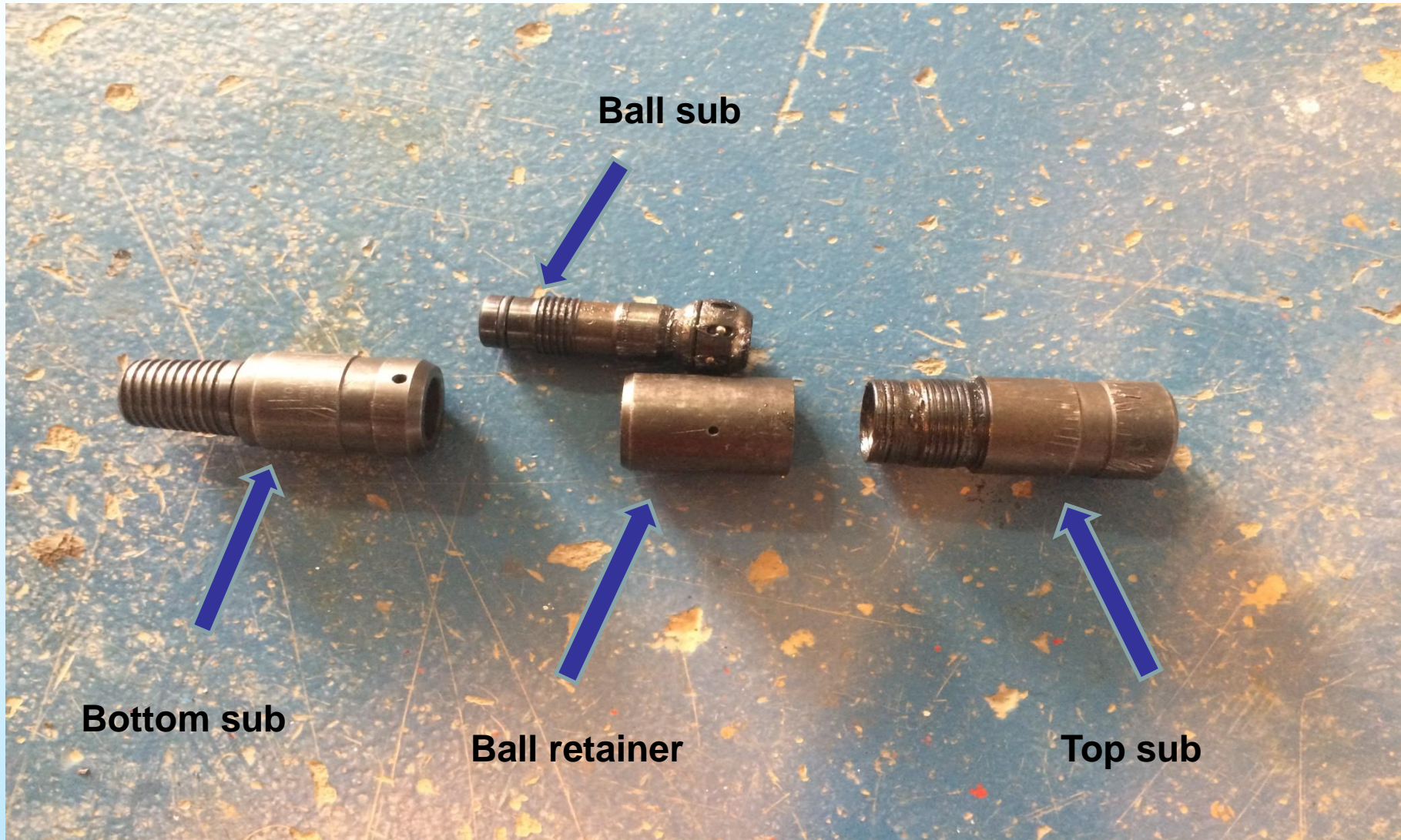
➤ 3- remove the ball subs from ball retainers.







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## Assembly



1- slide the ball sub into the ball retainer .

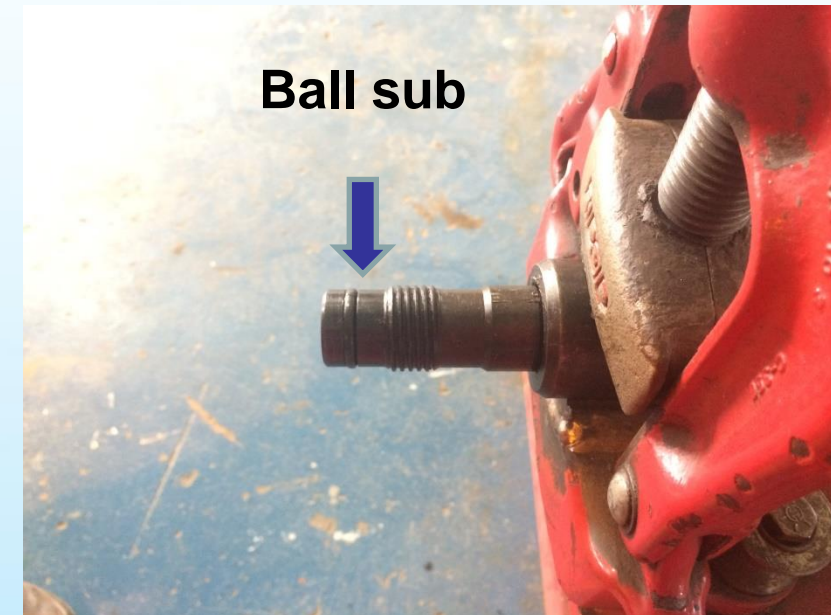
**A**



**B**



**C**

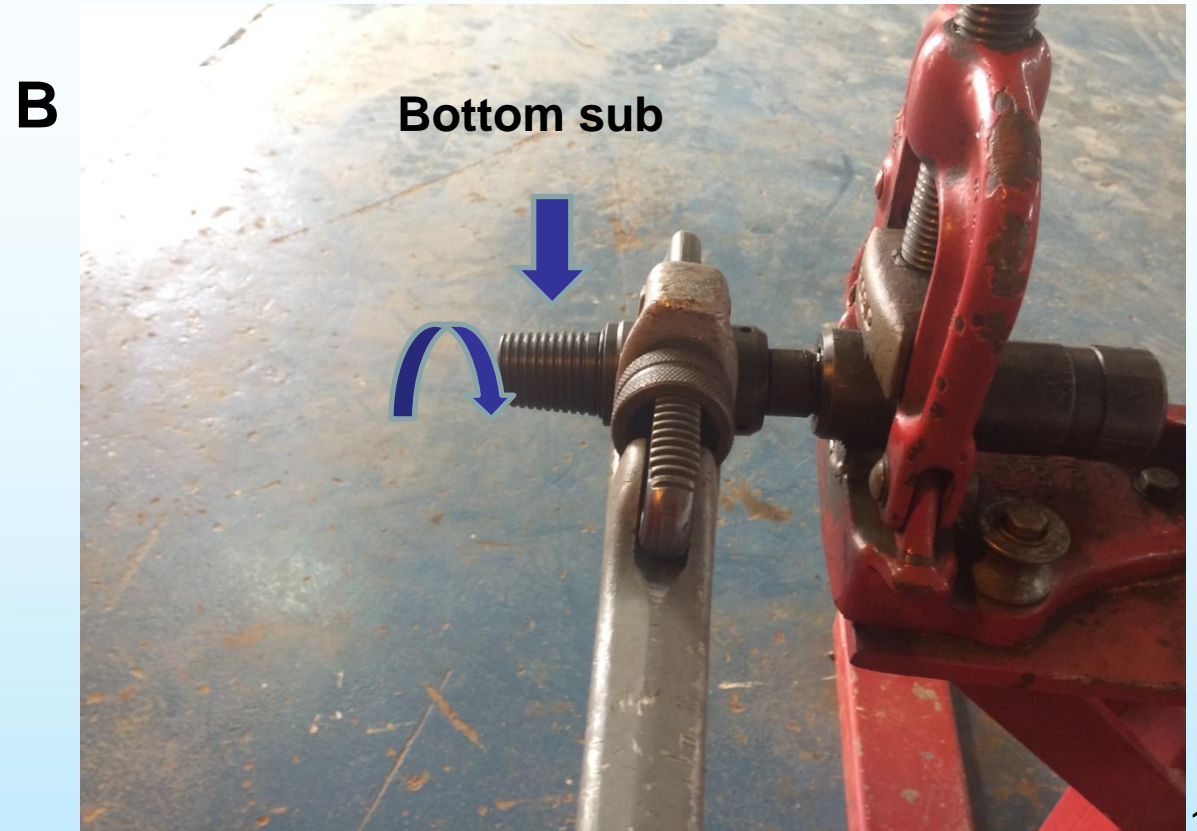
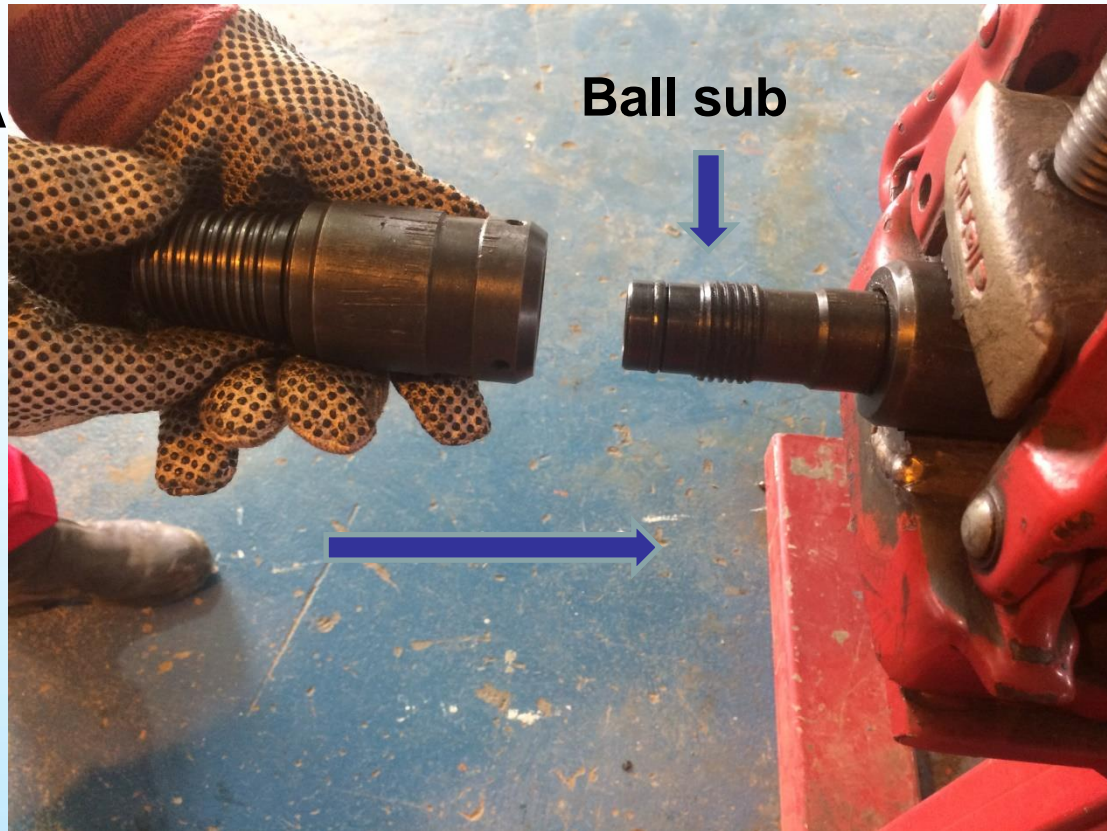






# Overseas Technical Services Kish

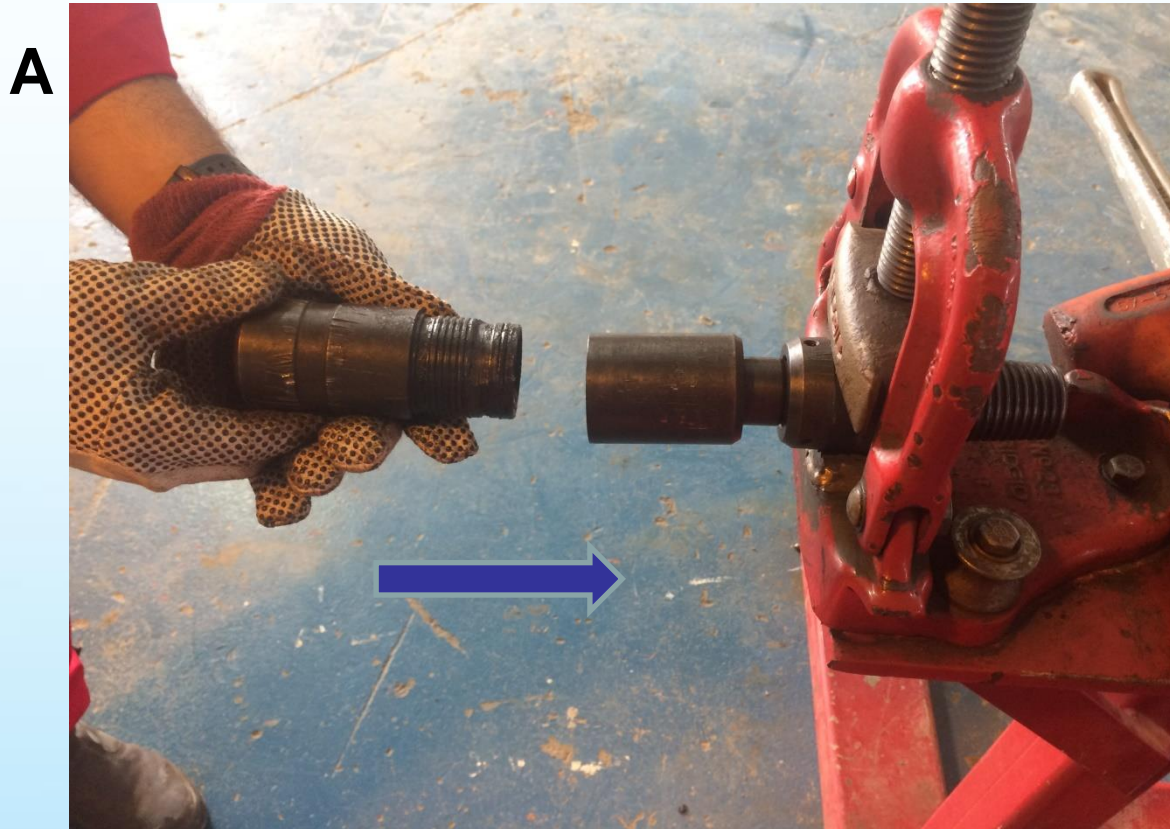
➤ 2- Make up the ball sub to the bottom sub .







➤ 3- Make up the ball retainer to the top sub .

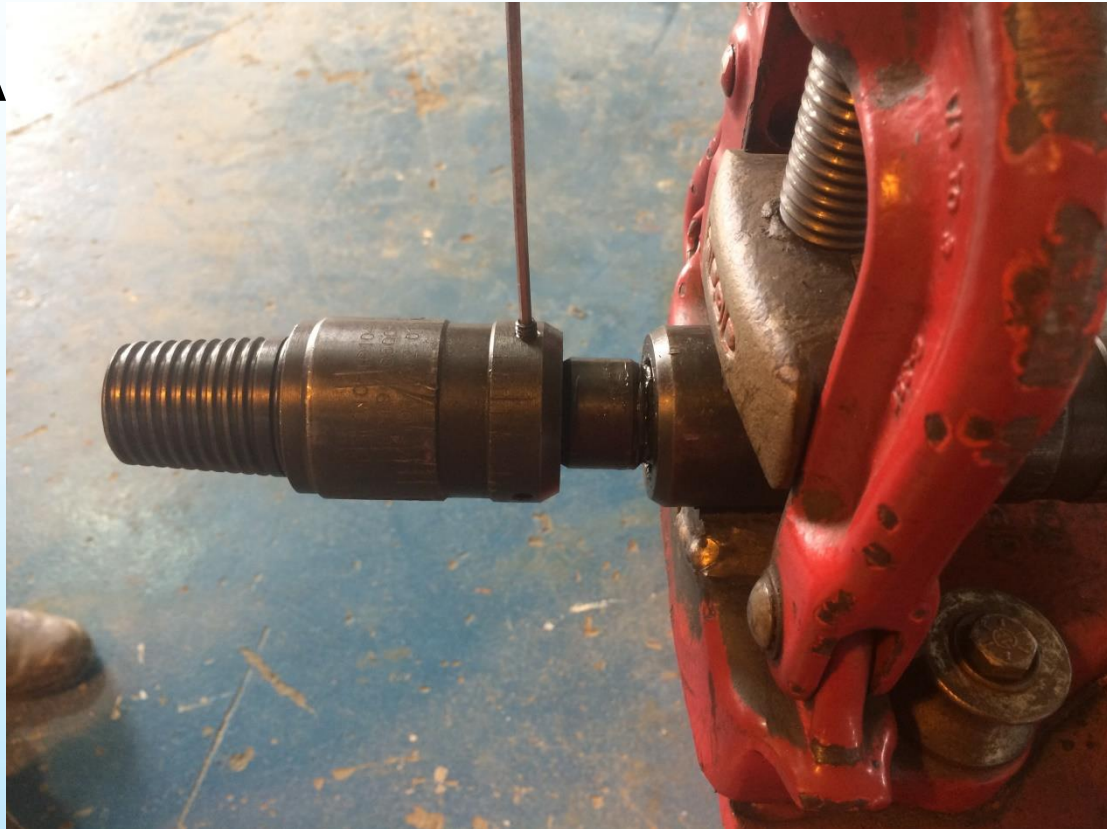






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➤ 4- install the set screws into ball retainer and bottom sub .







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**Well Done!**