Overseas Technical Services Kish

MAINTENANCE AND USE OF CTU DB-UNDER REAMER

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WORK CONTENT

- **Overview**
- **preparation**
- **Tool maintenance process**
- **End of maintenance**

PREPARATION

- 2-4 prepare the assembly drawing

PREPARATION

- 2-5 Required auxiliary equipment and related Hand tools:

PREPARATION

DB-Under reamer Parts lists

TOOL MAINTENANCE PROCESS

Thru-Tubing DB-Under reamer Tool maintenance special tools and commonly used hand tools

No	Tool Name	Quantity	Note
1	Vise	1	
2	24"Pipe wrenches	2	
3	Adjustable wrench	1	
4	Allen wrench	Some	
5	Common Hand Tools	some	
6	O ring special tools	1	

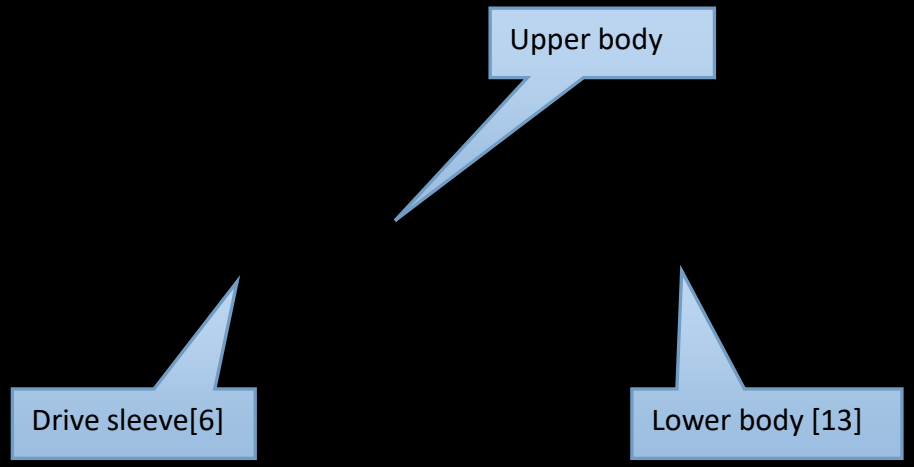
TOOL MAINTENANCE PROCESS

- 2-5 Safety related requirements
- 2-5-1 the maintenance place is an indoor maintenance place. Try to avoid the maintenance of windy weather.
- 2-5-2 Safety identification inspections include, but are not limited to: (1) wearing PPE; (2) avoiding mechanical injuries and the like.

TOOL MAINTENANCE PROCESS

3-1 Removal steps

3-1-1 Hold the upper body of the tool on the vise



TOOL MAINTENANCE PROCESS

3-1 Removal steps

3-1-2 Remove all set screws

Note: End face head captive screws each cap screw has two captive screws that need to be removed completely.

TOOL MAINTENANCE PROCESS

3-1 Removal steps

3-1-3 Remove the face cutter [28]

TOOL MAINTENANCE PROCESS

3-1 Removal steps

3-1-4 Loosen the lower body until the blade pin holes align with the pin holes on the lower body.

TOOL MAINTENANCE PROCESS

3-1 Removal steps

3-1-5 Remove a total of three cutter blades with remove blade pin [24]

TOOL MAINTENANCE PROCESS

3-1 Removal steps

3-1-6 Remove the lower body [13]

TOOL MAINTENANCE PROCESS

3-1 Removal steps

3-1-7 Remove the Top sub [1] set screw [2].

TOOL MAINTENANCE PROCESS

3-1 Removal steps

3-1-8 Remove the Top sub [1]and spring [5]from drive sleeve[6].

TOOL MAINTENANCE PROCESS

3-1 Removal steps

3-1-9 Remove the small drive pin [19A (3ea)] that connects the nozzle holder and the mandrel [4]

TOOL MAINTENANCE PROCESS

3-1 Removal steps

3-1-9 Remove nozzle carrier [14]

TOOL MAINTENANCE PROCESS

3-1 Removal steps

3-1-11 Remove the drive pin [6]

TOOL MAINTENANCE PROCESS

3-1 Removal steps

3-1-11 remove the large drive pins [9(3ea)]

TOOL MAINTENANCE PROCESS

3-1 Removal steps

3-1-11 Remove the mandrel [4]

TOOL MAINTENANCE PROCESS

3-1 Removal steps

3-1-12 Place the components neatly

3-2 Check list and maintenance

No	Check item	Quantity	Note
1	O-Ring	14ea	
2	spring	1ea	
3	Steel ball	1ea	
4	Pin	12ea	

a. If any of the above accessories is damaged, replace the new one directly

b. Use clean cotton yarn to clean the tool ensure all accessories are clean

3-3 installation steps

3-3-1 Fix the upper body on the vise.

3-3 installation steps

3-3-2 put the mandrel into the upper body

3-1 Removal steps

3-3-2 Grease the large drive pin and install the large drive pin along the groove in the spindle

3-3 Removal steps

3-3-3 push the mandrel into the upper body, note that the pin should be stuck in the pin groove of the upper body, and put the rotary mandrel into place after pushing it into position

3-1

3-4 Mounting drive sleeve [6]

3-1 Removal steps

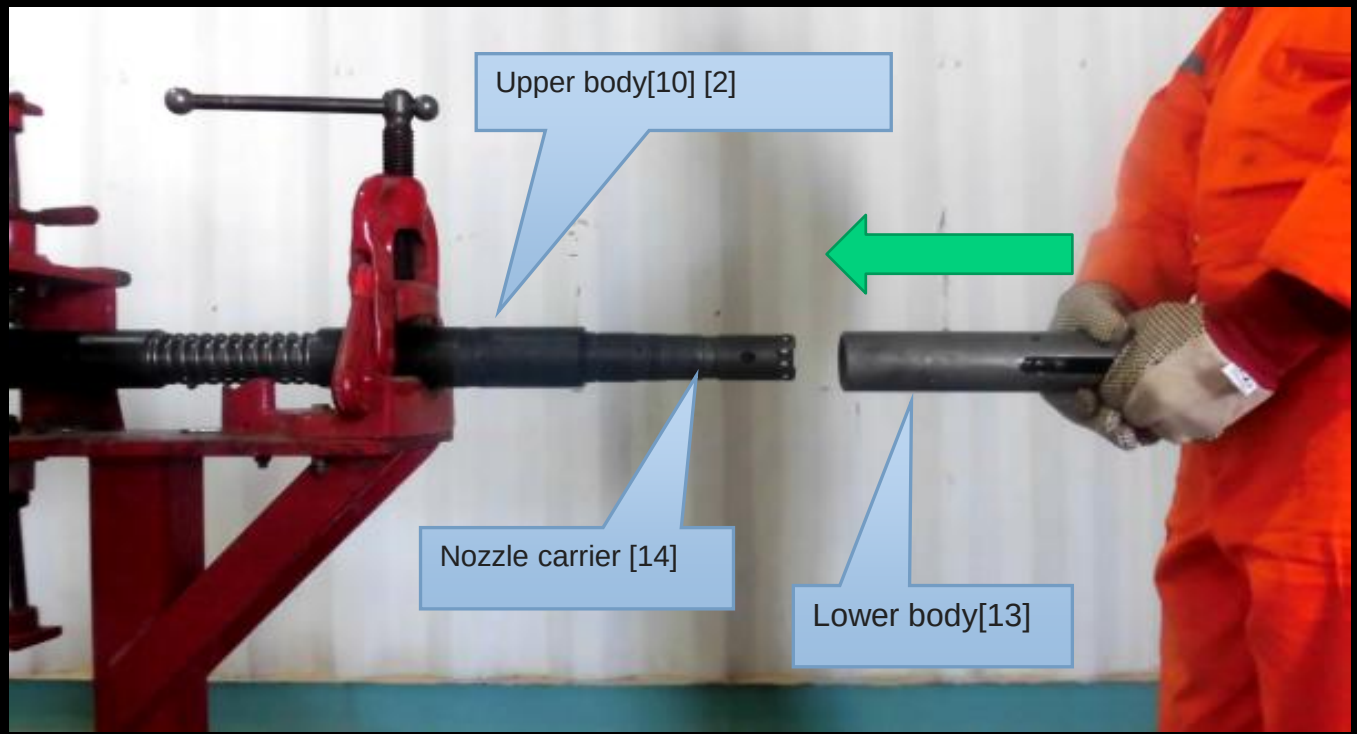
3-3-5 Install the top sub [1]

3-1 Removal steps

3-3-5 Install the top sub[1] fastening set screw[2]

3-1 Removal steps

3-3-5 Connect the lower body[13] onto the nozzle seat and the upper body[10].

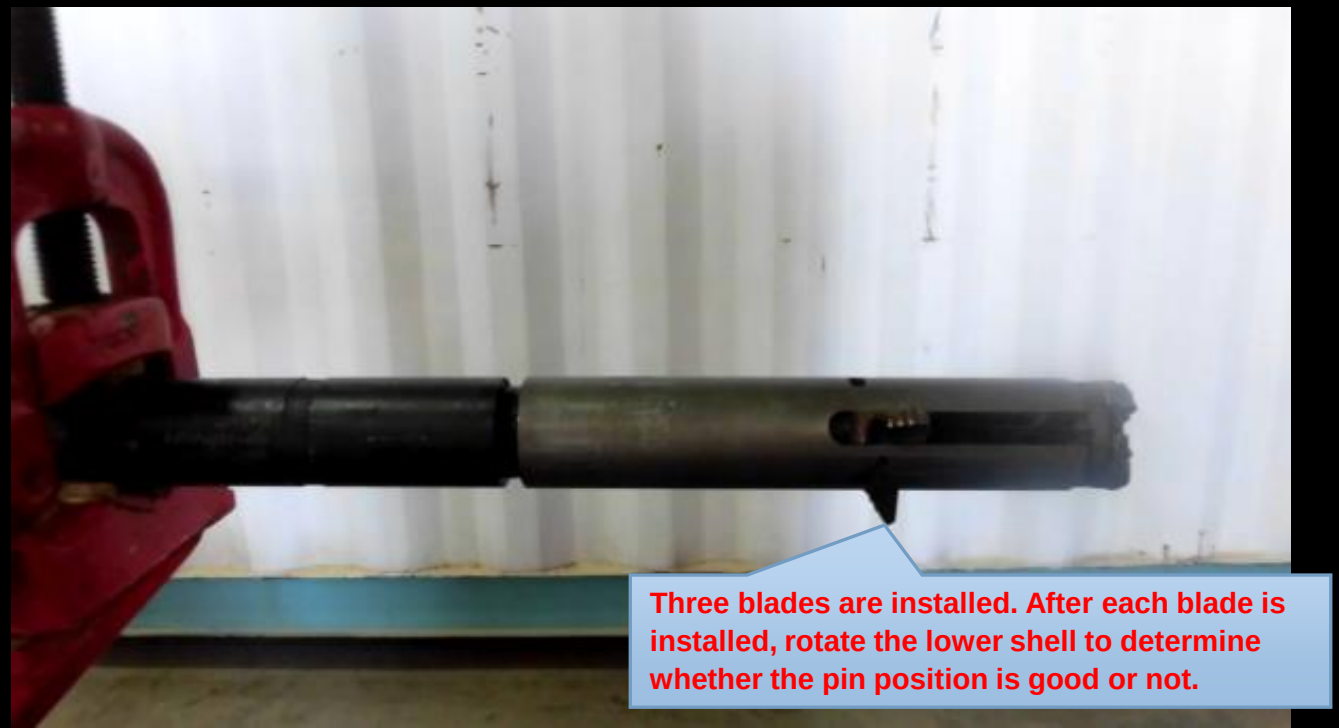


3-1 Removal steps

3-3-6 The rotary buckle is aligned with the pin hole of the lower body[13] and the pin hole of the nozzle seat, and can be passed through the pin once to ensure that the pin holes are aligned;

3-1 Removal steps

3-3-6 Install three cutter blades, rotate the lower shell after each blade installation **to ensure that the position of the blade fastening pins is correct;**



- عکس کامل تووِلز بعد از بستن

TOOL MAINTENANCE PROCESS

3.1 Inspect all O-rings on each component for damage.

3.2 After using diesel oil to remove oil from the components of the tool, clean it with clean water and blow it with compressed air, especially to ensure that the inner wall of the tool barrel is clean.

3.3 Check all parts for damage.

3.4 Replace the damaged part and record the part number of the newly replaced part on the maintenance log sheet.

3.5 Apply a little oil on the surface of each spring and O-ring

- **4- End of maintenance**
- 4-1 Tool disposal
- 4-1-1 Apply a small amount of butter to all the exposed threads and holes in the tool
- 4-1-2 Wear wire on both ends of the tool
- 4-1-3 pressure test the tools
- 4-2 fill in the document
- 4-2-1 remove the pressure record card and fill in relevant information (country area, oilfield name, well name, tool name, date, time, etc.)
- 4-2-2 Fill in the tool maintenance record form, CTU engineers must sign and confirm
- 4-2-3 Fill in the tool status label and attach it to the wire

END OF MAINTENANCE

- Apply a small amount of butter to all the exposed threads and holes in the tool.
  Wear wire on both ends of the tool;
  Move the test pressure qualified tool to the qualified equipment area.
  Remove the pressure record card and fill in the relevant information (country, region, field name, well name, tool name, date, time, etc.).
  Fill in the tool maintenance record form, and the coiled tubing engineer must sign and confirm it.
  Fill in the tool status label and attach it to the wire.
  Neatly tidy tools, remove safety signs and warning tapes, report forms and drawings, provide convenience for next operation, and clean wastes, such as old seals, on the spot according to waste disposal regulations.

- 5- Finishing work
- Neatly tidy up the tools, remove safety signs and warning tapes, and archive reports and drawings to facilitate the next operation. Clean wastes and other waste seals in accordance with waste disposal regulations.

- Thanks for your attention