

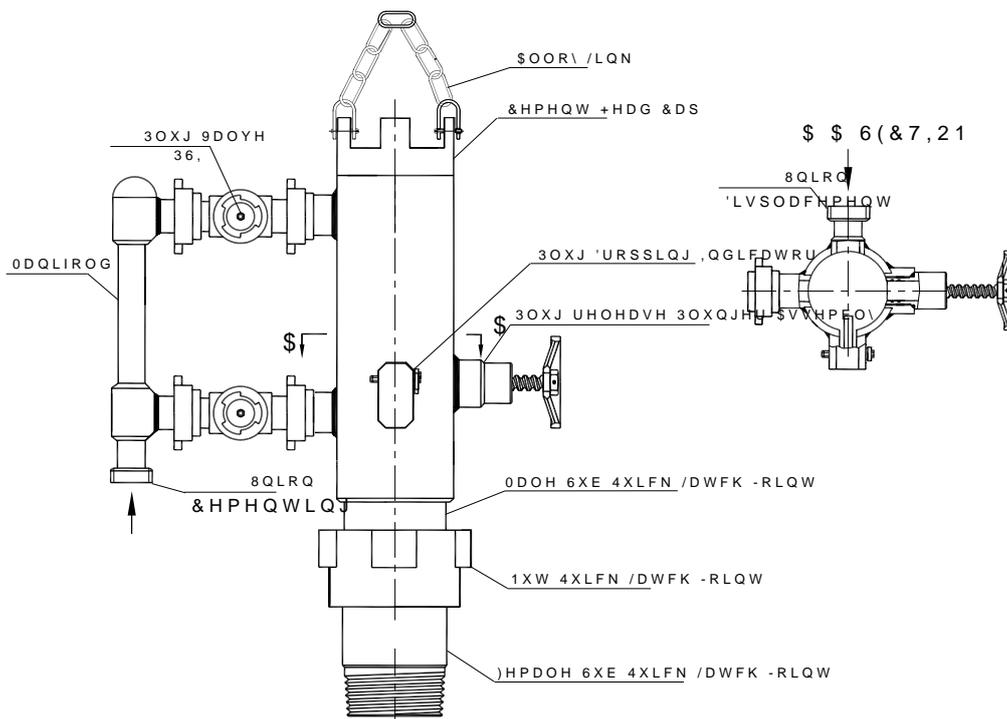
MODEL DSC SINGLE PLUG CEMENT HEAD  
OPERATION & MAINTENANCE HANDBOOK

SHANDONG SAIGAO GROUP CORPORATION

## 1. STRUCTURE

Special tool for pumping slurry and releasing plug. It can couple with one plug, and makes the drilling fluid fill into casing in turn and quickly. This can simplify the cementing operation, prevent cement pollution.

The structure of the DSC Single Plug Cement Head as follows: its bottom has a quick-latch joint, it can be used to connect with casing. The body contains plug. Screw-bar block plug. Open cement head cap can put plug into cement body. Union interface can be connected with cementing pipeline or displace mud. Cement head cap, body and quick-latch joint are used with large trapezoidal-thread, it makes the tool convenient to disassemble and carry.



## 2. FEATURES

2.1. Quick-latch joint is designed to be easier, faster and safer makeup for two-stage cementing. It is manufactured utilizing API grade steels with connections for API 8 round, stress and premium threads.

2.2. Positive lever indicates plug releasing.

2.3. Structure is very reasonable, parts are made from AISI4135H alloy

steel.

2.4. Cement head cap and quick-latch joint with large trapezoidal-threaded, it makes the tool convenient to disassemble and carry.

### 3. MAIN TECHNICAL PARAMETERS

Specifications mm	Working Pressure MPa	I.D. of Plug Container, mm	Length of Plug Container, mm
4" ( N101.6mm)	35 ÷ 50	N102	425
4½" ( N114.3mm)	35 ÷ 50	N115	425
5" ( N127mm)	35 ÷ 50	N127	425
5½" ( N139.7mm)	35 ÷ 50	N140	425
5¾" ( N146mm)	35 ÷ 50	N146	425
6" ( N168.27mm)	21 ÷ 35	N168	425
7" ( N177.8mm)	21 ÷ 35	N178	425
7½" ( N193.67mm)	21 ÷ 35	N194	425
8" ( N219.1mm)	21 ÷ 35	N219	425
9" ( N244.5mm)	21 ÷ 35	N245	425
10¾" ( N273mm)	21 ÷ 35	N273	425
11¾" ( N298.45mm)	21 ÷ 35	N298	425
12¾" ( N324mm)	21 ÷ 35	N324	425
13" ( N339.7mm)	21 ÷ 35	N340	425
16" ( N406.4mm)	21 ÷ 35	N406	600
16¾" ( N426mm)	21 ÷ 35	N426	600
18" ( N473.1mm)	21 ÷ 35	N473	600
20" ( N508mm)	21 ÷ 35	N508	600

### 4. INSTALLATION AND OPERATION

- 4.1. Open the nut of quick-latch joint, connection with casing.
- 4.2. Open cement head cap, turn off screw-bar, then install plug, push down the handle of indicator.
- 4.3. Close and screw down cement head cap in order to prevent leakage.
- 4.4. Connect cementing pipeline and place mud pipeline with union.

4.5. It must connect the pipeline with cementing head on the lower union before circulate, circulation through cement head.

4.6. Open screw-bar to release plug after finish cementing.

4.7. Open upper plug valve when displace mud, let mud push plug down.

Notice:

The screw-bar handle cannot rotate is advance (screw-bar block plug).

## 5. MAINTENANCE

Clean cement head after use.

### 5.1. Maintain manifold

Open nut of union by hammer, disassemble manifold. Rinse out rudimental cement and apply butter on union.

### 5.2. Maintain cement head cap.

Open cement head cap and clean, check sealing ring, if it have been damaged, change it with new apply butter and make-up.

### 5.3. Maintain quick-latch Joint

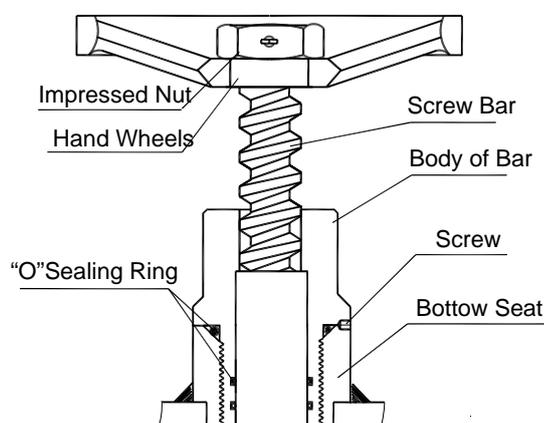
Open quick-latch Joint and clean, check "O" sealing ring, if it have been damaged, change it with new apply butter and make-up.

### 5.4. Maintain screw-bar

According to Fig, disassemble bolt by screw driver, take out sealing rings and check it. Disassemble impacted nut, screw bar, take out sealing rings and check it. Clean screw-bar and wipe butter, assemble it in order again.

Disassemble process

Disassemble the nut of indicator, hit it out of indicator (Notice: don't damage thread), take out wedge-block and washer from body, change sealing ring and apply lube.



### 5.5. Maintain indicator

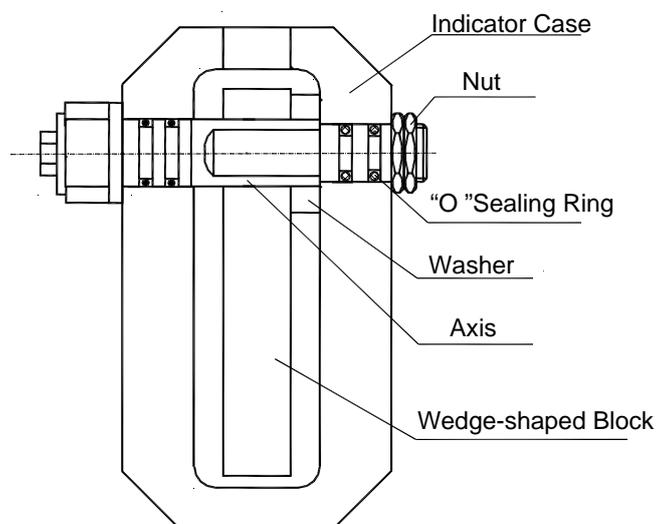
Indicator will be the case with ~~shy~~ running water, turning the handle indicator to ensure that the rotation of ~~flexibility~~, such as the rotation is not flexible, open maintenance plans.

#### 5.5.1 The demolition process indicator

Wrench off-axis with the fastening ~~nut~~ indicator, the indicator will be played axis. (Be careful not to damage ~~it~~) out from the cylinder, wedge-shaped block allocation, positioning washer, was ~~the~~ replacement of seals, lubricants painted.

#### 5.5.2 Indicator assembly process

The indicator from the axis of penetration ~~hole~~, wedge-shaped block set aside, the location in the body was ~~followed~~ extinguishers from the set of indicators to the axis, and then continue ~~axis~~ of penetration across the hole, firmly fixed on the nut.



6. In the course of transportation ~~on~~ and go up or down drilling platform, naked thread of cement head must ~~be~~ sealed protector. Prohibit suddenly break and frusta, lest happen distortion or spoil, can not use ~~normal~~