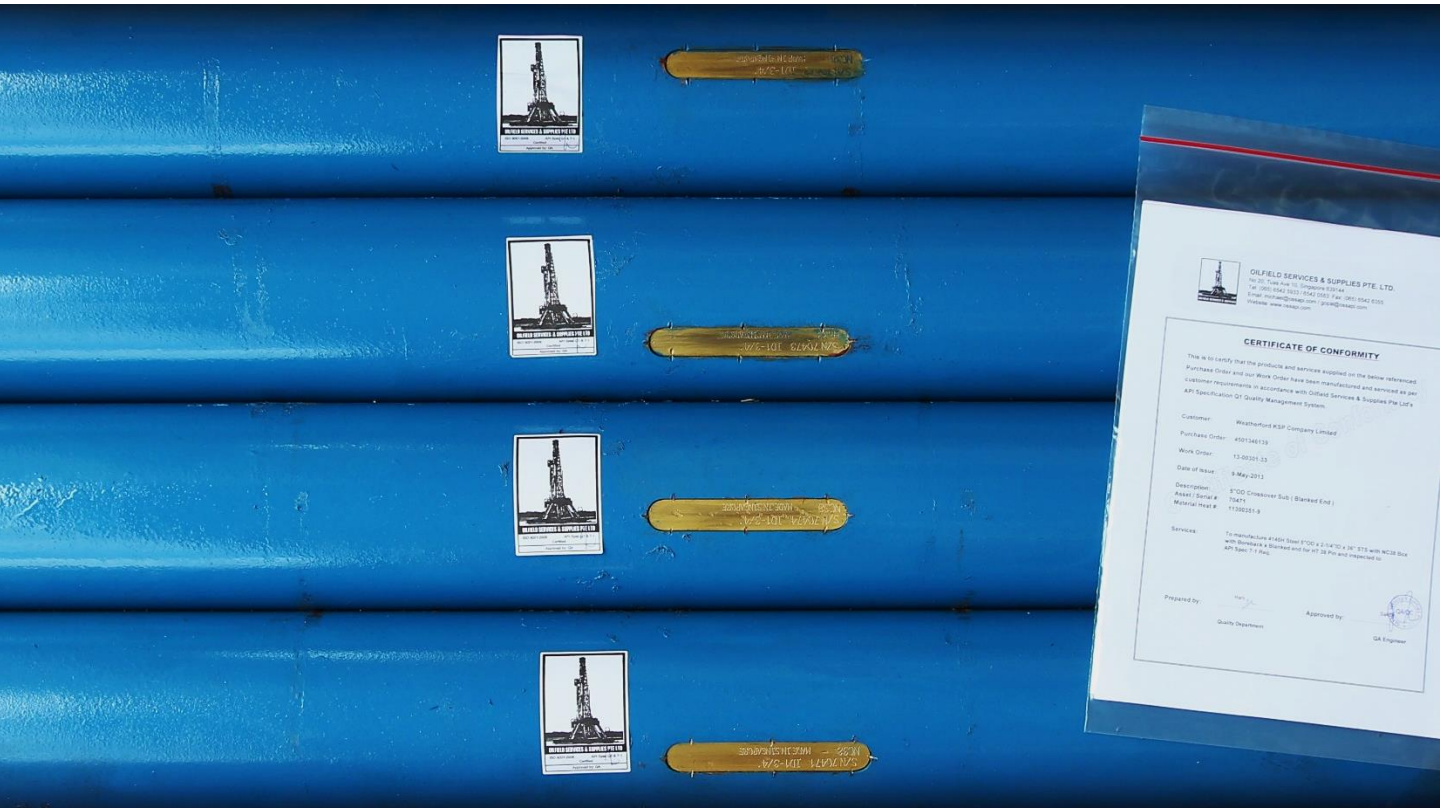


We assure you that we will never compromise on quality.



Inspected Tools

Rotary Crossover | Kelly Saver | Float | Bit Sub

OSS drill stem substitutes are manufactured from Alloy Steel AISI 4145 H Modified, in accordance to the requirements of A.P.I. Spec 7-1.

The subs can be manufactured in various O.D. sizes, complete with A.P.I. connections, to meet the needs of our customers.

The thread roots can be cold rolled and phosphate coated to minimize galling. Subs are manufactured with straight or reduced section as shown.

Crossover Sub – short subassembly used to adapt between different thread types or sizes.

Kelly Saver Sub – sacrificial sub used to absorb the connection wear and extend the life of the drill stem component.

Float Sub – used to house the float valve and to provide for fluid flow control at the bottom of the drill stem.

Bit Sub – used to connect the drill bit and drill collar.

Ordering Information

When enquiring, please specify:

1. Use (e.g. DC/DC – DC/DP – Bit Sub etc)
2. O.D.(s) and I.D.(s)
3. Length
4. Size and type of connection
5. Other features (e.g. SRG, bore backs etc)

For reduced section substitutes, include:

1. O.D. of reduced section
2. Length of reduced section

For float substitutes include:

1. Float bore and style



Reduced Section



Straight



Saver



Float Sub



Crossover Sub



NM Saver Sub

Lift Sub

OSS lift substitutes are manufactured from Alloy Steel AISI 4145 H Modified, in accordance to the requirements of A.P.I. Spec 7-1.

Lift subs enable the efficient and safe handling of BHA equipment, and can be supplied with an 18° tapered shoulder as shown, or alternatively with a square shoulder. (Dial Head)

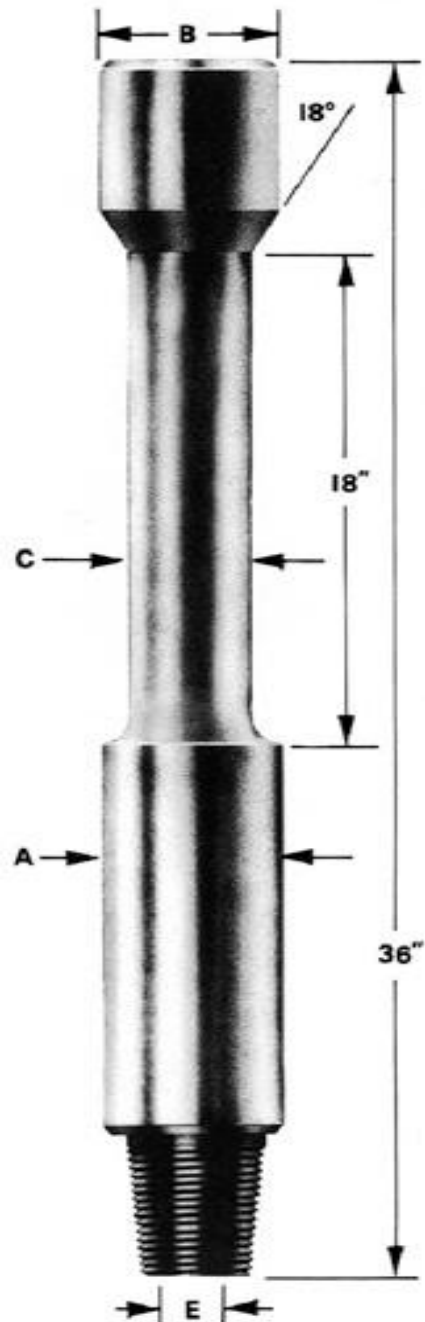
Lift Sub Specification

DRILL COLLAR SIZE (A)	APPROX WEIGHT (LB)
3½	40
4⅝	50
4¾	84
5	88
6	150
6¼	168
6½	168
6¾	168
7	169
7¼	169
8	257
8¼	257
9½	320
9¾	320
11	368

Ordering Information

When enquiring, please specify:

1. Drill collar O.D. (A)
2. Tool joint O.D. (B)
3. Drill pipe O.D. (C)
4. Drill collar connection size and type (D)
5. Bore (E)
6. Tapered or square shoulder

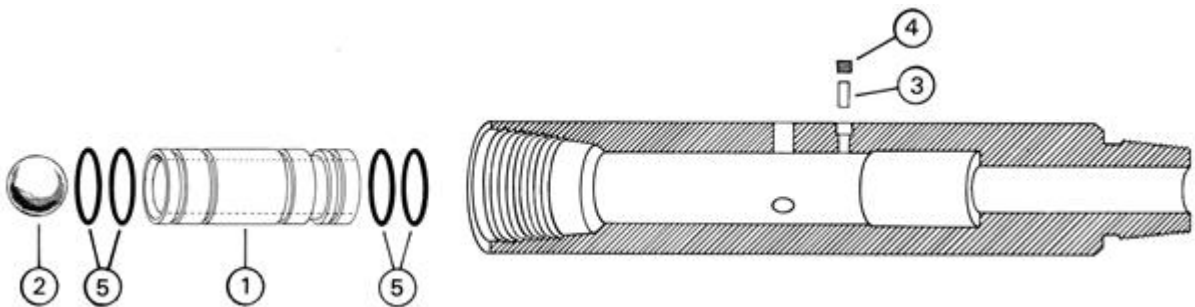
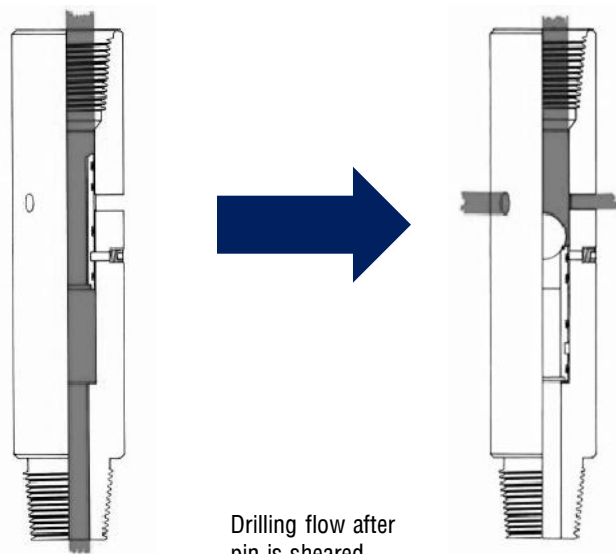


Tapered Lift Sub

Circulating Sub

OSS circulating substitutes are manufactured from Alloy Steel AISI 4145 H Modified and are designed to achieve increased mud circulation by allowing a higher circulation rate to be established by routing fluid flow to the annulus. This sub typically runs above the bit or down-hole motor in the B.H.A.

When activated, a chrome steel ball is dropped from the surface and mud pumps are engaged. The application of 3000 psi fluid pressure causes a pin in the sub to shear, and the sleeve and pin drop to their secondary position which opens three sub ports and divert the flow to the annulus.



OSS redressing kit contains:

1. 1 Sleeve
2. 1 Ball
3. 1 Shear Pin
4. 1 Pressure Plug
5. 4 'O' Rings

Ordering Information

OSS has a detailed set of redress procedures available.

When enquiring, please specify:

1. Drill collar size
2. Drill collar connection size and type
3. Minimum I.D. of drilling tools above the circulation sub