



## Intervention Y Fitting

### Coiled tubing or wireline access – without downtime

The Oil States Intervention Y Fitting provides access to a riser or flowline for coiled tubing or wireline intervention without interrupting flow.

With its diverter plug in place, the fitting's 5D main bore permits bi-directional pigging. The diverter plug is removed when hydrate formation or other flow assurance problems require intervention. The flowline remains in service because coiled tubing or wireline is introduced through the intervention branch.

The Intervention Y Fitting is manufactured from either a forged or cast body. The unique curved bore is machined to match a typical 5D bend and the pipe wall thickness.

#### Plug access without depressurization

Access into the pressurized cavity of the fitting for removing and installing the diverter plug is provided through a valve using a Plug Insertion and Removal Tool. This tool, which is designed for operation by either a diver or ROV, is attached to the valve, pressure is equalized, and the valve is opened, allowing the diverter plug to be extracted into the tool while the flowline remains pressurized. The block valve is then closed, and the tool and plug are recovered to the surface. The coiled tubing or wireline head is then installed on the valve for intervention operations, and the procedure is reversed to replace the diverter plug.



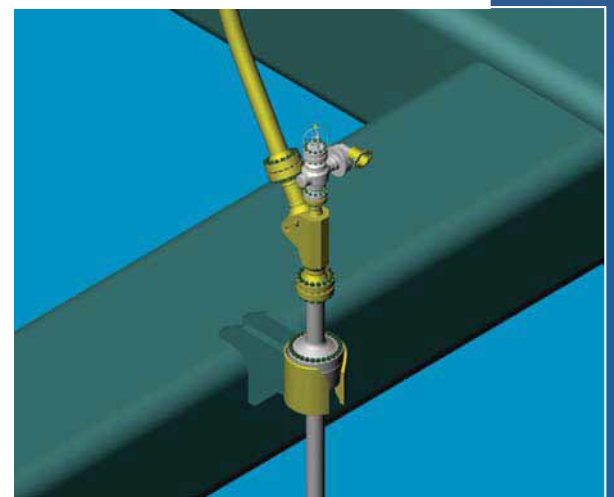
Plug Insertion and Removal

#### Design specifications

The Intervention Y Fitting is designed in accordance with ASME Pressure Vessel Code, Section VIII, Division 2, unless another recognized code is specified by the purchaser.



Oil States Intervention Y Fitting



The Intervention Y combined with an Oil States FlexJoint® connector on a steel catenary riser (SCR)





## OIL STATES HOUSTON

### MANUFACTURING, ENGINEERING & SALES:

6120 E. Orem Drive  
Houston, Texas 77048USA  
Tel +1 713 445 2210  
Fax +1 713 445 2380  
houston@oilstates.com

### Houston Ship Channel

16730 Jacintoport Blvd.  
Houston, Texas 77015USA  
Tel +1 281 247 7400  
Fax +1 281 247 7401

### SALES OFFICES:

#### North America

Oil States Industries, Inc.  
1155 Dairy Ashford, Ste. 700  
Houston, Texas 77079  
USA  
Tel +1 713 510 2200  
Fax +1 713 510 2307

#### South America

#### Oil States Industries do Brasil Ltda.

Centro Empresarial Barra Shopping  
Av das Américas 4200, Bl 8,  
Cob 303CEP 22640-102  
Barra da Tijuca, RJ Brazil  
Tel +55 21 3385 4473

#### Europe & Eurasia

#### Oil States Industries, Inc.

Blackness Road  
Altens Industrial Estate  
Aberdeen, AB12 3LH  
Scotland, UK  
Tel +44 (0)1224 896190  
Fax +44 (0)1224 896199

#### Oil States Industries, Inc.

36, Bd des Océans  
13275 Marseille, Cedex 9  
France  
Tel +33 491 40 89 35  
Fax +33 491 40 14 82

#### Oil States Industries, Inc.

Suite 5, 1 F. Amirov Street  
Baku, AZ1000  
Azerbaijan  
Tel +994 12 4 981 125  
Fax +994 12 5 379 125

#### SE Asia

#### Oil States Industries, Inc.

102 Bis/M Le Lai Street  
Ho Chi Minh City, District 1  
SR Vietnam  
Tel +84 8 3925 3545  
Fax +84 8 3925 0123

#### Middle East

#### Oil States Industries, Inc.

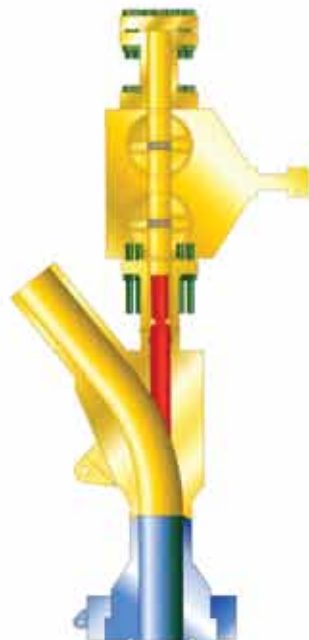
Fairmont, St. 712  
Sheikh Zayed Road  
Dubai, United Arab Emirates  
Tel +971 50 5500954

#### Africa

#### Oil States Industries (Nigeria) Ltd.

No. 50c Glover Road  
Ikoyi, Lagos  
Nigeria  
Tel +234 1 2718363  
Fax +234 1 2718364

## Typical Diverter Plug Removal Sequence



Intervention Y in normal operation mode, with the Diverter Plug in place.



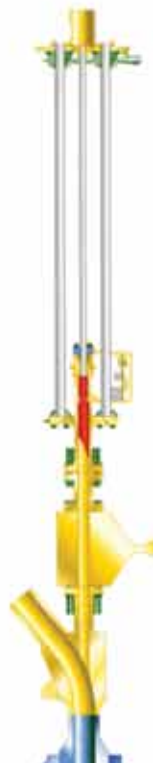
After pressure is bled off and the annulus is purged and flushed, the blind flange is removed, the Plug Installation and Removal Tool is installed, and seal integrity is tested.



After seawater is displaced, the block-and-bleed valves are opened and the Screw-Jack Gearbox is operated to lower the Insertion/Removal Shaft to the Diverter Plug.



The Shaft engages the Actuator Bolt in the Diverter Plug. Shaft rotation raises the Actuator Bolt, retracting the Locking Dogs and releasing the Diverter Plug for removal



The Screw-Jack Gearbox is operated in reverse to raise the Insertion/Removal Shaft, lifting the Diverter Plug out of the Intervention Y.



The Block and Bleed Gate Valves are closed, the Plug Installation and Removal Tool is unbolted and removed, and the Intervention Y is ready to receive the coiled tubing or wireline unit. The procedure is reversed to reinstall the Diverter Plug.

