



WIRELIN
SOLUTIONS
DOWNHOLE COMPLETION TOOLS

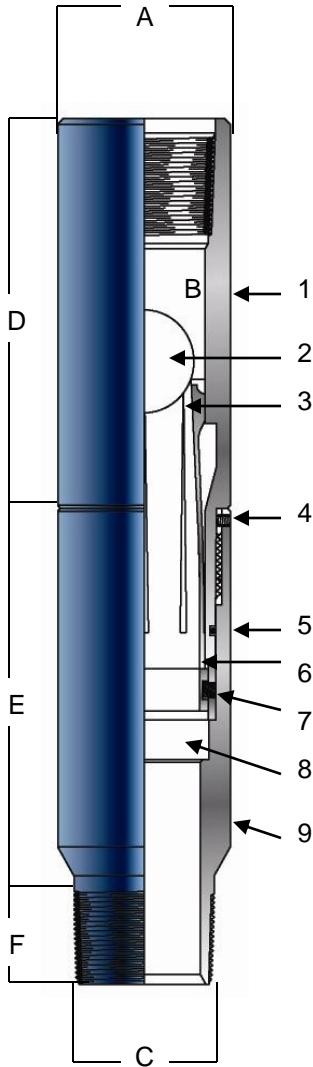
Hydro Trip Pressure Subs



2 3/8" Model "WE" Hydro Trip Pressure Sub w/ 2 3/8" EUE Box X Pin

The Model "WE" Hydro Trip Pressure Sub is a pressure actuated device installed in tubing string below a hydrostatically actuated tool such as a packer. It provides a method of applying pressure to activate and set the packer and then through continued pressure, activate the Hydro Trip Sub.

The Packer is set by circulating a ball through the packer down to ball seat in Hydro Trip Sub. After packer is set, a continued increase in pressure is applied to shear the shear screws in the shear ring, allowing the ball seat collet to move down into the collet relief area and allowing the ball to pass down the Hydro Trip Sub through the tubing, leaving a "full open" Sub with no restrictions to production.



MATERIAL SELECTION:

4140 / P110	4140 / L80
110,000 Yield	82,000 Yield
Standard Service	Resist Corrosion in Sour Gas Environments

ITEM	PART NAME	No. REQ.	PART No.
--	2 3/8" "WE" Hydro Trip Sub	--	00152237260100
1	Top Sub	1	00152237261001
2	Drop Ball	1	1-3/4" O.D.
3	Ball Seat	1	001552237004900
4	Set Screw	1	10-31 x 3/16"
5	O-Ring	1	#229
6	Spacer	1	001552237004700
7	** Shear Screw (Brass)	8	1/4"-20 x 5/16"
8	Shear Ring	1	00152237004800
9	Bottom Sub	1	001552237261600

** Shear Value for each Brass Screw = 375# +/- 15%

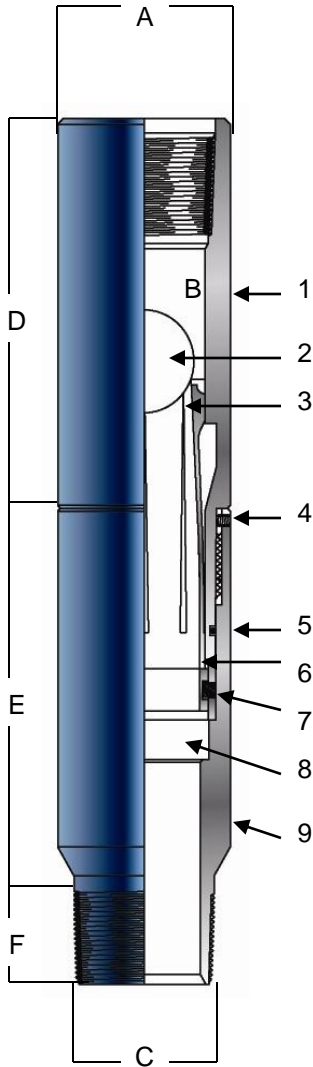
SIZE	A	B	C	*D	*E	*E	Ball Seat I.D.	
							Before Shift	After Shift
2 3/8"	3.000	2.185	1.968	6.094	7.781	2.125	1.625	1.906

* Dimensions are for Subs with threads shown. Dimensions will vary when Subs with different threads are used.

2 7/8" Model "WE" Hydro Trip Pressure Sub w/ 2 7/8" EUE Box X Pin

The Model "WE" Hydro Trip Pressure Sub is a pressure actuated device installed in tubing string below a hydrostatically actuated tool such as a packer. It provides a method of applying pressure to activate and set the packer and then through continued pressure, activate the Hydro Trip Sub.

The Packer is set by circulating a ball through the packer down to ball seat in Hydro Trip Sub. After packer is set, a continued increase in pressure is applied to shear the shear screws in the shear ring, allowing the ball seat collet to move down into the collet relief area and allowing the ball to pass down the Hydro Trip Sub through the tubing, leaving a "full open" Sub with no restrictions to production.



MATERIAL SELECTION:

4140 / P110	4140 / L80
110,000 Yield	82,000 Yield
Standard Service	Resist Corrosion in Sour Gas Environments

ITEM	PART NAME	No. REQ.	PART No.
--	2 7/8" "WE" Hydro Trip Sub	--	001552287440100
1	Top Sub	1	001552287441001
2	Drop Ball	1	2-1/8" O.D.
3	Ball Seat	1	001552287004900
4	Set Screw	1	1/4-20 x 1/4"
5	O-Ring	1	#232
6	Spacer	1	001552287004700
7	** Shear Screw (Brass)	8	5/16"-18 x 5/16"
8	Shear Ring	1	001552287004800
9	Bottom Sub	1	001552287441600

** Shear Value for each Brass Screw = 445# +/- 15%

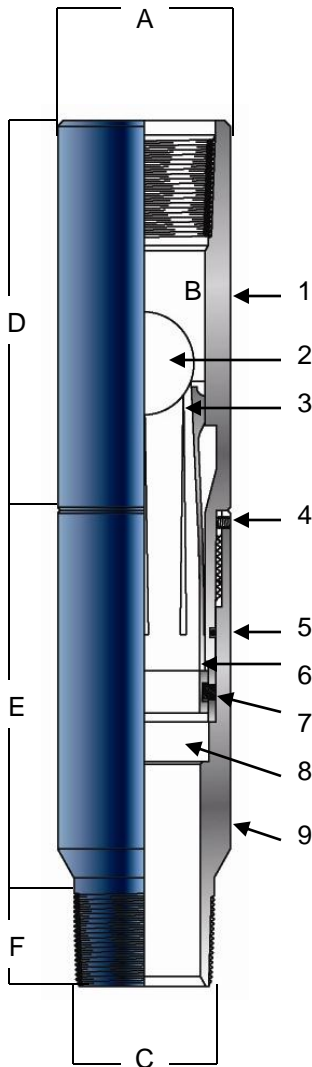
SIZE	A	B	C	*D	*E	*E	Ball Seat I.D.	
							Before Shift	After Shift
2 7/8"	3.687	2.610	2.406	8.062	7.375	2.500	2.000	2.375

* Dimensions are for Subs with threads shown. Dimensions will vary when Subs with different threads are used.

3 1/2" Model "WE" Hydro Trip Pressure Sub w/ 3 1/2" EUE Box X Pin

The Model "WE" Hydro Trip Pressure Sub is a pressure actuated device installed in tubing string below a hydrostatically actuated tool such as a packer. It provides a method of applying pressure to activate and set the packer and then through continued pressure, activate the Hydro Trip Sub.

The Packer is set by circulating a ball through the packer down to ball seat in Hydro Trip Sub. After packer is set, a continued increase in pressure is applied to shear the shear screws in the shear ring, allowing the ball seat collet to move down into the collet relief area and allowing the ball to pass down the Hydro Trip Sub through the tubing, leaving a "full open" Sub with no restrictions to production.



MATERIAL SELECTION:

4140 / P110	4140 / L80
110,000 Yield	82,000 Yield
Standard Service	Resist Corrosion in Sour Gas Environments

ITEM	PART NAME	No. REQ.	PART No.
--	3 1/2" "WE" Hydro Trip Sub	--	001552350620100
1	Top Sub	1	001552350621001
2	Drop Ball	1	2-1/2" O.D.
3	Ball Seat	1	001552350004900
4	Set Screw	1	1/4-20 x 1/4"
5	O-Ring	1	#239
6	Spacer	1	001552350004700
7	** Shear Screw (Brass)	8	5/16"-18 x 5/16"
8	Shear Ring	1	001552350004800
9	Bottom Sub	1	001552350621600

** Shear Value for each Brass Screw = 290# +/- 15%

SIZE	A	B	C	*D	*E	*E	Ball Seat I.D.	
							Before Shift	After Shift
3 1/2"	4.500	3.225	3.000	9.625	7.125	2.875	2.312	2.781

* Dimensions are for Subs with threads shown. Dimensions will vary when Subs with different threads are used.

Model “WE” Hydro Trip Pressure Sub Sizes 2 3/8” / 2 7/8” / 3 1/2”

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Packer is set by circulating a ball through packer down to ball seat in the Hydro Trip Sub. After packer is set, a continued increase in pressure is applied to shear the shear screws in the shear ring, allowing the ball seat collet to move down into the collet relief area and allowing the ball to pass down the Hydro Trip Sub through the tubing, leaving a “full open” Sub with no restrictions to production.

REDRESS PROCEDURE

After a Hydro Trip Sub has been pulled from well, it is manufactured such that it can be redressed and utilized again.

- A. Place Bottom Sub (item 9) of Hydro Trip in vice and secure.
- B. Remove set screws (item 4).
- C. Remove Top Sub (item 1) from Bottom Sub.
- D. After removing the Top Sub, the Ball Seat Collet (item 3) will be sticking out of the bottom end of Top Sub. Remove Ball Seat Collet out of bottom end of Top Sub and discard. Remove O-ring from Top Sub and discard.
- E. Remove Spacer (item 6) and Shear Ring (item 8) out of Bottom Sub.
- F. Remove sheared screws from Spacer, clean and grease all parts, including Top and Bottom Sub.
- G. Replace sheared screws with proper amount of new screws into the Shear Ring and Spacer. Drop made up Shear Ring / Spacer into the Bottom Sub. Make sure item falls into place in Bottom Sub.
- H. Replace O-ring on Top Sub and make up Top Sub into Bottom Sub. Replace Set Screws.
- I. Take NEW Ball Seat Collet and with proper “driving tool” drive Ball Seat down through top of Top Sub down to where Ball Seat bottoms out on Shear Ring. Hydro Trip Pressure Sub is ready to run.