



PURPOSE

The Hydraulic Tubing Punch is used to control the perforating and punching of tubing without the use of detonators. The tool provides a source of achieving the well communication between tubing and annulus.

ASSEMBLY PARTS

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|-----------------------|--------------------|
| 1. Fishneck | 14. Punch Piston |
| 2. Striker Pin | 15. Punch (.37) |
| 3. Shear Pin Housing | 16. Bleed Screw |
| 4. Shear Pin Cover | 17. Safety Sleeve |
| 5. Firing Pin Housing | 18. Shear Screw |
| 6. Firing Pin | 19. O-Ring |
| 7. Shell Chamber | 20. O-Ring |
| 8. Seal Disc | 21. O-Ring |
| 9. Shell Assembly | 22. O-Ring |
| 10. Cylinder | 23. O-Ring |
| 11. Rubber Disk | 24. Pin Seal Screw |
| 12. Piston | 25. 0.25 Ball |
| 13. Punch Housing | 26. Set Screw |

OPERATION

Assemble the components of the Hydraulic Tubing Punch and attach to the tool string.

Once attached to the tool string release the safety sleeve, and lower into the wellbore to the desired depth, setting down on a pre run collar stop or other firm base. Jar down to shear the shear pin and detonate the charge. The punch is forced through the tubing wall when the firing shell is detonated. Gas pressure build up above the piston forces the piston down which displaces the oil in the oil chamber to the punch housing. The oil pressure transmitted to the punch housing shears the punch piston pin forcing the punch piston from the punch housing and through the tubing wall.

The outside end of tapered punch being larger in diameter than the inside end allows the punch to fall outside tubing and be clear of the perforator.

The hydraulic perforator is designed for three common tubing sizes; 2.375, 2.875 and 3.50 inch tubing. With the use of larger OD sleeves and longer punch piston the 2.375 perforator is converted to 2.875 and 3.50 inch.

Two styles of firing pins and shell caps are available which are rim fire or center fire. The style of firing pin must be matched with the charge.

* More information available upon request. *

(Sizes on next page)

Nominal Size		1.18"	1.50"	1.75"
Assembly Number		0101HP1180A0	0101HP150A0	0101HP175A0
Item	Part Name			
1	Fishneck	0101HP11801	0101HP15001	0101HP17501
2	Striker Pin	0101HP11802	0101HP15002	0101HP17502
3	Shear Pin Housing	0101HP11803	0101HP15003	0101HP17503
4	Shear Pin Cover	0101HP11804	0101HP15004	0101HP17504
5	Firing Pin Housing	0101HP11805	0101HP15005	0101HP17505
6	Firing Pin	0101HP11806	0101HP17506	0101HP17506
7	Shell Chamber	0101HP11807	0101HP15007	0101HP17507
8	Seal Disc	0501SLC20006	0101HP17508	0101HP17508
9	Shell Assembly	0101HP11809	0101HP175S0	0101HP17509
10	Cylinder	0101HP11810	0101HP15010	0101HP17510
11	Rubber Disk	0101HP11811	0101HP15011	0101HP17511
12	Piston	0101HP11812	0101HP15012	0101HP17512
13	Punch Housing	0101HP11813	0101HP15013	0101HP17513
14	Punch Piston	0101HP11814	0101HP15014	0101HP20014
15	Punch (.37)	0101HP11815	0101HP15015	0101HP17515
16	Bleed Screw	0101HP11818	0101HP17518	0101HP17518
17	Safety Sleeve	n/a	0101HP15019	0101HP17519
18	Shear Screw	0501SLC20020	0501SLC20020	0501SLC20020
19	O-Ring	-	123	126
20	O-Ring	113	210	212
21	O-Ring	010	012	111
22	O-Ring	015	213	214
23	O-Ring	016	018	020
24	Pin Seal Screw	0101HP11817	0101HP11817	0101HP11817
25	0.25 Ball			
26	Set Screw	0.25 - UNC X .31	0.25 - UNC X .38	0.25 - UNC X .38
Upper Thread Connection		0.625"-11 UN	0.938"-10 UN	0.938"-10 UN
Lower Thread Connection		0.625"-11 UN	0.938"-10 UN	0.938"-10 UN
Max O.D.		1.18"	1.50"	*1.75"
Fishneck size		1.00"	1.18"	1.37"

*Includes 2.24" O.D. Sleeve for 1.75" Tubing Punch for 2.875" tubing.

*Includes 2.74" O.D. Sleeve for 1.75" Tubing Punch for 3.50" tubing.