



# Alpha Oil Tools Guidelines for Running Wireline Set Bridge Plugs: Big Boy, Midget 1 & Midget 2

1. Use casing scraper before running any equipment in the well to remove scale and other materials from the casing wall. Any tool that is expected to grip the casing wall has to first reach the casing wall. Follow scraper with gage ring and junk basket.
2. Always follow cleaning, redressing and operational procedures on the setting tool. Make certain oil levels in pressure setting tool are correct for the well environment involved. Take into consideration the heat expansion of the oil in your manufacturers guidelines that should be supplied with your pressure setting tool.
3. Use the correct bridge plug for the temperature, pressure, casing size, casing weight and environment.

## **BIG BOY BRIDGE PLUG/BTS BRIDGE PLUG**

2 3/8" tubing thru 7 5/8" casing (1.71 - 6.09 plugs)	<b>PRESSURE</b>	<b>TEMPERATURE</b>
8 5/8" thru 9 5/8" casing (6.96 - 7.71 plugs)	10,000 psi	325° F
10 3/4" thru 11 3/4" casing (8.71 - 9.50 plugs)	8,000 psi	300° F
13 3/8" casing (11.56 - 12.00 plugs)	5,000 psi	300° F
16" casing (14.25 plugs)	3,000 psi	300° F
18 5/8 thru 20" casing (17.25 plugs)	2,000 psi	200° F
	2,000 psi	200° F

## **MIDGET BRIDGE PLUG**

2 3/8" tubing thru 7" casing (1.71 - 5.61 plugs)	<b>PRESSURE</b>	<b>TEMPERATURE</b>
	6,000 psi	200° F

4. Casing should have 100% cement bond before running plug in the well.
5. Do not overtighten bridge plug onto setting tool. This action causes the slips to crack which leads to premature setting. Snug tight is sufficient for a bridge plug. The lock spring or nut, depending on make of setting tool, must accompany the tension mandrel to prevent plug from backing off.
6. Do not allow the setting tool weight to rest on the bridge plug after making up. This can cause the slips to crack.
7. Help guide the setting tool and bridge plug through lubricators, wellhead and blowout preventer. When running under pressure raise tools to the top of lubricator before equalizing the pressure into lubricator.
8. Running speed should not exceed 300 feet per minute to avoid fluid displacement cutting on elastomer. Should setting tool misfire, retrieve equipment no faster than it went in. Slow down for liners and other restrictions.
9. Never set plug in casing collar or where milling has occurred.
10. Always set plugs in static well conditions (no fluid or gas movement).
11. Shock to the plug can result in failure. Warn service companies of the plug depth to avoid high impact collisions. When using the plug for locating purposes, be gentle and ease tools onto plug. Never place tubing weight on plug.
12. Pressure setting tool failure can result from several causes (ex: out of date power charge or bad o-ring). In the event that a pressure setting tool does not shear off of the bridge plug and you have to pull out of the rope socket, the shear stud will still part in a normal manner when the setting tool is fished out. This happens most commonly because the power charge did not put up sufficient pressure to shear the stud in the plug. The Alpha studs are made to shear correctly and are held to high standards of accuracy. When the fishing tool goes in to retrieve the setting tool, you can watch the accuracy of the shear stud when it shears, assuming that the weight indicator is not out of calibration. The shear values are listed as follows:

## **SIZE OF PLUG (O.D.)**

1.710 thru 2.750	<b>SHEAR STUD VALUE</b>
3.120	12,000 lbs.
3.500 thru 4.750	25,000 lbs.
5.340 thru 12.000	30,000 lbs.
	50,000 lbs.

## **SHEAR STUD VALUE**

12,000 lbs.
25,000 lbs.
30,000 lbs.
50,000 lbs.

13. When perforating, bridge plug should be protected with a minimum of ten feet of cement dumped directly on top of plug. Cement should be given sufficient time to set up before perforating.
14. Perforating should not be done closer than fifty feet of bridge plug.

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