

Installation

Installation of the MILL-EZ™ 2 3/8", 2 7/8", 3 1/2" MILL-EZ™ Composite Bridge Plug

Prior to running a Mill-EZ™ 2 3/8", 2 7/8", or 3 1/2" Mill-EZ™ Composite Bridge Plug on wireline, a wireline gauge ring larger than the OD of the plug and less than the drift of the casing should be run. A depth of greater than the setting depth of the bridge plug is desired. If any obstruction is encountered in the casing, additional gauge ring runs should be made to recover obstruction or an alternate casing cleanup process considered.

Load the Baker wireline setting tool with the appropriate amount of oil according to the temperature at the Plug's setting depth.

Always use a Baker **Slow Set** Power Charge in the setting tool.

Make sure all connections on the setting tool are tight.

Next, screw the adapter mandrel into the setting tool inner mandrel. Use a small pipe wrench when tightening the adapter mandrel into the inner mandrel. Slightly more than hand tightened is sufficient. This will prevent the adapter mandrel from falling into the well bore if the adapter mandrel should back out while coming out of the hole. Tighten the 2 3/8", 2 7/8", or 3 1/2" Mill-EZ™ setting sleeve onto the setting tool to the jam nut, while holding the setting tool.

Guide the bridge plug mandrel into the setting sleeve and onto the adapter mandrel. Rotate clockwise until the mandrel threads are fully engage. It is not necessary to use a pipe wrench when tightening the adapter mandrel onto the plug. Firmly hand tightened is sufficient.

Rotate the setting sleeve toward the plug until it has come into contact with the push ring on the top of the bridge plug; continue to rotate the assembly to the right until any air gap on the setting tools sleeve is eliminated. If the air gap cannot be eliminated without using a pipe wrench on the plug, the setting tool should be disassembled and inspected. Then rotate the jam nut down to the setting sleeve and tighten the jam nut to the setting sleeve with a pipe wrench. **NOTE:** hand tight is sufficient.

Running the 2 3/8", 2 7/8", 3 1/2" MILL-EZ Bridge Plug in the well

Once the length of the CCL to the top of the plug has been determined.

Pick up the setting tool and 2 3/8", 2 7/8", or 3 1/2" Mill-EZ™ Bridge plug assembly with wire line. **NOTE:** For best results, **DO NOT** support the weight of the setting tool, CCL, and bridge plug by the bridge plug. Support the weight by handling the setting tool itself. Precaution should be used once the assembly is suspended as to not let the plug swing into valves or pressure lines thus causing damage or injury to the plug and employees.

When running the plug in the well, a line speed of **200' to 250'** per minute is desirable. Certain conditions may warrant a less rapid descent or an increased rate of speed. **NOTE: Hitting fluid level or a sand bridge at a rapid speed will prematurely set the bridge plug!**

Once the setting depth is achieved, set the plug and note any weight loss of the assembly on the wire line trucks weight indicator. In some cases there may not be a positive indication that the plug is set. Pick up the setting assembly approx. **20'** to **30'**. Lower the assembly onto the plug noting any weight loss or CCL movement.

Pull the setting assembly out of the hole. If the fluid level is anything other than full, a slow line speed is desired when leaving fluid to air. Lay down the setting assembly and bleed of the trapped pressure in the setting tool.

***Ample cement or sand should be used on the top of the plug to absorb the percussion generated by the perforating guns.**

***Do not perforate within 75' of the plug after it is set.**

Disassembling the setting equipment from the setting tool.

Holding back-ups on the setting tool rotate the setting sleeve and remove. Remove the adapter mandrel from the setting tool mandrel.

CAUTION: When testing the plug slowly fill hole with fluid so as not to hammer the plug down the hole with the column of fluid. Recommended pump rate is 1/4 to 1/2 bbl/min for the first 30 minutes to ensure a sufficient fluid cushion.

Installation of the Mill-EZ™ 4", 4 1/2", 5" MILL-EZ™ Composite Bridge Plug

Prior to running a Mill-EZ™ Model 4", 4 1/2", 5", MILL-EZ™ Composite Bridge Plug on wireline, a wireline gauge ring larger than the OD of the plug and less than the drift of the casing should be run. A depth of greater than the setting depth of the bridge plug is desired. If any obstruction is encountered in the casing, additional gauge ring runs should be made to recover obstruction or an alternate casing cleanup process considered.

Load the Baker wireline setting tool with the appropriate amount of oil according to the temperature at the Plug's setting depth.

Always use a Baker **Slow Set** Power Charge in the setting tool. Make sure all connections on the setting tool are tight.

Tighten the 4", 4 1/2", or 5" Mill-EZ™ setting sleeve onto the setting tool with a pipe wrench, while holding a backup on the setting tool.

With the plug upright, screw the adapter mandrel onto the upper threads of the plug mandrel. **NOTE:** It is necessary to use a small pipe wrench with light pressure, when tightening the adapter mandrel onto the plug. Back the plug up above the shear area, close to the end of the plug, so as not to turn thru the shear point.

Install the **Lock Spring** provided with each plug, onto the upper portion of the adapter mandrel until the spring is flush with the top of the threads.

Align the slot on the setting tool with the tattle tale of the spring. Holding the plug from the bottom sub, rotate the entire assembly to the right.

Once the setting sleeve has come into contact with the push ring of the plug, continue to rotate the assembly to the right until any air gap on the setting tools sleeve is eliminated. If the air gap cannot be eliminated without using a pipe wrench on the plug, the setting tool should be disassembled and inspected. **NOTE:** hand tight is sufficient, the lock spring will eliminate the possibility of the plug backing off during the run-in and setting process.

Running the 4", 4 1/2", 5" MILL-EZ Bridge Plug in the well

Once the length of the CCL to the top of the plug has been determined. (Approx. 8 feet)

Pick up the setting tool and Model 4", 4 1/2", 5" Mill-EZ™ Bridge plug assembly with wireline. **NOTE:** For best results, do not support the weight of the setting tool, CCL and bridge plug by the bridge plug. Support the weight by handling the setting tool itself. Precaution should be used once the assembly is suspended as to not let the plug swing into valves or pressure lines thus causing damage or injury to the plug and employees.

When running the plug in the well, a line speed of **200'** to **250'** per minute is desirable. Certain conditions may warrant a less rapid descent or an increased rate of speed. **NOTE: Hitting fluid level or sand bridge at a rapid speed will prematurely set the bridge plug!**

Once the setting depth is achieved, set the plug and note any weight loss of the assembly on the wireline trucks weight indicator. In some cases there may not be a positive indication that the plug is set. Pick up the setting assembly approx. **20'** to **30'**. Lower the assembly onto the plug noting any weight loss or CCL movement.

Pull the setting assembly out of the hole. If the fluid level is anything other than full, a slow line speed is desired when leaving fluid to air. Lay down the setting assembly and bleed of the trapped pressure in the setting tool.

***Ample cement or sand should be used on the top of the plug to absorb the percussion generated by the perforating guns.**

***Do not perforate within 75' of the plug after it is set.**

Disassembling the setting equipment from the setting tool.

Holding back-ups on the setting tool rotate the setting sleeve loose. Insert a rod through the setting sleeve and the adapter mandrel. Rotate both at the same time to unscrew the adapter mandrel from the setting tool.

Remove the adapter mandrel from the inside of the setting sleeve.

CAUTION: When testing the plug slowly fill hole with fluid so as not to hammer the plug down the hole with the column of fluid. Recommended pump rate is

¼ to ½ bbl/min for the first 30 minutes to ensure a sufficient fluid cushion.

Installation of the Mill-EZ™ 5 1/2", 7", 7 5/8", 8 5/8" or 9 5/8" MILL-EZ™ Composite Bridge Plug

Prior to running a Mill-EZ™ 5 1/2", 7", 7 5/8" or 9 5/8" Mill-EZ™ Composite Bridge Plug on wireline, a wireline gauge ring larger than the OD of the plug and less than the drift of the casing should be ran. A depth of greater than the setting depth of the bridge plug is desired. If any obstruction is encountered in the casing, additional gauge ring runs should be made to recover obstruction or an alternate casing cleanup process considered.

Load the Baker wireline setting tool with the appropriate amount of oil according to the temperature at the Plug's setting depth.

Always use a Baker **Slow Set** Power Charge in the setting tool. Make sure all connections on the setting tool are tight.

Tighten the 5 1/2", 7", 7 5/8" or 9 5/8" Mill-EZ™ setting sleeve onto the setting tool with a pipe wrench, while holding a backup on the setting tool.

With the plug upright, screw the adapter mandrel onto the upper threads of the plug mandrel. **NOTE:** It is necessary to use a small pipe wrench with light pressure, when tightening the adapter mandrel onto the plug. Back the plug up above the shear area, close to the end of the plug, so as not to turn thru the shear point.

Install the Lock Spring provided with each plug onto the upper portion of the adapter mandrel until the spring is flush with the top of the threads. Align the slot on the setting tool with the tattle-tale of the spring. Holding the plug from the bottom sub, rotate the entire assembly to the right.

Once the setting sleeve has come into contact with the top of the plug, continue to rotate the assembly to the right until any air gap on the setting tools sleeve is eliminated. If the air gap cannot be eliminated without using a pipe wrench on the plug, the setting tool should be disassembled and inspected. **NOTE:** Hand tight is sufficient, the lock spring will eliminate the possibility of the plug backing off during the run-in and setting process.

Running the 5 1/2", 7", 7 5/8", 8 5/8" or 9 5/8" MILL-EZ™ Bridge Plug in the well

Once the length of the CCL to the top of the plug has been determined. (Approx. 8 feet)

Pick up the setting tool and Model 5 1/2", 7", 7 5/8" or 9 5/8" Mill-EZ™ Bridge plug assembly with wireline. **NOTE:** For best results, do not support the weight of the setting tool, CCL and bridge plug by the bridge plug. Support the weight by handling the setting tool itself. Precaution should be used once the assembly is suspended as to not let the plug swing into valves or pressure lines thus causing damage or injury to the plug and employees.

When running the plug in the well, a line speed of 200' to 250' per minute is desirable. Certain conditions may warrant a less rapid descent or an increased rate of speed. **NOTE: Hitting fluid level or sand bridge at a rapid speed will prematurely set the bridge plug.**

Once the setting depth is achieved, set the plug and note any weight loss of the assembly on the wireline truck weight indicator. In some cases there may not be a positive indication that the plug is set. Pick up the setting assembly approx. 20' to 30'. Lower the assembly onto the plug noting any weight loss or CCL movement.

Pull the setting assembly out of the hole. Lay down the setting assembly and bleed of the trapped pressure in the setting tool.

***Ample cement or sand should be used on the top of the plug to absorb the percussion generated by the perforating guns.**

***Do not perforate within 75' of the plug after it is set.**

Disassembling the setting equipment from the setting tool.

Holding back-ups on the setting tool rotate the setting sleeve loose. Unscrew the adapter mandrel from the setting tool.

Remove the spring from the adapter mandrel.

CAUTION: When testing the plug slowly fill the hole with fluid so as not to hammer the plug down the hole with the column of fluid. Recommended pump rate is ¼ to ½ bbl/min for the first 30 minutes to ensure a sufficient fluid cushion.