



**Composite Frac Plug
Field Manual - Short Form**

RPL-FSM-10002-10

Version 10



REVISION TRACKING

Version	Date	Requester	Description	Editor	Approver
01	11/21/2017		Document Release	Joseph LeRoy	Grant Martin
02	11/29/2017		Document Release	Joseph LeRoy	Grant Martin
03	04/23/2018	Clint Mickey	Change Mill/Bit OD to match updated specs	Joseph LeRoy	Grant Martin
04	10/05/2018	Clint Mickey	Remove Mill/Bit table. Revise Section 1 and 2	Joseph LeRoy	Clint Mickey
05	01/07/2019	Clint Mickey	Update with SI Units of Measure	Joseph LeRoy	Clint Mickey
06	11/04/2019	Clint Mickey	Update colors and logos	Joseph LeRoy	Clint Mickey
07	11/06/2019	Alex Miller	Update run in speed and pump down rates to include 5.5" casing pump rates of 14-26 bpm	Joseph LeRoy	Clint Mickey
08	12/04/2019	Clint Mickey	Modify Section 1	Joseph LeRoy	Clint Mickey
09	9/22/2020	Alex Miller	Modify Sections 1 & 2 to include 5"	Alex Miller	Clint Mickey
10	3/07/2022	Grant Martin	Add RIH speed and rate increase suggestions	Alex Miller	Gabi Clark

1 Adapter Kit Rig Up (Not applicable if running PurpleSeal Express)

1. Confirm the contents of the adapter kit are in good working condition with no signs of damage to components, threads, or set screws. Drill taps are provided for each hole size in the WLAK and should be used prior to each run.
2. Confirm set screws are tight to keep the adapter kit parts from backing off when running and retrieving tool string from well bore.

Table 1: Wireline Assembly Kit (WLAK) Screw Assembly

Casing Size (in.)	Plug OD (in.)	Total Shear Screws	Tension Mandrel	Setting Sleeve (Anti Pre-Set Screw is mandatory every run)
6.00	4.80	6	5	1
5.50	4.38	6	5	1
5.00	3.85	5	4	1
4.50	3.60	5	4	1

3. Check all set screws and adapter kit parts after each plug run.

2 Run in Speeds and Pump Down Rates

Although the PurpleSeal plug does not have a limit to run speed, Repeat Precision recommends a running speed of no more than 450 fpm [137.16 m/min] in the horizontal to minimize the risk of compromising the plug in the event the tool string strikes an obstruction or debris.



As deviation becomes greater, gradually increase the pump rate in increments of 1 to 2 bbl/min [159 to 318 L/min].

Table 2: Pump Down Rate and Run In Hole Speeds (USC)

Casing Size (in.)	Plug OD (in.)	Pump Rate (bbl/min)	Line Tension (lb)	Liner Top (ft/min)	Horizontal (ft/min)
6.00	4.80	16-20	800-1,200	100-150	350-650
5.50	4.38	14-26	800-1,200	100-150	350-650
5.00	3.85	13-18	800-1,100	100-150	350-650
4.50	3.60	12-16	800-1,100	100-150	350-650

Table 3: Pump Down Rate and Run In Hole Speeds (SI)

Casing Size (mm)	Plug OD (mm)	Pump Rate (L/min)	Line Tension (daN)	Liner Top (m/min)	Horizontal (m/min)
139.7	111.25	2,226 - 4,134	355.9 - 533.8	30.48 - 45.72	106.68 - 198.12

3 Retrieval Speed with Plug

Repeat Precision recommends 100 ft/min [30.48 m/min] to 200 ft/min [60.96 m/min] or the Wireline Company/Operators SOP acceptable rate. These rates can vary depending on deviation severity, pump down fin presence, line size, and casing ID to plug OD relationship.

4 Ball Seat Rate

Seat the ball at a maximum pump rate of 15 bbl/min [2,385 L/min]. Slow the pump rate to 10 bbl/min [1.59 m³/min] to 15 bbl/min [2.39 m³/min] when the ball is 80 bbl [12.72 m³] from the ball seat.