

CAMRAM™ Packers and Top Seals Fatigue Test Results

50 Pressure Cycles at 250 °F and 10,000 psi

Fatigue Test Conditions

Test Temperature	250 °F
Test Fluid	Mineral-Based Hydraulic Oil
Test Pressure	10,000 psi
Minimum Acceptable Life	50 cycles at 250 °F without Leakage

Fatigue Test Results

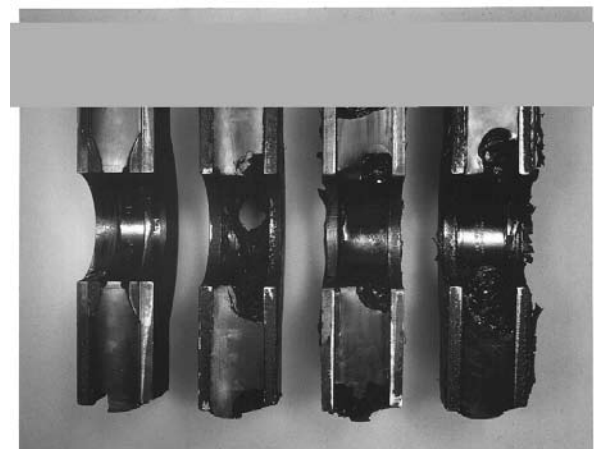
	CAMRAM	BRAND A	BRAND B	BRAND C
Cycles Completed	50	0	50	9
Packer Condition	Passed - Pressure Test Suitable for Continued Use	Failed - Would Not Hold Pressure	Passed - Pressure Test Not Suitable for Continued Use	Failed - Would Not Hold Pressure
Seal Area/Material Loss	5%	90%	25%	40%

The packers in the photograph were installed in a 13-5/8" CAMERON U blowout preventer and subjected to the fatigue test conditions detailed above. From the photograph, one can clearly see that the CAMRAM packer from Cameron was in excellent condition after the test, sustaining only a 5% seal area/material loss after 50 cycles.

The packer brands A, B and C are "bootleg" packers, only one of which passed a 10,000 psi pressure test but lost 25% of its seal area/material after 50 cycles, making it unsuitable for continued use.

For proper identification of a "Genuine Quality Part" from Cameron, the word CAMRAM must be molded into the packer. Use of the CAMRAM trademark ensures the longest possible service life — even under severe conditions.

Ram Packers after Fatigue Test at 250 °F



CAMRAM Brand A Brand B Brand C