

EnginAll

Product tested **Popular Commercial Brand SAE 10w-30**

Test type **Falex Pin in Vee Block**

(in PSI)	Straight oil no additive				Oil with additive				Variance			
	(min:sec) Run time	Time to next pressure mark	(lbs./in.) Torque	% change	(min:sec) Run time	Time to next pressure mark	(lbs./in.) Torque	% change	Run time difference	Variance	(lbs./in.) torque difference	Variance
Break-in start	12:01:00 PM		15.5		12:22:00 PM		12.5				-3.0	-19.35%
300	5.00		19.0	22.58%	5.00		13.5	8.00%			-5.5	-28.95%
500	5.00		19.5	2.63%	5.00		14.0	3.70%			-5.5	-28.21%
750	0.14	0.14	26.0	33.33%	0.14	0.14	15.0	7.14%	0.00	0.00%	-11.0	42.31%
1,000	0.29	0.15	38.0	46.15%	0.29	0.15	18.0	20.00%	0.00	0.00%	-20.0	52.63%
1,250					0.42	0.13	24.0	33.33%				
1,500					0.59	0.17	48.0	100.00%				
1,750					1.11	0.12	55.0	14.58%				
2,000					1.35	0.24	53.0	-3.64%				
2,250					1.51	0.16	56.0	5.66%				
2,500					2.11	0.20	58.0	3.57%				
2,750					2.26	0.15	61.5	6.03%				
3,000					2.39	0.13	61.5	0.00%				
3,250					3.01	0.22	63.0	2.44%				
3,500					3.15	0.14	65.0	3.17%				
3,750					3.35	0.20	68.0	4.62%				
4,000					3.54	0.19	68.0	0.00%				
4,250					4.03	0.09	69.0	1.47%				
4,500					4.24	0.21	72.0	4.35% (1)				

End test	0.29		38.0	94.87%	0.29		18.0	28.57%				
					4.24		72.0	414.29%				
Ave. increase per second			0.64				0.22					

(1) The Popular Commercial Brand SAE 10w-30 with additive was still running at the 4,500 PSI direct pressure mark.

Conclusion After break-in, at a direct pressure of 1,000 PSI, the torque for the brand tested without additive increased to 38.0 lbs./in., a 94.87% increase, and failed only 29 seconds after break in. During that same period, the torque for the 10W-30 tested with the additive increased to 18.0 lbs./in., a 28.57% increase. Based on this information, The 10W-30 with the additive had a 52.63% reduction in torque at a direct pressure of 1,000 PSI.

The 10W-30 tested with the additive was able to continue and achieve the maximum direct pressure the test allows (4,500 PSI) in a period of 4 minutes and 24 seconds. In analyzing the results, it appears that after 1,500 PSI direct pressure, the additive provided significantly more benefit.