

THE BLUE FLAME AT BONNEVILLE - 1970
USAC/FIA LOG BOOK - copyright 2016 Richard Keller

Existing World Land Speed Record is 600.601mph - must exceed 606.607mph (101% of LSR) to break the record

DATE	RUN	DISTANCE	TIME	MPH	DIRECTION	NOTES
9/14/2007						Team arrives on salt
9/15/1970						changing wheel bearings - set up pits
9/16/1970						vehicle preparations
9/17/1970	1	SS 1/4-mile	10.517	85.576	north	average speed for distance - standing start
9/18/1970	2	SS 1/4-mile	9.851	91.360	north	average speed for distance - standing start
	3	SS 1/4-mile	6.724	133.849	south	average speed for distance - standing start
	3	SS 500 meters	7.844	142.589	south	average speed for distance - standing start
9/19/1970	4	mile	21.261	169.324	north	mile 4 to 5 - test run
	4	mile	9.461	380.509	north	mile 5 to 6 - test run
	4	kilometer	5.603	399.240	north	mile 5 to 6 - test run
	4	2000 feet trap	3.858	353.309	north	reference data only
9/20/1970						no runs - publicity photos
9/21/1970	5	mile	11.094	324.499	north	mile 4 to 5 - 1st test run
	5	mile	8.449	426.085	north	mile 5 to 6 - 1st test run
	5	kilometer	5.203	429.931	north	mile 5 to 6 - 1st test run
	5	2000 feet trap	3.246	419.922	north	mile 5 to 6 - 1st test run - reference data only
	6	mile	10.810	333.025	north	mile 4 to 5 - 2nd test run
	6	mile	8.530	422.039	north	mile 5 to 6 - 2nd test run
	6	kilometer	5.267	424.707	north	mile 5 to 6 - 2nd test run
	6	2000 feet trap	3.263	417.735	north	mile 5 to 6 - 2nd test run - reference data only
9/22/1970						rocket motor repairs
9/23/1970						rocket motor repairs
9/24/1970						rocket motor reassembled after crack repaired
9/25/1970	7	mile	10.453	344.398	north	test run - H2O2 only
	7	kilometer	6.803	328.815	north	
	7	2000 feet trap	3.650	373.443	north	
9/26/1970						Dick Keller returns to Milwaukee to fabricate replacement H2O2 catalyst pack
9/27/1970						
9/28/1970						
9/29/1970						
9/30/1970						
				xxxxxxx		
10/1/1970						
10/2/1970						
10/3/1970						
10/4/1970						
10/5/1970						

10/6/1970						The Blue Flame rocket motor is repaired and returned to course
10/7/1970						no runs - high winds
10/8/1970						no runs - high winds
10/9/1970	8	mile	8.768	410.584	north	H2O2 only - test new catalyst
	8	kilometer	5.823	384.150	north	
	8	2000 feet trap	2.945	462.840	north	reference data only
	9	mile	7.678	468.872	south	H2O2 only - test new catalyst
	9	kilometer	4.829	463.230	south	
	9	2000 feet trap	2.849	478.440	south	reference data only
10/10/1970						no runs - high winds
10/11/1970	10	mile	7.435	484.196	south	H2O2 only - test new catalyst
	10	kilometer	4.539	492.824	south	
	10	2000 feet trap	2.896	470.672	south	reference data only
	11	mile	7.544	477.200	north	H2O2 and LNG
	11	kilometer	4.804	465.639	north	
	11	2000 feet trap	2.740	497.470	north	reference data only
	12	mile	6.462	557.103	south	H2O2 and LNG
	12	kilometer	4.020	556.451	south	
	12	2000 feet trap	2.442	558.177	south	reference data only
	13	mile	6.484	555.212	north	parachute failure - went into mud at mile 13
	13	kilometer	4.064	550.426	north	
						cleaning car from mud and salt - build heat shields for parachutes - nozzles bored out - LF tire replaced (low pressure)
10/12/1970						parachute test
10/13/1970	14	mile	6.619	543.889	north	
	14	kilometer	4.156	538.241	north	
	14	2000 feet trap	2.463	553.418	north	reference data only
10/14/1970						installed push bar to save fuel on acceleration - no runs - high winds
10/15/1970	15	mile	6.358	566.216	south	
	15	kilometer	3.850	581.021	south	
	15	2000 feet trap	2.508	543.488	south	reference data only
	16	mile	6.586	546.614	north	
	16	kilometer	4.077	548.671	north	
	16	2000 feet trap	2.509	543.271	north	reference data only
	17	mile	5.911	609.034	south	
	17	kilometer	3.670	609.518	south	H2O2 leak - couldn't make return run
10/16/1970						no runs - rocket motor calibration (tuning) - right angle injectors installed
10/17/1970						no runs - rocket motor calibration (tuning)
10/18/1970	18	mile	5.791	621.654	south	mile record try outbound run
	18	kilometer	3.603	620.853	south	kilo record try outbound run
	19	mile	no time		north	unable to complete north run due to regulator malfunction - repaired with toothpaste

	20	mile	5.960	604.027	north	mile record try outbound run
	20	kilometer	3.736	598.750	north	kilo record try outbound run
	21	mile	6.007	599.300	south	mile record try return run - 601.655 average
	21	kilometer	3.674	608.855	south	kilo record try return run - 603.760 average
10/19/1970						waiting for LNG and 98% H2O2
10/20/1970						waiting for LNG and 98% H2O2
10/21/1970						LNG and 98% H2O2 arrive for final attempts
10/22/1970						no runs - high winds
10/23/1970	22	mile	no time		north	warmup run on H2O2 only
10/23/1970	23	mile	5.829	617.602	south	mile record try outbound run
	23	kilometer	3.543	631.367	south	kilo record try outbound run
	24	mile	5.739	627.287	north	mile record try return run - 622.407 average
	24	kilometer	3.554	629.412	north	kilo record try return run - 630.388 average

SNOW BEGINS

The international course laid out by USAC for FIA records is 120 feet wide, 10 miles in length with a mile marker at each mile, numbered 1 through 10 northbound. Record runs are typically timed between miles marked 5 and 6 northbound and southbound.

The kilometer speed trap begins 2,000 feet north of the mile 5 marker and ends coincident with mile 6. Data collected over the 2,000 feet distance and the kilometer distance (3280 feet) were used to analyze the optimal performance of The Blue Flame, as it was intended to accelerate under power into the measured mile and cease power (run out of fuel) at the midpoint, coasting out of the mile.

USAC-FIA timing crew were: Joe Petrali, Ben torres, Glen Bjorklund, Jess Toby and David Petrali