

Report of the Month

This 1976 Honda CB550 race bike isn't showing a lot of change, but something's not right. What's going on?

To learn more about where the elements are coming from, [click here](#).

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	157	UNIT / LOCATION AVERAGES	86	160	119	87	110	UNIVERSAL AVERAGES
	MI/HR on Unit	609		452	366	206	87	1,100	
	Sample Date	10/20/2018		9/4/2018	8/1/2018	6/12/2018	6/4/2018	12/9/2017	
	Make Up Oil Added	0 qts		0 qts		0 qts	0 qts	0 qts	
ALUMINUM	7	9	4	16	10	7	7	10	
CHROMIUM	1	1	1	2	1	1	1	1	
IRON	9	12	11	17	15	11	7	12	
COPPER	9	4	4	7	7	3	3	5	
LEAD	562	446	436	791	543	310	431	386	
TIN	1	1	0	2	4	0	1	1	
MOLYBDENUM	1	1	1	0	0	1	0	2	
NICKEL	1	2	1	2	2	2	1	1	
MANGANESE	0	0	0	0	0	0	0	0	
SILVER	0	0	0	0	0	0	0	0	
TITANIUM	0	0	0	0	1	1	0	0	
POTASSIUM	0	1	0	0	0	0	0	1	
BORON	3	25	1	3	3	2	4	32	
SILICON	12	12	14	15	15	10	14	11	
SODIUM	3	3	4	4	4	3	2	3	
CALCIUM	2258	1639	2337	2613	2480	2413	2358	1685	
MAGNESIUM	10	517	9	17	13	11	52	447	
PHOSPHORUS	1670	1618	1880	1943	1962	1562	1061	1493	
ZINC	1871	1871	2095	2202	2196	1742	1167	1730	
BARIUM	0	0	0	0	0	0	0	0	

Values
Should Be*

PROPERTIES	SUS Viscosity @ 210°	71.5	65-76	73.2	73.4	70.8	65.8	74.6
	cSt Viscosity @ 100°C	13.34	11.6-14.8	13.78	13.84	13.17	11.83	14.16
Flashpoint in °F	395	>375	420	425	410	410	410	
Fuel %	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	
Antifreeze %	-	0.0	-	-	-	-	-	
Water %	0.0	<0.1	0.0	0.0	0.0	0.0	0.0	
Insolubles %	0.1	<0.6	0.1	0.2	0.2	TR	TR	
TBN								
TAN								
ISO Code								

When we wrote the report, we pointed out the change in copper. The increase was not a major change, but copper used to read as low as 3 ppm so we wondered if something was developing. Because it's a race bike, the owner tears down the engine every winter to check for wear and renew any parts as needed. When he did the teardown after this report, he found an internal oil line had failed and the rod bearings were on their way to seizing. Finding the problem before failure saved the rods, crank, and potentially the entire engine.