



OIL REPORT

LAB NUMBER:
 REPORT DATE: 10/31/2018
 CODE: 20/685

UNIT ID:
 CLIENT ID:
 PAYMENT:

UNIT	EQUIP. MAKE/MODEL: Harley Davidson Twin Cam 103	OIL TYPE & GRADE: Amsoil MCV 20W/50
	FUEL TYPE: Gasoline (Unleaded)	OIL USE INTERVAL: 7,120 Miles
	ADDITIONAL INFO:	

CLIENT	PHONE:
	FAX:
	ALT PHONE:
	EMAIL:

COMMENTS Iron and copper both improved a little bit more in this latest sample from your Harley, so everything looks really good in this latest sample, especially given that this is by far the longest oil change we've tested so far from the engine. Universal averages are based on ~4,200 miles of oil use, so you're getting better-than-average wear after a longer-than-average oil run, and no contaminants were found. The viscosity was just a bit high for a 20W/50 oil, but insolubles are low and the TBN is good at 6.2, so feel free to leave this oil in use another 2,000-3,000 miles. Nice!

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	7,120	UNIT / LOCATION AVERAGES	4,452	2,883	4,632	UNIVERSAL AVERAGES
	MI/HR on Unit	35,996		28,876	24,034	21,139	
	Sample Date	10/12/2018		5/29/2017	8/9/2015	7/28/2015	
	Make Up Oil Added	0.5 qts		0 qts	0 qts	0 qts	
ALUMINIUM	4	4	4	8	3	5	
CHROMIUM	0	0	1	1	0	0	
IRON	9	10	11	19	10	13	
COPPER	9	11	14	9	17	15	
LEAD	0	0	0	0	0	3	
TIN	0	1	0	0	2	1	
MOLYBDENUM	74	59	48	19	56	122	
NICKEL	0	0	0	1	0	0	
MANGANESE	3	4	4	5	7	4	
SILVER	0	0	0	0	0	0	
TITANIUM	0	0	0	0	0	0	
POTASSIUM	2	2	1	4	1	2	
BORON	91	72	3	4	4	134	
SILICON	11	13	12	16	9	12	
SODIUM	7	6	7	9	5	21	
CALCIUM	3358	3131	3439	3440	3902	2358	
MAGNESIUM	14	137	14	18	24	323	
PHOSPHORUS	1000	1085	1173	1114	1128	1145	
ZINC	1169	1393	1428	1479	1566	1439	
BARIUM	1	1	2	2	2	1	

Values Should Be*

PROPERTIES	SUS Viscosity @ 210°F	107.9	81-102	102.9	100.3	120.3
	cSt Viscosity @ 100°C	22.20	15.8-21.1	21.04	20.42	25.04
	Flashpoint in °F	435	>385	465	450	425
	Fuel %	<0.5	<2.0	<0.5	<0.5	<0.5
	Antifreeze %	-	0.0	-	-	-
	Water %	0.0	<0.1	0.0	0.0	0.0
	Insolubles %	0.1	<0.6	0.2	0.1	TR
	TBN	6.2	>1.0	6.0	5.1	6.3
	TAN					
	ISO Code					

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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