



OIL REPORT

LAB NUMBER:
REPORT DATE: 8/28/2018
CODE: 20/32

UNIT ID: 15 HARLEY
CLIENT ID:
PAYMENT: CC: Visa

UNIT	MAKE/MODEL: Harley Davidson Twin Cam 103	OIL TYPE & GRADE: Amsoil 20W/50
	FUEL TYPE: Gasoline (Unleaded)	OIL USE INTERVAL: 9,768 Miles
	ADDITIONAL INFO: 2015 Harley Davidson	

CLIENT	
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COMMENTS	Iron increased quite a bit compared to past years and shows a little more wear at steel parts than before. In terms of wear rate (ppm/mile), this level is still below average, so it's hard to get too worked up over poorly wearing steel parts. Hard use like city riding can cause iron to read a little higher than it otherwise would, so maybe that's a factor here. The other metals continue to look great next to averages, which are based on ~4,100 miles on the oil. The thick viscosity isn't a new finding for this engine. We suspect it's from heat, which is normal with these Twin Cams. Overall, still a nice report!
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ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	9,768	UNIT / LOCATION AVERAGES	10,000	12,130				UNIVERSAL AVERAGES
	MI/HR on Unit	99,768		49,964	13,175				
	Sample Date	8/5/2018		10/13/2017	11/8/2016				
	Make Up Oil Added	0.5 qts		0.25 qt	.5 qts				
	ALUMINUM	6	7	5	11				5
	CHROMIUM	1	1	1	1				0
	IRON	29	21	14	21				13
	COPPER	11	29	13	62				15
	LEAD	0	1	0	3				3
	TIN	1	2	1	4				1
	MOLYBDENUM	72	60	61	48				121
	NICKEL	1	1	2	1				0
	MANGANESE	1	2	1	4				4
	SILVER	0	0	0	0				0
	TITANIUM	0	0	0	0				0
	POTASSIUM	2	4	0	9				2
	BORON	20	17	2	29				133
	SILICON	10	12	11	16				12
	SODIUM	5	6	5	9				21
	CALCIUM	4431	4219	4159	4066				2360
	MAGNESIUM	18	83	20	210				318
	PHOSPHORUS	1373	1242	1250	1102				1145
	ZINC	1859	1714	1687	1596				1437
	BARIUM	2	2	2	3				1

Values
Should Be*

PROPERTIES	SUS Viscosity @ 210°	133.7	79-100	136.4	123.1			
	cSt Viscosity @ 100°C	28.05	15.3-20.6	28.65	25.67			
	Flashpoint in °F	450	>385	475	420			
	Fuel %	<0.5	<2.0	<0.5	<0.5			
	Antifreeze %	-	0.0	-	-			
	Water %	0.0	0.0	0.0	0.0			
	Insolubles %	0.3	<0.6	0.3	0.3			
	TBN							
	TAN							
	ISO Code							

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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