



OIL REPORT

LAB NUMBER: L93293
 REPORT DATE: 1/16/2020
 CODE: 44/75

UNIT ID: 12 PASSAT
 CLIENT ID: 76933
 PAYMENT: Bulk CC

UNIT	EQUIP. MAKE/MODEL:	Volkswagen 2.0L TDI 2012+	OIL TYPE & GRADE:	Liqui Moly 5W/30
	FUEL TYPE:	Diesel	OIL USE INTERVAL:	13,500 Miles no, 19,500
	ADDITIONAL INFO:			

CLIENT	bobthefarmer JR.	PHONE: bobthefarmer
	bobthefarmer AVON, IN	FAX:
	bobthefarmer	ALT PHONE:
		EMAIL: bobthefarmer@yahoo.com

COMMENTS BOB: This engine has made more metal than average since the beginning, and that was okay because it was at least consistent. Something changed this time, though, as all metals are significantly higher than in the past. The increase in chrome is probably the most concerning, given that it shows a large jump in ring wear. Iron also increased, showing significantly more steel wear, probably from the cylinder liners but other steel shafts could be contributing Note also aluminum (pistons/bearings), copper (brass/bronze), and nickel (alloy/coating). Try just 5,000 mi.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	13.500	UNIT / LOCATION AVERAGES				UNIVERSAL AVERAGES
	MI/HR on Unit	106,750	13,000	11,200	13,000	10,000	
	Sample Date	1/6/2020	7/30/2018	7/20/2017	9/4/2016	12/27/2015	
	Make Up Oil Added	0 qts	0.50 qts	0.125 qts	0 qts	0 qts	
ALUMINUM	180	142	141	104	138	147	40
CHROMIUM	18	10	10	6	8	9	3
IRON	180	96	76	62	81	82	36
COPPER	23	13	11	8	11	12	6
LEAD	0	0	0	0	0	0	0
TIN	0	0	0	0	0	2	1
MOLYBDENUM	11	5	4	3	3	5	28
NICKEL	11	5	6	2	2	2	1
MANGANESE	4	3	3	2	2	2	1
SILVER	0	0	0	0	0	0	0
TITANIUM	1	1	1	1	1	1	2
POTASSIUM	7	9	4	6	8	20	11
BORON	3	2	1	2	3	1	46
SILICON	9	9	6	9	10	10	4
SODIUM	5	3	3	2	3	3	4
CALCIUM	1684	1649	1461	1732	1657	1713	1522
MAGNESIUM	7	7	5	6	6	11	63
PHOSPHORUS	736	730	678	740	726	769	725
ZINC	883	857	758	895	879	868	853
BARIUM	0	0	0	0	0	0	0

Values Should Be*

PROPERTIES	SUS Viscosity @ 210°F	63.9	57-65	65.4	66.4	68.3	66.3
	cSt Viscosity @ 100°C	11.32	9.4-11.9	11.71	11.99	12.51	11.97
	Flashpoint in °F	425	>410	425	430	425	425
	Fuel %	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5
	Antifreeze %	0.0	0.0	0.0	0.0	0.0	0.0
	Water %	0.0	<0.1	0.0	0.0	0.0	0.0
	Insolubles %	0.2	<0.6	0.3	0.4	0.2	0.3
	TBN						
	TAN						
	ISO Code						

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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