



OIL REPORT

LAB NUMBER: J28686
 REPORT DATE: 5/4/2017
 CODE: 20/32

UNIT ID: BLK 2000 JP
 CLIENT ID: 108717
 PAYMENT: Prepaid

UNIT	MAKE/MODEL: Jeep 4.0L Inline 6 cyl	OIL TYPE & GRADE: 5W/30 Synthetic
	FUEL TYPE: Gasoline (Unleaded)	OIL USE INTERVAL: 2,000 Miles
	ADDITIONAL INFO: Jeep Cherokee Sport	

CLIENT	TOM MARRAPODE	PHONE: (219) 778-4036
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COMMENTS TOM: Thanks for the notes about the piston slap. We're thinking the noise might actually be related to the coolant that's present. Potassium and sodium likely show the contamination. Antifreeze is a common problem for this engine - usually it's a head gasket. The good news is, you've caught the problem before it did any serious damage. Wear looks okay next to averages, which show typical wear for this type of Jeep after 4,100 miles on the oil. Sodium can also be an oil additive, but in this case we suspect coolant. Watch for coolant loss and check back in 2K mi.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	2,000	UNIT / LOCATION AVERAGES					UNIVERSAL AVERAGES
	MI/HR on Unit	170,000						
	Sample Date	4/20/2017						
	Make Up Oil Added	0 qts						
ALUMINUM	6	6					4	
CHROMIUM	1	1					1	
IRON	20	20					26	
COPPER	5	5					4	
LEAD	0	0					2	
TIN	0	0					1	
MOLYBDENUM	17	17					70	
NICKEL	1	1					1	
MANGANESE	1	1					1	
SILVER	0	0					0	
TITANIUM	21	21					1	
POTASSIUM	88	88					3	
BORON	8	8					47	
SILICON	12	12					13	
SODIUM	216	216					48	
CALCIUM	1118	1118					2005	
MAGNESIUM	134	134					153	
PHOSPHORUS	539	539					734	
ZINC	573	573					876	
BARIUM	0	0					0	

Values Should Be*

PROPERTIES	SUS Viscosity @ 210°F	56.8	56-63				
	cSt Viscosity @ 100°C	9.31	9.1-11.3				
	Flashpoint in °F	425	>365				
	Fuel %	<0.5	<2.0				
	Antifreeze %	?	0.0				
	Water %	0.0	<0.1				
	Insolubles %	0.3	<0.6				
	TBN						
	TAN						
	ISO Code						

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

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