



**OIL
REPORT**

LAB NUMBER: K36125

UNIT ID: 2001 GREY XJ

REPORT DATE: 7/13/2018

CLIENT ID: 128115

CODE: 20/32

PAYMENT: CC: Visa

MAKE/MODEL: Jeep 4.0L Inline 6 cyl

FUEL TYPE: Gasoline (Unleaded)

OIL TYPE & GRADE: 10W/40

ADDITIONAL INFO:

OIL USE INTERVAL: 3,000 Miles

Cherokee

CHRIS: This engine does have a serious coolant leak. Potassium and especially sodium show the contamination. Wear metals are cautionary as a result. The coolant is hitting the bearing area especially hard, as seen by the excessive iron, copper and lead. Iron is quite concerning at more than 1,000 ppm. There's enough metal here that you'll want to ensure mechanical parts are still serviceable, even if you address the coolant leak. 2.3% fuel could show a fuel system problem and the coolant caused significant oxidation as evidenced by insolubles. Proceed with caution.

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	3,000	UNIT / LOCATION AVERAGES						UNIVERSAL AVERAGES
	MI/HR on Unit	275,000							
	Sample Date	7/3/2018							
	Make Up Oil Added	0 qts							
ALUMINUM	26							4	
CHROMIUM	4							1	
IRON	1065							25	
COPPER	13							4	
LEAD	135							2	
TIN	2							1	
MOLYBDENUM	62							71	
NICKEL	4							1	
MANGANESE	5							1	
SILVER	0							0	
TITANIUM	0							1	
POTASSIUM	252							4	
BORON	9							48	
SILICON	17							14	
SODIUM	4336							51	
CALCIUM	877							1966	
MAGNESIUM	16							163	
PHOSPHORUS	497							736	
ZINC	531							873	
BARIUM	0							0	

Values
Should Be*

PROPERTIES	SUS Viscosity @ 210°F	71.7	64-75					
	cSt Viscosity @ 100°C	13.39	11.3-14.5					
	Flashpoint in °F	330	>375					
	Fuel %	2.3	<2.0					
	Antifreeze %	>5.0	0.0					
	Water %	0.0	0.0					
	Insolubles %	10.0	<0.6					
	TBN							
	TAN							
	ISO Code							

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

416 E. PETTIT AVE. FORT WAYNE, IN 46806 (260) 744-2380 www.blackstone-labs.com