



OIL REPORT

LAB NUMBER: F12844

UNIT ID: 08 CUMMINS

REPORT DATE:

CLIENT ID:

CODE:

PAYMENT:

UNIT	MAKE/MODEL: Cummins 6.7L ISB	OIL TYPE & GRADE: Valvoline Prem Blue CI-4 15W/40
	FUEL TYPE: Diesel	OIL USE INTERVAL: 7,455 Miles
	ADDITIONAL INFO: 2008	

CLIENT	PHONE:
	FAX:
	ALT PHONE:
	EMAIL:

COMMENTS JOHN: Valvoline Premium blue started adding titanium to its additive package recently. We don't know whether this will help your engine in any way, but it certainly won't hurt anything. Wear accumulation read nice and low after running this oil out to 7,455 miles, and potassium improved to the point where we won't highlight it again unless it happens to increase in the future. Since sodium has always read nice and low, the potassium was probably coming from the EGR system and no coolant. No contamination of any type was found in the 15W/40 oil. Nice diesel!

ELEMENTS IN PARTS PER MILLION	MI/HR on Oil	7,455	UNIT / LOCATION AVERAGES	3,428	7,484	7,831	7,713	7,583	UNIVERSAL AVERAGES
	MI/HR on Unit	56,051		48,596	45,168	37,684	29,853	22,140	
	Sample Date	04/06/12		11/26/11	09/06/11	05/09/11	11/11/10	05/23/10	
	Make Up Oil Added			0 qts	0 qts	0 qts	0 qts	0 qts	
ALUMINUM	5	3	6	17	7	2	2	3	
CHROMIUM	1	2	1	2	2	1	2	1	
IRON	16	43	15	35	44	26	34	24	
COPPER	3	11	3	5	4	5	3	7	
LEAD	2	2	2	5	2	2	3	1	
TIN	0	2	0	0	0	0	4	1	
MOLYBDENUM	45	39	47	50	48	34	39	36	
NICKEL	0	0	0	0	0	0	1	0	
MANGANESE	0	2	0	1	1	0	1	0	
SILVER	1	1	1	1	1	1	0	0	
TITANIUM	24	4	0	0	0	0	0	0	
POTASSIUM	9	9	15	56	24	4	1	6	
BORON	1	3	3	4	5	2	3	48	
SILICON	3	10	3	6	7	4	5	6	
SODIUM	6	8	6	6	4	4	9	6	
CALCIUM	1274	1003	1289	1382	1125	883	849	1571	
MAGNESIUM	1044	843	994	1054	821	649	993	572	
PHOSPHORUS	1131	981	1235	1251	1071	838	1195	1000	
ZINC	1316	1178	1389	1451	1262	884	1324	1178	
BARIUM	0	3	0	0	0	0	0	0	

Values Should Be*

PROPERTIES	SUS Viscosity @ 210°F	69.9	69-78	69.5	72.0	66.2	55.5	59.2
	cSt Viscosity @ 100°C	12.94	12.7-15.3	12.83	13.48	11.94	8.92	10.00
	Flashpoint in °F	440	>415	430	450	415	375	415
	Fuel %	<0.5	<2.0	<0.5	<0.5	<0.5	1.5	<0.5
	Antifreeze %	0.0	0	0.0	?	?	0.0	0.0
	Water %	0.0	<0.1	0.0	0.0	0.0	0.0	0.0
	Insolubles %	0.3	<0.8	0.2	0.2	0.3	0.3	0.3
	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