

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

CUMMINS PEAK CLT

Diesel Engine Fluid NAPA Motor Oil 15W40 (--- GAL)

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0901697		
Sample Date		Client Info		20 Mar 2024		
Machine Age	hrs	Client Info		677		
Oil Age	hrs	Client Info		47		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	3		
Chromium	ppm	ASTM D5185m	>20	<1		
Nickel	ppm	ASTM D5185m	>2	<1		
Titanium	ppm	ASTM D5185m	>2	<1		
Silver	ppm	ASTM D5185m	>2	0		
Aluminum	ppm	ASTM D5185m	>20	3		
Lead	ppm	ASTM D5185m	>40	1		
Copper	ppm	ASTM D5185m	>330	<1		
Tin	ppm	ASTM D5185m	>15	1		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		<1		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		64		
Barium	ppm	ASTM D5185m		<1		
Molybdenum	ppm	ASTM D5185m		49		
Manganese						
	ppm	ASTM D5185m		<1		
Magnesium	ppm ppm	ASTM D5185m ASTM D5185m		<1 40		
Magnesium Calcium						
	ppm	ASTM D5185m		40		
Calcium	ppm ppm	ASTM D5185m ASTM D5185m		40 2116		
Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		40 2116 1004	 	
Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	40 2116 1004 1133		
Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	40 2116 1004 1133 4130	 	
Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method		40 2116 1004 1133 4130 current	 history1	 history2
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>25	40 2116 1004 1133 4130 current 6	 history1 	 history2
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	>25	40 2116 1004 1133 4130 current 6 3	 history1 	 history2
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>25 >20	40 2116 1004 1133 4130 current 6 3 2	 history1 	 history2
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>25 >20 limit/base	40 2116 1004 1133 4130 current 6 3 2 2 current	 history1 history1	 history2 history2
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>25 >20 limit/base >6	40 2116 1004 1133 4130 current 6 3 2 2 current 0.1	 history1 history1 	 history2 history2
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>25 >20 limit/base >6 >20	40 2116 1004 1133 4130 current 6 3 2 2 current 0.1 6.2	 history1 history1 history1	 history2 history2 history2
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	>25 >20 limit/base >6 >20 >30	40 2116 1004 1133 4130 current 6 3 2 2 current 0.1 6.2 16.4	 history1 history1 history1	 history2 history2 history2



OIL ANALYSIS REPORT

FT-IR (Direct Ti	rend)		VISUAL		method	limit/base	curren	nt history1	history2
30 - Oxidation			White Metal	scalar	*Visual	NONE	NONE		
25 - Sulfation			Yellow Metal	scalar	*Visual	NONE	NONE		
23 10 10 10			Precipitate	scalar	*Visual	NONE	NONE		
92-5 15			Silt	scalar	*Visual	NONE	NONE		
			Debris	scalar	*Visual	NONE	NONE		
10-			Sand/Dirt	scalar	*Visual	NONE	NONE		
24		/24	Appearance	scalar	*Visual	NORML	NORML		
Mar20/24		Mar20/24	Odor	scalar	*Visual	NORML	NORML		
E.			Emulsified Water	scalar	*Visual	>0.2	NEG		
Base Number			Free Water	scalar	*Visual	>0.2	NEG		
3.0						line it //e e e e			
(B) 10 10 10 10 10 10 10 10 10 10 10 10 10			FLUID PROPER		method	limit/base	curren		history2
5 4.U +			Visc @ 100°C	cSt	ASTM D445		13.3		
₩ 3.0 2.0			GRAPHS						
⁶⁶ 1.0 -			Ferrous Alloys						
24 0.0		VC	iron						
Mar20/24		100-1	8 - nickel						
2		74							
Viscosity @ 100	0°C		Edd						
18			4						
17 Abnormal									
			2						
() 0015 001) 3014			0						
13 - Abnormal			Mar20/24			Mar20/24			
12-			Mar			Mar			
11		9	Non-ferrous Meta	ls					
Mar20/24		cure.	10 copper						
N S		- M -	8 -						
			Е 6-						
			4						
			2						
			0						
			20/24			0/24 -			
			Mar2			Mar2			
			Viscosity @ 100°	2			Base Nun	nber	
			18			8.0			
			17- Abnormal			7.0			
			16-			(B/H6.0+ HOX 5.0+	1		
			ହି ₁₅			¥5.0-			
			ට 15 -000 ව ද් 14			1.0 1.0 1.0 1.0 1.0 1.0			
			12						
			Abnormal			2.0 ·			
			12-			1.0			
			114			-0.0	24		24
			Mar20/24			Mar20/24	Mar20/2		Mar20/24
			Z			N	N		2
	L.	Laboratory	: WearCheck USA - 50)1 Madisc	on Ave., Carv	v. NC 27513		CAROLINA POW	ER SOLUTION
			: WC0901697	Recei		9 Apr 2024			W GROVER ST
	ACCREDITED	Lab Number	: 06142849	Teste	ed :10	0 Apr 2024		-	SHELBY, NC
	TESTING LABORATORY	Unique Number		Diagr	nosed :10	0 Apr 2024 - We	es Davis		US 28150
	Certificate L2367	Test Package		daa chidid	000 007 100				Contact: PAIGE
THE PROPERTY AND ADDRESS OF THE PROPERTY OF TH	i o aiscuss th	is sample report,	contact Customer Serv	ice at 1-8	00-237-136	У .		paige@carolinapow	ersolutions.com
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	* - Denotes te		are outside of the ISO a ecifications are based		pe of accred	ditation.			: (704)481-0782 F:

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