

OIL ANALYSIS REPORT

4IN VAC PUMP 339 Component

Diesel Engine

PETRO CANADA 15W40 (--- GAL)

Sample Rating Trend



DIAGNOSIS
Dagammandation
Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

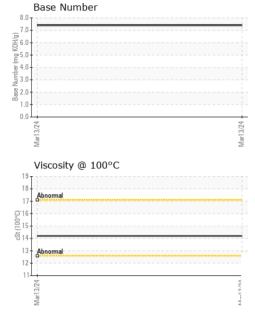
Fluid Condition

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

				Mar2024		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
	17 (1101)	Client Info	mmbasc	WC0906199		
Sample Number		Client Info		13 Mar 2024		
Sample Date Machine Age	hrs	Client Info		15 Mai 2024		
Oil Age	hrs	Client Info		383		
Oil Changed	1115	Client Info		Changed		
Sample Status		Ollerit IIIIO		NORMAL		
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CONTAMINATION	V	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	3		
Chromium	ppm	ASTM D5185m	>20	<1		
Nickel	ppm	ASTM D5185m	>4	<1		
Titanium	ppm	ASTM D5185m		<1		
Silver	ppm	ASTM D5185m	>3	<1		
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		59		
Barium	ppm	ASTM D5185m		0		
Molybdenum	ppm	ASTM D5185m		33		
Manganese	ppm	ASTM D5185m		<1		
Magnesium	ppm	ASTM D5185m		231		
Calcium	ppm	ASTM D5185m		2229		
Phosphorus	ppm	ASTM D5185m		1116		
Zinc	ppm	ASTM D5185m		1261		
Sulfur	ppm	ASTM D5185m		4124		
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	4		
Sodium	ppm	ASTM D5185m		2		
Potassium	ppm	ASTM D5185m	>20	2		
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.1		
Nitration	Abs/cm	*ASTM D7624	>20	6.7		
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.5		
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.0		
Base Number (BN)	mg KOH/g	ASTM D2896		7.4		
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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Precipitate	scalar	*Visual	NONE	NONE		
Silt	scalar	*Visual	NONE	NONE		
Debris	scalar	*Visual	NONE	NONE		
Sand/Dirt	scalar	*Visual	NONE	NONE		
Appearance	scalar	*Visual	NORML	NORML		
Odor	scalar	*Visual	NORML	NORML		
Emulsified Water	scalar	*Visual	>0.2	NEG		
Free Water	scalar	*Visual		NEG		
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		14.2		

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/isc @ 100°C	cSt	ASTM D445		14.2		
GRAPHS						
Iron (ppm)			100	Lead (ppm)		
Severe			100	Severe		
			60			
Abnormal			E 40-	Abnormal	***************************************	
1:			20-			
Mar13/24			Mar13/24	Mar13/24		
			Mar			
Aluminum (ppm)			50 ₁	Chromium (pp	om)	
Severe			40-	Severe		
Abnormal			30·	Abnormal		
- Outrollina			20-	- Contonia		
			o-			
Mar13/24			Mar13/24	Mar13/24		
≊ Copper (ppm)			Ĕ	≊ Silicon (ppm)		
Severe			80	Severe Severe		
			60-			
-			튭 40	Abnormal		
-			20-	Abiloilla		
			0-	24		
Mar13/24			Mar13/24	Mar13/24		
Viscosity @ 100°C				Base Number		
			8.0 m			
Abnormal			-0.9 Base Number (mg KOH/g)			
Abnormal			4.0 -			
0			≥ 2.0 -			
3/24			- U.U-	3/24		
Mar13/24			Mar13/24	Mar13/24		





Laboratory

Sample No. : WC0906199 Lab Number : 06125421

Unique Number : 10939572

Received Tested

Diagnosed Test Package : MOB 1 (Additional Tests: TBN)

: 21 Mar 2024 : 22 Mar 2024

: 22 Mar 2024 - Wes Davis

706 38TH AVE N MYRTLE BEACH, SC US 29577 Contact: NEIL

neil@clbenton.com T:

To discuss this sample report, contact Customer Service at 1-800-237-1369. * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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