

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

INTERNATIONAL DUMP TRUCK 50

Diesel Engine

PETRO CANADA 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

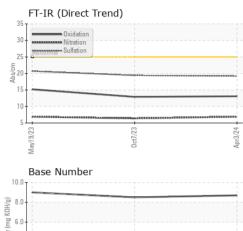
Fluid Condition

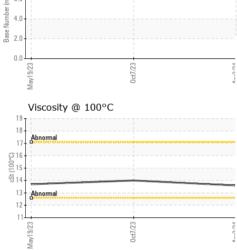
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0878807	WC0822234	WC0822422
Sample Date		Client Info		03 Apr 2024	07 Oct 2023	19 May 2023
Machine Age	mls	Client Info		433270	424970	416594
Oil Age	mls	Client Info		8000	8376	8153
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATIO	N	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	13	13	11
Chromium	ppm	ASTM D5185m	>20	2	3	2
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	1	1	2
Lead	ppm	ASTM D5185m	>40	5	6	3
Copper	ppm	ASTM D5185m	>330	1	2	2
Tin	ppm	ASTM D5185m	>15	<1	<1	1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		8	6	14
Barium	ppm	ASTM D5185m		0	3	0
Molybdenum	ppm	ASTM D5185m		58	58	59
Manganese	ppm	ASTM D5185m		<1	<1	1
Magnesium	ppm	ASTM D5185m		891	857	979
Calcium	ppm	ASTM D5185m		1048	1003	1117
Phosphorus	ppm	ASTM D5185m		959	935	1048
Zinc	ppm	AOTH DELOF				
	ppm	ASTM D5185m		1186	1108	1322
Sulfur	ppm	ASTM D5185m ASTM D5185m		1186 3177	1108 2740	1322 3924
Sulfur CONTAMINANTS	ppm		limit/base			
	ppm	ASTM D5185m	limit/base	3177	2740	3924
CONTAMINANTS	ppm	ASTM D5185m method		3177 current	2740 history1	3924 history2
CONTAMINANTS Silicon	ppm ppm	ASTM D5185m method ASTM D5185m	>25	3177 current 3	2740 history1 3	3924 history2 4
CONTAMINANTS Silicon Sodium	ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m	>25	3177 current 3 2	2740 history1 3 4	3924 history2 4 2
CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	>25 >20	3177 current 3 2 <1	2740 history1 3 4 <1	3924 history2 4 2 2
CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m method	>25 >20 limit/base >3	3177 current 3 2 <1 current	2740 history1 3 4 <1 history1	3924 history2 4 2 2 history2
CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m method *ASTM D7844	>25 >20 limit/base >3	3177 current 3 2 <1 current 1.3	2740 history1 3 4 <1 history1 1.5	3924 history2 4 2 2 history2 1.5
CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624	>25 >20 limit/base >3 >20	3177 current 3 2 <1 current 1.3 6.9	2740 history1 3 4 <1 history1 1.5 6.4	3924 history2 4 2 2 history2 1.5 6.9
CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7415	>25 >20 limit/base >3 >20 >30	3177 current 3 2 <1 current 1.3 6.9 19.2	2740 history1 3 4 <1 history1 1.5 6.4 19.4	3924 history2 4 2 2 history2 1.5 6.9 20.7



OIL ANALYSIS REPORT





VISUAL		method				history2	
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE	
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML	
Odor	scalar	*Visual	NORML	NORML	NORML	NORML	
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG	
Free Water	scalar	*Visual		NEG	NEG	NEG	
FLUID PROPER	TIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445		13.6	14.0	13.7	
GRAPHS							
Iron (ppm)			100	Lead (ppm)			
Severe				Severe			
150							
Abnormal			L.	Abaran	1		
				- -			
19/23	#7/23		ri3/24	19/23	£7/23		
May	00		Ap	May	00		
					pm)		
Severe	1			Severe			
Abnormal	1		E 20	Abnormal			
0							
ay 19,23	0ct7/23		Apr3/24	ay 19/23	0ct7/23		
_							
400 Severe			80				
300			60	D			
200			Ē.40	0-			
				Abnormal			
0 - 1	7/23 -		3/24	9/23	7/23 -		
May1	Oct		Apr	May1	00		
Viscosity @ 100°C				Base Number			
10			10.0 P				
			9.6. 2 cr				
14			5 6.0 19 19				
Deserves			2 IN 10	i i i i i i i i i i i i i i i i i i i			
10							
May19/23	0ct7/23 -		Apr3/24	May19/23 -	0ct7/23 -		
lay1	Oct		Apr	/lay1	Oct		
	Precipitate Silt Debris Sand/Dirt Appearance Odor Emulsified Water Free Water FLUID PROPER Visc @ 100°C GRAPHS Iron (ppm) Copper (ppm) Copper (ppm) Copper (ppm) Copper (ppm) Copper (ppm)	Precipitate scalar Silt scalar Debris scalar Sand/Dirt scalar Appearance scalar Odor scalar Emulsified Water scalar Free Water scalar FLUID PROPERTIES Visc @ 100°C cSt GRAPHS Iron (ppm) Copper (ppm) Copper (ppm) Copper (ppm) Copper (ppm) Copper (ppm) Copper (ppm)	Precipitate scalar *Visual Silt scalar *Visual Debris scalar *Visual Sand/Dirt scalar *Visual Appearance scalar *Visual Odor scalar *Visual Emulsified Water scalar *Visual Free Water scalar *Visual Free Water scalar *Visual FLUID PROPERTIES method Visc @ 100°C cSt ASTM D445 GRAPHS Iron (ppm) Aluminum (ppm) Copper (ppm) Copper (ppm) Copper (ppm) Viscosity @ 100°C Viscosity @ 100°C	Precipitate scalar *Visual NONE Sitt scalar *Visual NONE Sand/Dirt scalar *Visual NONE Appearance scalar *Visual NORML Odor scalar *Visual NORML Odor scalar *Visual NORML Emulsified Water scalar *Visual Sol2 Free Water scalar *Visual Visual	Precipitate scalar *Visual NONE NONE Sitt 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 NORMS Terret Water scalar *Visual NORML Visc @ 100°C cSt ASTM D445 13.6 GRAPHS Iron (ppm) Aluminum (ppm) Aluminum (ppm) Copper (ppm) 00 00 00 00 00 00 00 00 00 00 00 00 0	Precipitate scalar 'Visual NONE NONE NONE NONE Sitt scalar 'Visual NONE NONE NONE NONE Sand/Dirt scalar 'Visual NONE NONE NONE NONE Appearance scalar 'Visual NORML NORML NORML NORML Odor scalar 'Visual NORML NORML NORML NORML Codor scalar 'Visual NORML NORML NORML NORML Emulsified Water scalar 'Visual >0.2 NEG NEG Free Water scalar 'Visual >0.2 NEG NEG Free Water scalar 'Visual >0.2 NEG NEG Tron (ppm) Aluminum (ppm) Copper (ppm) Coppe	



Unique Number : 1 Test Package : MOB 1 (Additional Tests: TBN) Certificate L2367 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) Report Id: CLBMYR [WUSCAR] 06183798 (Generated: 05/20/2024 20:33:49) Rev: 1

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