

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id 130168M

Component Diesel Engine

Fluid PETRO CANADA DURON SHP 10W30 (--- QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a components first oil change.

Contamination

There is no indication of any contamination in the oil.

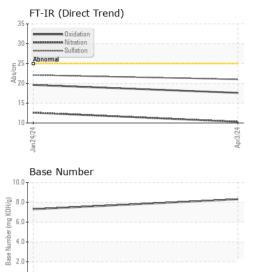
Fluid Condition

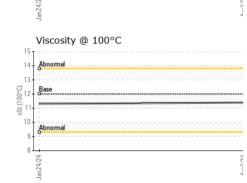
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0116913	PCA0113596	
Sample Date		Client Info		03 Apr 2024	24 Jan 2024	
Machine Age	mls	Client Info		137667	27292	
Oil Age	mls	Client Info		10475	27292	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	NORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	41	72	
Chromium	ppm	ASTM D5185m	>20	1	0	
Nickel	ppm	ASTM D5185m	>4	1	0	
Titanium	ppm	ASTM D5185m		<1	0	
Silver	ppm	ASTM D5185m	>3	<1	0	
Aluminum	ppm	ASTM D5185m	>20	4	5	
Lead	ppm	ASTM D5185m	>40	3	3	
Copper	ppm	ASTM D5185m	>330	75	186	
Tin	ppm	ASTM D5185m	>15	3	1	
Vanadium	ppm	ASTM D5185m		<1	0	
Cadmium	ppm	ASTM D5185m		<1	0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 3	history1 9	history2
Boron Barium	ppm ppm					
Boron Barium Molybdenum		ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	3 <1 67	9 0 67	
Boron Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	3 <1 67 2	9 0 67 <1	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	3 <1 67 2 922	9 0 67 <1 956	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	3 <1 67 2 922 1162	9 0 67 <1 956 1494	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	3 <1 67 2 922 1162 1098	9 0 67 <1 956 1494 1118	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180	3 <1 67 2 922 1162 1098 1232	9 0 67 <1 956 1494 1118 1566	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	3 <1 67 2 922 1162 1098	9 0 67 <1 956 1494 1118	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	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	2 0 50 950 1050 995 1180 2600	3 <1 67 2 922 1162 1098 1232	9 0 67 <1 956 1494 1118 1566	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	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	2 0 50 950 1050 995 1180 2600	3 <1 67 2 922 1162 1098 1232 2886 current 8	9 0 67 <1 956 1494 1118 1566 3546 history1 14	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25	3 <1 67 2 922 1162 1098 1232 2886 current 8 2	9 0 67 <1 956 1494 1118 1566 3546 history1 14 4	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25	3 <1 67 2 922 1162 1098 1232 2886 current 8	9 0 67 <1 956 1494 1118 1566 3546 history1 14	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 Imit/base >25 >20 Imit/base	3 <1 67 2 922 1162 1098 1232 2886 current 8 2 2 2 2 2	9 0 67 <1 956 1494 1118 1566 3546 history1 14 4 1 1 <i>h</i> istory1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 Imit/base >25 >20 Imit/base >3	3 <1 67 2 922 1162 1098 1232 2886 <i>current</i> 8 2 2 2 2 <i>current</i> 0.8	9 0 67 <1 956 1494 1118 1566 3546 history1 14 4 1 1 4 1 history1 1.1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <i>imit/base</i> >25 >20 <i>imit/base</i> >3 >20	3 <1 67 2 922 1162 1098 1232 2886 current 8 2 2 2 2 2 2 current 0.8 10.3	9 0 67 <1 956 1494 1118 1566 3546 history1 14 4 1 1 4 1 1 1 1 1.1 1.2.6	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 Imit/base >25 >20 Imit/base >3	3 <1 67 2 922 1162 1098 1232 2886 <i>current</i> 8 2 2 2 2 <i>current</i> 0.8	9 0 67 <1 956 1494 1118 1566 3546 history1 14 4 1 1 4 1 history1 1.1	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <i>imit/base</i> >25 >20 <i>imit/base</i> >3 >20	3 <1 67 2 922 1162 1098 1232 2886 current 8 2 2 2 2 2 2 current 0.8 10.3	9 0 67 <1 956 1494 1118 1566 3546 history1 14 4 1 1 4 1 1 1 1 1.1 1.2.6	 history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	2 0 50 0 950 1050 995 1180 2600 imit/base >25 20 imit/base >3 >20 >30	3 <1 67 2 922 1162 1098 1232 2886 Current 8 2 2 2 Current 0.8 10.3 21.0	9 0 67 <1 956 1494 1118 1566 3546 history1 14 4 1 1 <u>history1</u> 1.1 1.2.6 22.1	 history2 history2 history2



OIL ANALYSIS REPORT





VISUAL		method	limit/base	current	history1	history
White Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance	scalar	*Visual	NORML	NORML	NORML	
Odor	scalar	*Visual	NORML	NORML	NORML	
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
Free Water	scalar	*Visual		NEG	NEG	
FLUID PROPE	ERTIES	method	limit/base	current	history1	history
Visc @ 100°C	cSt	ASTM D445	12.00	11.4	11.3	
GRAPHS						
Iron (ppm)				Lead (ppm)		
250 Severe			10	Severe		
200			- 80	U + B		
Abnormal			udd of	Abnormal		
			- 41			
50			2			
24 74 7			724			
Jan 24/24			Apr3/24	Jan 24/24		
Aluminum (ppm)				Chromium (p	(mag	
⁵⁰ T			50			
40 - Severe			40			
E 30 -			E 20	0-		
E 20 - Abnormal			[≞] 20	0 - Abnormal		
10-			10	0-		
Jan 24, 24			Apr3/24	Jan 24/24		
-			4	,		
Copper (ppm)			80	Silicon (ppm))	
Abnormal						
300			61			
톱 200			튭.41			
100			2	Abnormal		
0				0		
Jan24/24			Apr3/24	Jan 24/24		
-			Ap			
Viscosity @ 100°	С		10.0	Base Numbe	r	
			(B/HO 8.0			
			то с. 1 Д б.1			
0012 #3						
3 10 Abnormal			(b) HOX Buy Buy Buy Buy Buy Buy Buy Buy Buy Buy			
8						
Jan24/24			Apr3/24 -	Jan 24/24		
₽ ²				ci.		



Test Package : MOB 1 (Additional Tests: TBN) Certificate 12367 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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