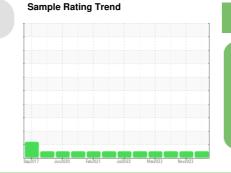


OIL ANALYSIS REPORT

SAMPLE INFORMATION method





NORMAL

Machine Id FREIGHTLINER 388040

Diesel Engine

PETRO CANADA DURON SHP 10W30 (--- 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.

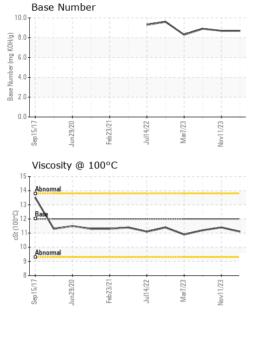
Fluid Condition

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

SAMIFLE INFURI		method	iiiiii/base	current	TIIStOLA	TIIStory2	
Sample Number		Client Info		PCA0120652	PCA0104255	PCA0101281	
Sample Date		Client Info		13 Mar 2024	11 Nov 2023	20 Jul 2023	
Machine Age	mls	Client Info		93175	91525	87965	
Oil Age	mls	Client Info		0	0	0	
Oil Changed		Client Info		Changed	Changed	Changed	
Sample Status				NORMAL	NORMAL	NORMAL	
· · · · · · · · · · · · · · · · · · ·				Nonimae		NOTIWITE	
CONTAMINAT	ION	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	>80	15	21	20	
Chromium	ppm		>5	0	<1	<1	
Nickel	ppm	ASTM D5185m	>2	0	<1	<1	
Titanium	ppm	ASTM D5185m	_	<1	0	0	
Silver	ppm	ASTM D5185m	>3	0	0	0	
Aluminum	ppm	ASTM D5185m		2	4	5	
Lead	ppm	ASTM D5185m	>30	0	0	0	
Copper	ppm	ASTM D5185m		۰ <1	<1	<1	
Tin	ppm		>5	0	0	0	
Vanadium	ppm	ASTM D5185m	20	<1	0	0	
Cadmium	ppm	ASTM D5185m		0	0	0	
	ppm		L'and the states		-	-	
ADDITIVES		method				history2	
_			_				
Boron	ppm	ASTM D5185m	2	6	30	9	
Barium	ppm ppm	ASTM D5185m	0	0	30 0	9 <1	
Barium Molybdenum		ASTM D5185m ASTM D5185m	0 50	0 62	30 0 59	9 <1 63	
Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m	0	0	30 0 59 <1	9 <1 63 <1	
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950	0 62 <1 974	30 0 59 <1 864	9 <1 63 <1 898	
Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050	0 62 <1	30 0 59 <1	9 <1 63 <1 898 1121	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950	0 62 <1 974	30 0 59 <1 864 1166 1065	9 <1 63 <1 898 1121 1029	
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050	0 62 <1 974 1145	30 0 59 <1 864 1166	9 <1 63 <1 898 1121	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050 995	0 62 <1 974 1145 1043	30 0 59 <1 864 1166 1065	9 <1 63 <1 898 1121 1029	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180	0 62 <1 974 1145 1043 1223	30 0 59 <1 864 1166 1065 1282	9 <1 63 <1 898 1121 1029 1215	
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 ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600	0 62 <1 974 1145 1043 1223 3735	30 0 59 <1 864 1166 1065 1282 3259	9 <1 63 <1 898 1121 1029 1215 3089	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600	0 62 <1 974 1145 1043 1223 3735 current	30 0 59 <1 864 1166 1065 1282 3259 history1	9 <1 63 <1 898 1121 1029 1215 3089 history2	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	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	0 50 0 950 1050 995 1180 2600	0 62 <1 974 1145 1043 1223 3735 current 4	30 0 59 <1 864 1166 1065 1282 3259 history1 4	9 <1 63 <1 898 1121 1029 1215 3089 history2 3	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	0 50 0 950 1050 995 1180 2600 limit/base >20	0 62 <1 974 1145 1043 1223 3735 current 4 1	30 0 59 <1 864 1166 1065 1282 3259 history1 4 2	9 <1 63 <1 898 1121 1029 1215 3089 history2 3 0	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600 imit/base >20 }	0 62 <1 974 1145 1043 1223 3735 current 4 1 2 current	30 0 59 <1 864 1166 1065 1282 3259 history1 4 2 6 history1	9 <1 63 <1 898 1121 1029 1215 3089 history2 3 0 4 history2	
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	0 50 0 950 1050 995 1180 2600 <i>limit/base</i> >20 <i>limit/base</i> >3	0 62 <1 974 1145 1043 1223 3735 <u>current</u> 4 1 2 2 <u>current</u> 0.1	30 0 59 <1 864 1166 1065 1282 3259 history1 4 2 6 history1 0.2	9 <1 63 <1 898 1121 1029 1215 3089 history2 3 0 4 history2 0.3	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus 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	0 50 0 950 1050 995 1180 2600 imit/base >20 >20 imit/base >3 >20	0 62 <1 974 1145 1043 1223 3735 <u>current</u> 4 1 2 2 <u>current</u> 0.1 5.9	30 0 59 <1 864 1166 1065 1282 3259 history1 4 2 6 history1 0.2 6.6	9 <1 63 <1 898 1121 1029 1215 3089 history2 3 0 4 history2 0.3 6.9	
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 D5185m	0 50 0 950 1050 995 1180 2600 imit/base >20 imit/base >3 >20 imit/base >3	0 62 <1 974 1145 1043 1223 3735 <u>current</u> 4 1 2 <u>current</u> 0.1 5.9 17.2	30 0 59 <1 864 1166 1065 1282 3259 history1 4 2 6 history1 0.2 6.6 18.1	9 <1 63 <1 898 1121 1029 1215 3089 history2 3 0 4 history2 0.3 6.9 18.0	
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	0 50 0 950 1050 995 1180 2600 imit/base >20 >20 imit/base >3 >20	0 62 <1 974 1145 1043 1223 3735 <u>current</u> 4 1 2 2 <u>current</u> 0.1 5.9	30 0 59 <1 864 1166 1065 1282 3259 history1 4 2 6 history1 0.2 6.6	9 <1 63 <1 898 1121 1029 1215 3089 history2 3 0 4 history2 0.3 6.9	
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 D5185m	0 50 0 950 1050 995 1180 2600 imit/base >20 imit/base >3 >20 imit/base >3	0 62 <1 974 1145 1043 1223 3735 <u>current</u> 4 1 2 <u>current</u> 0.1 5.9 17.2	30 0 59 <1 864 1166 1065 1282 3259 history1 4 2 6 history1 0.2 6.6 18.1	9 <1 63 <1 898 1121 1029 1215 3089 history2 3 0 4 history2 0.3 6.9 18.0	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	0 50 0 950 1050 995 1180 2600 imit/base >20 imit/base >3 >20 >30	0 62 <1 974 1145 1043 1223 3735 current 4 1 2 current 0.1 5.9 17.2 current	30 0 59 <1 864 1166 1065 1282 3259 history1 4 2 6 history1 0.2 6.6 18.1 history1	9 <1 63 <1 898 1121 1029 1215 3089 history2 3 0 4 history2 0.3 6.9 18.0 history2	



OIL ANALYSIS REPORT



		VISUAL		method	limit/base	current	history1	l	nistory2
		White Metal	scalar	*Visual	NONE	NONE	NONE	N	ONE
		Yellow Metal	scalar	*Visual	NONE	NONE	NONE	N	ONE
		Precipitate	scalar	*Visual	NONE	NONE	NONE	N	ONE
	Silt	scalar	*Visual	NONE	NONE	NONE	N	ONE	
		Debris	scalar	*Visual	NONE	NONE	NONE	N	ONE
		Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	N	ONE
Jul14/22	Mar7/23 Nov11/23	Appearance	scalar	*Visual	NORML	NORML	NORML	N	ORML
Jul	Nov	Odor	scalar	*Visual	NORML	NORML	NORML	N	ORML
		Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	N	EG
		Free Water	scalar	*Visual		NEG	NEG	N	EG
		FLUID PROPE	RTIES	method	limit/base	current	history1		nistory2
~~~		Visc @ 100°C	cSt	ASTM D445	12.00	11.1	11.4	11	.2
		GRAPHS							
		Iron (ppm)				Lead (ppm)			
3		150 Severe			80	Smirm			
Jul14/22	Mar7/23 Nov11/23	100 Abnormal			60				
7	- 2	dd		1	톱 40	Abnormal			
		50		1	20	-			
		Sep 15/17 Jun 29/20 Feb 23/21	Jul14/22	Mar7/23	Nov1 1/23	Sep 15/17 Jun 29/20	Feb23/21 Jul14/22	Mar7/23	Nov11/23
		÷, _	Jul	Ξ.	NoN	,		Mi	Nov
		Aluminum (ppm)			Chromium (ppm)				
		50-			10				
		40 E 30 - Abnormal			B Ed 6	Abnormal			
		20			4			- +	
		10	~	$\sim$	2				
		3/21+	4/22 <del>-</del>	//23		3/20	3/21	1/23 -	/23 -
		Sep 15/17 Jun 29/20 Feb 23/21	Jul14/22	Mar7/23	Nov11/23	Sep15/17 Jun29/20	Feb23/21 Jul14/22	Mar7/23	Nov11/23
		Copper (ppm)				Silicon (ppm	)		
		300 250			40	Severe			
		200 -			30	1			
		톱 150 - Abnormal			. 톱 20	Anormal			
		100-			10		~		
		50			0		$\sim$		
		Sep 15/17 Jun 29/20 Feb 23/21	Jul14/22	Mar7/23	Nov11/23	Sep15/17 Jun29/20	Feb23/21	Mar7/23	Nov11/23
				Mē	Nov			Ma	Nov
		Viscosity @ 100°C	2		Base Number				
		14 Abnormal			(B)HO 8.0			~	
					j 6.0				
		(2-001) 12 t;			^{ba} g 4.0				
		10 Abnormal			(b)HOX 8.0 (b)HOX (b) (b)HOX (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c	-			
			2	13	+ 0.0		21+		3
		Sep15/17 Jun29/20	Jul14/22	Mar7/23	Nov1 1/23	Sep 15/17 Jun 29/20	Feb23/21 Jul14/22	Mar7/23	Nov11/23
NAB		: WearCheck USA - 50 : PCA0120652 r : 06136134	Recei Teste	on Ave., Cary ived : 02 ed : 03	NC 27513 Apr 2024 Apr 2024		MILLER TRUCK LEASING #11 39 INDUSTRIAL AV HASBROUCK HEIGHTS, N		
tificate L2367	Test Packag	er : 10955599 e : MOB 1 ( Additional Te	ests: TBN	gnosed : 03 Apr 2024 - Wes Davis BN ) -800-237-1369. cope of accreditation.			US 0760 Contact: MIKE LONGETT mlongette@millertransgroup.com T		

Contact/Location: MIKE LONGETTE - MILRUT