

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Area CHICAGO 95TH TAYLOR T520M 452-09 (S/N 33250)

Diesel Engine

Fluid PETRO CANADA DURON HP 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.

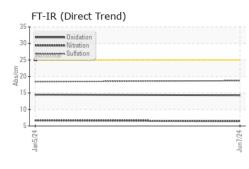
Fluid Condition

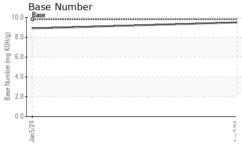
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

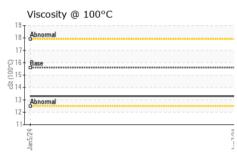
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0123851	PCA0113122	
Sample Date		Client Info		07 Jun 2024	05 Jan 2024	
Machine Age	hrs	Client Info		16637	16394	
Oil Age	hrs	Client Info		500	500	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	NORMAL	
CONTAMINATI	ON	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 METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	10	10	
Chromium	ppm	ASTM D5185m	>20	<1	<1	
Nickel	ppm	ASTM D5185m	>4	0	0	
Titanium	ppm	ASTM D5185m		<1	<1	
Silver	ppm	ASTM D5185m	>3	<1	0	
Aluminum	ppm	ASTM D5185m	>20	<1	1	
Lead	ppm	ASTM D5185m	>40	0	2	
Copper	ppm	ASTM D5185m	>330	<1	<1	
Tin	ppm	ASTM D5185m	>15	0	<1	
Vanadium	ppm	ASTM D5185m		<1	<1	
Cadmium	ppm	ASTM D5185m		0	0	
	1-1-			•	0	
ADDITIVES	F F	method	limit/base	current	history1	history2
ADDITIVES Boron	ppm		limit/base	-		history2
		method	limit/base	current	history1	
Boron	ppm	method ASTM D5185m	limit/base	current 6	history1 2	
Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	limit/base	current 6 0	history1 2 0	
Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 6 0 58	history1 2 0 48	
Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 6 0 58 <1	history1 2 0 48 <1	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 6 0 58 <1 931	history1 2 0 48 <1 849	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	methodASTM D5185mASTM D5185mASTM D5185mASTM D5185mASTM D5185mASTM D5185m	limit/base	current 6 0 58 <1 931 1156	history1 2 0 48 <1 849 922	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 6 0 58 <1 931 1156 955	history1 2 0 48 <1 849 922 945	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 6 0 58 <1 931 1156 955 1133	history1 2 0 48 <1 849 922 945 1099	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		Current 6 0 58 <1 931 1156 955 1133 3133	history1 2 0 48 <1 849 922 945 1099 2535	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 6 0 58 <1 931 1156 955 1133 3133 current	history1 2 0 48 <1 849 922 945 1099 2535 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	method ASTM D5185m	limit/base >25	current 6 0 58 <1 931 1156 955 1133 3133 current 2	history1 2 0 48 <1 849 922 945 1099 2535 history1 3	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	method ASTM D5185m	limit/base >25	current 6 0 58 <1 931 1156 955 1133 3133 current 2 4	history1 2 0 48 <1 849 922 945 1099 2535 history1 3 2	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	method ASTM D5185m	limit/base >25 >20	current 6 0 58 <1 931 1156 955 1133 3133 current 2 4 0	history1 2 0 48 <1 849 922 945 1099 2535 history1 3 2 0	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base >25 >20 limit/base	current 6 0 58 <1 931 1156 955 1133 3133 current 2 4 0 current	history1 2 0 48 <1 849 922 945 1099 2535 history1 3 2 0 history1 3 2 0 history1	 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 ppm ppm	method ASTM D5185m	limit/base >25 >20 limit/base >3	current 6 0 58 <1 931 1156 955 1133 3133 current 2 4 0 current 0.2	history1 2 0 48 <1 849 922 945 1099 2535 history1 3 2 0 history1 0 0.2	 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	method ASTM D5185m	limit/base >25 >20 limit/base >3 >20	current 6 0 58 <1 931 1156 955 1133 3133 current 2 4 0 current 0.2 6.5	history1 2 0 48 <1 849 922 945 1099 2535 history1 3 2 0 history1 0 6.7	 history2 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	method ASTM D5185m ASTM D5185m	Imit/base >25 >20 Imit/base >3 >20 >30	current 6 0 58 <1 931 1156 955 1133 3133 current 2 4 0 current 0.2 6.5 18.7	history1 2 0 48 <1 849 922 945 1099 2535 history1 3 2 0 history1 0.2 6.7 18.4	 history2 history2 history2



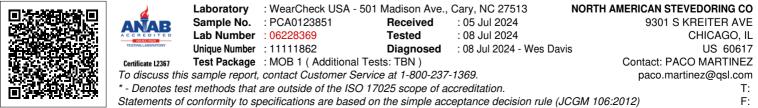
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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	
ellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance	scalar	*Visual	NORML	NORML	NORML	
Ddor	scalar	*Visual	NORML	NORML	NORML	
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
Free Water	scalar	*Visual		NEG	NEG	
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
/isc @ 100°C	cSt	ASTM D445	15.6	13.3	13.3	
GRAPHS						
Iron (ppm)			100	Lead (ppm)		
Severe			80	Severe		
			F 60			
Abnormal			40	Abnormal		
			20			
			0	4	_	
Jan 5/24			Jun7/24	Jan 5/24		
¬ Aluminum (ppm)			7	Chromium (p	nm)	
Aluminum (ppm)			50	T ;	piny	
Severe			40	Severe		
			==== ³⁰			
Abnormal			20	Abnormal		
-			10			
24			24	24		
Jan5/24			Jun7/24	Jan 5/24		
Copper (ppm)				Silicon (ppm)		
Severe Pabnonnal			80	Severe		
			60			
- i 			e 40			
			20	Abnormal		
			0			
Jan 5/24			Jun7/24	Jan5/24		
-			ηſ			
Viscosity @ 100°C			10.0	Base Number		
Abnormal			(0)H03 Base Mrmber 4.0 2.0			
Base			Ĕ 6.0			
			4.0			
Abnormal			92.0			
*			0.0	4		
Jan5/24			Jun7/24	Jan5/24		
				10		



Contact/Location: PACO MARTINEZ - NORCHILL