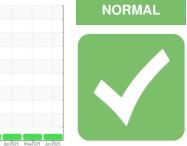


## **OIL ANALYSIS REPORT**

Sample Rating Trend



#### Machine Id **TEREX D16** Component **Diesel Engine** Fluid **PETRO CANADA DURON HP 15W40 (8 GAL)**

SAMPLE INFORMATION method

### 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.

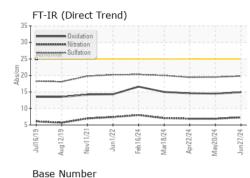
#### Fluid Condition

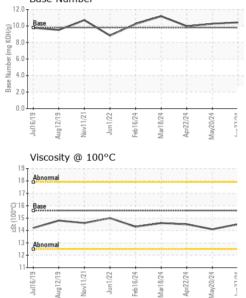
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

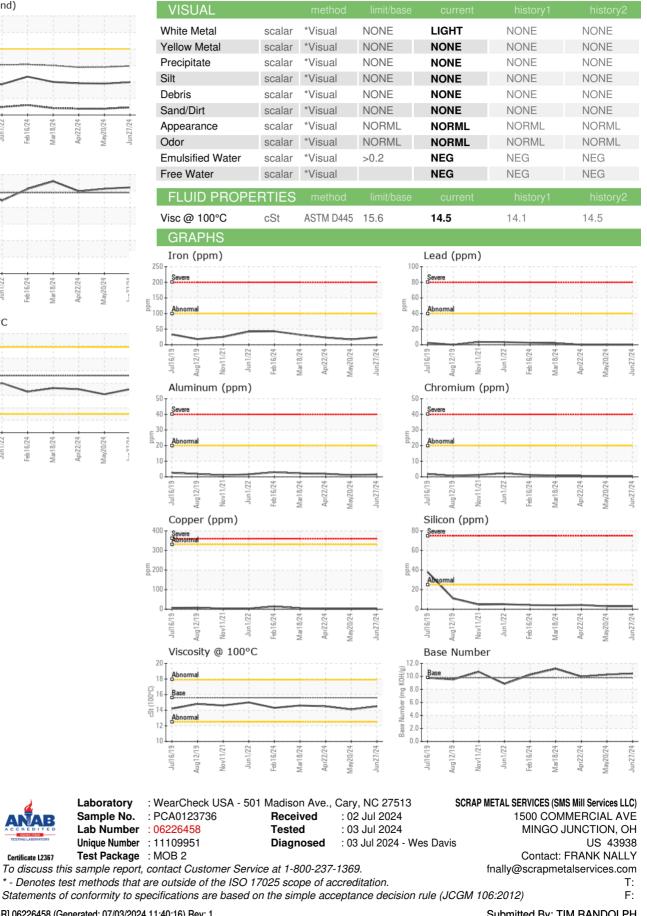
SAMPLE INFOR		method	limit/base	current	nistory i	nistory2
Sample Number		Client Info		PCA0123736	PCA0123802	PCA0118461
Sample Date		Client Info		27 Jun 2024	20 May 2024	22 Apr 2024
Machine Age	hrs	Client Info		7833	7490	7272
Oil Age	hrs	Client Info		343	218	253
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
· · ·		in a the a d			la la tament	la i at a m . O
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 METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	24	17	23
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	1	2
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	4	2	2
Tin	ppm	ASTM D5185m	>15	1	<1	2
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 4	history1 3	history2 3
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	4	3	3
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	4 0	3 0	3 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	4 0 60	3 0 56	3 0 59
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	4 0 60 <1	3 0 56 <1	3 0 59 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	4 0 60 <1 964	3 0 56 <1 926	3 0 59 <1 957
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	4 0 60 <1 964 1105	3 0 56 <1 926 972	3 0 59 <1 957 1020
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	limit/base	4 0 60 <1 964 1105 1085	3 0 56 <1 926 972 1007	3 0 59 <1 957 1020 1042
Boron 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 ASTM D5185m	limit/base	4 0 60 <1 964 1105 1085 1289	3 0 56 <1 926 972 1007 1195	3 0 59 <1 957 1020 1042 1234
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 ASTM D5185m ASTM D5185m	limit/base	4 0 60 <1 964 1105 1085 1289 3768	3 0 56 <1 926 972 1007 1195 3074	3 0 59 <1 957 1020 1042 1234 3426
Boron 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 ASTM D5185m	limit/base	4 0 60 <1 964 1105 1085 1289 3768 current	3 0 56 <1 926 972 1007 1195 3074 history1	3 0 59 <1 957 1020 1042 1234 3426 history2
Boron 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 <b>method</b>	limit/base	4 0 60 <1 964 1105 1085 1289 3768 current 3	3 0 56 <1 926 972 1007 1195 3074 history1 3	3 0 59 <1 957 1020 1042 1234 3426 history2 4
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 <b>method</b> ASTM D5185m	limit/base	4 0 60 <1 964 1105 1085 1289 3768 <u>current</u> 3 2	3 0 56 <1 926 972 1007 1195 3074 history1 3 0	3 0 59 <1 957 1020 1042 1234 3426 history2 4 <1
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	limit/base >25 >20	4 0 60 <1 964 1105 1085 1289 3768 current 3 2 2 <1	3 0 56 <1 926 972 1007 1195 3074 history1 3 0 0	3 0 59 <1 957 1020 1042 1234 3426 history2 4 <1 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3	4 0 60 <1 964 1105 1085 1289 3768 <i>current</i> 3 2 <1 <i>current</i>	3 0 56 <1 926 972 1007 1195 3074 history1 3 0 0 0 0	3 0 59 <1 957 1020 1042 1234 3426 history2 4 <1 <1 <1 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	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3	4 0 60 <1 964 1105 1085 1289 3768 <i>current</i> 3 2 <1 <i>current</i> 0.8	3 0 56 <1 926 972 1007 1195 3074 history1 3 0 0 0 history1 0.6	3 0 59 <1 957 1020 1042 1234 3426 history2 4 <1 <1 <1 <1 history2 0.7
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 TS ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3 >20	4 0 60 <1 964 1105 1085 1289 3768 <i>current</i> 3 2 <1 2 <1 <i>current</i> 0.8 7.3	3 0 56 <1 926 972 1007 1195 3074 history1 3 0 0 0 history1 0.6 6.9 19.5	3 0 59 <1 957 1020 1042 1234 3426 <b>history2</b> 4 <1 <1 <1 <b>history2</b> 0.7 6.9 19.4
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 TS ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	limit/base >25 >20 limit/base >3 >20 >30 >30	4 0 60 <1 964 1105 1085 1289 3768 <i>current</i> 3 2 <1 <i>current</i> 0.8 7.3 19.8 <i>current</i>	3 0 56 <1 926 972 1007 1195 3074 history1 3 0 0 0 history1 0.6 6.9 19.5 history1	3 0 59 <1 957 1020 1042 1234 3426 history2 4 <1 <1 <1 history2 0.7 6.9 19.4 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 TS ppm ppm ppm	ASTM D5185m ASTM D5185m	limit/base >25 >20 limit/base >3 >20 >30 limit/base >30	4 0 60 <1 964 1105 1085 1289 3768 <u>current</u> 3 2 <1 2 <1 0.8 7.3 19.8	3 0 56 <1 926 972 1007 1195 3074 history1 3 0 0 0 history1 0.6 6.9 19.5	3 0 59 <1 957 1020 1042 1234 3426 <b>history2</b> 4 <1 <1 <1 <b>history2</b> 0.7 6.9 19.4



# **OIL ANALYSIS REPORT**







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Certificate 12367

Laboratory

Sample No.

Submitted By: TIM RANDOLPH

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