

Sample Rating Trend

NORMAL

Area (16041Z) Walgreens - Tractor [Walgreens - Tractor] 136A61398

Diesel Engine

PETRO CANADA DURON UHP E6 10W40 (11 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.

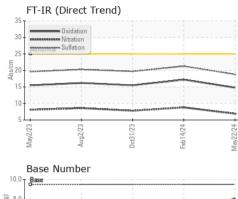
Fluid Condition

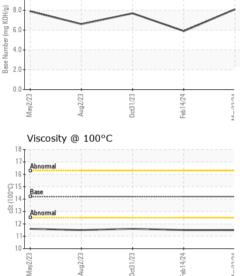
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0117837	PCA0117905	PCA0105442
Sample Date		Client Info		22 May 2024	14 Feb 2024	31 Oct 2023
Machine Age	mls	Client Info		339193	318697	299847
Oil Age	mls	Client Info		25000	25000	28791
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
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	>80	16	13	10
Chromium	ppm	ASTM D5185m	>5	1	1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	<1
Titanium	ppm	ASTM D5185m	~ _	<1	0	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>30	5	6	4
Lead	ppm	ASTM D5185m	>30	1	1	0
Copper	ppm	ASTM D5185m		4	5	5
Tin	ppm	ASTM D5185m	>5	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	<1	<1
Cadmium	ppm	ASTM D5185m		<1	<1	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	maa					
Boron	ppm	ASTM D5185m	0	0	3	4
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	0 0	3 0	4
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	0 0 63	3 0 61	4 0 61
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0	0 0	3 0	4
Boron Barium Molybdenum	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0	0 0 63 <1	3 0 61 <1	4 0 61 0
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 80	0 0 63 <1 1055	3 0 61 <1 978	4 0 61 0 911
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 80 2400 750	0 0 63 <1 1055 1198	3 0 61 <1 978 1103	4 0 61 0 911 1083
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	0 0 0 80 2400 750	0 0 63 <1 1055 1198 1156	3 0 61 <1 978 1103 958	4 0 61 0 911 1083 934
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	0 0 0 0 80 2400 750 840	0 0 63 <1 1055 1198 1156 1355	3 0 61 <1 978 1103 958 1205	4 0 61 0 911 1083 934 1212
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	0 0 0 80 2400 750 840 2130	0 0 63 <1 1055 1198 1156 1355 3753	3 0 61 <1 978 1103 958 1205 2518	4 0 61 0 911 1083 934 1212 3126
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	0 0 0 80 2400 750 840 2130	0 0 63 <1 1055 1198 1156 1355 3753 current	3 0 61 <1 978 1103 958 1205 2518 history1	4 0 61 0 911 1083 934 1212 3126 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	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	0 0 0 80 2400 750 840 2130 Iimit/base	0 0 63 <1 1055 1198 1156 1355 3753 current 6	3 0 61 <1 978 1103 958 1205 2518 history1 5	4 0 61 0 911 1083 934 1212 3126 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 ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 80 2400 750 840 2130 Iimit/base	0 0 63 <1 1055 1198 1156 1355 3753 current 6 <	3 0 61 <1 978 1103 958 1205 2518 history1 5 1	4 0 61 0 911 1083 934 1212 3126 history2 4 0
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	0 0 0 80 2400 750 840 2130 2130 2130 2130 20	0 0 63 <1 1055 1198 1156 1355 3753 current 6 <1 4	3 0 61 <1 978 1103 958 1205 2518 history1 5 1 7	4 0 61 0 911 1083 934 1212 3126 history2 4 0 6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 80 2400 750 840 2130 2130 2130 2130 20 20 20 20 20 20	0 0 63 <1 1055 1198 1156 1355 3753 current 6 <1 4 x	3 0 61 <1 978 1103 958 1205 2518 history1 5 1 7 <i>history1</i>	4 0 61 0 911 1083 934 1212 3126 history2 4 0 6 kistory2
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	0 0 0 80 2400 750 840 2130 2130 2130 2130 20 20 20 20 20 20	0 0 63 <1 1055 1198 1156 1355 3753 <i>current</i> 6 <1 4 <i>current</i>	3 0 61 <1 978 1103 958 1205 2518 history1 5 1 7 7 history1 0.7	4 0 61 0 911 1083 934 1212 3126 history2 4 0 6 history2 0.4
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	0 0 0 80 2400 750 840 2130 2130 2130 2130 20 20 20 20 20 20 20 20 20 20 20 20 20	0 0 63 <1 1055 1198 1156 1355 3753 <i>current</i> 6 <1 4 <i>current</i> 0.3 6.9	3 0 61 <1 978 1103 958 1205 2518 history1 5 1 7 5 1 7 <i>history1</i> 0.7 8.8	4 0 61 0 911 1083 934 1212 3126 history2 4 0 6 history2 0.4 7.8
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 D5185m	0 0 0 80 2400 750 840 2130 2130 2130 2130 20 20 320 320 33 320 30	0 0 63 <1 1055 1198 1156 1355 3753 <i>current</i> 6 <1 4 <i>current</i> 0.3 6.9 18.8	3 0 61 <1 978 1103 958 1205 2518 history1 5 1 7 5 1 7 <i>history1</i> 0.7 8.8 21.3	4 0 61 0 911 1083 934 1212 3126 history2 4 0 6 history2 0.4 7.8 19.7
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	0 0 0 2400 750 840 2130 2130 2130 2130 20 20 20 20 20 20 20 30 20 20 20 20 20 20 20 20 20 20 20 20 20	0 0 63 <1 1055 1198 1156 1355 3753 <i>current</i> 6 <1 4 <i>current</i> 0.3 6.9 18.8 <i>current</i>	3 0 61 <1 978 1103 958 1205 2518 history1 5 1 7 5 1 7 <i>history1</i> 0.7 8.8 21.3 <i>history1</i>	4 0 61 0 911 1083 934 1212 3126 history2 4 0 6 history2 0.4 7.8 19.7 history2

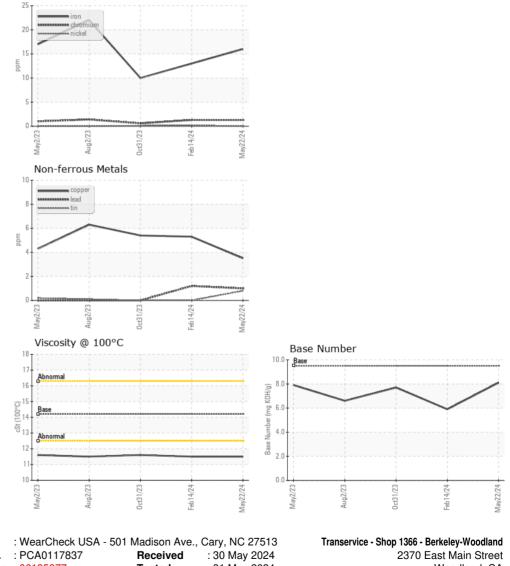


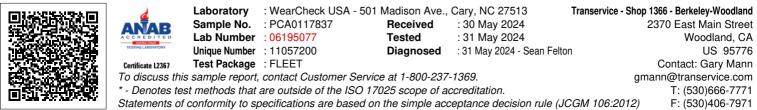
OIL ANALYSIS REPORT





VISUAL		method	limit/base	current	history1	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 PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.2	11.5	11.5	11.6
GRAPHS						
Ferrous Alloys						





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Submitted By: Gary Mann

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