

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Area IDEAL SUPPLY Machine Id INTERNATIONAL ISC319

Component Diesel Engine

Fluid PETRO CANADA DURON SHP 10W30 (40 QTS)

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.

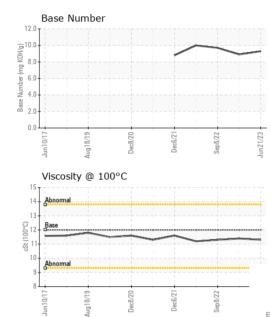
Fluid Condition

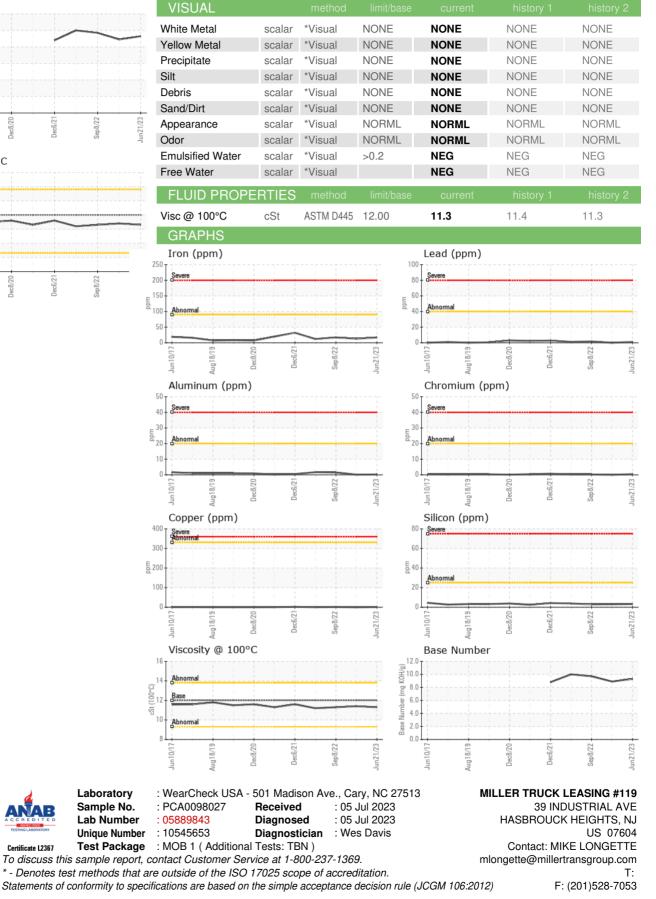
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history 1	history 2
Sample Number		Client Info		PCA0098027	PCA0089657	PCA0079035
Sample Date		Client Info		21 Jun 2023	14 Feb 2023	08 Sep 2022
Machine Age	mls	Client Info		165097	162910	159192
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history 1	history 2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
			11 11 11			
WEAR METAL	5	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>90	17	13	17
Chromium	ppm		>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	<1	<1	2
Lead	ppm	ASTM D5185m	>40	1	0	2
Copper	ppm	ASTM D5185m	>330	1	0	1
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history 1	history 2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 12	history 1 16	history 2 9
	ppm ppm					
Boron		ASTM D5185m	2	12	16	9
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0	12 0	16 0	9 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	12 0 62	16 0 58	9 0 66
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	12 0 62 <1	16 0 58 <1	9 0 66 <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	12 0 62 <1 876	16 0 58 <1 834	9 0 66 <1 862
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	12 0 62 <1 876 1114	16 0 58 <1 834 1136	9 0 66 <1 862 1077
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	12 0 62 <1 876 1114 1021	16 0 58 <1 834 1136 893	9 0 66 <1 862 1077 1014
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	2 0 50 950 1050 995 1180	12 0 62 <1 876 1114 1021 1186	16 0 58 <1 834 1136 893 1126	9 0 66 <1 862 1077 1014 1216
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 ASTM D5185m	2 0 50 950 1050 995 1180 2600	12 0 62 <1 876 1114 1021 1186 3182	16 0 58 <1 834 1136 893 1126 3132	9 0 66 <1 862 1077 1014 1216 2921
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	2 0 50 950 1050 995 1180 2600	12 0 62 <1 876 1114 1021 1186 3182 current	16 0 58 <1 834 1136 893 1126 3132 history 1	9 0 66 <1 862 1077 1014 1216 2921 history 2
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 ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	12 0 62 <1 876 1114 1021 1186 3182 current 3	16 0 58 <1 834 1136 893 1126 3132 history 1 3	9 0 66 <1 862 1077 1014 1216 2921 history 2 3
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 50 950 1050 995 1180 2600 limit/base >25	12 0 62 <1 876 1114 1021 1186 3182 Current 3 0	16 0 58 <1 834 1136 893 1126 3132 history 1 3 0	9 0 66 <1 862 1077 1014 1216 2921 history 2 3 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	2 0 50 950 1050 995 1180 2600 limit/base >25	12 0 62 <1 876 1114 1021 1186 3182 current 3 0 1	16 0 58 <1 834 1136 893 1126 3132 history 1 3 0 0	9 0 66 <1 862 1077 1014 1216 2921 history 2 3 0 2
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 50 950 1050 995 1180 2600 limit/base >25 >20 limit/base >6	12 0 62 <1 876 1114 1021 1186 3182 <u>current</u> 3 0 1 <u>current</u> 0.4	16 0 58 <1 834 1136 893 1126 3132 history 1 3 0 0 0 history 1 0.5	9 0 66 <1 862 1077 1014 1216 2921 history 2 3 0 2 history 2 0.5
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	2 0 50 950 1050 995 1180 2600 limit/base >25	12 0 62 <1 876 1114 1021 1186 3182 current 3 0 1 1	16 0 58 <1 834 1136 893 1126 3132 history 1 3 0 0 0	9 0 66 <1 862 1077 1014 1216 2921 history 2 3 0 2 history 2
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 limit/base >25 >20 limit/base >6 >20	12 0 62 <1 876 1114 1021 1186 3182 <i>current</i> 3 0 1 <i>current</i> 0.4 6.3	16 0 58 <1 834 1136 893 1126 3132 history 1 3 0 0 0 history 1 0.5 6.5	9 0 66 <1 862 1077 1014 1216 2921 history 2 3 0 2 history 2 0.5 7.1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	2 0 0 50 950 1050 995 1180 2600 imit/base >25 20 imit/base >20 >30	12 0 62 <1 876 1114 1021 1186 3182 <i>current</i> 3 0 1 <i>current</i> 0.4 6.3 18.4 <i>current</i>	16 0 58 <1 834 1136 893 1126 3132 history 1 3 0 0 0 history 1 0.5 6.5 18.7 history 1	9 0 66 <1 862 1077 1014 1216 2921 history 2 3 0 2 history 2 0.5 7.1 19.6 history 2
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 D7414	2 0 50 950 1050 995 1180 2600 imit/base >25 imit/base >20 imit/base >20	12 0 62 <1 876 1114 1021 1186 3182 <u>current</u> 3 0 1 <u>current</u> 0.4 6.3 18.4	16 0 58 <1 834 1136 893 1126 3132 history 1 3 0 0 0 history 1 0.5 6.5 18.7	9 0 66 <1 862 1077 1014 1216 2921 history 2 3 0 2 history 2 0.5 7.1 19.6



OIL ANALYSIS REPORT





Certificate L2367

Laboratory

Sample No.

Lab Number

Unique Number

Contact/Location: MIKE LONGETTE - MILRUT