

## **OIL ANALYSIS REPORT**

#### Sample Rating Trend

NORMAL

### Area IDEAL SUPPLY Machine Id INTERNATIONAL ISC319

Component Diesel Engine

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

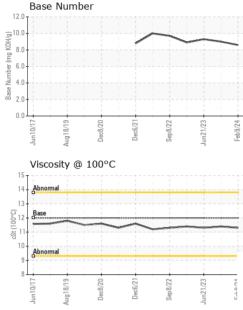
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

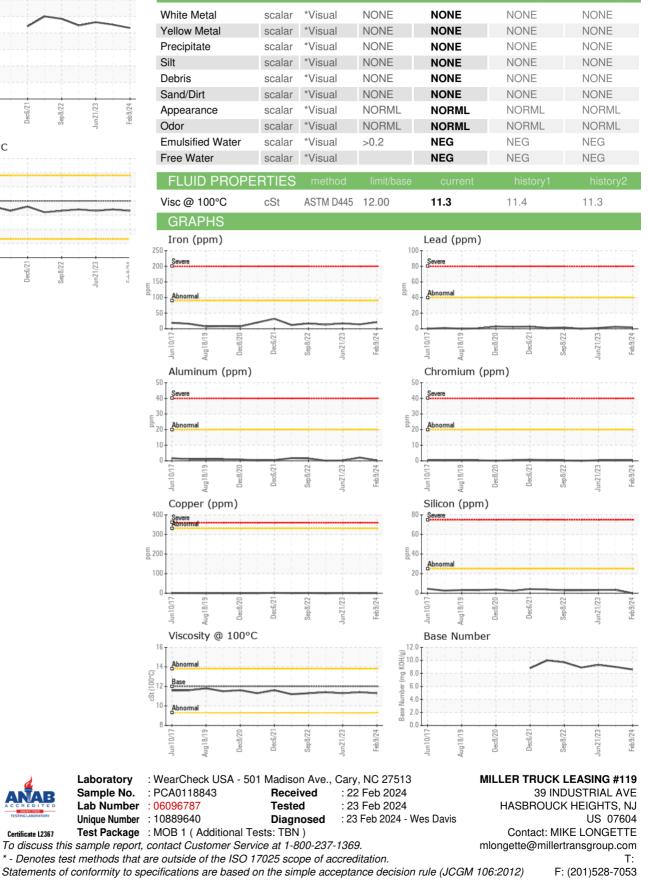
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0118843	PCA0110449	PCA0098027
Sample Date		Client Info		09 Feb 2024	25 Oct 2023	21 Jun 2023
Machine Age	mls	Client Info		169407	0	165097
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method	7 0.1	NEG	NEG	NEG
WEAR METAL	\$	method	limit/base	current	history1	history2
Iron	ppm		>90	21	14	17
Chromium	ppm		>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	<1	2	<1
Lead	ppm		>40	2	3	1
Copper	ppm	ASTM D5185m		<1	<1	1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 2	history1 2	history2 12
	ppm ppm					
Boron		ASTM D5185m	2	2	2 0 63	12
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0	2 0	2 0	12 0
Boron Barium Molybdenum Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	2 0 59	2 0 63	12 0 62
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	2 0 59 <1	2 0 63 <1	12 0 62 <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	2 0 59 <1 920	2 0 63 <1 954	12 0 62 <1 876
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	2 0 59 <1 920 1046	2 0 63 <1 954 1091	12 0 62 <1 876 1114
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	2 0 50 0 950 1050 995	2 0 59 <1 920 1046 998	2 0 63 <1 954 1091 1061	12 0 62 <1 876 1114 1021
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	2 0 50 950 1050 995 1180	2 0 59 <1 920 1046 998 1155	2 0 63 <1 954 1091 1061 1241	12 0 62 <1 876 1114 1021 1186
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	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 0 950 1050 995 1180 2600	2 0 59 <1 920 1046 998 1155 2941	2 0 63 <1 954 1091 1061 1241 3075 history1 3	12 0 62 <1 876 1114 1021 1186 3182 history2 3
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	2 0 59 <1 920 1046 998 1155 2941 current	2 0 63 <1 954 1091 1061 1241 3075 history1	12 0 62 <1 876 1114 1021 1186 3182 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>	2 0 50 950 1050 995 1180 2600 limit/base >25	2 0 59 <1 920 1046 998 1155 2941 current 0	2 0 63 <1 954 1091 1061 1241 3075 history1 3	12 0 62 <1 876 1114 1021 1186 3182 history2 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 <b>method</b> ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >25	2 0 59 <1 920 1046 998 1155 2941 current 0 1	2 0 63 <1 954 1091 1061 1241 3075 history1 3 0	12 0 62 <1 876 1114 1021 1186 3182 history2 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 <b>limit/base</b> >25	2 0 59 <1 920 1046 998 1155 2941 current 0 1 0	2 0 63 <1 954 1091 1061 1241 3075 history1 3 0 2	12 0 62 <1 876 1114 1021 1186 3182 history2 3 0 1
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	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>Imit/base</b> >25 >20	2 0 59 <1 920 1046 998 1155 2941 <i>current</i> 0 1 0 0 <i>current</i>	2 0 63 <1 954 1091 1061 1241 3075 history1 3 0 2 history1	12 0 62 <1 876 1114 1021 1186 3182 history2 3 0 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 ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>limit/base</b> >25 >20 <b>limit/base</b> >6	2 0 59 <1 920 1046 998 1155 2941 <i>current</i> 0 1 0 <i>current</i> 0	2 0 63 <1 954 1091 1061 1241 3075 history1 3 0 2 history1 0.5	12 0 62 <1 876 1114 1021 1186 3182 history2 3 0 1 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	2 0 50 950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i> >6 >20	2 0 59 <1 920 1046 998 1155 2941 <i>current</i> 0 1 0 <i>current</i> 0.6 6.3	2 0 63 <1 954 1091 1061 1241 3075 history1 3 0 2 history1 0.5 5.9	12 0 62 <1 876 1114 1021 1186 3182 history2 3 0 1 history2 0.4 6.3
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 D7844	2 0 0 50 0 950 1050 995 1180 2600 2600 25 20 220 20 20 20 20 20 20 20 20 20 20 20	2 0 59 <1 920 1046 998 1155 2941 <i>current</i> 0 1 0 0 <i>current</i> 0.6 6.3 18.6 <i>current</i>	2 0 63 <1 954 1091 1061 1241 3075 history1 3 0 2 history1 0.5 5.9 18.4 history1	12 0 62 <1 876 1114 1021 1186 3182 history2 3 0 1 history2 0.4 6.3 18.4 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 ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >25 <b>imit/base</b> >20 <b>imit/base</b> >20	2 0 59 <1 920 1046 998 1155 2941 <i>current</i> 0 1 0 0 <i>current</i> 0.6 6.3 18.6	2 0 63 <1 954 1091 1061 1241 3075 history1 3 0 2 <u>history1</u> 0.5 5.9 18.4	12 0 62 <1 876 1114 1021 1186 3182 <b>history2</b> 3 0 1 <b>history2</b> 0.4 6.3 18.4



# **OIL ANALYSIS REPORT**

VISUAL





Certificate L2367

Contact/Location: MIKE LONGETTE - MILRUT