

## **OIL ANALYSIS REPORT**

### 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

Fluid

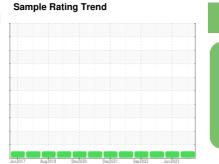
All component wear rates are normal.

#### 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.



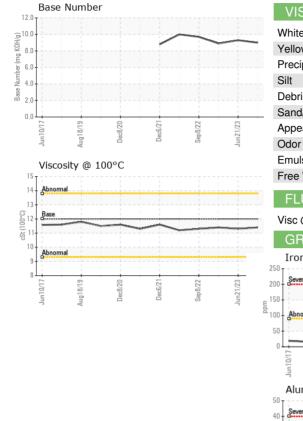


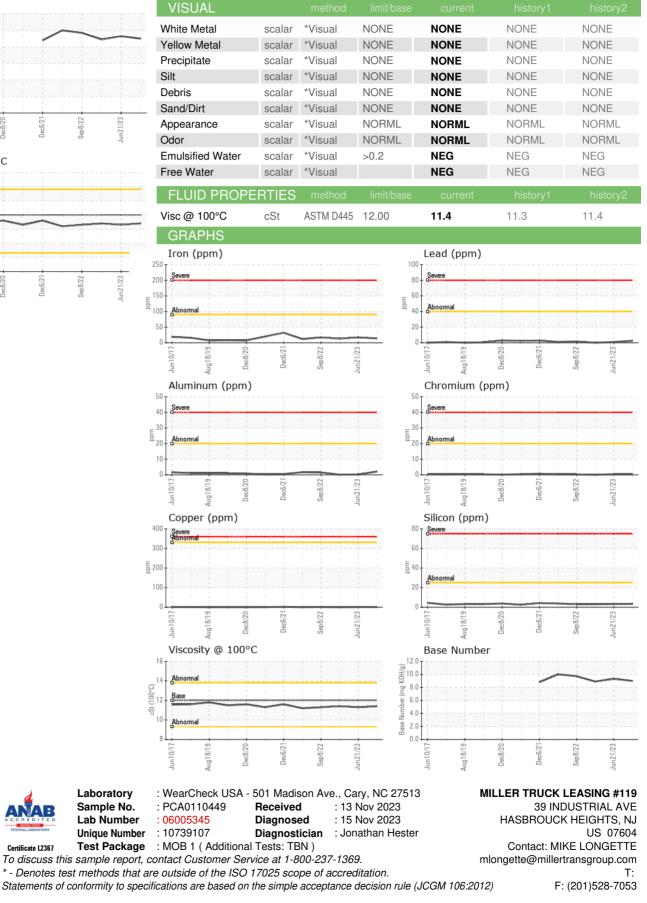
NORMAL

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0110449	PCA0098027	PCA0089657
Sample Date		Client Info		25 Oct 2023	21 Jun 2023	14 Feb 2023
Machine Age	mls	Client Info		0	165097	162910
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		N/A	Changed	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
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>90	14	17	13
Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	2	<1	<1
Lead	ppm	ASTM D5185m	>40	3	1	0
Copper	ppm	ASTM D5185m	>330	<1	1	0
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base 2	current 2	history1 12	history2 16
	ppm ppm					
Boron		ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	2	12	16
Boron Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	2 0 63 <1	12 0 62 <1	16 0 58 <1
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	2 0 63 <1 954	12 0 62	16 0 58
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	2 0 63 <1 954 1091	12 0 62 <1 876 1114	16 0 58 <1 834 1136
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	2 0 63 <1 954 1091 1061	12 0 62 <1 876 1114 1021	16 0 58 <1 834 1136 893
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	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 63 <1 954 1091 1061 1241	12 0 62 <1 876 1114 1021 1186	16 0 58 <1 834 1136 893 1126
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 63 <1 954 1091 1061	12 0 62 <1 876 1114 1021	16 0 58 <1 834 1136 893
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 ASTM D5185m	2 0 50 950 1050 995 1180 2600	2 0 63 <1 954 1091 1061 1241	12 0 62 <1 876 1114 1021 1186	16 0 58 <1 834 1136 893 1126
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	2 0 63 <1 954 1091 1061 1241 3075	12 0 62 <1 876 1114 1021 1186 3182 history1 3	16 0 58 <1 834 1136 893 1126 3132 history2 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	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 limit/base >25	2 0 63 <1 954 1091 1061 1241 3075 current	12 0 62 <1 876 1114 1021 1186 3182 history1	16 0 58 <1 834 1136 893 1126 3132 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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <i>limit/base</i> >25	2 0 63 <1 954 1091 1061 1241 3075 current 3	12 0 62 <1 876 1114 1021 1186 3182 history1 3	16 0 58 <1 834 1136 893 1126 3132 history2 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	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	2 0 63 <1 954 1091 1061 1241 3075 current 3 0 2 2	12 0 62 <1 876 1114 1021 1186 3182 history1 3 0 1 1 history1	16 0 58 <1 834 1136 893 1126 3132 history2 3 0 0 0
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 63 <1 954 1091 1061 1241 3075 <u>current</u> 3 0 2 2 <u>current</u>	12 0 62 <1 876 1114 1021 1186 3182 history1 3 0 1 history1 0.4	16 0 58 <1 834 1136 893 1126 3132 history2 3 0 0 0 history2 0.5
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 <b>TS</b> 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 63 <1 954 1091 1061 1241 3075 <i>current</i> 3 0 2 <i>current</i> 0.5 5.9	12 0 62 <1 876 1114 1021 1186 3182 history1 3 0 1 1 history1 0.4 6.3	16 0 58 <1 834 1136 893 1126 3132 history2 3 0 0 0 history2 0.5 6.5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm 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 63 <1 954 1091 1061 1241 3075 <u>current</u> 3 0 2 2 <u>current</u>	12 0 62 <1 876 1114 1021 1186 3182 history1 3 0 1 history1 0.4	16 0 58 <1 834 1136 893 1126 3132 history2 3 0 0 0 history2 0.5
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 63 <1 954 1091 1061 1241 3075 <i>current</i> 3 0 2 <i>current</i> 0.5 5.9	12 0 62 <1 876 1114 1021 1186 3182 history1 3 0 1 1 history1 0.4 6.3	16 0 58 <1 834 1136 893 1126 3132 history2 3 0 0 0 history2 0.5 6.5
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> >6 >20 >20	2 0 63 <1 954 1091 1061 1241 3075 <i>current</i> 3 0 2 <i>current</i> 0.5 5.9 18.4	12 0 62 <1 876 1114 1021 1186 3182 history1 3 0 1 1 history1 0.4 6.3 18.4	16 0 58 <1 834 1136 893 1126 3132 <b>history2</b> 3 0 0 0 <b>history2</b> 0.5 6.5 18.7



# **OIL ANALYSIS REPORT**





Certificate L2367

Laboratory

Sample No.

Lab Number