

### **OIL ANALYSIS REPORT**

#### Sample Rating Trend



# Machine Id 639279

Component Diesel Engine

PETRO CANADA DURON SHP 10W30 (--- QTS)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

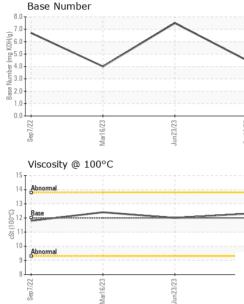
#### Fluid Condition

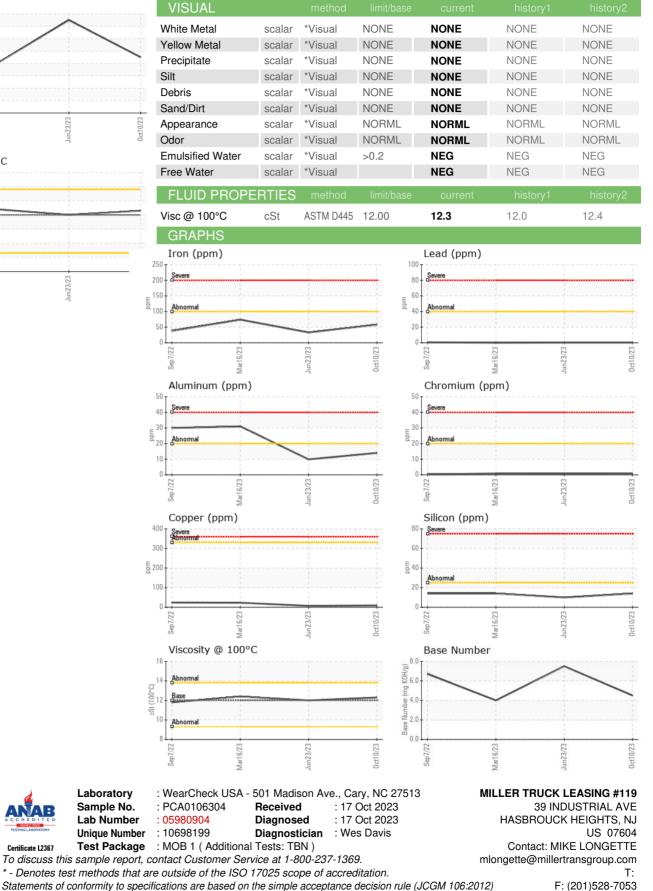
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

TS)						
SAMPLE INFOR	ΜΑΤΙΟΝ	method	₂ <sub>Mar</sub> zoza	Current	history1	history2
		Client Info	innivoase	PCA0106304	PCA0092341	PCA0094257
Sample Number Sample Date		Client Info		10 Oct 2023	23 Jun 2023	16 Mar 2023
Machine Age	mls	Client Info		10 001 2023	23 Juli 2023 80129	58391
0	mls	Client Info			0	0
Oil Age Oil Changed	11115	Client Info		0 Changed	0 Not Changd	Changed
Sample Status		Client inio		Changed NORMAL	NORMAL	NORMAL
CONTAMINAT		m othod	limit/base	-		-
	ION	method		current	history1	history2
Fuel		WC Method	>5	<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	>100	58	33	74
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	<1	<1
Aluminum	ppm	ASTM D5185m	>20	14	10	31
Lead	ppm	ASTM D5185m	>40	<1	<1	0
Copper	ppm	ASTM D5185m	>330	9	7	23
Tin	ppm	ASTM D5185m	>15	1	<1	2
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	4	5	13
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	50	64	58	12
-	ppm ppm	ASTM D5185m ASTM D5185m		64 2	58 1	12 3
Manganese				-		
Manganese Magnesium	ppm ppm	ASTM D5185m	0	2	1	3
Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m	0 950	2 1111	1 909	3 746
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995	2 1111 1352	1 909 1195	3 746 1295
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050	2 1111 1352 1212	1 909 1195 1031	3 746 1295 738
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180	2 1111 1352 1212 1555	1 909 1195 1031 1224	3 746 1295 738 887
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600	2 1111 1352 1212 1555 3261	1 909 1195 1031 1224 3094	3 746 1295 738 887 3260
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b>	0 950 1050 995 1180 2600 limit/base	2 1111 1352 1212 1555 3261 current	1 909 1195 1031 1224 3094 history1	3 746 1295 738 887 3260 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 limit/base	2 1111 1352 1212 1555 3261 current 14	1 909 1195 1031 1224 3094 history1 10	3 746 1295 738 887 3260 history2 14
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 limit/base >25	2 1111 1352 1212 1555 3261 current 14 3	1 909 1195 1031 1224 3094 history1 10 2	3 746 1295 738 887 3260 history2 14 5
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	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	0 950 1050 995 1180 2600 limit/base >25 >20	2 1111 1352 1212 1555 3261 current 14 3 35	1 909 1195 1031 1224 3094 history1 10 2 24	3 746 1295 738 887 3260 history2 14 5 89
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D51854	0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	2 1111 1352 1212 1555 3261 current 14 3 35 current 0.8	1 909 1195 1031 1224 3094 history1 10 2 24 history1 0.5	3 746 1295 738 887 3260 history2 14 5 89 history2 0.8
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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i> >3 >20	2 1111 1352 1212 1555 3261 current 14 3 35 current	1 909 1195 1031 1224 3094 history1 10 2 24 history1	3 746 1295 738 887 3260 history2 14 5 89 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624	0 950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i> >3 >20	2 1111 1352 1212 1555 3261 <u>current</u> 14 3 35 <u>current</u> 0.8 13.1	1 909 1195 1031 1224 3094 history1 10 2 24 history1 0.5 11.7	3 746 1295 738 887 3260 history2 14 5 89 history2 0.8 13.9
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	0 950 1050 995 1180 2600 limit/base >25 	2 1111 1352 1212 1555 3261 <u>current</u> 14 3 35 <u>current</u> 0.8 13.1 26.3	1 909 1195 1031 1224 3094 history1 10 2 24 history1 0.5 11.7 22.5	3 746 1295 738 887 3260 history2 14 5 89 history2 0.8 13.9 29.9



## **OIL ANALYSIS REPORT**





Certificate L2367

Laboratory

Sample No.

Contact/Location: MIKE LONGETTE - MILRUT