

## **OIL ANALYSIS REPORT**

Sample Rating Trend





#### JZ4IOZ 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.

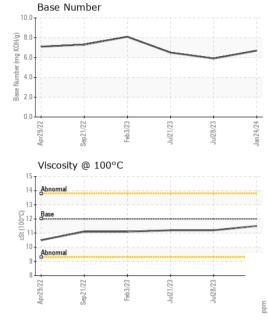
#### Fluid Condition

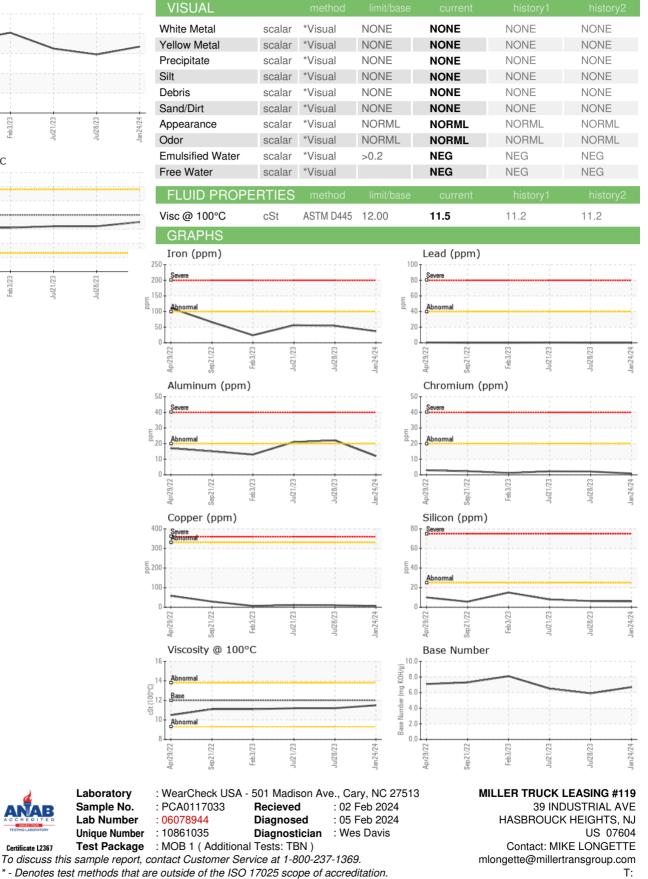
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

TS)		Apr2022	Sep2022 Feb2023	Jul2023 Jul2023	Jan2024	
SAMPLE INFORM	ΛΑΤΙΟΝ	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0117033	PCA0102993	PCA0101283
Sample Date		Client Info		24 Jan 2024	28 Jul 2023	21 Jul 2023
Machine Age	mls	Client Info		119258	101519	100454
Oil Age	mls	Client Info		0	0	0
Oil Changed		Client Info		N/A	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATI	ON	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 METALS	S .	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	37	54	56
Chromium	ppm	ASTM D5185m	>20	<1	2	2
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	12	22	21
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	7	10	11
Tin	ppm	ASTM D5185m	>15	2	1	1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	16	5	6
Barium	ppm	ASTM D5185m	0	2	0	1
Molybdenum	ppm	ASTM D5185m	50	72	68	71
Manganese						
-	ppm	ASTM D5185m	0	<1	1	1
-	ppm ppm	ASTM D5185m ASTM D5185m	0 950	<1 914	1 974	1 941
Magnesium						
Magnesium Calcium	ppm	ASTM D5185m	950	914	974	941
Magnesium Calcium Phosphorus	ppm ppm	ASTM D5185m ASTM D5185m	950 1050	914 1285	974 1279	941 1304
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995	914 1285 1043	974 1279 951	941 1304 981
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180	914 1285 1043 1239	974 1279 951 1274	941 1304 981 1259
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN <sup>-</sup>	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180 2600	914 1285 1043 1239 3217	974 1279 951 1274 3316	941 1304 981 1259 2913
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN <sup>T</sup> Silicon	ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	950 1050 995 1180 2600 limit/base	914 1285 1043 1239 3217 current	974 1279 951 1274 3316 history1	941 1304 981 1259 2913 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN <sup>T</sup> Silicon Sodium	ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180 2600 limit/base	914 1285 1043 1239 3217 current 6	974 1279 951 1274 3316 history1 6	941 1304 981 1259 2913 history2 8
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN <sup>T</sup> Silicon Sodium	ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180 2600 limit/base >25	914 1285 1043 1239 3217 current 6 0	974 1279 951 1274 3316 history1 6 5	941 1304 981 1259 2913 history2 8 <1
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN <sup>T</sup> Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180 2600 limit/base >25 >20	914 1285 1043 1239 3217 current 6 0 16 current 1.1	974 1279 951 1274 3316 history1 6 5 36	941 1304 981 1259 2913 history2 8 < <1 39
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN <sup>T</sup> Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180 2600 <b>limit/base</b> >25 >20	914 1285 1043 1239 3217 current 6 0 16 current	974 1279 951 1274 3316 history1 6 5 36 history1	941 1304 981 1259 2913 history2 8 <1 39 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN <sup>T</sup> Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	950 1050 995 1180 2600 <b>limit/base</b> >25 >20 <b>limit/base</b> >3	914 1285 1043 1239 3217 current 6 0 16 current 1.1	974 1279 951 1274 3316 history1 6 5 36 history1 1	941 1304 981 1259 2913 history2 8 
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN <sup>T</sup> 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 D7844 *ASTM D7624	950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20	914 1285 1043 1239 3217 current 6 0 16 current 1.1 1.1 11.5	974 1279 951 1274 3316 history1 6 5 36 history1 1 1 12.2	941 1304 981 1259 2913 history2 8 <1 39 history2 1 12.4
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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7624	950 1050 995 1180 2600 <b>limit/base</b> >25 >20 <b>limit/base</b> >3 >20 >3	914 1285 1043 1239 3217 current 6 0 16 current 1.1 1.1 11.5 23.5	974 1279 951 1274 3316 history1 6 5 36 history1 1 1 12.2 24.5	941 1304 981 1259 2913 history2 8 <1 39 history2 1 1 12.4 24.8



# **OIL ANALYSIS REPORT**





Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Certificate L2367

Laboratory

Sample No.

Lab Number

Unique Number

Contact/Location: MIKE LONGETTE - MILRUT

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