

## **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id **724570** Component **Diesel Engine** Fluid **PETRO CANADA DURON SHP 10W30 (--- GAL)** 

### 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.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0129056	PCA0125242	PCA0121429
Sample Date		Client Info		05 Jul 2024	10 May 2024	05 Apr 2024
Machine Age	mls	Client Info		365835	332013	310894
Oil Age	mls	Client Info		365835	332013	310894
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	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 METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	27	98	82
Chromium	ppm	ASTM D5185m	>20	1	3	2
Nickel	ppm	ASTM D5185m	>4	<1	2	0
Titanium	ppm	ASTM D5185m		20	16	17
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	4	10	9
Lead	ppm	ASTM D5185m	>40	0	<1	0
Copper	ppm	ASTM D5185m	>330	4	20	17
Tin	ppm	ASTM D5185m	>15	<1	2	1
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES						
ADDITIVEO		method	limit/base	current	history1	history2
Boron	ppm	Method ASTM D5185m	limit/base	current 12	history1 10	history2 15
	ppm ppm					
Boron		ASTM D5185m	2	12	10	15
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0	12 0	10 1	15 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	12 0 47	10 1 58	15 0 61
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	12 0 47 <1	10 1 58 2	15 0 61 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 47 <1 825	10 1 58 2 848	15 0 61 1 943
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 47 <1 825 1336	10 1 58 2 848 1317	15 0 61 1 943 1388
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 47 <1 825 1336 1082	10 1 58 2 848 1317 1123	15 0 61 1 943 1388 1149
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	12 0 47 <1 825 1336 1082 1330	10 1 58 2 848 1317 1123 1253	15 0 61 1 943 1388 1149 1357
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	2 0 50 950 1050 995 1180 2600	12 0 47 <1 825 1336 1082 1330 3632	10 1 58 2 848 1317 1123 1253 2740	15 0 61 1 943 1388 1149 1357 3283
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	2 0 50 950 1050 995 1180 2600	12 0 47 <1 825 1336 1082 1330 3632 current	10 1 58 2 848 1317 1123 1253 2740 history1	15 0 61 1 943 1388 1149 1357 3283 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 ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>limit/base</b>	12 0 47 <1 825 1336 1082 1330 3632 current 6	10 1 58 2 848 1317 1123 1253 2740 history1 10	15 0 61 1 943 1388 1149 1357 3283 history2 8
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 0 950 1050 995 1180 2600 <b>limit/base</b>	12 0 47 <1 825 1336 1082 1330 3632 current 6 2	10 1 58 2 848 1317 1123 1253 2740 history1 10 2	15 0 61 1 943 1388 1149 1357 3283 history2 8 5
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	12 0 47 <1 825 1336 1082 1330 3632 current 6 2 4	10 1 58 2 848 1317 1123 1253 2740 history1 10 2 12	15 0 61 1 943 1388 1149 1357 3283 history2 8 5 8
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	12 0 47 <1 825 1336 1082 1330 3632 current 6 2 4 4	10 1 58 2 848 1317 1123 1253 2740 history1 10 2 12 history1	15 0 61 1 943 1388 1149 1357 3283 <b>history2</b> 8 5 8 8 <b>bistory2</b>
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 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	12 0 47 <1 825 1336 1082 1330 3632 current 6 2 4 current 0.8	10 1 58 2 848 1317 1123 1253 2740 history1 10 2 12 history1 1.6	15 0 61 1 943 1388 1149 1357 3283 history2 8 5 8 5 8 <b>bistory2</b> 1.5
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 TS ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <i>imit/base</i> >25 >20 <i>imit/base</i> >3 >20	12 0 47 <1 825 1336 1082 1330 3632 current 6 2 4 current 0.8 10.1	10 1 58 2 848 1317 1123 1253 2740 history1 10 2 12 history1 1.6 13.2	15 0 61 1 943 1388 1149 1357 3283 history2 8 5 8 5 8 5 8 <b>history2</b> 1.5 12.2
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 TS ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>imit/base</b> >25 <b>imit/base</b> >3 >20	12 0 47 <1 825 1336 1082 1330 3632 <u>current</u> 6 2 4 <u>current</u> 0.8 10.1 23.5	10 1 58 2 848 1317 1123 1253 2740 history1 10 2 12 history1 1.6 13.2 27.6	15 0 61 1 943 1388 1149 1357 3283 <b>history2</b> 8 5 8 5 8 <b>bistory2</b> 1.5 1.5 12.2 26.0



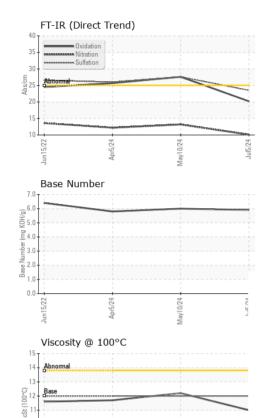
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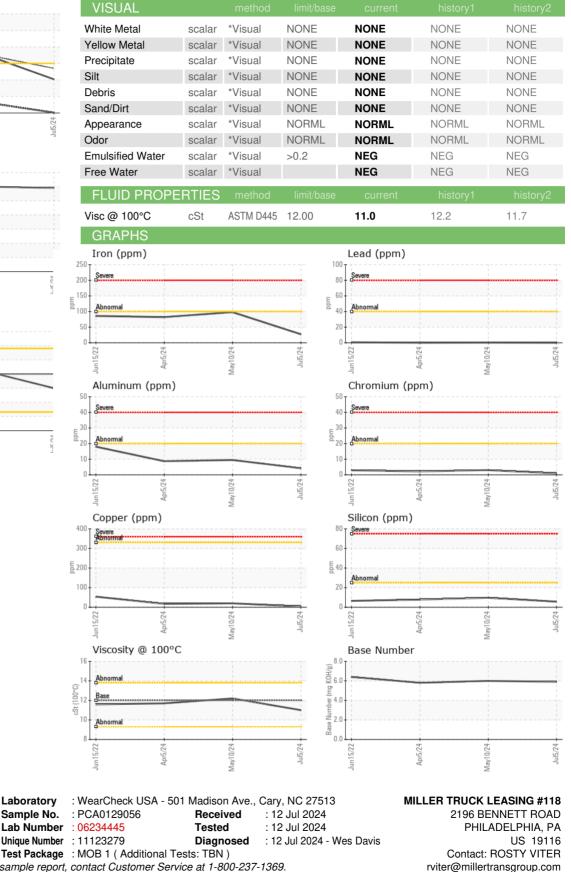
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# **OIL ANALYSIS REPORT**





To discuss this sample report, contact Customer Service at 1-800-237-1369. \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

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

Report Id: MILPHINE [WUSCAR] 06234445 (Generated: 07/12/2024 17:32:43) Rev: 1

Certificate 12367

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