

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id **328285** 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

Metal levels are typical for a new component breaking in.

Contamination

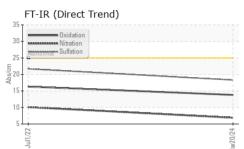
There is no indication of any contamination in the oil.

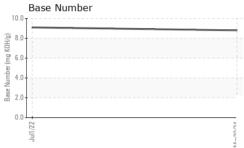
Fluid Condition

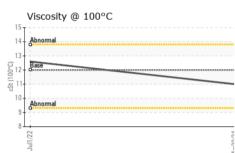
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

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SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0121471	PCA0073295	
Sample Date		Client Info		20 Mar 2024	01 Jul 2022	
Machine Age	mls	Client Info		57289	9168	
Oil Age	mls	Client Info		57289	9168	
Oil Changed		Client Info		Not Changd	Not Changd	
Sample Status				NORMAL	NORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	11	57	
Chromium	ppm	ASTM D5185m	>20	<1	1	
Nickel	ppm	ASTM D5185m	>4	0	0	
Titanium	ppm	ASTM D5185m		12	<1	
Silver	ppm	ASTM D5185m	>3	0	0	
Aluminum	ppm	ASTM D5185m	>20	7	14	
Lead	ppm	ASTM D5185m	>40	0	<1	
Copper	ppm	ASTM D5185m	>330	1	43	
Tin	ppm	ASTM D5185m	>15	<1	4	
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES	••	method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 22	history1 65	history2
Boron	ppm	ASTM D5185m	2	22	65	
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	2 0	22 0	65 4	
Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	22 0 46	65 4 6	
Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	22 0 46 <1	65 4 6 7	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	22 0 46 <1 803	65 4 6 7 655	
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	22 0 46 <1 803 1230	65 4 6 7 655 1388	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm 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	22 0 46 <1 803 1230 981	65 4 6 7 655 1388 669	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm 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	22 0 46 <1 803 1230 981 1192	65 4 6 7 655 1388 669 812	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	2 0 50 950 1050 995 1180 2600	22 0 46 <1 803 1230 981 1192 3485	65 4 6 7 655 1388 669 812 3256 history1 11	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	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	2 0 50 950 1050 995 1180 2600	22 0 46 <1 803 1230 981 1192 3485 current	65 4 6 7 655 1388 669 812 3256 history1	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm 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 method	2 0 50 950 1050 995 1180 2600 limit/base >25	22 0 46 <1 803 1230 981 1192 3485 <u>current</u> 3	65 4 6 7 655 1388 669 812 3256 history1 11	 history2
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 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	22 0 46 <1 803 1230 981 1192 3485 <u>current</u> 3 1	65 4 6 7 655 1388 669 812 3256 history1 11 6	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	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	22 0 46 <1 803 1230 981 1192 3485 current 3 1 8	65 4 6 7 655 1388 669 812 3256 history1 11 6 24	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	22 0 46 <1 803 1230 981 1192 3485 current 3 1 8 <i>current</i>	65 4 6 7 655 1388 669 812 3256 history1 11 6 24 24	 history2 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 limit/base >25 >20 limit/base >3	22 0 46 <1 803 1230 981 1192 3485 <u>current</u> 3 1 8 <u>current</u> 0.3	65 4 6 7 655 1388 669 812 3256 history1 11 6 24 24 history1 0.4	 history2 history2 history2
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 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20	22 0 46 <1 803 1230 981 1192 3485 <u>current</u> 3 1 8 <u>current</u> 0.3 6.9	65 4 6 7 655 1388 669 812 3256 history1 11 6 24 24 history1 0.4 10.1	 history2 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 50 950 1050 995 1180 2600 imit/base >25 imit/base >3 >20	22 0 46 <1 803 1230 981 1192 3485 <u>current</u> 3 1 8 <u>current</u> 0.3 6.9 18.3	65 4 6 7 655 1388 669 812 3256 history1 11 6 24 24 history1 0.4 10.1 21.7	 history2 history2 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 TS ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844	2 0 50 0 950 1050 995 1180 2600 imit/base >25 20 imit/base >3 >20 >30	22 0 46 <1 803 1230 981 1192 3485 Current 3 1 8 Current 0.3 6.9 18.3 Current	65 4 6 7 655 1388 669 812 3256 history1 11 6 24 24 history1 0.4 10.1 21.7 history1	 history2 history2 history2 history2









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Metal Metal tate Dirt rance fied Water dater ID PROPEI 100°C APHS (ppm)	scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual Method		NONE NONE NONE NONE NORML NORML NEG NEG Current 11.0	NONE NONE NONE NONE NONE NORML NORML NEG NEG history1 12.6	 history2
tate Dirt rance fied Water Vater ID PROPEI 100°C APHS (ppm)	scalar scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual method	NONE NONE NONE NORML NORML >0.2 limit/base 12.00	NONE NONE NONE NORML NORML NEG NEG	NONE NONE NONE NORML NORML NEG NEG history1	 history2
Dirt rance fied Water /ater ID PROPEI 100°C APHS (ppm)	scalar scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual * Visual method	NONE NONE NORML NORML >0.2 limit/base 12.00	NONE NONE NORML NORML NEG NEG	NONE NONE NORML NORML NEG NEG history1	 history2
rance fied Water /ater ID PROPEI 100°C APHS (ppm)	scalar scalar scalar scalar scalar scalar	*Visual *Visual *Visual *Visual *Visual *Visual method	NONE NORML NORML >0.2 limit/base 12.00	NONE NORML NORML NEG NEG Current	NONE NORML NORML NEG NEG history1	 history2
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rance fied Water /ater ID PROPEI 100°C APHS (ppm)	scalar scalar scalar scalar RTIES	*Visual *Visual *Visual *Visual method	NORML NORML >0.2 limit/base 12.00	NORML NORML NEG NEG current	NORML NORML NEG NEG history1	 history2
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/ater ID PROPEI 100°C APHS (ppm)	scalar scalar RTIES	*Visual *Visual method	>0.2 limit/base 12.00	NEG NEG current	NEG NEG history1	 history2
/ater ID PROPEI 100°C APHS (ppm)	scalar RTIES	*Visual method	limit/base 12.00	NEG current	NEG history1	 history2
ID PROPEI 100°C APHS (ppm)	RTIES	method	12.00	current	history1	history2
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APHS (ppm)	cSt	ASTM D445		11.0	12.6	
(ppm)						
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or (nnm)			≥	Cilicon (nnm)		2
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