

OIL ANALYSIS REPORT





Machine Id DT662 Component

Diesel Engine

PETRO CANADA DURON SHP 10W30 (36 mls)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0101817	PCA0095233	PCA0087538
Sample Date		Client Info		26 Oct 2023	09 May 2023	09 Dec 2022
Machine Age	mls	Client Info		47964	47964	47964
Oil Age	mls	Client Info		47964	47964	47964
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	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	>110	15	9	4
Chromium	ppm	ASTM D5185m	>4	<1	<1	0
Nickel	ppm	ASTM D5185m		0	<1	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	2
Aluminum	ppm	ASTM D5185m		3	4	3
Lead	ppm	ASTM D5185m	>45	0	<1	0
Copper	ppm	ASTM D5185m		1	<1	<1
Tin	ppm	ASTM D5185m	>4	0	<1	0
Vanadium	ppm	ASTM D5185m	>4	0	0	<1
Cadmium		ASTM D5185m		0	0	0
	ppm			-	-	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	5	12	98
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	50	68	68	65
Manganese	ppm	ASTM D5185m	0	0	<1	<1
Magnesium	ppm	ASTM D5185m	950	935	909	457
Calcium	ppm ppm	ASTM D5185m ASTM D5185m	950 1050	935 1157		
•					909	457
Calcium	ppm	ASTM D5185m	1050	1157	909 1241	457 1749
Calcium Phosphorus	ppm ppm	ASTM D5185m ASTM D5185m	1050 995	1157 980	909 1241 1048	457 1749 1050
Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180	1157 980 1292	909 1241 1048 1315	457 1749 1050 1247
Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180 2600 limit/base	1157 980 1292 2994	909 1241 1048 1315 3597	457 1749 1050 1247 4159
Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	1050 995 1180 2600 limit/base	1157 980 1292 2994 current	909 1241 1048 1315 3597 history1	457 1749 1050 1247 4159 history2
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm TS ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m	1050 995 1180 2600 limit/base	1157 980 1292 2994 current 6	909 1241 1048 1315 3597 history1 5	457 1749 1050 1247 4159 history2 3
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180 2600 limit/base >30	1157 980 1292 2994 current 6 0	909 1241 1048 1315 3597 history1 5 2	457 1749 1050 1247 4159 history2 3 0
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180 2600 <i>limit/base</i> >30 >20	1157 980 1292 2994 current 6 0 6	909 1241 1048 1315 3597 history1 5 2 4	457 1749 1050 1247 4159 history2 3 0 5
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180 2600 limit/base >30 >20	1157 980 1292 2994 current 6 0 6 current	909 1241 1048 1315 3597 history1 5 2 4 4 history1	457 1749 1050 1247 4159 history2 3 0 5 5 history2
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1050 995 1180 2600 limit/base >30 >20 limit/base >3	1157 980 1292 2994 current 6 0 6 current 0.5	909 1241 1048 1315 3597 history1 5 2 4 4 history1 0.4	457 1749 1050 1247 4159 history2 3 0 5 history2 0.2
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm TS ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7844	1050 995 1180 2600 imit/base >30 >20 imit/base >3 >20	1157 980 1292 2994 <u>current</u> 6 0 6 <u>current</u> 0.5 9.3	909 1241 1048 1315 3597 history1 5 2 4 history1 0.4 9.1	457 1749 1050 1247 4159 history2 3 0 5 history2 0.2 6.3
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm TS ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	1050 995 1180 2600 Imit/base >30 S 20 S 3 >20 S3 >20 S3 S20	1157 980 1292 2994 current 6 0 6 current 0.5 9.3 20.8	909 1241 1048 1315 3597 history1 5 2 4 <u>history1</u> 0.4 9.1 21.0	457 1749 1050 1247 4159 history2 3 0 5 history2 0.2 6.3 20.2



cSt (100°C) B

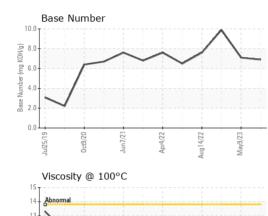
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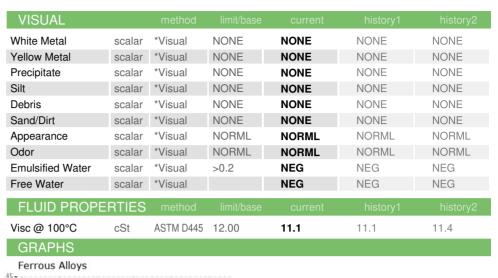
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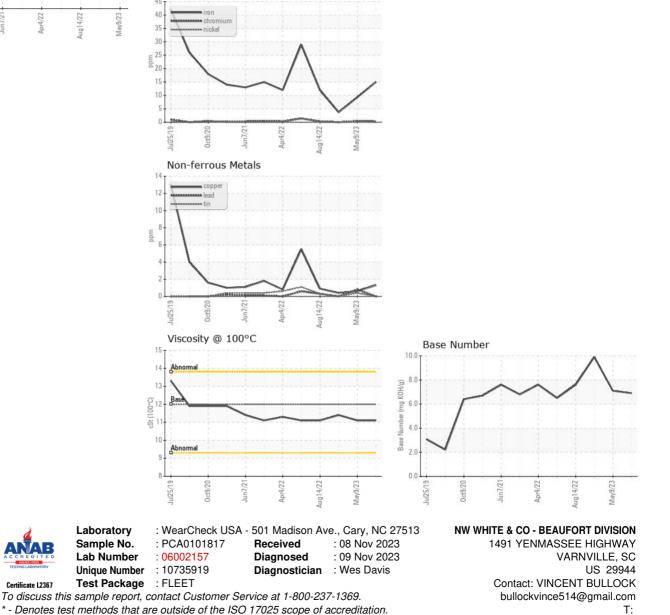
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* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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