

OIL ANALYSIS REPORT

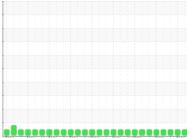
Sample Rating Trend





Component **Diesel Engine** PETRO CANADA DURON SHP 15W40 (--- GAL)

SAMPLE INFORMATION method





DIAGNOSIS
Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

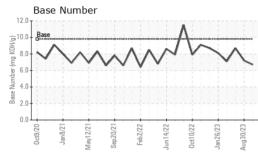
Fluid Condition

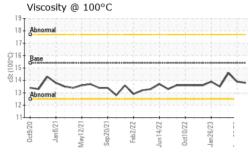
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sample Number		Client Info		PCA0106006	PCA0095318	PCA0098104
Sample Date		Client Info		23 Oct 2023	30 Aug 2023	19 Jun 2023
Machine Age	hrs	Client Info		19423	19206	18817
Oil Age	hrs	Client Info		217	389	285
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<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	>120	12	8	2
Chromium	ppm	ASTM D5185m	>20	0	<1	0
Nickel	ppm	ASTM D5185m	>5	<1	2	<1
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	2	1	0
Lead	ppm	ASTM D5185m	>40	2	<1	0
Copper	ppm	ASTM D5185m	>330	4	6	2
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	1	0	1
Barium	ppm	ASTM D5185m	0	4	0	0
Molybdenum	ppm	ASTM D5185m	60	66	66	54
Manganese	ppm	ASTM D5185m	0	<1	<1	0
Magnesium	ppm	ASTM D5185m	1010	933	1051	883
Calcium	ppm	ASTM D5185m	1070	1106	1168	957
Phosphorus	ppm	ASTM D5185m	1150	1018	1009	902
Zinc	ppm	ASTM D5185m	1270	1211	1286	1104
Sulfur	ppm	ASTM D5185m	2060	2588	3129	3489
CONTAMINAN	ITS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	6	4	2
Sodium	ppm	ASTM D5185m		8	14	4
Potassium	ppm	ASTM D5185m	>20	4	0	<1
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	0.7	0.5	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8.6	7.8	5.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.9	19.8	18.4
FLUID DEGRA	DATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.6	16.5	15.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	6.7	7.2	8.7



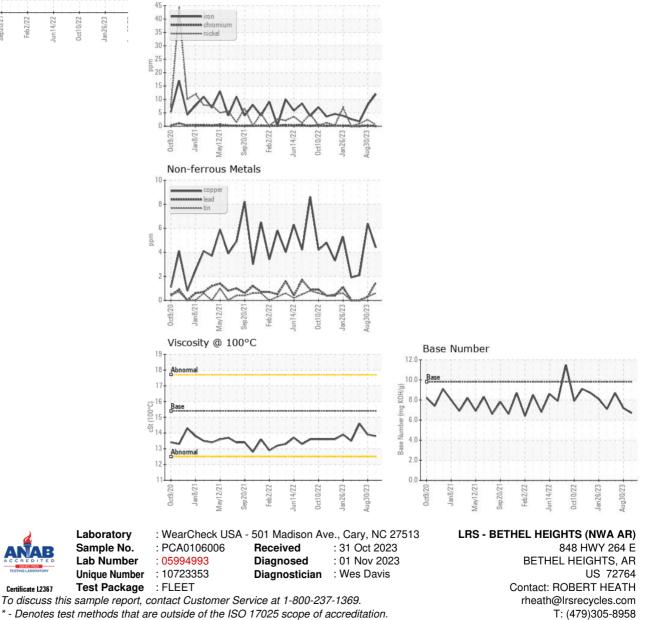
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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	13.8	13.9	14.6
GRAPHS						

Ferrous Alloys



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

Submitted By: ALSO ORIVANAR ORIHAR ORITOP - JAMIE HAYWORTH

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