



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id

8616

Component

Diesel Engine

Fluid

PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		NL0001697	NL0000523	NL0001355
Sample Date		Client Info		07 Nov 2023	25 Jul 2023	30 Nov 2022
Machine Age	mls	Client Info		190613	155349	79757
Oil Age	mls	Client Info		45000	45000	45000
Filter Age	mls	Client Info		45000	45000	45000
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	34	32	48
Chromium	ppm	ASTM D5185m	>20	<1	<1	1
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	7	7	15
Lead	ppm	ASTM D5185m	>40	3	0	6
Copper	ppm	ASTM D5185m	>330	17	14	93
Tin	ppm	ASTM D5185m	>15	2	<1	4
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

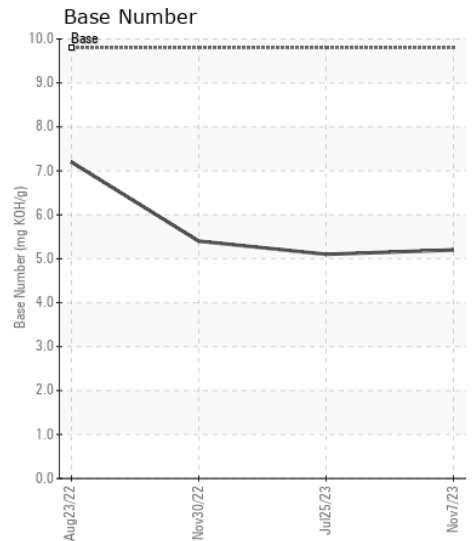
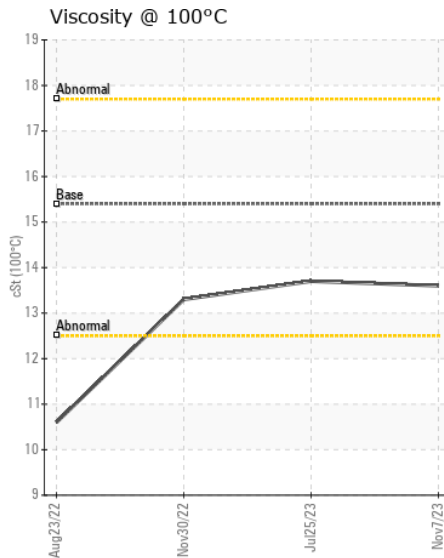
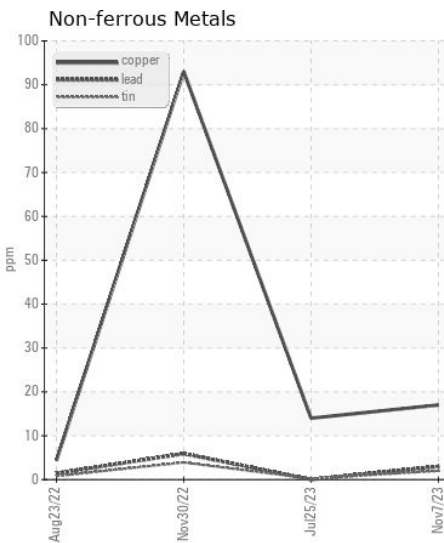
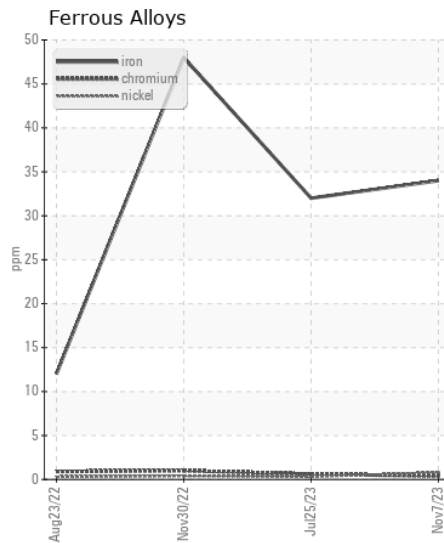
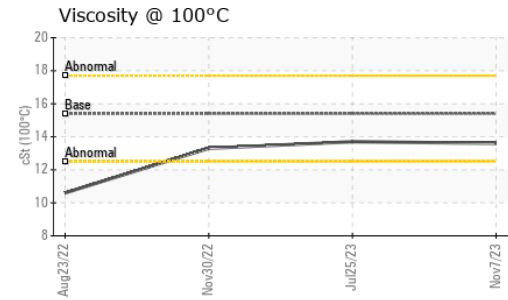
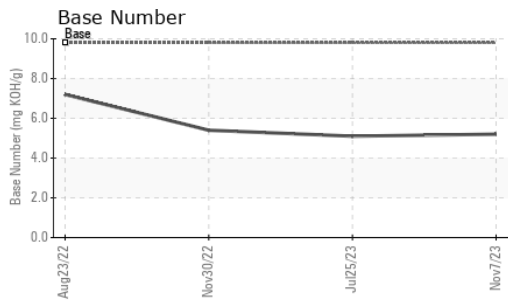
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	5	4	10
Potassium	ppm	ASTM D5185m	>20	10	6	44
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.8	0.8	0.8
Nitration	Abs/cm	*ASTM D7624	>20	10.4	10.3	11.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.3	23.0	23.4
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

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.

Sodium	ppm	ASTM D5185m		0	0	4
Boron	ppm	ASTM D5185m	0	<1	0	3
Barium	ppm	ASTM D5185m	0	<1	0	0
Molybdenum	ppm	ASTM D5185m	60	65	60	77
Manganese	ppm	ASTM D5185m	0	<1	0	1
Magnesium	ppm	ASTM D5185m	1010	907	935	955
Calcium	ppm	ASTM D5185m	1070	1088	1168	1324
Phosphorus	ppm	ASTM D5185m	1150	920	936	909
Zinc	ppm	ASTM D5185m	1270	1191	1314	1203
Sulfur	ppm	ASTM D5185m	2060	2553	3378	2777
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.8	19.5	20.5
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	5.2	5.1	5.4
Visc @ 100°C	cSt	ASTM D445	15.4	13.6	13.7	13.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : NL0001697
Lab Number : 06076713
Unique Number : 10858804
Test Package : FLEET

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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)