

OIL ANALYSIS REPORT

Sample Rating Trend

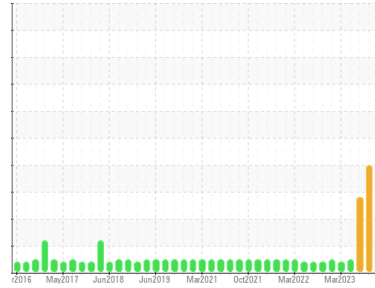
GLYCOL

Area
(MM1341)

Machine Id
2536

Component
Diesel Engine

Fluid
PETRO CANADA DURON SHP 15W40 (10 GAL)



DIAGNOSIS

Recommendation

We advise that you check for possible coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

Sodium and/or potassium levels remain high.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION	method	limit/base	current	history1	history2
Sample Number	Client Info		PCA0101776	PCA0095856	PCA0101741
Sample Date	Client Info		09 Jan 2024	23 Oct 2023	07 Aug 2023
Machine Age	hrs	Client Info	24499	23928	23431
Oil Age	hrs	Client Info	600	600	600
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			ABNORMAL	ABNORMAL	ABNORMAL

CONTAMINATION	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG

WEAR METALS	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >165	8	66	81
Chromium	ppm	ASTM D5185m >5	<1	2	4
Nickel	ppm	ASTM D5185m >4	<1	<1	0
Titanium	ppm	ASTM D5185m >2	0	<1	<1
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >20	2	6	6
Lead	ppm	ASTM D5185m >150	1	18	0
Copper	ppm	ASTM D5185m >90	4	15	4
Tin	ppm	ASTM D5185m >5	<1	<1	<1
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	0	<1	0

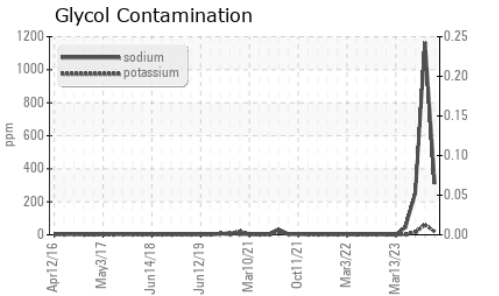
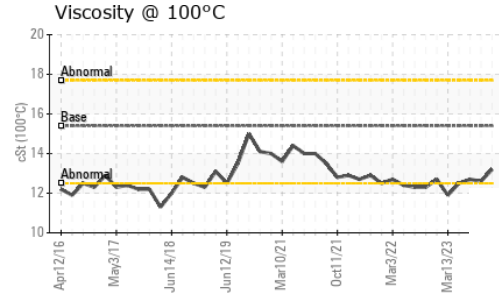
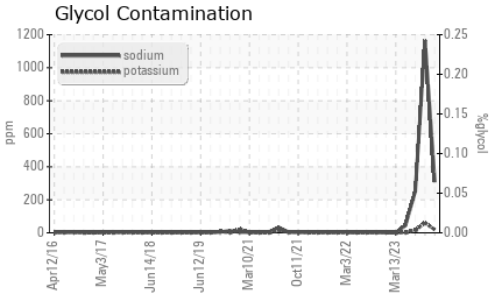
ADDITIVES	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	20	22	13
Barium	ppm	ASTM D5185m 0	0	3	0
Molybdenum	ppm	ASTM D5185m 60	72	119	77
Manganese	ppm	ASTM D5185m 0	<1	<1	1
Magnesium	ppm	ASTM D5185m 1010	693	812	895
Calcium	ppm	ASTM D5185m 1070	1253	1236	1196
Phosphorus	ppm	ASTM D5185m 1150	957	983	1037
Zinc	ppm	ASTM D5185m 1270	1181	1218	1251
Sulfur	ppm	ASTM D5185m 2060	3176	3313	3693

CONTAMINANTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >35	10	▲ 35	▲ 36
Sodium	ppm	ASTM D5185m	▲ 309	▲ 1165	▲ 253
Potassium	ppm	ASTM D5185m >20	19	▲ 60	16
Glycol	%	*ASTM D2982	NEG	NEG	NEG

INFRA-RED	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >7.5	0.2	0.9	0.9
Nitration	Abs/cm	*ASTM D7624 >20	7.2	13.4	11.0
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.1	23.6	21.3

FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	13.2	18.5	16.8
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	8.9	9.2	7.0

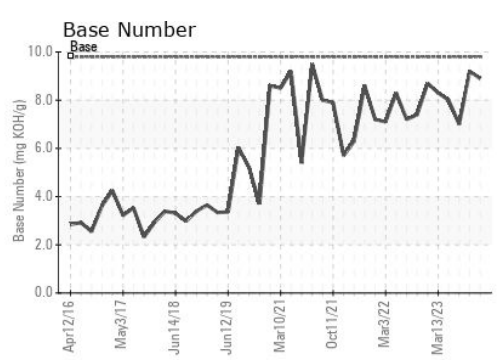
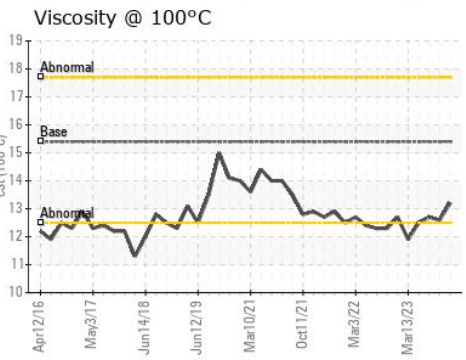
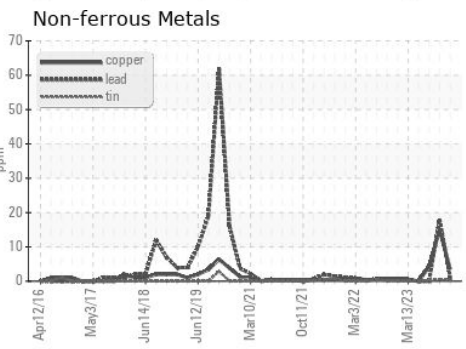
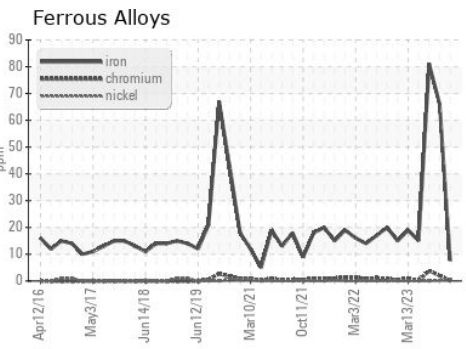
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VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.4	13.2	12.6	12.7

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0101776 **Recieved** : 11 Jan 2024
Lab Number : **06057877** **Diagnosed** : 15 Jan 2024
Unique Number : 10829259 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 002 - Vance-Granville
 241 Vanco Mill Rd
 Henderson, NC
 US 27537
 Contact: Cameron King
 cameron.king@gflenv.com
 T: (252)438-5333
 F: (252)431-1635

Certificate L2367
 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)