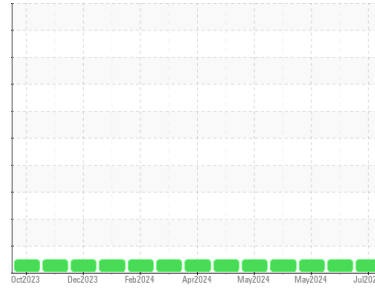




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

814048

Component

Diesel Engine

Fluid

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

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 INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0093488	GFL0093471	GFL0093443
Sample Date	Client Info		03 Jul 2024	20 Jun 2024	31 May 2024
Machine Age	hrs	Client Info	2162	2053	1915
Oil Age	hrs	Client Info	375	266	128
Oil Changed	Client Info		Not Changed	Not Changed	Not Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	10	9	5
Chromium	ppm	ASTM D5185m >20	<1	<1	<1
Nickel	ppm	ASTM D5185m >4	0	0	0
Titanium	ppm	ASTM D5185m	9	7	8
Silver	ppm	ASTM D5185m >3	<1	0	0
Aluminum	ppm	ASTM D5185m >20	13	11	6
Lead	ppm	ASTM D5185m >40	0	0	0
Copper	ppm	ASTM D5185m >330	2	<1	<1
Tin	ppm	ASTM D5185m >15	0	0	<1
Vanadium	ppm	ASTM D5185m	<1	<1	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	8	6	8
Barium	ppm	ASTM D5185m 0	0	0	1
Molybdenum	ppm	ASTM D5185m 60	58	56	58
Manganese	ppm	ASTM D5185m 0	<1	<1	0
Magnesium	ppm	ASTM D5185m 1010	945	1014	907
Calcium	ppm	ASTM D5185m 1070	1223	1251	1149
Phosphorus	ppm	ASTM D5185m 1150	997	1128	1005
Zinc	ppm	ASTM D5185m 1270	1187	1406	1246
Sulfur	ppm	ASTM D5185m 2060	3208	3838	3300

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	2	3	3
Sodium	ppm	ASTM D5185m	7	2	0
Potassium	ppm	ASTM D5185m >20	30	26	18

INFRA-RED

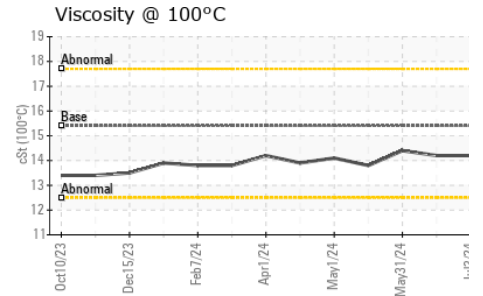
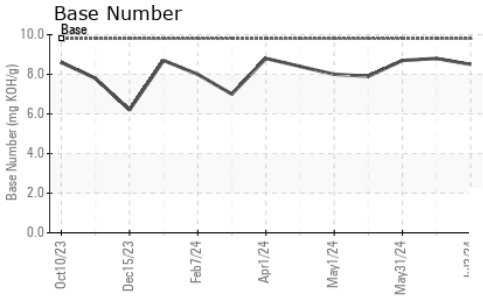
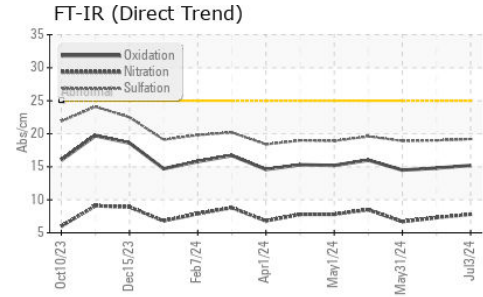
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.3	0.2	0.4
Nitration	Abs/cm	*ASTM D7624 >20	7.8	7.3	6.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.2	19.0	18.9

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	15.2	14.8	14.5
Base Number (BN)	mg KOH/g	ASTM D2896 9.8	8.5	8.8	8.7



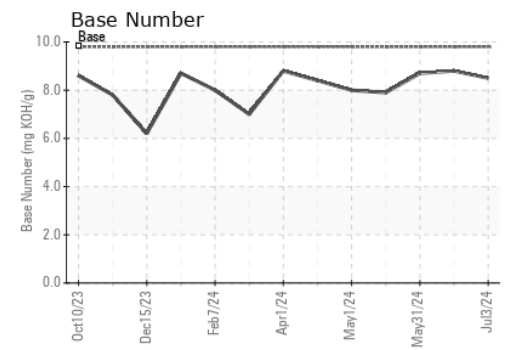
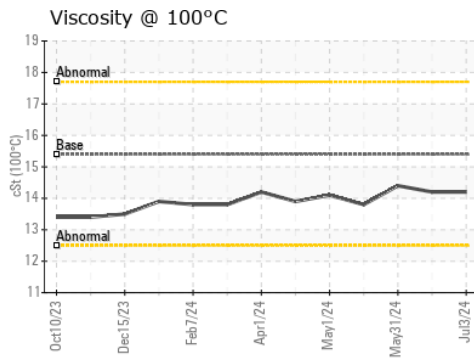
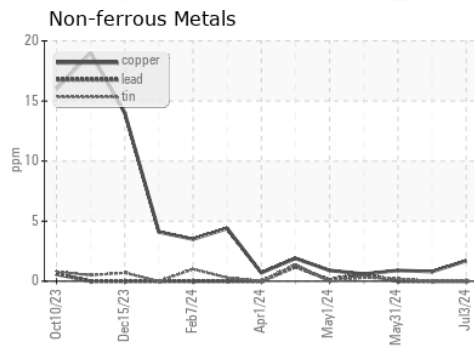
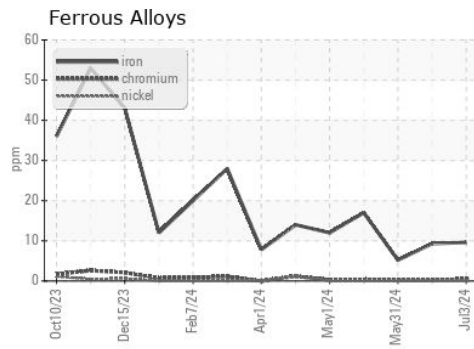
OIL ANALYSIS REPORT



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	14.2	14.2	14.4

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0093488
Lab Number : **06228396**
Unique Number : 11111889
Test Package : FLEET
Received : 05 Jul 2024
Tested : 08 Jul 2024
Diagnosed : 08 Jul 2024 - Wes Davis

GFL Environmental - 891 - Oklahoma City Hauling
 1001 South Rockwell
 Oklahoma City, OK
 US 73128
 Contact: Andy Smith
 andrew.smith@gflenv.com
 T: (405)306-1651
 F:

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)