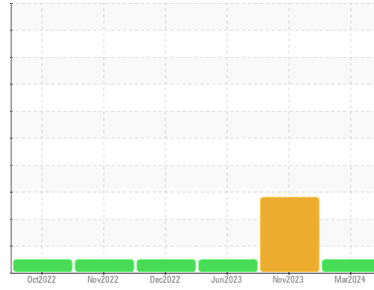




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
579M
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (5 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: Early sampled)

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	GFL0115169	GFL0097663	GFL0072954	
Sample Date	Client Info	28 Mar 2024	04 Nov 2023	06 Jun 2023	
Machine Age	hrs	Client Info	6974	6686	6054
Oil Age	hrs	Client Info	278	632	750
Oil Changed	Client Info	Not Changed	Changed	Changed	
Sample Status		NORMAL	ABNORMAL	NORMAL	

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >3.0	<1.0	0.5	<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 >90	28	42	26
Chromium	ppm ASTM D5185m >20	<1	1	1
Nickel	ppm ASTM D5185m >2	<1	▲ 3	<1
Titanium	ppm ASTM D5185m >2	0	<1	<1
Silver	ppm ASTM D5185m >2	0	0	0
Aluminum	ppm ASTM D5185m >20	4	3	1
Lead	ppm ASTM D5185m >40	0	<1	1
Copper	ppm ASTM D5185m >330	1	72	1
Tin	ppm ASTM D5185m >15	0	3	<1
Vanadium	ppm ASTM D5185m	<1	0	0
Cadmium	ppm ASTM D5185m	0	0	<1

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 0	0	48	3
Barium	ppm ASTM D5185m 0	0	0	<1
Molybdenum	ppm ASTM D5185m 60	61	94	64
Manganese	ppm ASTM D5185m 0	<1	4	<1
Magnesium	ppm ASTM D5185m 1010	1023	739	999
Calcium	ppm ASTM D5185m 1070	1272	1319	1179
Phosphorus	ppm ASTM D5185m 1150	1067	742	1061
Zinc	ppm ASTM D5185m 1270	1360	952	1358
Sulfur	ppm ASTM D5185m 2060	3315	2060	3482

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	4	▲ 37	6
Sodium	ppm ASTM D5185m	7	7	7
Potassium	ppm ASTM D5185m >20	0	4	3

INFRA-RED

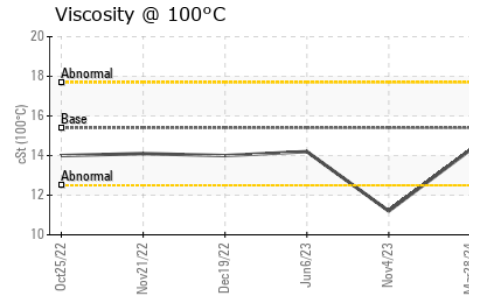
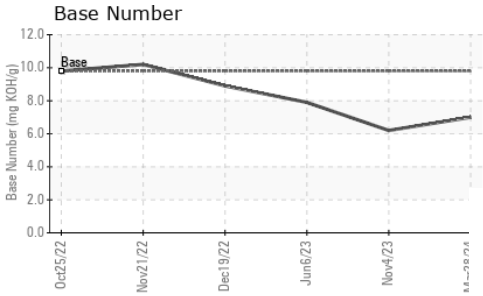
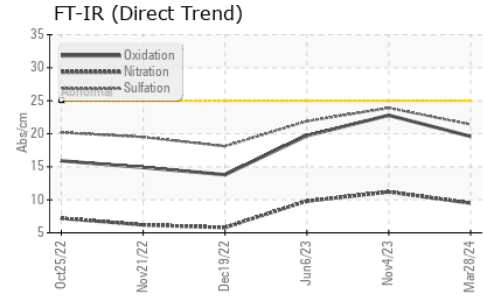
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >6	0.2	0.7	0.3
Nitration	Abs/cm *ASTM D7624 >20	9.5	11.2	9.8
Sulfation	Abs/.1mm *ASTM D7415 >30	21.4	23.9	21.9

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	19.6	22.8	19.7
Base Number (BN)	mg KOH/g ASTM D2896 9.8	7.0	6.2	7.9



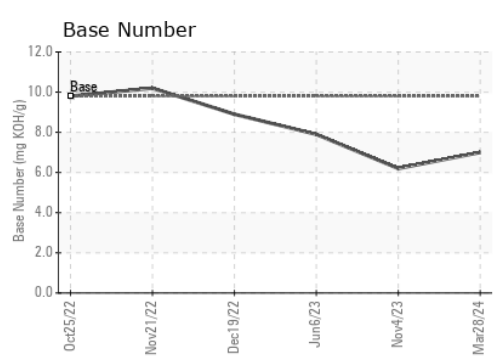
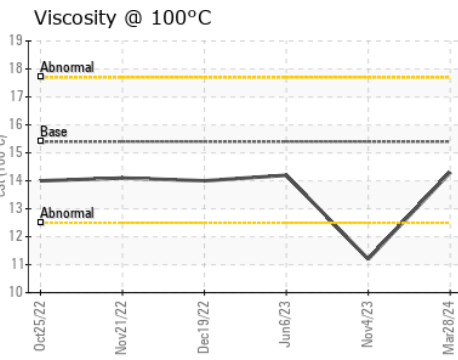
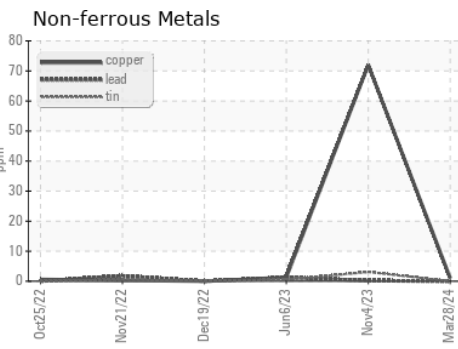
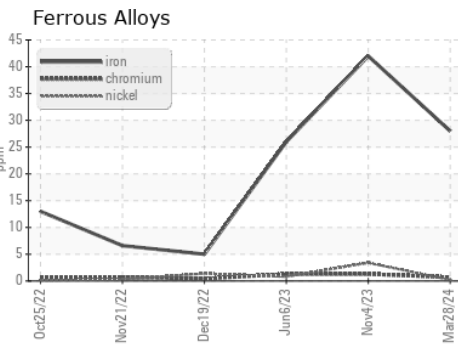
OIL ANALYSIS REPORT



PARAMETER	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	14.3	11.2	14.2

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0115169
Lab Number : **06136794**
Unique Number : 10956259
Test Package : FLEET
Received : 02 Apr 2024
Tested : 03 Apr 2024
Diagnosed : 04 Apr 2024 - Sean Felton

GFL Environmental - 405 - Arbor Hills
 7811 Chubb Rd
 NORTHVILLE, MI
 US 48168
 Contact: John Nahal
 jnahal@gflenv.com

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)