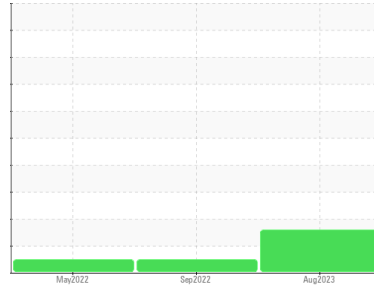




OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
4555

Component
Transmission (Auto)

Fluid
PETRO CANADA DuraDrive HD Synthetic 668 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check all areas where dirt can enter the system. The fluid change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

Aluminum ppm levels are noted. All other component wear rates are normal.

Contamination

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Fluid Condition

The AN level is acceptable for this fluid. The fluid is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0084352	GFL0057800	GFL0052648
Sample Date	Client Info	17 Aug 2023	02 Sep 2022	04 May 2022
Machine Age	kms	Client Info	19165	48432
Oil Age	kms	Client Info	733	2708
Oil Changed	Client Info	Changed	Changed	Not Changed
Sample Status		ABNORMAL	NORMAL	NORMAL

WEAR METALS

method	limit/base	current	history1	history2		
PQ	ASTM D8184*	>150	0	5		
Iron	ppm	ASTM D5185(m)	>325	28	72	131
Chromium	ppm	ASTM D5185(m)	>2	0	0	<1
Nickel	ppm	ASTM D5185(m)	>2	<1	0	0
Titanium	ppm	ASTM D5185(m)	>3	0	0	0
Silver	ppm	ASTM D5185(m)	>5	0	0	0
Aluminum	ppm	ASTM D5185(m)	>75	11	31	58
Lead	ppm	ASTM D5185(m)	>40	<1	5	10
Copper	ppm	ASTM D5185(m)	>50	10	37	64
Tin	ppm	ASTM D5185(m)	>10	<1	2	4
Antimony	ppm	ASTM D5185(m)	>3	0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0

ADDITIVES

method	limit/base	current	history1	history2		
Boron	ppm	ASTM D5185(m)	78	77	113	162
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	<1	<1
Manganese	ppm	ASTM D5185(m)		<1	<1	1
Magnesium	ppm	ASTM D5185(m)	0	1	1	1
Calcium	ppm	ASTM D5185(m)	113	124	133	133
Phosphorus	ppm	ASTM D5185(m)	222	228	318	414
Zinc	ppm	ASTM D5185(m)		9	10	16
Sulfur	ppm	ASTM D5185(m)	1326	1486	1714	2004
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

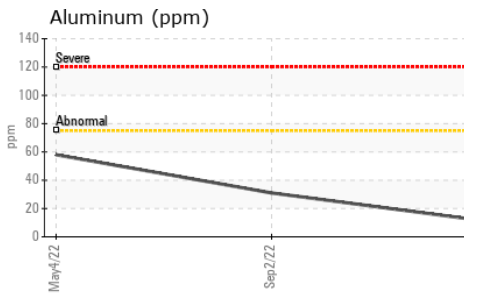
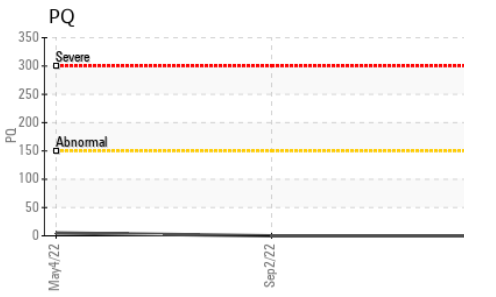
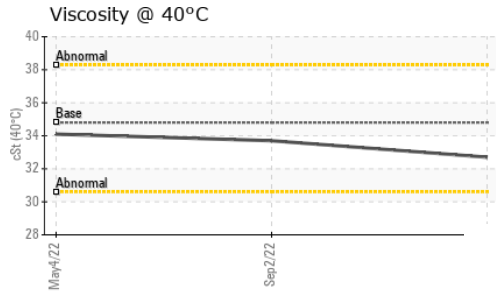
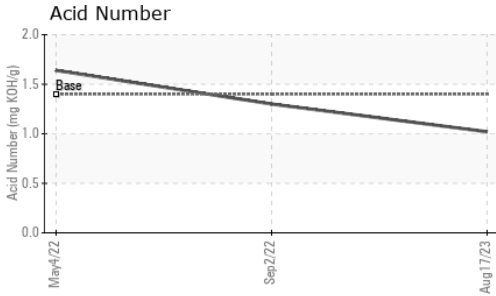
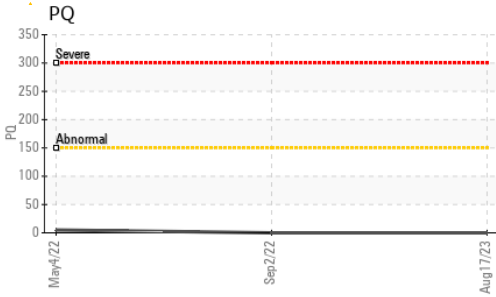
method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185(m)	>20	▲ 34	8	12
Sodium	ppm	ASTM D5185(m)		3	6	9
Potassium	ppm	ASTM D5185(m)	>20	<1	1	0

FLUID DEGRADATION

method	limit/base	current	history1	history2		
Acid Number (AN)	mg KOH/g	ASTM D974*	1.4	1.02	1.30	1.64



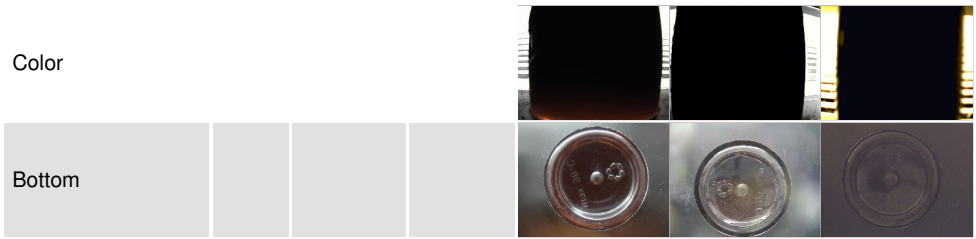
OIL ANALYSIS REPORT



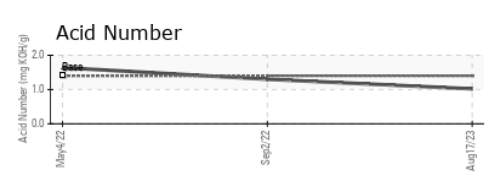
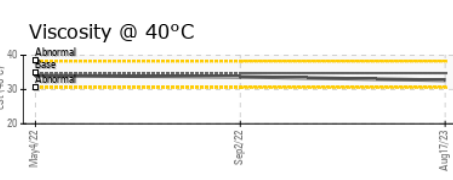
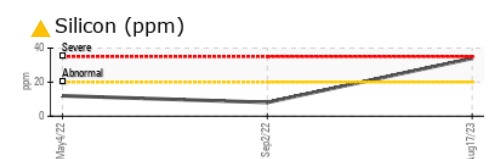
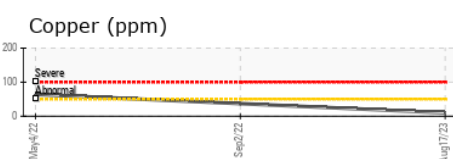
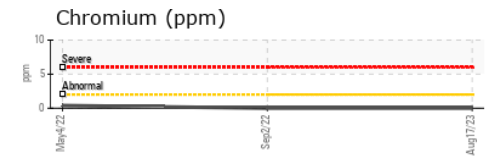
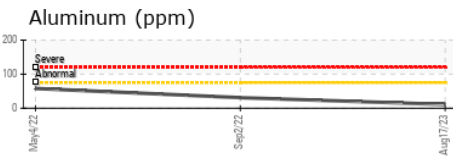
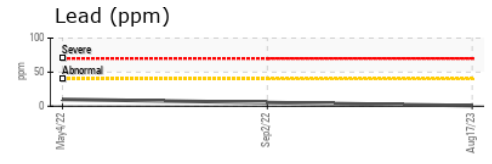
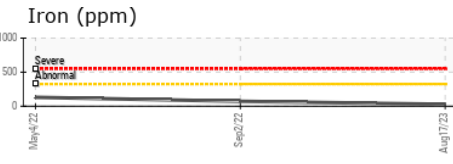
PARAMETER	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	34.8	32.7	33.7, 34.1

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County
Sample No. : GFL0084352 **Received** : 22 Aug 2023
Lab Number : 02577546 **Diagnosed** : 24 Aug 2023
Unique Number : 5630606 **Diagnostician** : Kevin Marson
Test Package : MOB 2 (Additional Tests: PQ)

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

Contact: GFL Calgary
 calgarymaintenance@gflenv.com
 T: (403)369-6163