



Machine Id
WL0112
Component
Hydraulic System
Fluid
PETRO CANADA PRODURO TO-4 SAE 10W (--- GAL)

RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. We advise that you check for visible metal particles in the oil. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation.

WEAR

Iron ppm levels are abnormal. Light concentration of visible metal present. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

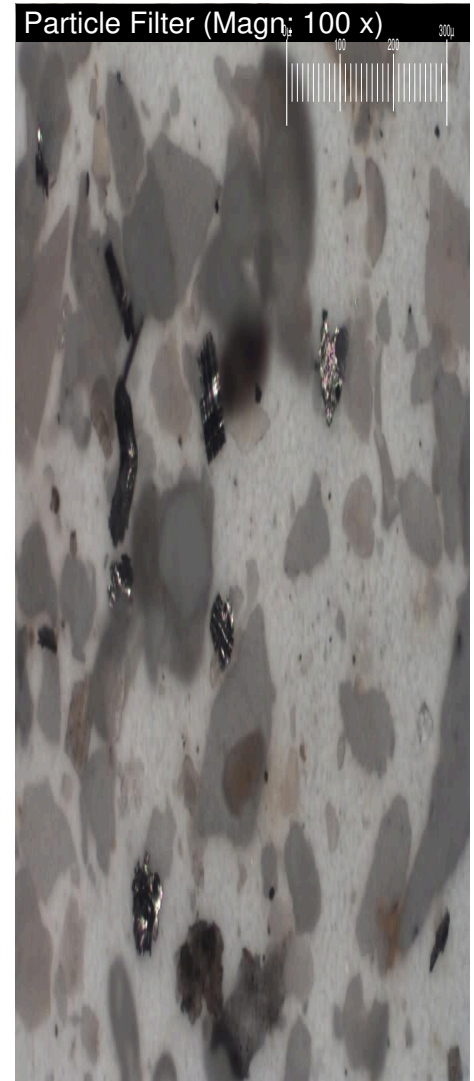
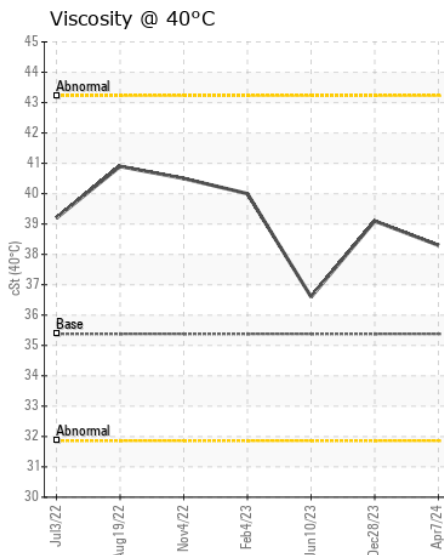
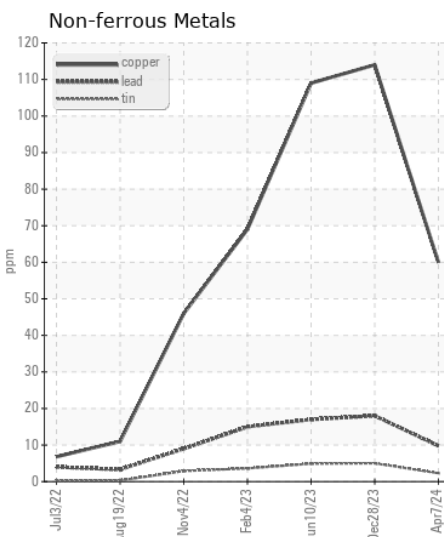
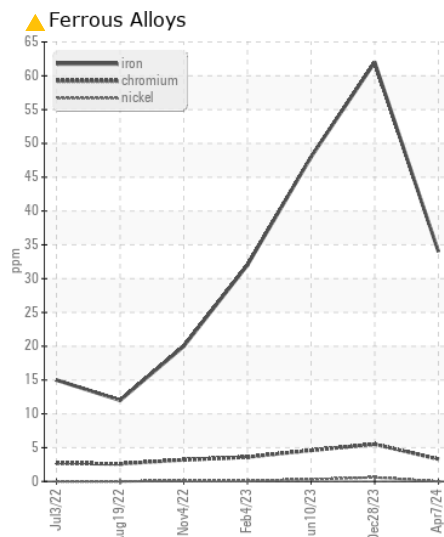
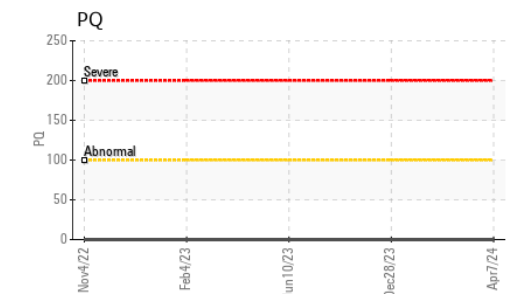
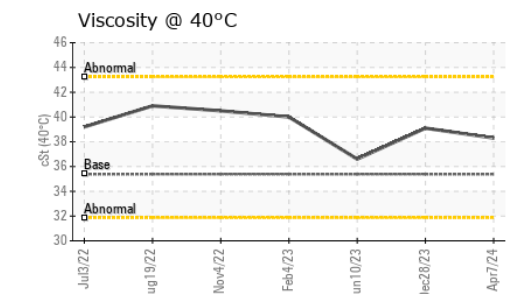
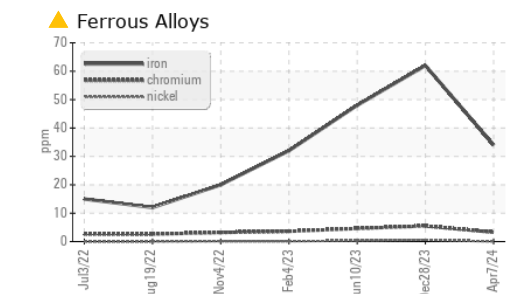
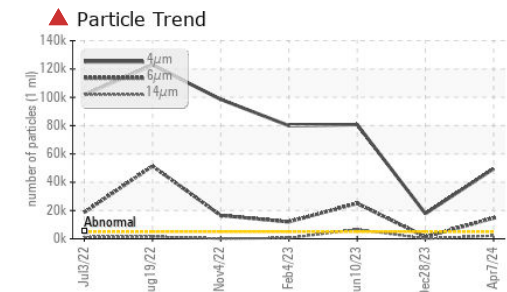
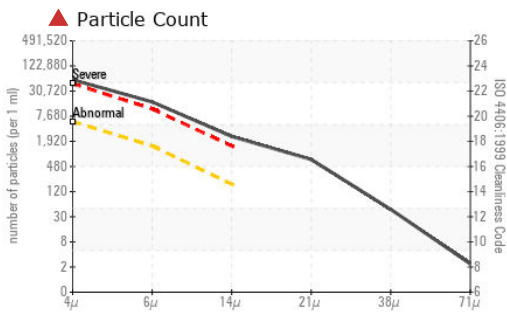
CONTAMINATION

There is a high amount of particulates (2 to 100 microns in size) present in the oil.

FLUID CONDITION

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0100622	GFL0100647	GFL0054631
Sample Date		Client Info		07 Apr 2024	28 Dec 2023	10 Jun 2023
Machine Age	hrs	Client Info		8836	8011	6677
Oil Age	hrs	Client Info		825	2000	2000
Filter Age	hrs	Client Info		825	1334	500
Oil Changed		Client Info		Not Changed	Changed	Not Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	ABNORMAL	SEVERE
PQ		ASTM D8184*		0	0	0
Iron	ppm	ASTM D5185(m)	>20	▲ 34	▲ 62	▲ 48
Chromium	ppm	ASTM D5185(m)	>10	3	6	5
Nickel	ppm	ASTM D5185(m)	>10	0	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>10	2	3	2
Lead	ppm	ASTM D5185(m)	>10	10	▲ 18	▲ 17
Copper	ppm	ASTM D5185(m)	>75	60	▲ 114	▲ 109
Tin	ppm	ASTM D5185(m)	>10	2	5	5
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	▲ VLITE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185(m)	>20	3	5	5
Potassium	ppm	ASTM D5185(m)	>20	2	2	2
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>5000	▲ 49526	▲ 17802	▲ 80740
Particles >6µm		ASTM D7647	>1300	▲ 14673	● 1381	▲ 25056
Particles >14µm		ASTM D7647	>160	▲ 2195	112	▲ 6691
Particles >21µm		ASTM D7647	>40	▲ 621	30	▲ 680
Particles >38µm		ASTM D7647	>10	▲ 40	1	1
Particles >71µm		ASTM D7647	>3	2	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 23/21/18	▲ 21/18/14	▲ 24/22/20
Silt	scalar	Visual*	NONE	VLITE	NONE	NONE
Debris	scalar	Visual*	NONE	VLITE	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*	>0.1	NEG	NEG	NEG
Sodium	ppm	ASTM D5185(m)		38	66	83
Boron	ppm	ASTM D5185(m)	1	8	11	15
Barium	ppm	ASTM D5185(m)	0	0	4	<1
Molybdenum	ppm	ASTM D5185(m)	1	1	3	4
Manganese	ppm	ASTM D5185(m)	1	<1	<1	<1
Magnesium	ppm	ASTM D5185(m)	1	26	33	36
Calcium	ppm	ASTM D5185(m)	2864	2441	1830	2072
Phosphorus	ppm	ASTM D5185(m)	987	867	759	874
Zinc	ppm	ASTM D5185(m)	1162	1120	1076	1121
Sulfur	ppm	ASTM D5185(m)	3713	3261	3510	3568
Visc @ 40°C	cSt	ASTM D7279(m)	35.38	38.3	39.1	36.6



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0100622
Lab Number : 02630275
Unique Number : 5763407
Test Package : MOB 1 (Additional Tests: Bottom, BottomAnalysis, FilterPatch, PQ, PrtCount, PrtFilter)

GFL Environmental - 575 - Squamish Hauling
 38950 Queens Way,
 Squamish, BC
 CA V8B 0K8
 Contact: Dean Imbeau
 dimbeau@gflenv.com
 T: (604)892-5604
 F: (604)892-5238

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.