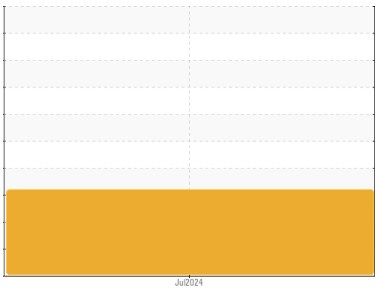
OIL ANALYSIS REPORT

Sample Rating Trend



DIRT

Machine Id
714015
Component

Fluid
BREAK IN 5W20 (10)

DIAGNOSIS

Recommendation
We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. (Customer Sample Comment: 1st pm service, break in oil 5W20?)

Wear
The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other metal levels are typical for a new component breaking in.

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

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		**GFL0116302**	---	---
Sample Date		Client Info		**02 Jul 2024**	---	---
Machine Age	hrs	Client Info		**584**	---	---
Grease Age	hrs	Client Info		**584**	---	---
Oil Age	hrs	Client Info		**584**	---	---
Grease Serviced		Client Info		**Changed**	---	---
Oil Changed		Client Info		**Changed**	---	---
Sample Status				**ABNORMAL**	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m		**60**	---	---
Chromium	ppm	ASTM D5185m		**2**	---	---
Nickel	ppm	ASTM D5185m		**10**	---	---
Titanium	ppm	ASTM D5185m		**0**	---	---
Silver	ppm	ASTM D5185m		**<1**	---	---
Aluminum	ppm	ASTM D5185m		**18**	---	---
Lead	ppm	ASTM D5185m		**3**	---	---
Copper	ppm	ASTM D5185m		**238**	---	---
Tin	ppm	ASTM D5185m		**3**	---	---
Vanadium	ppm	ASTM D5185m		**0**	---	---
Cadmium	ppm	ASTM D5185m		**0**	---	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**190**	---	---
Barium	ppm	ASTM D5185m		**<1**	---	---
Molybdenum	ppm	ASTM D5185m		**124**	---	---
Manganese	ppm	ASTM D5185m		**6**	---	---
Magnesium	ppm	ASTM D5185m		**715**	---	---
Calcium	ppm	ASTM D5185m		**1593**	---	---
Phosphorus	ppm	ASTM D5185m		**711**	---	---
Zinc	ppm	ASTM D5185m		**853**	---	---
Sulfur	ppm	ASTM D5185m		**2627**	---	---

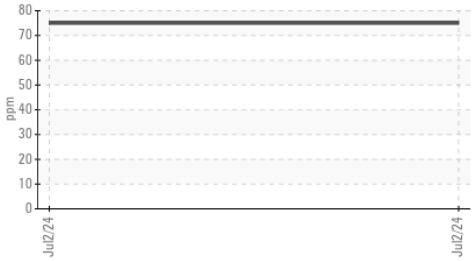
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m		**75**	---	---
Sodium	ppm	ASTM D5185m		**4**	---	---
Potassium	ppm	ASTM D5185m	>20	**44**	---	---
Water	%	ASTM D6304		**NEG**	---	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		**0.4**	---	---
Nitration	Abs/cm	*ASTM D7624		**10.3**	---	---
Sulfation	Abs/.1mm	*ASTM D7415		**24.4**	---	---

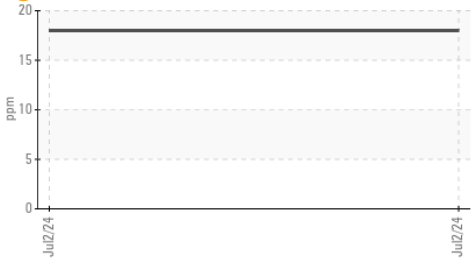
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414		**23.1**	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		**7.50**	---	---

OIL ANALYSIS REPORT

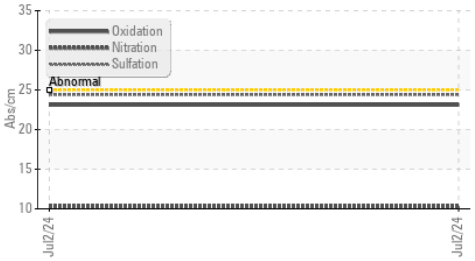
Silicon (ppm)



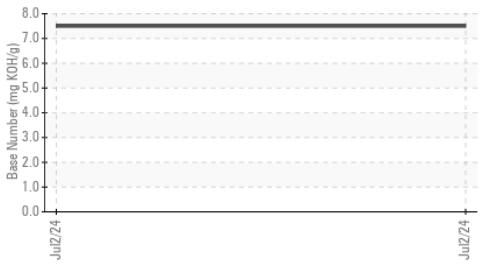
Aluminum (ppm)



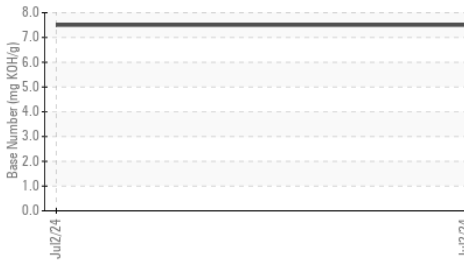
FT-IR (Direct Trend)



Base Number



Base Number



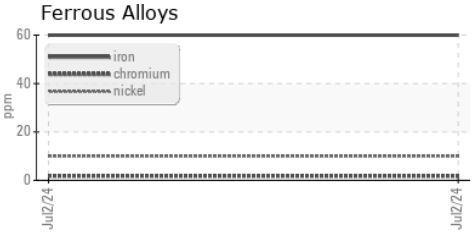
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	---	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	---	---
Precipitate	scalar	*Visual	NONE	**NONE**	---	---
Silt	scalar	*Visual	NONE	**NONE**	---	---
Debris	scalar	*Visual	NONE	**NONE**	---	---
Sand/Dirt	scalar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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		**9.7**	---	---

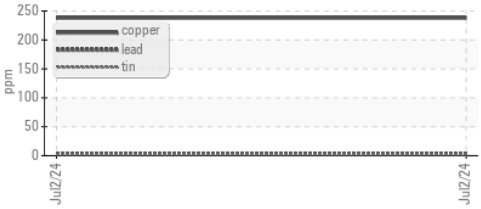
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color			*no image*	*no image*	*no image*
Bottom			*no image*	*no image*	*no image*

GRAPHS

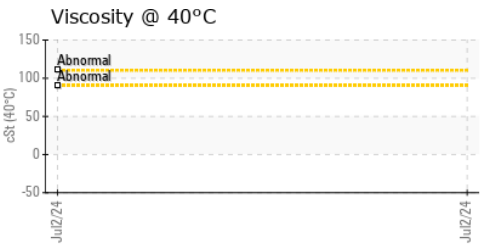
Ferrous Alloys



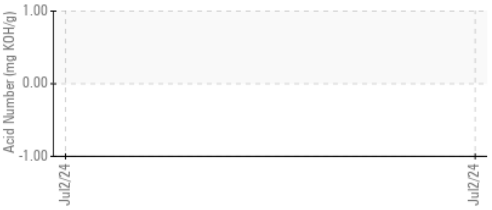
Non-ferrous Metals



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0116302
Lab Number : 06229597
Unique Number : 11113090
Test Package : FLEET (Additional Tests: FT-IR, ICP-NewOil, KF, KV100, PQ, PrtCount, TBN, Vis)

Received : 05 Jul 2024
Tested : 09 Jul 2024
Diagnosed : 09 Jul 2024 - Jonathan Hester

GFL Environmental - 625 - Harrison Hauling
2480 S Clare Ave
Clare, MI
US 48617
Contact: Glenda Standen
gstanden@gflenv.com
T:
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)

Report Id: GFL625 [WUSCAR] 06229597 (Generated: 07/09/2024 23:34:46) Rev: 1

Submitted By: also GFL632 and GFL638 - Glenda Standen