



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
812033
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- Shots)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0117940	GFL0117956	GFL0111947
Sample Date		Client Info		24 May 2024	01 May 2024	09 Apr 2024
Machine Age	hrs	Client Info		5993	5836	5740
Oil Age	hrs	Client Info		253	96	600
Filter Age	hrs	Client Info		253	96	600
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Filter Changed		Client Info		Not Changd	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	3	<1	4
Chromium	ppm	ASTM D5185m	>20	0	0	0
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	0	<1
Aluminum	ppm	ASTM D5185m	>20	4	2	7
Lead	ppm	ASTM D5185m	>40	<1	<1	0
Copper	ppm	ASTM D5185m	>330	<1	0	0
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

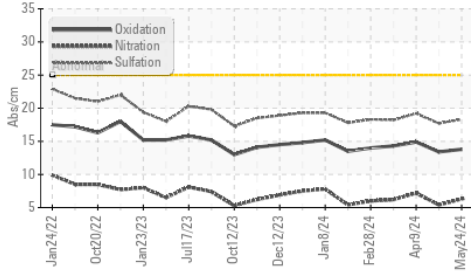
Silicon	ppm	ASTM D5185m	>25	4	2	5
Potassium	ppm	ASTM D5185m	>20	3	0	3
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.1	0.3
Nitration	Abs/cm	*ASTM D7624	>20	6.3	5.4	7.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.3	17.7	19.2
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	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	>0.2	NEG	NEG	NEG

FLUID CONDITION

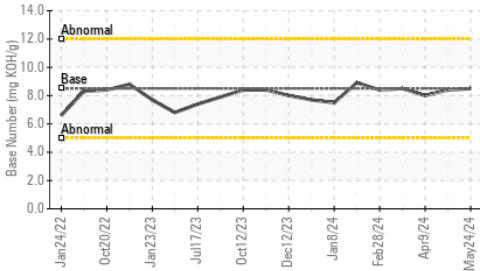
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>158	1	<1	2
Boron	ppm	ASTM D5185m	250	2	0	2
Barium	ppm	ASTM D5185m	10	0	0	<1
Molybdenum	ppm	ASTM D5185m	100	61	63	57
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m	450	994	1015	965
Calcium	ppm	ASTM D5185m	3000	1099	1139	1079
Phosphorus	ppm	ASTM D5185m	1150	1078	1076	1055
Zinc	ppm	ASTM D5185m	1350	1276	1265	1300
Sulfur	ppm	ASTM D5185m	4250	3549	3829	3620
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.8	13.4	14.9
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	8.5	8.4	8.0
Visc @ 100°C	cSt	ASTM D445	14.4	13.6	13.9	13.3

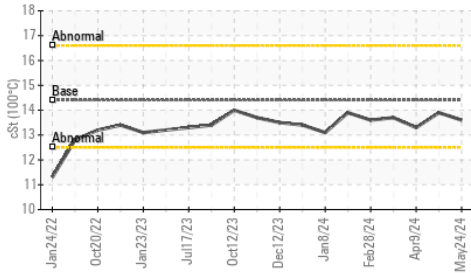
FT-IR (Direct Trend)



Base Number



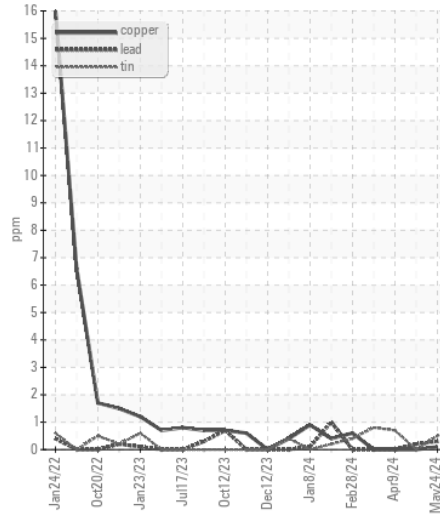
Viscosity @ 100°C



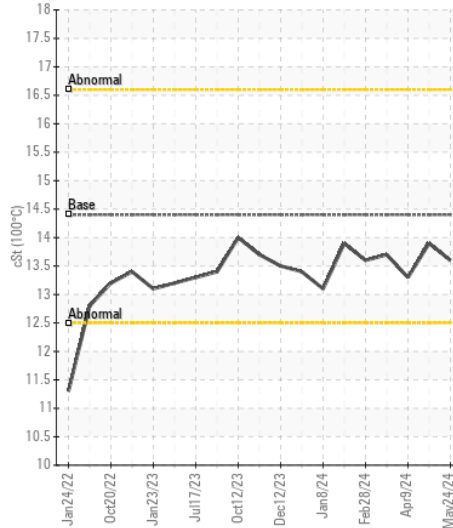
Ferrous Alloys



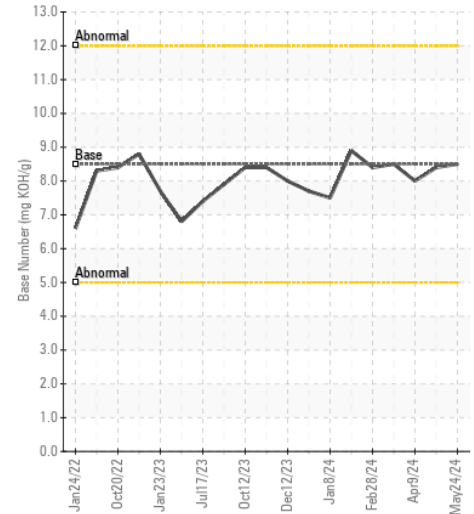
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0117940
Lab Number : 06193433
Unique Number : 11050185
Test Package : FLEET

Received : 28 May 2024
Tested : 30 May 2024
Diagnosed : 30 May 2024 - Wes Davis

GFL Environmental - 892 - Pauls Valley Hauling
 1910 S CHICKASAW STREET
 Pauls Valley, OK
 US 73075
 Contact: Tony Graham
 tgraham2@wcamerica.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)

T:
F: