FLEET LUBE 360 OIL DIAGNOSTICS

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	NORMAL

Area
(ML7046)
Machine Id
413073
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (7 GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

WEAR

All component wear rates are normal.

CONTAMINATION

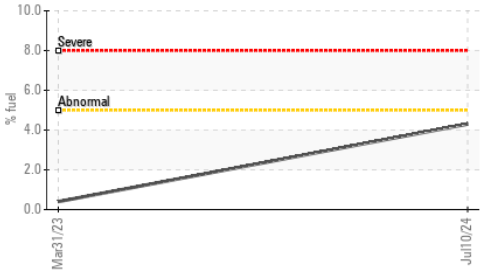
Light fuel dilution occurring. No other contaminants were detected in the oil.

FLUID CONDITION

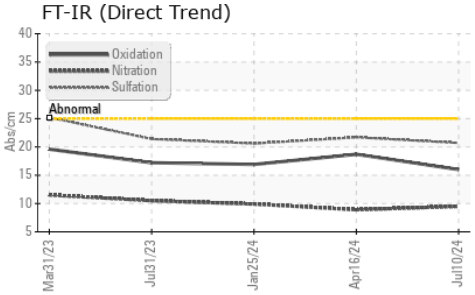
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**GFL0110415**	GFL0090138	GFL0090126
Sample Date		Client Info		**10 Jul 2024**	16 Apr 2024	25 Jan 2024
Machine Age	hrs	Client Info		**4350**	3717	3138
Oil Age	hrs	Client Info		**633**	3717	3138
Filter Age	hrs	Client Info		**633**	579	731
Oil Changed		Client Info		**Changed**	Changed	Changed
Filter Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**MARGINAL**	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	**19**	17	13
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>4	**0**	<1	0
Titanium	ppm	ASTM D5185m		**<1**	<1	<1
Silver	ppm	ASTM D5185m	>3	**<1**	0	0
Aluminum	ppm	ASTM D5185m	>20	**10**	14	11
Lead	ppm	ASTM D5185m	>40	**0**	<1	<1
Copper	ppm	ASTM D5185m	>330	**7**	3	2
Tin	ppm	ASTM D5185m	>15	**0**	<1	1
Vanadium	ppm	ASTM D5185m		**0**	<1	<1
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	**8**	7	4
Potassium	ppm	ASTM D5185m	>20	**13**	34	21
Fuel	%	ASTM D3524	>5	▲ **4.3**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG
Glycol		WC Method		**NEG**	NEG	NEG
Soot %	%	*ASTM D7844	>3	**0.6**	0.3	0.5
Nitration	Abs/cm	*ASTM D7624	>20	**9.5**	8.9	9.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	**20.7**	21.7	20.6
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
Sodium	ppm	ASTM D5185m		**5**	2	2
Boron	ppm	ASTM D5185m	0	**4**	13	<1
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	60	**58**	44	60
Manganese	ppm	ASTM D5185m	0	**2**	<1	<1
Magnesium	ppm	ASTM D5185m	1010	**885**	920	947
Calcium	ppm	ASTM D5185m	1070	**1030**	1170	1077
Phosphorus	ppm	ASTM D5185m	1150	**956**	919	1018
Zinc	ppm	ASTM D5185m	1270	**1189**	1062	1211
Sulfur	ppm	ASTM D5185m	2060	**2974**	2982	2524
Oxidation	Abs/.1mm	*ASTM D7414	>25	**16.0**	18.7	16.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	**7.0**	7.5	6.8
Visc @ 100°C	cSt	ASTM D445	15.4	**12.4**	13.3	14.3

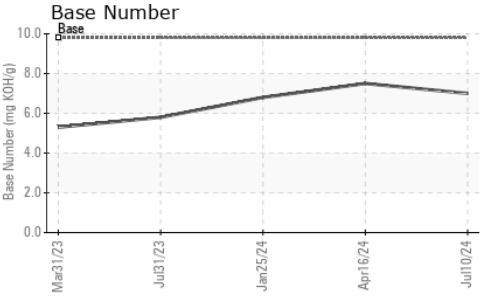
Fuel Dilution



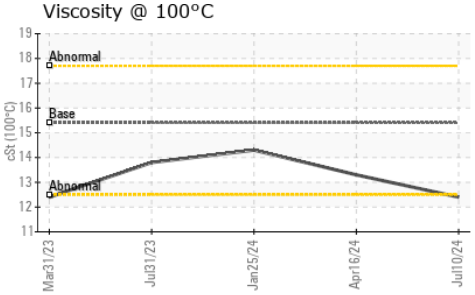
FT-IR (Direct Trend)



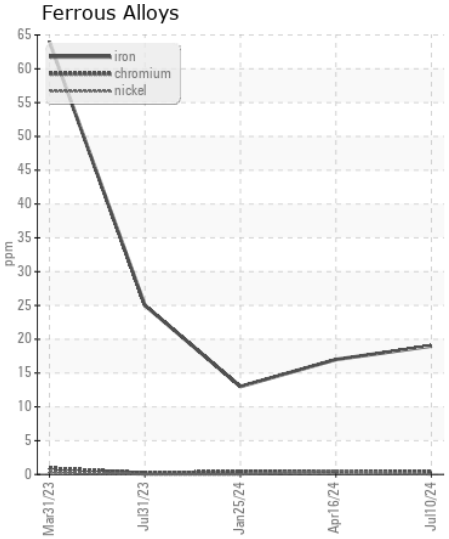
Base Number



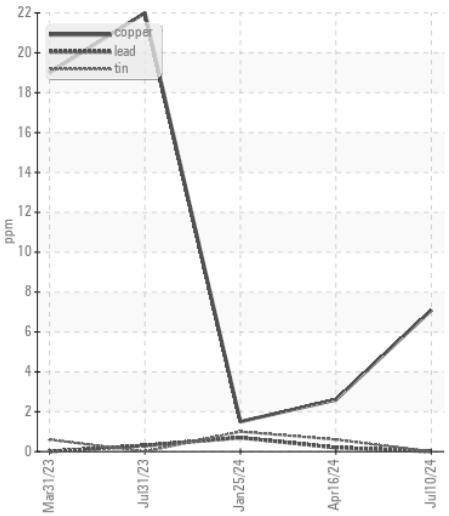
Viscosity @ 100°C



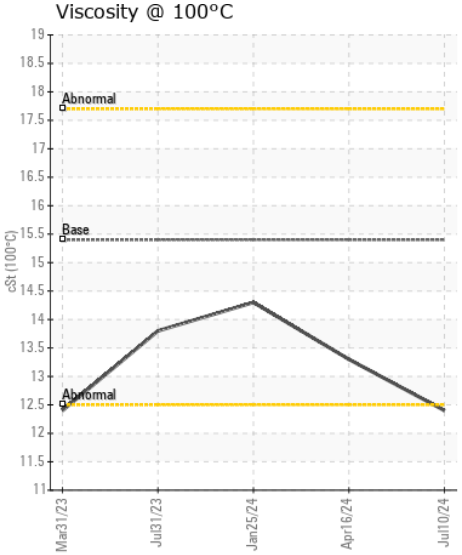
Ferrous Alloys



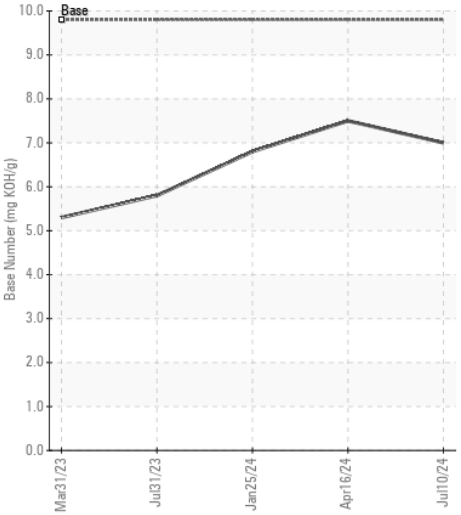
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0110415
Lab Number : 06238786
Unique Number : 11127620
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

Received : 17 Jul 2024
Tested : 18 Jul 2024
Diagnosed : 18 Jul 2024 - Wes Davis

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)

GFL Environmental - 044 - Elizabeth City
657 Old US 17
Elizabeth City, NC
US 27909
Contact: TOM BAIRD
tom.baird@gflenv.com
T: (252)562-2645
F: (252)264-4411