



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION



Machine Id
425020-723 MACK GU813
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0115276	GFL0062209	GFL0062195
Sample Date		Client Info		17 Jun 2024	25 Jul 2023	26 Jun 2023
Machine Age	hrs	Client Info		13179	12978	285177
Oil Age	hrs	Client Info		201	1200	1078
Filter Age	hrs	Client Info		201	1200	1078
Oil Changed		Client Info		Changed	Changed	Not Changd
Filter Changed		Client Info		Changed	Changed	Not Changd
Sample Status				ATTENTION	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	3	9	8
Chromium	ppm	ASTM D5185m	>20	0	0	<1
Nickel	ppm	ASTM D5185m	>5	<1	<1	0
Titanium	ppm	ASTM D5185m	>2	4	<1	<1
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	2	1	0
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	<1	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

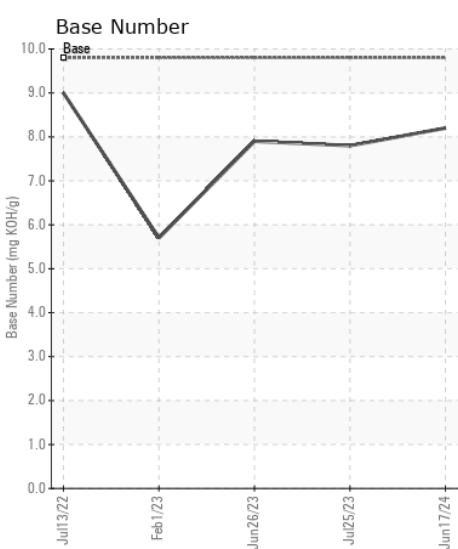
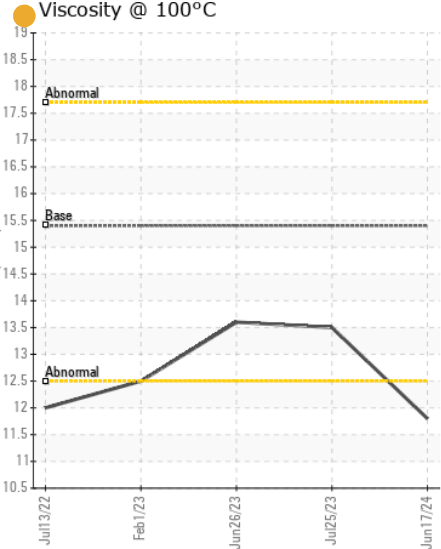
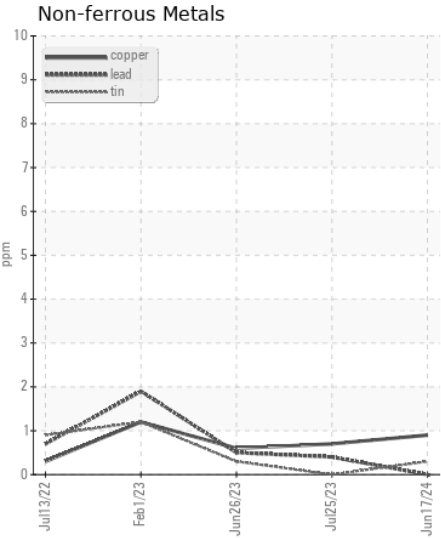
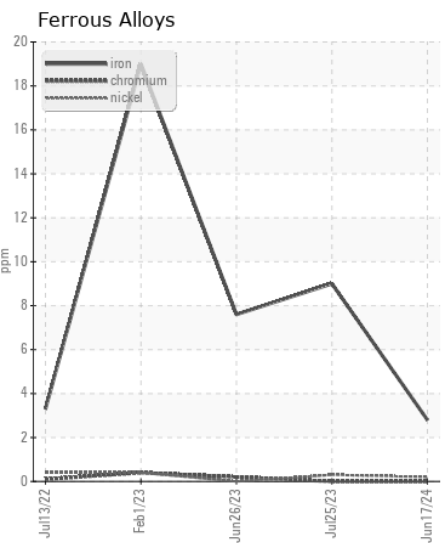
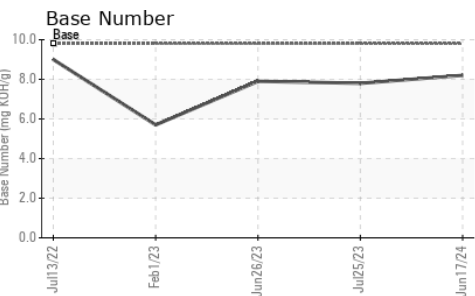
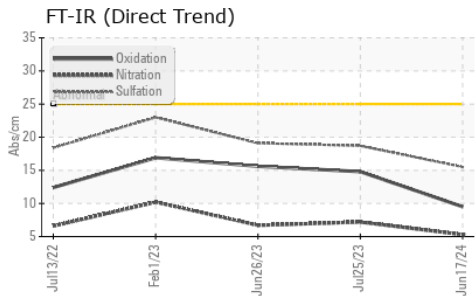
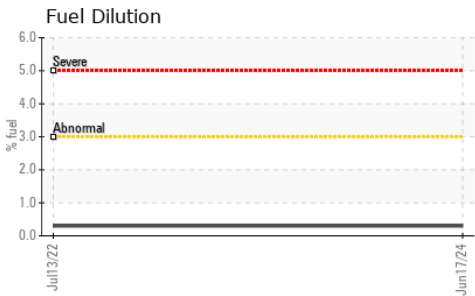
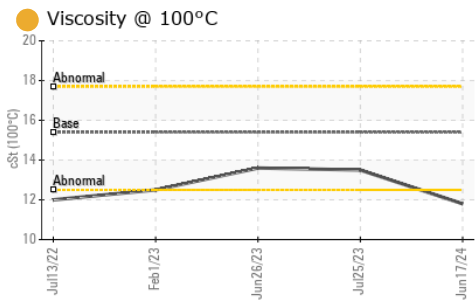
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	4	3	3
Potassium	ppm	ASTM D5185m	>20	4	2	1
Fuel	%	ASTM D3524	>3.0	0.3	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	5.3	7.2	6.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	15.5	18.7	19.1
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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		<1	2	<1
Boron	ppm	ASTM D5185m	0	18	8	8
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	13	56	55
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	172	947	838
Calcium	ppm	ASTM D5185m	1070	2136	1156	1087
Phosphorus	ppm	ASTM D5185m	1150	976	1018	960
Zinc	ppm	ASTM D5185m	1270	1121	1246	1141
Sulfur	ppm	ASTM D5185m	2060	4335	3682	3254
Oxidation	Abs/.1mm	*ASTM D7414	>25	9.5	14.8	15.6
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.2	7.8	7.9
Visc @ 100°C	cSt	ASTM D445	15.4	11.8	13.5	13.6



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0115276 **Received** : 21 Jun 2024
Lab Number : 06217564 **Tested** : 26 Jun 2024
Unique Number : 11090428 **Diagnosed** : 26 Jun 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 642- Grand Rapids Hauling
 5826 Alden Nash Ave SE
 Lowell, MI
 US 49331
 Contact: Chad Crosby
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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)