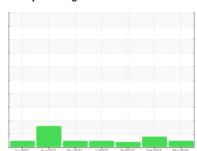


OIL ANALYSIS REPORT

Sample Rating Trend









Machine Id 189M Component
Diesel Engine

PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

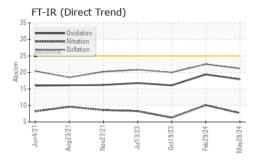
Fluid Condition

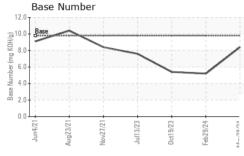
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

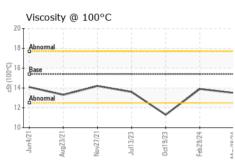
Sample Number Client Info GFL0122542 GFL0108944 GFL009316 Sample Date Client Info 28 May 2024 29 Feb 2024 19 Oct 2025 19	N 3HP 13W40 (-	GAL)	Junzuzi	Aug2021 100V2021	JUIZUZ3 UCIZUZ3 P60ZUZ4	Mdy2024	
Sample Date	SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 17256 16576 15744 15159 Oil Age hrs Client Info 16576 15744 15159 Oil Age hrs Client Info 16576 15744 15159 Sample Status NORMAL ABNORMAL ATTENTION Fuel	Sample Number		Client Info		GFL0122542	GFL0108944	GFL009316
Dil Age	Sample Date		Client Info		28 May 2024	29 Feb 2024	19 Oct 2023
Client Info	Machine Age	hrs	Client Info		17256	16576	15744
NORMAL ABNORMAL ATTENTION	Oil Age	hrs	Client Info		16576	15744	15159
CONTAMINATION	Oil Changed		Client Info		Changed	Changed	Changed
Fuel	Sample Status				NORMAL	ABNORMAL	ATTENTION
Water WC Method >0.2 NEG NEG NEG Glycol WC Method NEG NEG NEG WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >120 8 23 10 Chromium ppm ASTM D5185m >20 0 1 <1 Nickel ppm ASTM D5185m >5 <1 7 2 Silver ppm ASTM D5185m >2 0 <1 <1 Silver ppm ASTM D5185m >2 0 0 0 Aluminum ppm ASTM D5185m >20 <1 3 3 Lead ppm ASTM D5185m >40 <1 <1 <1 <1 Copper ppm ASTM D5185m >15 0 <1 1 <1 Vanadium ppm ASTM D5185m >15 0 <1 1 <td>CONTAMINAT</td> <td>ΓΙΟΝ</td> <td>method</td> <td>limit/base</td> <td>current</td> <td>history1</td> <td>history2</td>	CONTAMINAT	ΓΙΟΝ	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>3.0	<1.0	<1.0	0.9
WEAR METALS	Water		WC Method	>0.2	NEG	NEG	NEG
Chromium	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >20 0 1 <1 <1 Nickel ppm ASTM D5185m >5 <1 ▲ 7 2 Titanium ppm ASTM D5185m >5 <1 ▲ 7 2 2 Titanium ppm ASTM D5185m >2 0 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1<	WEAR METAL	_S	method	limit/base	current	history1	history2
Nickel	ron	ppm	ASTM D5185m	>120	8	23	10
Description	Chromium	ppm	ASTM D5185m	>20	0	1	<1
Silver	Nickel	ppm	ASTM D5185m	>5	<1	<u>^</u> 7	2
Aluminum	Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Lead	Silver	ppm	ASTM D5185m	>2	0	0	0
Copper ppm ASTM D5185m >330 0 2 2 Tin ppm ASTM D5185m >15 0 <1	Aluminum	ppm	ASTM D5185m	>20	<1	3	3
Tin	Lead	ppm	ASTM D5185m	>40	<1	<1	<1
Vanadium ppm ASTM D5185m 0 <1 0 Cadmium ppm ASTM D5185m 0 0 <1 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 2 <1 5 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 0 0 <1 <1 Magnesium ppm ASTM D5185m 1070 1028 1105 720 Phosphorus ppm ASTM D5185m 1270 1214 1310 915 Sulfur ppm ASTM D5185m 2060 3050 2666 2016 CONTAMINANTS method limit/base current history1 history2 Solicon ppm ASTM D5185m >25 2 <t< td=""><td>Copper</td><td>ppm</td><td>ASTM D5185m</td><td>>330</td><td>0</td><td>2</td><td>2</td></t<>	Copper	ppm	ASTM D5185m	>330	0	2	2
ADDITIVES	Tin	ppm	ASTM D5185m	>15	0	<1	1
ADDITIVES	Vanadium	ppm	ASTM D5185m		0	<1	0
Barium	Cadmium	ppm	ASTM D5185m		0	0	<1
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 60 57 64 38 Manganese ppm ASTM D5185m 0 0 <1 <1 Magnesium ppm ASTM D5185m 1010 921 969 645 Calcium ppm ASTM D5185m 1070 1028 1105 720 Phosphorus ppm ASTM D5185m 1150 972 1024 686 Zinc ppm ASTM D5185m 1270 1214 1310 915 Sulfur ppm ASTM D5185m 2060 3050 2666 2016 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 4 5 Sodium ppm ASTM D5185m >20 0 2 3 INFRA-RED method limit/base current history1 history2 Soot % *ASTM D7844 >4 <th< td=""><td>Boron</td><td>ppm</td><td>ASTM D5185m</td><td>0</td><td>2</td><td><1</td><td>5</td></th<>	Boron	ppm	ASTM D5185m	0	2	<1	5
Manganese ppm ASTM D5185m 0 0 <1 <1 Magnesium ppm ASTM D5185m 1010 921 969 645 Calcium ppm ASTM D5185m 1070 1028 1105 720 Phosphorus ppm ASTM D5185m 1150 972 1024 686 Zinc ppm ASTM D5185m 1270 1214 1310 915 Sulfur ppm ASTM D5185m 2060 3050 2666 2016 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 4 5 Sodium ppm ASTM D5185m >20 0 2 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.4 0.8 0.3 Nitration Abs/am *ASTM D7415<	Barium	ppm	ASTM D5185m	0	0	0	0
Magnesium ppm ASTM D5185m 1010 921 969 645 Calcium ppm ASTM D5185m 1070 1028 1105 720 Phosphorus ppm ASTM D5185m 1150 972 1024 686 Zinc ppm ASTM D5185m 1270 1214 1310 915 Sulfur ppm ASTM D5185m 2060 3050 2666 2016 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 4 5 Sodium ppm ASTM D5185m >20 0 2 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.4 0.8 0.3 Nitration Abs/.1mm *ASTM D78415 >30 21.2 22.5 20.0 FLUID DEGRADATION method l	Molybdenum	ppm	ASTM D5185m	60	57	64	38
Calcium ppm ASTM D5185m 1070 1028 1105 720 Phosphorus ppm ASTM D5185m 1150 972 1024 686 Zinc ppm ASTM D5185m 1270 1214 1310 915 Sulfur ppm ASTM D5185m 2060 3050 2666 2016 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 4 5 Sodium ppm ASTM D5185m >20 0 2 3 Potassium ppm ASTM D5185m >20 0 2 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.4 0.8 0.3 Nitration Abs/.1mm *ASTM D7415 >30 21.2 22.5 20.0 FLUID DEGRADATION method <td>Manganese</td> <td>ppm</td> <td>ASTM D5185m</td> <td>0</td> <td>0</td> <td><1</td> <td><1</td>	Manganese	ppm	ASTM D5185m	0	0	<1	<1
Phosphorus ppm ASTM D5185m 1150 972 1024 686 Zinc ppm ASTM D5185m 1270 1214 1310 915 Sulfur ppm ASTM D5185m 2060 3050 2666 2016 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 4 5 Sodium ppm ASTM D5185m >20 0 2 3 Potassium ppm ASTM D5185m >20 0 2 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.4 0.8 0.3 Nitration Abs/cm *ASTM D7415 >30 21.2 22.5 20.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *AS	Magnesium	ppm	ASTM D5185m	1010	921	969	645
Zinc ppm ASTM D5185m 1270 1214 1310 915	Calcium	ppm	ASTM D5185m	1070	1028	1105	720
Sulfur ppm ASTM D5185m 2060 3050 2666 2016 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 4 5 Sodium ppm ASTM D5185m 4 5 4 Potassium ppm ASTM D5185m >20 0 2 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.4 0.8 0.3 Nitration Abs/cm *ASTM D7624 >20 7.7 10.1 6.3 Sulfation Abs/.1mm *ASTM D7415 >30 21.2 22.5 20.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.9 19.4 16.1	Phosphorus	ppm	ASTM D5185m	1150	972	1024	686
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 2 4 5 Sodium ppm ASTM D5185m 4 5 4 Potassium ppm ASTM D5185m >20 0 2 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.4 0.8 0.3 Nitration Abs/cm *ASTM D7624 >20 7.7 10.1 6.3 Sulfation Abs/.1mm *ASTM D7415 >30 21.2 22.5 20.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.9 19.4 16.1	Zinc	ppm	ASTM D5185m	1270	1214	1310	915
Silicon ppm ASTM D5185m >25 2 4 5 Sodium ppm ASTM D5185m 4 5 4 Potassium ppm ASTM D5185m >20 0 2 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.4 0.8 0.3 Nitration Abs/cm *ASTM D7624 >20 7.7 10.1 6.3 Sulfation Abs/.1mm *ASTM D7415 >30 21.2 22.5 20.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.9 19.4 16.1	Sulfur	ppm	ASTM D5185m	2060	3050	2666	2016
Sodium ppm ASTM D5185m 4 5 4 Potassium ppm ASTM D5185m >20 0 2 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.4 0.8 0.3 Nitration Abs/cm *ASTM D7624 >20 7.7 10.1 6.3 Sulfation Abs/.1mm *ASTM D7415 >30 21.2 22.5 20.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.9 19.4 16.1	CONTAMINA	NTS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 0 2 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.4 0.8 0.3 Nitration Abs/cm *ASTM D7624 >20 7.7 10.1 6.3 Sulfation Abs/.1mm *ASTM D7415 >30 21.2 22.5 20.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.9 19.4 16.1	Silicon	ppm	ASTM D5185m	>25	2	4	5
INFRA-RED	Sodium	ppm	ASTM D5185m		4	5	4
Soot % % *ASTM D7844 >4 0.4 0.8 0.3 Nitration Abs/cm *ASTM D7624 >20 7.7 10.1 6.3 Sulfation Abs/.1mm *ASTM D7415 >30 21.2 22.5 20.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.9 19.4 16.1	Potassium	ppm	ASTM D5185m	>20	0	2	3
Nitration Abs/cm *ASTM D7624 >20 7.7 10.1 6.3 Sulfation Abs/.1mm *ASTM D7415 >30 21.2 22.5 20.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.9 19.4 16.1	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 21.2 22.5 20.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.9 19.4 16.1	Soot %	%	*ASTM D7844	>4	0.4	0.8	0.3
Sulfation Abs/.1mm *ASTM D7415 >30 21.2 22.5 20.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 17.9 19.4 16.1	Nitration	Abs/cm	*ASTM D7624	>20	7.7	10.1	6.3
Oxidation	Sulfation			>30			
	FLUID DEGRA	DATION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	17.9	19.4	16.1
	Base Number (BN)		ASTM D2896		8.4	5.2	5.4



OIL ANALYSIS REPORT



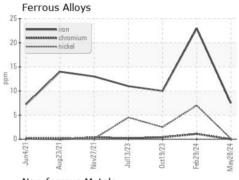




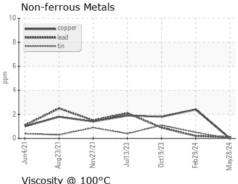
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

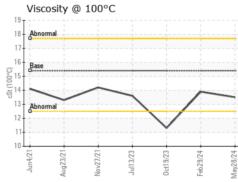
Visc @ 100°C	cSt	ASTM D445	15.4	13.5	13.9	11.3

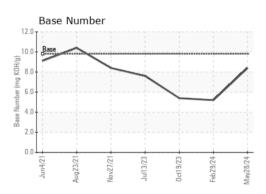
GRAPHS



FLUID PROPERTIES method limit/base











Certificate 12367

Sample No.

: GFL0122542 Lab Number : 06195201 Unique Number : 11057324 Test Package : FLEET

To discuss this sample report, contact Customer Service at 1-800-237-1369.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 30 May 2024 **Tested** : 31 May 2024

Diagnosed : 31 May 2024 - Wes Davis

GFL Environmental - 415 - Michigan East 6200 Elmridge

Sterling Heights, MI US 48313 Contact: Frank Wolak fwolak@gflenv.com T: (586)825-9514

* - 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)