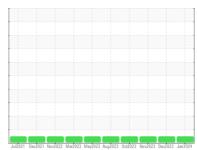


OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id 567M Component Diesel Engine Fluid PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil

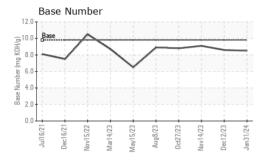
Fluid Condition

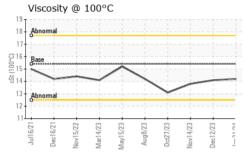
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sample Number Client Info GFL0108847 GFL0105615 GFL009314 Sample Date Client Info 31 Jan 2024 12 Dec 2023 14 Nov 2023 14	OAMBLE WEST	4 A T. G.					
Sample Date	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 11915 18961 18961 18961 11324	Sample Number		Client Info		GFL0108847	GFL0105615	GFL0093140
Oil Age hrs Client Info 18961 18961 11324 Oil Changed Sample Status Client Info Changed Changed Not Changed Not Changed Nor Chan	Sample Date		Client Info		31 Jan 2024	12 Dec 2023	14 Nov 2023
Cilent Info	Machine Age	hrs	Client Info		11915	18961	18961
NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 history2 NEG NEG	Oil Age	hrs			18961	18961	11324
CONTAMINATION method limit/base current history1 history2 Fuel WC Method >3.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0	Oil Changed		Client Info		Changed	Not Changd	Changed
Fuel	Sample Status				NORMAL	NORMAL	NORMAL
Water WC Method >0.2 NEG NEG NEG Glycol WC Method Imit/base Current history1 history2 WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >90 15 13 14 Chromium ppm ASTM D5185m >20 1 <1 1 Nickel ppm ASTM D5185m >2 <1 <1 0 <1 Silver ppm ASTM D5185m >2 <1 0 0 0 Silver ppm ASTM D5185m >2 4 2 4 2 4 Lead ppm ASTM D5185m >40 -1 <1 0 <-1 1 0 <-1 1 0 <-1 1 0 <-1 1 0 <-1 <-1 <-1 <-1 <-1 <-1 <-1 <-1 <-1 <-1 </th <th>CONTAMINAT</th> <th>ION</th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	CONTAMINAT	ION	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
WEAR METALS	Water		WC Method	>0.2	NEG	NEG	NEG
Irron	Glycol		WC Method		NEG	NEG	NEG
Chromium	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>90	15	13	14
Titanium	Chromium	ppm	ASTM D5185m	>20	1	<1	1
Silver	Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Aluminum	Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Lead	Silver	ppm	ASTM D5185m	>2	0	0	0
Copper ppm ASTM D5185m >330 1 6 6 Tin ppm ASTM D5185m >15 <1	Aluminum	ppm	ASTM D5185m	>20	4	2	4
Tin	Lead	ppm	ASTM D5185m	>40	<1	<1	0
Vanadium ppm ASTM D5185m <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 <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	Copper	ppm	ASTM D5185m	>330	1	6	6
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 <1	Tin	ppm	ASTM D5185m	>15	<1	0	<1
ADDITIVES	Vanadium	ppm	ASTM D5185m		<1	<1	<1
Boron ppm ASTM D5185m 0 0 0 0 0 0 0 0	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 60 53 56 53 Manganese ppm ASTM D5185m 0 <1 0 <1 Magnesium ppm ASTM D5185m 1010 935 916 869 Calcium ppm ASTM D5185m 1070 992 1052 1022 Phosphorus ppm ASTM D5185m 1150 1086 1021 959 Zinc ppm ASTM D5185m 1270 1195 1282 1215 Sulfur ppm ASTM D5185m 2060 2738 2578 2825 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 6 5 Sodium ppm ASTM D5185m >20 5 1 3 INFRA-RED method limit/base <th>ADDITIVES</th> <th></th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 60 53 56 53 Manganese ppm ASTM D5185m 0 <1 0 <1 Magnesium ppm ASTM D5185m 1010 935 916 869 Calcium ppm ASTM D5185m 1070 992 1052 1022 Phosphorus ppm ASTM D5185m 1150 1086 1021 959 Zinc ppm ASTM D5185m 1270 1195 1282 1215 Sulfur ppm ASTM D5185m 2060 2738 2578 2825 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 6 5 Sodium ppm ASTM D5185m >20 5 1 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 <t< td=""><td>Boron</td><td>ppm</td><td>ASTM D5185m</td><td>0</td><th>0</th><td><1</td><td>1</td></t<>	Boron	ppm	ASTM D5185m	0	0	<1	1
Manganese ppm ASTM D5185m 0 <1 0 <1 Magnesium ppm ASTM D5185m 1010 935 916 869 Calcium ppm ASTM D5185m 1070 992 1052 1022 Phosphorus ppm ASTM D5185m 1150 1086 1021 959 Zinc ppm ASTM D5185m 1270 1195 1282 1215 Sulfur ppm ASTM D5185m 2060 2738 2578 2825 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 6 5 Sodium ppm ASTM D5185m 3 2 5 Potassium ppm ASTM D5185m >20 5 1 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20	Barium	ppm	ASTM D5185m	0	0	0	0
Magnesium ppm ASTM D5185m 1010 935 916 869 Calcium ppm ASTM D5185m 1070 992 1052 1022 Phosphorus ppm ASTM D5185m 1150 1086 1021 959 Zinc ppm ASTM D5185m 1270 1195 1282 1215 Sulfur ppm ASTM D5185m 2060 2738 2578 2825 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 6 5 Sodium ppm ASTM D5185m >20 5 1 3 Potassium ppm ASTM D5185m >20 5 1 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.4 0.3 0.3 Nitration Abs/cm *ASTM D7415	Molybdenum	ppm	ASTM D5185m	60	53	56	53
Calcium ppm ASTM D5185m 1070 992 1052 1022 Phosphorus ppm ASTM D5185m 1150 1086 1021 959 Zinc ppm ASTM D5185m 1270 1195 1282 1215 Sulfur ppm ASTM D5185m 2060 2738 2578 2825 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 6 5 Sodium ppm ASTM D5185m >20 5 1 3 Potassium ppm ASTM D5185m >20 5 1 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.4 0.3 0.3 Nitration Abs/.1mm *ASTM D7415 >30 19.2 18.7 18.8 FLUID DEGRADATION *ASTM D7414 >2	Manganese	ppm	ASTM D5185m	0	<1	0	<1
Phosphorus ppm ASTM D5185m 1150 1086 1021 959 Zinc ppm ASTM D5185m 1270 1195 1282 1215 Sulfur ppm ASTM D5185m 2060 2738 2578 2825 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 6 5 Sodium ppm ASTM D5185m 3 2 5 Potassium ppm ASTM D5185m >20 5 1 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.4 0.3 0.3 Nitration Abs/cm *ASTM D7415 >30 19.2 18.7 18.8 FLUID DEGRADATION *ASTM D7414 >25 15.9 14.9 15.3	Magnesium	ppm	ASTM D5185m	1010	935	916	869
Zinc ppm ASTM D5185m 1270 1195 1282 1215 Sulfur ppm ASTM D5185m 2060 2738 2578 2825 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 6 5 Sodium ppm ASTM D5185m 3 2 5 Potassium ppm ASTM D5185m >20 5 1 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.4 0.3 0.3 Nitration Abs/cm *ASTM D7624 >20 8.8 7.3 7.7 Sulfation Abs/.1mm *ASTM D7415 >30 19.2 18.7 18.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D741	Calcium	ppm	ASTM D5185m	1070	992	1052	1022
Sulfur ppm ASTM D5185m 2060 2738 2578 2825 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 6 5 Sodium ppm ASTM D5185m 3 2 5 Potassium ppm ASTM D5185m >20 5 1 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.4 0.3 0.3 Nitration Abs/cm *ASTM D7624 >20 8.8 7.3 7.7 Sulfation Abs/.1mm *ASTM D7415 >30 19.2 18.7 18.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.9 14.9 15.3	Phosphorus	ppm	ASTM D5185m	1150	1086	1021	959
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 6 6 5 Sodium ppm ASTM D5185m 3 2 5 Potassium ppm ASTM D5185m >20 5 1 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.4 0.3 0.3 Nitration Abs/cm *ASTM D7624 >20 8.8 7.3 7.7 Sulfation Abs/.1mm *ASTM D7415 >30 19.2 18.7 18.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.9 14.9 15.3	Zinc	ppm	ASTM D5185m	1270	1195	1282	1215
Silicon ppm ASTM D5185m >25 6 6 5 Sodium ppm ASTM D5185m 3 2 5 Potassium ppm ASTM D5185m >20 5 1 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.4 0.3 0.3 Nitration Abs/cm *ASTM D7624 >20 8.8 7.3 7.7 Sulfation Abs/.1mm *ASTM D7415 >30 19.2 18.7 18.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.9 14.9 15.3	Sulfur	ppm	ASTM D5185m	2060	2738	2578	2825
Sodium ppm ASTM D5185m 3 2 5 Potassium ppm ASTM D5185m >20 5 1 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.4 0.3 0.3 Nitration Abs/cm *ASTM D7624 >20 8.8 7.3 7.7 Sulfation Abs/.1mm *ASTM D7415 >30 19.2 18.7 18.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.9 14.9 15.3	CONTAMINAN	TS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 5 1 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.4 0.3 0.3 Nitration Abs/cm *ASTM D7624 >20 8.8 7.3 7.7 Sulfation Abs/.1mm *ASTM D7415 >30 19.2 18.7 18.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.9 14.9 15.3	Silicon	ppm	ASTM D5185m	>25	6	6	5
INFRA-RED	Sodium	ppm	ASTM D5185m		3	2	5
Soot % % *ASTM D7844 >6 0.4 0.3 0.3 Nitration Abs/cm *ASTM D7624 >20 8.8 7.3 7.7 Sulfation Abs/.1mm *ASTM D7415 >30 19.2 18.7 18.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.9 14.9 15.3	Potassium	ppm	ASTM D5185m	>20	5	1	3
Nitration Abs/cm *ASTM D7624 >20 8.8 7.3 7.7 Sulfation Abs/.1mm *ASTM D7415 >30 19.2 18.7 18.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.9 14.9 15.3	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 19.2 18.7 18.8 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.9 14.9 15.3	Soot %	%	*ASTM D7844	>6	0.4	0.3	0.3
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.9 14.9 15.3	Nitration	Abs/cm	*ASTM D7624	>20	8.8	7.3	7.7
Oxidation Abs/.1mm *ASTM D7414 >25 15.9 14.9 15.3	Sulfation	Abs/.1mm	*ASTM D7415	>30	19.2	18.7	18.8
	FLUID DEGRAD	DATION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 9.8 8.5 8.6 9.1	Oxidation	Abs/.1mm	*ASTM D7414	>25	15.9	14.9	15.3
	Base Number (BN)	mg KOH/g	ASTM D2896	9.8	8.5	8.6	9.1



OIL ANALYSIS REPORT

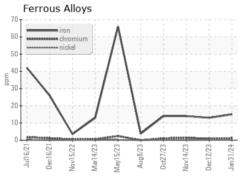


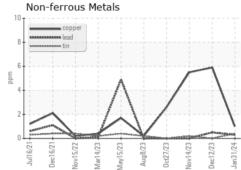


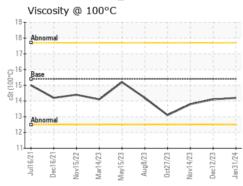
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

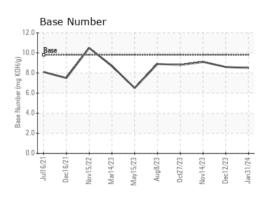
FLUID PROPE	RHES	metnoa	ilmit/base	current	nistory i	nistory2
Visc @ 100°C	cSt	ASTM D445	15.4	14.2	14.1	13.8

GRAPHS













Certificate L2367

Laboratory Sample No. Lab Number Test Package : FLEET

: GFL0108847 : 06079475 Unique Number : 10861566

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Recieved Diagnosed

: 05 Feb 2024 : 05 Feb 2024 Diagnostician : Wes Davis

GFL Environmental - 415 - Michigan East 6200 Elmridge

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

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)