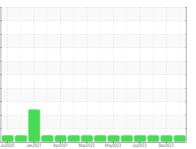


OIL ANALYSIS REPORT

Sample Rating Trend





NORMAL

Sample Number Client Info GFL011275S GFL010129B GFL009178 amohine Age No Client Info 02 Mar 2024 27 Dec 2025 13 Oct 2021 mmal. Oil Age hirs Client Info 02 Mar 2024 27 Dec 2025 13 Oct 2023 itamination in the Oil Changed Client Info 0 19435 19010 attamination of the CONTAMINATION method Init/base current Nato Changed Not Changed		_ ,		Jul2020 Ja	an2021 Apr2021 Ma	y2022 May2023 Jul2023	Dec2023	
erval to monitor. Sample Date Client Info 192 Mar 2024 27 Dec 2023 13 Oct 2023 mmal. Oil Age hrs Client Info 19435 19435 19400 ormal. Oil Age hrs Client Info Not Changd Not Changd <t< th=""><th></th><th>SAMPLE INFORM</th><th>ATION</th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></t<>		SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 19916 19435 19010 oll Age hrs Client Info 0 19435 0 tamination in the Sample Status I Not Changd Not Changd Not Changd e is suitable E E WC Method 3.0 <1.0		Sample Number		Client Info		GFL0112755	GFL0101298	GFL0091789
Imal. Oil Aage hrs Client Info Not Changd	erval to monitor.	Sample Date		Client Info		02 Mar 2024	27 Dec 2023	13 Oct 2023
Dil Changed Client Info Not Changd NORMAL Not Changd NORMAL Not Changd NORMAL Not Changd NORMAL e is suitable e condition of the condition of the CONTAMINATION method Joint Changed NEG NEG NEG NEG P is suitable e condition of the Full WC Method >3.0 -1.0 <1.0		Machine Age	nrs	Client Info		19916	19435	19010
Sample Status NORMAL NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 P is suitable Fuel WC Method >3.0 <1.0	rmal.	Oil Age	nrs	Client Info		0	19435	0
CONTAMINATION method limit/base current history1 history2 p is suitable o condition of the Fuel WC Method >3.0 <1.0		Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
P is suitable Fuel WC Method >3.0 <1.0 <1.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG NEG NEG Glycol WC Method >0.2 NEG NEG NEG NEG Iron ppm ASTU 05186m >120 2 5 2 Chromium ppm ASTU 05186m >20 0 <1	tamination in the	Sample Status				NORMAL	NORMAL	NORMAL
Water WC Method >0.2 NEG NEG NEG Bycol WC Method NEG NEG NEG NEG Water ppm ASTM 05185m >120 2 5 2 Iron ppm ASTM 05185m >20 0 <1		CONTAMINATIC	N	method	limit/base	current	history1	history2
Water WC Method >0.2 NEG NEG NEG NEG Glycol WC Method WEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM 05185m >20 0 <1	nic cuitable	Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Glycol WC Method NEG NEG NEG WEAR METALS renthod imit/base current history1 history2 Iron ppm ASTM D5186m >20 0 <1		Water		WC Method	>0.2	NEG	NEG	NEG
Iron ppm ASTM D5185m >120 2 5 2 Chromium ppm ASTM D5185m >20 0 <1		Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >20 0 <1 1 Nickel ppm ASTM D5185m >5 0 0 0 Silver ppm ASTM D5185m >2 0 <1		WEAR METALS		method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >5 0 0 0 Titanium ppm ASTM D5185m >2 0 <1		Iron	opm	ASTM D5185m	>120	2	5	2
Titanium ppm ASTM D5185m >2 0 <1 0 Silver ppm ASTM D5185m >2 0 0 0 Auminum ppm ASTM D5185m >20 2 2 <1		Chromium	opm	ASTM D5185m	>20	0	<1	1
Titanium ppm ASTM D5185m >2 0 <1 0 Silver ppm ASTM D5185m >20 2 0 0 0 Auminum ppm ASTM D5185m >20 2 2 <1		Nickel	opm	ASTM D5185m	>5	0	0	0
Aluminum ppm ASTM D5185m >20 2 2 <1 Lead ppm ASTM D5185m >40 0 0 0 Copper ppm ASTM D5185m >330 0 2 <1				ASTM D5185m	>2	0	<1	0
Aluminum ppm ASTM D5185m >20 2 2 <1 Lead ppm ASTM D5185m >40 0 0 0 Copper ppm ASTM D5185m >330 0 2 <1				ASTM D5185m	>2	0	0	
Lead ppm ASTM D5185m >40 0 0 0 Copper ppm ASTM D5185m >330 0 2 <1				ASTM D5185m	>20	2	2	<1
Copper ppm ASTM D5185m >330 0 2 <1 Tin ppm ASTM D5185m >15 0 <1				ASTM D5185m	>40	0	0	0
Tin ppm ASTM D5185m >15 0 <1 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 2 4 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 <1				ASTM D5185m	>330	0	2	<1
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 2 4 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 <1						0		
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 2 4 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 <1							0	0
Boron ppm ASTM D5185m 0 0 2 4 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 60 58 59 55 Manganese ppm ASTM D5185m 0 <1 0 Magnesium ppm ASTM D5185m 1010 983 966 842 Calcium ppm ASTM D5185m 1010 983 966 842 Calcium ppm ASTM D5185m 1070 1069 1074 955 Zinc ppm ASTM D5185m 1270 1276 1318 1095 Sulfur ppm ASTM D5185m 2060 3049 3028 2857 Silicon ppm ASTM D5185m >20 3 4 3 Sodium ppm ASTM D5185m >20 0 3 1 INFRA-RED method limit/base current history						0		
Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 60 58 59 55 Manganese ppm ASTM D5185m 0 <1 <1 0 Magnesium ppm ASTM D5185m 1010 983 966 842 Calcium ppm ASTM D5185m 1070 1069 1074 956 Phosphorus ppm ASTM D5185m 1570 1276 1318 1095 Sulfur ppm ASTM D5185m 1270 1276 1318 1095 Sulfur ppm ASTM D5185m 2060 3049 3028 2857 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 0 3 1 INFRA-RED method limit/base current history1 history2 Soot % % 'ASTM D7844 <		ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 60 58 59 55 Manganese ppm ASTM D5185m 0 <1		Boron	opm	ASTM D5185m	0	0	2	4
Marganese ppm ASTM D5185m 0 <1 <1 0 Magnesium ppm ASTM D5185m 1010 983 966 842 Calcium ppm ASTM D5185m 1070 1069 1074 956 Phosphorus ppm ASTM D5185m 1150 1050 971 955 Zinc ppm ASTM D5185m 1270 1276 1318 1095 Sulfur ppm ASTM D5185m 2060 3049 3028 2857 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 4 3 Sodium ppm ASTM D5185m >20 0 3 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.2 0.2 0.1 Nitration Abs/cm *ASTM D7824		Barium	opm	ASTM D5185m	0	0	0	0
Magnesium ppm ASTM D5185m 1010 983 966 842 Calcium ppm ASTM D5185m 1070 1069 1074 956 Phosphorus ppm ASTM D5185m 1150 1050 971 955 Zinc ppm ASTM D5185m 1270 1276 1318 1095 Sulfur ppm ASTM D5185m 2060 3049 3028 2857 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 4 3 Sodium ppm ASTM D5185m >20 0 3 1 NFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.2 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 6.4 8.3 5.4 Sulfation Abs/lm *ASTM D7415 >30 17.8 18.7 17.0 FLUID DEGRADATION met		Molybdenum	opm	ASTM D5185m	60	58	59	55
Calcium ppm ASTM D5185m 1070 1069 1074 956 Phosphorus ppm ASTM D5185m 1150 1050 971 955 Zinc ppm ASTM D5185m 1270 1276 1318 1095 Sulfur ppm ASTM D5185m 2060 3049 3028 2857 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 4 3 Sodium ppm ASTM D5185m >20 0 2 0 Potassium ppm ASTM D5185m >20 0 3 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.2 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 6.4 8.3 5.4 Sulfation Abs/.1mm *ASTM D7415 >30 17.8 18.7 17.0 FLUID DEGRADATION method		Manganese	opm	ASTM D5185m	0	<1	<1	0
Phosphorus ppm ASTM D5185m 1150 1050 971 955 Zinc ppm ASTM D5185m 1270 1276 1318 1095 Sulfur ppm ASTM D5185m 2060 3049 3028 2857 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 4 3 Sodium ppm ASTM D5185m >25 3 4 3 Sodium ppm ASTM D5185m >20 0 2 0 Potassium ppm ASTM D5185m >20 0 3 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.2 0.2 0.1 Nitration Abs/cm *ASTM D7844 >4 0.2 0.2 0.1 Sulfation Abs/.tmm *ASTM D7844 2		Magnesium	opm	ASTM D5185m	1010	983	966	842
Zinc ppm ASTM D5185m 1270 1276 1318 1095 Sulfur ppm ASTM D5185m 2060 3049 3028 2857 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 4 3 Sodium ppm ASTM D5185m >25 3 4 3 Sodium ppm ASTM D5185m >20 0 2 0 Potassium ppm ASTM D5185m >20 0 3 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.2 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 6.4 8.3 5.4 Sulfation Abs/.1mm *ASTM D7415 >30 17.8 18.7 17.0 FLUID DEGRADATION method limit/base				ASTM D5185m	1070	1069	1074	956
Zinc ppm ASTM D5185m 1270 1276 1318 1095 Sulfur ppm ASTM D5185m 2060 3049 3028 2857 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 4 3 Sodium ppm ASTM D5185m >20 0 2 0 Potassium ppm ASTM D5185m >20 0 3 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.2 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 6.4 8.3 5.4 Sulfation Abs/1mm *ASTM D7615 >30 17.8 18.7 17.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/1mm *ASTM D7414 <td></td> <td>Phosphorus</td> <td>opm</td> <td>ASTM D5185m</td> <td>1150</td> <th>1050</th> <td>971</td> <td>955</td>		Phosphorus	opm	ASTM D5185m	1150	1050	971	955
SulfurppmASTM D5185m2060304930282857CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>25343SodiumppmASTM D5185m>20020PotassiumppmASTM D5185m>20031INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>40.20.20.1NitrationAbs/cm*ASTM D7624>206.48.35.4SulfationAbs/.1mm*ASTM D7415>3017.818.717.0FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2514.515.713.4				ASTM D5185m	1270	1276	1318	1095
Silicon ppm ASTM D5185m >25 3 4 3 Sodium ppm ASTM D5185m 0 2 0 Potassium ppm ASTM D5185m >20 0 3 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >4 0.2 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 6.4 8.3 5.4 Sulfation Abs/.1mm *ASTM D7415 >30 17.8 18.7 17.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.5 15.7 13.4		Sulfur	opm	ASTM D5185m	2060	3049	3028	2857
Sodium ppm ASTM D5185m 0 2 0 Potassium ppm ASTM D5185m >20 0 3 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.2 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 6.4 8.3 5.4 Sulfation Abs/.1mm *ASTM D7415 >30 17.8 18.7 17.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.5 15.7 13.4		CONTAMINANT	S	method	limit/base	current	history1	history2
Sodium ppm ASTM D5185m 0 2 0 Potassium ppm ASTM D5185m >20 0 3 1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.2 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 6.4 8.3 5.4 Sulfation Abs/.1mm *ASTM D7415 >30 17.8 18.7 17.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.5 15.7 13.4		Silicon	opm	ASTM D5185m	>25	3	4	3
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.2 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 6.4 8.3 5.4 Sulfation Abs/.1mm *ASTM D7415 >30 17.8 18.7 17.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.5 15.7 13.4		Sodium	opm	ASTM D5185m		0	2	0
Soot % % *ASTM D7844 >4 0.2 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 6.4 8.3 5.4 Sulfation Abs/.1mm *ASTM D7415 >30 17.8 18.7 17.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.5 15.7 13.4		Potassium	opm	ASTM D5185m	>20	0	3	1
Nitration Abs/cm *ASTM D7624 >20 6.4 8.3 5.4 Sulfation Abs/.1mm *ASTM D7415 >30 17.8 18.7 17.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.5 15.7 13.4		INFRA-RED		method	limit/base	current	history1	history2
Nitration Abs/cm *ASTM D7624 >20 6.4 8.3 5.4 Sulfation Abs/.1mm *ASTM D7415 >30 17.8 18.7 17.0 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.5 15.7 13.4		Soot %	%	*ASTM D7844	>4	0.2	0.2	0.1
SulfationAbs/.1mm*ASTM D7415>3017.818.717.0FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.1mm*ASTM D7414>2514.515.713.4		Nitration	Abs/cm	*ASTM D7624	>20			5.4
Oxidation Abs/.1mm *ASTM D7414 >25 14.5 15.7 13.4			Abs/.1mm					
		FLUID DEGRADA		method	limit/base	current	history1	history2
		Oxidation	Abs/.1mm	*ASTM D7414	>25	14.5	15.7	13.4
			ng KOH/g			8.4	6.9	8.6

Machine Id 425017-415

Component **Diesel Engine**

Fluic PETRO CANADA DURON SHP 15W40 (--- LTR)

DIAGNOSIS

Recommendation

Resample at the next service in

Wear

All component wear rates are no

Contamination

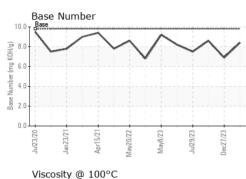
There is no indication of any co oil.

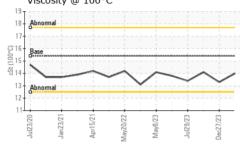
Fluid Condition

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

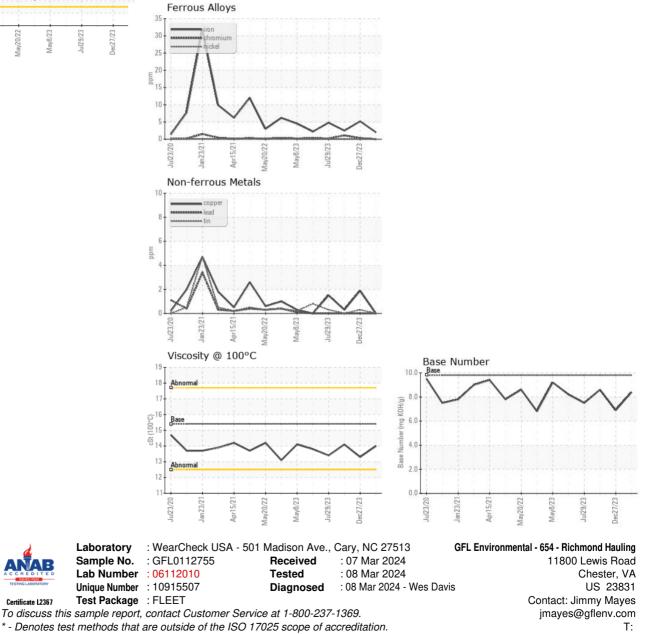


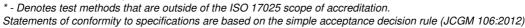
OIL ANALYSIS REPORT





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	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.0	13.3	14.1
GRAPHS						





Certificate L2367

Submitted By: TECHNICIAN ACCOUNT

F: