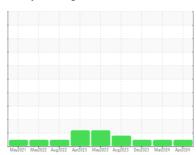


OIL ANALYSIS REPORT

Sample Rating Trend









Machine Id
4710M
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

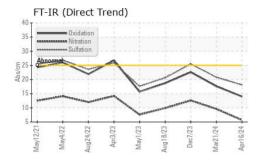
Fluid Condition

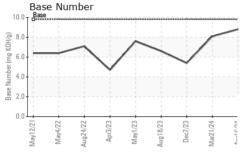
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

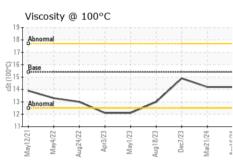
Sample Date	SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 10004 10004 9751	Sample Number		Client Info		GFL0116908	GFL0116939	GFL0107021
Oil Age	Sample Date		Client Info		16 Apr 2024	21 Mar 2024	07 Dec 2023
Contained Client Info Changed NA NORMAL NORMA	Machine Age	hrs	Client Info		10004	10004	9751
NORMAL NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 history2 NEG N	Oil Age	hrs	Client Info		600	600	600
NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 history2 water WC Method >5 <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 <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 <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 <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	Changed	N/A
Fuel	Sample Status						NORMAL
Water WC Method >0.2 NEG NEG NEG NEG Glycol WC Method Imitibase current history1 history2 WEAR METALS method limitibase current history1 history2 Iron ppm ASTM D5185m >80 4 17 40 Chromium ppm ASTM D5185m >5 <1 0 0 Nickel ppm ASTM D5185m >2 1 0 0 Silver ppm ASTM D5185m >2 1 0 0 Silver ppm ASTM D5185m >30 1 2 6 Aluminum ppm ASTM D5185m >30 1 0 <1 1 Copper ppm ASTM D5185m >5 1 <1 0 <1 Calcad ppm ASTM D5185m >5 1 <1 0 0 Cadmium ppm ASTM D5185m	CONTAMINA	TION	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>5	<1.0	<1.0	<1.0
WEAR METALS	Water		WC Method	>0.2	NEG	NEG	NEG
	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >5 <1 0 1 Nickel ppm ASTM D5185m >2 1 0 0 Titanium ppm ASTM D5185m >2 1 0 0 Silver ppm ASTM D5185m >30 1 0 0 Aluminum ppm ASTM D5185m >30 1 0 <1	WEAR METAI	LS	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>80	4	17	40
Titanium	Chromium	ppm	ASTM D5185m	>5	<1	0	1
Silver	Nickel	ppm	ASTM D5185m	>2	1	0	0
Silver	Titanium		ASTM D5185m		<1	0	0
Aluminum	Silver		ASTM D5185m	>3	<1	0	0
Lead	Aluminum		ASTM D5185m	>30	1	2	6
Copper ppm ASTM D5185m >150 1 <1 2 Tin ppm ASTM D5185m >5 1 <1					1		
Tin							
Vanadium ppm ASTM D5185m <1 0 0 Cadmium ppm ASTM D5185m 1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1 3 <1 Barium ppm ASTM D5185m 0 0 0 0 0 Molybdenum ppm ASTM D5185m 0 1 <1 0 0 Magnesium ppm ASTM D5185m 0 1 <1 0 0 Magnesium ppm ASTM D5185m 1070 1058 960 1234 Phosphorus ppm ASTM D5185m 1150 1116 895 1132 Zinc ppm ASTM D5185m 1270 1215 1159 1323 Sulfur ppm ASTM D5185m 2060 3593 3012 2788 CONTAMINANTS method limit/ba	• •						
Cadmium ppm ASTM D5185m 1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 <1							
ADDITIVES	Cadmium						
Boron	ADDITIVES	•••	method	limit/base	current	history1	history2
Barium	Boron	ppm	ASTM D5185m	0	<1	3	<1
Molybdenum ppm ASTM D5185m 60 56 50 60 Manganese ppm ASTM D5185m 0 1 <1 0 Magnesium ppm ASTM D5185m 1010 895 852 1085 Calcium ppm ASTM D5185m 1070 1058 960 1234 Phosphorus ppm ASTM D5185m 1150 1116 895 1132 Zinc ppm ASTM D5185m 1270 1215 1159 1323 Sulfur ppm ASTM D5185m 2060 3593 3012 2788 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 3 2 11 Sodium ppm ASTM D5185m 3 3 7 Potassium ppm ASTM D5185m >20 2 <1 3 INFRA-RED method limit/base current <td>Barium</td> <td>ppm</td> <td>ASTM D5185m</td> <td>0</td> <th>0</th> <td>0</td> <td>0</td>	Barium	ppm	ASTM D5185m	0	0	0	0
Manganese ppm ASTM D5185m 0 1 <1 0 Magnesium ppm ASTM D5185m 1010 895 852 1085 Calcium ppm ASTM D5185m 1070 1058 960 1234 Phosphorus ppm ASTM D5185m 1150 1116 895 1132 Zinc ppm ASTM D5185m 1270 1215 1159 1323 Sulfur ppm ASTM D5185m 2060 3593 3012 2788 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 3 2 11 Sodium ppm ASTM D5185m >20 3 2 11 Sodium ppm ASTM D5185m >20 2 <1 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624	Molybdenum		ASTM D5185m	60	56	50	60
Magnesium ppm ASTM D5185m 1010 895 852 1085 Calcium ppm ASTM D5185m 1070 1058 960 1234 Phosphorus ppm ASTM D5185m 1150 1116 895 1132 Zinc ppm ASTM D5185m 1270 1215 1159 1323 Sulfur ppm ASTM D5185m 2060 3593 3012 2788 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 3 2 11 Sodium ppm ASTM D5185m >20 2 <1 3 Potassium ppm ASTM D5185m >20 2 <1 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 5.7 9.6 12.6 Sulfation Abs/.1mm *ASTM D7415 <td>-</td> <td></td> <td>ASTM D5185m</td> <td>0</td> <th>1</th> <td></td> <td></td>	-		ASTM D5185m	0	1		
Calcium ppm ASTM D5185m 1070 1058 960 1234 Phosphorus ppm ASTM D5185m 1150 1116 895 1132 Zinc ppm ASTM D5185m 1270 1215 1159 1323 Sulfur ppm ASTM D5185m 2060 3593 3012 2788 CONTAMINANTS method limit/base current history1 history2 Soliicon ppm ASTM D5185m >20 3 2 11 Soliicon ppm ASTM D5185m >20 3 2 11 Soliicon ppm ASTM D5185m >20 2 <1	•				895	852	1085
Phosphorus ppm ASTM D5185m 1150 1116 895 1132 Zinc ppm ASTM D5185m 1270 1215 1159 1323 Sulfur ppm ASTM D5185m 2060 3593 3012 2788 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 3 2 11 Sodium ppm ASTM D5185m >20 2 <1							
Zinc ppm ASTM D5185m 1270 1215 1159 1323 Sulfur ppm ASTM D5185m 2060 3593 3012 2788 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 3 2 11 Sodium ppm ASTM D5185m 3 3 7 Potassium ppm ASTM D5185m >20 2 <1							
Sulfur ppm ASTM D5185m 2060 3593 3012 2788 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 3 2 11 Sodium ppm ASTM D5185m 3 3 7 Potassium ppm ASTM D5185m >20 2 <1 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 0.7 1.3 Nitration Abs/cm *ASTM D7624 >20 5.7 9.6 12.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.1 20.8 25.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.0 17.6 22.6							
Silicon ppm ASTM D5185m >20 3 2 11 Sodium ppm ASTM D5185m 3 3 7 Potassium ppm ASTM D5185m >20 2 <1 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 0.7 1.3 Nitration Abs/cm *ASTM D7624 >20 5.7 9.6 12.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.1 20.8 25.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.0 17.6 22.6	Sulfur						
Sodium ppm ASTM D5185m 3 3 7 Potassium ppm ASTM D5185m >20 2 <1	CONTAMINA	NTS	method	limit/base	current	history1	history2
Sodium ppm ASTM D5185m 3 3 7 Potassium ppm ASTM D5185m >20 2 <1	Silicon	ppm	ASTM D5185m	>20	3	2	11
Potassium ppm ASTM D5185m >20 2 <1 3 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.1 0.7 1.3 Nitration Abs/cm *ASTM D7624 >20 5.7 9.6 12.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.1 20.8 25.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.0 17.6 22.6	Sodium						
Soot % *ASTM D7844 >3 0.1 0.7 1.3 Nitration Abs/cm *ASTM D7624 >20 5.7 9.6 12.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.1 20.8 25.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.0 17.6 22.6	Potassium			>20			3
Nitration Abs/cm *ASTM D7624 >20 5.7 9.6 12.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.1 20.8 25.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.0 17.6 22.6	INFRA-RED		method	limit/base	current	history1	history2
Nitration Abs/cm *ASTM D7624 >20 5.7 9.6 12.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.1 20.8 25.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.0 17.6 22.6	Soot %	%	*ASTM D7844	>3	0.1	0.7	1.3
Sulfation Abs/.1mm *ASTM D7415 >30 18.1 20.8 25.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 14.0 17.6 22.6							
Oxidation Abs/.1mm *ASTM D7414 >25 14.0 17.6 22.6	Sulfation						
	FLUID DEGRADATION method limit/base current history1 history2						
	Oxidation	Abs/.1mm	*ASTM D7414	>25	14.0	17.6	22.6
	Base Number (BN)				8.8	8.1	5.4



OIL ANALYSIS REPORT



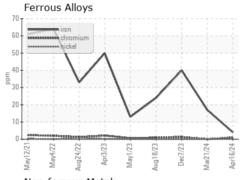


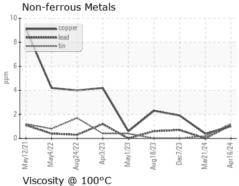


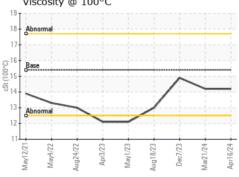
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

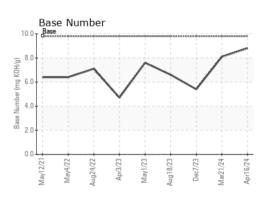
FLUID PROPI	ERIIES	method			flistory i	nistoryz
Visc @ 100°C	cSt	ASTM D445	15.4	14.2	14.2	14.9

GRAPHS













Certificate 12367

Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Lab Number : 06152875 Unique Number : 10982953

: GFL0116908

Received : 18 Apr 2024 **Tested** Diagnosed

: 19 Apr 2024 : 19 Apr 2024 - Wes Davis 888 Baldwin Pontiac, MI US 48340

Contact: Ricky Matthews rickymathews@gflenv.com T: (586)825-9514

GFL Environmental - 465 - Pontiac

Test Package : FLEET 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)

Report Id: GFL465 [WUSCAR] 06152875 (Generated: 04/19/2024 11:33:57) Rev: 1

Submitted By: Ricky Matthews