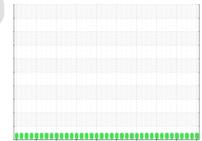


OIL ANALYSIS REPORT

Sample Rating Trend









(546HPY)
726095
Component
Diesel Engine

PETRO CANADA DURON SHP 15W40 (11 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

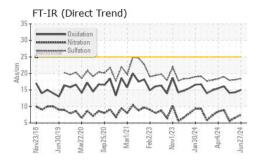
Fluid Condition

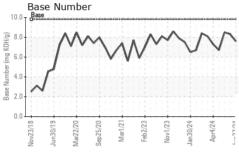
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

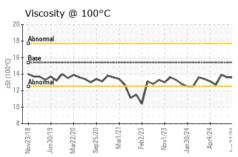
Sample Number Client Info CFL0122896 GFL0122881 GFL0118776 Sample Date Client Info Client Info Client Info O	SAMPLE INFORM	ATION	method	limit/base	current	history1	history2	
Machine Age hrs Client Info 17964 17829 17676 Oil Age hrs Client Info 0 0 0 0 Oil Changed Client Info Not Changd Not	Sample Number		Client Info		GFL0122896	GFL0122881	GFL0118776	
Oil Age hrs Client Info Not Changd Not Changd Not Changd	Sample Date		Client Info		27 Jun 2024	05 Jun 2024	08 May 2024	
Oil Age hrs Client Info Not Changd Not Changd Not Changd	Machine Age	hrs	Client Info		17964	17829	17676	
Oil Changed Client Info Not Changd Not Changd NORMAL NORMAL NORMAL		hrs	Client Info		0	0	0	
NORMAL NORMAL NORMAL			Client Info		Not Changd	Not Changd	Not Changd	
Fuel	-				•	_	_	
Water WC Method >0.2 NEG NEG NEG Glycol WC Method Imiti/base current history1 history2 WEAR METALS method limiti/base current history1 history2 Iron ppm ASTM D5185m >120 6 4 0 Chromium ppm ASTM D5185m >20 <1 <1 0 Nickel ppm ASTM D5185m >2 <1 <1 0 Silver ppm ASTM D5185m >2 <1 <1 0 Silver ppm ASTM D5185m >2 <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	CONTAMINATIO	NC	method	limit/base	current	history1	history2	
WEAR METALS	Fuel		WC Method	>3.0	<1.0	<1.0	<1.0	
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >120 6 4 0 Chromium ppm ASTM D5185m >20 <1	Water		WC Method	>0.2	NEG	NEG	NEG	
Irron	Glycol		WC Method		NEG	NEG	NEG	
Chromium ppm ASTM D5185m >20 <1	WEAR METALS		method	limit/base	current	history1	history2	
Nickel	Iron	ppm	ASTM D5185m	>120	6	4	0	
Description	Chromium	ppm	ASTM D5185m	>20	<1	<1	0	
Silver	Nickel	ppm	ASTM D5185m	>5	<1	<1	0	
Aluminum	Titanium	ppm	ASTM D5185m	>2	<1	<1	0	
Aluminum			ASTM D5185m	>2	<1	0	0	
Copper ppm ASTM D5185m >330 2 <1 0 Tin ppm ASTM D5185m >15 <1	Aluminum	ppm	ASTM D5185m	>20	3	2	<1	
Copper ppm ASTM D5185m >330 2 <1 0 Tin ppm ASTM D5185m >15 <1	Lead	ppm	ASTM D5185m	>40	<1	<1	<1	
Tin			ASTM D5185m	>330	2	<1	0	
Vanadium ppm ASTM D5185m <1 <1 0 Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 4 2 4 Barium ppm ASTM D5185m 0 <1 0 0 Molybdenum ppm ASTM D5185m 60 59 64 54 Manganese ppm ASTM D5185m 1010 867 1024 892 Calcium ppm ASTM D5185m 1070 1100 1164 1049 Phosphorus ppm ASTM D5185m 1070 1180 1301 1188 Sulfur ppm ASTM D5185m 2270 1180 1301 1188 Sulfur ppm ASTM D5185m >26 4 5 3 Sodium ppm ASTM D5185m >25 4 5				>15	<1	<1		
Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 4 2 4 Barium ppm ASTM D5185m 0 <1			ASTM D5185m		<1	<1	0	
Boron ppm ASTM D5185m 0 4 2 4								
Barium ppm ASTM D5185m 0 <1	ADDITIVES		method	limit/base	current	history1	history2	
Molybdenum ppm ASTM D5185m 60 59 64 54 Manganese ppm ASTM D5185m 0 <1 0 0 Magnesium ppm ASTM D5185m 1010 867 1024 892 Calcium ppm ASTM D5185m 1070 1100 1164 1049 Phosphorus ppm ASTM D5185m 1150 944 983 1035 Zinc ppm ASTM D5185m 1270 1180 1301 1188 Sulfur ppm ASTM D5185m 2060 2715 3279 3474 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 5 3 Sodium ppm ASTM D5185m >20 3 2 2 INFRA-RED method limit/base current history1 history2 Soot % "ASTM D7844 >4 <td>Boron</td> <td>ppm</td> <td>ASTM D5185m</td> <td>0</td> <th>4</th> <td>2</td> <td>4</td>	Boron	ppm	ASTM D5185m	0	4	2	4	
Manganese ppm ASTM D5185m 0 <1 0 0 Magnesium ppm ASTM D5185m 1010 867 1024 892 Calcium ppm ASTM D5185m 1070 1100 1164 1049 Phosphorus ppm ASTM D5185m 1150 944 983 1035 Zinc ppm ASTM D5185m 1270 1180 1301 1188 Sulfur ppm ASTM D5185m 2060 2715 3279 3474 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 5 3 Sodium ppm ASTM D5185m >20 3 2 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 7.5 6.6 5.6 Sulfation Abs/.1mm *ASTM D	Barium	ppm	ASTM D5185m	0	<1	0	0	
Magnesium ppm ASTM D5185m 1010 867 1024 892 Calcium ppm ASTM D5185m 1070 1100 1164 1049 Phosphorus ppm ASTM D5185m 1150 944 983 1035 Zinc ppm ASTM D5185m 1270 1180 1301 1188 Sulfur ppm ASTM D5185m 2060 2715 3279 3474 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 5 3 Sodium ppm ASTM D5185m 1 3 1 1 Potassium ppm ASTM D5185m >20 3 2 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 7.5 6.6 5.6 Sulfation Abs/alm *ASTM D7415	Molybdenum	ppm	ASTM D5185m	60	59	64	54	
Calcium ppm ASTM D5185m 1070 1100 1164 1049 Phosphorus ppm ASTM D5185m 1150 944 983 1035 Zinc ppm ASTM D5185m 1270 1180 1301 1188 Sulfur ppm ASTM D5185m 2060 2715 3279 3474 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 5 3 Sodium ppm ASTM D5185m >20 3 2 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.3 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 7.5 6.6 5.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.4 18.1 17.9 FLUID DEGRADATION <t< td=""><td>Manganese</td><td>ppm</td><td>ASTM D5185m</td><td>0</td><th><1</th><td>0</td><td>0</td></t<>	Manganese	ppm	ASTM D5185m	0	<1	0	0	
Calcium ppm ASTM D5185m 1070 1100 1164 1049 Phosphorus ppm ASTM D5185m 1150 944 983 1035 Zinc ppm ASTM D5185m 1270 1180 1301 1188 Sulfur ppm ASTM D5185m 2060 2715 3279 3474 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 5 3 Sodium ppm ASTM D5185m >20 3 2 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.3 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 7.5 6.6 5.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.4 18.1 17.9 FLUID DEGRADATION <td>Magnesium</td> <td>ppm</td> <td>ASTM D5185m</td> <td>1010</td> <th>867</th> <td>1024</td> <td>892</td>	Magnesium	ppm	ASTM D5185m	1010	867	1024	892	
Phosphorus ppm ASTM D5185m 1150 944 983 1035 Zinc ppm ASTM D5185m 1270 1180 1301 1188 Sulfur ppm ASTM D5185m 2060 2715 3279 3474 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 5 3 Sodium ppm ASTM D5185m >20 3 2 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.3 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 7.5 6.6 5.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.4 18.1 17.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.	Calcium	ppm	ASTM D5185m	1070	1100	1164	1049	
Zinc ppm ASTM D5185m 1270 1180 1301 1188 Sulfur ppm ASTM D5185m 2060 2715 3279 3474 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 5 3 Sodium ppm ASTM D5185m 1 3 1 Potassium ppm ASTM D5185m >20 3 2 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.3 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 7.5 6.6 5.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.4 18.1 17.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D74			ASTM D5185m	1150	944	983	1035	
Sulfur ppm ASTM D5185m 2060 2715 3279 3474 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 5 3 Sodium ppm ASTM D5185m 1 3 1 Potassium ppm ASTM D5185m >20 3 2 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.3 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 7.5 6.6 5.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.4 18.1 17.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.0 14.3 14.1			ASTM D5185m	1270	1180	1301	1188	
Silicon ppm ASTM D5185m >25 4 5 3 Sodium ppm ASTM D5185m 1 3 1 Potassium ppm ASTM D5185m >20 3 2 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.3 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 7.5 6.6 5.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.4 18.1 17.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.0 14.3 14.1			ASTM D5185m	2060	2715	3279	3474	
Sodium ppm ASTM D5185m 1 3 1 Potassium ppm ASTM D5185m >20 3 2 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.3 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 7.5 6.6 5.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.4 18.1 17.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.0 14.3 14.1	CONTAMINANTS method limit/base current history1 history2							
Potassium ppm ASTM D5185m >20 3 2 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.3 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 7.5 6.6 5.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.4 18.1 17.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.0 14.3 14.1	Silicon	ppm	ASTM D5185m	>25	4	5	3	
INFRA-RED	Sodium	ppm	ASTM D5185m		1	3	1	
Soot % % *ASTM D7844 >4 0.3 0.2 0.1 Nitration Abs/cm *ASTM D7624 >20 7.5 6.6 5.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.4 18.1 17.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.0 14.3 14.1	Potassium	ppm	ASTM D5185m	>20	3	2	2	
Nitration Abs/cm *ASTM D7624 >20 7.5 6.6 5.6 Sulfation Abs/.1mm *ASTM D7415 >30 18.4 18.1 17.9 FLUID DEGRADATION method limit/base current bistory1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.0 14.3 14.1	INFRA-RED		method	limit/base	current	history1	history2	
Sulfation Abs/.1mm *ASTM D7415 >30 18.4 18.1 17.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.0 14.3 14.1	Soot %	%	*ASTM D7844	>4	0.3	0.2	0.1	
Sulfation Abs/.1mm *ASTM D7415 >30 18.4 18.1 17.9 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.0 14.3 14.1	Nitration	Abs/cm	*ASTM D7624	>20	7.5	6.6	5.6	
Oxidation Abs/.1mm *ASTM D7414 >25 15.0 14.3 14.1	Sulfation	Abs/.1mm	*ASTM D7415	>30	18.4			
	FLUID DEGRADATION method limit/base current history1 history2							
	Oxidation	Abs/.1mm	*ASTM D7414	>25	15.0	14.3	14.1	
	Base Number (BN)	mg KOH/g	ASTM D2896	9.8	7.6	8.3	8.5	



OIL ANALYSIS REPORT



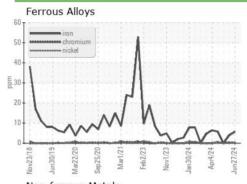


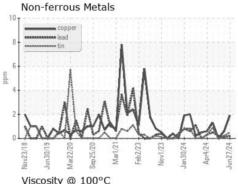


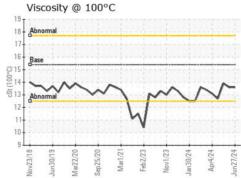
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

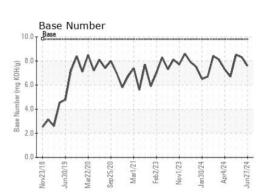
FLUID PROPE	RHES	metnoa	ilmit/base	current	nistory i	nistory2
Visc @ 100°C	cSt	ASTM D445	15.4	13.6	13.6	13.9

GRAPHS













Certificate 12367

Laboratory Sample No.

: GFL0122896 Lab Number : 06225648 Unique Number : 11103845

Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 01 Jul 2024

Tested : 02 Jul 2024 Diagnosed : 02 Jul 2024 - Wes Davis

GFL Environmental - 837 - Harrison TS

22820 S State Route 291 Harrisonville, MO

US 64701

Contact: SARA PATRICK spatrick@gflenv.com

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

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

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

T:

F: