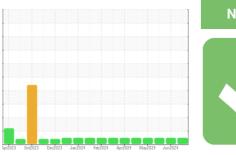


OIL ANALYSIS REPORT

Sample Rating Trend









Machine Id
913146
Component
Diesel Engine
Fluid

PETRO CANADA DURON UHP 5W30 (--- 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

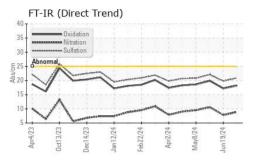
Fluid Condition

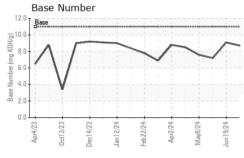
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

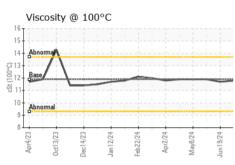
Sample Number Client Info GFL0122845 GFL0122887 GFL0122887 Sample Date Client Info 10 Jul 2024 19 Jun 2024 30 May 2024 3	N OHP 5W30 (-	J., (_)						
Sample Date	SAMPLE INFOF	RMATION	method	limit/base	current	history1	history2	
Machine Age hrs Client Info 4433 4285 4137	Sample Number		Client Info		GFL0122845	GFL0122887	GFL0122931	
Oil Age	Sample Date		Client Info		10 Jul 2024	19 Jun 2024	30 May 2024	
Colient Info	Machine Age	hrs	Client Info		4433	4285	4137	
NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 history2 NEG NEG	Oil Age	hrs	Client Info		4285	148	3704	
NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 history2 water 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 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <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		Not Changd	Not Changd	Changed	
Fuel	-					NORMAL		
Water WC Method >0.2 NEG NEG NEG Glycol WC Method Imitibase NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >120 8 4 15 Chromium ppm ASTM D5185m >20 <1	CONTAMINAT	ΓΙΟΝ	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 8 4 15 Chromium ppm ASTM D5185m >20 <1	Water		WC Method	>0.2	NEG	NEG	NEG	
Chromium	Glycol		WC Method		NEG	NEG	NEG	
Chromium	WEAR METAL	_S	method	limit/base	current	history1	history2	
Strickel	ron	ppm	ASTM D5185m	>120	8	4	15	
Silver	Chromium	ppm	ASTM D5185m	>20	<1	0	<1	
Silver	Nickel	ppm	ASTM D5185m	>5	<1	0	<1	
Aluminum	Titanium	ppm	ASTM D5185m	>2	<1	<1	0	
Lead	Silver	ppm	ASTM D5185m	>2	<1	<1	<1	
Copper	Aluminum	ppm	ASTM D5185m	>20	2	<1	<1	
Copper	Lead	ppm	ASTM D5185m	>40	<1	0	0	
Property Property	Copper	ppm	ASTM D5185m	>330	1	<1	2	
ADDITIVES	Tin	ppm	ASTM D5185m	>15	<1	0	<1	
ADDITIVES	Vanadium	ppm	ASTM D5185m		<1	<1	0	
Boron	Cadmium	ppm	ASTM D5185m		<1	0	0	
Barium	ADDITIVES		method	limit/base	current	history1	history2	
Molybdenum ppm ASTM D5185m 64 56 57 58 Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 1160 1091 1183 1122 Calcium ppm ASTM D5185m 1160 1029 1082 1043 Phosphorus ppm ASTM D5185m 1260 1230 1321 1248 Zinc ppm ASTM D5185m 1260 1230 1321 1248 Sulfur ppm ASTM D5185m 3000 3085 4029 3586 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 3 0 Sodium ppm ASTM D5185m 20 2 <1 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624	Boron	ppm	ASTM D5185m	0	26	35	17	
Manganese ppm ASTM D5185m 0 <1 <1 <1 Magnesium ppm ASTM D5185m 1160 1091 1183 1122 Calcium ppm ASTM D5185m 820 855 883 875 Phosphorus ppm ASTM D5185m 1160 1029 1082 1043 Zinc ppm ASTM D5185m 1260 1230 1321 1248 Sulfur ppm ASTM D5185m 3000 3085 4029 3586 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 3 0 Sodium ppm ASTM D5185m >20 2 <1	Barium	ppm	ASTM D5185m	0	0	0	0	
Magnesium ppm ASTM D5185m 1160 1091 1183 1122 Calcium ppm ASTM D5185m 820 855 883 875 Phosphorus ppm ASTM D5185m 1160 1029 1082 1043 Zinc ppm ASTM D5185m 1260 1230 1321 1248 Sulfur ppm ASTM D5185m 3000 3085 4029 3586 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 3 0 Sodium ppm ASTM D5185m >20 2 <1 <1 Potassium ppm ASTM D5185m >20 2 <1 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.5 0.3 0.7 Nitration Abs/.1mm *ASTM D7415 <td>Molybdenum</td> <td>ppm</td> <td>ASTM D5185m</td> <td>64</td> <th>56</th> <td>57</td> <td>58</td>	Molybdenum	ppm	ASTM D5185m	64	56	57	58	
Calcium ppm ASTM D5185m 820 855 883 875 Phosphorus ppm ASTM D5185m 1160 1029 1082 1043 Zinc ppm ASTM D5185m 1260 1230 1321 1248 Sulfur ppm ASTM D5185m 3000 3085 4029 3586 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 3 0 Sodium ppm ASTM D5185m >20 2 <1	Manganese	ppm	ASTM D5185m	0	<1	<1	<1	
Phosphorus ppm ASTM D5185m 1160 1029 1082 1043 Zinc ppm ASTM D5185m 1260 1230 1321 1248 Sulfur ppm ASTM D5185m 3000 3085 4029 3586 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 3 0 Sodium ppm ASTM D5185m >25 5 3 0 Sodium ppm ASTM D5185m >20 2 <1	Magnesium	ppm	ASTM D5185m	1160	1091	1183	1122	
Zinc ppm ASTM D5185m 1260 1230 1321 1248 Sulfur ppm ASTM D5185m 3000 3085 4029 3586 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 3 0 Sodium ppm ASTM D5185m 20 2 <1	Calcium	ppm	ASTM D5185m	820	855	883	875	
Sulfur ppm ASTM D5185m 3000 3085 4029 3586 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 3 0 Sodium ppm ASTM D5185m 4 4 6 Potassium ppm ASTM D5185m >20 2 <1	Phosphorus	ppm	ASTM D5185m	1160	1029	1082	1043	
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 5 3 0 Sodium ppm ASTM D5185m 4 4 6 Potassium ppm ASTM D5185m >20 2 <1	Zinc	ppm	ASTM D5185m	1260	1230	1321	1248	
Silicon ppm ASTM D5185m >25 5 3 0 Sodium ppm ASTM D5185m 4 4 6 Potassium ppm ASTM D5185m >20 2 <1 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.5 0.3 0.7 Nitration Abs/cm *ASTM D7624 >20 8.9 7.8 10.6 Sulfation Abs/.1mm *ASTM D7415 >30 20.9 19.8 22.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.2 17.2 19.9	Sulfur	ppm	ASTM D5185m	3000	3085	4029	3586	
Sodium ppm ASTM D5185m 4 4 6 Potassium ppm ASTM D5185m >20 2 <1	CONTAMINANTS method limit/base current history1 history2							
Potassium ppm ASTM D5185m >20 2 <1 <1 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.5 0.3 0.7 Nitration Abs/cm *ASTM D7624 >20 8.9 7.8 10.6 Sulfation Abs/.1mm *ASTM D7415 >30 20.9 19.8 22.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.2 17.2 19.9	Silicon	ppm	ASTM D5185m	>25	5	3	0	
INFRA-RED	Sodium	ppm	ASTM D5185m		4	4	6	
Soot % *ASTM D7844 >4 0.5 0.3 0.7 Nitration Abs/cm *ASTM D7624 >20 8.9 7.8 10.6 Sulfation Abs/.1mm *ASTM D7415 >30 20.9 19.8 22.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.2 17.2 19.9	Potassium	ppm	ASTM D5185m	>20	2	<1	<1	
Nitration Abs/cm *ASTM D7624 >20 8.9 7.8 10.6 Sulfation Abs/.1mm *ASTM D7415 >30 20.9 19.8 22.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.2 17.2 19.9	INFRA-RED		method	limit/base	current	history1	history2	
Sulfation Abs/.1mm *ASTM D7415 >30 20.9 19.8 22.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.2 17.2 19.9	Soot %	%	*ASTM D7844	>4	0.5	0.3	0.7	
Sulfation Abs/.1mm *ASTM D7415 >30 20.9 19.8 22.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 18.2 17.2 19.9	Vitration	Abs/cm	*ASTM D7624	>20	8.9	7.8	10.6	
Oxidation								
	FLUID DEGRA	DATION	method	limit/base	current	history1	history2	
	Oxidation	Abs/.1mm	*ASTM D7414	>25	18.2	17.2	19.9	
	Base Number (BN)	mg KOH/g	ASTM D2896	11.0	8.7	9.1	7.2	



OIL ANALYSIS REPORT



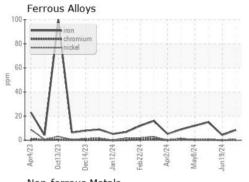


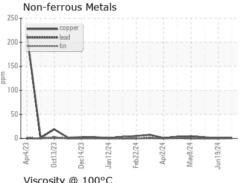


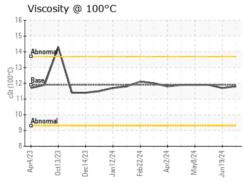
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

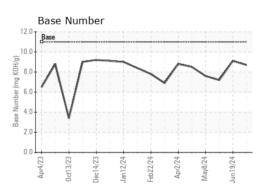
FLUID PROPERTIES		method				history2	
Visc @ 100°C	cSt	ASTM D445	11.9	11.8	11.7	11.9	

GRAPHS













Certificate 12367

Sample No. Lab Number : 06238722 Unique Number : 11127556

: GFL0122845

Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 16 Jul 2024

Tested : 17 Jul 2024 Diagnosed : 17 Jul 2024 - Wes Davis

7801 East Truman Road Kansas City, MO US 64126

GFL Environmental - 836 - Kansas City Hauling

Contact: Loyce Stewart loyce.stewart@gflenv.com

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)

T:

F: