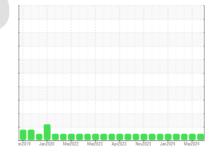


OIL ANALYSIS REPORT

Area (78J6TV) 727102-361673

Diesel Engine

PETRO CANADA DURON SHP 15W40 (8 GAL)



Sample Rating Trend



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

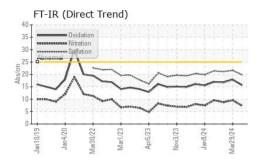
Fluid Condition

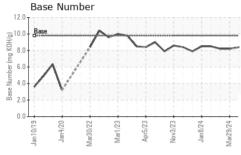
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

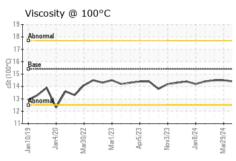
Sample Date Client Info 12 Apr 2024 29 Mar 2024 01 Mar 2024 Machine Age hrs Client Info 14109 14276 19141 01 14276 19141 01 14276 19141 01 14276 19141 01 14276 19141 01 14276 19141 01 14276 19141 01 14276 19141 01 14276 19141 01 14276 19141 01 14276 19141 01 14276 19141 01 14276 19141 01 14276 19141 01 14276 19141 01 14276 19141 01 14276 01 01 14276 01 01 01 01 01 01 01 0	SAMPLE INFOR	RMATION	method	limit/base	current	history1	history2			
Machine Age hrs Client Info 14109 14276 19141	Sample Number		Client Info		GFL0065430	GFL0112189	GFL0065483			
Oil Age	Sample Date		Client Info		12 Apr 2024	29 Mar 2024	01 Mar 2024			
Oil Changed Client Info Not Changed NORMAL NORM	Machine Age	hrs	Client Info		14109	14276	19141			
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 Age	hrs	Client Info		150	600	150			
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	Changed	Not Changd			
Fuel	Sample Status									
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 >75 8 22 19 Chromium ppm ASTM D5185m >5 <1 <1 1 Nickel ppm ASTM D5185m >4 0 0 0 Silver ppm ASTM D5185m >2 0 0 0 Silver ppm ASTM D5185m >25 0 0 0 Silver ppm ASTM D5185m >25 0 0 <1 Lead ppm ASTM D5185m >25 0 0 <1 Copper ppm ASTM D5185m >100 0 0 <1 Vanadium ppm ASTM D5185m 0 0 0	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			
Chromium	Glycol		WC Method		NEG	NEG	NEG			
Chromium	WEAR METAL	_S	method	limit/base	current	history1	history2			
Nickel	Iron	ppm	ASTM D5185m	>75	8	22	19			
Nickel	Chromium		ASTM D5185m	>5	<1	<1	1			
Titanium	Nickel			>4	0		0			
Silver										
Aluminum										
Lead					-					
Copper ppm ASTM D5185m >100 0 <1 Tin ppm ASTM D5185m >4 <1										
Tin										
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 1 2 <1 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 60 62 66 70 Manganese ppm ASTM D5185m 0 <1 <1 0 Magnesium ppm ASTM D5185m 1070 1093 1089 1033 Phosphorus ppm ASTM D5185m 1150 1156 1074 1028 Zinc ppm ASTM D5185m 1270 1313 1268 1280 Sulfur ppm ASTM D5185m 2060 3619 3335 2904 CONTAMINANTS method limit/base current h	• •				_					
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 1 2 <1				>4						
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 1 2 <1										
Boron		ppm	ASTM D5185m		0					
Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 60 62 66 70 Manganese ppm ASTM D5185m 0 <1 <1 0 Magnesium ppm ASTM D5185m 1010 1016 971 995 Calcium ppm ASTM D5185m 1070 1093 1089 1033 Phosphorus ppm ASTM D5185m 1150 1156 1074 1028 Zinc ppm ASTM D5185m 1270 1313 1268 1280 Sulfur ppm ASTM D5185m 2060 3619 3335 2904 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 4 5 Sodium ppm ASTM D5185m 9 29 37 Potassium ppm ASTM D5185m >20	ADDITIVES		method	limit/base	current	history1	history2			
Molybdenum ppm ASTM D5185m 60 62 66 70 Manganese ppm ASTM D5185m 0 <1 <1 0 Magnesium ppm ASTM D5185m 1010 1016 971 995 Calcium ppm ASTM D5185m 1070 1093 1089 1033 Phosphorus ppm ASTM D5185m 1150 1156 1074 1028 Zinc ppm ASTM D5185m 1270 1313 1268 1280 Sulfur ppm ASTM D5185m 2060 3619 3335 2904 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m 225 4 4 5 Sodium ppm ASTM D5185m 9 29 37 Potassium ppm ASTM D5185m 9 29 37 Potassium ppm ASTM D7844 >6 0.4	Boron									
Manganese ppm ASTM D5185m 0 <1 <1 0 Magnesium ppm ASTM D5185m 1010 1016 971 995 Calcium ppm ASTM D5185m 1070 1093 1089 1033 Phosphorus ppm ASTM D5185m 1150 1156 1074 1028 Zinc ppm ASTM D5185m 1270 1313 1268 1280 Sulfur ppm ASTM D5185m 2060 3619 3335 2904 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 4 5 Sodium ppm ASTM D5185m >20 4 16 21 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.4 0.7 0.6 Nitration Abs/:1mm *AS	Barium	ppm	ASTM D5185m	0	0	0	0			
Magnesium ppm ASTM D5185m 1010 1016 971 995 Calcium ppm ASTM D5185m 1070 1093 1089 1033 Phosphorus ppm ASTM D5185m 1150 1156 1074 1028 Zinc ppm ASTM D5185m 1270 1313 1268 1280 Sulfur ppm ASTM D5185m 2060 3619 3335 2904 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 4 5 Sodium ppm ASTM D5185m 9 29 37 Potassium ppm ASTM D5185m >20 4 16 21 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 7.4 9.6 8.8 Sulfation Abs/.1mm *ASTM D7415 >30<	Molybdenum	ppm			62	66				
Calcium ppm ASTM D5185m 1070 1093 1089 1033 Phosphorus ppm ASTM D5185m 1150 1156 1074 1028 Zinc ppm ASTM D5185m 1270 1313 1268 1280 Sulfur ppm ASTM D5185m 2060 3619 3335 2904 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 4 5 Sodium ppm ASTM D5185m 9 29 37 Potassium ppm ASTM D5185m >20 4 16 21 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.4 0.7 0.6 Nitration Abs/.1mm *ASTM D7415 >30 19.9 21.6 21.1 FLUID DEGRADATION method limit/base	Manganese	ppm	ASTM D5185m	0	<1	<1	0			
Phosphorus ppm ASTM D5185m 1150 1156 1074 1028 Zinc ppm ASTM D5185m 1270 1313 1268 1280 Sulfur ppm ASTM D5185m 2060 3619 3335 2904 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 4 5 Sodium ppm ASTM D5185m 9 29 37 Potassium ppm ASTM D5185m >20 4 16 21 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.4 0.7 0.6 Nitration Abs/cm *ASTM D7624 >20 7.4 9.6 8.8 Sulfation Abs/.1mm *ASTM D7415 >30 19.9 21.6 21.1 FLUID DEGRADATION method <	Magnesium	ppm	ASTM D5185m	1010	1016	971	995			
Zinc ppm ASTM D5185m 1270 1313 1268 1280 Sulfur ppm ASTM D5185m 2060 3619 3335 2904 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 4 5 Sodium ppm ASTM D5185m 9 29 37 Potassium ppm ASTM D5185m >20 4 16 21 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.4 0.7 0.6 Nitration Abs/cm *ASTM D7624 >20 7.4 9.6 8.8 Sulfation Abs/.1mm *ASTM D7415 >30 19.9 21.6 21.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM	Calcium	ppm	ASTM D5185m	1070	1093	1089	1033			
Sulfur ppm ASTM D5185m 2060 3619 3335 2904 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 4 5 Sodium ppm ASTM D5185m 9 29 37 Potassium ppm ASTM D5185m >20 4 16 21 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.4 0.7 0.6 Nitration Abs/cm *ASTM D7624 >20 7.4 9.6 8.8 Sulfation Abs/.1mm *ASTM D7415 >30 19.9 21.6 21.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.7 17.9 16.8	Phosphorus	ppm	ASTM D5185m	1150	1156	1074	1028			
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 4 4 5 Sodium ppm ASTM D5185m 9 29 37 Potassium ppm ASTM D5185m >20 4 16 21 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.4 0.7 0.6 Nitration Abs/cm *ASTM D7624 >20 7.4 9.6 8.8 Sulfation Abs/.1mm *ASTM D7415 >30 19.9 21.6 21.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.7 17.9 16.8	Zinc	ppm	ASTM D5185m	1270	1313	1268	1280			
Silicon ppm ASTM D5185m >25 4 4 5 Sodium ppm ASTM D5185m 9 29 37 Potassium ppm ASTM D5185m >20 4 16 21 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.4 0.7 0.6 Nitration Abs/cm *ASTM D7624 >20 7.4 9.6 8.8 Sulfation Abs/.1mm *ASTM D7415 >30 19.9 21.6 21.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.7 17.9 16.8	Sulfur	ppm	ASTM D5185m	2060	3619	3335	2904			
Sodium ppm ASTM D5185m 9 29 37 Potassium ppm ASTM D5185m >20 4 16 21 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.4 0.7 0.6 Nitration Abs/cm *ASTM D7624 >20 7.4 9.6 8.8 Sulfation Abs/.1mm *ASTM D7415 >30 19.9 21.6 21.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.7 17.9 16.8	CONTAMINAN	NTS	method	limit/base	current	history1	history2			
Potassium ppm ASTM D5185m >20 4 16 21 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.4 0.7 0.6 Nitration Abs/cm *ASTM D7624 >20 7.4 9.6 8.8 Sulfation Abs/.1mm *ASTM D7415 >30 19.9 21.6 21.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.7 17.9 16.8	Silicon	ppm	ASTM D5185m	>25	4	4	5			
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >6 0.4 0.7 0.6 Nitration Abs/cm *ASTM D7624 >20 7.4 9.6 8.8 Sulfation Abs/.1mm *ASTM D7415 >30 19.9 21.6 21.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.7 17.9 16.8	Sodium	ppm	ASTM D5185m		9	29	37			
Soot % *ASTM D7844 >6 0.4 0.7 0.6 Nitration Abs/cm *ASTM D7624 >20 7.4 9.6 8.8 Sulfation Abs/.1mm *ASTM D7415 >30 19.9 21.6 21.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.7 17.9 16.8	Potassium	ppm	ASTM D5185m	>20	4	16	21			
Nitration Abs/cm *ASTM D7624 >20 7.4 9.6 8.8 Sulfation Abs/.1mm *ASTM D7415 >30 19.9 21.6 21.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.7 17.9 16.8	INFRA-RED		method	limit/base	current	history1	history2			
Nitration Abs/cm *ASTM D7624 >20 7.4 9.6 8.8 Sulfation Abs/.1mm *ASTM D7415 >30 19.9 21.6 21.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.7 17.9 16.8	Soot %	%	*ASTM D7844	>6	0.4	0.7	0.6			
Sulfation Abs/.1mm *ASTM D7415 >30 19.9 21.6 21.1 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 15.7 17.9 16.8	Nitration									
Oxidation Abs/.1mm *ASTM D7414 >25 15.7 17.9 16.8	Sulfation									
	FLUID DEGRADATION method limit/base current history1 history2									
	Oxidation	Abs/.1mm	*ASTM D7414	>25	15.7	17.9	16.8			

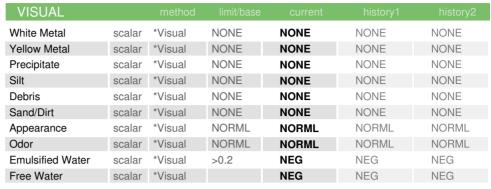


OIL ANALYSIS REPORT



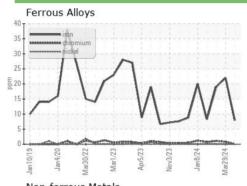


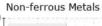


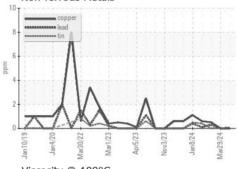


FLUID PROPI	ERTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.4	14.5	14.5

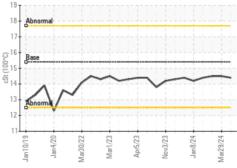
GRAPHS

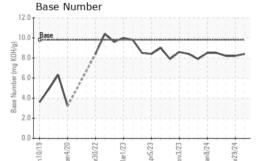
















Certificate 12367

Laboratory Sample No.

Lab Number : 06150121 Unique Number : 10980199

Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0065430 Received **Tested**

: 16 Apr 2024 : 17 Apr 2024 Diagnosed : 17 Apr 2024 - Wes Davis

GFL Environmental - 829 - Wilco Hauling

5054 Highway HH Hartville, MO US 65667

Contact: James Jones james.jones@gflenv.com

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

T: (417)349-5006

 st - 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)