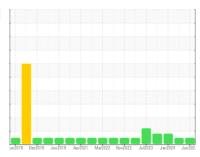


OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id 901075 Component Diesel Engine

PETRO CANADA DURON HP 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.

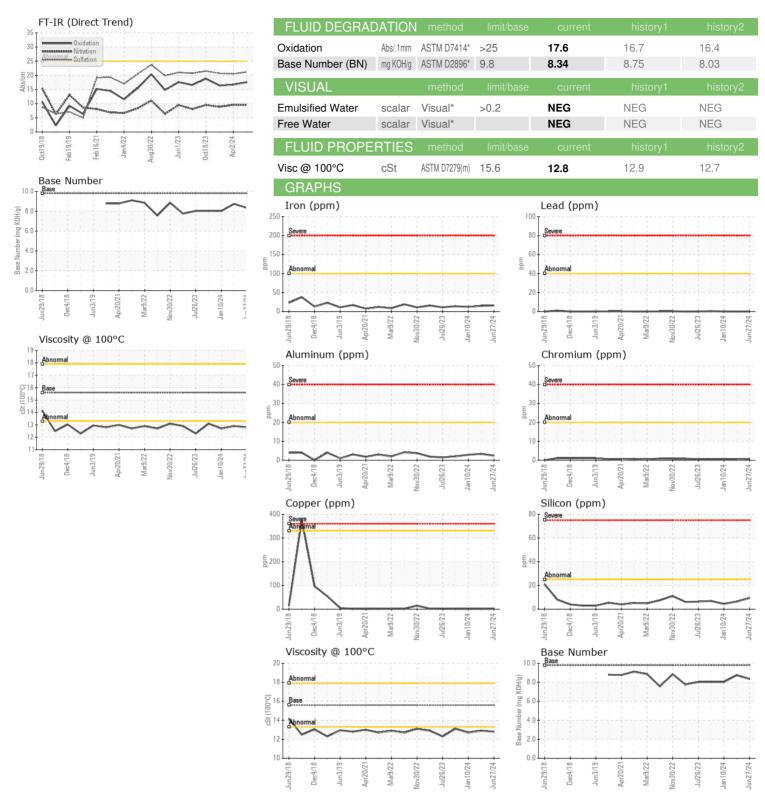
Fluid Condition

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 Client Info 27 Jun 2024 10 Jan 2024	CAMPI E INFORM	A TION					
Sample Date Client Info 27 Jun 2024 10 Jan 2024	SAMPLE INFORM.	AHON	method	limit/base	current	history1	history2
Machine Age hrs Client Info Dil Changed Changed Changed Changed Changed NORMAL NORMA	Sample Number		Client Info		GFL0112439	GFL0117332	GFL0099551
Dil Age	Sample Date		Client Info		27 Jun 2024	02 Apr 2024	10 Jan 2024
Client Info	Machine Age	hrs	Client Info		15601		27501
CONTAMINATION	J	hrs			-		
CONTAMINATION	Oil Changed		Client Info			Ü	Ü
Fuel WC Method >5	Sample Status				NORMAL	NORMAL	MARGINAL
Water Glycol WC Method WC Method >0.2 NEG NEG NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185(m) >100 16 15 12 Chromium ppm ASTM D5185(m) >20 <1 <1 <1 Nickel ppm ASTM D5185(m) >4 0 0 0 Silver ppm ASTM D5185(m) >4 0 0 0 Aluminum ppm ASTM D5185(m) >20 2 3 3 Lead ppm ASTM D5185(m) >33.00 1 1 1 Tin ppm ASTM D5185(m) >15 0 0 0 Aprilion ppm ASTM D5185(m) 0 0 0 0 Vanadium ppm ASTM D5185(m) 0 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 </th <th>CONTAMINATIO</th> <th>NC</th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	CONTAMINATIO	NC	method	limit/base	current	history1	history2
WEAR METALS	Fuel		WC Method	>5	<1.0	<1.0	<u>2.4</u>
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185(m) >100 16 15 12 Chromium ppm ASTM D5185(m) >20 <1	Water		WC Method	>0.2	NEG	NEG	NEG
Control Cont	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185(m) >20	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185(m)	>100	16	15	12
Description	Chromium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Silver	Nickel	ppm	ASTM D5185(m)	>4	0	0	0
Aluminum	Titanium	ppm	ASTM D5185(m)		0	0	0
Lead	Silver	ppm	ASTM D5185(m)	>3	<1	0	0
Copper	Aluminum	ppm	ASTM D5185(m)	>20	2	3	3
Tin	Lead	ppm	ASTM D5185(m)	>40	0	0	0
Antimony	Copper	ppm	ASTM D5185(m)	>330	1	1	1
Vanadium ppm ASTM D5185(m) 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 0 Cadmium ppm ASTM D5185(m) 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 0 7 2 2 2 Barium ppm ASTM D5185(m) 0 0 0 0 0 Molybdenum ppm ASTM D5185(m) 0 61 61 58 Manganese ppm ASTM D5185(m) 0 <1 <1 0 Magnesium ppm ASTM D5185(m) 1010 955 984 922 Calcium ppm ASTM D5185(m) 1070 1085 1076 1101 Phosphorus ppm ASTM D5185(m) 1270 1196 1205 1214 Sulfur ppm ASTM D5185(m) 2060 2	Tin	ppm	ASTM D5185(m)	>15	0	0	0
Beryllium	Antimony	ppm	ASTM D5185(m)		0	0	0
Cadmium ppm ASTM D5185(m) 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 0 7 2 2 Barium ppm ASTM D5185(m) 0 0 0 0 Molybdenum ppm ASTM D5185(m) 60 61 61 58 Manganese ppm ASTM D5185(m) 0 <1	Vanadium	ppm	. ,		0	0	0
ADDITIVES	Beryllium	ppm	ASTM D5185(m)		0		0
Boron ppm ASTM D5185(m) 0 7 2 2 2	Cadmium	ppm	ASTM D5185(m)		0	0	0
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185(m) 60 61 61 58 Manganese ppm ASTM D5185(m) 0 <1	Boron	ppm	ASTM D5185(m)	0	7	2	2
Manganese ppm ASTM D5185(m) 0 <1 <1 0 Magnesium ppm ASTM D5185(m) 1010 955 984 922 Calcium ppm ASTM D5185(m) 1070 1085 1076 1101 Phosphorus ppm ASTM D5185(m) 1150 1006 1023 1010 Zinc ppm ASTM D5185(m) 1270 1196 1205 1214 Sulfur ppm ASTM D5185(m) 2060 2542 2495 2671 Lithium ppm ASTM D5185(m) <1	Barium	ppm	ASTM D5185(m)	0	0	0	0
Magnesium ppm ASTM D5185(m) 1010 955 984 922 Calcium ppm ASTM D5185(m) 1070 1085 1076 1101 Phosphorus ppm ASTM D5185(m) 1150 1006 1023 1010 Zinc ppm ASTM D5185(m) 1270 1196 1205 1214 Sulfur ppm ASTM D5185(m) 2060 2542 2495 2671 Lithium ppm ASTM D5185(m) <1	Molybdenum	ppm	. ,		61	61	
Calcium ppm ASTM D5185(m) 1070 1085 1076 1101 Phosphorus ppm ASTM D5185(m) 1150 1006 1023 1010 Zinc ppm ASTM D5185(m) 1270 1196 1205 1214 Sulfur ppm ASTM D5185(m) 2060 2542 2495 2671 Lithium ppm ASTM D5185(m) <1	Manganese	ppm	ASTM D5185(m)	0	<1	<1	0
Phosphorus ppm ASTM D5185(m) 1150 1006 1023 1010 Zinc ppm ASTM D5185(m) 1270 1196 1205 1214 Sulfur ppm ASTM D5185(m) 2060 2542 2495 2671 Lithium ppm ASTM D5185(m) <1 <1 <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 9 6 4 Sodium ppm ASTM D5185(m) >20 1 <1 <1 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >3 0.7 0.7 0.6 Nitration Abs/cm ASTM D7624* >20 9.5 9.6 8.9	Magnesium	ppm	(/			984	
Zinc ppm ASTM D5185(m) 1270 1196 1205 1214 Sulfur ppm ASTM D5185(m) 2060 2542 2495 2671 Lithium ppm ASTM D5185(m) <1 <1 <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 9 6 4 Sodium ppm ASTM D5185(m) >20 1 <1			ASTM D5185(m)				
Sulfur ppm ASTM D5185(m) 2060 2542 2495 2671 Lithium ppm ASTM D5185(m) 2060 2542 2495 2671 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 9 6 4 Sodium ppm ASTM D5185(m) 6 4 4 Potassium ppm ASTM D5185(m) >20 1 <1 <1 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >3 0.7 0.7 0.6 Nitration Abs/cm ASTM D7624* >20 9.5 9.6 8.9		ppm	. ,				
Lithium ppm ASTM D5185(m) <1 <1 <1 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 9 6 4 Sodium ppm ASTM D5185(m) 6 4 4 Potassium ppm ASTM D5185(m) >20 1 <1			(/				
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185(m) >25 9 6 4 Sodium ppm ASTM D5185(m) 6 4 4 Potassium ppm ASTM D5185(m) >20 1 <1			. ,	2060			
Silicon ppm ASTM D5185(m) >25 9 6 4 Sodium ppm ASTM D5185(m) 6 4 4 Potassium ppm ASTM D5185(m) >20 1 <1			ASTM D5185(m)		<1	<1	<1
Sodium ppm ASTM D5185(m) 6 4 4 Potassium ppm ASTM D5185(m) >20 1 <1 <1 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >3 0.7 0.7 0.6 Nitration Abs/cm ASTM D7624* >20 9.5 9.6 8.9	CONTAMINANT	S	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185(m) >20 1 <1 <1 INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >3 0.7 0.7 0.6 Nitration Abs/cm ASTM D7624* >20 9.5 9.6 8.9	Silicon	ppm	ASTM D5185(m)	>25	9	6	4
INFRA-RED method limit/base current history1 history2 Soot % % ASTM D7844* >3 0.7 0.7 0.6 Nitration Abs/cm ASTM D7624* >20 9.5 9.6 8.9		ppm	()		6	4	4
Soot % % ASTM D7844* >3 0.7 0.7 0.6 Nitration Abs/cm ASTM D7624* >20 9.5 9.6 8.9	Potassium	ppm	ASTM D5185(m)	>20	1	<1	<1
Nitration Abs/cm ASTM D7624* >20 9.5 9.6 8.9	INFRA-RED		method	limit/base	current	history1	history2
	Soot %	%	ASTM D7844*	>3	0.7	0.7	0.6
Sulfation Abs/.1mm ASTM D7415* >30 21.2 20.5 20.7	Nitration	Abs/cm	ASTM D7624*	>20	9.5	9.6	8.9
	Sulfation	Abs/.1mm	ASTM D7415*	>30	21.2	20.5	20.7



OIL ANALYSIS REPORT





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No.

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 550 - Rocky View County : GFL0112439 Lab Number : 02645719 Unique Number : 5803258 Test Package : MOB 2

To discuss this sample report, contact Customer Service at 1-800-268-2131.

Received : 05 Jul 2024 **Tested** : 05 Jul 2024

Diagnosed

: 05 Jul 2024 - Wes Davis

CA T1X 1X1 Contact: GFL Calgary calgarymaintenance@gflenv.com T:

F: (403)369-6163

Rocky View County, AB

220 Carmek Blvd

Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.