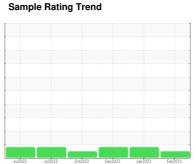


OIL ANALYSIS REPORT

ot i



NORMAL



Area 166 Machine Id 921067-64

Component

Transmission (Auto)

PETRO CANADA DuraDrive HD Synthetic 668 (--- 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 fluid.

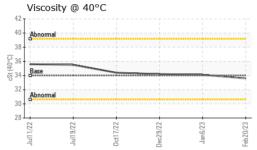
Fluid Condition

The condition of the fluid is acceptable for the time in service.

Sample Number Client Info GFL0074852 GFL0070564 GFL005872 Sample Date Client Info 20 Feb 2023 06 Jan 2023 29 Dec 202 Machine Age hrs Client Info 600 600 600 0 0 0 0 0	668 (GAL)		Jul2022	Jul2022 Oct2022	Dec2022 Jan2023	Feb2023	
Sample Date	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info	Sample Number		Client Info		GFL0074852	GFL0070564	GFL0058725
Dil Age	Sample Date		Client Info		20 Feb 2023	06 Jan 2023	29 Dec 2022
Dil Changed Client Info Not Changed NoRMAL ABNORMAL ASTM D5185m >5	Machine Age	hrs	Client Info		3158	83607	75435
NORMAL ABNORMAL ABNORMAL ABNORMAL WEAR METALS method limit/base current history1 history1 history2 history2 history3 history3 history3 history4 history4	Oil Age	hrs	Client Info		600	600	0
WEAR METALS method limit/base current history1 history1 ron ppm ASTM D5185m >160 65 76 85 Chromium ppm ASTM D5185m >5 <1	Oil Changed		Client Info		Not Changd	N/A	Not Changd
Description	Sample Status				NORMAL	ABNORMAL	ABNORMAL
Description	WEAR METAL	.S	method	limit/base	current	history1	history2
Sickel	ron	ppm	ASTM D5185m	>160	65	76	85
Description	Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Silver	Nickel	ppm	ASTM D5185m	>5	<1	<1	<1
Astronome	Γitanium	ppm	ASTM D5185m		0	0	0
Lead	Silver	ppm	ASTM D5185m	>5	<1	0	0
December December	Aluminum	ppm	ASTM D5185m	>50	42	<u></u> 51	<u></u> 61
Description	_ead		ASTM D5185m	>50	18	23	28
Tin	Copper		ASTM D5185m	>225	11	16	15
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 21 0 0 Barium ppm ASTM D5185m <1 0 0 Molybdenum ppm ASTM D5185m <1 1 1 Magnesium ppm ASTM D5185m 3 <1 <1 1 Magnesium ppm ASTM D5185m 106 80 81 1 <1 2 <					4		
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 82 78 83 Barium ppm ASTM D5185m <1	Vanadium				0		
Boron ppm ASTM D5185m 82 78 83							
Sarium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m <1 <1 1 Manganese ppm ASTM D5185m 1 1 1 Magnesium ppm ASTM D5185m 3 <1	Boron	ppm	ASTM D5185m		82	78	83
Manganese ppm ASTM D5185m 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2 2 2 1 2 1 2 1 2 1 2 3 3 3 4 3 3 4 2 2 2 2 2 2 2 2 2 2 2 3 3 4 3 3 4 3 3 4 3 3 4 3 3 4 3 3 4 3 4 3 4 3 4 7 6 6 6 6 6 6 9	Barium	ppm	ASTM D5185m		<1	0	0
Magnesium ppm ASTM D5185m 3 <1 <1 Calcium ppm ASTM D5185m 106 80 81 Phosphorus ppm ASTM D5185m 225 242 260 Zinc ppm ASTM D5185m 12 0 6 Sulfur ppm ASTM D5185m 1308 1051 1157 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >20 8 8 8 Sodium ppm ASTM D5185m >20 2 1 3 VISUAL method limit/base current history1 history1 White Metal scalar *Visual NONE NONE NONE Vellow Metal scalar *Visual NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE Pobris scalar *V	Molybdenum	ppm	ASTM D5185m		<1	<1	1
Magnesium ppm ASTM D5185m 3 <1 <1 Calcium ppm ASTM D5185m 106 80 81 Phosphorus ppm ASTM D5185m 225 242 260 Zinc ppm ASTM D5185m 12 0 6 Sulfur ppm ASTM D5185m 1308 1051 1157 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >20 8 8 8 Sodium ppm ASTM D5185m >20 2 1 3 VISUAL method limit/base current history1 history1 White Metal scalar *Visual NONE NONE NONE NONE Vellow Metal scalar *Visual NONE NONE NONE NONE NONE Perceipitate scalar *Visual NONE NONE NONE NONE	Manganese	ppm	ASTM D5185m		1	1	1
Phosphorus ppm ASTM D5185m 225 242 260 Zinc ppm ASTM D5185m 12 0 6 Sulfur ppm ASTM D5185m 1308 1051 1157 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 8 8 8 Sodium ppm ASTM D5185m >20 2 1 3 Potassium ppm ASTM D5185m >20 2 1 3 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE White Metal scalar *Visual NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE <t< td=""><td>Magnesium</td><td>ppm</td><td>ASTM D5185m</td><td></td><td>3</td><td><1</td><td><1</td></t<>	Magnesium	ppm	ASTM D5185m		3	<1	<1
Table Tabl	Calcium	ppm	ASTM D5185m		106	80	81
Time	Phosphorus	ppm	ASTM D5185m		225	242	260
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 8 8 8 8 Sodium ppm ASTM D5185m >20 8 8 8 8 Potassium ppm ASTM D5185m >20 2 1 3 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Ddor scalar *Visual NORML NORML NORML NORML Dodor scalar *Visual NORML NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG NEG Free Water scalar *Visual NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML NORML			ASTM D5185m		12	0	6
Silicon ppm ASTM D5185m >20 8 8 8 8 Sodium ppm ASTM D5185m 4 7 6 Potassium ppm ASTM D5185m >20 2 1 3 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE NONE NONE NONE NON	Sulfur		ASTM D5185m		1308	1051	1157
Sodium	CONTAMINAN	ITS	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 2 1 3 VISUAL method limit/base current history1 history3 White Metal scalar *Visual NONE NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Ddor scalar *Visual NORML NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG NEG Free Water scalar *Visual NEG NEG NEG	Silicon	ppm	ASTM D5185m	>20	8	8	8
White Metal scalar *Visual NONE NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE NONE NONE NONE Scalar *Visual NONE NONE NONE NONE NONE NONE NONE NON	Sodium	ppm	ASTM D5185m		4	7	6
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 NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Ddor scalar *Visual NORML NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG NEG Free Water scalar *Visual NEG NEG NEG	Potassium	ppm	ASTM D5185m	>20	2	1	3
Yellow Metalscalar*VisualNONENONENONENONEPrecipitatescalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLDdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGFree Waterscalar*VisualNEGNEGNEG	VISUAL		method	limit/base	current	history1	history2
Precipitate scalar *Visual NONE NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE NONE NONE Scalar *Visual NONE NONE NONE NONE NONE NONE Scand/Dirt scalar *Visual NONE NONE NONE NONE NONE NONE NONE NON	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silt scalar *Visual NONE 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 >0.1 NEG NEG NEG Free Water scalar *Visual NEG NEG NEG	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Debris scalar *Visual NONE 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 >0.1 NEG NEG NEG Free Water scalar *Visual NEG NEG NEG	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG NEG Free Water scalar *Visual NEG NEG NEG	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance scalar *Visual NORML NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG NEG Free Water scalar *Visual NEG NEG NEG	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Odor scalar *Visual NORML NORML NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG NEG Free Water scalar *Visual NEG NEG NEG	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Emulsified Water scalar *Visual >0.1 NEG NEG NEG Free Water scalar *Visual NEG NEG NEG NEG	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water scalar *Visual >0.1 NEG NEG NEG Free Water scalar *Visual NEG NEG NEG NEG	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Free Water scalar *Visual NEG NEG NEG	Emulsified Water			>0.1	NEG	NEG	NEG
FLUID PROPERTIES method limit/base current history1 history1	Free Water	scalar	*Visual		NEG	NEG	NEG
	FLUID PROPE	RTIES	method	limit/base	current	history1	history2

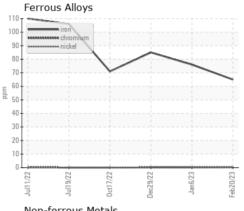


OIL ANALYSIS REPORT

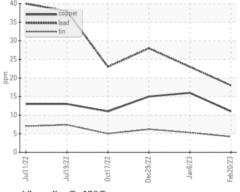


SAMPLE IMAGES	method	limit/base	current	history1	history2
Color			no image	no image	no image
Bottom			no image	no image	no image

GRAPHS



Non-ferrous Metals



Visco	osity @ 4	l0°C			
40 Abnor	nal				
38 -					
37					
(2) 36 35 35 Base		\\			
33					
32 - Abnor					
30	nai				
29	Jul19/22 -)ct17/22	Dec29/22 +	Jan 6/23 +	Feb20/23
Jul	E E	0ct1	Dec2	Jan	Feb2





Laboratory Sample No. Lab Number Unique Number : 10351125

: 05776508

: GFL0074852

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 24 Feb 2023

Diagnosed : 27 Feb 2023 Diagnostician : Angela Borella

US

Contact: Service Manager

GFL Environmental - Non-Engine

Test Package : FLEET

* - 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)

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

Submitted By: DEAN PEACE JR

T:

F: