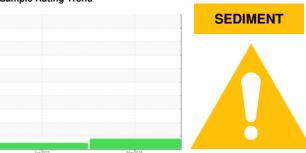


OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

945021-260279

Transmission (Auto)

PETRO CANADA DuraDrive HD Synthetic 668 (32 QTS)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of visible silt present in the sample.

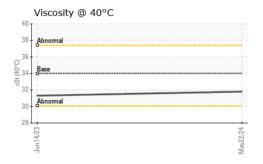
Fluid Condition

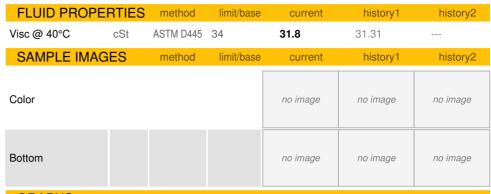
The condition of the fluid is acceptable for the time in service.

WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >160 36 66	668 (32 QTS)			Jun2023	May2024		
Sample Number Client Info CFL0121924 3FL0084723	SAMPLE INFORM	ΛΑΤΙΟΝ	method	limit/hase	current	history1	history2
Sample Date		VIATION		IIIIIIVDase		,	
Machine Age hrs Client Info 28597 26739 Oil Age hrs Client Info 1858 0 Oil Changed Client Info Changed Changed Sample Status Band ABNORMAL NORMAL CONTAMINATION method limit/base current history1 history2 WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >5 0 <1 Nickel ppm ASTM D5185m >5 0 <1 Nickel ppm ASTM D5185m >5 0 0 Titanium ppm ASTM D5185m >5 <1 0 Aluminum ppm ASTM D5185m >50 13 18 Lead ppm ASTM D5185m >50 13 18 Copper	·						
Oil Changed hrs Client Info 1858 0					•		
Client Info Changed Changed Changed ABNORMAL NORMAL NORMAL CONTAMINATION Method Imit/base current history1 history2							
ABNORMAL	· ·	hrs					
CONTAMINATION method limit/base current history1 history2 Water WC Method >0.1 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >160 36 66 Chromium ppm ASTM D5185m >5 0 0 Nickel ppm ASTM D5185m >5 0 0 Silver ppm ASTM D5185m >5 0 0 Aluminum ppm ASTM D5185m >5 13 18 Aluminum ppm ASTM D5185m >50 3 5 Aluminum ppm ASTM D5185m >50 3 5 Copper ppm ASTM D5185m >10 2 3 Copper ppm ASTM D5185m <1	-		Client Info		_		
Water WC Method >0.1 NEG NEG					ABNORMAL	NORMAL	
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >160 36 66	CONTAMINATI	ON	method	limit/base	current	history1	history2
Iron	Water		WC Method	>0.1	NEG	NEG	
Chromium ppm ASTM D5185m >5 0 <1 Nickel ppm ASTM D5185m >5 0 0 Titanium ppm ASTM D5185m >5 <1	WEAR METALS	S	method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>160	36	66	
Titanium	Chromium	ppm	ASTM D5185m	>5	0	<1	
Silver	Nickel	ppm	ASTM D5185m	>5	0	0	
Aluminum	Titanium	ppm	ASTM D5185m		<1	<1	
Lead ppm ASTM D5185m >50 3 5 Copper ppm ASTM D5185m >225 35 72 Tin ppm ASTM D5185m >10 2 3 Vanadium ppm ASTM D5185m <1 <1 Cadmium ppm ASTM D5185m <1 <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m <1 0 Barium ppm ASTM D5185m <1 0 Molybdenum ppm ASTM D5185m <1 1 Magnesium ppm ASTM D5185m <1 1 Magnesium ppm ASTM D5185m 4 9 Calcium ppm ASTM D5185m 120 80 Phosphorus ppm <td< th=""><th>Silver</th><th>ppm</th><th>ASTM D5185m</th><th>>5</th><th><1</th><th>0</th><th></th></td<>	Silver	ppm	ASTM D5185m	>5	<1	0	
Copper ppm ASTM D5185m >225 35 72 Tin ppm ASTM D5185m >10 2 3 Vanadium ppm ASTM D5185m <1	Aluminum	ppm	ASTM D5185m	>50	13	18	
Tin	Lead	ppm	ASTM D5185m	>50	3	5	
Vanadium ppm ASTM D5185m <1 <1 Cadmium ppm ASTM D5185m <1 <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 67 69 Barium ppm ASTM D5185m <1 0 Molybdenum ppm ASTM D5185m <1 2 Manganese ppm ASTM D5185m <1 1 Magnesium ppm ASTM D5185m 120 80 Calcium ppm ASTM D5185m 219 215 Phosphorus ppm ASTM D5185m 22 45 Zinc ppm ASTM D5185m 22 45 Sulfur ppm ASTM D5185m 22 45 CONTAMINANTS method limit/base current history1 histo	Copper	ppm	ASTM D5185m	>225	35	72	
Cadmium ppm ASTM D5185m <1	Tin	ppm	ASTM D5185m	>10	2	3	
ADDITIVES	Vanadium	ppm	ASTM D5185m		<1	<1	
Boron	Cadmium	ppm	ASTM D5185m		<1	<1	
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m <1	Boron	ppm	ASTM D5185m		67	69	
Manganese ppm ASTM D5185m <1 1 Magnesium ppm ASTM D5185m 4 9 Calcium ppm ASTM D5185m 120 80 Phosphorus ppm ASTM D5185m 219 215 Zinc ppm ASTM D5185m 22 45 Sulfur ppm ASTM D5185m 1687 1025 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 7 3 Sodium ppm ASTM D5185m >20 4 5 Potassium ppm ASTM D5185m >20 4 5 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE Yellow Metal scalar	Barium	ppm	ASTM D5185m		<1	0	
Magnesium ppm ASTM D5185m 4 9 Calcium ppm ASTM D5185m 120 80 Phosphorus ppm ASTM D5185m 219 215 Zinc ppm ASTM D5185m 22 45 Sulfur ppm ASTM D5185m 1687 1025 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m 5 6 Sodium ppm ASTM D5185m 5 6 Potassium ppm ASTM D5185m >20 4 5 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE Yellow Metal scalar *Visual NONE<	Molybdenum	ppm	ASTM D5185m		<1	2	
Calcium ppm ASTM D5185m 120 80 Phosphorus ppm ASTM D5185m 219 215 Zinc ppm ASTM D5185m 22 45 Sulfur ppm ASTM D5185m 1687 1025 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 7 3 Sodium ppm ASTM D5185m >20 4 5 Potassium ppm ASTM D5185m >20 4 5 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE Silt scalar	Manganese	ppm	ASTM D5185m		<1	1	
Phosphorus ppm ASTM D5185m 219 215 Zinc ppm ASTM D5185m 22 45 Sulfur ppm ASTM D5185m 1687 1025 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 7 3 Sodium ppm ASTM D5185m >20 4 5 Potassium ppm ASTM D5185m >20 4 5 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE Silt scalar *Visual NONE NONE <td< th=""><th>Magnesium</th><th>ppm</th><th>ASTM D5185m</th><th></th><th>4</th><th>9</th><th></th></td<>	Magnesium	ppm	ASTM D5185m		4	9	
Zinc ppm ASTM D5185m 22 45 Sulfur ppm ASTM D5185m 1687 1025 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 7 3 Sodium ppm ASTM D5185m 5 6 Potassium ppm ASTM D5185m >20 4 5 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE Silt scalar *Visual NONE NONE NONE Debris scalar *Visual NONE NONE NONE Sand/Dirt scalar	Calcium	ppm	ASTM D5185m		120	80	
Sulfur ppm ASTM D5185m 1687 1025 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 7 3 Sodium ppm ASTM D5185m 5 6 Potassium ppm ASTM D5185m >20 4 5 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE Silt scalar *Visual NONE NONE NONE Debris scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NORML NORML NORML N	Phosphorus	ppm	ASTM D5185m		219	215	
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 7 3 Sodium ppm ASTM D5185m 5 6 Potassium ppm ASTM D5185m >20 4 5 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE Silt scalar *Visual NONE NONE NONE Debris scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NORML NORML NORML Appearance scalar *Visual <td< th=""><th>Zinc</th><th>ppm</th><th>ASTM D5185m</th><th></th><th>22</th><th>45</th><th></th></td<>	Zinc	ppm	ASTM D5185m		22	45	
Silicon ppm ASTM D5185m >20 7 3 Sodium ppm ASTM D5185m 5 6 Potassium ppm ASTM D5185m >20 4 5 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE Silt scalar *Visual NONE NONE NONE Debris scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NORML NORML NORML Appearance scalar *Visual NORML NORML NORML NORML Codor scalar *Visual	Sulfur	ppm	ASTM D5185m		1687	1025	
Sodium ppm ASTM D5185m 5 6 Potassium ppm ASTM D5185m >20 4 5 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE Silt scalar *Visual NONE NONE NONE Debris scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NORML NORML NORML Appearance scalar *Visual NORML NORML NORML Odor scalar *Visual >0.1 NEG NEG	CONTAMINAN	TS	method	limit/base	current	history1	history2
Sodium ppm ASTM D5185m 5 6 Potassium ppm ASTM D5185m >20 4 5 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE Silt scalar *Visual NONE NONE NONE Debris scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NORML NORML NORML NORML Appearance scalar *Visual NORML NORML NORML Codor scalar *Visual >0.1 NORML NEG	Silicon	ppm	ASTM D5185m	>20	7	3	
VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE Silt scalar *Visual NONE NONE NONE Selt scalar *Visual NONE NONE NONE Debris scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Appearance scalar *Visual NORML NORML NORML Codor scalar *Visual NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG	Sodium		ASTM D5185m		5	6	
White Metal scalar *Visual NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE Silt scalar *Visual NONE NONE NONE Debris scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NORML NORML NORML NORML Appearance scalar *Visual NORML NORML NORML Odor scalar *Visual >0.1 NEG NEG	Potassium	ppm	ASTM D5185m	>20	4	5	
Yellow Metal scalar *Visual NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE Silt scalar *Visual NONE NONE NONE Debris scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Odor scalar *Visual >0.1 NEG NEG	VISUAL		method	limit/base	current	history1	history2
Precipitate scalar *Visual NONE NONE NONE Silt scalar *Visual NONE MODER NONE Debris scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Appearance scalar *Visual NORML NORML NORML Odor scalar *Visual NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG	White Metal	scalar	*Visual	NONE	NONE	NONE	
Silt scalar *Visual NONE MODER NONE Debris scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Appearance scalar *Visual NORML NORML NORML Odor scalar *Visual NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Debris scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Appearance scalar *Visual NORML NORML NORML Odor scalar *Visual NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG	Precipitate	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt scalar *Visual NONE NONE NONE Appearance scalar *Visual NORML NORML NORML Odor scalar *Visual NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG	Silt	scalar	*Visual	NONE	▲ MODER	NONE	
Appearance scalar *Visual NORML NORML NORML Odor scalar *Visual NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG	Debris	scalar	*Visual	NONE	NONE	NONE	
Odor scalar *Visual NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Emulsified Water scalar *Visual >0.1 NEG NEG	Appearance	scalar	*Visual	NORML	NORML	NORML	
	Odor	scalar	*Visual	NORML	NORML	NORML	
Free Water scalar *Visual NEG NEG	Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	
	Free Water	scalar	*Visual		NEG	NEG	

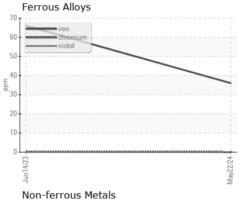


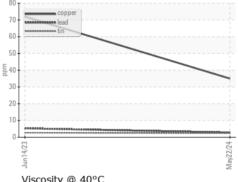
OIL ANALYSIS REPORT





GRAPHS





Viscosity @ 40°C 38 37 36 31 30 29





Laboratory Sample No.

Lab Number : 06194476

: GFL0121924

Unique Number : 11056599

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

: 29 May 2024 Tested : 30 May 2024 Diagnosed : 31 May 2024 - Sean Felton

GFL Environmental - 856 - Houston South

8515 Highway 6 South Houston, TX US 77083

Contact: Apolinar Zacarias

pzacariascano@gflenv.com

Test Package : FLEET Certificate 12367 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: