

# **OIL ANALYSIS REPORT**

### Sample Rating Trend







CAT TDTO TRANS-DRIVE SAE 30 (--- GAL)





#### **DIAGNOSIS**

#### Recommendation

We advise that you check for visible metal particles in the oil. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

Moderate concentration of visible metal present. Gear wear is indicated.

#### Contamination

There is no indication of any contamination in the

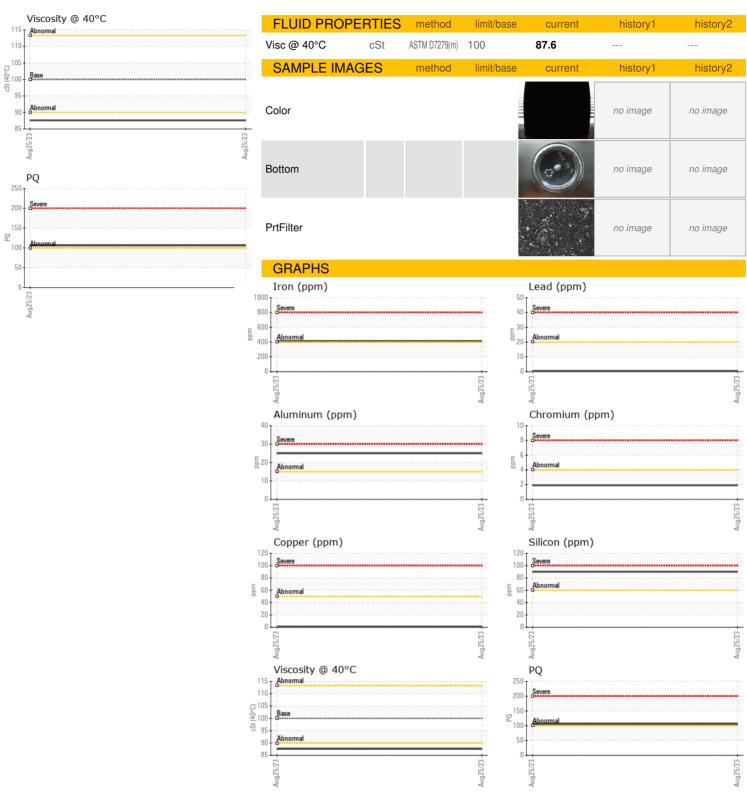
### Fluid Condition

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

IVE SAL 30 ( (	•			Aug2023		
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0076984		
Sample Date		Client Info		25 Aug 2023		
Machine Age	hrs	Client Info		16250		
Oil Age	hrs	Client Info		450		
Oil Changed		Client Info		Changed		
Sample Status				ABNORMAL		
WEAR METAL	S	method	limit/base	current	history1	history2
PQ		ASTM D8184*		106		
Iron	ppm	ASTM D5185(m)	>400	409		
Chromium	ppm	ASTM D5185(m)	>4	2		
Nickel	ppm	ASTM D5185(m)	>3	<1		
Titanium	ppm	ASTM D5185(m)		<1		
Silver	ppm	ASTM D5185(m)		0		
Aluminum	ppm	ASTM D5185(m)	>15	25		
Lead	ppm	ASTM D5185(m)	>20	<1		
Copper	ppm	ASTM D5185(m)	>50	<1		
Tin	ppm	ASTM D5185(m)	>3	0		
Antimony	ppm	ASTM D5185(m)	>5	0		
Vanadium	ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		43		
Barium	ppm	ASTM D5185(m)		<1		
Molybdenum	ppm	ASTM D5185(m)		1		
Manganese	ppm	ASTM D5185(m)		2		
Magnesium	ppm	ASTM D5185(m)		12		
Calcium	ppm	ASTM D5185(m)	2980	2455		
Phosphorus	ppm	ASTM D5185(m)	1100	1141		
Zinc	ppm	ASTM D5185(m)	1270	1057		
Sulfur	ppm	ASTM D5185(m)	1270	6896		
Lithium	ppm	ASTM D5185(m)		3		
CONTAMINAN	ppiii	7101111 20100(111)				
	TC	method	limit/hasa		hietory1	history2
		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	limit/base >60	current 90		
Silicon Sodium	ppm ppm	ASTM D5185(m) ASTM D5185(m)	>60	current 90 5		
Silicon Sodium Potassium	ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>60 >20	90 5 2		
Silicon Sodium Potassium VISUAL	ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method	>60 >20 limit/base	current 90 5 2 current		
Silicon Sodium Potassium VISUAL White Metal	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method Visual*	>60 >20 limit/base NONE	current 90 5 2 current MODER		
Silicon Sodium Potassium  VISUAL  White Metal Yellow Metal	ppm ppm ppm scalar	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) method Visual* Visual*	>60 >20 limit/base NONE NONE	current  90 5 2 current  MODER NONE	  history1	  history2
Silicon Sodium Potassium  VISUAL  White Metal Yellow Metal Precipitate	ppm ppm ppm scalar scalar scalar	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method  Visual*  Visual*	>60 >20 limit/base NONE NONE NONE	current  90 5 2  current  MODER NONE NONE	history1	history2
Silicon Sodium Potassium  VISUAL  White Metal Yellow Metal Precipitate Silt	ppm ppm ppm scalar scalar scalar scalar	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method  Visual*  Visual*  Visual*	>60 >20 limit/base NONE NONE NONE NONE	current  90 5 2 current  MODER NONE NONE NONE	 history1	history2
Silicon Sodium Potassium  VISUAL White Metal Yellow Metal Precipitate Silt Debris	ppm ppm ppm scalar scalar scalar scalar	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method  Visual*  Visual*  Visual*  Visual*  Visual*	>60 >20 limit/base NONE NONE NONE NONE NONE NONE	current  90 5 2  current  MODER NONE NONE NONE NONE NONE	history1	history2
Silicon Sodium Potassium  VISUAL  White Metal Yellow Metal Precipitate Silt	ppm ppm ppm scalar scalar scalar scalar	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method  Visual*  Visual*  Visual*	>60 >20 limit/base NONE NONE NONE NONE	current  90 5 2 current  MODER NONE NONE NONE NONE NONE NONE	history1	history2
Silicon Sodium Potassium  VISUAL White Metal Yellow Metal Precipitate Silt Debris	ppm ppm ppm scalar scalar scalar scalar scalar scalar	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method  Visual*  Visual*  Visual*  Visual*  Visual*  Visual*  Visual*  Visual*	>60  >20  limit/base  NONE  NONE	current  90 5 2  current  MODER NONE NONE NONE NONE NONE NONE NONE NO	history1	history2
Silicon Sodium Potassium  VISUAL  White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt	ppm ppm ppm scalar scalar scalar scalar scalar	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method  Visual*  Visual*  Visual*  Visual*  Visual*  Visual*	>60  >20  limit/base  NONE  NONE  NONE  NONE  NONE  NONE  NONE	current  90 5 2 current  MODER NONE NONE NONE NONE NONE NONE NONE NO	history1	history2
Silicon Sodium Potassium  VISUAL  White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance	ppm ppm ppm scalar scalar scalar scalar scalar scalar	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)  method  Visual*  Visual*  Visual*  Visual*  Visual*  Visual*  Visual*  Visual*	>60  >20  limit/base  NONE  NONE	current  90 5 2  current  MODER NONE NONE NONE NONE NONE NONE NONE NO	history1	history2



## **OIL ANALYSIS REPORT**





CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number Unique Number

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 575 - Squamish Hauling

: GFL0076984 : 02579407 : 5632467

Received Diagnosed

: 30 Aug 2023 : 01 Sep 2023

Diagnostician : Kevin Marson

Test Package : MOB 1 ( Additional Tests: Bottom, BottomAnalysis, FilterPatch, PQ )

38950 Queens Way, Squamish, BC CA V8B 0K8 Contact: Dean Imbeau dimbeau@gflenv.com

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

T: (604)892-5604 F: (604)892-5238