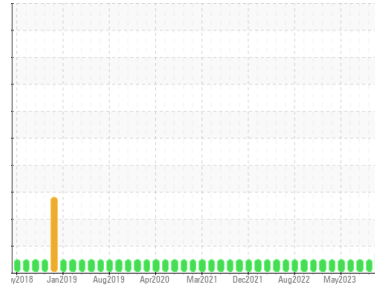




OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id
ALLISON 229
 Component
Rear Transmission (Auto)
 Fluid
CASTROL TRANSYND (--- GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Light fuel dilution occurring. No other contaminants were detected in the fluid.

Fluid Condition

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

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0866505	WC0866563	WC0816411
Sample Date	Client Info		04 Dec 2023	23 Oct 2023	16 Aug 2023
Machine Age	kms	Client Info	0	0	0
Oil Age	kms	Client Info	28510	19405	8433
Oil Changed	Client Info		Not Changed	Not Changd	Not Changed
Sample Status			MARGINAL	NORMAL	NORMAL

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 D5185(m)	>230	56	50	42
Chromium	ppm	ASTM D5185(m)	>2	0	0	0
Nickel	ppm	ASTM D5185(m)	>5	<1	<1	0
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>5	<1	<1	0
Aluminum	ppm	ASTM D5185(m)	>65	11	9	8
Lead	ppm	ASTM D5185(m)	>55	2	2	1
Copper	ppm	ASTM D5185(m)	>85	9	9	8
Tin	ppm	ASTM D5185(m)	>5	<1	<1	<1
Antimony	ppm	ASTM D5185(m)		0	0	0
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)	150	82	80	82
Barium	ppm	ASTM D5185(m)	0	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0	<1
Manganese	ppm	ASTM D5185(m)		0	0	<1
Magnesium	ppm	ASTM D5185(m)	0	1	1	1
Calcium	ppm	ASTM D5185(m)	40	127	126	126
Phosphorus	ppm	ASTM D5185(m)	320	253	245	269
Zinc	ppm	ASTM D5185(m)	5	4	4	5
Sulfur	ppm	ASTM D5185(m)	1050	1582	1544	1593
Lithium	ppm	ASTM D5185(m)		<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>20	6	5	4
Sodium	ppm	ASTM D5185(m)		4	4	4
Potassium	ppm	ASTM D5185(m)	>20	<1	0	2
Fuel	%	ASTM D7593*		▲ 3.2	---	---

INFRA-RED

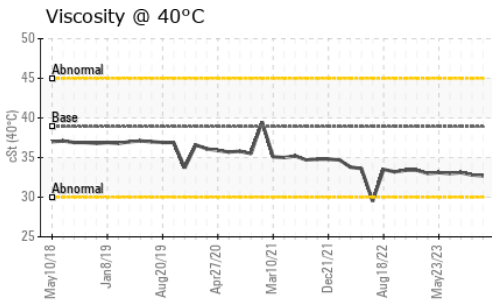
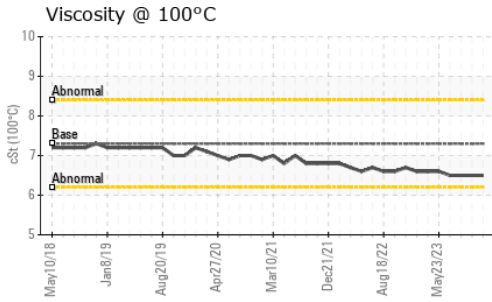
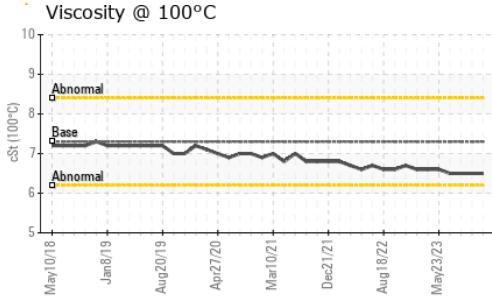
	method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*		0	---	---
Nitration	Abs/cm	ASTM D7624*		5.3	---	---
Sulfation	Abs/.1mm	ASTM D7415*		36.7	---	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414*		49.9	---	---



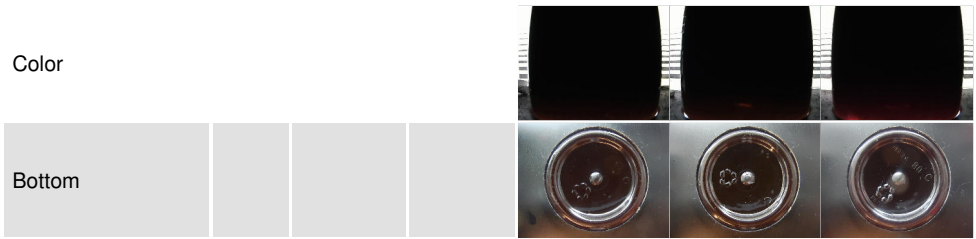
OIL ANALYSIS REPORT



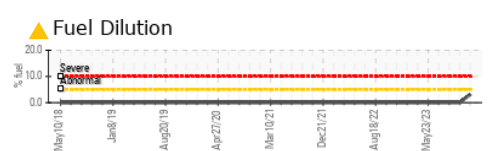
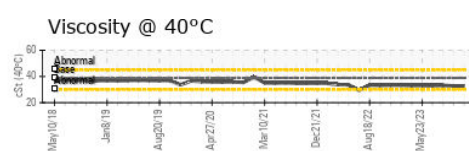
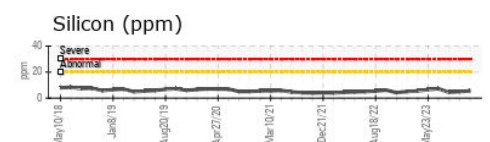
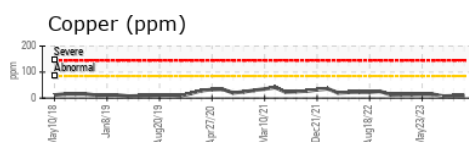
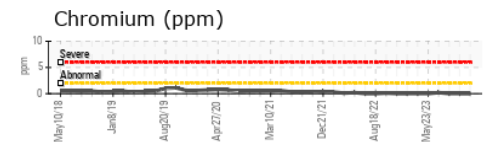
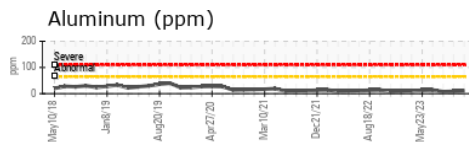
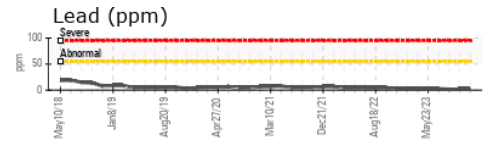
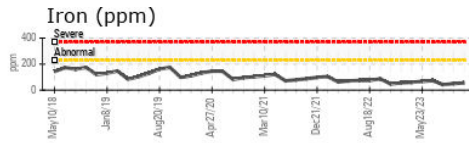
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	VLITE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	38.9	32.7	32.8
Visc @ 100°C	cSt	ASTM D7279(m)	7.3	6.5	6.5
Viscosity Index (VI)	Scale	ASTM D2270*	168	157	156

SAMPLE IMAGES



GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0866505
Lab Number : 02601519
Unique Number : 5694604
Test Package : MOB 1 (Additional Tests: FT-IR, FuelDilution, KV100, PercentFuel, VI)

CITY OF THUNDER BAY
 AUTO MAINTENANCE STORES, 570 FORT WILLIAM ROAD
 THUNDER BAY, ON
 CA P7B 2Z8
 Contact: Sean Malcolm
 sean.malcolm@thunderbay.ca

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.

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