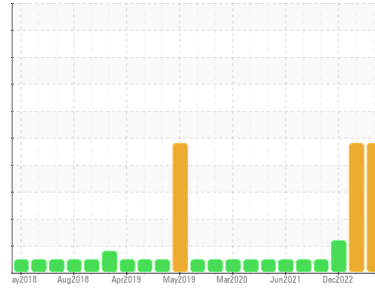




PROBLEM SUMMARY

Sample Rating Trend

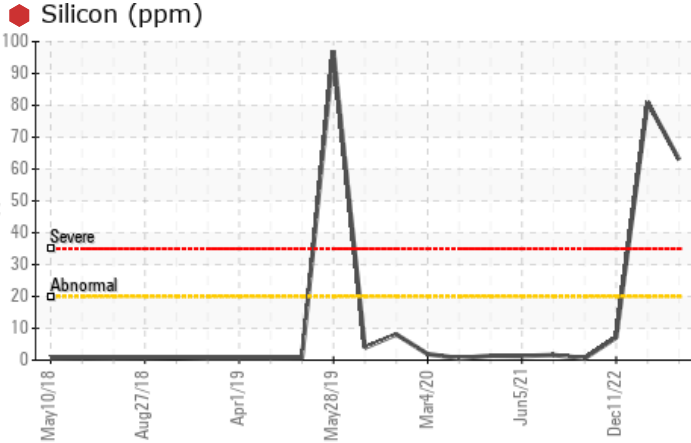


DIRT



Machine Id
GTC TRAIN #2 MINERAL OIL (S/N TGB650242)
 Component
Gearbox
 Fluid
MOBIL DTE 832 (--- LTR)

COMPONENT CONDITION SUMMARY




RECOMMENDATION

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	SEVERE	ATTENTION
Silicon	ppm	ASTM D5185(m)	>20	63	81	7

Customer Id: EXXSTJ
Sample No.: PP13907152
Lab Number: 02577503
Test Package: MAR 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Kevin Marson +1 (289)291-4644 x4644
Kevin.Marson@wearcheck.com

To change component or sample information:
 Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Resample	---	---	?	We recommend an early resample to monitor this condition.
Information Required	---	---	?	NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.
Check Breathers	---	---	?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.
Check Seals	---	---	?	Check seals and/or filters for points of contaminant entry.

HISTORICAL DIAGNOSIS

02 Jun 2023 Diag: Kevin Marson



Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. Elemental level of silicon (Si) above normal indicating ingress of seal material, dirt and/or grease. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.



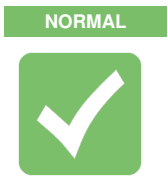
11 Dec 2022 Diag: Kevin Marson



Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. There is no indication of any contamination in the oil. Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



13 Sep 2022 Diag: Wes Davis



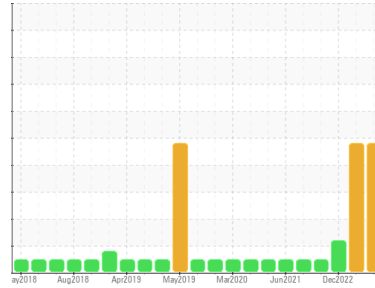
Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.





OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
GTC TRAIN #2 MINERAL OIL (S/N TGB650242)

Component
Gearbox
Fluid
MOBIL DTE 832 (--- LTR)

DIAGNOSIS

Recommendation

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

All component wear rates are normal.

Contamination

Elemental level of silicon (Si) above normal indicating ingress of seal material, dirt and/or grease.

Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		PP13907152	PP13874958	PP13809088
Sample Date	Client Info		06 Aug 2023	02 Jun 2023	11 Dec 2022
Machine Age	hrs	Client Info	0	0	0
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			SEVERE	SEVERE	ATTENTION

WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184*		0	0	0
Iron	ppm	ASTM D5185(m) >150	<1	<1	1
Chromium	ppm	ASTM D5185(m) >10	0	0	0
Nickel	ppm	ASTM D5185(m) >10	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	0	0	0
Silver	ppm	ASTM D5185(m)	<1	0	<1
Aluminum	ppm	ASTM D5185(m) >5	<1	<1	0
Lead	ppm	ASTM D5185(m) >65	0	0	<1
Copper	ppm	ASTM D5185(m) >80	<1	0	2
Tin	ppm	ASTM D5185(m) >8	0	0	0
Antimony	ppm	ASTM D5185(m) >5	0	0	<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	<1	<1
Barium	ppm	ASTM D5185(m)	0	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0
Manganese	ppm	ASTM D5185(m)	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	0	0	0
Calcium	ppm	ASTM D5185(m)	<1	<1	0
Phosphorus	ppm	ASTM D5185(m)	1222	1231	▲ 420
Zinc	ppm	ASTM D5185(m)	2	2	▲ 61
Sulfur	ppm	ASTM D5185(m)	30	0	▲ 3772
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

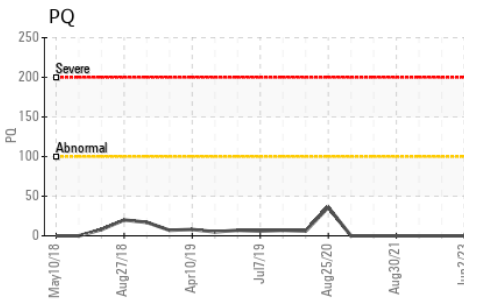
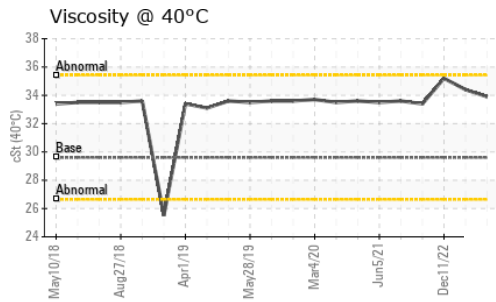
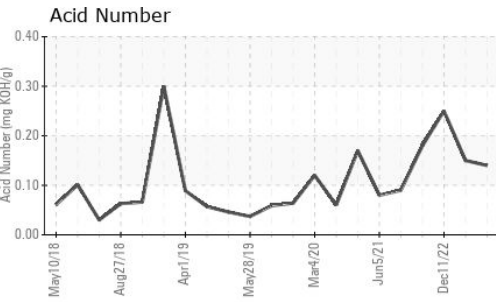
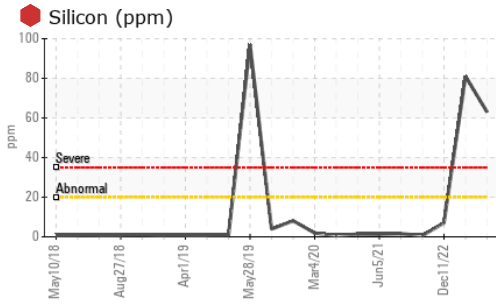
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >20	63	81	7
Sodium	ppm	ASTM D5185(m)	0	0	0
Potassium	ppm	ASTM D5185(m) >20	<1	<1	0

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.14	0.15	0.25



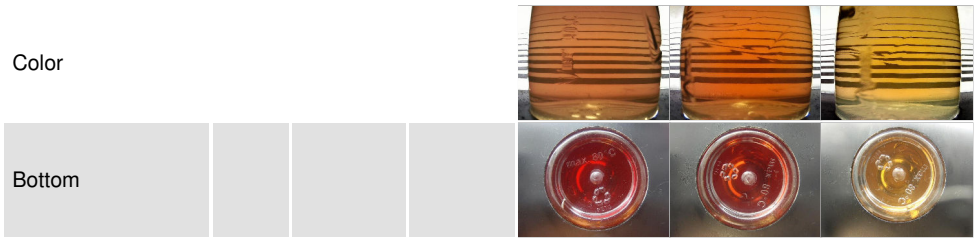
OIL ANALYSIS REPORT



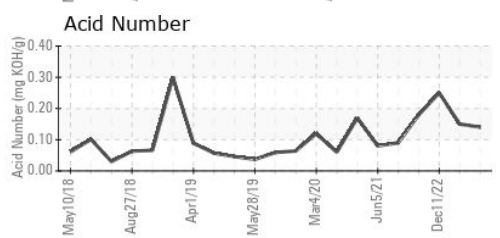
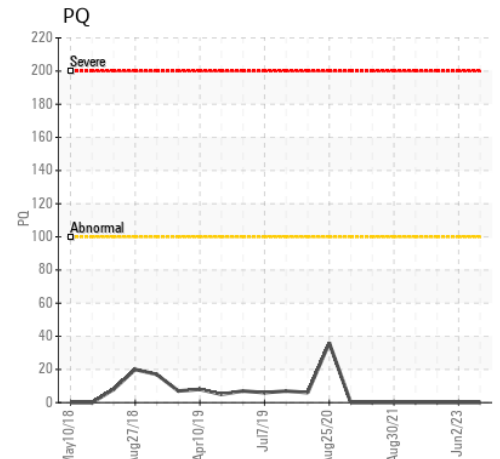
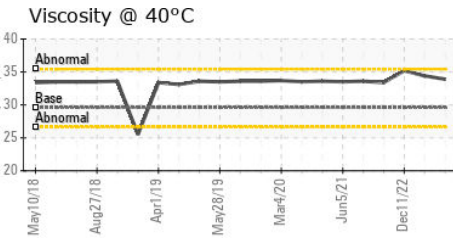
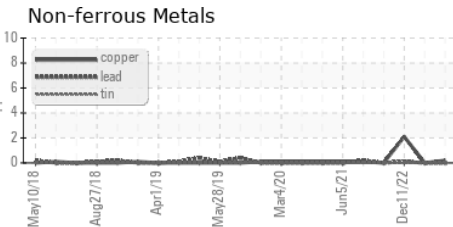
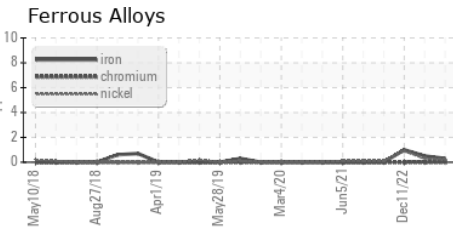
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	VLITE	NONE
Yellow Metal	scalar	Visual*	NONE	VLITE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	VLITE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	29.6	33.9	34.4

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
 Sample No. : PP13907152
 Lab Number : 02577503
 Unique Number : 5630563
 Test Package : MAR 2 (Additional Tests: TAN Man)

ExxonMobil Canada East Ltd.
 Hebron-Materials and Repair Coordin, Suite 1000, 100 New Gow
 St. John's, NL
 CA A1C 6K3
 Contact: Liam Maher
 liam.m.maher@exxonmobil.com
 T: (709)273-3729
 F:

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.