

PROBLEM SUMMARY

Sample Rating Trend

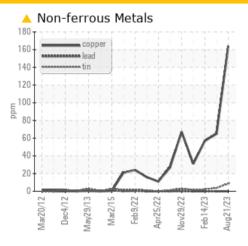
DIRT

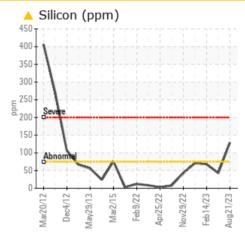
Machine Id **8362**Component

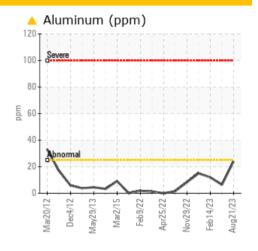
Left Final Drive

GEAR OIL SAE 80W140 (--- GAL)

COMPONENT CONDITION SUMMARY







RECOMMENDATION

We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS								
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL		
Aluminum	ppm	ASTM D5185m	>25	<u> </u>	6	12		
Copper	ppm	ASTM D5185m	>50	164	△ 65	▲ 57		
Silicon	ppm	ASTM D5185m	>75	129	43	68		
Yellow Metal	scalar	*Visual	NONE	▲ MODER	MODER	MODER		

Customer Id: TRANEW Sample No.: WC0837043 Lab Number: 05932340 Test Package: CONST



To manage this report scan the QR code

To discuss the diagnosis or test data: Jonathan Hester +1 919-379-4092 x4092 jhester@wearcheckusa.com

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Check Dirt Access			?	We advise that you check all areas where dirt can enter the system.

HISTORICAL DIAGNOSIS

12 Jul 2023 Diag: Don Baldridge

WEAR



The oil 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. The copper level is abnormal. All other component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.



14 Feb 2023 Diag: Don Baldridge

WEAR



The oil 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. The copper level is abnormal. All other component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.



27 Dec 2022 Diag: Sean Felton

NORMAL



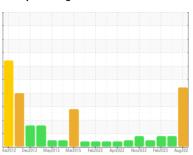
Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.





OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id 8362 Component

Left Final Drive

GEAR OIL SAE 80W140 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

The copper level is abnormal. Moderate concentration of visible metal present.

Contamination

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Fluid Condition

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

Tin ppm ASTM D5185m >10 9 4 2 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 400 205 155 166 Barium ppm ASTM D5185m 200 0 0 0 Molybdenum ppm ASTM D5185m 12 0 <1		Тиг2012 Онг2012 Мау2013 Миг2015 Feb2022 Арг2022 Nor2022 Feb2023 Aug202							
Sample Date	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2		
Machine Age hrs Client Info 9130 8619 7228	Sample Number		Client Info		WC0837043	WC0831231	WC0775993		
Oil Age hrs Client Info 519 237 619 Oil Changed Sample Status Client Info Changed ABNORMAL Changed Changed Changed Changed ABNORMAL Changed ABNORMAL ABN	Sample Date		Client Info		21 Aug 2023	12 Jul 2023	14 Feb 2023		
Oil Changed Sample Status	Machine Age	hrs	Client Info		9130	8619	7228		
MEAR METALS	Oil Age	hrs	Client Info		519	237	619		
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >500 158 67 60 Chromium ppm ASTM D5185m >10 3 1 0 Nickel ppm ASTM D5185m >10 10 2 2 Titanium ppm ASTM D5185m >2 <1	Oil Changed		Client Info		Changed	Changed	Changed		
Iron	Sample Status				ABNORMAL	ABNORMAL	ABNORMAL		
Chromium ppm ASTM D5185m >10 3 1 0 Nickel ppm ASTM D5185m >10 10 2 2 Tittanium ppm ASTM D5185m 2 <1	WEAR METALS		method	limit/base	current	history1	history2		
Nickel	Iron	ppm	ASTM D5185m	>500	158	67	60		
Titanium	Chromium	ppm	ASTM D5185m	>10	3	1	0		
Silver	Nickel	ppm	ASTM D5185m	>10	10	2	2		
Aluminum ppm ASTM D5185m >25 24 6 12 Lead ppm ASTM D5185m >25 0 0 0 Copper ppm ASTM D5185m >50 164 65 57 Tin ppm ASTM D5185m >10 9 4 2 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 Boron ppm ASTM D5185m 400 205 155 166 Barium ppm ASTM D5185m 400 20 0 0 Mangaese ppm ASTM D5185m 12 0 <1	Titanium	ppm	ASTM D5185m		2	<1	<1		
Lead ppm ASTM D5185m >25 0 0 0 Copper ppm ASTM D5185m >50 164 65 57 Tin ppm ASTM D5185m >10 9 4 2 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 400 205 155 166 Barium ppm ASTM D5185m 1200 0 0 0 Molybdenum ppm ASTM D5185m 12 2 1 1 Magnaese ppm ASTM D5185m 12 2 2 1 1 Magnaesium ppm ASTM D5185m 12 2 2 5 6 Calcium ppm ASTM D5185m 150	Silver	ppm	ASTM D5185m		0	0	0		
Copper ppm ASTM D5185m >50 ▲ 164 ♠ 65 ♠ 57 Tin ppm ASTM D5185m >10 9 4 2 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 400 205 155 166 Barium ppm ASTM D5185m 200 0 0 0 Molydedenum ppm ASTM D5185m 12 0 <1	Aluminum	ppm	ASTM D5185m	>25	<u>^</u> 24	6	12		
Tin ppm ASTM D5185m >10 9 4 2 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 400 205 155 166 Barium ppm ASTM D5185m 200 0 0 0 Molybdenum ppm ASTM D5185m 12 0 <1 0 Manganese ppm ASTM D5185m 12 2 1 1 Magnesium ppm ASTM D5185m 12 2 2 5 Calcium ppm ASTM D5185m 12 2 2 2 1 Phosphorus ppm ASTM D5185m 125 25 52 62 Sulfur ppm ASTM D5185m 125 25	Lead	ppm	ASTM D5185m	>25	0	0	0		
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 400 205 155 166 Barium ppm ASTM D5185m 200 0 0 0 Molybdenum ppm ASTM D5185m 12 0 <1 0 Manganese ppm ASTM D5185m 12 2 1 1 Magnesium ppm ASTM D5185m 12 2 2 1 1 Magnesium ppm ASTM D5185m 150 118 220 211 Phosphorus ppm ASTM D5185m 150 118 220 211 Phosphorus ppm ASTM D5185m 125 25 52 62 Sulfur ppm ASTM D5185m 125 25 52<	Copper	ppm	ASTM D5185m	>50	<u> 164</u>	△ 65	△ 57		
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 400 205 155 166 Barium ppm ASTM D5185m 200 0 0 0 Molybdenum ppm ASTM D5185m 12 0 <1	Tin	ppm	ASTM D5185m	>10	9	4	2		
ADDITIVES	Vanadium	ppm	ASTM D5185m		0	0	0		
Boron	Cadmium	ppm	ASTM D5185m		0	0	0		
Barium ppm ASTM D5185m 200 0 0 0 Molybdenum ppm ASTM D5185m 12 0 <1	ADDITIVES		method	limit/base	current	history1	history2		
Molybdenum ppm ASTM D5185m 12 0 <1 0 Manganese ppm ASTM D5185m 12 2 1 1 Magnesium ppm ASTM D5185m 12 2 2 5 Calcium ppm ASTM D5185m 150 118 220 211 Phosphorus ppm ASTM D5185m 150 380 395 341 Zinc ppm ASTM D5185m 125 25 52 62 Sulfur ppm ASTM D5185m 125 25 52 62 Sulfur ppm ASTM D5185m 22500 2324 2694 1633 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 129 43 68 Sodium ppm ASTM D5185m >20 5 2 1 VISUAL method limit/base current	Boron	ppm	ASTM D5185m	400	205	155	166		
Manganese ppm ASTM D5185m 2 1 1 Magnesium ppm ASTM D5185m 12 2 2 5 Calcium ppm ASTM D5185m 150 118 220 211 Phosphorus ppm ASTM D5185m 150 118 220 211 Phosphorus ppm ASTM D5185m 1650 380 395 341 Zinc ppm ASTM D5185m 125 25 52 62 Sulfur ppm ASTM D5185m 22500 2324 2694 1633 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 ▲ 129 43 68 Sodium ppm ASTM D5185m >75 ▲ 129 43 68 Sodium ppm ASTM D5185m >75 ▲ 129 43 68 Sodium ppm ASTM D5185m	Barium	ppm	ASTM D5185m	200	0	0	0		
Magnesium ppm ASTM D5185m 12 2 2 5 Calcium ppm ASTM D5185m 150 118 220 211 Phosphorus ppm ASTM D5185m 150 380 395 341 Zinc ppm ASTM D5185m 125 25 52 62 Sulfur ppm ASTM D5185m 125 25 52 62 Sulfur ppm ASTM D5185m 22500 2324 2694 1633 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 129 43 68 Sodium ppm ASTM D5185m >75 129 43 68 Sodium ppm ASTM D5185m >20 5 2 1 VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE	Molybdenum	ppm	ASTM D5185m	12	0	<1	0		
Calcium ppm ASTM D5185m 150 118 220 211 Phosphorus ppm ASTM D5185m 1650 380 395 341 Zinc ppm ASTM D5185m 125 25 52 62 Sulfur ppm ASTM D5185m 22500 2324 2694 1633 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 ▲ 129 43 68 Sodium ppm ASTM D5185m >75 ▲ 129 43 68 Sodium ppm ASTM D5185m >20 5 2 1 VISUAL method limit/base current history1 history2 VISUAL method limit/base current history1 history2 VISUAL NONE NONE NONE NONE VISUAL NONE	Manganese	ppm	ASTM D5185m		2	1	1		
Phosphorus ppm ASTM D5185m 1650 380 395 341 Zinc ppm ASTM D5185m 125 25 52 62 Sulfur ppm ASTM D5185m 125 25 52 62 Sulfur ppm ASTM D5185m 22500 2324 2694 1633 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 129 43 68 Sodium ppm ASTM D5185m >75 129 43 68 VISUAL DPM ASTM D5185m <	Magnesium	ppm	ASTM D5185m	12	2	2	5		
Zinc ppm ASTM D5185m 125 25 52 62 Sulfur ppm ASTM D5185m 22500 2324 2694 1633 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 ▲ 129 43 68 Sodium ppm ASTM D5185m >75 ▲ 129 43 68 Sodium ppm ASTM D5185m >75 ▲ 129 43 68 Sodium ppm ASTM D5185m >75 ▲ 129 43 68 Sodium ppm ASTM D5185m >75 ▲ 129 43 68 Sodium ppm ASTM D5185m >75 ▲ 129 43 68 Sodium ppm ASTM D5185m >75 ▲ 129 43 68 VISUAL method limit/base current history2 White Metal scalar *Visual NONE NONE	Calcium	ppm	ASTM D5185m	150	118	220	211		
Sulfur ppm ASTM D5185m 22500 2324 2694 1633 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75 ▲ 129 43 68 Sodium ppm ASTM D5185m 1 <1	Phosphorus	ppm	ASTM D5185m	1650	380	395	341		
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >75	Zinc	ppm	ASTM D5185m	125	25	52	62		
Silicon ppm ASTM D5185m >75 129 43 68 Sodium ppm ASTM D5185m 1 <1 <1 <1 Potassium ppm ASTM D5185m >20 5 2 1 VISUAL method limit/base current history1 history2 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 Appearance scalar *Visual NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML Emulsified Water scalar *Visual >0.2 NEG NEG NEG Free Water Scalar *Visual NEG NEG NEG	Sulfur	ppm	ASTM D5185m	22500	2324	2694	1633		
Sodium ppm ASTM D5185m 1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	CONTAMINANTS	3	method	limit/base	current	history1	history2		
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VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE NONE Yellow Metal scalar *Visual NONE MODER MODER MODER Precipitate scalar *Visual NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE Sand/Dirt scalar *Visual NORML NORML NORML NORML Appearance scalar *Visual NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML Emulsified Water scalar *Visual >0.2 NEG NEG NEG Free Water scalar *Visual NEG NEG NEG	Sodium	ppm	ASTM D5185m		1	<1	<1		
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Appearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGFree Waterscalar*VisualNEGNEGNEG	Debris			NONE	NONE	NONE	NONE		
Appearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGNEGFree Waterscalar*VisualNEGNEGNEG	Sand/Dirt		*Visual	NONE	NONE	NONE	NONE		
Odor scalar *Visual NORML NORML NORML NORML Emulsified Water scalar *Visual >0.2 NEG NEG NEG Free Water scalar *Visual NEG NEG NEG	Appearance			NORML		NORML	NORML		
Emulsified Water scalar *Visual >0.2 NEG NEG NEG Free Water scalar *Visual NEG NEG NEG	• •		*Visual	NORML	NORML				
Free Water scalar *Visual NEG NEG NEG	Emulsified Water					NEG			
FLUID PROPERTIES method limit/base current history1 history2	Free Water								
	FLUID PROPERT	TES	method	limit/base	current	history1	history2		

Visc @ 40°C

cSt

ASTM D445 263

106

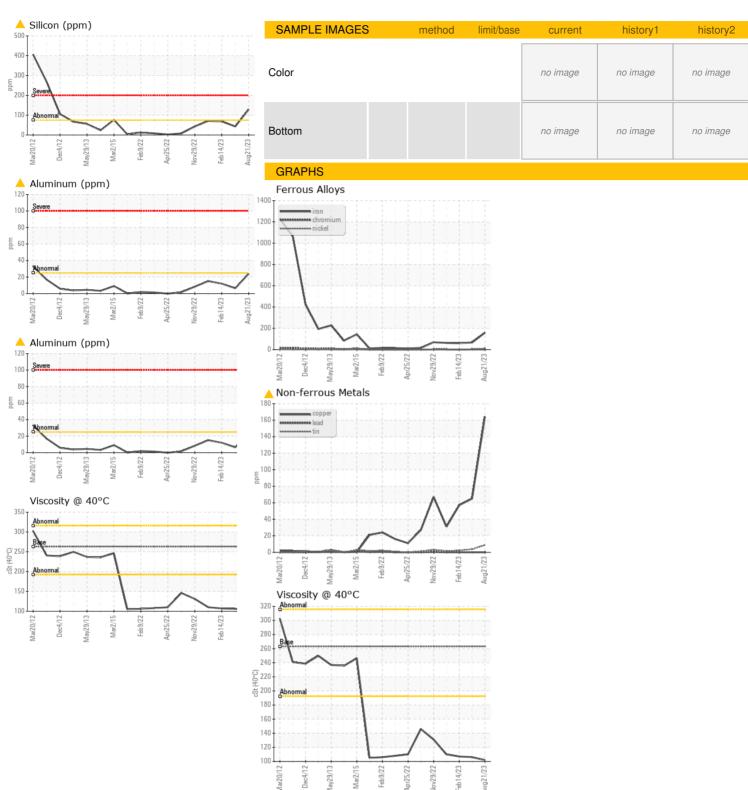
107 Contact/Location: MIKE WYATT - TRANEW

Report Id: TRANEW [WUSCAR] 05932340 (Generated: 08/25/2023 12:15:07) Rev: 1

Page 3 of 4



OIL ANALYSIS REPORT





Laboratory Sample No. Lab Number

Unique Number

: 10617611

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : WC0837043 Received Diagnosed : 05932340

: 23 Aug 2023 : 25 Aug 2023 Diagnostician : Jonathan Hester

Test Package : CONST (Additional Tests: PQ) 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.

TRADER CONSTRUCTION CO.

PO DRAWER 1578 NEW BERN, NC US 28563

Contact: MIKE WYATT mwyatt@traderconstruction.com

T: (252)633-1399 F: (252)638-4871

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)