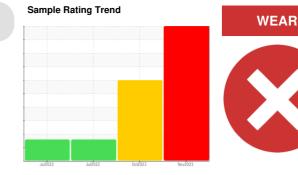


PROBLEM SUMMARY

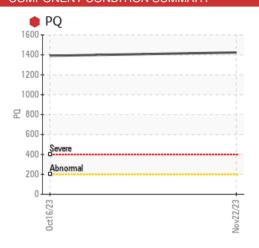
FRONTIER II 69WEA86957

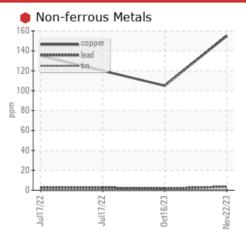
Component Main Grease

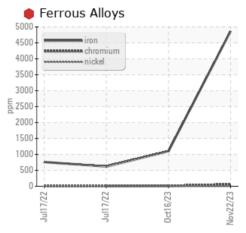
NOT GIVEN (--- LTR)











RECOMMENDATION

Purge old grease immediately. We recommend an early resample to monitor this condition.

PROBLEMATIC T	EST RE	SULTS				
Sample Status				SEVERE	ABNORMAL	ABNORMAL
PQ		ASTM D8184	>200	1424	▲ 1391	
Iron	ppm	ASTM D5185m	>250	4866	<u></u> 1102	<u></u> 761
Chromium	ppm	ASTM D5185m	>10	6 1	<u> 11</u>	4
Copper	ppm	ASTM D5185m	>75	155	<u> </u>	<u> </u>

Customer Id: NORDEX Sample No.: NX06026957 Lab Number: 06026957 Test Package: GRS 1



To manage this report scan the QR code

To discuss the diagnosis or test data: Doug Bogart +1 (800)237-1369 x4016 dougb@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
Resample			?	Re-sample to verify the actual oil condition. Purge old grease immediately if still abnormal and monitor the trend of iron level. We recommend an early resample to monitor this condition

HISTORICAL DIAGNOSIS

16 Oct 2023 Diag: Doug Bogart

WEAR



Re-sample to verify the actual grease condition. Purge old grease if still abnormal and monitor the trend of iron level. Please specify the brand, type, and viscosity of the oil on your next sample. Bearing and/or bushing wear is indicated. Elemental level of silicon (Si) above normal. The condition of the grease is acceptable for the time in service.



17 Jul 2022 Diag: Doug Bogart

WEAR



No corrective action is recommended at this time. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample. Generally an abnormal rate of wear indicated in the component. There is no indication of any contamination in the grease. The condition of the grease is acceptable for the time in service.



17 Jul 2022 Diag: Doug Bogart

WEAR



No corrective action is recommended at this time. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample. Generally an abnormal rate of wear indicated in the component. There is no indication of any contamination in the grease. The condition of the grease is acceptable for the time in service.





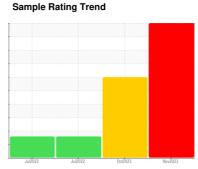
GREASE ANALYSIS

FRONTIER II 69WEA86957

Component

Main Grease

NOT GIVEN (--- LTR)





DIAGNOSIS

Recommendation

Purge old grease immediately. We recommend an early resample to monitor this condition.

Bearing and/or bushing wear is indicated.

Grease Condition

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

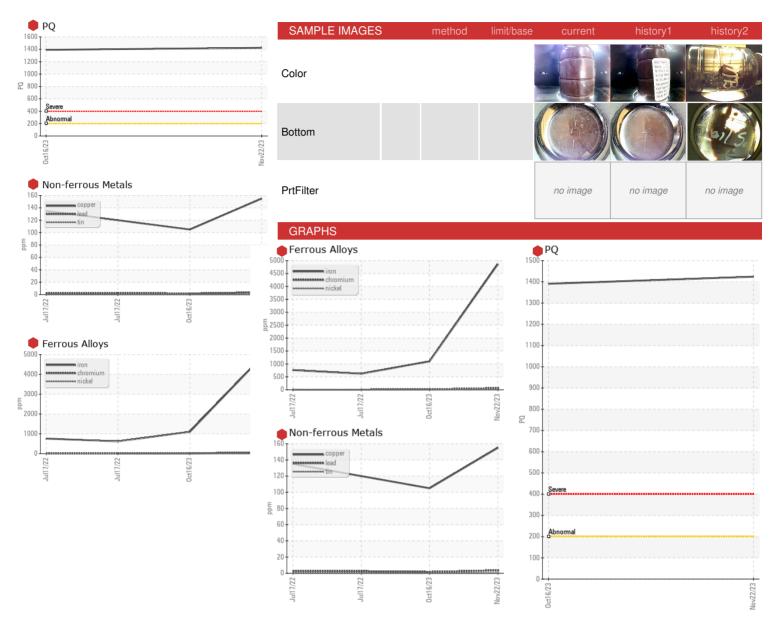
Contaminants

There is no indication of any contamination in the grease.

SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		NX06026957	NX05989619	NX05593389
Sample Date		Client Info		22 Nov 2023	16 Oct 2023	17 Jul 2022
Machine Age	hrs	Client Info		0	12583	0
Grease Age	hrs	Client Info		0	0	0
Grease Serviced		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	ABNORMAL	ABNORMAL
CONTAMINATIO	N	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184	>200	1424	<u> </u>	
Iron	ppm	ASTM D5185m	>250	4866	<u> </u>	<u>^</u> 761
Chromium	ppm	ASTM D5185m	>10	6 1	<u> 11</u>	4
Nickel	ppm	ASTM D5185m	>5	1	0	0
Cadmium	ppm	ASTM D5185m		0	0	<1
Titanium	ppm	ASTM D5185m		1	<1	<1
Vanadium	ppm	ASTM D5185m		2	1	<1
Lead	ppm	ASTM D5185m	>25	4	2	3
Copper	ppm	ASTM D5185m	>75	155	<u> </u>	<u> </u>
Tin	ppm	ASTM D5185m	>5	0	0	0
Silver	ppm	ASTM D5185m	>5	0	<1	1
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		219	152	207
Magnesium	ppm	ASTM D5185m		7	0	0
Manganese	ppm	ASTM D5185m		40	10	11
Molybdenum	ppm	ASTM D5185m		4715	3462	2309
Phoophorus						
rnosphorus	ppm	ASTM D5185m		930	618	367
•	ppm	ASTM D5185m ASTM D5185m		930 307	618 164	367 186
	ppm		limit/base			186
Zinc THICKENER/SO	ppm	ASTM D5185m	limit/base	307	164	186
Zinc THICKENER/SO, Aluminum	ppm	ASTM D5185m method	limit/base	307 current	164 history1	186 history2
Zinc THICKENER/SO Aluminum Barium	ppm AP ppm	ASTM D5185m method ASTM D5185m	limit/base	307 current	164 history1	186 history2
Zinc THICKENER/SOA Aluminum Barium Calcium Sodium	ppm AP ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	307 current 0 4	164 history1 4 7	186 history2 9 7
Zinc THICKENER/SOA Aluminum Barium Calcium Sodium	ppm AP ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	307 current 0 4 34	164 history1 4 7 22	186 history2 9 7 13
Zinc THICKENER/SO Aluminum Barium Calcium Sodium Lithium	ppm AP ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	307 current 0 4 34 21	164 history1 4 7 22 17	186 history2 9 7 13 15
Zinc THICKENER/SO Aluminum Barium Calcium Sodium Lithium	ppm AP ppm ppm ppm ppm ppm ppm p	Method ASTM D5185m	limit/base	307 current 0 4 34 21 4037	164 history1 4 7 22 17 3412	9 7 13 15 3531 6191
Zinc THICKENER/SO Aluminum Barium Calcium Sodium Lithium Sulfur CONTAMINANTS	ppm AP ppm ppm ppm ppm ppm ppm p	Method ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method		307 current 0 4 34 21 4037 6376	164 history1 4 7 22 17 3412 4462	9 7 13 15 3531 6191
Zinc THICKENER/SO Aluminum Barium Calcium Sodium Lithium Sulfur CONTAMINANTS	ppm AP ppm ppm ppm ppm ppm ppm p	Method ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method	limit/base	307 current 0 4 34 21 4037 6376 current	164 history1 4 7 22 17 3412 4462 history1	186 history2 9 7 13 15 3531 6191 history2
Aluminum Barium Calcium Sodium Lithium Sulfur	ppm AP ppm ppm ppm ppm ppm ppm p	method ASTM D5185m method ASTM D5185m	limit/base	307 current 0 4 34 21 4037 6376 current 112	164 history1 4 7 22 17 3412 4462 history1 ▲ 987	9 7 13 15 3531 6191 history2 48 2
Zinc THICKENER/SO Aluminum Barium Calcium Sodium Lithium Sulfur CONTAMINANTS Silicon Potassium	ppm AP ppm ppm ppm ppm ppm ppm p	method ASTM D5185m Method ASTM D5185m	limit/base >150	307 current 0 4 34 21 4037 6376 current 112 7	164 history1 4 7 22 17 3412 4462 history1 987 2	186 history2 9 7 13 15 3531 6191 history2 48 2 history2
Zinc THICKENER/SO Aluminum Barium Calcium Sodium Lithium Sulfur CONTAMINANTS Silicon Potassium GREASE CONDI	ppm AP ppm ppm ppm ppm ppm ppm p	Method ASTM D5185m method ASTM D5185m METhod ASTM D5185m method	limit/base >150	307	164 history1 4 7 22 17 3412 4462 history1 ▲ 987 2 history1	9 7 13 15 3531 6191 history2 48



GREASE ANALYSIS





Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10776748

: NX06026957 : 06026957 Test Package : GRS 1 (Additional Tests: KV40, SCREEN)

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

: 06 Dec 2023 : 26 Dec 2023 Diagnostician : Doug Bogart

NORDEX USA - Chicago 300 SOUTH WACKER DRIVE, SUITE 1500

CHICAGO, IL US 60606

Contact: DEVIN LINEHAN DLinehan@nordex-online.com

T: (312)386-4124 F: (312)386-7102

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)