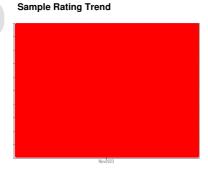


PROBLEM SUMMARY

FRONTIER II [200006776] Machine Id 19WEA86907

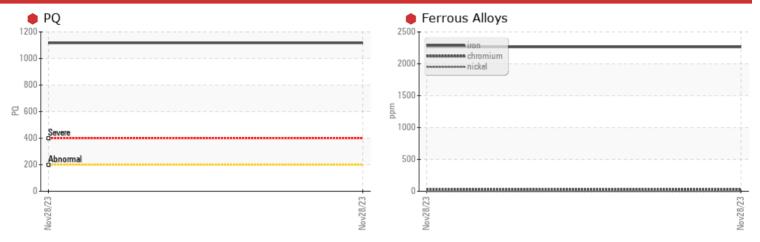
Component **Grease**

NOT GIVEN (--- LTR)





COMPONENT CONDITION SUMMARY



RECOMMENDATION

Re-sample to verify the actual oil condition. Purge old grease if still abnormal and monitor the trend of iron level. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS								
Sample Status				SEVERE				
PQ		ASTM D8184	>200	1117				
Iron	ppm	ASTM D5185m	>250	2264				
Chromium	ppm	ASTM D5185m	>10	32				

Customer Id: NORDEX Sample No.: NX06026958 Lab Number: 06026958 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		
Monitor			?	Re-sample to verify the actual oil condition. Purge old grease if still abnormal and monitor the trend of iron level.		
Change Fluid			?	Re-sample to verify the actual oil condition. Purge old grease if still abnormal and monitor the trend of iron level.		
Resample			?	Re-sample to verify the actual oil condition. Purge old grease if still abnormal and monitor the trend of iron level. We recommend an early resample to monitor this condition.		

HISTORICAL DIAGNOSIS



GREASE ANALYSIS

FRONTIER II [200006776] Machine Id 19WEA86907

Component

Grease

NOT GIVEN (--- LTR)

Sample Rating Trend



DIAGNOSIS

Recommendation

Re-sample to verify the actual oil condition. Purge old grease if still abnormal and monitor the trend of iron level. We recommend an early resample to monitor this condition.

Wear

Bearing and/or bushing wear is indicated.

Grease Condition

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

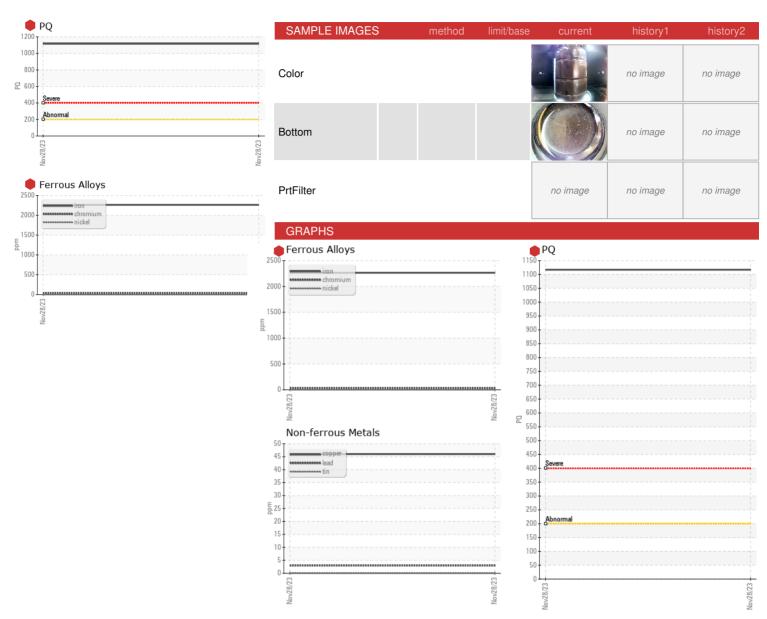
Contaminants

There is no indication of any contamination in the grease.

Sample Number Client Info NX06026958	SAMPLE INFORMA	ATION	method	limit/base	current	history1	history2
Sample Date Client Info 28 Nov 2023 Machine Age hrs Client Info 0 Grease Sage hrs Client Info 0 Grease Serviced Client Info N/A Sample Status SEVERE CONTAMINATION method limit/base current history1 history2 Water WC Method >0.1 NEG WEAR METALS method limit/base current history1 history2 PQ ASTM D8184 >20.0 1117 Iron ppm ASTM D8185m >20 2264 Iron ppm ASTM D8185m >5 0 Chromium ppm ASTM D8185m <1	Sample Number		Client Info		NX06026958		
Grease Age hrs Client Info N/A Grease Serviced Client Info N/A Sample Status SEVERE CONTAMINATION method limit/base current history1 history2 Water WC Method >0.1 NEG WEAR METALS method limit/base current history1 history2 WEAR METALS method limit/base current history1 history1 history2 PQ ASTM D5185m >20 1117 Iron ppm ASTM D5185m >10 32 Chromium ppm ASTM D5185m >1 1 Cadmium ppm ASTM D5185m 2 Cadmium			Client Info		28 Nov 2023		
Grease Serviced Sample Status Client Info N/A CONTAMINATION method limit/base current history1 history2 Water WC Method >0.1 NEG WEAR METALS method limit/base current history1 history2 PQ ASTM D5185m >200 1117 Chromium ppm ASTM D5185m >250 2264 Chromium ppm ASTM D5185m >5 0 Chromium ppm ASTM D5185m 22 Vanadium ppm ASTM D5185m >5 3	Machine Age	hrs	Client Info		0		
Sample Status	Grease Age	hrs	Client Info		0		
CONTAMINATION method limit/base current history1 history2 Water WC Method >0.1 NEG WEAR METALS method limit/base current history1 history2 PQ ASTM D6188m >200 1117 Iron ppm ASTM D6185m >250 2264 Chromium ppm ASTM D5185m >10 32 Chromium ppm ASTM D5185m >5 0 Cadmium ppm ASTM D5185m <1 Cadmium ppm ASTM D5185m 21 Cadmium ppm ASTM D5185m >25 3 Caded ppm ASTM D5185m >25 3 Copper ppm ASTM D5185m >5 0	Grease Serviced		Client Info		N/A		
Water WC Method >0.1 NEG WEAR METALS method limit/base current history1 history2 WEAR METALS method limit/base current history1 history2 PQ ASTM D8185m >200 1117 Chromium ppm ASTM D5185m >10 32 Nickel ppm ASTM D5185m >5 0 Cadmium ppm ASTM D5185m <1	Sample Status				SEVERE		
WEAR METALS method limit/base current history1 history2 PQ ASTM D8184 >200 11117 Iron ppm ASTM D5185m >250 2264 Chromium ppm ASTM D5185m >10 32 Nickel ppm ASTM D5185m >5 0 Cadmium ppm ASTM D5185m <1 Vanadium ppm ASTM D5185m 2 Vanadium ppm ASTM D5185m 2 Vanadium ppm ASTM D5185m 25 3 Vanadium ppm ASTM D5185m >5 0 Vanadium ppm ASTM D5185m >5 0 Lead ppm ASTM D5185m >5 0	CONTAMINATION		method	limit/base	current	history1	history2
PQ	Water		WC Method	>0.1	NEG		
Iron	WEAR METALS		method	limit/base	current	history1	history2
Chromium ppm ASTM D5185m >10 32 Nickel ppm ASTM D5185m >5 0 Cadmium ppm ASTM D5185m <1 Titanium ppm ASTM D5185m 2 Vanadium ppm ASTM D5185m 25 3 Lead ppm ASTM D5185m >5 46 Copper ppm ASTM D5185m >5 0 Tin ppm ASTM D5185m >5 0 Silver ppm ASTM D5185m >5 <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 210 Manganesium ppm ASTM D5185m 19 <th< td=""><td>PQ</td><td></td><td>ASTM D8184</td><td>>200</td><th>1117</th><td></td><td></td></th<>	PQ		ASTM D8184	>200	1117		
Nickel ppm ASTM D5185m >5 0 Cadmium ppm ASTM D5185m <1	Iron	ppm	ASTM D5185m	>250	2264		
Cadmium ppm ASTM D5185m <1	Chromium		ASTM D5185m	>10	32		
Titanium ppm ASTM D5185m <1 Vanadium ppm ASTM D5185m 2 Lead ppm ASTM D5185m >25 3 Copper ppm ASTM D5185m >5 0 Tin ppm ASTM D5185m >5 0 Silver ppm ASTM D5185m >5 <1	Nickel	ppm	ASTM D5185m	>5	0		
Vanadium ppm ASTM D5185m 2 Lead ppm ASTM D5185m >25 3 Copper ppm ASTM D5185m >75 46 Tin ppm ASTM D5185m >5 0 Silver ppm ASTM D5185m >5 <1	Cadmium	ppm	ASTM D5185m		<1		
Lead ppm ASTM D5185m >25 3 Copper ppm ASTM D5185m >75 46 Tin ppm ASTM D5185m >5 0 Silver ppm ASTM D5185m >5 <1	Titanium	ppm	ASTM D5185m		<1		
Copper ppm ASTM D5185m >75 46 Tin ppm ASTM D5185m >5 0 Silver ppm ASTM D5185m >5 <1	Vanadium	ppm	ASTM D5185m		2		
Tin ppm ASTM D5185m >5 0 Silver ppm ASTM D5185m >5 <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 210 Magnesium ppm ASTM D5185m 0 Manganese ppm ASTM D5185m 19 Molybdenum ppm ASTM D5185m 5493 Phosphorus ppm ASTM D5185m 1049 Zinc ppm ASTM D5185m 274 THICKENER/SOAP method limit/base current history1 history2 Aluminum ppm ASTM D5185m 12 Barium ppm ASTM D5185m 12 Calcium ppm ASTM D5185m	Lead	ppm	ASTM D5185m	>25	3		
Silver ppm ASTM D5185m >5 <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 210 Magnesium ppm ASTM D5185m 0 Manganese ppm ASTM D5185m 19 Molybdenum ppm ASTM D5185m 5493 Phosphorus ppm ASTM D5185m 1049 Zinc ppm ASTM D5185m 274 THICKENER/SOAP method limit/base current history1 history2 Aluminum ppm ASTM D5185m 0 Barium ppm ASTM D5185m 12 Calcium ppm ASTM D5185m 3645 Sulfur	Copper	ppm	ASTM D5185m	>75	46		
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 210 Magnesium ppm ASTM D5185m 0 Manganese ppm ASTM D5185m 19 Molybdenum ppm ASTM D5185m 5493 Phosphorus ppm ASTM D5185m 1049 Zinc ppm ASTM D5185m 274 THICKENER/SOAP method limit/base current history1 history2 Aluminum ppm ASTM D5185m 0 Barium ppm ASTM D5185m 12 Calcium ppm ASTM D5185m 12 Sodium ppm ASTM D5185m 3645 Sulfur ppm ASTM D5185m 6123	Tin	ppm	ASTM D5185m	>5	0		
Boron ppm ASTM D5185m 210 Magnesium ppm ASTM D5185m 0 Manganese ppm ASTM D5185m 19 Molybdenum ppm ASTM D5185m 5493 Phosphorus ppm ASTM D5185m 1049 Zinc ppm ASTM D5185m 274 Zinc ppm ASTM D5185m 0 Zinc ppm ASTM D5185m 12 ASTM D5185m 12 Contain ppm ASTM D5185m 6123 Contain ppm AS	Silver	ppm	ASTM D5185m	>5	<1		
Magnesium ppm ASTM D5185m 0 Manganese ppm ASTM D5185m 19 Molybdenum ppm ASTM D5185m 5493 Phosphorus ppm ASTM D5185m 1049 Zinc ppm ASTM D5185m 274 THICKENER/SOAP method limit/base current history1 history2 Aluminum ppm ASTM D5185m 0 Barium ppm ASTM D5185m 12 Calcium ppm ASTM D5185m 12 Sodium ppm ASTM D5185m 3645 Sulfur ppm ASTM D5185m 6123 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >150	ADDITIVES		method	limit/base	current	history1	history2
Manganese ppm ASTM D5185m 19 Molybdenum ppm ASTM D5185m 5493 Phosphorus ppm ASTM D5185m 1049 Zinc ppm ASTM D5185m 274 THICKENER/SOAP method limit/base current history1 history2 Aluminum ppm ASTM D5185m 0 Barium ppm ASTM D5185m 12 Calcium ppm ASTM D5185m 12 Sodium ppm ASTM D5185m 3645 Sulfur ppm ASTM D5185m 6123 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >150 145	Boron	ppm	ASTM D5185m		210		
Molybdenum ppm ASTM D5185m 5493 Phosphorus ppm ASTM D5185m 1049 Zinc ppm ASTM D5185m 274 THICKENER/SOAP method limit/base current history1 history2 Aluminum ppm ASTM D5185m 0 Barium ppm ASTM D5185m 12 Calcium ppm ASTM D5185m 67 Sodium ppm ASTM D5185m 12 Lithium ppm ASTM D5185m 3645 Sulfur ppm ASTM D5185m 6123 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >150 145	Magnesium	ppm	ASTM D5185m		0		
Phosphorus ppm ASTM D5185m 1049 Zinc ppm ASTM D5185m 274 THICKENER/SOAP method limit/base current history1 history2 Aluminum ppm ASTM D5185m 0 Barium ppm ASTM D5185m 12 Calcium ppm ASTM D5185m 67 Sodium ppm ASTM D5185m 12 Lithium ppm ASTM D5185m 3645 Sulfur ppm ASTM D5185m 6123 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >150 145	Manganese	ppm	ASTM D5185m		19		
Zinc ppm ASTM D5185m 274 THICKENER/SOAP method limit/base current history1 history2 Aluminum ppm ASTM D5185m 0 Barium ppm ASTM D5185m 12 Calcium ppm ASTM D5185m 67 Sodium ppm ASTM D5185m 12 Lithium ppm ASTM D5185m 3645 Sulfur ppm ASTM D5185m 6123 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >150 145	Molybdenum	ppm	ASTM D5185m		5493		
THICKENER/SOAP method limit/base current history1 history2 Aluminum ppm ASTM D5185m 0 Barium ppm ASTM D5185m 12 Calcium ppm ASTM D5185m 67 Sodium ppm ASTM D5185m 12 Lithium ppm ASTM D5185m 3645 Sulfur ppm ASTM D5185m 6123 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >150 145	Phosphorus	ppm	ASTM D5185m		1049		
Aluminum ppm ASTM D5185m 0 Barium ppm ASTM D5185m 12 Calcium ppm ASTM D5185m 67 Sodium ppm ASTM D5185m 12 Lithium ppm ASTM D5185m 3645 Sulfur ppm ASTM D5185m 6123 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >150 145	Zinc	ppm	ASTM D5185m		274		
Barium ppm ASTM D5185m 12 Calcium ppm ASTM D5185m 67 Sodium ppm ASTM D5185m 12 Lithium ppm ASTM D5185m 3645 Sulfur ppm ASTM D5185m 6123 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >150 145	THICKENER/SOAF	-	method	limit/base	current	history1	history2
Barium ppm ASTM D5185m 12 Calcium ppm ASTM D5185m 67 Sodium ppm ASTM D5185m 12 Lithium ppm ASTM D5185m 3645 Sulfur ppm ASTM D5185m 6123 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >150 145	Aluminum	ppm	ASTM D5185m		0		
Sodium ppm ASTM D5185m 12 Lithium ppm ASTM D5185m 3645 Sulfur ppm ASTM D5185m 6123 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >150 145			ASTM D5185m		12		
Lithium ppm ASTM D5185m 3645 Sulfur ppm ASTM D5185m 6123 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >150 145	Calcium	ppm	ASTM D5185m		67		
Sulfur ppm ASTM D5185m 6123 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >150 145	Sodium	ppm	ASTM D5185m		12		
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >150 145	Lithium	ppm	ASTM D5185m		3645		
Silicon ppm ASTM D5185m >150 145	Sulfur	ppm	ASTM D5185m		6123		
	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m 4	Silicon	ppm	ASTM D5185m	>150	145		
	Potassium	ppm	ASTM D5185m		4		



GREASE ANALYSIS





Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10776749

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

: NX06026958 : 06026958

To discuss this sample report, contact Customer Service at 1-800-237-1369.

Recieved Diagnosed Diagnostician : Doug Bogart Test Package : GRS 1 (Additional Tests: KV40, SCREEN)

: 06 Dec 2023 : 26 Dec 2023

NORDEX USA - Chicago 300 SOUTH WACKER DRIVE, SUITE 1500 CHICAGO, IL US 60606

> Contact: DEVIN LINEHAN DLinehan@nordex-online.com T: (312)386-4124

* - 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)

F: (312)386-7102