

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Area FLOUR LOADOUT LEG Machine Id LOADOUT LEG Component

Gearbox

Fluid

HYDROTEX Ultra-Kleen ISO 220 (13 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

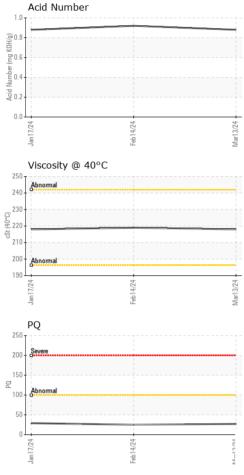
Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION method imit/base current history1 history2 Sample Number Client Info 13 Mar 2024 PCA0113074 PCA0113074 PCA0113079 Sample Date Client Info 0 0 0 0 Machine Age hrs Client Info 0 0 0 0 Oil Age hrs Client Info N/A N/A N/A N/A Sample Status Imit/base Current history1 history2 Water WC Method >0.2 NEG NEG NEG Water WC Method >0.2 NEG NEG NEG PQ ASTM D8184 27 25 29 100 105 161 Chromium ppm ASTM D5185m >15 0 0 0 0 14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				2024	Feb2024 Mar20		
Sample Date Client Info 13 Mar 2024 14 Feb 2024 17 Jan 2024 Machine Age hrs Client Info 0 0 0 Oil Age hrs Client Info 0 0 0 0 Oil Changed Client Info N/A N/A N/A N/A Sample Status Imit/base current history1 history2 Water WC Method >0.2 NEG NEG NEG PQ ASTM 08184 27 2.5 2.9 Iron ppm ASTM 05185 >1.5 <1 <1 <1 Nickel ppm ASTM 05185 >1.5 0 0 0 0 Silver ppm ASTM 05185 <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	SAMPLE INFORM	NATION	method	limit/base	current	history1	history2
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Oil Age hrs Client Info 0 0 0 Oil Changed Client Info N/A N/A N/A Sample Status Client Info N/A N/A N/A CONTAMUINATION method limit/base current history1 history2 Water WC Method >0.2 NEG NEG NEG WEAR METALS method limit/base current history1 history2 PQ ASTM D8184 27 25 29 linit/base current history1 history2 PQ ASTM D5185m >15 <1 <1 <1 <1 Nickel ppm ASTM D5185m >200 160 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Sample Date		Client Info		13 Mar 2024	14 Feb 2024	17 Jan 2024
Oil Changed Client Info N/A N/A N/A N/A Sample Status Image Status Image Status NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 Water WC Method >0.2 NEG NEG NEG WEAR METALS method limit/base current history1 history2 PQ ASTM D5185m >200 160 165 161 Chromium ppm ASTM D5185m >15 0 0 0 Nickel ppm ASTM D5185m >15 0 0 0 Aluminum ppm ASTM D5185m >25 2 2 2 Lead ppm ASTM D5185m >200 <1 <1 <1 Vanadium ppm ASTM D5185m >20 <1 <1 <1 Vanadium ppm ASTM D5185m 0 0 0 0	Machine Age	hrs	Client Info		0	0	0
Sample Status NORMAL NORMAL NORMAL NORMAL CONTAMINATION method limit/base current history1 history2 Water WC Method >0.2 NEG NEG NEG WEAR METALS method limit/base current history1 history2 PQ ASTM D8184 27 25 29 Ifon non ppm ASTM D8185 200 160 165 161 Chromium ppm ASTM D5185m >15 0 0 0 1 <t< th=""><th>Oil Age</th><th>hrs</th><th>Client Info</th><th></th><th>0</th><th>0</th><th>0</th></t<>	Oil Age	hrs	Client Info		0	0	0
CONTAMINATION method limit/base current history1 history2 Water WC Method >0.2 NEG NEG NEG WEAR METALS method limit/base current history1 history2 PQ ASTM D8184 27 25 29 Iron ppm ASTM D5185m >200 160 165 161 Chromium ppm ASTM D5185m >15 0 0 0 Nickel ppm ASTM D5185m >15 0 0 0 Nickel ppm ASTM D5185m >25 2 2 2 Lead ppm ASTM D5185m >200 <1 <1 <1 Vanadium ppm ASTM D5185m >200 <1 <1 <1 Vanadium ppm ASTM D5185m >20 <1 <1 <1 Vanadium ppm ASTM D5185m 0 0 0 0 <t< th=""><th>Oil Changed</th><th></th><th>Client Info</th><th></th><th>N/A</th><th>N/A</th><th>N/A</th></t<>	Oil Changed		Client Info		N/A	N/A	N/A
Water WC Method >0.2 NEG NEG NEG WEAR METALS method limit/base current history1 history2 PQ ASTM D8184 27 25 29 Iron ppm ASTM D8185m >200 160 165 161 Chromium ppm ASTM D5185m >15 41 41 41 Nickel ppm ASTM D5185m >15 0 0 0 Silver ppm ASTM D5185m >25 2 2 2 Lead ppm ASTM D5185m >200 <1 <1 <1 Copper ppm ASTM D5185m >200 <1 <1 <1 Vanadium ppm ASTM D5185m >200 <1 <1 <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 0 0 0 Ma	Sample Status				NORMAL	NORMAL	NORMAL
WEAR METALS method limit/base current history1 history2 PQ ASTM D8184 27 25 29 Iron ppm ASTM D8186 >200 160 165 161 Chromium ppm ASTM D5185m >15 <1 <1 <1 Nickel ppm ASTM D5185m >15 0 0 0 Titanium ppm ASTM D5185m >15 0 0 0 Aluminum ppm ASTM D5185m >25 2 2 2 Lead ppm ASTM D5185m >100 0 0 <1 Copper ppm ASTM D5185m >200 <1 <1 <1 Vanadium ppm ASTM D5185m >0 0 0 0 Cadmium ppm ASTM D5185m 71 <79 76 Barium ppm ASTM D5185m 0 0 0 Molybdenum	CONTAMINATI	ON	method	limit/base	current	history1	history2
PQ ASTM D8184 27 25 29 Iron ppm ASTM D5185m >200 160 165 161 Chromium ppm ASTM D5185m >15 <1 <1 <1 Nickel ppm ASTM D5185m >15 0 0 0 Titanium ppm ASTM D5185m >15 0 0 0 Silver ppm ASTM D5185m >25 2 2 2 Lead ppm ASTM D5185m >100 0 0 <1 Copper ppm ASTM D5185m >200 <1 <1 <1 Vanadium ppm ASTM D5185m >200 <1 <1 <1 Vanadium ppm ASTM D5185m >25 0 <1 <1 <1 Vanadium ppm ASTM D5185m >0 0 0 0 0 Conn ppm ASTM D5185m 0 0 0	Water		WC Method	>0.2	NEG	NEG	NEG
Iron ppm ASTM D5185m >200 160 165 161 Chromium ppm ASTM D5185m >15 <1 <1 <1 Nickel ppm ASTM D5185m >15 0 0 0 Titanium ppm ASTM D5185m <1 <1 <1 <1 Silver ppm ASTM D5185m >25 2 2 2 Lead ppm ASTM D5185m >200 <1 <1 <1 Copper ppm ASTM D5185m >200 <1 <1 <1 <1 Vanadium ppm ASTM D5185m >25 0 <1 <1 <1 Vanadium ppm ASTM D5185m >25 0 <1 <1 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 Boron ppm ASTM D5185m 0<	WEAR METALS	S	method	limit/base	current	history1	history2
Chromium ppm ASTM D5185m >15 <1	PQ		ASTM D8184		27	25	29
Nickel ppm ASTM D5185m >15 0 0 0 Titanium ppm ASTM D5185m <1 <1 <1 <1 Silver ppm ASTM D5185m >25 2 2 2 Lead ppm ASTM D5185m >200 <1 <1 <1 Copper ppm ASTM D5185m >200 <1 <1 <1 Tin ppm ASTM D5185m >200 <1 <1 <1 Vanadium ppm ASTM D5185m >200 <1 <1 <1 Vanadium ppm ASTM D5185m >20 <1 <1 <1 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 71 79 76 Barium ppm ASTM D5185m 0 0 0 Magnesium ppm ASTM D5185m 0 0 31 Cal	Iron	ppm	ASTM D5185m	>200	160	165	161
Titanium ppm ASTM D5185m <1	Chromium	ppm	ASTM D5185m	>15	<1	<1	<1
Silver ppm ASTM D5185m 0 0 0 0 Aluminum ppm ASTM D5185m<>25 2 2 2 Lead ppm ASTM D5185m<>100 0 0 <11 Copper ppm ASTM D5185m<>200 <1 <1 <1 Tin ppm ASTM D5185m >25 0 <1 <1 Vanadium ppm ASTM D5185m >25 0 <1 <1 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 Boron ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 0 3 1 Calcium ppm ASTM D5185m 0 0 3 3 Phosphorus	Nickel	ppm	ASTM D5185m	>15	0	0	0
Aluminum ppm ASTM D5185m >25 2 2 2 Lead ppm ASTM D5185m >100 0 0 <1 Copper ppm ASTM D5185m >200 <1 <1 <1 Tin ppm ASTM D5185m >25 0 <1 <1 <1 Vanadium ppm ASTM D5185m >25 0 <1 <1 <1 Vanadium ppm ASTM D5185m >25 0 <1 <1 <1 Vanadium ppm ASTM D5185m 0 0 0 0 0 Cadmium ppm ASTM D5185m 71 79 76 3 Boron ppm ASTM D5185m 0 0 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 <1 2 2 Magnesium ppm ASTM D5185m 395 438 403 2 2 </th <th>Titanium</th> <th>ppm</th> <th>ASTM D5185m</th> <th></th> <th><1</th> <th><1</th> <th><1</th>	Titanium	ppm	ASTM D5185m		<1	<1	<1
Lead ppm ASTM D5185m >100 0 0 <1	Silver	ppm	ASTM D5185m		0	0	0
Copper ppm ASTM D5185m >200 <1	Aluminum	ppm	ASTM D5185m	>25	2	2	2
Tin ppm ASTM D5185m >25 0 <1	Lead	ppm	ASTM D5185m	>100	0	0	<1
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m <1 <1 <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 71 79 76 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 0 0 <11 2 2 Magnesium ppm ASTM D5185m 0 0 <11 2 2 Magnesium ppm ASTM D5185m 0 0 <11 2 2 Magnesium ppm ASTM D5185m 395 438 403 2 Calcium ppm ASTM D5185m 23 8 24 2 Sulfur ppm ASTM D5185m >50 7 13 8 2 <th>Copper</th> <th>ppm</th> <th>ASTM D5185m</th> <th>>200</th> <th><1</th> <th><1</th> <th><1</th>	Copper	ppm	ASTM D5185m	>200	<1	<1	<1
CadmiumppmASTM D5185m<1	Tin	ppm	ASTM D5185m	>25	0	<1	<1
ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m717976BariumppmASTM D5185m000MolybdenumppmASTM D5185m000ManganeseppmASTM D5185m000MagnesiumppmASTM D5185m000CalciumppmASTM D5185m003PhosphorusppmASTM D5185m395438403ZincppmASTM D5185m23824SulfurppmASTM D5185m11488112479654CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m200<10FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2	Vanadium	ppm	ASTM D5185m		0	0	0
Boron ppm ASTM D5185m 71 79 76 Barium ppm ASTM D5185m 0 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 Manganese ppm ASTM D5185m 0 0 0 0 Magnesium ppm ASTM D5185m 0 0 <1 2 2 Magnesium ppm ASTM D5185m 0 0 <1 3 Calcium ppm ASTM D5185m 395 438 403 Zinc ppm ASTM D5185m 23 8 24 Sulfur ppm ASTM D5185m 11488 11247 9654 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m<>50 7 13 8 2 Sodium ppm ASTM D5185m<>20 0 <1 0 0 <	Cadmium	ppm	ASTM D5185m		<1	<1	<1
Barium ppm ASTM D5185m O O O Molybdenum ppm ASTM D5185m O O O O Manganese ppm ASTM D5185m O O O O Magnesium ppm ASTM D5185m O O O <1 Calcium ppm ASTM D5185m O O <1 Calcium ppm ASTM D5185m O O <1 Calcium ppm ASTM D5185m O O <3 Phosphorus ppm ASTM D5185m 395 438 403 Zinc ppm ASTM D5185m 23 8 24 Sulfur ppm ASTM D5185m 11488 11247 9654 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 7 13 8 Sodium <td< th=""><th>ADDITIVES</th><th></th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></td<>	ADDITIVES		method	limit/base	current	history1	history2
Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 1 2 2 Magnesium ppm ASTM D5185m 0 0 <1 Calcium ppm ASTM D5185m 0 0 3 Phosphorus ppm ASTM D5185m 395 438 403 Zinc ppm ASTM D5185m 23 8 24 Sulfur ppm ASTM D5185m 11488 11247 9654 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 7 13 8 Sodium ppm ASTM D5185m >20 0 <1 0 FLUID DEGRADATION method limit/base current history1 history2	Boron	ppm	ASTM D5185m		71	79	76
Molybdenum ppm ASTM D5185m 0 0 0 Manganese ppm ASTM D5185m 1 2 2 Magnesium ppm ASTM D5185m 0 0 <1 Calcium ppm ASTM D5185m 0 0 3 Phosphorus ppm ASTM D5185m 395 438 403 Zinc ppm ASTM D5185m 23 8 24 Sulfur ppm ASTM D5185m 11488 11247 9654 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 7 13 8 Sodium ppm ASTM D5185m >20 0 <1 0 FLUID DEGRADATION method limit/base current history1 history2	Barium		ASTM D5185m		0	0	0
Manganese ppm ASTM D5185m 1 2 2 Magnesium ppm ASTM D5185m 0 0 <1 Calcium ppm ASTM D5185m 0 0 3 Phosphorus ppm ASTM D5185m 395 438 403 Zinc ppm ASTM D5185m 23 8 24 Sulfur ppm ASTM D5185m 11488 11247 9654 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 7 13 8 Sodium ppm ASTM D5185m >20 0 <1 0 FLUID DEGRADATION method limit/base current history1 history2	Molybdenum		ASTM D5185m		0	0	0
Magnesium ppm ASTM D5185m 0 0 <1	-		ASTM D5185m		1	2	2
Calcium ppm ASTM D5185m 0 0 3 Phosphorus ppm ASTM D5185m 395 438 403 Zinc ppm ASTM D5185m 23 8 24 Sulfur ppm ASTM D5185m 11488 11247 9654 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 7 13 8 Sodium ppm ASTM D5185m >20 0 <1 0 FLUID DEGRADATION method limit/base current history1 history2	Magnesium	ppm	ASTM D5185m		0	0	<1
ZincppmASTM D5185m23824SulfurppmASTM D5185m11488112479654CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>507138SodiumppmASTM D5185m>200<10FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2	Calcium	ppm	ASTM D5185m		0	0	3
SulfurppmASTM D5185m11488112479654CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>507138SodiumppmASTM D5185m422PotassiumppmASTM D5185m>200<10FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2	Phosphorus	ppm	ASTM D5185m		395	438	403
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m<>507138SodiumppmASTM D5185m422PotassiumppmASTM D5185m<>200<10FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2	Zinc	ppm	ASTM D5185m		23	8	24
Silicon ppm ASTM D5185m >50 7 13 8 Sodium ppm ASTM D5185m 4 2 2 Potassium ppm ASTM D5185m >20 0 <1	Sulfur	ppm	ASTM D5185m		11488	11247	9654
SodiumppmASTM D5185m422PotassiumppmASTM D5185m>200<10FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2	CONTAMINAN	TS	method	limit/base	current	history1	history2
SodiumppmASTM D5185m422PotassiumppmASTM D5185m>200<10FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2	Silicon	ppm	ASTM D5185m	>50	7	13	8
PotassiumppmASTM D5185m>200<1			ASTM D5185m		4	2	2
	Potassium		ASTM D5185m	>20	0	<1	0
Acid Number (AN) mg KOH/g ASTM D8045 0.88 0.92 0.88	FLUID DEGRAD	ATION	method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g	ASTM D8045		0.88	0.92	0.88



OIL ANALYSIS REPORT



VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
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	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
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		218	219	218
SAMPLE IMAG	iES	method	limit/base	current	history1	history2
Color				-		A REAL PROPERTY OF A READ REAL PROPERTY OF A REAL P
Bottom						

