

OIL ANALYSIS REPORT

Silt

Debris

Odor

Sand/Dirt

Appearance

Emulsified Water

scalar *Visual

scalar *Visual

*Visual

*Visual

*Visual

*Visual

*Visual

scalar

scalar

scalar

scalar

scalar

NONE

NONE

NONE

NORML

NORML

>0.2

NONE

NONE

NONE

NORML

NORML

NEG

NEG

NONE

NONE

NONE

NORML

NORML

NEG

[60363846 SDR] K PRESS LIW SCREW 3 PRIMARY (S/N 20069492) Component

Gearbox

Fluic GEAR OIL ISO 320 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

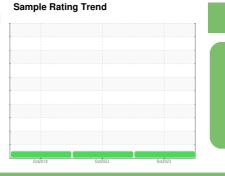
All component wear rates are normal.

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.





NORMAL

SAMPLE INFORMATION method imit/base current history1 history2 Sample Number Client Info WC0562269 WC0605318 WC122323779 Sample Date Client Info 0 0 0 Machine Age mls Client Info 0 0 0 Oil Age mls Client Info 0 0 0 Oil Age mls Client Info 0 0 0 0 Sample Status Imit/base Current history1 history1 history2 Iron ppm ASTM D5185m >200 0 0 2 Chromium ppm ASTM D5185m >10 0 0 0 Nickel ppm ASTM D5185m >200 0 0 1 1 Chromium ppm ASTM D5185m >100 0 0 1 1 Chromium ppm ASTM D5185m >25 -<1 0 1 1 <th></th> <th></th> <th></th> <th>2018</th> <th>Oct2022 Oct20</th> <th></th> <th></th>				2018	Oct2022 Oct20		
Sample Date Client Info 22 Oct 2023 30 Oct 2022 27 Oct 2018 Machine Age mis Client Info 0 0 0 Oil Age mis Client Info 0 0 0 0 Oil Changed Client Info Changed NAA NORMAL NORMAL NORMAL WEAR METALS method Imit/base current History1 History2 Iron ppm ASTM D5185m >200 0 0 2 Chromium ppm ASTM D5185m >15 0 0 0 1 Nickel ppm ASTM D5185m >10 0 0 1 1 Silver ppm ASTM D5185m >20 <1 0 1 1 Copper ppm ASTM D5185m >20 <1 0 0 0 Antimony ppm ASTM D5185m >20 <1 0 0 0 Astim D5185m >50 <th>SAMPLE INFORM</th> <th>IATION</th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Machine Age mls Client Info 0 0 0 Oil Age mls Client Info 0 0 0 Oil Changed Client Info Changed N/A NORMAL NORMAL Sample Status method Imit/base current history1 Nickal WEAR METALS method Imit/base current history1 Nickal Iron ppm ASTM D5185m >15 0 0 2 Chromium ppm ASTM D5185m 0 0 0 1 Nickel ppm ASTM D5185m >25 <1 0 1 1 Silver ppm ASTM D5185m >200 0 0 1 1 Lead ppm ASTM D5185m >200 0 0 0 0 Antimony ppm ASTM D5185m >20 <1 0 0 Apadium ppm ASTM D5185m >20 0	Sample Number		Client Info		WC0562269	WC0605318	WCI2323779
Oil Age mis Client Info 0 0 0 Oil Age Client Info Changed N/A Sample Status Image Image NORMAL NORMAL NORMAL WEAR METALS method Imit/base current history1 history2 Iron ppm ASTM D5185m >15 0 0 2 Chromium ppm ASTM D5185m >15 0 0 0 Nickel ppm ASTM D5185m >15 0 0 0 Silver ppm ASTM D5185m >25 <1 0 1 Lead ppm ASTM D5185m >200 0 0 1 Copper ppm ASTM D5185m >20 0 0 0 Cadmium pm ASTM D5185m >5 5 Vanadium pm ASTM D5185m 50 0 0 0 Cadmium pm	Sample Date		Client Info		22 Oct 2023	30 Oct 2022	27 Oct 2018
Oil Changed Sample Status Client Info Changed NORMAL N/A NORMAL NOR NOR </th <th>Machine Age</th> <th>mls</th> <th>Client Info</th> <th></th> <th>0</th> <th>0</th> <th>0</th>	Machine Age	mls	Client Info		0	0	0
Sample Status Image: Status Image: Status NORMAL NORMAL NORMAL NORMAL WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >200 0 0 2 Chromium ppm ASTM D5185m >15 0 0 0 Nickel ppm ASTM D5185m >15 0 0 0 Silver ppm ASTM D5185m >100 0 0 1 Lead ppm ASTM D5185m >200 0 0 1 1 Copper ppm ASTM D5185m >200 0 0 1 1 Lead ppm ASTM D5185m >200 0 0 0 0 Antimony ppm ASTM D5185m >20 0 0 0 Antimony ppm ASTM D5185m 50 0 <1 0 Cadmium ppm	-	mls	Client Info		-	÷	
WEAR METALS method imit/base current history1 history2 Iron ppm ASTM D5185m >200 0 0 2 Chromium ppm ASTM D5185m >15 0 0 0 Nickel ppm ASTM D5185m 15 0 0 0 Silver ppm ASTM D5185m 0 0 0 0 Aluminum ppm ASTM D5185m >25 <1 0 1 Lead ppm ASTM D5185m >200 0 0 1 Copper ppm ASTM D5185m >200 0 0 1 Cadmium ppm ASTM D5185m >200 0 0 0 Cadmium ppm ASTM D5185m >0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 15 0 0 0<	Oil Changed		Client Info			•	N/A
Iron ppm ASTM D5185m >200 0 0 2 Chromium ppm ASTM D5185m >15 0 0 0 Nickel ppm ASTM D5185m >15 0 0 0 0 Silver ppm ASTM D5185m >25 <1 0 0 1 Lead ppm ASTM D5185m >25 <1 0 1 Copper ppm ASTM D5185m >200 0 0 1 Copper ppm ASTM D5185m >200 0 0 1 Cadmium ppm ASTM D5185m >25 0 <1 0 Cadmium ppm ASTM D5185m >25 0 <1 0 Cadmium ppm ASTM D5185m >20 0 0 0 Cadmium ppm ASTM D5185m 15 0 0 0 Boron ppm ASTM D5185m 15 0 </th <th>Sample Status</th> <th></th> <th></th> <th></th> <th>NORMAL</th> <th>NORMAL</th> <th>NORMAL</th>	Sample Status				NORMAL	NORMAL	NORMAL
Chromium ppm ASTM D5185m >15 0 0 0 Nickel ppm ASTM D5185m >15 0 0 0 Silver ppm ASTM D5185m 0 0 0 0 Aluminum ppm ASTM D5185m >20 0 0 1 Lead ppm ASTM D5185m >200 0 0 1 Copper ppm ASTM D5185m >200 0 0 1 Copper ppm ASTM D5185m >200 0 0 1 Copper ppm ASTM D5185m >20 0 0 0 Antimony ppm ASTM D5185m >5 5 Vanadium ppm ASTM D5185m 50 0 0 0 Cadmium ppm ASTM D5185m 50 0 <1 0 Marganesium ppm ASTM D5185m 15 0 0	WEAR METALS		method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >15 0 0 <11	Iron	ppm	ASTM D5185m	>200	0	0	2
Titanium ppm ASTM D5185m 0 0 0 Silver ppm ASTM D5185m 0 0 0 Aluminum ppm ASTM D5185m >25 <1	Chromium	ppm	ASTM D5185m	>15	0	0	0
Silver ppm ASTM D5185m 0 0 0 Aluminum ppm ASTM D5185m >25 <1 0 <1 Lead ppm ASTM D5185m >100 0 0 1 Copper ppm ASTM D5185m >200 0 0 1 Tin ppm ASTM D5185m >25 0 <1 0 Antimony ppm ASTM D5185m >5 5 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 50 0 <1 0 Boron ppm ASTM D5185m 15 0 0 0 Magnesium ppm ASTM D5185m 15 0 0 <1 Calcium ppm ASTM D5185m 15 0 0 <1 Calcium ppm ASTM D5185m 15 0 0 <1	Nickel	ppm	ASTM D5185m	>15	0	0	<1
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Lead ppm ASTM D5185m >100 0 0 1 Copper ppm ASTM D5185m >200 0 0 1 Tin ppm ASTM D5185m >25 0 <1 0 Antimony ppm ASTM D5185m >5 5 Vanadium ppm ASTM D5185m >5 5 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 50 0 <1 0 Magnaese ppm ASTM D5185m 15 0 0 <1 Calcium ppm ASTM D5185m 50 21 0 <1 Calcium ppm ASTM D5185m 50 2 1 0 Sulfur ppm	Silver	ppm	ASTM D5185m		0	0	0
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Tin ppm ASTM D5185m >25 0 <1	Lead	ppm			-		
Antimony ppm ASTM D5185m >5 5 Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 50 0 <1 0 Barium ppm ASTM D5185m 15 0 0 0 Magnesee ppm ASTM D5185m 15 0 0 <1 Magnesium ppm ASTM D5185m 50 <1 0 <1 Calcium ppm ASTM D5185m 50 <2 <1 16 Phosphorus ppm ASTM D5185m 100 0 0 138 Sulfur ppm ASTM D5185m 12500 575 2101 600 CONTAMINANTS method limit/base current history1 history2 <		ppm	ASTM D5185m	>200	0	0	1
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 50 0 <1	Tin	ppm			-	<1	
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Boron ppm ASTM D5185m 50 0 <1	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 15 0 0 0 Molybdenum ppm ASTM D5185m 15 0 0 0 Manganese ppm ASTM D5185m 15 0 0 <1 Magnesium ppm ASTM D5185m 50 <1 0 <1 Calcium ppm ASTM D5185m 50 2 <1 16 Phosphorus ppm ASTM D5185m 350 408 198 361 Zinc ppm ASTM D5185m 100 0 0 138 Sulfur ppm ASTM D5185m 12500 575 2101 600 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 2 1 0 Sodium ppm ASTM D5185m >20 0 0 21 Potassium ppm ASTM D5185m >20 0.86<	ADDITIVES		method	limit/base	current	history1	history2
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Magnesse ppm ASTM D5185m 0 0 <1	Barium	ppm	ASTM D5185m	15	0	0	0
Magnesium ppm ASTM D5185m 50 <1	Molybdenum	ppm	ASTM D5185m	15	0	0	0
Calcium ppm ASTM D5185m 50 2 <1	Manganese	ppm	ASTM D5185m		0	0	<1
Phosphorus ppm ASTM D5185m 350 408 198 361 Zinc ppm ASTM D5185m 100 0 0 0 138 Sulfur ppm ASTM D5185m 12500 575 2101 600 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 2 1 0 Sodium ppm ASTM D5185m >50 2 1 0 Sodium ppm ASTM D5185m >50 2 1 0 Sodium ppm ASTM D5185m >20 0 0 <1	-	ppm	ASTM D5185m			0	
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SulfurppmASTM D5185m125005752101600CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>50210SodiumppmASTM D5185m>50210PotassiumppmASTM D5185m>2000<1PotassiumppmASTM D5185m>20002FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2Acid Number (AN)mg KOHgASTM D80450.850.580.860.541VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONENONENONEYellow Metalscalar*VisualNONENONENONENONE							
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Silicon ppm ASTM D5185m >50 2 1 0 Sodium ppm ASTM D5185m O 0 0 <1			ASTM D5185m	12500	575	2101	600
SodiumppmASTM D5185mOO<1			method	limit/base	current	history1	
PotassiumppmASTM D5185m>20002FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2Acid Number (AN)mg KOH/gASTM D80450.850.580.860.541VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONENONENONEYellow Metalscalar*VisualNONENONENONENONE	Silicon	ppm	ASTM D5185m	>50		1	0
FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2Acid Number (AN)mg KOH/gASTM D80450.850.580.860.541VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONENONENONEYellow Metalscalar*VisualNONENONENONENONE	Sodium	ppm	ASTM D5185m		-	0	<1
Acid Number (AN)mg KOH/gASTM D80450.850.580.860.541VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONENONENONEYellow Metalscalar*VisualNONENONENONENONE	Potassium	ppm	ASTM D5185m	>20	0	0	2
VISUALmethodlimit/basecurrenthistory1history2White Metalscalar*VisualNONENONENONENONEYellow Metalscalar*VisualNONENONENONENONE	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
White Metal scalar *Visual NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE	Acid Number (AN)	ma KOU/a	ASTM D8045	0.85	0.58	0.86	0.541
Yellow Metal scalar *Visual NONE NONE NONE NONE	()	nig Kon/g					
	. ,	iliy kon/y		limit/base	current	history1	history2
	VISUAL	0 0	method				
	VISUAL White Metal	scalar	method *Visual	NONE	NONE	NONE	NONE

Report Id: MARSCHI [WUSCAR] 06008486 (Generated: 11/17/2023 1 Free Water

NEG

NONE

LIGHT

NONE

NORML

NORML



OIL ANALYSIS REPORT

308

Acid Number

1.60

1.40

(B/HOX Bm) - 0.80

0.80

툴 0.60

문 0.40

0.20

0.00

: 15 Nov 2023

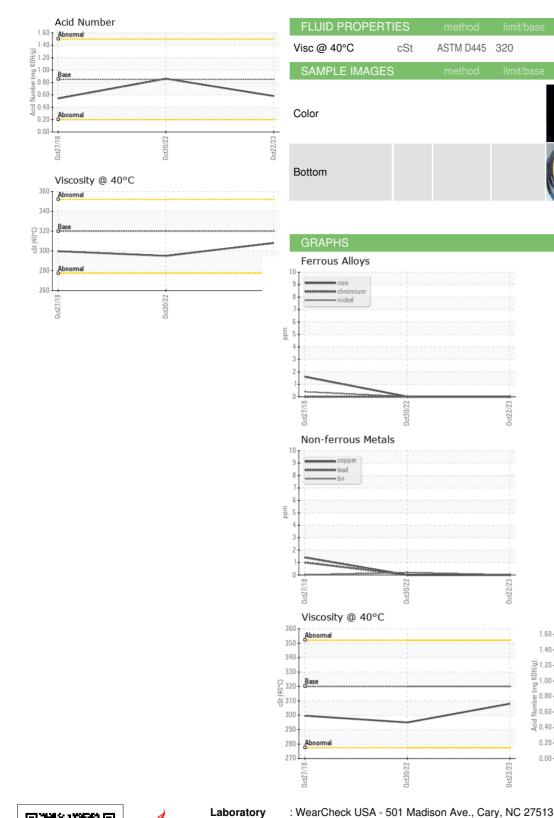
: 17 Nov 2023

Diagnostician : Don Baldridge

Abnorma

295

299.7



0ct30/22 0ct22/23 MARS CHOCOLATE 2019 NORTH OAK PARK CHICAGO, IL US 60707 Contact: TONY FIORE tony.fiore@effem.com T: (773)745-2279 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F:

Certificate L2367

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Sample No.

Lab Number

Unique Number : 10742248

Test Package : IND 2

: WC0562269

: 06008486

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.

Received

Diagnosed

Contact/Location: TONY FIORE - MARSCHI