

OIL ANALYSIS REPORT

Area AREA III [500318348] Machine Id PFAUDLER A9104 (S/N GD-00034) Component

Gearbox

Fluid MOBIL SHC 634 (7 GAL)

DIAGNOSIS

A Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

🔺 Wear

The aluminum level is abnormal. All other component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

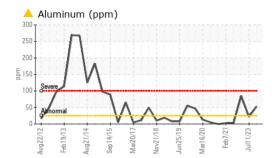
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

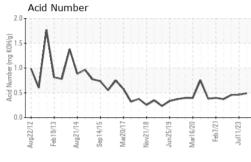


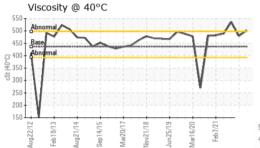
Sample NumberClient InfoWC0882249WC0810166WC0742564Sample DateIClient Info000Machine AgehrsClient Info000Oil AgehrsClient Info000Oil ChangedIrsClient Info000Oil ChangedIrsClient InfoN/AN/AN/ASample StatusIrsClient InfoABNORMALNORMALABNORMALCONTAMINATIONmethodImitbasecurrenthistoryhistoryWaterWC Method0.2NEGNEGNEGWEAR METALSmethodImitbasecurrenthistoryhistoryIronppmASTM D51856>20025764ChromiumppmASTM D51856>1500-1NickelppmASTM D51856>1500-1SilverppmASTM D51856>16-10-1SilverppmASTM D51856>20012433CopperppmASTM D51856>20012433TinppmASTM D51856>20012433AntimonyppmASTM D51856>20012433CinatificationppmASTM D51856>200000AntimonyppmASTM D51856>2001243AntimonyppmASTM D51	SAMPLE INFORM	IATION	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 ABNORMAL NORMAL ABNORMAL CONTAMINATION method limit/base current history1 history2 Water WC Method >0.2 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >200 25 7 64 Chromium ppm ASTM D5185m >15 0 0 -1 Nickel ppm ASTM D5185m >15 0 0 -1 Silver ppm ASTM D5185m >200 12 4 33 Tin ppm ASTM D5185m >20 0 -1 Antimony ppm ASTM D5185m >5 Vanadi	Sample Date		Client Info		18 Dec 2023	11 Jul 2023	19 Oct 2022
Oil ChangedClient InfoN/AN/AN/AN/ASample StatusImage StatusImage StatusABNORMALABNORMALABNORMALCONTAMINATIONmethodlimit/basecurrenthistory1history2WaterWC Method>0.2NEGNEGNEGWEAR METALSmethodlimit/basecurrenthistory1history2IronppmASTM D5185m>1500<1NickelppmASTM D5185m>1500<1NickelppmASTM D5185m>150<10NitkerppmASTM D5185m>1000<10AluminumppmASTM D5185m>20012433IrinppmASTM D5185m>20012433IrinppmASTM D5185m>25000CopperppmASTM D5185m0000VanadiumppmASTM D5185m0000ADITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m6<1<132MarganeseppmASTM D5185m6<1<1MarganeseppmASTM D5185m6<132PhosphorusppmASTM D5185m6<132PhosphorusppmASTM D5185m8791189655Currentppm	Machine Age	hrs	Client Info		0	0	0
Sample Status Image Method ABNORMAL NORMAL ABNORMAL CONTAMINATION method limit/base current history1 history2 Water WC Method >.0.2 NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >200 25 7 64 Chromium ppm ASTM D5185m >15 0 0 -1 Nickel ppm ASTM D5185m >15 0 0 -1 Silver ppm ASTM D5185m >15 0 0 0 Copper ppm ASTM D5185m >200 12 4 33 Tin ppm ASTM D5185m >5 Vanadium ppm ASTM D5185m >5 Vanadium ppm ASTM D5185m 0 0 0 0<	Oil Age	hrs	Client Info		0	0	0
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Chromium ppm ASTM D5185m >15 0 0 <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel ppm ASTM D5185m >15 0 0 0 Titanium ppm ASTM D5185m <1 0 <1 Silver ppm ASTM D5185m >25 ▲ 53 22 ▲ 85 Lead ppm ASTM D5185m >100 0 0 0 Copper ppm ASTM D5185m >200 12 4 33 Tin ppm ASTM D5185m >200 12 4 33 Antimony ppm ASTM D5185m >200 12 4 33 Vanadium ppm ASTM D5185m >20 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method Imit/base current history1 history2 Boron ppm ASTM D5185m 6 <1 1 2 Molybdenum ppm ASTM D5185m <1 1 4	Iron	ppm	ASTM D5185m	>200	25	7	64
Titanium ppm ASTM D5185m	Chromium	ppm	ASTM D5185m	>15	0	0	<1
Silver ppm ASTM D5185m 0 <1	Nickel	ppm	ASTM D5185m	>15	0	0	0
Aluminum ppm ASTM D5185m >25 ▲ 53 22 ▲ 85 Lead ppm ASTM D5185m >100 0 0 0 Copper ppm ASTM D5185m >200 12 4 33 Tin ppm ASTM D5185m >25 0 0 <1 Antimony ppm ASTM D5185m >5 Vanadium ppm ASTM D5185m >5 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 6 <1 <1 2 Molybdenum ppm ASTM D5185m 6 2 111 4 Magnesium ppm ASTM D5185m <1 1	Titanium	ppm	ASTM D5185m		<1	0	<1
Lead ppm ASTM D5185m >100 0 0 0 Copper ppm ASTM D5185m >200 12 4 33 Tin ppm ASTM D5185m >25 0 0 <1 Antimony ppm ASTM D5185m >5 Vanadium ppm ASTM D5185m >5 Vanadium ppm ASTM D5185m >5 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 6 <1 <1 2 Boron ppm ASTM D5185m 6 2 11 1 Magnesium ppm ASTM D5185m 6 2 11 4 Calcium ppm ASTM D5185m <1 1 4 32 Phosphorus ppm ASTM D5185m 443 391 <td< th=""><th>Silver</th><th>ppm</th><th>ASTM D5185m</th><th></th><th>0</th><th><1</th><th>0</th></td<>	Silver	ppm	ASTM D5185m		0	<1	0
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Tin ppm ASTM D5185m >25 0 0 <1	Lead	ppm	ASTM D5185m	>100	0	0	0
AntimonyppmASTM D5185m>5VanadiumppmASTM D5185m0000CadmiumppmASTM D5185m0000ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185m6<1<1BariumppmASTM D5185m6<12MolybdenumppmASTM D5185m6211ManganeseppmASTM D5185m6211ManganeseppmASTM D5185m<114CalciumppmASTM D5185m<38<132PhosphorusppmASTM D5185m443391508ZincppmASTM D5185m8791189665CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>509812SodiumppmASTM D5185m<4100PotassiumppmASTM D5185m>2015429FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2	Copper	ppm	ASTM D5185m	>200	12	4	33
VanadiumppmASTM D5185m000CadmiumppmASTM D5185mImit/basecurrenthistory1history2ADDITIVESmethodlimit/basecurrenthistory1/istory2BoronppmASTM D5185m6<1<1BariumppmASTM D5185m0<12MolybdenumppmASTM D5185m6211ManganeseppmASTM D5185m6211MangensiumppmASTM D5185m<114CalciumppmASTM D5185m<14333914508PhosphorusppmASTM D5185m44333914508ZincppmASTM D5185m8791189665CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>509812SodiumppmASTM D5185m>2015429FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2	Tin	ppm	ASTM D5185m	>25	0	0	<1
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BoronppmASTM D5185m6<1	Cadmium	ppm	ASTM D5185m		0	0	0
BariumppmASTM D5185m0<1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 6 2 11 Manganese ppm ASTM D5185m 0 0 <1 Magnesium ppm ASTM D5185m <1 1 4 Calcium ppm ASTM D5185m <1 32 Phosphorus ppm ASTM D5185m 443 391 508 Zinc ppm ASTM D5185m 443 391 508 Zinc ppm ASTM D5185m 443 391 508 Sulfur ppm ASTM D5185m 879 1189 665 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 9 8 12 Sodium ppm ASTM D5185m >20 15 4 29 FLUID DEGRADATION method limit/base current history1 history2	Boron	ppm	ASTM D5185m		6	<1	<1
Manganese ppm ASTM D5185m 0 0 <1	Barium	ppm	ASTM D5185m		0	<1	2
Magnesium ppm ASTM D5185m <1	Molybdenum	ppm	ASTM D5185m		6	2	11
Calcium ppm ASTM D5185m 8 <1	Manganese	ppm	ASTM D5185m		0	0	<1
Phosphorus ppm ASTM D5185m 443 391 508 Zinc ppm ASTM D5185m 14 7 34 Sulfur ppm ASTM D5185m 879 1189 665 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 9 8 12 Sodium ppm ASTM D5185m >20 15 4 29 FLUID DEGRADATION method limit/base current history1 history2	Magnesium	ppm	ASTM D5185m		<1	1	4
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SulfurppmASTM D5185m8791189665CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>509812SodiumppmASTM D5185m<100PotassiumppmASTM D5185m>2015429FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2	Phosphorus	ppm	ASTM D5185m		443	391	508
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Silicon ppm ASTM D5185m >50 9 8 12 Sodium ppm ASTM D5185m <1	Sulfur	ppm	ASTM D5185m		879	1189	665
SodiumppmASTM D5185m<1	CONTAMINANTS		method	limit/base	current	history1	history2
PotassiumppmASTM D5185m>2015429FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2	Silicon	ppm	ASTM D5185m	>50	9	8	12
FLUID DEGRADATION method limit/base current history1 history2	Sodium	ppm	ASTM D5185m		<1	0	0
	Potassium	ppm	ASTM D5185m	>20	15	4	29
Acid Number (AN) mg KOH/g ASTM D8045 0.49 0.46 0.457	FLUID DEGRADA		method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g	ASTM D8045		0.49	0.46	0.457



OIL ANALYSIS REPORT

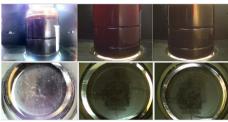






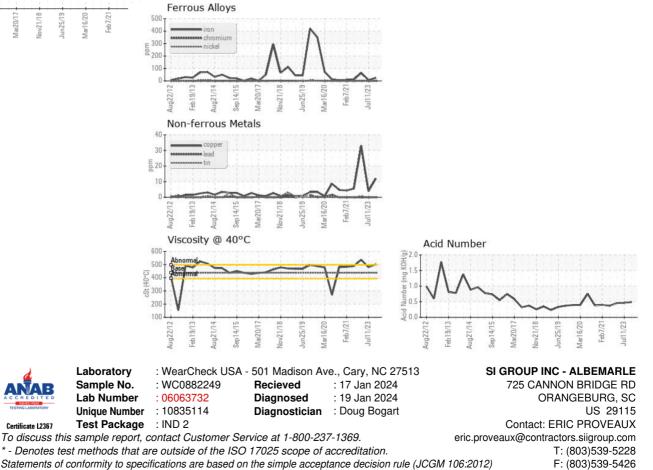
	method	limit/base	current	history1	history2
scalar	*Visual	NONE	NONE	NONE	NONE
scalar	*Visual	NONE	NONE	NONE	NONE
scalar	*Visual	NONE	NONE	NONE	NONE
scalar	*Visual	NONE	MODER	MODER	NONE
scalar	*Visual	NONE	NONE	NONE	NONE
scalar	*Visual	NONE	NONE	NONE	NONE
scalar	*Visual	NORML	NORML	NORML	NORML
scalar	*Visual	NORML	NORML	NORML	NORML
scalar	*Visual	>0.2	NEG	NEG	NEG
scalar	*Visual		NEG	NEG	NEG
FLUID PROPERTIES		limit/base	current	history1	history2
cSt	ASTM D445	436.4	502	480	▲ 536.0
	method	limit/base	current	history1	history2
	scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar	scalar *Visual scalar *Visual	scalar*VisualNONEscalar*VisualNONEscalar*VisualNONEscalar*VisualNONEscalar*VisualNONEscalar*VisualNONEscalar*VisualNORMLscalar*VisualNORMLscalar*VisualNORMLscalar*VisualNORMLscalar*VisualNORMLscalar*VisualSolarscalar*VisualSolarscalar*VisualSolarscalar*VisualSolarscalar*VisualSolarscalar*VisualSolarscalar*VisualSolarscalar*VisualSolarscalar*VisualSolarscalar*VisualSolarscalar*VisualSolarscalar*VisualSolarscalar*VisualSolarscalar*VisualSolarscalar*VisualSolarscalar*VisualSolarscalar*VisualSolarscalar*SolarSolarscalar*SolarSolarscalar*SolarSolarscalar*SolarSolarscalar*SolarSolarscalar*SolarSolarscalar*SolarSolarscalar*SolarSolarscalar*SolarSolarscalar*SolarSolar <t< th=""><th>scalar*VisualNONENONEscalar*VisualNONENONEscalar*VisualNONEMODERscalar*VisualNONEMODERscalar*VisualNONENONEscalar*VisualNONENONEscalar*VisualNONENONEscalar*VisualNONENONEscalar*VisualNORMLNORMLscalar*VisualNORMLNORMLscalar*Visual>0.2NEGscalar*VisualImit/basecurrentcStASTM D445436.4502</th><th>scalar*VisualNONENONENONEscalar*VisualNONENONENONEscalar*VisualNONENONENONEscalar*VisualNONEMODERMODERscalar*VisualNONENONENONEscalar*VisualNONENONENONEscalar*VisualNONENONENONEscalar*VisualNONENONENONEscalar*VisualNORMLNORMLNORMLscalar*VisualNORMLNORMLNORMLscalar*Visual>0.2NEGNEGscalar*VisualImit/basecurrenthistory1cStASTM D445436.4502480</th></t<>	scalar*VisualNONENONEscalar*VisualNONENONEscalar*VisualNONEMODERscalar*VisualNONEMODERscalar*VisualNONENONEscalar*VisualNONENONEscalar*VisualNONENONEscalar*VisualNONENONEscalar*VisualNORMLNORMLscalar*VisualNORMLNORMLscalar*Visual>0.2NEGscalar*VisualImit/basecurrentcStASTM D445436.4502	scalar*VisualNONENONENONEscalar*VisualNONENONENONEscalar*VisualNONENONENONEscalar*VisualNONEMODERMODERscalar*VisualNONENONENONEscalar*VisualNONENONENONEscalar*VisualNONENONENONEscalar*VisualNONENONENONEscalar*VisualNORMLNORMLNORMLscalar*VisualNORMLNORMLNORMLscalar*Visual>0.2NEGNEGscalar*VisualImit/basecurrenthistory1cStASTM D445436.4502480

Color



Bottom

GRAPHS



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

Submitted By: KIRK WILLIAMS

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