

PROBLEM SUMMARY

Machine Id CLEARING P11 Component Gear Lube System

Pluid 2V INDUSTRIES EP 150 XGP (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

PROBLEMATIC TEST RESULTS							
Sample Status				ATTENTION	ABNORMAL	NORMAL	
Copper	ppm	ASTM D5185(m)	>50	<u> </u>	<u> </u>	27	

Customer Id: ALFVAU Sample No.: AW0003852 Lab Number: 02580025 Test Package: IND 1



To manage this report scan the QR code

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RECOMMENDED A	CTIONS			
Action	Status	Date	Done By	Description
Information Required			?	NOTE: Please

NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

HISTORICAL DIAGNOSIS





We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.Copper ppm levels are abnormal. Lead ppm levels are noted. Bearing and/or bushing wear is indicated. There is no indication of any contamination in the oil. The oil is no longer serviceable as



view report

21 Jun 2021 Diag: Kevin Marson

a result of the abnormal and/or severe wear.



Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using IND 2 test kits, this testkit includes Particle Count to determine the ISO cleanliness of the fluid. this testkit includes AN to determine the suitability of the oil for continued use.All component wear rates are normal. There is no indication of any contamination in the component(unconfirmed). The condition of the oil is acceptable for the time in service (unconfirmed).



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Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using IND 2 test kits, this testkit includes Particle Count to determine the ISO cleanliness of the fluid. this testkit includes AN to determine the suitability of the oil for continued use.All component wear rates are normal. There is no indication of any contamination in the component(unconfirmed). The condition of the oil is acceptable for the time in service (unconfirmed).







OIL ANALYSIS REPORT

Sample Rating Trend

WEAR

Machine Id CLEARING P11 Component

Gear Lube System Fluid 2V INDUSTRIES EP 150 XGP (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

🔺 Wear

Copper ppm levels are noted. All other component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

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

Sample Number Client Info 28 Aug 2023 20 May 2022 21 Jun 2011 Sample Date No Client Info 0 0 0 Old Age hrs Client Info 0 0 0 Old Age hrs Client Info 0 0 0 Old Age No Client Info Not Changd N/A N/A Sample Status Client Info Not Changd N/A N/A WEAR METALS method Inntoxy history history Iron ppm ASTMD51600 >150 61 49 0 Chromium ppm ASTMD51600 >10 -1 1 0 Nickel ppm ASTMD51600 >10 -1 1 0 Silver ppm ASTMD51600 >50 4 83 74 27 Tin ppm ASTMD51600 >50 0 10 0 0 Vanadum ppm ASTMD51600 >50 0 0 0 0 Capper ppm ASTMD51600 >50 0 1 1 1 Vanadum pm ASTMD51600 S 337	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Date Client Info 28 Aug 2023 26 May 2022 21 Jun 2021 Machine Age hrs Client Info 0 0 0 Oil Age hrs Client Info 0 0 0 Oil Age hrs Client Info 0 0 0 Sample Status Tend Imit No ATTENTION ABNORMAL NORMAL WEAR METALS method limit/base current history1 history2 Iron ppm ASTM 05180m >10 c1 1 0 Nickel ppm ASTM 05180m >10 c1 1 0 Silver ppm ASTM 05180m >100 12 14 2 2 Gopper ppm ASTM 05180m >10 0 0 0 0 Vanadium ppm ASTM 05180m 55 0 1 0 Berlin ppm ASTM 05180m 5 0 0 0 <	Sample Number		Client Info		AW0003852	AW0003962	AW0003867
Machine Age hrs Client Info 0 0 0 Oil Age hrs Client Info 0 NA N/A Sample Status Client Info Not Changd NA NORMAL NORMAL WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5165(m) >10 <1 1 0 Nickel ppm ASTM D5165(m) >10 <1 <1 1 Titanium ppm ASTM D5165(m) >100 1 <1 1 Aluminum ppm ASTM D5165(m) >100 12 14 2 Copper ppm ASTM D5165(m) >100 3 4 <1 Antimony ppm ASTM D5165(m) >10 3 4 <1 Antimony ppm ASTM D5165(m) 0 0 0 0 Antimony ppm ASTM D5165(m) 0 0 1	Sample Date		Client Info		28 Aug 2023	26 May 2022	21 Jun 2021
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Oli ChangedClient InfoNot ChangedN/AN/ASample StatusIImal DescentionATTENTIONABNORMALNORMALWEAR METALSmethodlimil/basecurrenthistory1history2IronppmASTMOSIS6>15061490ChromiumppmASTMOSIS6>10c110NickelppmASTMOSIS6>10c1c1c1RatimositionppmASTMOSIS60c1c1c1AtaminumppmASTMOSIS6551c1c1LeadppmASTMOSIS6>10034c1AtiminonyppmASTMOSIS6>50c10AtimonyppmASTMOSIS60000PartitionsppmASTMOSIS60000AddiumppmASTMOSIS60000AddiumppmASTMOSIS60000AddiumppmASTMOSIS6255BariumppmASTMOSIS6232AddiumppmASTMOSIS6232AddiumppmASTMOSIS61c1c1AddiumppmASTMOSIS6232CoberniumppmASTMOSIS6232AddiumppmASTMOSIS61c1c1AddiumppmASTMOSIS6	Oil Age	hrs	Client Info		0	0	0
Sample StatusmethodImit/basecurrentABNORMALNORMALWEAR METALSmethodlimit/basecurrenthistory1history2IronppmASTM 05/85(m)>150614910ChromiumppmASTM 05/85(m)>10c110NickelppmASTM 05/85(m)>100<1<1TataniumppmASTM 05/85(m)>2551<1AuminumppmASTM 05/85(m)>2551<1LeadppmASTM 05/85(m)>50A 8347427TinppmASTM 05/85(m)>50A 834<1AntimonyppmASTM 05/85(m)>50000VanadiumppmASTM 05/85(m)>5000CadmiumppmASTM 05/85(m)0000ASTM 05/85(m)>50000AsTM 05/85(m)2555BariumppmASTM 05/85(m)337<1<1MolydeenumpmASTM 05/85(m)337<1<1MolydeenumpmASTM 05/85(m)160140187MolydeenumppmASTM 05/85(m)160140187ZincoppmASTM 05/85(m)501352SoftuntppmASTM 05/85(m)5013512SoftuntppmASTM 05/85(m	Oil Changed		Client Info		Not Changd	N/A	N/A
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5/85(m) >150 61 49 10 Chromium ppm ASTM D5/85(m) >10 <1 1 0 Nickel ppm ASTM D5/85(m) >10 0 <1 <1 Titanium ppm ASTM D5/85(m) >25 5 1 <1 <1 Aluminum ppm ASTM D5/85(m) >50 0 <14 2 Copper ppm ASTM D5/85(m) >50 0 <14 2 Copper ppm ASTM D5/85(m) >50 0 <14 2 Vanadium ppm ASTM D5/85(m) >50 0 0 0 Vanadium ppm ASTM D5/85(m) >50 0 0 0 Copper ppm ASTM D5/85(m) 0 0 0 0 Chromum ppm ASTM D5/85(m) <t< th=""><th>Sample Status</th><th></th><th></th><th></th><th>ATTENTION</th><th>ABNORMAL</th><th>NORMAL</th></t<>	Sample Status				ATTENTION	ABNORMAL	NORMAL
Iron ppm ASTM D5165(m) >150 61 49 10 Chromium ppm ASTM D5165(m) >10 0 <1 1 0 Nickel ppm ASTM D5165(m) >10 0 <1 0 Silver ppm ASTM D5165(m) >25 5 1 <1 Aluminum ppm ASTM D5165(m) >250 5 1 <1 Lead ppm ASTM D5165(m) >100 12 14 2 Copper ppm ASTM D5165(m) >10 3 4 <1 Antimony ppm ASTM D5165(m) 0 0 0 0 Vanadium ppm ASTM D5165(m) 0 0 0 0 Cadmium ppm ASTM D5165(m) 2 5 5 Barium ppm ASTM D5165(m) 2 3 2 Magnaseum ppm ASTM D5165(m) 2 3 2	WEAR METALS		method	limit/base	current	history1	history2
Chromium ppm ASTM D5185(m) >10 <1	Iron	ppm	ASTM D5185(m)	>150	61	49	10
Nickel ppm ASTM D5185(m) >10 0 <1	Chromium	ppm	ASTM D5185(m)	>10	<1	1	0
Titanium ppm ASTM D5185(m) <1	Nickel	ppm	ASTM D5185(m)	>10	0	<1	<1
Silver ppm ASTM D5185(m) 25 5 1 <1	Titanium	ppm	ASTM D5185(m)		<1	<1	0
Aluminum ppm ASTM D5185(m) >25 5 1 <1	Silver	ppm	ASTM D5185(m)		0	0	<1
Lead ppm ASTM D5185(m) >100 12 ▲ 14 2 Copper ppm ASTM D5185(m) >50 ▲ 83 ▲ 74 27 Tin ppm ASTM D5185(m) >10 3 4 <1 Antimony ppm ASTM D5185(m) >10 0 0 0 Vanadium ppm ASTM D5185(m) 0 0 0 0 Boron ppm ASTM D5185(m) 0 0 1 <1 Molybdenum ppm ASTM D5185(m) 2 5 5 Barium ppm ASTM D5185(m) 337 <1 <1 Magnesium ppm ASTM D5185(m) 2 3 2 Calcium ppm ASTM D5185(m) 2 3 2 Calcium ppm ASTM D5185(m) 2 3 2 Calcium ppm ASTM D5185(m) 160 140 187 Zinc ppm A	Aluminum	ppm	ASTM D5185(m)	>25	5	1	<1
Copper ppm ASTM D5185(m) >50 ▲ 83 ▲ 74 27 Tin ppm ASTM D5185(m) >10 3 4 <1 Antimony ppm ASTM D5185(m) >5 0 <1 0 Vanadium ppm ASTM D5185(m) >5 0 0 0 0 Beryllium ppm ASTM D5185(m) 0 0 0 0 0 Cadmium ppm ASTM D5185(m) 0 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 337 <1 <1 Manganese ppm ASTM D5185(m) 3337 <1 <1 Manganese ppm ASTM D5185(m) 160 140 187 Zinc ppm ASTM D5185(m) 160 140 187 Zinc ppm ASTM D5185(m) <13 5 <t< th=""><th>Lead</th><th>ppm</th><th>ASTM D5185(m)</th><th>>100</th><th>12</th><th>14</th><th>2</th></t<>	Lead	ppm	ASTM D5185(m)	>100	12	1 4	2
TinppmASTM D5185(m)>1034<1	Copper	ppm	ASTM D5185(m)	>50	<u> </u>	<u> </u>	27
Antimony ppm ASTM D5185(m) >5 0 <1	Tin	ppm	ASTM D5185(m)	>10	3	4	<1
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BariumppmASTM D5185(m)01<1	Boron	ppm	ASTM D5185(m)		2	5	5
MolybdenumppmASTM D5185(m)337<1	Barium	ppm	ASTM D5185(m)		0	1	<1
ManganeseppmASTM D5185(m)<1	Molybdenum	ppm	ASTM D5185(m)		337	<1	<1
MagnesiumppmASTM D5185(m)232CalciumppmASTM D5185(m)7162PhosphorusppmASTM D5185(m)160140187ZincppmASTM D5185(m)192449SulfurppmASTM D5185(m)466590105515LithiumppmASTM D5185(m)466590105515LithiumppmASTM D5185(m)<1<1<1CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185(m)>501352SodiumppmASTM D5185(m)>20421VISUALmethodlimit/basecurrenthistory1history2White MetalscalarVisual*NONEVLITENONENONEYellow MetalscalarVisual*NONENONENONENONESiltscalarVisual*NONENONENONENONESiltscalarVisual*NONENONENONENONEDebrisscalarVisual*NONENONENONENONEAgpearancescalarVisual*NORMLNORMLNORMLNORMLAgpearancescalarVisual*NORMLNORMLNORMLNORMLCodorscalarVisual*NORMLNORMLNORMLNORMLAgpearancescalarVisual*NORMLNORM	Manganese	ppm	ASTM D5185(m)		<1	<1	<1
CalciumppmASTM D5185(m)7162PhosphorusppmASTM D5185(m)160140187ZincppmASTM D5185(m)192449SulfurppmASTM D5185(m)466590105515LithiumppmASTM D5185(m)466590105515LithiumppmASTM D5185(m)<1<1<1CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185(m)>501352SodiumppmASTM D5185(m)>20421PotassiumppmASTM D5185(m)>20421VISUALmethodlimit/basecurrenthistory1history2White MetalscalarVisual*NONENONENONENONEYellow MetalscalarVisual*NONENONENONENONESiltscalarVisual*NONENONENONENONESiltscalarVisual*NONENONENONENONEDebrisscalarVisual*NORENONENONENONEAppearancescalarVisual*NORMLNORMLNORMLNORMLCodorscalarVisual*NORMLNORMLNORMLNORMLEmulsified WaterscalarVisual*NORMLNORMLNORMLNORMLCodorscalarVisual*NORML<	Magnesium	ppm	ASTM D5185(m)		2	3	2
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SulfurppmASTM D5185(m)466590105515LithiumppmASTM D5185(m)<1<1<1<1CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185(m)>501352SodiumppmASTM D5185(m)>20421PotassiumppmASTM D5185(m)>20421VISUALmethodlimit/basecurrenthistory1history2White MetalscalarVisual*NONEVLITENONENONEYellow MetalscalarVisual*NONENONEVLITENONESiltscalarVisual*NONENONENONENONESiltscalarVisual*NONENONENONENONESand/DirtscalarVisual*NONENONENONENONEAppearancescalarVisual*NORMLNORMLNORMLNORMLOdorscalarVisual*NORMLNORMLNORMLNORMLEmulsified WaterscalarVisual*>0.1NEGNEGNEG	Zinc	ppm	ASTM D5185(m)		19	24	49
LithiumppmASTM D5185(m)<1	Sulfur	ppm	ASTM D5185(m)		4665	9010	5515
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185(m)>501352SodiumppmASTM D5185(m)104<1PotassiumppmASTM D5185(m)>20421VISUALmethodlimit/basecurrenthistory1history2White MetalscalarVisual*NONEVLITENONENONEYellow MetalscalarVisual*NONENONEVLITENONEPrecipitatescalarVisual*NONENONENONENONESiltscalarVisual*NONENONENONENONEDebrisscalarVisual*NONENONENONENONEAppearancescalarVisual*NORMLNORMLNORMLNORMLOdorscalarVisual*NORMLNORMLNORMLNORMLNORMLEmulsified WaterscalarVisual*>0.1NEGNEGNEG	Lithium	ppm	ASTM D5185(m)		<1	<1	<1
SiliconppmASTM D5185(m)>501352SodiumppmASTM D5185(m)IO4<1PotassiumppmASTM D5185(m)>20421VISUALmethodlimit/basecurrenthistory1history2White MetalscalarVisual*NONEVLITENONENONEYellow MetalscalarVisual*NONENONEVLITENONEPrecipitatescalarVisual*NONENONENONENONESiltscalarVisual*NONENONENONENONEDebrisscalarVisual*NONENONENONENONEAppearancescalarVisual*NORMLNORMLNORMLNORMLOdorscalarVisual*NORMLNORMLNORMLNORMLNORMLEmulsified WaterscalarVisual*>0.1NEGNEGNEGNEG	CONTAMINANTS		method	limit/base	current	history1	history2
SodiumppmASTM D5185(m)104<1	Silicon	ppm	ASTM D5185(m)	>50	13	5	2
PotassiumppmASTM D5185(m)>20421VISUALmethodlimit/basecurrenthistory1history2White MetalscalarVisual*NONEVLITENONENONEYellow MetalscalarVisual*NONENONEVLITENONEPrecipitatescalarVisual*NONENONENONENONESiltscalarVisual*NONEVLITEVLITENONEDebrisscalarVisual*NONENONENONENONESand/DirtscalarVisual*NORMLNONENONENONEAppearancescalarVisual*NORMLNORMLNORMLNORMLOdorscalarVisual*NORMLNORMLNORMLNORMLEmulsified WaterscalarVisual*>0.1NEGNEGNEG	Sodium	ppm	ASTM D5185(m)		10	4	<1
VISUALmethodlimit/basecurrenthistory1history2White MetalscalarVisual*NONEVLITENONENONEYellow MetalscalarVisual*NONENONEVLITENONEPrecipitatescalarVisual*NONENONENONENONESiltscalarVisual*NONEVLITEVLITENONEDebrisscalarVisual*NONENONENONENONESand/DirtscalarVisual*NONENONENONENONEAppearancescalarVisual*NORMLNORMLNORMLNORMLOdorscalarVisual*NORMLNORMLNORMLNORMLEmulsified WaterscalarVisual*>0.1NEGNEGNEG	Potassium	ppm	ASTM D5185(m)	>20	4	2	1
White MetalscalarVisual*NONEVLITENONENONEYellow MetalscalarVisual*NONENONEVLITENONEPrecipitatescalarVisual*NONENONENONENONESiltscalarVisual*NONEVLITEVLITENONEDebrisscalarVisual*NONENONENONENONESand/DirtscalarVisual*NONENONENONENONEAppearancescalarVisual*NORMLNORMLNORMLNORMLOdorscalarVisual*NORMLNORMLNORMLNORMLEmulsified WaterscalarVisual*>0.1NEGNEGNEG	VISUAL		method	limit/base	current	history1	history2
Yellow MetalscalarVisual*NONENONEVLITENONEPrecipitatescalarVisual*NONENONENONENONENONESiltscalarVisual*NONEVLITEVLITENONEDebrisscalarVisual*NONENONENONENONESand/DirtscalarVisual*NONENONENONENONEAppearancescalarVisual*NORMLNORMLNORMLNORMLOdorscalarVisual*NORMLNORMLNORMLNORMLEmulsified WaterscalarVisual*>0.1NEGNEGNEG	White Metal	scalar	Visual*	NONE	VLITE	NONE	NONE
PrecipitatescalarVisual*NONENONENONENONESiltscalarVisual*NONEVLITEVLITENONEDebrisscalarVisual*NONENONENONENONESand/DirtscalarVisual*NONENONENONENONEAppearancescalarVisual*NORMLNORMLNORMLNORMLOdorscalarVisual*NORMLNORMLNORMLNORMLEmulsified WaterscalarVisual*>0.1NEGNEGNEG	Yellow Metal	scalar	Visual*	NONE	NONE	VLITE	NONE
SiltscalarVisual*NONEVLITEVLITENONEDebrisscalarVisual*NONENONENONENONESand/DirtscalarVisual*NONENONENONENONEAppearancescalarVisual*NORMLNORMLNORMLNORMLOdorscalarVisual*NORMLNORMLNORMLNORMLEmulsified WaterscalarVisual*>0.1NEGNEGFree WaterscalarVisual*NEGNEGNEG	Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
DebrisscalarVisual*NONENONENONENONENONESand/DirtscalarVisual*NONENONENONENONENONEAppearancescalarVisual*NORMLNORMLNORMLNORMLNORMLOdorscalarVisual*NORMLNORMLNORMLNORMLNORMLEmulsified WaterscalarVisual*>0.1NEGNEGNEGFree WaterscalarVisual*NEGNEGNEG	Silt	scalar	Visual*	NONE	VLITE	VLITE	NONE
Sand/DirtscalarVisual*NONENONENONENONEAppearancescalarVisual*NORMLNORMLNORMLNORMLOdorscalarVisual*NORMLNORMLNORMLNORMLEmulsified WaterscalarVisual*>0.1NEGNEGFree WaterscalarVisual*NEGNEGNEG	Debris	scalar	Visual*	NONE	NONE	NONE	NONE
AppearancescalarVisual*NORMLNORMLNORMLNORMLNORMLOdorscalarVisual*NORMLNORMLNORMLNORMLNORMLEmulsified WaterscalarVisual*>0.1NEGNEGNEGFree WaterscalarVisual*NEGNEGNEG	Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Odor scalar Visual* NORML	Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water scalar Visual* >0.1 NEG NEG Free Water scalar Visual* NEG NEG NEG	Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Free Water scalar Visual* NEG NEG NEG	Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	NEG
	Free Water	scalar	Visual*		NEG	NEG	NEG

Contact/Location: Ken Young - ALFVAU



OIL ANALYSIS REPORT









Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 CALA Sample No. : AW0003852 Received :01 Sep 2023 Lab Number : 02580025 : 01 Sep 2023 Diagnosed ISO 17025:2017 Accredited Laboratory Unique Number : 5633085 Diagnostician : Kevin Marson Test Package : IND 1 To discuss this sample report, contact Customer Service at 1-800-268-2131. Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.

MARTINREA INTERNATIONAL **30 AVIVA PARK DRIVE** VAUGHAN, ON

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Validity of results and interpretation are based on the sample and information as supplied.