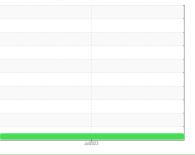


OIL ANALYSIS REPORT

Sample Rating Trend







Machine Id WL0415 Component Gearbox Fluid GEAR OIL SAE 75W90 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) GEAR OIL SAE 75W90. Please confirm.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

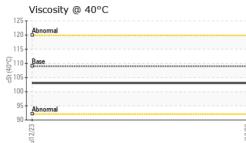
The condition of the oil is acceptable for the time in service.

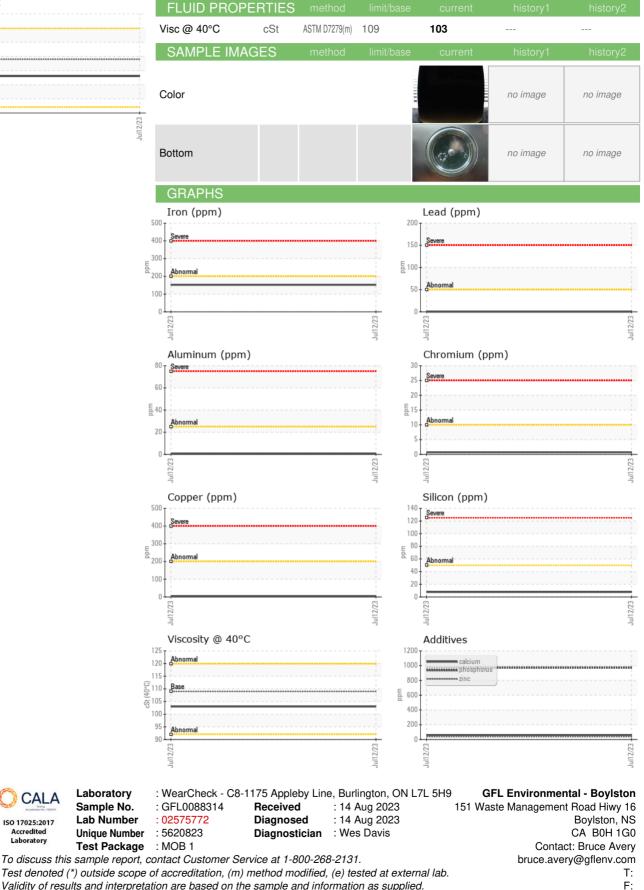
Sample Number Client Info I 2 Jul 2023 Machine Age hrs Client Info 5138 Oil Age hrs Client Info 5138 Oil Age hrs Client Info Changed Sample Status Image Image WEAR METALS method Imit/base current history1 history2 Iron ppm ASTM 05185(m) >10 <1 Nickel ppm ASTM 05185(m) >10 <1 Aluminum ppm ASTM 05185(m) >25 <1 Aduminum ppm ASTM 05185(m) >20 3 Aduminum ppm ASTM 05185(m) >5 0 Aduminum ppm ASTM 05185(m) >0	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 5138 Oil Age hrs Client Info 1000 Sample Status I INORINAL WEAR METALS method Imit/base current history1 history2 Iron ppm ASTMD5185(m) >200 152 Nickel ppm ASTMD5185(m) >10 <1 Silver ppm ASTMD5185(m) >200 132 Auminum ppm ASTMD5185(m) >200 3 Copper ppm ASTMD5185(m) >200 3 Auminum ppm ASTMD5185(m) >200 3 Copper ppm ASTMD5185(m) 0 Auminum ppm ASTMD5185(m) 0 C	Sample Number		Client Info		GFL0088314		
Oil Age hrs Client Info 1000 Sample Status Image Image	Sample Date		Client Info		12 Jul 2023		
Oil Changed Sample Status Client Info Changed NORNAL WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >200 152 Chromium ppm ASTM D5185m >10 <1 Nickel ppm ASTM D5185m >10 <1 Nickel ppm ASTM D5185m >20 1 Silver ppm ASTM D5185m >50 <1 Copper ppm ASTM D5185m >50 <1 Copper ppm ASTM D5185m >50 0 Antimony ppm ASTM D5185m >50 0 Vanadium pm ASTM D5185m 50 0 Vanadium pm ASTM D5185m 10 <td< th=""><th>Machine Age</th><th>hrs</th><th>Client Info</th><th></th><th>5138</th><th></th><th></th></td<>	Machine Age	hrs	Client Info		5138		
Sample Status Internet NORMAL WEAR METALS method limit/base current history1 history2 Iron ppm ASTM05165m >200 152 Chromium ppm ASTM05165m >10 <1 Nickel ppm ASTM05165m >10 <1 Silver ppm ASTM05165m >25 <1 Auminum ppm ASTM05165m >25 <1 Auminum ppm ASTM05165m >25 <1 Auminum ppm ASTM05165m >20 3 Auminum ppm ASTM05165m >20 Autimony ppm ASTM05165m 20 Capper ppm ASTM05165m 20 </th <th>Oil Age</th> <th>hrs</th> <th>Client Info</th> <th></th> <th>1000</th> <th></th> <th></th>	Oil Age	hrs	Client Info		1000		
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185(m) >200 152 Chromium ppm ASTM D5185(m) >10 <1 Nickel ppm ASTM D5185(m) >10 <1 Silver ppm ASTM D5185(m) >20 <1 Aluminum ppm ASTM D5185(m) >50 <1 Lead ppm ASTM D5185(m) >50 <1 Antimony ppm ASTM D5185(m) >50 0 Antimony ppm ASTM D5185(m) >0 Antimony ppm ASTM D5185(m) 0 Vanadium pm ASTM D5185(m) 0 0 Antimony ppm ASTM D5185(m	Oil Changed		Client Info		Changed		
Iron ppm ASTM D5185(m) >200 152 Chromium ppm ASTM D5185(m) >10 <1 Nickel ppm ASTM D5185(m) >10 <1 Titanium ppm ASTM D5185(m) 0 Aluminum ppm ASTM D5185(m) >25 <1 Lead ppm ASTM D5185(m) >50 <1 Lead ppm ASTM D5185(m) >50 <1 Antimony ppm ASTM D5185(m) >10 0 Vanadium pm ASTM D5185(m) 0 Vanadium pm ASTM D5185(m) 0 Cadmium pm ASTM D5185(m) 100 105 Boron pm ASTM D5185(m) </th <th>Sample Status</th> <th></th> <th></th> <th></th> <th>NORMAL</th> <th></th> <th></th>	Sample Status				NORMAL		
Chromium ppm ASTM D5186m >10 <1	WEAR METAL	S	method	limit/base	current	history1	history2
Nickel ppm ASTM D5185(m) >10 <1	Iron	ppm	ASTM D5185(m)	>200	152		
Titanium ppm ASTM D5185(m) 0 Silver ppm ASTM D5185(m) 525 <1 Aluminum ppm ASTM D5185(m) >500 <1 Lead ppm ASTM D5185(m) >500 <1 Copper ppm ASTM D5185(m) >50 0 Antimony ppm ASTM D5185(m) >5 0 Antimony ppm ASTM D5185(m) >5 0	Chromium	ppm	ASTM D5185(m)	>10	<1		
Silver ppm ASTM D5185(m) 0 Aluminum ppm ASTM D5185(m) >25 <1	Nickel	ppm	ASTM D5185(m)	>10	<1		
Aluminum ppm ASTM D5185(m) >25 <1 Lead ppm ASTM D5185(m) >50 <1	Titanium	ppm	ASTM D5185(m)		0		
Lead ppm ASTM D5185(m) >50 <1	Silver	ppm	ASTM D5185(m)		0		
Copper ppm ASTM D5185(m) >200 3 Tin ppm ASTM D5185(m) >10 0 Antimony ppm ASTM D5185(m) >5 0 Vanadium ppm ASTM D5185(m) 0 Beryllium ppm ASTM D5185(m) 0 Cadmium ppm ASTM D5185(m) 0 ADDITIVES method imit/base current history1 history2 Boron ppm ASTM D5185(m) 200 0 Magnesium ppm ASTM D5185(m) 12 -1 Magnesium ppm ASTM D5185(m) 12 -1 Calcium ppm ASTM D5185(m) 125 40 Sulfur ppm ASTM D5185(m)	Aluminum	ppm	ASTM D5185(m)	>25	<1		
Tin ppm ASTM D5185(m) >10 0 Antimony ppm ASTM D5185(m) >5 0 Vanadium ppm ASTM D5185(m) 0 Beryllium ppm ASTM D5185(m) 0 Cadmium ppm ASTM D5185(m) 0 ADDITIVES method Imit/base current history1 Boron ppm ASTM D5185(m) 200 0 Malyddenum ppm ASTM D5185(m) 12 0 Magnesium ppm ASTM D5185(m) 12 Calcium ppm ASTM D5185(m) 125 400 Sulfur ppm ASTM D5185(m) 22500 26258 Sulfur ppm ASTM D5185(m)	Lead	ppm	ASTM D5185(m)	>50	<1		
Antimony ppm ASTM D5185(m) >5 0 Vanadium ppm ASTM D5185(m) 0 Beryllium ppm ASTM D5185(m) 0 Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 400 105 Barium ppm ASTM D5185(m) 200 0 Magnaese ppm ASTM D5185(m) 12 0 Magnaesium ppm ASTM D5185(m) 12 40 Zinc ppm ASTM D5185(m) 125 40 Sulfur ppm ASTM D5185(m) 2200 262528 Silicon ppm ASTM D5185(m) 20 2	Copper	ppm	ASTM D5185(m)	>200	3		
Vanadium ppm ASTM D5185(m) 0 Beryllium ppm ASTM D5185(m) 0 Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 400 105 Maryanese ppm ASTM D5185(m) 12 0 Maryanese ppm ASTM D5185(m) 12 <1 Maryanese ppm ASTM D5185(m) 150 61 Calcium ppm ASTM D5185(m) 125 40 Sulfur ppm ASTM D5185(m) 22 Sulfur ppm ASTM D5185(m) 20 26258 Sulfur ppm ASTM D5185(m) >20 2	Tin	ppm	ASTM D5185(m)	>10	0		
Beryllium ppm ASTM D5185(m) 0 Cadmium ppm ASTM D5185(m) 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185(m) 200 0 Barium ppm ASTM D5185(m) 200 0 Manganese ppm ASTM D5185(m) 12 0 Magnesium ppm ASTM D5185(m) 12 <1	Antimony	ppm	ASTM D5185(m)	>5	0		
CadmiumppmASTM D5185(m)0ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185(m)400105BariumppmASTM D5185(m)2000MolybdenumppmASTM D5185(m)120MagneseeppmASTM D5185(m)120MagnesiumppmASTM D5185(m)12<1CalciumppmASTM D5185(m)15061PhosphorusppmASTM D5185(m)12540SulfurppmASTM D5185(m)2250026258LithiumppmASTM D5185(m)>508SodiumppmASTM D5185(m)>202VisualppmASTM D5185(m)>202VisualNONENONENONEVisualNONENONENONESiltscalarVisual*NONENONESiltscalarVisual*NONENONESiltscalarVisual*NONEVLITESiltscalarVisual*NONENONESiltscalarVisual*NONE<	Vanadium	ppm	ASTM D5185(m)		0		
ADDITIVESmethodlimit/basecurrenthistory1history2BoronppmASTM D5185(m)400105BariumppmASTM D5185(m)2000MolybdenumppmASTM D5185(m)120MaganeseppmASTM D5185(m)120MagnesiumppmASTM D5185(m)12<1CalciumppmASTM D5185(m)15061PhosphorusppmASTM D5185(m)12540SulfurppmASTM D5185(m)12540SulfurppmASTM D5185(m)2250026258CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185(m)>508PotassiumppmASTM D5185(m)>202VISUALmethodlimit/basecurrenthistory1history2Vhite MetalscalarVisual*NONENONEYellow MetalscalarVisual*NONENONESiliscalarVisual*NONENONESilitscalarVisual*NONENONEDebrisscalarVisual*<	Beryllium	ppm	ASTM D5185(m)		0		
Boron ppm ASTM D5185(m) 400 105 Barium ppm ASTM D5185(m) 200 0 Molybdenum ppm ASTM D5185(m) 12 0 Manganese ppm ASTM D5185(m) 12 <1 Magnesium ppm ASTM D5185(m) 12 <1 Calcium ppm ASTM D5185(m) 150 61 Phosphorus ppm ASTM D5185(m) 150 972 Sulfur ppm ASTM D5185(m) 2500 26258 Sulfur ppm ASTM D5185(m) >20 2 Solitum ppm ASTM D5185(m) >50 8 Solitum ppm ASTM D5185(m) >20 2 Visual NONE<	Cadmium	ppm	ASTM D5185(m)		0		
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Molybdenum ppm ASTM D5185(m) 12 0 Manganese ppm ASTM D5185(m) 12 <1	Boron	ppm	ASTM D5185(m)	400	105		
ManganeseppmASTM D5185(m)12MagnesiumppmASTM D5185(m)12<1	Barium	ppm	ASTM D5185(m)	200	0		
Magnesium ppm ASTM D5185(m) 12 <1	Molybdenum	ppm	ASTM D5185(m)	12	0		
CalciumppmASTM D5185(m)15061PhosphorusppmASTM D5185(m)1650972ZincppmASTM D5185(m)12540SulfurppmASTM D5185(m)2250026258LithiumppmASTM D5185(m)2250026258CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185(m)>508SodiumppmASTM D5185(m)>508PotassiumppmASTM D5185(m)>202VISUALmethodlimit/basecurrenthistory1history2White MetalscalarVisual*NONENONEYellow MetalscalarVisual*NONENONESiltscalarVisual*NONEVLITESiltscalarVisual*NONEVLITESand/DirtscalarVisual*NONENONEAppearancescalarVisual*NORMLNORML	Manganese	ppm	ASTM D5185(m)		2		
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SulfurppmASTM D5185(m)2250026258LithiumppmASTM D5185(m)22CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185(m)>508SodiumppmASTM D5185(m)>508PotassiumppmASTM D5185(m)>202VISUALmethodlimit/basecurrenthistory1history2White MetalscalarVisual*NONENONEYellow MetalscalarVisual*NONENONESiltscalarVisual*NONENONESiltscalarVisual*NONEVLITESand/DirtscalarVisual*NONENONEAppearancescalarVisual*NORMLNORML	Phosphorus	ppm	ASTM D5185(m)	1650	972		
LithiumppmASTM D5185(m)2CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185(m)>508SodiumppmASTM D5185(m)>201PotassiumppmASTM D5185(m)>202VISUALmethodlimit/basecurrenthistory1history2White MetalscalarVisual*NONENONEYellow MetalscalarVisual*NONENONESiltscalarVisual*NONEVLITESiltscalarVisual*NONEVLITEDebrisscalarVisual*NONENONEAppearancescalarVisual*NORMLNORML	Zinc	ppm	ASTM D5185(m)	125	40		
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185(m)>508SodiumppmASTM D5185(m)1PotassiumppmASTM D5185(m)>202VISUALmethodlimit/basecurrenthistory1history2White MetalscalarVisual*NONENONEYellow MetalscalarVisual*NONENONEPrecipitatescalarVisual*NONENONESiltscalarVisual*NONEVLITESebrisscalarVisual*NONENONEAppearancescalarVisual*NORMLNORML	Sulfur	ppm	ASTM D5185(m)	22500	26258		
SiliconppmASTM D5185(m)>508SodiumppmASTM D5185(m)1PotassiumppmASTM D5185(m)>202VISUALmethodlimit/basecurrenthistory1history2White MetalscalarVisual*NONENONEYellow MetalscalarVisual*NONENONEPrecipitatescalarVisual*NONENONESiltscalarVisual*NONEVLITEDebrisscalarVisual*NONENONESand/DirtscalarVisual*NONENONEAppearancescalarVisual*NORMLNORML	Lithium	ppm	ASTM D5185(m)		2		
SodiumppmASTM D5185(m)1PotassiumppmASTM D5185(m)>202VISUALmethodlimit/basecurrenthistory1history2White MetalscalarVisual*NONENONEYellow MetalscalarVisual*NONENONEPrecipitatescalarVisual*NONENONESiltscalarVisual*NONEVLITEDebrisscalarVisual*NONENONESand/DirtscalarVisual*NORMLNORML	CONTAMINAN	TS	method	limit/base	current	history1	history2
PotassiumppmASTM D5185(m)>202VISUALmethodlimit/basecurrenthistory1history2White MetalscalarVisual*NONENONEYellow MetalscalarVisual*NONENONEPrecipitatescalarVisual*NONENONESiltscalarVisual*NONEVLITEDebrisscalarVisual*NONEVLITESand/DirtscalarVisual*NONENONEAppearancescalarVisual*NORMLNORML	Silicon	ppm	ASTM D5185(m)	>50	8		
VISUALmethodlimit/basecurrenthistory1history2White MetalscalarVisual*NONENONEYellow MetalscalarVisual*NONENONEPrecipitatescalarVisual*NONENONESiltscalarVisual*NONEVLITEDebrisscalarVisual*NONEVLITESand/DirtscalarVisual*NONENONEAppearancescalarVisual*NORMLNORML	Sodium	ppm	ASTM D5185(m)		1		
White MetalscalarVisual*NONENONEYellow MetalscalarVisual*NONENONEPrecipitatescalarVisual*NONENONESiltscalarVisual*NONEVLITEDebrisscalarVisual*NONEVLITESand/DirtscalarVisual*NONENONEAppearancescalarVisual*NORMLNORML	Potassium	ppm	ASTM D5185(m)	>20	2		
Yellow MetalscalarVisual*NONENONEPrecipitatescalarVisual*NONENONESiltscalarVisual*NONEVLITEDebrisscalarVisual*NONEVLITESand/DirtscalarVisual*NONENONEAppearancescalarVisual*NORMLNORML	VISUAL		method	limit/base	current	history1	history2
PrecipitatescalarVisual*NONENONESiltscalarVisual*NONEVLITEDebrisscalarVisual*NONEVLITESand/DirtscalarVisual*NONENONEAppearancescalarVisual*NORMLNORML	White Metal	scalar	Visual*	NONE	NONE		
SiltscalarVisual*NONEVLITEDebrisscalarVisual*NONEVLITESand/DirtscalarVisual*NONENONEAppearancescalarVisual*NORMLNORML	Yellow Metal	scalar	Visual*	NONE	NONE		
DebrisscalarVisual*NONEVLITESand/DirtscalarVisual*NONENONEAppearancescalarVisual*NORMLNORML	Precipitate	scalar	Visual*	NONE			
Sand/DirtscalarVisual*NONENONEAppearancescalarVisual*NORMLNORML	Silt	scalar	Visual*	NONE			
Appearance scalar Visual* NORML NORML	Debris	scalar	Visual*	NONE	VLITE		
	Sand/Dirt	scalar					
	Appearance	scalar					
	Odor	scalar	Visual*	NORML	NORML		
Emulsified Water scalar Visual* >0.2 NEG		scalar		>0.2			
Free Water scalar Visual* NEG k:49:06) Rev: 1 Contact/Location: Bruce Avery - GFL96		scalar	Visual*			 ocation: Bruco	

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OIL ANALYSIS REPORT





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

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