

Machine Id **142001 - SG4** Component **Gearbox** Fluid **LIEBHERR GEAR HYPOID 90 EP (--- GAL)**

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.

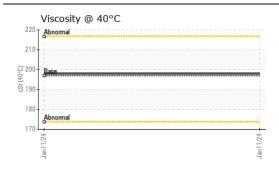
FLUID CONDITION

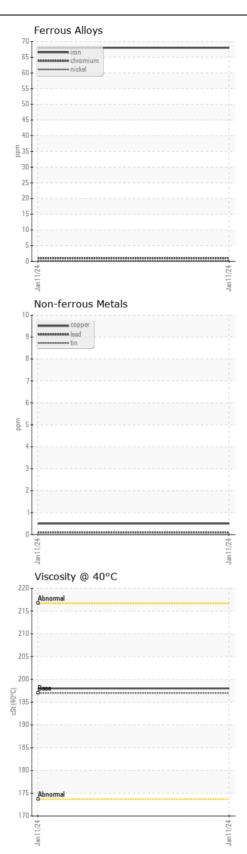
The condition of the oil is acceptable for the time in service.

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TestUOMMethodLimit/AbrCurrentHistory1History2Sample NumberClient InfoLM0000710Sample DateClient Info517Machine AgehrsClient Info517Oil AgehrsClient Info0Filter AgehrsClient InfoChangedOil ChangedClient InfoMASample StatusClient InfoNASample StatusSTM D5185m>20068IronppmASTM D5185m>101NickelppmASTM D5185m>101SilverppmASTM D5185m>50<1AluminumppmASTM D5185m>50<1AlumatinumppmASTM D5185m>50<1VanadiumppmASTM D5185m>50<1Yellow Metalscalar*VisualNORESiliconppmASTM D5185m>501SiliconppmASTM D5185m>201SiliconppmASTM D5185m>201SiliconppmASTM D5185m>201							
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Machine Age Oil Age Nachine Age Dil Age hrsClient Info517Filter Age NicehrsClient Info0Oil ChangedClient InfoN/ASample StatusClient InfoN/ASample StatusVisualNORMALIronppmASTM D5185m>20068NickelppmASTM D5185m>101NickelppmASTM D5185m>10SilverppmASTM D5185m>10SilverppmASTM D5185m>2061AluminumppmASTM D5185m>200LeadppmASTM D5185m>20c1CopperppmASTM D5185m>100VanadiumppmASTM D5185m>100VanadumppmASTM D5185m>201SiliconppmASTM D5185m>502SiliconppmASTM D5185m>201SiliconppmASTM D5185m>201SiliconppmASTM D5185m>201SiliconppmASTM D5185m>201	Sample Number		Client Info		LM0000710		
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ChromiumppmASTM D5185m>101NickelppmASTM D5185m>10<1TitaniumppmASTM D5185m0SilverppmASTM D5185m>200AluminumppmASTM D5185m>20<1LeadppmASTM D5185m>200<1CopperppmASTM D5185m>200<1VanadiumppmASTM D5185m>100VanadiumppmASTM D5185m>100VanadiumppmASTM D5185m>100VanadiumppmASTM D5185m>201VanadiumppmASTM D5185m>201VanadiumppmASTM D5185m>201SiliconppmASTM D5185m>201SiliconppmASTM D5185m>201SiliconppmASTM D5185m>201SiliconppmASTM D5185m>201SiliconppmASTM D5185m>201Siliconscalar*VisualNONENONESiliconscalar*VisualNORMN	Sample Status				NORMAL		
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Titanium ppm ASTM D5185m 0 Silver ppm ASTM D5185m 0 Aluminum ppm ASTM D5185m >25 0 Lead ppm ASTM D5185m >20 <1 Lead ppm ASTM D5185m >200 <1 Copper ppm ASTM D5185m >200 <1 Yanadium ppm ASTM D5185m >200 <1 Vanadium ppm ASTM D5185m >10 0 Vanadium ppm ASTM D5185m >10 0 Vanadium ppm ASTM D5185m >50 2 Vellow Metal scalar *Visual NONE NONE Silicon ppm ASTM D5185m >20 1 Silit scalar *Visual NONE NONE Sand/Dirt					-		
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Lead ppm ASTM D5185m >50 <1					•		
CopperppmASTM D5185m>200<1		ppm			-		
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Sand/Dirtscalar*VisualNONENONEAppearancescalar*VisualNORMLNORMLOdorscalar*VisualNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGSodiumppmASTM D5185m2BoronppmASTM D5185m<<1BariumppmASTM D5185m0MolybdenumppmASTM D5185m<0ManganeseppmASTM D5185m<1MagnesiumppmASTM D5185m<1				_			
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Odorscalar*VisualNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGSodiumppmASTM D5185m2BoronppmASTM D5185m<<1BariumppmASTM D5185m0MolybdenumppmASTM D5185m0ManganeseppmASTM D5185m<1MagnesiumppmASTM D5185m<1				-			
Emulsified Water scalar *Visual >0.2 NEG Sodium ppm ASTM D5185m 2 Boron ppm ASTM D5185m < <1 Barium ppm ASTM D5185m <1 Molybdenum ppm ASTM D5185m 0 Manganese ppm ASTM D5185m <1 Magnesium ppm ASTM D5185m <1				_	-		
Sodium ppm ASTM D5185m 2 Boron ppm ASTM D5185m <1				-	-		
Boron ppm ASTM D5185m <1		Scalai	• • • • • • • • • • • • • • • • • • •	>0.2	NEG		
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Molybdenum ppm ASTM D5185m 0 Manganese ppm ASTM D5185m <1	Boron	ppm	ASTM D5185m		<1		
Manganese ppm ASTM D5185m <1	Barium	ppm	ASTM D5185m		0		
Magnesium ppm ASTM D5185m 1	Molybdenum	ppm	ASTM D5185m		0		
	Manganese	ppm	ASTM D5185m		<1		
Calcium ppm ASTM D5185m 44	Magnesium	ppm	ASTM D5185m		1		
	Calcium	ppm	ASTM D5185m		44		
Phosphorus ppm ASTM D5185m 1269	Phosphorus	ppm	ASTM D5185m		1269		
Zinc ppm ASTM D5185m 3	Zinc	ppm	ASTM D5185m		3		
Sulfur ppm ASTM D5185m 27515	Sulfur	ppm	ASTM D5185m		27515		
Visc @ 40°C cSt ASTM D445 197 198	Visc @ 40°C	cSt	ASTM D445	197	198		

Contact/Location: RONNY FUNK - LIEHIA





LIEBHERR USA CO - Maritime Cranes 15101 NW 112TH AVE HIALEAH GARDENS, FL US 33018 Contact: RONNY FUNK ronny.funk@liebherr.com T: (305)817-7566 106:2012) F:



 Certificate 12307
 Test Package
 : CONST

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

: LM0000710

: 06065221

: WearCheck USA - 501 Madison Ave., Cary, NC 27513

Diagnostician : Wes Davis

: 18 Jan 2024

: 19 Jan 2024

Recieved

Diagnosed

Report Id: LIEHIA [WUSCAR] 06065221 (Generated: 01/19/2024 18:52:07) Rev: 1

Laboratory

Sample No.

Lab Number

Unique Number : 10836603

Contact/Location: RONNY FUNK - LIEHIA

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