

Machine Id 145797-1218 LIEBHERR LH80M 145797-1218

Front Left Wheel Hub

LIEBHERR GEAR BASIC 90 LS (--- GAL)

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Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

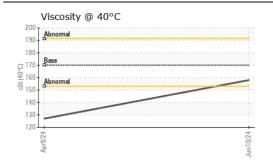
There is no indication of any contamination in the oil.

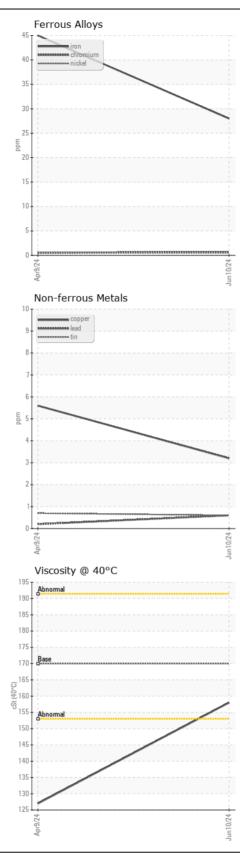
FLUID CONDITION

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

TestUOMMethodLimit/MCurrentHistory1History2Sample NumberCClient Into10 Jun202409 Apr 2024aSample DateCClient Into10 Jun202409 Apr 2024aMachine AgehrsClient IntoS00500aOil AgehrsClient IntoCChangedaFilter AgehrsClient IntoCChangedaFilter ChangedIcient IntoCChangedaSample StatusClient IntoCChangedaTornppmASTM D5186Ada-aNickelppmASTM D5186Ada-aNickelppmASTM D5186Ada-aNickelppmASTM D5186Ada-aSilverppmASTM D5186Ada-aSilverppmASTM D5186Ada-aAuminumppmASTM D5186Ada-aNordeuppmASTM D5186Ada-aSilverppmASTM D5186Ada-aSilverppmASTM D5186p-a-aSilverppmASTM D5186p-a-aSilverppmASTM D5186p-a-aSilverppmASTM D5186p-a-aSilverppmASTM D5186p-a-							
Sample DateClient InfoID Jun 202009 Apr 2024Machine AgehrsClient Info20171579Oil AgehrsClient Info500500Filter AgehrsClient InfoCChangedOil ChangedIClient InfoCChangedFilter ChangedIClient InfoPChangedSample StatusKith DillsAGChangedIronpmASTM D5185>5602845.5NickelpmASTM D5185>4<1<1NickelpmASTM D5185>4<1<1NickelpmASTM D5185>4<1<1SilvenpmASTM D5185>4<1<1AluminumpmASTM D5185>5022<AluminumpmASTM D5185>503.1<1YanadiumpmASTM D5185>503.1<1YandiumpmASTM D5185>4<1<1YandiumpmASTM D5185>4<1<1YandiumpmASTM D5185>4<1<1YandiumpmASTM D5185>5022YandiumpmASTM D5185>4<1<1YandiumpmASTM D5185<	Test	UOM	Method	Limit/Abn	Current	History1	History2
Machine AgehrsClient Info20171579Oil AgehrsClient Info500500Filter AgehrsClient InfoChangedChangedOil ChangedClient InfoChangedChangedFilter ChangedClient InfoMoreChangedSample StatusClient InfoMoreNORMALIronppmASTM D5185>640C1<NickelppmASTM D5185>44<1<NickelppmASTM D5185>44<1<NickelppmASTM D5185>44<1<AluminumppmASTM D5185>44<1<<AluminumppmASTM D5185>44<1<<CopperppmASTM D5185>44<1<<YandouppmASTM D5185>4<1<<CopperppmASTM D5185>4<1<<YandouppmASTM D5185>4<1<<YandouppmASTM D5185>4<1<<YandouppmASTM D5185>4<1<YandouppmASTM D5185>4<1<YandouppmASTM D5185>4<1<1<<YandouppmASTM D5185>59<<YandouppmASTM D5185>7559<<	Sample Number		Client Info		LH0257703	LH0257714	
Oil AgehrsClient Info500500Filter AgehrsClient InfoChangedChangedOil ChangedIClient InfoChangedChangedFilter ChangedIClient InfoChangedChangedSample StatusNORMALNORMALIronppmASTM 0518m-6502845.0ChromiumppmASTM 0518m-6404.1NickelppmASTM 0518m-444.1SilverppmASTM 0518m-444.1AluminumppmASTM 0518m-54022AluminumppmASTM 0518m-5404.1AluminumppmASTM 0518m-5403.1AluminumppmASTM 0518m-5403.1AluminumppmASTM 0518m-5403.1AluminumppmASTM 0518m-5403.1AluminumppmASTM 0518m-5403.1AluminumppmASTM 0518m-5403.1AluminumppmASTM 0518m-5403.1AluminumppmASTM 0518m-5404.1AluminumppmASTM 0518m	Sample Date		Client Info		10 Jun 2024	09 Apr 2024	
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Oli ChangedClient InfoChangedChangedChangedFilter ChangedClient InfoChangedChangedSample StatusNORMALNORMALIronppmASTM DS185>642845NickelppmASTM DS185>44<1<1NickelppmASTM DS185>44<1<1TitaniumppmASTM DS185>44<1<1<1SilverpmASTM DS185>4222<LeadppmASTM DS185>44<1<1CopperpfmASTM DS185>44<1<1VanadiumppmASTM DS185>44<1<1VanadiumppmASTM DS185>44<1<1ValdowppmASTM DS185>44<1<1ValdowppmASTM DS185>44<1<1ValdowppmASTM DS185>4<1<1ValdowppmASTM DS185>4<1<1ValdowppmASTM DS185>59ValdowppmASTM DS185>759ValdowppmASTM DS185>759<	Oil Age	hrs	Client Info		500	500	
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ChromiumppmASTM D5185m>44<1	Sample Status				NORMAL	NORMAL	
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NickelpmASTM D518s>4<1	-				-		
TitaniumppmASTM D5185m>4<1							
SilverppmASTM D5185m<1							
AluminumppmASTM D5185m>2022LeadppmASTM D5185m>4<1<1CopperppmASTM D5185m>60036TinppmASTM D5185m>4<1<1<VanadiumppmASTM D5185m>4<10<VanadiumppmASTM D5185m>4<10<Vhite Metalscalar*VisualNONENONENONE<Yellow Metalscalar*VisualNONENONENONE<SiliconppmASTM D5185m>7559Yellow Metalscalar*VisualNONENONENONE<SiliconppmASTM D5185m>2022<YetterWC Method>0.2NEGNORESilitscalar*VisualNONENONENONESand/Dirtscalar*VisualNORENONENONEAppearancescalar*VisualNORMNORMLNORMLGodiumppmASTM D5185m011MagnesemppmASTM D5185m011MolybdenumppmASTM D5185m011MagnesiumppmASTM D5185m<189877MagnesiumppmASTM D5185m<				>4			
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CopperppmASTM D5185m>6036TinppmASTM D5185m>4<1<1VanadiumppmASTM D5185m<<10White Metalscalar*VisualNONENONENONEYellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m>7559PotassiumppmASTM D5185m>2022WaterWC Method>0.2NEGNONESilitscalar*VisualNONEMODERDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLGodrscalar*VisualNORMLNORMLNORMLSodiumppmASTM D5185m011SodiumppmASTM D5185m011MolybdenumppmASTM D5185m011MaganeseppmASTM D5185m<18987MagnesiumppmASTM D5185m<18987MagnesiumppmASTM D5185m<16068MagnesiumppmASTM D5185m<1460<							
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WaterWC Method>0.2NEGNEGSiltscalar*VisualNONENONEMODERDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGSodiumppmASTM D5185m0.2NEGNEGBariumppmASTM D5185m011MolybdenumppmASTM D5185m011MagnesiumppmASTM D5185m011PhosphorusppmASTM D5185m<189877FunctionppmASTM D5185m<146068MagnesiumppmASTM D5185m<146068PhosphorusppmASTM D5185m<146068SulfurppmASTM D5185m<146068SulfurppmASTM D5185m<146068SulfurppmASTM D5185m<146068SulfurppmASTM D5185m<146068SulfurppmASTM D5185m	Silicon	ppm	ASTM D5185m	>75	5	9	
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Sand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGSodiumppmASTM D5185m060193BoronppmASTM D5185m011MolybdenumppmASTM D5185m011MagnesiumppmASTM D5185m011CalciumppmASTM D5185m<18987PhosphorusppmASTM D5185m214324102363ZincppmASTM D5185m<16068SulfurppmASTM D5185m214322201	Silt	scalar	*Visual	NONE	NONE	MODER	
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Odorscalar*VisualNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEGNEGSodiumppmASTM D5185m466BoronppmASTM D5185m0600193BariumppmASTM D5185m011MolybdenumppmASTM D5185m011MagnesiumppmASTM D5185m011MagnesiumppmASTM D5185m<114355PhosphorusppmASTM D5185m<189877PhosphorusppmASTM D5185m214324102363SulfurppmASTM D5185m<16068	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Emulsified Waterscalar*Visual>0.2NEGNEGSodiumppmASTM D5185m46BoronppmASTM D5185m0600193BariumppmASTM D5185m011MolybdenumppmASTM D5185m011ManganeseppmASTM D5185m011MagnesiumppmASTM D5185m<11435CalciumppmASTM D5185m<189877PhosphorusppmASTM D5185m214324102363ZincppmASTM D5185m<16068SulfurppmASTM D5185m234682581322201	Appearance	scalar	*Visual	NORML	NORML	NORML	
Sodium ppm ASTM D5185m 4 6 Boron ppm ASTM D5185m 0 600 1930 Barium ppm ASTM D5185m 0 1 1 Molybdenum ppm ASTM D5185m 0 1 1 Manganese ppm ASTM D5185m 0 1 1 Magnesium ppm ASTM D5185m 0 1 1 Calcium ppm ASTM D5185m 0 1 1 Phosphorus ppm ASTM D5185m <1 89 87 Zinc ppm ASTM D5185m <14 2410 2363 Sulfur ppm ASTM D5185m <14 60 68	Odor	scalar	*Visual	NORML	NORML	NORML	
Boron ppm ASTM D5185m 0 60 193 Barium ppm ASTM D5185m 0 1 1 Molybdenum ppm ASTM D5185m 0 1 1 Manganese ppm ASTM D5185m 0 1 1 Magnesium ppm ASTM D5185m 0 1 1 Calcium ppm ASTM D5185m <1 14 355 Phosphorus ppm ASTM D5185m <1 89 877 Zinc ppm ASTM D5185m <14 2410 2363 Sulfur ppm ASTM D5185m <1 60 68	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
Barium ppm ASTM D5185m 0 1 1 Molybdenum ppm ASTM D5185m 0 2 6 Manganese ppm ASTM D5185m 0 1 1 Magnesium ppm ASTM D5185m 0 1 1 Calcium ppm ASTM D5185m <1 14 35 Phosphorus ppm ASTM D5185m <1 89 87 Phosphorus ppm ASTM D5185m 2143 2410 2363 Zinc ppm ASTM D5185m <1 60 68 Sulfur ppm ASTM D5185m 23468 25813 22201	Sodium	ppm	ASTM D5185m		4	6	
Molybdenum ppm ASTM D5185m 0 2 6 Manganese ppm ASTM D5185m 0 1 1 Magnesium ppm ASTM D5185m 0 14 35 Calcium ppm ASTM D5185m <1 89 87 Phosphorus ppm ASTM D5185m 2143 2410 2363 Zinc ppm ASTM D5185m <1 60 68 Sulfur ppm ASTM D5185m 23468 25813 22201	Boron	ppm	ASTM D5185m	0	60	193	
Manganese ppm ASTM D5185m 0 1 1 Magnesium ppm ASTM D5185m <1	Barium	ppm	ASTM D5185m	0	1	1	
Magnesium ppm ASTM D5185m <1	Molybdenum	ppm	ASTM D5185m	0	2	6	
Calcium ppm ASTM D5185m <1	Manganese	ppm	ASTM D5185m	0	1	1	
Phosphorus ppm ASTM D5185m 2143 2410 2363 Zinc ppm ASTM D5185m <1	Magnesium	ppm	ASTM D5185m	<1	14	35	
Zinc ppm ASTM D5185m <1	Calcium	ppm	ASTM D5185m	<1	89	87	
Sulfur ppm ASTM D5185m 23468 25813 22201	Phosphorus	ppm	ASTM D5185m	2143	2410	2363	
	Zinc	ppm	ASTM D5185m	<1	60	68	
Visc @ 40°C cSt ASTM D445 170 158 127	Sulfur	ppm	ASTM D5185m	23468	25813	22201	
	Visc @ 40°C	cSt	ASTM D445	170	158	127	

Contact/Location: Dale Shaw - TEXHOUWC





TEXAS PORT RECYCLING - HOUSTON PORT Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : LH0257703 Received 8945 MANCHESTER ST : 27 Jun 2024 Lab Number : 06222713 Tested HOUSTON, TX : 01 Jul 2024 Unique Number : 11100910 Diagnosed : 01 Jul 2024 - Wes Davis US 77012 Test Package : CONST Contact: Dale Shaw Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. dale.shaw@tmrecycling.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: F: (713)921-5545 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Contact/Location: Dale Shaw - TEXHOUWC Page 2 of 2