

#### Machine Id **10008888709 366.1689 (S/N 1000047370)** Component **Gearbox** Fluid **KLUBER KLUBEROIL 4 UH1-220 N (--- GAL)**

### RECOMMENDATION

We advise that you check all areas where contaminants can enter the system. We recommend that you drain the oil from the component if this has not already been done. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

#### **WEAR**

All component wear rates are normal.

## CONTAMINATION

Lithium (Li) level marginal at 4ppm., indicates possible grease contamination.

# FLUID CONDITION

The viscosity of the oil is higher than normal, possibly indicating the addition of a heavier grade of oil. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The AN level is acceptable for this fluid. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Nu	mber	Client Info		WC0904617	WC0789012	WC0848525
Sample D	ate	Client Info		08 Feb 2024	30 Dec 2023	21 Oct 2023
Machine A	Age hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Chang	ed	Client Info		N/A	Not Changd	Not Changd
Filter Cha	nged	Client Info		N/A	Changed	Changed
Sample St	tatus			ABNORMAL	NORMAL	ABNORMAL
PQ		ASTM D8184*		3	0	0
Iron	ppm	ASTM D5185(m)	>200	12	48	78
Chromium	n ppm	ASTM D5185(m)	>15	0	<1	<1
Nickel	ppm	ASTM D5185(m)	>15	<1	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	<1
Aluminum	ppm	ASTM D5185(m)	>25	<1	<1	0
Lead	ppm	ASTM D5185(m)	>100	<1	0	<1
Copper	ppm	ASTM D5185(m)	>200	11	0	<1
Tin	ppm	ASTM D5185(m)	>25	<1	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Met	al scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Me	etal scalar	Visual*	NONE	NONE	NONE	NONE
Silicon			<u>∖</u> 50	15		16
Silicon	ppm	ASTM D5185(m)	>50	15 2	14	16
Potassium		ASTM D5185(m) ASTM D5185(m)	>20	2	14 <1	<1
Potassium Water	n ppm	ASTM D5185(m) ASTM D5185(m) WC Method	>20 >0.2	2 NEG	14 <1 NEG	<1 NEG
Potassium Water Silt	n ppm scalar	ASTM D5185(m) ASTM D5185(m) WC Method Visual*	>20 >0.2 NONE	2 NEG NONE	14 <1 NEG NONE	<1 NEG NONE
Potassium Water Silt Debris	n ppm scalar scalar	ASTM D5185(m) ASTM D5185(m) WC Method Visual* Visual*	>20 >0.2 NONE NONE	2 NEG NONE NONE	14 <1 NEG NONE NONE	<1 NEG NONE VLITE
Potassium Water Silt Debris Sand/Dirt	ppm scalar scalar scalar	ASTM D5185(m) ASTM D5185(m) WC Method Visual* Visual*	>20 >0.2 NONE NONE NONE	2 NEG NONE NONE NONE	14 <1 NEG NONE NONE NONE	<1 NEG NONE VLITE NONE
Potassium Water Silt Debris Sand/Dirt Appearan	scalar scalar scalar scalar	ASTM D5185(m) ASTM D5185(m) WC Method Visual* Visual* Visual* Visual*	>20 >0.2 NONE NONE NONE	2 NEG NONE NONE NONE NORML	14 <1 NEG NONE NONE NONE NORML	<pre>&lt;1 NEG NONE VLITE NONE WGOIL</pre>
Potassium Water Silt Debris Sand/Dirt Appearant Odor	scalar scalar scalar scalar scalar scalar scalar	ASTM D5185(m) ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual*	>20 >0.2 NONE NONE NORML NORML	2 NEG NONE NONE NONE NORML	14 <1 NEG NONE NONE NONE NORML NORML	<1 NEG NONE VLITE NONE WGOIL NORML
Potassium Water Silt Debris Sand/Dirt Appearan	scalar scalar scalar scalar scalar scalar scalar	ASTM D5185(m) ASTM D5185(m) WC Method Visual* Visual* Visual* Visual*	>20 >0.2 NONE NONE NONE	2 NEG NONE NONE NONE NORML	14 <1 NEG NONE NONE NONE NORML	<pre>&lt;1 NEG NONE VLITE NONE WGOIL</pre>
Potassium Water Silt Debris Sand/Dirt Appearant Odor	scalar scalar scalar scalar scalar scalar scalar	ASTM D5185(m) ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual*	>20 >0.2 NONE NONE NORML NORML	2 NEG NONE NONE NONE NORML	14 <1 NEG NONE NONE NONE NORML NORML	<1 NEG NONE VLITE NONE WGOIL NORML
Potassium Water Silt Debris Sand/Dirt Appearant Odor Emulsified	n ppm scalar scalar scalar ce scalar scalar scalar scalar	ASTM D5185(m) ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* Visual*	>20 >0.2 NONE NONE NORML NORML	2 NEG NONE NONE NORML NORML NEG	14 <1 NEG NONE NONE NONE NORML NORML NEG	<1 NEG NONE VLITE NONE WGOIL NORML .2%
Potassium Water Silt Debris Sand/Dirt Appearand Odor Emulsified M Sodium	n ppm scalar scalar scalar ce scalar scalar scalar yater scalar	ASTM D5185(m) ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m)	>20 >0.2 NONE NONE NORML NORML	2 NEG NONE NONE NORML NORML NEG	14 <1 NEG NONE NONE NORML NORML NEG 0	<1 NEG NONE VLITE NONE WGOIL NORML .2% <1
Potassium Water Silt Debris Sand/Dirt Appearand Odor Emulsified M Sodium Boron	n ppm scalar scalar scalar scalar scalar scalar scalar scalar ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m)	>20 >0.2 NONE NONE NORML NORML	2 NEG NONE NONE NORML NORML NEG 0 2	14 <1 NEG NONE NONE NORML NORML NEG 0 0	<1 NEG NONE VLITE NONE WGOIL NORML .2% <1 <1
Potassium Water Silt Debris Sand/Dirt Appearant Odor Emulsified Sodium Boron Barium	kan	ASTM D5185(m) ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m)	>20 >0.2 NONE NONE NORML NORML	2 NEG NONE NONE NORML NORML NEG 0 2 <1	14 <1 NEG NONE NONE NORML NORML NORML NEG 0 0 0	<1 NEG NONE VLITE NONE WGOIL NORML .2% <1 <1 <1 0
Potassium Water Silt Debris Sand/Dirt Appearand Odor Emulsified Sodium Boron Barium Molybden	n ppm scalar scalar scalar scalar scalar scalar scalar ppm ppm ppm ppm se ppm	ASTM D5185(m) ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >0.2 NONE NONE NORML NORML	2 NEG NONE NONE NORML NORML NEG 0 2 <1 3	14 <1 NEG NONE NONE NORML NORML NEG 0 0 0 0 0	<1 NEG NONE VLITE NONE WGOIL NORML .2% <1 <1 0 0 0
Potassium Water Silt Debris Sand/Dirt Appearand Odor Emulsified Sodium Boron Barium Molybden Manganes	n ppm scalar scalar scalar scalar scalar scalar scalar ppm ppm ppm ppm se ppm	ASTM D5185(m) ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >0.2 NONE NONE NORML NORML	2 NEG NONE NONE NORML NORML NEG 0 2 <1 3 0	14 <1 NEG NONE NONE NORML NORML NEG 0 0 0 0 0 0 0 0 0 0	<1 NEG NONE VLITE NONE WGOIL NORML .2% <1 <1 0 0 0 0
Potassium Water Silt Debris Sand/Dirt Appearan Odor Emulsified Sodium Boron Barium Molybdem Manganes Magnesium	A ppm scalar scalar scalar scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	ASTM D5185(m) ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >0.2 NONE NONE NORML NORML	2 NEG NONE NONE NORML NORML NEG 0 2 <1 3 0 <1	14 <1 NEG NONE NONE NORML NORML NEG 0 0 0 0 0 0 0 0 0 0 0	<1 NEG NONE VLITE NONE WGOIL NORML .2% <1 <1 0 0 0 0 0 0
Potassium Water Silt Debris Sand/Dirt Appearand Odor Emulsified Sodium Boron Barium Molybden Manganes Magnesium	A ppm scalar scalar scalar scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	ASTM D5185(m) ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >0.2 NONE NONE NORML NORML	2 NEG NONE NONE NORML NORML NEG 0 2 <1 3 0 <1 8 62	14 <1 NEG NONE NONE NORML NORML NEG 0 0 0 0 0 0 0 1 <1	<1 NEG NONE VLITE NONE WGOIL NORML .2% <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1
Potassium Water Silt Debris Sand/Dirt Appearand Odor Emulsified M Sodium Boron Barium Molybden Manganes Magnesium Calcium	n ppm scalar scalar scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	ASTM D5185(m) ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >0.2 NONE NONE NORML NORML	2 NEG NONE NONE NORML NORML NEG 0 2 <1 3 0 <1 3 0 <1 4 62 625	14 <1 NEG NONE NONE NORML NORML NEG 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<1 NEG NONE VLITE NONE WGOIL NORML .2% <1 <1 <1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Potassium Water Silt Debris Sand/Dirt Appearand Odor Emulsified M Sodium Boron Barium Molybden Manganes Magnesium Calcium Phosphore Zinc	A Sealar scalar scalar scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	ASTM D5185(m) ASTM D5185(m) WC Method Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >0.2 NONE NONE NORML NORML	2 NEG NONE NONE NORML NORML NEG 0 2 <1 3 0 <1 4 62 625 2 9	14 <1 NEG NONE NONE NORML NORML NEG 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<1 NEG NONE VLITE NONE WGOIL NORML .2% <1 <1 0 0 0 0 0 0 0 0 0 0 4

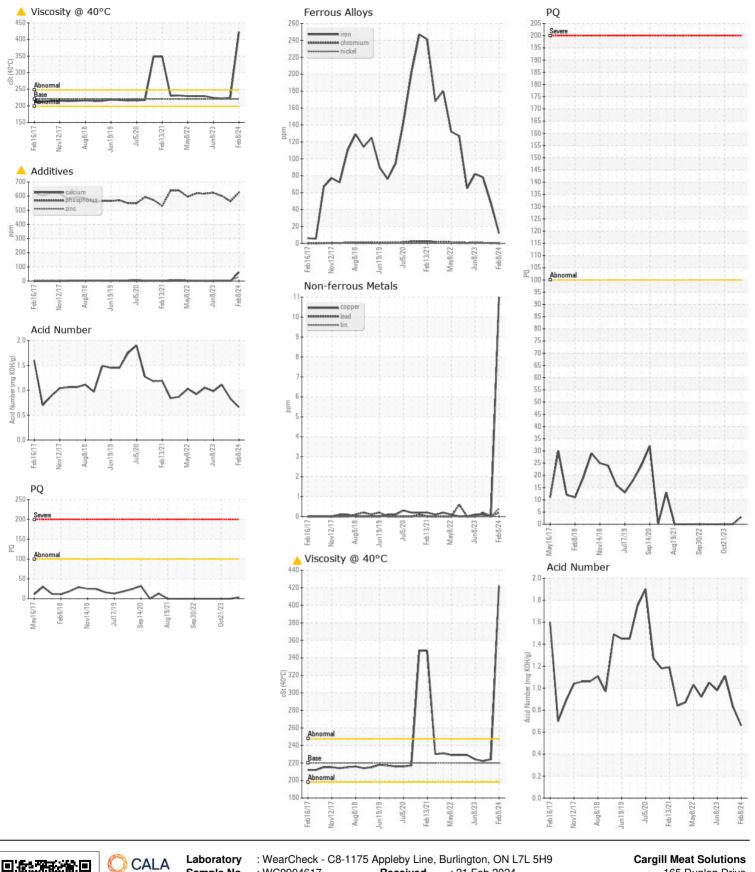
ASTM D7279(m) 220 **422** 

Visc @ 40°C cSt

Contact/Location: Jakub Posluszny - CARGUE

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Sample No. : WC0904617 Received : 21 Feb 2024 Lab Number : 02617257 Tested : 23 Feb 2024 ISO 17025:2017 Accredited : 23 Feb 2024 - Kevin Marson Unique Number : 5734367 Diagnosed Laboratory Test Package : IND 2 (Additional Tests: TAN Man) 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. Validity of results and interpretation are based on the sample and information as supplied.

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