

WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL



Machine Id LIEBHERR TA230 150775-1513

Diesel Engine

{not provided} (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

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All component wear rates are normal.

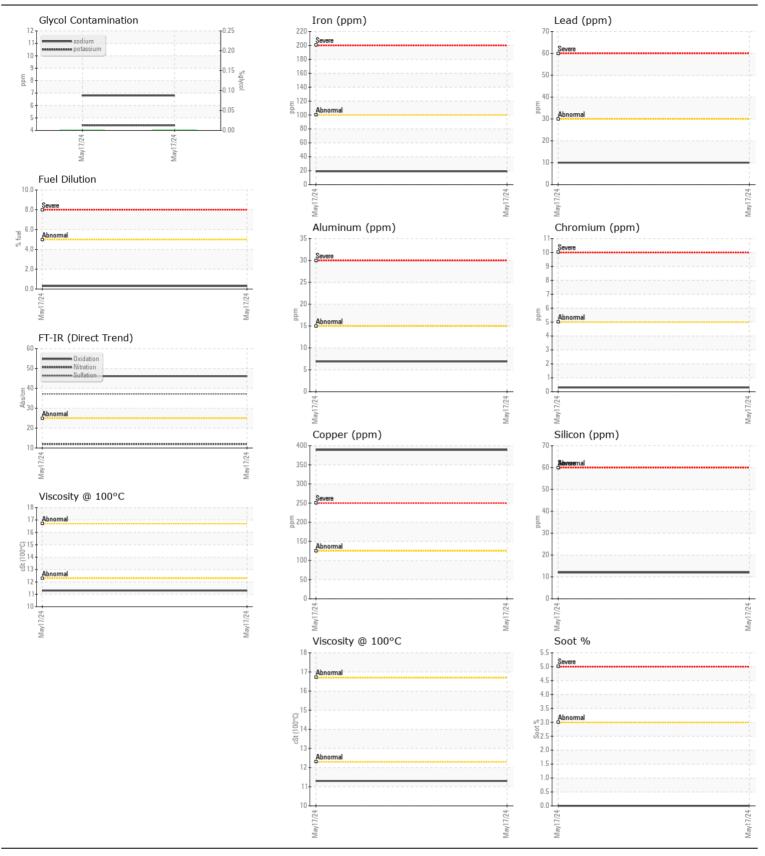
CONTAMINATION

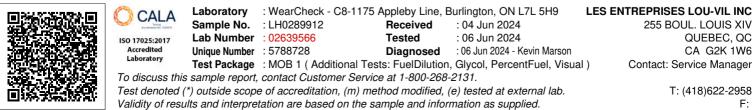
Fuel content negligible. There is no indication of any contamination in the oil.

FLUID CONDITION

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

Test UOM Method LimitAb Current History1 History2 Sample Number Client Info I 189 Sample Date Client Info 1 186 Machine Age hrs Client Info 0 Oil Age hrs Client Info 0 Oil Changed Client Info N/A Filter Age hrs Client Info N/A Sample Status - N/A Iron ppm ASTM D5185(m) >5 <1 Silker ppm ASTM D5185(m) >3 0 Silver ppm ASTM D5185(m) >30 10 Corper ppm ASTM D5185(m) >5 3 Silver ppm<							
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Oil Changed Client Info Changed Filter Changed Client Info N/A Sample Status NORMAL Iron ppm ASTM D5185(m) >50 <1 Iron ppm ASTM D5185(m) >55 0 Nickel ppm ASTM D5185(m) >50 Silver ppm ASTM D5185(m) >50 0 Aluminum ppm ASTM D5185(m) >15 7 Lead ppm ASTM D5185(m) >50 0 Vanadium ppm ASTM D5185(m) >50 0 Yellow Metal scalar Visual* NONE NONE Yellow Metal scalar Visual* NONE NONE Yellow Metal <	Oil Age	hrs	Client Info		0		
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Potassium ppm ASTM D5185(m) >20 4 Fuel % ASTM D7593' >5 0.3 Water WC Method >0.2 NEG Glycol % ASTM D7922' 0.0 Soot % % ASTM D7624' >20 12.0 Sulfation Abs/cm ASTM D7624' >20 12.0 Sulfation Abs/rm ASTM D7624' >20 12.0 Sulfation Abs/rm ASTM D7624' >20 12.0 Sulfation Abs/rm ASTM D7624' >20 17.0 Sulfation Abs/rm ASTM D7624' >00 NORE Sulfation Scalar Visual* NORE NORE Debris scalar Visual*	Yellow Metal	scalar	Visual*	NONE	NONE		
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Manganese ppm ASTM D5185(m) 4 Magnesium ppm ASTM D5185(m) 902 Calcium ppm ASTM D5185(m) 1304 Phosphorus ppm ASTM D5185(m) 724 Zinc ppm ASTM D5185(m) 850 Sulfur ppm ASTM D5185(m) 1885 Oxidation Abs/.1mm ASTM D7414* >25 46.1	Barium	ppm	ASTM D5185(m)		36		
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Oxidation Abs/.1mm ASTM D7414* >25 46.1	Zinc	ppm	ASTM D5185(m)		850		
	Sulfur	ppm	ASTM D5185(m)		1885		
Visc @ 100°C cSt ASTM D7279(m) 11.3		Abs/.1mm		>25	46.1		
	Visc @ 100°C	cSt	ASTM D7279(m)		11.3		





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