LIEBHERR

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

LIEBHERR 184-713

Left Track Drive Fluid GEAR OIL SAE 80W90 (--- GAL)

DIAGNOSIS

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.

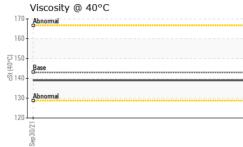
Fluid Condition

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

SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		LH0200478		
Sample Date		Client Info		30 Sep 2021		
Machine Age	hrs	Client Info		8339		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				NORMAL		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>1000	44		
Chromium	ppm	ASTM D5185m	>30	<1		
Nickel	ppm	ASTM D5185m	>7	<1		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m		0		
Aluminum	ppm	ASTM D5185m	>25	2		
Lead	ppm	ASTM D5185m	>50	0		
Copper	ppm	ASTM D5185m	>100	11		
Tin	ppm	ASTM D5185m	>5	0		
Antimony	ppm	ASTM D5185m		0		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	400	155		
Barium	ppm	ASTM D5185m	200	0		
Molybdenum	ppm	ASTM D5185m	12	0		
Manganese	ppm	ASTM D5185m	10	2		
Magnesium	ppm	ASTM D5185m	12	0		
Calcium	ppm	ASTM D5185m	150	4		
Phosphorus	ppm	ASTM D5185m	1650	1038		
Zinc	ppm	ASTM D5185m	125	3		
Sulfur	ppm	ASTM D5185m	22500	18623		
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>150	5		
Sodium	ppm	ASTM D5185m	>170	1		
Potassium	ppm	ASTM D5185m	>20	0		
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Precipitate	scalar	*Visual	NONE	NONE		
Silt	scalar	*Visual	NONE	NONE		
Debris	scalar	*Visual	NONE	VLITE		
Sand/Dirt	scalar	*Visual	NONE	NONE		
Appearance	scalar	*Visual	NORML	NORML		
Odor	scalar	*Visual	NORML	NORML		
Emulsified Water	scalar	*Visual	>0.2	NEG		
Free Water	scalar	*Visual		NEG		



OIL ANALYSIS REPORT



	FLUID PROPER	RTIES	method	limit/base	e current	history1	history2
	Visc @ 40°C	cSt	ASTM D445	143	139		
	SAMPLE IMAGE	ES	method	limit/base	e current	history1	history2
	Color				no image	no image	no image
Sep30/21 -							
Se	Bottom				no image	no image	no image
	Dottom				ine initige	lie indge	no intego
	GRAPHS						
25	Iron (ppm)				Lead (ppm)		
20	S				100 - Severe		
E ¹⁵	00 -			E	80 -		
E 10	00 - Abnormal			dd	60 Abnormal		
5	00 -				20 -		
	Sep30/21			Sep30/21	Sep 30/21		
				Sep			
	Aluminum (ppm))			Chromium (phu)	
	50 - Severe				60 - 0		
	30 - Abnormal				40- 30- Abnormal		
	20-				20		
	0				10		
	Sep 30/21			Sep30/21	Sep30/21		
2	Copper (ppm)				Silicon (ppm)	
	50 00 - Severe				350 300 Severe		
е ¹	50 -				250 - 200 -		
	00 - Abnormal				200 - Abnormal 150 - Abnormal 100		
	50 -				50-		
	Sep30/21			Sep30/21	Sep30/21		
		_		Sep			
1	Viscosity @ 40°C			1	Additives	1	
	60-				000 - calcium 800 - zinc	rus	
cSt (40°C) 1	50 Base			Шdd			
	30 - Abnormal				400 -		
1	20				0		
	Sep30/21			Sep 30/21	Sep30/21		
Sample No. Lab Number Unique Number Test Package s sample report, co	: WearCheck USA - : LH0200478 : 05411446 : 9760634 : MOBCE pontact Customer Ser e outside of the ISO	Received Diagnose Diagnosti	: 29 I d : 01 I cian : Dor 00-237-1369	Nov 2021 Dec 2021 Baldridge		Contact: DON dfitzgeraldo	RONTAGE F JRR RIDGE, US 605

Contact/Location: DON FITZGERALD - LEC0033