

## **OIL ANALYSIS REPORT**

Sample Rating Trend



### Machine Id **LIEBHERR HS895 188297** Component 2 Winch

Fluid PETRO CANADA TRAXON 75

### 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

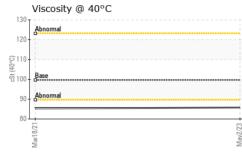
The condition of the oil is acceptable for the time in service.

75W90 SYNTHETIC ( GAL)											
SAMPLE INFORM	ΛΑΤΙΟΝ	method	limit/base	current	history1	history2					
Sample Number		Client Info		LH0260278	LH0195194						
Sample Date		Client Info		02 May 2023	18 Mar 2021						
Machine Age	hrs	Client Info		13473	6156						
Oil Age	hrs	Client Info		0	0						
Oil Changed		Client Info		N/A	Changed						
Sample Status				NORMAL	NORMAL						
CONTAMINATIO	N	method	limit/base	current	history1	history2					
Water		WC Method	>0.2	NEG	NEG						
WEAR METALS		method	limit/base	current	history1	history2					
Iron	ppm	ASTM D5185(m)	>150	32	24						
Chromium	ppm	ASTM D5185(m)	>10	0	<1						
Nickel	ppm	ASTM D5185(m)	>10	<1	<1						
Titanium	ppm	ASTM D5185(m)		0	0						
Silver	ppm	ASTM D5185(m)		2	<1						
Aluminum	ppm	ASTM D5185(m)	>5	0	<1						
Lead	ppm	ASTM D5185(m)	>15	<1	<1						
Copper	ppm	ASTM D5185(m)	>80	2	1						
Tin	ppm	ASTM D5185(m)		0	0						
Antimony	ppm	ASTM D5185(m)	>5	0	0						
Vanadium	ppm	ASTM D5185(m)		0	0						
Beryllium	ppm	ASTM D5185(m)		0	0						
Cadmium	ppm	ASTM D5185(m)		0	0						
ADDITIVES		method	limit/base	current	history1	history2					
Boron	ppm	ASTM D5185(m)	328	313	311						
Barium	ppm	ASTM D5185(m)	1	5	2						
Molybdenum	ppm	ASTM D5185(m)		0	<1						
Manganese	ppm	ASTM D5185(m)		<1	<1						
Magnesium	ppm	ASTM D5185(m)	1	3	2						
Calcium	ppm	ASTM D5185(m)	7	10	9						
Phosphorus	ppm	ASTM D5185(m)	1145	1350	1214						
Zinc	ppm	ASTM D5185(m)	3	10	9						
Sulfur	ppm	ASTM D5185(m)	17909	21765	21817						
Lithium	ppm	ASTM D5185(m)		<1	<1						
CONTAMINANTS	;	method	limit/base	current	history1	history2					
Silicon	ppm	ASTM D5185(m)	>25	3	2						
Sodium	ppm	ASTM D5185(m)		<1	<1						
Potassium	ppm	ASTM D5185(m)	>20	0	<1						





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2	VISUAL		method	limit/base	current	history1	history2
	White Metal	scalar	Visual*	NONE	NONE	NONE	
	Yellow Metal	scalar	Visual*	NONE	NONE	NONE	
	Precipitate	scalar	Visual*	NONE	NONE	NONE	
-	Silt	scalar	Visual*	NONE	NONE	NONE	
-	Debris	scalar	Visual*	NONE	VLITE	NONE	
	Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	
May2/23	Appearance	scalar	Visual*	NORML	NORML	NORML	
May	Odor	scalar	Visual*	NORML	NORML	NORML	
	Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	
	Free Water	scalar	Visual*		NEG	NEG	
	FLUID PROPER	TIES	method	limit/base	current	history1	history2
	Visc @ 40°C	cSt	ASTM D7279(m)	99.6	85.8	85.3	
	SAMPLE IMAGE	ES	method	limit/base	current	history1	history2
	Color						no image
	Bottom						no image
	GRAPHS						
	Iron (ppm)				Lead (ppm)		
	400 Severe				Severe		
	E 200 - Abnormal			u dd	20 - Abnormal		
	0				0		
	Mar1 8/2			May2/23	Mar18/2		May2/23
	Aluminum (ppm)				Chromium (p	nm)	
	15 <sub>T</sub>				30 T :		
	E 10 - Severe			mdd	20 - Severe		
	음 <sub>5</sub> _ <mark>A</mark> bnormal			d.	1		
	2			23	2110		23
	Mar1 8/2'			May2/23	Mar18/2		May2/23
	<pre>Copper (ppm)</pre>			-	Silicon (ppm)		-
	<sup>200</sup> Severe				<sup>60</sup> Severe		
				E	60 F		
	는 100 - Abnormal			mdd	20 - Abnormal		
	2 2 2			23			23
	Mar18/2			May2/23	Mar18/2		May2/23
	∠ Viscosity @ 40°C				Additives		~
	140 T			15			
	C 120 - Abnormal S 100 - Base S 100 - Abnormar			E <sup>10</sup>	00 - calcium	IS	
	<u>u</u>			<sup>12</sup> 5	00 - zinc		
	80			23	0 1 2 1 2		23 -
	Mar18/2			May2/23	Mar18/21		May2/23
Accredited Laboratory Unique Number Test Package	r :5577647 9 :MOB 1 t, contact Customer Ser	Rece Teste Diagr	ived : 10 ed : 10 nosed : 10 800-268-213	0 May 2023 0 May 2023 0 May 2023 - 1 1.	Wes Davis	:	ur Develpment 380 Bayside Dr St John, NB CA E2J 4Y8 Darien Edison arbourdev.com T:
ISO 17025:2017 Accredited Laboratory Number	r : 02556607 r : 5577647 e : MOB 1 t, contact Customer Ser pe of accreditation, (m) r	Teste Diagr vice at 1-8 method me	ed : 10 nosed : 10 800-268-213 odified, (e) te	0 May 2023 ) May 2023 - \ 1. ested at exte	e rnal lab.	Contact	St Joh CA E2 Darien E

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Contact/Location: Darien Edison - HAR380STJ