

## **OIL ANALYSIS REPORT**

Sample Rating Trend





#### Area **East Chicago Operations** Machine Io **LIEBHERR R912 MH-85 (S/N 5007455)** Component Front Differential

PETRO CANADA TRAXON 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

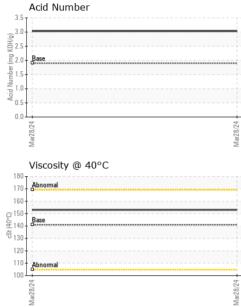
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0113789		
Sample Date		Client Info		28 Mar 2024		
Machine Age	hrs	Client Info		1838		
Oil Age	hrs	Client Info		1838		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>.2	NEG		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	62		
Chromium	ppm	ASTM D5185m	>10	<1		
Nickel	ppm	ASTM D5185m	>10	0		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m		0		
Aluminum	ppm	ASTM D5185m	>25	<1		
Lead	ppm	ASTM D5185m	>25	0		
Copper	ppm	ASTM D5185m	>100	5		
Tin	ppm	ASTM D5185m	>10	0		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	243	86		
Barium	ppm	ASTM D5185m	1	0		
Molybdenum	ppm	ASTM D5185m		0		
Manganese	ppm	ASTM D5185m		3		
Magnesium	ppm	ASTM D5185m	2	2		
Calcium	ppm	ASTM D5185m	6	22		
Phosphorus	ppm	ASTM D5185m	987	1716		
Zinc	ppm	ASTM D5185m	1	6		
Sulfur	ppm	ASTM D5185m	21530	23490		
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>75	3		
Sodium	ppm	ASTM D5185m		2		
Potassium	ppm	ASTM D5185m	>20	0		
FLUID DEGRAD	DATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.9	3.03		



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VISUAL



	VISUAL		method	limit/base	e 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	NONE		
	Sand/Dirt	scalar	*Visual	NONE	NONE		
24		scalar	*Visual	NORML	NORML		
Mar28/24	Appearance						
×	Odor	scalar	*Visual	NORML	NORML		
	Emulsified Water	scalar	*Visual	>.2	NEG		
	Free Water	scalar	*Visual		NEG		
	FLUID PROPE	RTIES	method	limit/base	e current	history1	history2
	Visc @ 40°C	cSt	ASTM D445	141.0	153		
	SAMPLE IMAG	ÈES	method	limit/base	e current	history1	history2
						,	
Mar28/24	Color				no image	no image	no image
Mari							
	Bottom				no image	no image	no image
	GRAPHS						
	Iron (ppm)				Lead (ppm)		
	2000 Severe				50 T Smore		
	ā. 1000 - <sup>1</sup>			41 ad	100 - Severe		
i	Abnormal			d	Abnormal		
	24 0			24	0 4 1		
	Mar28/2			Mar28/24	Mar28/24		
				2		nm)	:
	Aluminum (ppm)				Chromium (p	рш <b>у</b>	
	Severe				20		
	E 100 Abnormal			bbr	20 10 Abnormal		
				4	0		
	Mar28/24			Mar28/24	Mar28/24		
	Mai			Mai			
	Copper (ppm)				Silicon (ppm)		
	300 200 Severe				Severe		
	E 200 Abnormal			- d	200 - Abnormal		
	8/24			8/24 -	8/24		200
	Mar28,2			Mar28/24	Mar28/24		
	 Viscosity @ 40°C				_		
	200 T			5/24 Acid Number (mg KOH/g)	4.0 T		
	Contraction of the second seco			r (mg	2.0 Base		
	Abnormal			un be			
	100			24	0.0 L+		
	Mar28/24			Mar28/24 Aci	Mar28/24		
	×			Σ	Ξ.		:
Laboratory Sample No.	: WearCheck USA - 50 : PCA0113789 : 06140089	Recei Teste	ved : 05 d : 08	, NC 27513 5 Apr 2024 8 Apr 2024	1		T <b>AL SERVICE</b> 51ST STREE T CHICAGO, I
Lab Number Unique Number ate L2367 Test Package		Diagn	<b>osed</b> : 08	Apr 2024 - Do	on Baldridge	Contact: [	US 4631 DAN GERTLEI

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Submitted By: DAN GERTLER