

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area Scoop 6 Yard Machine Id LHD6105

Component Front Left Wheel Hub

PETRO CANADA TRAXON 80W90 (4 LTR)

			Apr2023	Dec2023		
SAMPLE INFO	RMATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PC0074929	PC0050463	
Sample Date		Client Info		16 Dec 2023	23 Apr 2023	
Machine Age	hrs	Client Info		2477	1130	
Oil Age	hrs	Client Info		0	0	
Oil Changed		Client Info		N/A	N/A	
Sample Status				NORMAL	NORMAL	
CONTAMINA	TION	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	
WEAR META	LS	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>500	60	115	
Chromium	ppm	ASTM D5185(m)	>8	0	2	
Nickel	ppm	ASTM D5185(m)	>5	0	<1	
Titanium	ppm	ASTM D5185(m)		0	<1	
Silver	ppm	ASTM D5185(m)		0	0	
Aluminum	ppm	ASTM D5185(m)	>5	2	10	
Lead	ppm	ASTM D5185(m)	>5	<1	3	
Copper	ppm	ASTM D5185(m)	>50	28	99	
Tin	ppm	ASTM D5185(m)		<1	2	
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	history
Boron	ppm	ASTM D5185(m)	243	106	13	
Barium	ppm	ASTM D5185(m)	1	0	<1	
Molybdenum	ppm	ASTM D5185(m)		0	<1	
Manganese	ppm	ASTM D5185(m)		<1	4	
Magnesium	ppm	ASTM D5185(m)	2	10	12	
Calcium	ppm	ASTM D5185(m)	6	2536	15	
Phosphorus	ppm	ASTM D5185(m)	987	1041	505	
Zinc	ppm	ASTM D5185(m)	1	1062	11	
Sulfur	ppm	ASTM D5185(m)	21530	4977	21474	
Lithium	ppm	ASTM D5185(m)		<1	<1	
CONTAMINA	NTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	11	37	
Sodium	ppm	ASTM D5185(m)		<1	3	
Potassium	ppm	ASTM D5185(m)	>20	1	5	

DIAGNOSIS

Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

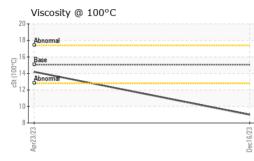
There is no indication of any contamination in the oil.

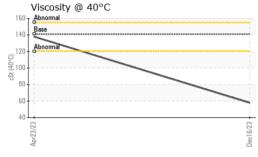
Fluid Condition

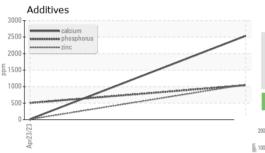
Additive levels indicate the addition of a different brand, or type of oil. Viscosity of sample indicates oil is within SAE 80 range, advise investigate. The condition of the oil is acceptable for the time in service.



OIL ANALYSIS REPORT







Laboratory

Sample No. Lab Number

Unique Number

VISUAL		method	limit/base	current	history1	history2	
White Metal	scalar	Visual*	NONE	LIGHT	NONE		
Yellow Metal	scalar	Visual*	NONE	NONE	NONE		
Precipitate	scalar	Visual*	NONE	NONE	NONE		
Silt	scalar	Visual*	NONE	LIGHT	NONE		
Debris	scalar	Visual*	NONE	NONE	NONE		
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE		
Appearance	scalar	Visual*	NORML	NORML	NORML		
Odor	scalar	Visual*	NORML	NORML	NORML		
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG		
Free Water	scalar	Visual*		NEG	NEG		
FLUID PROPE	RTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D7279(m)	141.0	57.9	138		
Visc @ 100°C	cSt	ASTM D7279(m)	15.06	9	14.2		
				9 133			
Viscosity Index (VI)	Scale	ASTM D2270*	108		100		
SAMPLE IMAG	ES	method	limit/base	current	history1	history2	
Color						no image	
Bottom						no image	
GRAPHS	-		_				
Iron (ppm)				Lead (ppm)			
000			20	T :			
00 - Abnormal			<u></u> 10	- O Abnormal			
0 L			8 0			8	
A pr/23			Dec16/23	Apr23/22		Dec16/23	
Aluminum (ppm)				Chromium (p	nm)		
²⁰ T			20	²⁰ Serve			
10 - Abnormal			<u>E</u> 10	+			
			o				
Apr 23/2			Dec 16/2	A.pr/23/2		Dec16/2	
Copper (ppm)				Silicon (ppm)			
00 Severe							
50 - Abnormal			Severe Diverses				
			8			23	
Apr 23/23			Dec16/23	Apr23/23		Dec16/	
Viscosity @ 40°C				Additives			
			4000			1	
			<u></u> 2000	caccun			
04				ß		23	
6-1			Dec16/23	Apr/23/		Dec16/23	
Apr23/22							
: WearCheck - C8-11				7L 5H9 La	akeshore Gold T	immins West	
: WearCheck - C8-11 : PC0074929 F	Recieved	:24	Jan 2024	7L 5H9 La	akeshore Gold T		
: WearCheck - C8-11 : PC0074929 F : 02610962 [i : 24 . ed : 25 .		7L 5H9 La	akeshore Gold T	Timmins West Timmins, ON CA	

Accredited Laboratory Test Package : MOB 1 (Additional Tests: KV100, VI To discuss this sample report, contact Customer Service at 1-800-268-2131. darseneau@ca.panamericansilver.com 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.

CALA

ISO 17025:2017

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F: