

OIL ANALYSIS REPORT

Area CRANES MA-04001 - AFTER CRANE HYDRAULIC TANK

Tank Hydraulic System

PETRO CANADA TRAXON 80W90 (--- GAL)

DIAGNOSIS

Recommendation

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. The fluid was specified as PETRO CANADA TRAXON 80W90, however, a fluid match indicates that this fluid is Mineral ATF. Please confirm the oil type and grade on your next sample. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

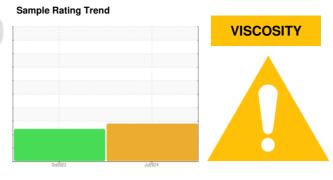
All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Fluid Condition

Viscosity of sample indicates oil is within ISO 22 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



SAMPLE INFORM	/ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PC0080136	PC0040457	
Sample Date		Client Info		15 Jul 2024	10 Oct 2022	
Machine Age	hrs	Client Info		0	0	
Oil Age	hrs	Client Info		0	0	
Oil Changed		Client Info		N/A	N/A	
Sample Status				ABNORMAL	ABNORMAL	
CONTAMINATI	ON	method	limit/base	current	history1	history2
Water		WC Method	>0.05	NEG	NEG	
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	8	7	
Chromium	ppm	ASTM D5185(m)	>10	1	1	
Nickel	ppm	ASTM D5185(m)	>10	<1	<1	
Titanium	ppm	ASTM D5185(m)	-	0	0	
Silver	ppm	ASTM D5185(m)		<1	0	
Aluminum	ppm	ASTM D5185(m)	>10	0	0	
Lead	ppm	ASTM D5185(m)	>20	<1	1	
Copper	ppm	ASTM D5185(m)		3	3	
Tin	ppm	ASTM D5185(m)	>10	0	<1	
Antimony	ppm	ASTM D5185(m)		<1	<1	
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)	243	101	106	
Barium	ppm	ASTM D5185(m)	1	<mark> </mark> 19	23	
Volybdenum	ppm	ASTM D5185(m)		0	<1	
	ppm ppm	ASTM D5185(m) ASTM D5185(m)		0	<1 <1	
Vanganese		. ,	2	-		
Manganese Magnesium	ppm	ASTM D5185(m)		0	<1	
Manganese Magnesium Calcium	ppm ppm	ASTM D5185(m) ASTM D5185(m)		0 <1	<1 <1	
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	6	0 <1 46	<1 <1 68	
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	6 987	0 <1 46 264	<1 <1 68 321	
Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	6 987 1	0 <1 46 264 67	<1 <1 68 321 67	
Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	6 987 1	0 <1 46 264 67 778	<1 <1 68 321 67 843	
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	6 987 1 21530	0 <1 46 264 67 778 <1	<1 <1 68 321 67 843 <1	
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	6 987 1 21530 limit/base	0 <1 46 264 67 778 <1 current	<1 <1 68 321 67 843 <1 history1	 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	6 987 1 21530 limit/base	0 <1 46 264 67 778 <1 current	<1 <1 68 321 67 843 <1 history1 2	 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN [®] Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	6 987 1 21530 limit/base >15	0 <1 46 264 67 778 <1 current 1 6	<1 <1 68 321 67 843 <1 history1 2 6	 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Silicon Sodium Potassium FLUID CLEANL	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	6 987 1 21530 Iimit/base >15 >20	0 <1 46 264 67 778 <1 current 1 6 <1	<1 <1 68 321 67 843 <1 <u>history1</u> 2 6 <1	 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium FLUID CLEANL Particles >4µm	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185(m) ASTM D5185(m)	6 987 1 21530 limit/base >15 >20 limit/base >5000	0 <1 46 264 67 778 <1 current 1 6 <1 current 1276	<1 <1 68 321 67 843 <1 <u>history1</u> 2 6 <1 <u>history1</u> 1104	 history2 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium FLUID CLEANL Particles >6µm	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185(m) ASTM D76477 ASTM D7647	6 987 1 21530 Imit/base >15 >20 Imit/base >5000 >1300	0 <1 46 264 67 778 <1 current 1 6 <1 current 1276 303	<1 <1 68 321 67 843 <1 <u>history1</u> 2 6 <1 <u>history1</u> 1104 283	 history2 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium FLUID CLEANL Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185(m) ASTM D5185(m)	6 987 1 21530 Imit/base >15 >20 Imit/base >5000 >1300 >160	0 <1 46 264 67 778 <1 current 1 6 <1 current 1276	<1 <1 68 321 67 843 <1 <u>history1</u> 2 6 <1 <u>history1</u> 1104 283 30	 history2 history2 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium FLUID CLEANL Particles >4µm Particles >6µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185(m) ASTM D76477 ASTM D76477 ASTM D7647	6 987 1 21530 Imit/base >15 >20 Imit/base >5000 >1300 >160	0 <1 46 264 67 778 <1 current 1 6 <1 current 1276 303 31	<1 <1 68 321 67 843 <1 <u>history1</u> 2 6 <1 <u>history1</u> 1104 283	 history2 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185(m) ASTM D7647 ASTM D7647	6 987 1 21530 ////////////////////////////////////	0 <1 46 264 67 778 <1 current 1 6 <1 current 1276 303 31 9	<1 <1 68 321 67 843 <1 <u>history1</u> 2 6 <1 <u>history1</u> 1104 283 30 6	 history2 history2

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Acid Number (mg KOH/g) 20

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OIL ANALYSIS REPORT

Viscosity @ 100°C		FLUID DEGRAD	OATION	method	limit/base	current	history1	history2
8 - Abnormal		Acid Number (AN)	mg KOH/g	ASTM D974*	1.9	0.88	0.87	
6 Base 4 Abnomal		VISUAL		method	limit/base	current	history1	history2
4 Abnomal		White Metal	coalar	Visual*	NONE	NONE	NONE	
		Yellow Metal		Visual*	NONE	NONE	NONE	
		Precipitate	scalar		NONE	NONE	NONE	
5	*	Silt		Visual*	NONE	NONE	NONE	
0ct10/22	Jul15/24	Debris	scalar	Visual*	NONE	NONE	NONE	
0	7	Sand/Dirt		Visual*	NONE	NONE	NONE	
Additives		Appearance	scalar	Visual*	NORML	NORML	NORML	
calcium	1	Odor		Visual*	NORML	NORML	NORML	
and the second s		Emulsified Water	scalar	Visual*	>0.05	NEG	NEG	
		Free Water	scalar	Visual*	20.00	NEG	NEG	
		FLUID PROPE		method	limit/base	current	history1	history2
								Thistoryz
		Visc @ 40°C	cSt	ASTM D7279(m)	141.0	A 24.3	▲ 24.2	
0ct10/22	Jul15/24	Visc @ 100°C	cSt	ASTM D7279(m)	15.06	▲ 5.2	▲ 5.1	
00	լլու	Viscosity Index (VI)	Scale	ASTM D2270*	108	151	144	
Particle Trend		SAMPLE IMAG	iES	method	limit/base	current	history1	history2
Fundamar 4µm								
		Color						no image
	1							
		Bottom						no image
22	24							
0ct10/22	Jul15/24	GRAPHS						
Particle Count		Ferrous Alloys				Particle Cou	nt	
	T ²⁶				491,52	¹⁰ T		[²
Severe	-24	E 5-			122,88	10 - Emiliaria		-2
Abnormal	22	a o nickel			30,72	10 -		-2
	18				호 🖹 7,68	0 Abnormal		-2
	+16	0ct10/22			1,012/24 (per 1 ml) 1,92	10		-1
	-14	_			sapiti 48	1		
	12	Non-ferrous Metal	S		ba		N	
	-8	copper			12 numper of	10		+1
α 6μ 14μ 21μ 38μ	710	E 5 - tin			- In - I	10 -		-1
Acid Number	, .p.					8-		-1
		0ct10/22			Jul15/24	2-		-
		_			Jul	0 4u 6u	14	28
		🔺 Viscosity @ 40°C			(B	· · · · ·	14μ 21μ r	38µ 71µ
		200 Abnormal			Hoy 2	.0 Base		
	(40°C	450 Abnormal 150 Abnormal 2000 -			Bull 1	0-		
	Ş	50-			24			
		27			24			
0/22	L D A	0ct10/22			Jul15/24	0ct10/22		
0ct10/22	11.11	0			7	0		
Accredited Unique I	e No. : umber : Number : ackage :	: WearCheck - C8-1175 : PC0080136 : 02648136 : 5813688 : IND 2 (Additional Tes contact Customer Servi	Recei Teste Diagn ts: KV10	ved :16 d :17 losed :18 0, VI)	5 Jul 2024 7 Jul 2024 Jul 2024 - Kev		Conta	
Test denoted (*) outsid	le scope	of accreditation, (m) me ation are based on the s	ethod mo	odified, (e) te	sted at exte		T: ((709)778-35 (709)724-28

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