

OIL ANALYSIS REPORT

Sample Rating Trend





CATERPILLAR 30-304 (S/N TZA10093)

Hydraulic System

PETRO CANADA ENVIRON MV 46 (20 LTR)

				Nov2023		
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PC0069825		
Sample Date		Client Info		09 Nov 2023		
Machine Age	hrs	Client Info		6875		
Oil Age	hrs	Client Info		5		
Oil Changed		Client Info		Not Changd		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.05	NEG		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	0		
Chromium	ppm	ASTM D5185(m)	>20	0		
Nickel	ppm	ASTM D5185(m)	>20	<1		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)		<1		
Aluminum	ppm	ASTM D5185(m)	>20	0		
Lead	ppm	ASTM D5185(m)	>20	0		
Copper	ppm	ASTM D5185(m)		<1		
Tin	ppm	ASTM D5185(m)	>20	0		
Antimony	ppm	ASTM D5185(m)	~=	0		
Vanadium	ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES	ppm	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	<1		
Barium	ppm	ASTM D5185(m)		<1		
Molybdenum	ppm	ASTM D5185(m)	0	0		
Manganese	ppm	ASTM D5185(m)		0		
Magnesium	ppm	ASTM D5185(m)	0	0		
Calcium	ppm	ASTM D5185(m)	0	7		
Phosphorus	ppm	ASTM D5185(m)	650	621		
Zinc	ppm	ASTM D5185(m)	0	3		
Sulfur	ppm	ASTM D5185(m)	1420	1352		
Lithium	ppm	ASTM D5185(m)		<1		
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	0		
Sodium	ppm	ASTM D5185(m)		<1		
Potassium	ppm	ASTM D5185(m)	>20	0		
FLUID CLEANI	INESS	method	limit/base	current	history1	history2
Deutieles Aune		ASTM D7647	>5000	438		
Particles >4µm			>1300	120		
Particles >4µm Particles >6µm		ASTM D7647	>1000	120		
•		ASTM D7647 ASTM D7647	>160	15		
Particles >6µm			>160			
Particles >6µm Particles >14µm		ASTM D7647	>160	15		
Particles >6μm Particles >14μm Particles >21μm		ASTM D7647 ASTM D7647	>160 >40 >10	15 5		

Contamination

Wear

Recommendation

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

Resample at the next service interval to monitor.

All component wear rates are normal.

Fluid Condition

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

Contact/Location: Service Manager - LESNEW



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Viscosity @ 100°C	FLUID DEGRAI		method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g	ASTM D974*	0.12	0.07		
Abnormal	VISUAL		method	limit/base	current	history1	history2
Base	White Metal	scalar	Visual*	NONE	NONE		
Abnormal	Yellow Metal	scalar	Visual*	NONE	NONE		
	Precipitate	scalar	Visual*	NONE	NONE		
. 62/6voN	Silt Debris	scalar	Visual*	NONE	NONE		
No		scalar	Visual*	NONE	NONE		
Particle Trend	Sand/Dirt	scalar	Visual*	NONE	NONE		
4μm]	Appearance Odor	scalar scalar	Visual* Visual*	NORML NORML	NORML NORML		
- - - - - - - - - -	Emulsified Water	scalar	Visual*	>0.05	NEG		
	Free Water	scalar	Visual*		NEG		
	FLUID PROPE	RTIES	method	limit/base	current	history1	history2
	Visc @ 40°C	cSt	ASTM D7279(m)	45.0	44.0		
23		cSt	ASTM D7279(m)	8.2	8		
Mav9/23	Viscosity Index (VI)	Scale	ASTM D2270*	158	155		
/iscosity @ 100°C	SAMPLE IMAG	GES	method	limit/base	current	history1	history2
Abnormal	Color					no image	no image
Base	Bottom				6	no image	no image
57/6AeN	GRAPHS						
Viscosity @ 40°C	Ferrous Alloys				Particle Count		1
	10 iron 1			491,520	I		T ²⁶
Abnormal	E. 5 - necessary chromium			122,880	Severe		-24
Base	0			30,720			-22
	Nov9/23			v9/2	Abnormal		-20 4406:1999 Clean -16 Clean
				ළ <u>ම</u> 1.920 දු		•	18 1999
Abnormal	Non-ferrous Meta	S					16 Clean
	Copper			120 120			-14 in -12 Code
No	E 5			ž 30			
Particle Trend				8	İ	1	+10
Aphonna 4µm	Nov9/23			Nov9/23			
	Viscosity @ 40°C			02	μ Acid Number	14μ 21μ	38µ 71µ
	⁵⁵			(B)H0.15 H0 0.10			
	Base			Ĕ 0.10			
	³ 40 - Abnormal			40.00 Percent Virginia			
	35			0.00 Acid 1	123		23
27/RVOV	Nov9/23			Nov9/23	Nov9/23		Nov9/23
Laboratory Sample Nor Laboratory Laboratory Laboratory Laboratory Test Packa	er : PC0069825 er : 02600484 iber : 5685564	Received Diagnose Diagnost ests: KV1	d : 04 ed : 05 ician : We 00, VI)	Dec 2023 Dec 2023 s Davis		2 CHEMIN DE S NEW RI	EPRISES PEC SAINT-EDGAR ICHMOND, QC CA G0C 2B0 ervice Manager info@lepec.ca