

OIL ANALYSIS REPORT

ORIN CONTRACTORS 233

Component **Hydraulic System**

PETRO CANADA HYDREX AW 46 (--- GAL)

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

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

Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

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		<u>k</u>		Feb 2024		
SAMPLE INFORM	ΛΟΙΤΑΝ	method	limit/base	current	history1	history2
Sampla Number		Client Info		WC0899434		
Sample Number		Client Info				
Sample Date				27 Feb 2024		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		Not Changd		
Sample Status				ATTENTION		
CONTAMINATIO	N	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	4		
Chromium	ppm	ASTM D5185(m)	>10	<1		
Nickel	ppm	ASTM D5185(m)	>10	<1		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)		<1		
Aluminum	ppm	ASTM D5185(m)	>10	<1		
Lead	ppm	ASTM D5185(m)	>10	2		
Copper	ppm	ASTM D5185(m)	>75	15		
Tin	ppm	ASTM D5185(m)	>10	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		
	pp	()		•		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	<1		
Barium	ppm	ASTM D5185(m)	0	<1		
Molybdenum	ppm	ASTM D5185(m)	0	0		
Manganese	ppm	ASTM D5185(m)	0	0		
Magnesium	ppm	ASTM D5185(m)	0	3		
Calcium	ppm	ASTM D5185(m)	50	106		
Phosphorus		ASTM D5185(m)	330	844		
Zinc	ppm		430	o44 1074		
Sulfur	ppm	ASTM D5185(m)				
	ppm	ASTM D5185(m)	760	2382		
Lithium	ppm	ASTM D5185(m)		<1		
CONTAMINANTS	3	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>20	2		
Sodium	ppm	ASTM D5185(m)	~_U	2		
		· /	> 20			
Potassium	ppm	ASTM D5185(m)	>20	<1		
FLUID CLEANLIN	IESS					
Particles >4µm		ASTM D7647	>5000	1255		
Particles >6µm		ASTM D7647 ASTM D7647	>1300	1255		
Particles >0µm Particles >14µm				13		
		ASTM D7647	>160			
Particles >21µm		ASTM D7647		4		
Particles >38µm		ASTM D7647	>10	1		
Particles >71µm		ASTM D7647	>3	0		
Oil Cleanliness		ISO 4406 (c)	>19/17/14	17/15/11		

Sample Rating Trend

ADDITIVES

Contact/Location: Service Team - RONVAU



OIL ANALYSIS REPORT

1200 -	Additives	FLUID DEGRADA	ATION	method	limit/base	current	history1	history2
1000-	calcium	Acid Number (AN)	mg KOH/g	ASTM D974*	0.70	1.12		
800-	Zinc	VISUAL		method	limit/base	current	history1	history2
특. 600 -		White Metal	scalar	Visual*	NONE	NONE		
400 - 200 -		Yellow Metal	scalar	Visual*	NONE	NONE		
200		Precipitate	scalar	Visual*	NONE	NONE		
	Feb 27/24 Feb 27/24	Silt		Visual*	NONE	NONE		
	Feb	Debris Sand/Dirt	scalar	Visual*	NONE	NONE		
	Particle Trend	Appearance	scalar	Visual* Visual*	NONE NORML	NONE		
^{6k}	Aonoma 4µm	Odor		Visual*	NORML	NORML		
	Generation 6μm	Emulsified Water	scalar	Visual*	>0.1	NEG		
- 3k - (j ml) 3k - 3k -		Free Water	scalar	Visual*		NEG		
jo Ja 2k - aquunu 1k -		FLUID PROPERT	IES	method	limit/base	current	history1	history2
		Visc @ 40°C	cSt	ASTM D7279(m)	46.4	40.9		
0k⊥	Feb.27/24 +	SAMPLE IMAGES	3	method	limit/base	current	history1	history2
1.2	≝ Acid Number	Color				NCOM	no image	no image
40.7 - 0.7 - 0.7 - 0.7 - 0.7 - 0.7 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 - 0.2 -	Base	Bottom					no image	no image
54 T 50 - (1,0,0)+) 150 (1,0,0)+)	Base Particle Trend	GRAPHS Ferrous Alloys 10 10 10 10 10 10 10 10 10 10	S		Feb27/24 Feb27/24 Feb27/24 Feb27/24 000 Acid Number (mg KOH(g) 5 5 6 0.0	Abnormal Acid Number		126 -24 -22 -20 99 Clean/Intess Code -14 -14 -12 -10
		: 5746248 : MOBCE contact Customer Serv of accreditation, (m) m	Recei Teste Diagr ice at 1-8 ethod mo	ved : 11 d : 12 nosed : 12 200-268-213 podified, (e) te	Mar 2024 2 Mar 2024 Mar 2024 - Kevi 0. sted at extern	n Marson nal lab.	V Contact:	AVATING LTD. NTOSH BLVD 'AUGHAN, ON CA L4K 4P3 Service Team .team@roni.ca T: F:

Contact/Location: Service Team - RONVAU Page 2 of 2