

OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id M01544

Hydraulic System

PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL (--- GAL)

DIAGNOSIS

A Recommendation

We advise that you check for visible metal particles in the oil. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition.

A Wear

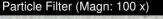
Light concentration of visible metal present.

Contamination

There is a moderate amount of particulates (2 to 100 microns in size) present in the oil.

Fluid Condition

The AN level is acceptable for this fluid.





Report Id: RWFWOO [WCAMIS] 02645279 (Generated: 07/05/2024 10:53:39) Rev: 1

SAMPLE INFORMA	TION	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0937644		
Sample Date		Client Info		20 Jun 2024		
	nrs	Client Info		0		
-	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				ABNORMAL		
CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.05	NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron p	opm	ASTM D5185(m)	>20	<1		
Chromium p	opm	ASTM D5185(m)	>20	0		
Nickel	opm	ASTM D5185(m)	>20	<1		
Titanium	opm	ASTM D5185(m)		0		
	opm	ASTM D5185(m)		0		
	opm	ASTM D5185(m)	>20	<1		
	opm	ASTM D5185(m)	>20	0		
	opm	ASTM D5185(m)	>20	<1		
	opm	ASTM D5185(m)	>20	0		
	opm	ASTM D5185(m)		0		
Vanadium	opm	ASTM D5185(m)		0		
	opm	ASTM D5185(m)		0		
	opm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron p	opm		0	<1		
20.0.0	opin	ASTM D5185(m)	0			
	opm	()	0	<1		
Barium p		()				
Barium p Molybdenum p	opm	ASTM D5185(m)	0	<1		
Barium p Molybdenum p Manganese p	opm opm opm	ASTM D5185(m) ASTM D5185(m)	0 0	<1 0		
Barium p Molybdenum p Manganese p Magnesium p	opm opm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 1	<1 0 0		
Barium p Molybdenum p Manganese p Magnesium p Calcium p	opm opm opm opm opm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 1 0	<1 0 0 <1	 	
Barium p Molybdenum p Manganese p Magnesium p Calcium p Phosphorus p	opm opm opm opm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 1 0 100	<1 0 0 <1 97		
Barium p Molybdenum p Manganese p Magnesium p Calcium p Phosphorus p Zinc p	opm opm opm opm opm opm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 1 0 100 670	<1 0 0 <1 97 600	 	
Barium p Molybdenum p Manganese p Magnesium p Calcium p Phosphorus p Zinc p Sulfur p	opm opm opm opm opm opm opm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 1 0 100 670 850	<1 0 0 <1 97 600 811	 	
Barium p Molybdenum p Manganese p Magnesium p Calcium p Phosphorus p Zinc p Sulfur p	opm opm opm opm opm opm opm opm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 1 0 100 670 850	<1 0 0 <1 97 600 811 1456	 	
Barium p Molybdenum p Manganese p Magnesium p Calcium p Calcium p Chosphorus p Zinc p Sulfur p Lithium p	opm opm opm opm opm opm opm opm	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)	0 0 1 0 100 670 850 1600	<1 0 0 <1 97 600 811 1456 <1 current		
Barium p Molybdenum p Manganese p Magnesium p Calcium p Calcium p Calcium p Calcium p Calcium p Calcium p ContaMinants p Silicon p	opm opm opm opm opm opm opm opm opm	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) ASTM D5185(m)	0 0 1 0 100 670 850 1600	<1 0 (1 97 600 811 1456 <1	 history1	
Barium p Molybdenum p Manganese p Magnesium p Calcium p Calcium p Chosphorus p Zinc p Sulfur p Lithium p CONTAMINANTS Silicon p Sodium p	oppm oppm oppm oppm oppm oppm oppm oppm	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)	0 0 1 0 100 670 850 1600	<1 0 0 <1 97 600 811 1456 <1 current <1	 history1	 history2
BariumPMolybdenumPManganesePMagnesiumPCalciumPPhosphorusPZincPSulfurPLithiumPSiliconPSodiumPPotassiumP	opm opm opm opm opm opm opm opm opm	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) ASTM D5185(m)	0 0 1 0 100 670 850 1600 limit/base >15 >20	<1 0 0 <1 97 600 811 1456 <1 current <1 <1	 history1 	 history2
Barium f Molybdenum f Manganese f Magnesium f Calcium f Phosphorus f Zinc f Sulfur f Lithium f CONTAMINANTS f Silicon f Sodium f Potassium f	opm opm opm opm opm opm opm opm opm	ASTM D5185(m) ASTM D5185(m)	0 0 1 0 100 670 850 1600 1600 1 1600 1 1 15 5 20 1 10 10 10 10 10 10 10 10 10 10 10 10	<1 0 0 <1 97 600 811 1456 <1 current <1 <1 <1 <1 <1 <1	 history1	 history2
BariumpMolybdenumpManganesepMagnesiumpCalciumpPhosphoruspZincpSulfurpLithiumpSoliconpSodiumpPotassiumpFLUID CLEANLINEParticles >4µm	opm opm opm opm opm opm opm opm opm	ASTM D5185(m) ASTM D5185(m)	0 0 1 0 100 670 850 1600 imit/base >15 >20 imit/base >5000	<1 0 0 <1 97 600 811 1456 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	 history1 history1 	history2 history2
Barium f Molybdenum f Manganese f Magnesium f Calcium f Phosphorus f Calcium f Phosphorus f Calcium f Calcium f Sulfur f Sulfur f Sulfur f CONTAMINANTS f Sodium f Sodium f Potassium f Particles >4µm f Particles >6µm f	opm opm opm opm opm opm opm opm opm	ASTM D5185(m) ASTM D5185(m)	0 0 1 0 100 670 850 1600 1600 1600 1600 1600 1600 1600 16	<1 0 0 <1 97 600 811 1456 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	 history1 history1	 history2 history2
Barium f Molybdenum f Manganese f Magnesium f Calcium f Phosphorus f Calcium f Sulfur f Sulfur f Sulfur f Sulfur f Sulfur f Sulfur f CONTAMINANTS f Sodium f Potassium f Potassium f Particles >4µm f Particles >14µm f	opm opm opm opm opm opm opm opm opm	ASTM D5185(m) ASTM D7647 ASTM D7647	0 0 1 1 0 670 850 1600 850 1600 850 1600 8 2 15 20 8 15 20 8 15 20 8 15 20 8 15 20 8 15 8 20 8 15 8 20 8 10 10 10 10 10 10 10 10 10 10 10 10 10	<1 0 0 <1 97 600 811 1456 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	 history1 history1 history1	 history2 history2 <li< td=""></li<>
Barium f Molybdenum f Manganese f Magnesium f Calcium f Phosphorus f Calcium f Phosphorus f Sulfur f Sulfur f Sulfur f CONTAMINANTS f Sodium f Potassium f Particles >4µm f Particles >4µm f Particles >14µm f Particles >21µm f	opm opm opm opm opm opm opm opm opm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	0 0 1 1 0 6 70 8 50 1 6 0 1 6 0 1 6 0 1 6 0 1 6 0 1 5 0 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1	<1 0 0 4 97 600 811 1456 <1 <1 <1 <1 <1 <1 <1 <1 ×1 ×1 ×1 ×1 ×1 ×1 ×1 ×1 ×1 ×	 history1 history1 	 history2 <
Barium f Molybdenum f Manganese f Magnesium f Calcium f Phosphorus f Sulfur f Sulfur f Sulfur f CONTAMINANTS f Sodium f Potassium f Potassium f Particles >6µm f Particles >14µm f Particles >38µm f	opm opm opm opm opm opm opm opm opm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0 0 1 0 100 670 850 1600 850 1600 >15 -20 Imit/base >20 Imit/base >5000 >1300 >160 >40 >40	<1 0 0 4 97 600 811 1456 <1 <1 <1 <1 <1 <1 <1 <1 ×1 ×1 ×1 ×1 ×1 ×1 ×1 ×1 ×1 ×	 history1 history1	 history2 history2 <li< td=""></li<>
Barium f Molybdenum f Manganese f Magnesium f Calcium f Phosphorus f Calcium f Phosphorus f Sulfur f Sulfur f Sulfur f CONTAMINANTS f Sodium f Potassium f Particles >4µm f Particles >4µm f Particles >14µm f Particles >21µm f	opm opm opm opm opm opm opm opm opm	ASTM D5185(m) ASTM D7647 ASTM D7647 ASTM D7647	0 0 1 1 0 6 70 8 50 1 6 0 1 6 0 1 6 0 1 6 0 1 6 0 1 5 0 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1	<1 0 0 4 97 600 811 1456 <1 <1 <1 <1 <1 <1 <1 <1 ×1 ×1 ×1 ×1 ×1 ×1 ×1 ×1 ×1 ×	 history1 history1 	 history2 history2 <li< td=""></li<>

Contact/Location: Tami Arnold - RWFWOO



OIL ANALYSIS REPORT

A Particle Count	FLUID DEGRAD	ATION
491,520 122,880 Severe	Acid Number (AN)	mg KOH/
7,680 Abnormal		
T, 6600 Abroma 1,920 480 480 40 500 1,220 480 500 500 500 500 500 500 500 5	VISUAL VISUAL White Metal Visual Visual Visual	scala scala
30 -	Precipitate	scala
	Silt	scala
1 4 4 4 5 4 5 4 5 4 5 4 5 4 5 4 5 4 5 4	Debris	scala
and an and and	Sand/Dirt	scala
A Particle Trend	Appearance	scala
=12k - 4µm	Odor	scala
E 10k	Emulsified Water	scala
80 20 10 10 10	Free Water	scala
E 12k E 10k 10k 14μm 4k Abnomal 4k 4k 4k 4k 4k 4k 4k 4k	FLUID PROPER	TIES
	Visc @ 40°C	cSt
5 Jun20/24	SAMPLE IMAGE	S
L L L L L L L L L L L L L L L L L L L	μημ	

Acid Number	
Base	
L	
Base	
1	
	0/24 ·
Jun 20/24	Jun20/24
	Jun2
Viscosity @ 40°C	Jum2
Viscosity @ 40°C	2 mnL
Viscosity @ 40°C	Zunf
Viscosity @ 40°C	Zunf
Viscosity @ 40°C	

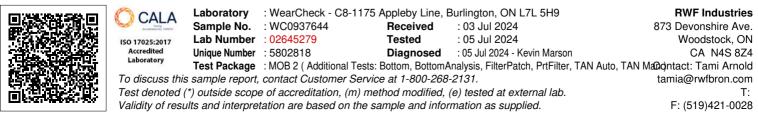
38

lun20/24

FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.60	1.00		
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	🔺 VLITE		
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		
Appearance	scalar	Visual*	NORML	NORML		
Odor	scalar	Visual*	NORML	NORML		
Emulsified Water	scalar	Visual*	>0.05	NEG		
Free Water	scalar	Visual*		NEG		
FLUID PROPERT	IES	method	limit/base	current	history1	history2
FLUID PROPERT Visc @ 40°C	T <mark>IES</mark> cSt	method ASTM D7279(m)	limit/base 47.9	current 47.5	history1	history2
	cSt				history1 history1	history2 history2
Visc @ 40°C	cSt	ASTM D7279(m)	47.9	47.5		
Visc @ 40°C SAMPLE IMAGES	cSt	ASTM D7279(m)	47.9	47.5	 history1	 history2

PrtFilter

un20/24



Report Id: RWFWOO [WCAMIS] 02645279 (Generated: 07/05/2024 10:53:39) Rev: 1

Contact/Location: Tami Arnold - RWFWOO Page 2 of 2

no image

no image