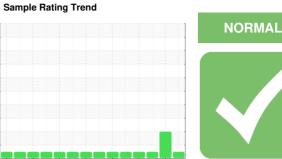


OIL ANALYSIS REPORT



COLD MILL/CM-5-STAND ROLL BEND 1710-042-0110

Hydraulic System

PETRO CANADA HYDREX AW 68 (150 GAL

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

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.

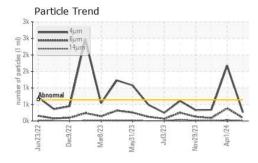
Fluid Condition

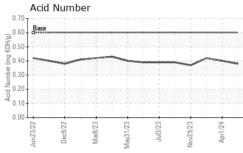
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

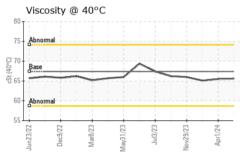
L)		Jun2022 De	c2022 Mar2023 May	2023 Jul2023 Nov2023	Apr2024	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		KFS0004545	KFS0004463	KFS0004841
Sample Date		Client Info		16 Jul 2024	01 Apr 2024	04 Mar 2024
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	ABNORMAL	NORMAL
CONTAMINATIO	N	method	limit/base	current	history1	history2
Water		WC Method	>0.05	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	0	<1	0
Chromium	ppm	ASTM D5185m	>20	0	<1	0
Nickel	ppm	ASTM D5185m	>20	0	<1	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>20	0	2	0
Lead	ppm	ASTM D5185m	>20	0	<1	0
Copper	ppm	ASTM D5185m	>20	0	2	0
Tin	ppm	ASTM D5185m	>20	0	1	0
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	0	0	0
Boron Barium	ppm ppm	ASTM D5185m ASTM D5185m	0	0	0	0
	• • • • • • • • • • • • • • • • • • • •					
Barium	ppm	ASTM D5185m	0	0	0	1
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	0	0	0 <1	0
Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	0 0 0	0 <1 <1	1 0 0
Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0	0 0 0 <1	0 <1 <1 <1	1 0 0 2
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 0 50	0 0 0 <1 50	0 <1 <1 <1 <1 55	1 0 0 2 53
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 50 330	0 0 0 <1 50 336	0 <1 <1 <1 <1 <55 379	1 0 0 2 53 357
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 50 330 430	0 0 0 <1 50 336 444	0 <1 <1 <1 <1 <55 379 452	1 0 0 2 53 357 468
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 50 330 430 760	0 0 0 <1 50 336 444 932	0 <1 <1 <1 55 379 452 919	1 0 0 2 53 357 468 782
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 0 0 50 330 430 760	0 0 0 <1 50 336 444 932	0 <1 <1 <1 <55 379 452 919 history1	1 0 0 2 53 357 468 782 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 50 330 430 760	0 0 0 <1 50 336 444 932 current	0 <1 <1 <1 <55 379 452 919 history1 <1	1 0 0 2 53 357 468 782 history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 50 330 430 760 limit/base >15	0 0 0 <1 50 336 444 932 current <1	0 <1 <1 <1 <55 379 452 919 history1 <1 0	1 0 0 2 53 357 468 782 history2 0
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 50 330 430 760 limit/base >15	0 0 0 <1 50 336 444 932 current <1 <1	0 <1 <1 <1 <55 379 452 919 history1 <1 0 2	1 0 0 2 53 357 468 782 history2 0 0
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 0 0 50 330 430 760 limit/base >15 >20	0 0 0 <1 50 336 444 932 current <1 <1 0	0 <1 <1 <1 <1 <55 379 452 919 history1 <1 0 2	1 0 0 2 53 357 468 782 history2 0 0
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m	0 0 0 0 50 330 430 760 limit/base >15 >20 limit/base	0 0 0 -<1 50 336 444 932 current <1 -<1 0	0 <1 <1 <1 <1 <55 379 452 919 history1 <1 0 2 history1 ▲ 1671	1 0 0 2 53 357 468 782 history2 0 0 0
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m	0 0 0 0 50 330 430 760 limit/base >15 >20 limit/base >640 >160	0 0 0 <1 50 336 444 932 current <1 <1 0 current 261 92	0 <1 <1 <1 <1 <1 <55 379 452 919 history1 <1 0 2 history1 ▲ 1671 ▲ 386	1 0 0 2 53 357 468 782 history2 0 0 0 history2 337 90
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D7647 ASTM D7647	0 0 0 0 50 330 430 760 limit/base >15 >20 limit/base >640 >160 >20	0 0 0 <1 50 336 444 932 current <1 <1 0 current 261 92 9	0 <1 <1 <1 <1 <1 <55 379 452 919 history1 <1 0 2 history1 ▲ 1671 ▲ 386 ■ 30	1 0 0 2 53 357 468 782 history2 0 0 0 history2 337 90 9
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 0 50 330 430 760 limit/base >15 >20 limit/base >640 >160 >20 >4	0 0 0 <1 50 336 444 932 current <1 <1 0 current 261 92 9	0 <1 <1 <1 <1 <1 <1 <55 379 452 919 history1 <1 0 2 history1 ▲ 1671 ▲ 386 30 8	1 0 0 2 53 357 468 782 history2 0 0 0 history2 337 90 9
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m MEthod ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 0 50 330 430 760 limit/base >15 >20 limit/base >640 >160 >20 >4 >3	0 0 0 <1 50 336 444 932 current <1 <1 0 current 261 92 9	0 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	1 0 0 2 53 357 468 782 history2 0 0 0 history2 337 90 9 2 0
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 0 50 330 430 760 limit/base >15 >20 limit/base >640 >160 >20 >4 >3 >3 >3	0 0 0 0 <1 50 336 444 932 current <1 <1 0 current 261 92 9 1 0 0	0 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1 <1	1 0 0 2 53 357 468 782 history2 0 0 0 history2 337 90 9 2 0

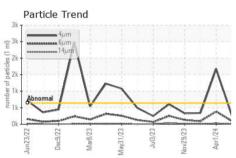


OIL ANALYSIS REPORT









VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERTIES method limit/base current					history1	history?
FLUID PROPER	ΓIES	method				history2

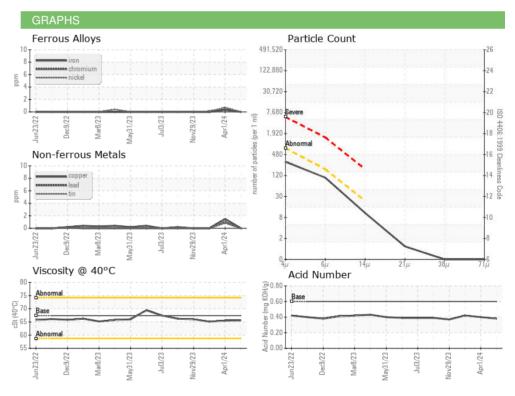
Visc @ 40°C	cSt	ASTM D445	67.4	65.6	65.5	65.1
SAMPLE IMAGES		method	limit/base	current	historv1	historv2

Color

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Certificate 12367

Laboratory Sample No.

Lab Number : 06241621 Unique Number : 11130455

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : KFS0004545 Received : 19 Jul 2024 **Tested** : 22 Jul 2024 : 22 Jul 2024 - Wes Davis

Diagnosed

Test Package : IND 2 To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) **CONSTELLIUM**

4805 SECOND STREET MUSCLE SHOALS, AL US 35661

Contact: Josh Edwards joshua.edwards@constellium.com

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