

Machine Id PRESS 2 SLUDGE (S/N 8190D) Hydraulic System PETRO CANADA HYDREX AW 68 (--- GAL)

RECOMMENDATION

This is a baseline read-out on the submitted sample. Diagnostician's Note: The sludge is actually heavily oxidized oil and some iron wear debris. Recommend that you inspect the system for any hot spots (stuck valves, spools, etc.).

WEAR

Iron ppm levels are abnormal.

CONTAMINATION

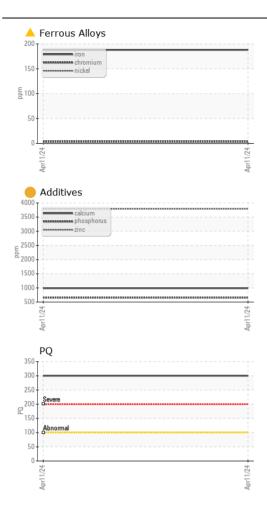
{not applicable}

FLUID CONDITION

Calcium ppm levels are notably high. Sulfur ppm levels are notably high. Zinc ppm levels are notably high.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0796125		
Sample Date		Client Info		11 Apr 2024		
Machine Age	mths	Client Info		24		
Oil Age	mths	Client Info		0		
Filter Age	mths	Client Info		0		
Oil Changed		Client Info		N/A		
Filter Changed		Client Info		N/A		
Sample Status				ABNORMAL		
PQ		ASTM D8184*		300		
Iron	nom	ASTM D8184 ASTM D5185(m)	. 20			
Chromium	ppm	× 7	>20	4		
Nickel	ppm	ASTM D5185(m) ASTM D5185(m)	>20 >20	4 <1		
Titanium	ppm	ASTM D5185(m)	>20	<1 <1		
Silver	ppm	ASTM D5185(m)		<1		
Aluminum	ppm	ASTM D5185(m) ASTM D5185(m)	>20	1		
Lead	ppm	ASTM D5185(m)	>20	2		
	ppm	ASTM D5185(m)	>20	5		
Copper Tin	ppm	ASTM D5185(m)	>20	7		
Vanadium	ppm	ASTM D5185(m)	>20			
	ppm	. ,		0 NONE		
White Metal Yellow Metal	scalar	Visual* Visual*	NONE	NONE		
	scalar	visuai	NONE	NONE		
Silicon	ppm	ASTM D5185(m)	>15	3		
Potassium	ppm	ASTM D5185(m)	>20	2		
Water		WC Method	>0.05	NEG		
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		
Codium				10		
Sodium	ppm	ASTM D5185(m)	0	10 2		
Boron	ppm	ASTM D5185(m)	0			
Barium	ppm	ASTM D5185(m)	0	<1		
Molybdenum Manganese	ppm	ASTM D5185(m) ASTM D5185(m)	0	0 1		
U	ppm	()	0	4		
Magnesium	ppm	ASTM D5185(m)				
Calcium	ppm	ASTM D5185(m) ASTM D5185(m)	50 330	987 656		
Phosphorus	ppm					
Zinc	ppm	ASTM D5185(m)	430	3790		
Sulfur	ppm	ASTM D5185(m)	760	9 3542		

Contact/Location: Farzad Shik - SPE95BRA



SPECTRA ALUMINUM PRODUCTS INC. Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 CALA Sample No. : WC0796125 Received : 17 Apr 2024 95 REAGENS INDUSTRIAL PKWY Lab Number : 02629815 Tested : 22 Apr 2024 BRADFORD, ON ISO 17025:2017 Accredited Laboratory Unique Number : 5762947 Diagnosed : 22 Apr 2024 - Bill Quesnel CA L3Z 2A4 Test Package : TEST (Additional Tests: ICP, PQ) Contact: Farzad Shik To discuss this sample report, contact Customer Service at 1-800-268-2131. fshik@spectraaluminum.com as Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. T: Validity of results and interpretation are based on the sample and information as supplied. F: (905)778-8054

Contact/Location: Farzad Shik - SPE95BRA Page 2 of 2