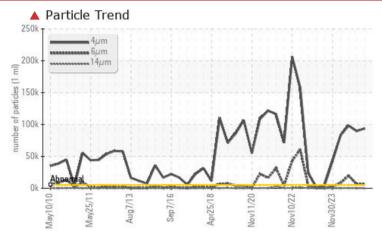


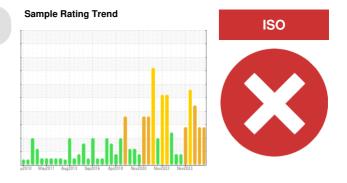
PROBLEM SUMMARY

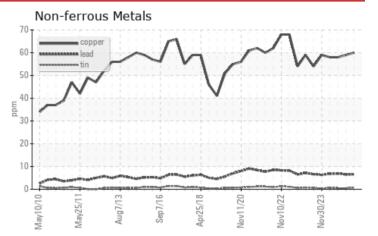
PRESS #8

Component Hydraulic System Fluid PETRO CANADA HYDREX AW 68 (10000 GAL)

COMPONENT CONDITION SUMMARY







RECOMMENDATION

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Confirm the source of the lubricant being utilized for top-up/fill. Resample in 30-45 days to monitor this situation. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using Advanced Oil Monitoring (AOM) kits for this system. The AOM test package includes advanced level testing to determine the suitability of turbine and large industrial compressor oils for continued use.

PROBLEMATIC TEST RESULTS

Sample Status			SEVERE	SEVERE	SEVERE
Particles >4µm	ASTM D7647	>5000	4 93866	▲ 89650	▲ 82906
Particles >6µm	ASTM D7647	>1300	<u> </u>	6 411	<u> </u>
Oil Cleanliness	ISO 4406 (c)	>19/17/14	4/20/13	4 24/20/13	4 24/20/14

Customer Id: EXTWOO Sample No.: PC0081055 Lab Number: 02623043 Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data: Kevin Marson +1 (289)291-4644 x4644 Kevin.Marson@wearcheck.com

To change component or sample information: Gloria Gonzalez +1 (289)291-4643 x4643 gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS							
Action	Status	Date	Done By	Description			
Change Filter			?	We recommend you service the filters on this component.			
Resample			?	Resample in 30-45 days to monitor this situation.			
Contact Required			?	Please contact your representative for information regarding the proper sampling kits for your service.			
Alert			?	NOTE: We recommend using Advanced Oil Monitoring (AOM) kits for this system. The AOM test package includes advanced level testing to determine the suitability of turbine and large industrial compressor oils for continued use.			
Check Breathers			?	The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather.			
Check Fluid Source			?	Confirm the source of the lubricant being utilized for top-up/fill.			
Check Seals			?	Check seals and/or filters for points of contaminant entry.			

HISTORICAL DIAGNOSIS



09 Mar 2024 Diag: Kevin Marson

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Confirm the source of the lubricant being utilized for top-up/fill. Resample in 30-45 days to monitor this situation. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using Advanced Oil Monitoring (AOM) kits for this system. The AOM test package includes advanced level testing to determine the suitability of turbine and large industrial compressor oils for continued use All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. 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 acceptable for the time in service (unconfirmed). The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.



view report

19 Dec 2023 Diag: Kevin Marson



Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. We recommend that you use electrostatic filtration to remove insolubles from the oil and to reduce the levels of varnish in the system. Alternatively draining a percentage of the oil and topping up with fresh oil (sweetening the oil) may provide a reduction in the varnish potential level. Confirm the source of the lubricant being utilized for top-up/fill. Resample in 30-45 days to monitor this situation. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using Advanced Oil Monitoring (AOM) kits for this system. The AOM test package includes advanced level testing to determine the suitability of turbine and large industrial compressor oils for continued use Copper ppm levels are noted. All other component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. MPC (Membrane Patch Colorimetry) test indicates a high concentration of varnish present. 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 acceptable for the time in service (unconfirmed). The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

19 Dec 2023 Diag: Kevin Marson



Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Confirm the source of the lubricant being utilized for top-up/fill. Resample in 30-45 days to monitor this situation. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using Advanced Oil Monitoring (AOM) kits for this system. The AOM test package includes advanced level testing to determine the suitability of turbine and large industrial compressor oils for continued use.Copper ppm levels are noted. All other component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. 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 acceptable for the time in service (unconfirmed). The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels









OIL ANALYSIS REPORT

Sample Rating Trend

ISO

PRESS #8

Component Hydraulic System Fluid PETRO CANADA HYDREX AW 68 (10000 GAL)

DIAGNOSIS

Recommendation

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Confirm the source of the lubricant being utilized for top-up/fill. Resample in 30-45 days to monitor this situation. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using Advanced Oil Monitoring (AOM) kits for this system. The AOM test package includes advanced level testing to determine the suitability of turbine and large industrial compressor oils for continued use.

Wear

Component wear rates appear to be normal (unconfirmed).

Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

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 acceptable for the time in service (unconfirmed). The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

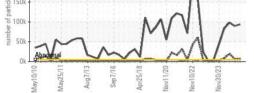
AL)	v2010 May2011 Aug2013 Sep2016 Apr2018 New2022 New2023						
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2	
Sample Number		Client Info		PC0081055	PC0081060	PC385873	
Sample Date		Client Info		14 Mar 2024	09 Mar 2024	19 Dec 2023	
Machine Age	mths	Client Info		0	0	0	
Oil Age	mths	Client Info		0	0	0	
Oil Changed		Client Info		N/A	N/A	N/A	
Sample Status				SEVERE	SEVERE	SEVERE	
CONTAMINAT	ION	method	limit/base	current	history1	history2	
Water		WC Method	>0.05	NEG	NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2	
PQ		ASTM D8184*		0	0	0	
Iron	ppm	ASTM D5185(m)	>20	32	32	32	
Chromium	ppm	ASTM D5185(m)	>20	<1	<1	<1	
Nickel	ppm	ASTM D5185(m)	>20	<1	<1	<1	
Titanium	ppm	ASTM D5185(m)		0	0	0	
Silver	ppm	ASTM D5185(m)		<1	0	0	
Aluminum	ppm	ASTM D5185(m)	>20	7	7	7	
Lead	ppm	ASTM D5185(m)	>20	7	6	7	
Copper	ppm	ASTM D5185(m)	>20	60	59	58	
Tin	ppm	ASTM D5185(m)	>20	<1	<1	<1	
Antimony	ppm	ASTM D5185(m)		0	0	0	
Vanadium	ppm	ASTM D5185(m)		0	0	0	
Beryllium	ppm	ASTM D5185(m)		0	0	0	
Cadmium	ppm	ASTM D5185(m)		0	0	0	
ADDITIVES		method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	0	0	0	0	
Barium	ppm	ASTM D5185(m)	0	<1	<1	<1	
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0	
Manganese	ppm	ASTM D5185(m)	0	0	0	0	
Magnesium	ppm	ASTM D5185(m)	0	6 52	52	- 45	
Calcium	ppm	ASTM D5185(m)	50	78	77	70	
Phosphorus	ppm	ASTM D5185(m)	330	603	603	576	
Zinc	ppm	ASTM D5185(m)	430	503	503	476	
Sulfur	ppm	ASTM D5185(m)	760	<mark> </mark> 1909	909	1824	
Lithium	ppm	ASTM D5185(m)		<1	<1	<1	
CONTAMINAN	TS	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>15	4	3	4	
Sodium	ppm	ASTM D5185(m)		2	2	1	
Potassium	ppm	ASTM D5185(m)	>20	<1	1	<1	

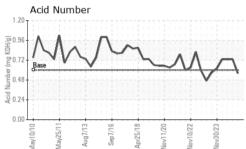


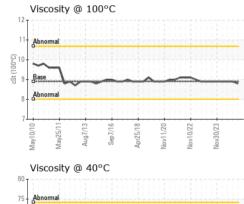
OIL ANALYSIS REPORT

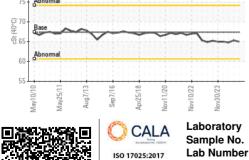
FLUID CLEANLINESS method

491,520 T	ticle Cou				T ²⁶
122,880					-24
30,720 7,680 Abnor 1,920 480 120 30 8	nal and				
1,920		-			-20 fd. -18 gg -16 gg -14 mini- -12 gg -10 gg
480					16 0
120		1-			I10 cm
30-		-			12
8					I10 8
2-					8
					-
0 4µ	6µ	14µ	21µ	38µ	71µ
🔺 Par	ticle Trer	nd			
250k T				onorpaa	
= 200k	4μm 6μm				
E 200K	14μm			Λ	
-8 150k -				-11-	
				~11	
(Ta 200k				/ VI I	









Accredited

Laboratory

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		methou	initia base	Current	matory	111310
Particles >4µm		ASTM D7647	>5000	9 3866	▲ 89650	▲ 82906
Particles >6µm		ASTM D7647	>1300	<u> </u>	6 411	▲ 8265
Particles >14µm		ASTM D7647	>160	55	43	113
Particles >21µm		ASTM D7647	>40	13	8	18
Particles >38µm		ASTM D7647	>10	3	2	1
Particles >71µm		ASTM D7647	>3	1	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	4 24/20/13	4/20/13	4 /20/
FLUID DEGRAD)ATION	method	limit/base	current	history1	histo
Acid Number (AN)	mg KOH/g	ASTM D974*	0.60	0.56	0.73	0.73
VISUAL		method	limit/base	current	history1	histo
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	NORN
Odor	scalar	Visual*	NORML	NORML	NORML	NORN

Emulsified Water	scalar	Visual*	>0.05	NEG	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG	NEG
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	67.4	65.0	65.3	64.8
Visc @ 100°C	cSt	ASTM D7279(m)	8.9	8.8	8.9	8.9

SAMPLE IMAGES Color

no image no image

▲ 24/20/14

NONE NONE NONE NONE NONE NONE NORML

NORML

MPC

Bottom

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 : PC0081055 Received : 19 Mar 2024 Lab Number : 02623043 Tested : 20 Mar 2024 Unique Number : 5748162 Diagnosed : 20 Mar 2024 - Kevin Marson Test Package : IND 2 (Additional Tests: KV100, PQ, VI) To discuss this sample report, contact Customer Service at 1-800-268-2131.

Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

EXTRUDEX ALUMINIUM 411 CHRISLEA ROAD WOODBRIDGE, ON CA L4L 8N4 Contact: Daljeet Munday

dmunday@extrudex.com T: (416)745-4444 F: (416)745-0925