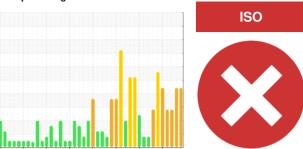


PROBLEM SUMMARY

Sample Rating Trend

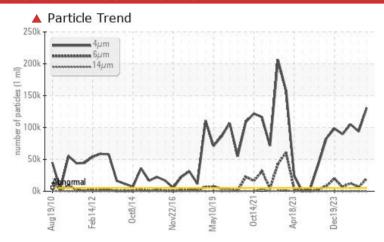


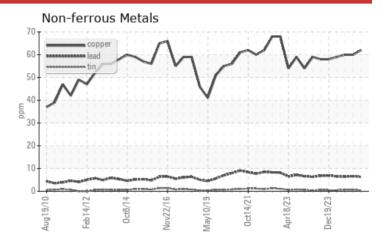
Machine Id PRESS #8

Hydraulic System

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.

PROBL	.EMATIC	TEST	RESU	LTS
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Sample Status		SEVERE	SEVERE	SEVERE
Particles >4µm	ASTM D7647 >5000	130641	▲ 104866	▲ 93866
Particles >6μm	ASTM D7647 >1300	19661	12877	△ 6353
Oil Cleanliness	ISO 4406 (c) >19/17/1	4 24/21/14	4 24/21/13	4 24/20/13

Customer Id: EXTWOO Sample No.: PC0087731 Lab Number: 02641132 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

ISO



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. Component wear rates appear to be normal (unconfirmed). 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.



ISO



14 Mar 2024 Diag: Kevin Marson

14 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. Component wear rates appear to be normal (unconfirmed). 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 levels.



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09 Mar 2024 Diag: Kevin Marson

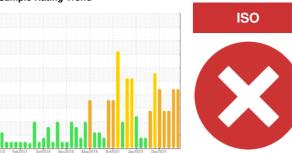
Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this 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.





OIL ANALYSIS REPORT

Sample Rating Trend



Machine Id

PRESS #8

Hydraulic System

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

All component wear rates are normal.

Contamination

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

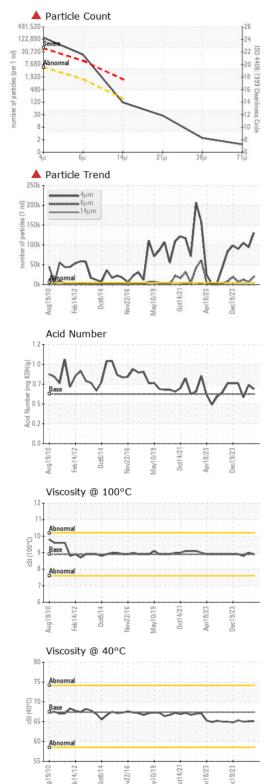
Fluid Condition

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.

aal)		g2010 Feb20	12 Oct2014 Nov2016	May2019 Oct2021 Apr2023	Dec2023	
SAMPLE INFOR	RMATION	\ method	limit/base	current	history1	history2
Sample Number		Client Info		PC0087731	PC0081051	PC0081055
Sample Date		Client Info		11 Jun 2024	14 Mar 2024	14 Mar 2024
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	ΓΙΟΝ	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	34	33	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)		0	0	<1
Aluminum	ppm	ASTM D5185(m)	>20	7	7	7
Lead	ppm	ASTM D5185(m)	>20	6	6	7
Copper	ppm	ASTM D5185(m)	>20	62	60	60
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	<1	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	<1	0	0
Magnesium	ppm	ASTM D5185(m)	0	52	52	52
Calcium	ppm	ASTM D5185(m)	50	76	78	78
Phosphorus	ppm	ASTM D5185(m)	330	575	600	603
Zinc	ppm	ASTM D5185(m)	430	499	501	503
Sulfur	ppm	ASTM D5185(m)	760	<u> </u>	1897	1909
Lithium	ppm	ASTM D5185(m)		<1	<1	<1
CONTAMINAN	NTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	2	3	4
Sodium	ppm	ASTM D5185(m)		2	2	2
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1



OIL ANALYSIS REPORT



Particles >4µm	FLUID CLEANL	INESS	method	limit/base	current	history1	history2
Particles > 14µm				>5000	▲ 130641	▲ 104866	
Particles >21µm	Particles >6µm		ASTM D7647	>1300	19661	▲ 12877	<u></u> 6353
Particles >38µm ASTM D7647 >10 2 2 3 Particles >71µm ASTM D7647 >3 1 2 1 Oil Cleanliness ISO 4406 (c) >19/17/14 ▲ 24/21/14 ▲ 24/21/13 ▲ 24/20/13 FLUID DEGRADATION method limit/base current limit/base current history1 history2 Acid Number (AN) mg KOH/g ASTM D974* 0.60 0.66 0.71 0.56 VISUAL method limit/base current history1 history2 White Metal scalar Visual* NONE NONE NONE NONE NONE NONE NONE NON	Particles >14µm		ASTM D7647	>160	101	63	55
Particles >71µm	Particles >21µm		ASTM D7647	>40	24	9	13
Oil Cleanliness ISO 4406 (c) >19/17/14 ▲ 24/21/14 ▲ 24/21/13 ▲ 24/20/13 FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg K0Hg ASTM D974* 0.60 0.66 0.71 0.56 VISUAL method limit/base current history1 history2 VISUAL method limit/base current history1 history2 VISUAL* NONE NONE <t< td=""><td>Particles >38µm</td><td></td><td>ASTM D7647</td><td>>10</td><th>2</th><td>2</td><td>3</td></t<>	Particles >38µm		ASTM D7647	>10	2	2	3
FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOHig ASTM D974* 0.60 0.66 0.71 0.56 VISUAL method limit/base current history1 history2 White Metal scalar Visual* NONE NONE NONE NONE NONE NONE NONE NON	Particles >71µm		ASTM D7647	>3	1	2	1
Acid Number (AN) mg KOHlg ASTM D974* 0.60 0.66 0.71 0.56 VISUAL method limit/base current history1 history2 White Metal scalar Visual* NONE NONE NONE NONE NONE NONE Precipitate scalar Visual* NONE NONE NONE NONE NONE NONE NONE NON	Oil Cleanliness		ISO 4406 (c)	>19/17/14	24/21/14	4 24/21/13	4 24/20/13
White Metal scalar Visual* NONE NONE NONE NONE NONE NONE Precipitate scalar Visual* NONE NONE NONE NONE NONE NONE NONE Sitt scalar Visual* NONE NONE NONE NONE NONE NONE NONE NON	FLUID DEGRAD	NOITA	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* NORML NORML NORML Emulsified Water scalar Visual* NORML NORML NORML Tree Water scalar Visual* NEG NEG NEG FLUID PROPERTIES method limit/base current history1 history2 Visc @ 40°C cSt ASTM D7279(m) 67.4 65.1 65.1 65.0 Visc @ 100°C cSt ASTM D7279(m) 8.9 8.9 9.0 8.8 Viscosity Index (VI) Scale ASTM D2270* 105 110 113 108 SAMPLE IMAGES method limit/base current history1 history2 Color	Acid Number (AN)	mg KOH/g	ASTM D974*	0.60	0.66	0.71	0.56
Yellow Metal scalar Visual* NONE NORM NORML	VISUAL		method	limit/base	current	history1	history2
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 history2 Visc @ 40°C	White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Silt scalar Visual* NONE 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 history2 Visc @ 40°C cSt ASTM D7279(m) 67.4 65.1 65.0 Visc @ 100°C cSt ASTM D7279(m) 8.9 8.9 9.0 8.8 Viscosity Index (VI) Scale ASTM D2270* 105 110 113 108 SAMPLE IMAGES method limit/base current history1 history2 Color	Yellow Metal	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 Free Water scalar Visual* NEG NEG NEG FLUID PROPERTIES method limit/base current history1 history2 Visc @ 40°C cSt ASTM D7279(m) 67.4 65.1 65.1 65.0 Visc @ 100°C cSt ASTM D7279(m) 8.9 8.9 9.0 8.8 Viscosity Index (VI) Scale ASTM D2270* 105 110 113 108 SAMPLE IMAGES method limit/base current history1 history2 Color	Precipitate	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt scalar Visual* NONE NONE NONE NONE Appearance scalar Visual* NORML N	Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance scalar Visual* NORML NORM	Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Odor scalar Visual* NORML NEG NEG <td>Sand/Dirt</td> <td>scalar</td> <td>Visual*</td> <td>NONE</td> <th>NONE</th> <td>NONE</td> <td>NONE</td>	Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Emulsified Water scalar Visual* >0.05 NEG 100 <td>Appearance</td> <td>scalar</td> <td>Visual*</td> <td>NORML</td> <th>NORML</th> <td>NORML</td> <td>NORML</td>	Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Free Water scalar Visual* NEG NEG NEG FLUID PROPERTIES method limit/base current history1 history2 Visc @ 40°C cSt ASTM D7279(m) 67.4 65.1 65.1 65.0 Visc @ 100°C cSt ASTM D7279(m) 8.9 8.9 9.0 8.8 Viscosity Index (VI) Scale ASTM D2270* 105 110 113 108 SAMPLE IMAGES method limit/base current history1 history2 Color	Odor	scalar	Visual*	NORML	NORML	NORML	NORML
FLUID PROPERTIES method limit/base current history1 history2 Visc @ 40°C cSt ASTM D7279(m) 67.4 65.1 65.1 65.0 Visc @ 100°C cSt ASTM D7279(m) 8.9 8.9 9.0 8.8 Viscosity Index (VI) Scale ASTM D2270* 105 110 113 108 SAMPLE IMAGES method limit/base current history1 history2	Emulsified Water	scalar	Visual*	>0.05	NEG	NEG	NEG
Visc @ 40°C cSt ASTM D7279(m) 67.4 65.1 65.0 Visc @ 100°C cSt ASTM D7279(m) 8.9 8.9 9.0 8.8 Viscosity Index (VI) Scale ASTM D2270* 105 110 113 108 SAMPLE IMAGES method limit/base current history1 history2	Free Water	scalar	Visual*		NEG	NEG	NEG
Visc @ 100°C cSt ASTM D7279(m) 8.9 9.0 8.8 Viscosity Index (VI) Scale ASTM D2270* 105 110 113 108 SAMPLE IMAGES method limit/base current history1 history2 Color Color Image: Color of the color	FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Viscosity Index (VI) Scale ASTM D2270* 105 110 113 108 SAMPLE IMAGES method limit/base current history1 history2 Color	Visc @ 40°C	cSt	ASTM D7279(m)	67.4	65.1	65.1	65.0
SAMPLE IMAGES method limit/base current history1 history2 Color	Visc @ 100°C	cSt	ASTM D7279(m)	8.9	8.9	9.0	8.8
Color	Viscosity Index (VI)	Scale	ASTM D2270*	105	110	113	108
	SAMPLE IMAG	ES	method	limit/base	current	history1	history2
Bottom	Color						
Bottom							
	Bottom						





Laboratory Sample No.

: PC0087731 Lab Number : 02641132 Unique Number : 5798671

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 Received : 11 Jun 2024 **Tested** : 12 Jun 2024

Diagnosed : 12 Jun 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

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