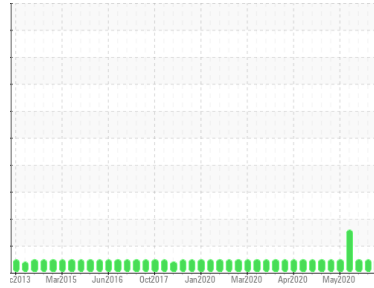


Area
Fwd Machinery Space [71134354]
 Machine Id
Pump - Fire Water (Stbd) - Hydraulic Start (S/N Sample Tag PA-71001B-S3)
 Component
Starboard Hydraulic System
 Fluid
PETRO CANADA HYDREX MV ARCTIC 15 (140 LTR)



DIAGNOSIS

Recommendation
 Resample at the next service interval to monitor.

Wear
 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.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	PC	PC0029739	PC
Sample Date	Client Info	22 Aug 2020	30 May 2020	25 May 2020
Machine Age	hrs	0	0	0
Oil Age	hrs	0	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		NORMAL	NORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history1	history2
Water	WC Method >0.05	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2
PQ	ASTM D8184*	0	0	0
Iron	ppm ASTM D5185(m) >20	<1	<1	<1
Chromium	ppm ASTM D5185(m) >10	0	0	0
Nickel	ppm ASTM D5185(m) >10	0	0	0
Titanium	ppm ASTM D5185(m)	0	0	0
Silver	ppm ASTM D5185(m)	0	0	0
Aluminum	ppm ASTM D5185(m) >10	0	<1	<1
Lead	ppm ASTM D5185(m) >20	0	0	0
Copper	ppm ASTM D5185(m) >20	1	2	2
Tin	ppm ASTM D5185(m) >10	0	0	0
Antimony	ppm ASTM D5185(m)	<1	<1	<1
Vanadium	ppm ASTM D5185(m)	0	0	0
Beryllium	ppm ASTM D5185(m)	0	0	0
Cadmium	ppm ASTM D5185(m)	0	0	0

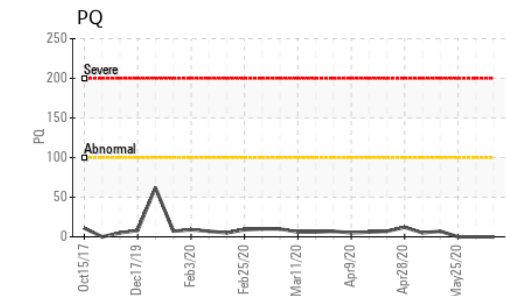
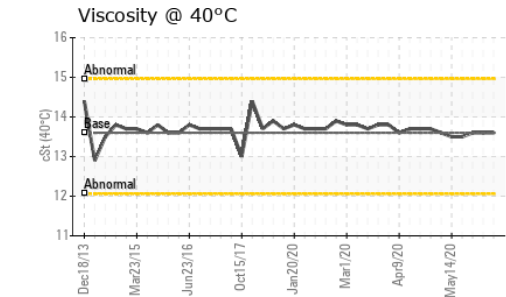
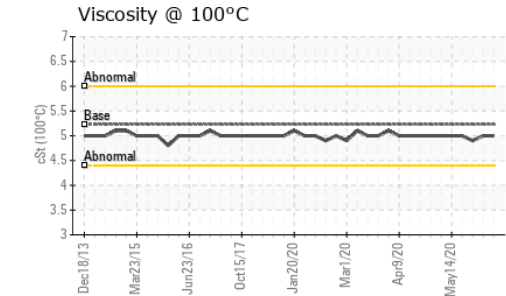
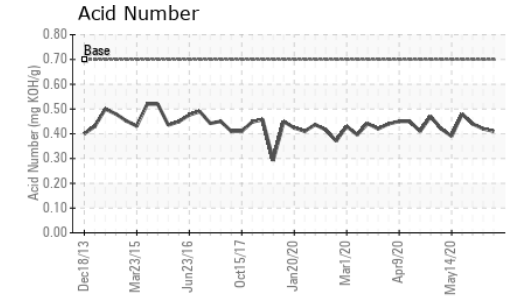
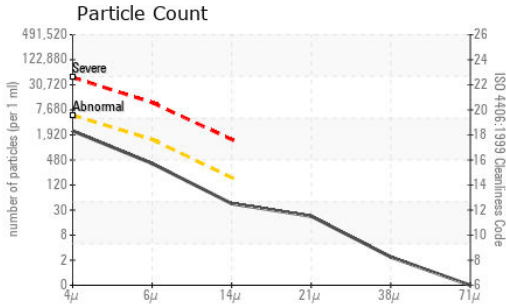
ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185(m) 0	<1	<1	<1
Barium	ppm ASTM D5185(m) 0	<1	<1	<1
Molybdenum	ppm ASTM D5185(m) 0	<1	<1	<1
Manganese	ppm ASTM D5185(m) 0	0	0	0
Magnesium	ppm ASTM D5185(m) 0	1	<1	<1
Calcium	ppm ASTM D5185(m) 50	146	152	153
Phosphorus	ppm ASTM D5185(m) 330	235	245	246
Zinc	ppm ASTM D5185(m) 430	337	347	350
Sulfur	ppm ASTM D5185(m) 760	714	753	755
Lithium	ppm ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185(m) >15	2	2	2
Sodium	ppm ASTM D5185(m)	<1	<1	<1
Potassium	ppm ASTM D5185(m) >20	<1	<1	<1

OIL ANALYSIS REPORT



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PC
Lab Number : **02374271**
Unique Number : 5097719
Test Package : MAR 2 (Additional Tests: KV100, PQ, VI)
Received : 04 Sep 2020
Tested : 08 Sep 2020
Diagnosed : 08 Sep 2020 - Kevin Marson

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.

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	2098	4873	3282	
Particles >6µm	ASTM D7647	>1300	347	603	348	
Particles >14µm	ASTM D7647	>160	38	20	16	
Particles >21µm	ASTM D7647	>40	19	5	6	
Particles >38µm	ASTM D7647	>10	2	0	0	
Particles >71µm	ASTM D7647	>3	0	0	0	
Oil Cleanliness	ISO 4406 (c)	>19/17/14	18/16/12	19/16/11	19/16/11	

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.70	0.41	0.42	0.44

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	history2
Visc @ 40°C	cSt	ASTM D7279(m)	13.6	13.6	13.6	13.6
Visc @ 100°C	cSt	ASTM D7279(m)	5.23	5.0	5.0	4.9
Viscosity Index (VI)	Scale	ASTM D2270*	394	363	363	348

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Bottom						
PrtFilter				no image	no image	no image