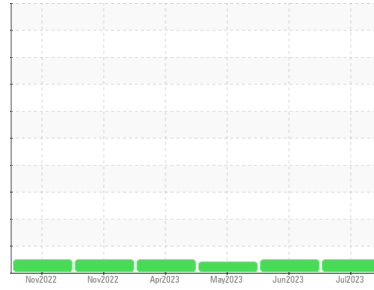




# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Area  
**GENERAL DYNAMICS OTS**  
 Machine Id  
**Q030: MSE FIN (S/N 14-092HN0NWBS-4)**  
 Component  
**Hydraulic System**  
 Fluid  
**PETRO CANADA HYDREX AW 46 (50 GAL)**

### 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 water content is negligible. 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		<b>SBP0003986</b>	SBP0003989	SBP0003991
Sample Date	Client Info		<b>05 Jul 2023</b>	02 Jun 2023	02 May 2023
Machine Age	mths	Client Info	<b>60</b>	60	30
Oil Age	mths	Client Info	<b>1</b>	60	30
Oil Changed	Client Info		<b>Filtered</b>	Filtered	Filtered
Sample Status			<b>NORMAL</b>	NORMAL	ATTENTION

### WEAR METALS

	method	limit/base	current	history1	history2
PQ	ASTM D8184		<b>14</b>	15	11
Iron	ppm	ASTM D5185m >20	<b>0</b>	0	0
Chromium	ppm	ASTM D5185m >20	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m >20	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	<1
Lead	ppm	ASTM D5185m >20	<b>0</b>	0	1
Copper	ppm	ASTM D5185m >20	<b>2</b>	1	2
Tin	ppm	ASTM D5185m >20	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

### ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 0	<b>0</b>	0	0
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m 0	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m 0	<b>2</b>	2	1
Calcium	ppm	ASTM D5185m 50	<b>112</b>	113	107
Phosphorus	ppm	ASTM D5185m 330	<b>474</b>	462	483
Zinc	ppm	ASTM D5185m 430	<b>658</b>	635	676
Sulfur	ppm	ASTM D5185m 760	<b>3442</b>	3329	3071

### CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	<b>2</b>	2	3
Sodium	ppm	ASTM D5185m	<b>1</b>	2	2
Potassium	ppm	ASTM D5185m >20	<b>0</b>	1	2
Water	%	ASTM D6304 >0.05	<b>0.014</b>	0.008	0.005
ppm Water	ppm	ASTM D6304 >500	<b>142.0</b>	89.1	55.2

### FLUID CLEANLINESS

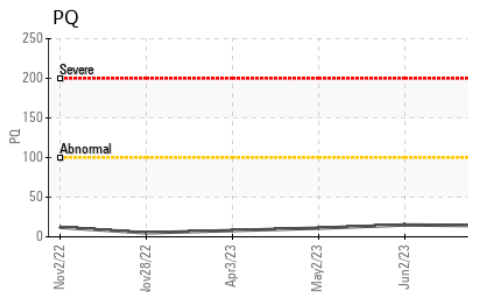
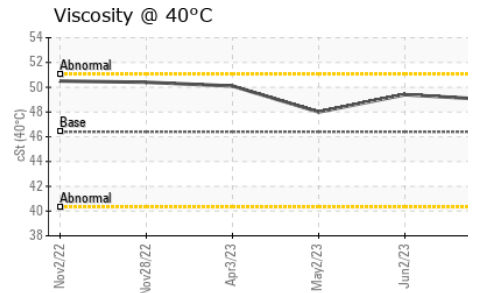
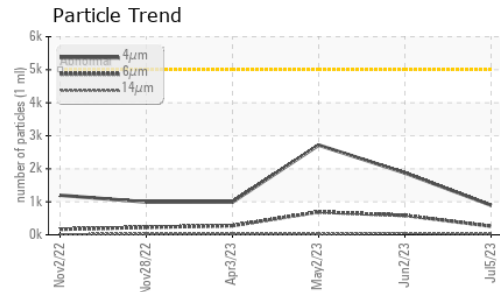
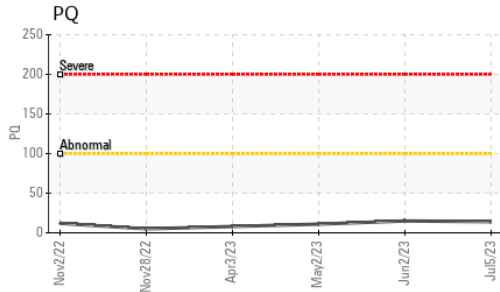
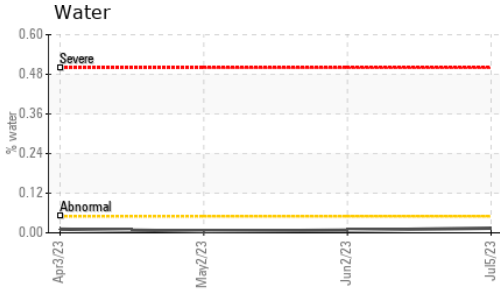
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	<b>895</b>	1875	2718
Particles >6µm	ASTM D7647	>1300	<b>259</b>	586	693
Particles >14µm	ASTM D7647	>160	<b>27</b>	48	19
Particles >21µm	ASTM D7647	>40	<b>8</b>	11	4
Particles >38µm	ASTM D7647	>10	<b>0</b>	2	0
Particles >71µm	ASTM D7647	>3	<b>0</b>	1	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<b>17/15/12</b>	18/16/13	19/17/11

### FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.70	<b>0.54</b>	0.60	0.61



# OIL ANALYSIS REPORT

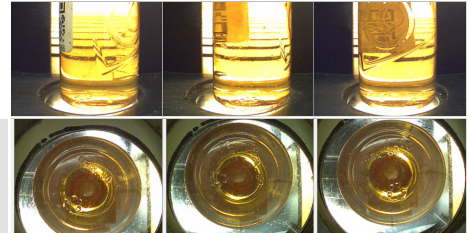


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46.4	49.0	49.4 ▲ 48.0

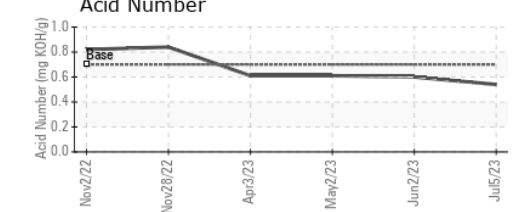
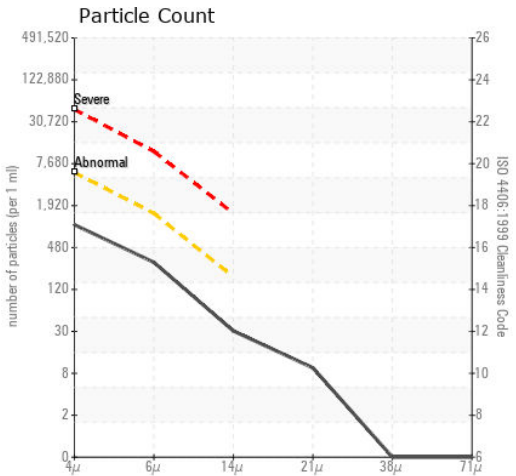
SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color



Bottom

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : SBP0003986  
**Lab Number** : 05901282  
**Unique Number** : 10562638  
**Test Package** : PLANT

**General Dynamics OTS - 701957**  
 4300 Industrial Ave  
 Lincoln, NE  
 US 68504  
 Contact: MIKE BROWN  
 MICHAEL.BROWN@GD-OTS.COM  
 T: (402)416-9013  
 F:

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)