

Area

**Fwd Machinery Space**

Machine Id

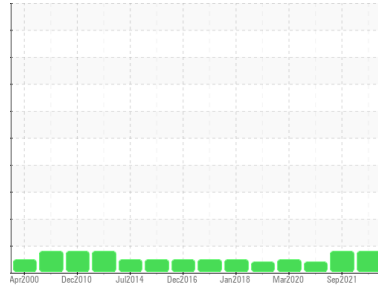
**Generator - PKSG Governor Oil (S/N Sample Tag CD-86101-S2)**

Component

**Governor System**

Fluid

**PETRO CANADA DURON UHP 5W40 (1 GAL)**



**DIAGNOSIS**

**Recommendation**

Confirm the source of the lubricant being utilized for top-up/fill. 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**

Viscosity of sample indicates oil is within SAE 10W30 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. 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>PC0031519</b>	PC0040407	PC408540
Sample Date	Client Info			<b>13 May 2023</b>	24 Sep 2021	26 Sep 2020
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed	Client Info			<b>N/A</b>	N/A	N/A
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.2	<b>NEG</b>	NEG	NEG

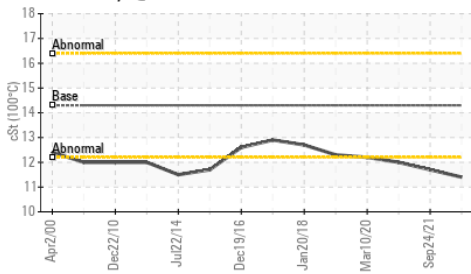
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		<b>0</b>	0	0
Iron	ppm	ASTM D5185(m)	>15	<b>3</b>	2	3
Chromium	ppm	ASTM D5185(m)	>5	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185(m)	>10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185(m)		<b>1</b>	2	2
Aluminum	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185(m)	>25	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185(m)	>15	<b>10</b>	8	12
Tin	ppm	ASTM D5185(m)	>5	<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)	>5	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)		<b>4</b>	3	3

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	65	<b>23</b>	30	3
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185(m)	65	<b>25</b>	26	<1
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	1160	<b>611</b>	494	8
Calcium	ppm	ASTM D5185(m)	820	<b>1943</b>	2239	3541
Phosphorus	ppm	ASTM D5185(m)	1160	<b>1242</b>	1296	1442
Zinc	ppm	ASTM D5185(m)	1260	<b>1296</b>	1400	1554
Sulfur	ppm	ASTM D5185(m)	3000	<b>3517</b>	3913	5120
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

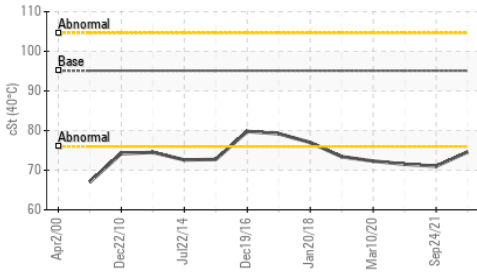
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	<b>3</b>	3	4
Sodium	ppm	ASTM D5185(m)		<b>8</b>	8	9
Potassium	ppm	ASTM D5185(m)	>20	<b>2</b>	2	2

# OIL ANALYSIS REPORT

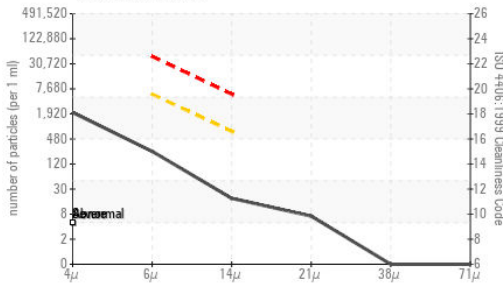
▲ Viscosity @ 100°C



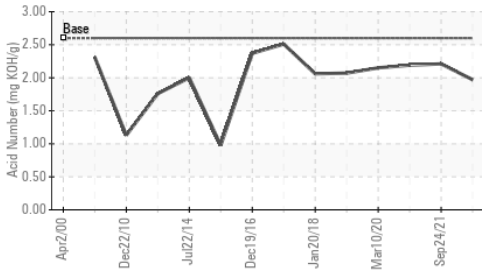
▲ Viscosity @ 40°C



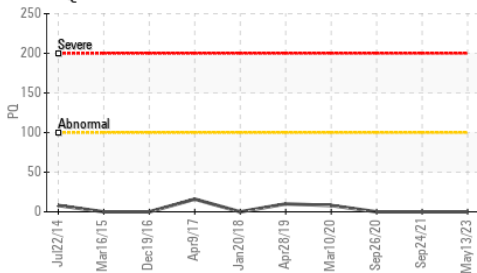
Particle Count



Acid Number



PQ



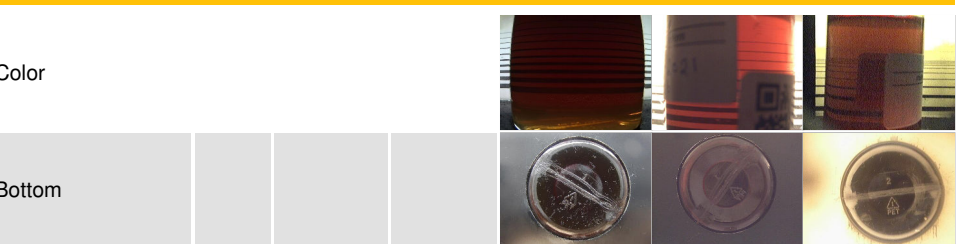
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647		<b>1819</b>	1625	3573
Particles >6µm	ASTM D7647	>5000	<b>213</b>	280	492
Particles >14µm	ASTM D7647	>640	<b>16</b>	28	25
Particles >21µm	ASTM D7647	>160	<b>6</b>	7	5
Particles >38µm	ASTM D7647	>40	<b>0</b>	0	0
Particles >71µm	ASTM D7647	>10	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>--/19/16	<b>18/15/11</b>	18/15/12	19/16/12

FLUID DEGRADATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g ASTM D974*	2.6	<b>1.97</b>	2.21	2.19

VISUAL	method	limit/base	current	history1	history2
White Metal	scalar Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar Visual*	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar Visual*	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar Visual*	NONE	<b>NONE</b>	VLITE	NONE
Sand/Dirt	scalar Visual*	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar Visual*	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar Visual*	>0.2	<b>NEG</b>	NEG	NEG
Free Water	scalar Visual*		<b>NEG</b>	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt ASTM D7279(m)	95.1	▲ <b>74.6</b>	▲ 71	71.5
Visc @ 100°C	cSt ASTM D7279(m)	14.3	▲ <b>11.4</b>	▲ 11.7	▲ 12.0
Viscosity Index (VI)	Scale ASTM D2270*	169	<b>145</b>	160	165

SAMPLE IMAGES



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0031519  
**Lab Number** : **02562601**  
**Unique Number** : 5591642  
**Test Package** : MAR 2 ( Additional Tests: KV100, PrtCount, TAN Man, VI )  
**Received** : 07 Jun 2023  
**Tested** : 08 Jun 2023  
**Diagnosed** : 08 Jun 2023 - Kevin Marson

**Suncor - Terra Nova Projects**  
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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.