MAR I

WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
CR 3112 No. 2 Stb. S/S Gen. Engine
Component
Starboard Diesel Engine
Fluid
PETRO CANADA DURON HP 15W40 (68 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

Metal levels are typical for a new component breaking in.

CONTAMINATION

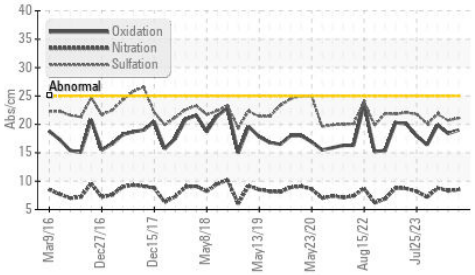
There is no indication of any contamination in the oil.

FLUID CONDITION

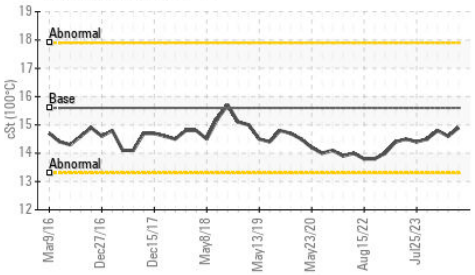
The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0844566	WC0844568	WC0844537
Sample Date		Client Info		24 Mar 2024	24 Feb 2024	05 Feb 2024
Machine Age	hrs	Client Info		514	95449	94916
Oil Age	hrs	Client Info		514	500	500
Filter Age	hrs	Client Info		514	500	500
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185(m)	>86	15	17	18
Chromium	ppm	ASTM D5185(m)	>3	0	0	<1
Nickel	ppm	ASTM D5185(m)	>3	<1	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>15	<1	0	1
Lead	ppm	ASTM D5185(m)	>16	<1	<1	2
Copper	ppm	ASTM D5185(m)	>250	2	2	2
Tin	ppm	ASTM D5185(m)	>2	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185(m)	>35	3	6	2
Potassium	ppm	ASTM D5185(m)	>20	0	0	<1
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0	0.1	0.1
Nitration	Abs/cm	ASTM D7624*	>20	8.5	8.3	8.8
Sulfation	Abs/.1mm	ASTM D7415*	>30	21.1	20.7	21.8
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*	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185(m)		2	1	<1
Boron	ppm	ASTM D5185(m)	0	8	0	<1
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	60	63	64	62
Manganese	ppm	ASTM D5185(m)	0	0	0	0
Magnesium	ppm	ASTM D5185(m)	1010	1039	1066	1021
Calcium	ppm	ASTM D5185(m)	1070	1130	1138	1105
Phosphorus	ppm	ASTM D5185(m)	1150	1009	1033	1033
Zinc	ppm	ASTM D5185(m)	1270	1263	1273	1223
Sulfur	ppm	ASTM D5185(m)	2060	2444	2494	2627
Oxidation	Abs/.1mm	ASTM D7414*	>25	19.0	18.4	19.9
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	14.9	14.6	14.8

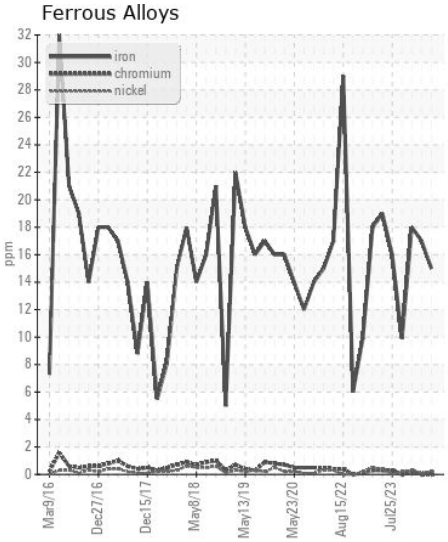
FT-IR (Direct Trend)



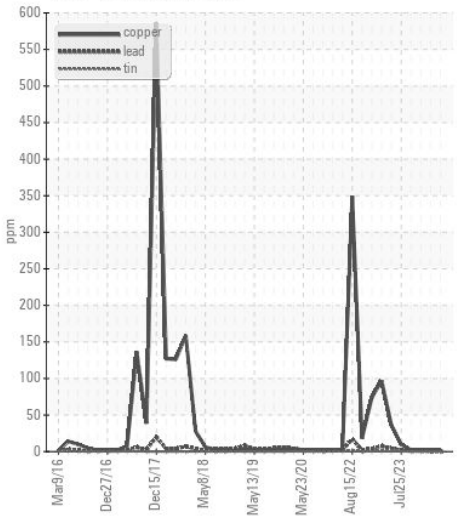
Viscosity @ 100°C



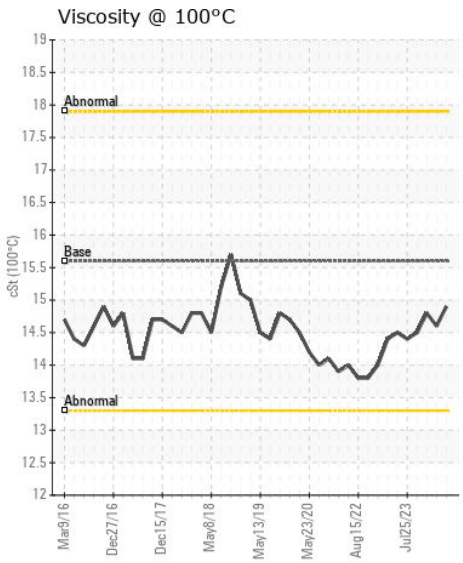
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



ISO 17025:2017 Accredited Laboratory

Laboratory	: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9		
Sample No.	: WC0844566	**Received**	: 11 Apr 2024
Lab Number	: 02628105	**Tested**	: 11 Apr 2024
Unique Number	: 5761237	**Diagnosed**	: 11 Apr 2024 - Wes Davis
Test Package	: MAR 1		

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.

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