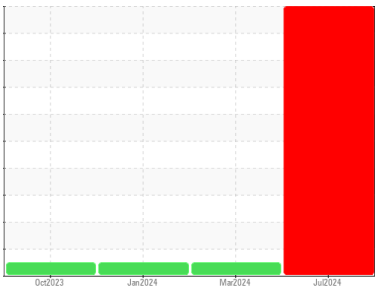
OIL DIAGNOSTICS

PROBLEM SUMMARY

Sample Rating Trend

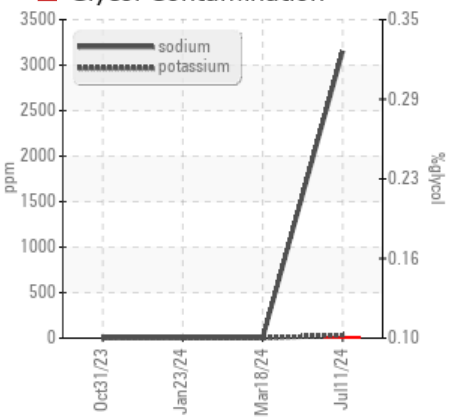


GLYCOL

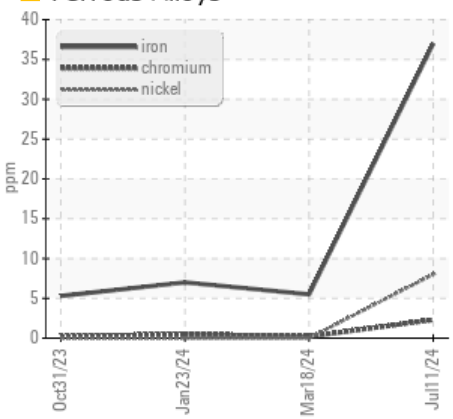
Machine Id
BM-115
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (10 GAL)

COMPONENT CONDITION SUMMARY

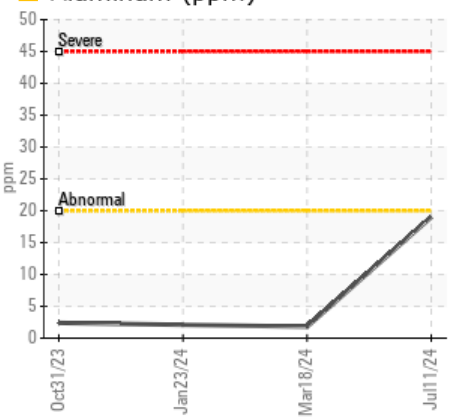
▲ Glycol Contamination



▲ Ferrous Alloys



▲ Aluminum (ppm)



RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				**SEVERE**	NORMAL	NORMAL
Nickel	ppm	ASTM D5185m	>5	▲ **8**	0	0
Aluminum	ppm	ASTM D5185m	>20	▲ **19**	2	2
Sodium	ppm	ASTM D5185m		▲ **3151**	3	3
Potassium	ppm	ASTM D5185m	>20	▲ **33**	1	2
Glycol	%	*ASTM D2982		▲ **0.10**	NEG	NEG

Customer Id: BLUCHA
Sample No.: PCA0122165
Lab Number: 06235589
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Glycol Access	---	---	?	We advise that you check for the source of the coolant leak.

HISTORICAL DIAGNOSIS

NORMAL

18 Mar 2024 Diag: Wes Davis
Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report

NORMAL

23 Jan 2024 Diag: Wes Davis
Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report

NORMAL

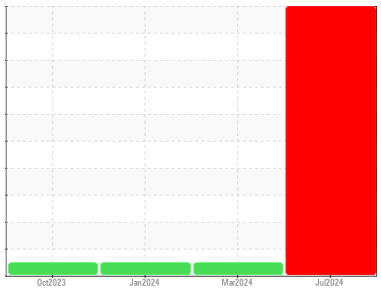
31 Oct 2023 Diag: Wes Davis
Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report

OIL DIAGNOSTICS

OIL ANALYSIS REPORT

Sample Rating Trend



GLYCOL

Machine Id
BM-115
Component
Diesel Engine
Fluid
PETRO CANADA DURON SHP 10W30 (10 GAL)

DIAGNOSIS

Recommendation
We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear
The aluminum level is marginal. Valve wear is indicated.

Contamination
Sodium and/or potassium levels are high. Test for glycol is positive.

Fluid Condition
The BN result indicates that there is suitable alkalinity remaining in the oil.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PCA0122165**	PCA0110723	PCA0114023
Sample Date		Client Info		**11 Jul 2024**	18 Mar 2024	23 Jan 2024
Machine Age	mls	Client Info		**219446**	193560	193560
Oil Age	mls	Client Info		**25886**	10739	14681
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**SEVERE**	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	**<1.0**	<1.0	<1.0
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	**37**	6	7
Chromium	ppm	ASTM D5185m	>20	**2**	<1	<1
Nickel	ppm	ASTM D5185m	>5	▲ **8**	0	0
Titanium	ppm	ASTM D5185m	>2	**<1**	0	<1
Silver	ppm	ASTM D5185m	>2	**<1**	0	0
Aluminum	ppm	ASTM D5185m	>20	▲ **19**	2	2
Lead	ppm	ASTM D5185m	>40	**3**	0	<1
Copper	ppm	ASTM D5185m	>330	**11**	0	<1
Tin	ppm	ASTM D5185m	>15	**2**	0	<1
Vanadium	ppm	ASTM D5185m		**<1**	0	<1
Cadmium	ppm	ASTM D5185m		**<1**	0	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	**77**	1	0
Barium	ppm	ASTM D5185m	0	**2**	0	0
Molybdenum	ppm	ASTM D5185m	50	**188**	64	53
Manganese	ppm	ASTM D5185m	0	**2**	0	<1
Magnesium	ppm	ASTM D5185m	950	**946**	1043	958
Calcium	ppm	ASTM D5185m	1050	**1062**	1199	1071
Phosphorus	ppm	ASTM D5185m	995	**1025**	1161	1001
Zinc	ppm	ASTM D5185m	1180	**1249**	1355	1182
Sulfur	ppm	ASTM D5185m	2600	**3229**	4018	2890

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**20**	3	4
Sodium	ppm	ASTM D5185m		▲ **3151**	3	3
Potassium	ppm	ASTM D5185m	>20	▲ **33**	1	2
Glycol	%	*ASTM D2982		▲ **0.10**	NEG	NEG

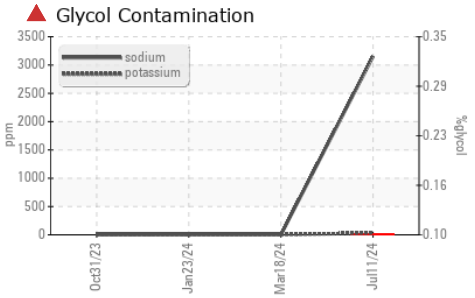
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	**0.6**	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	**17.6**	6.9	7.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	**18.3**	18.4	18.6

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**16.6**	14.2	14.3
Base Number (BN)	mg KOH/g	ASTM D2896		**34.1**	7.9	7.9

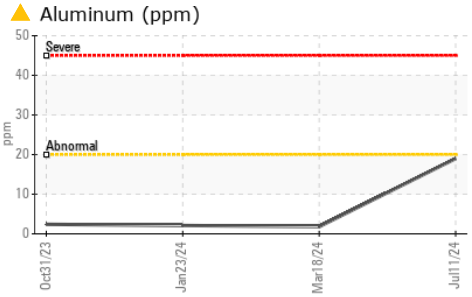
OIL ANALYSIS REPORT

OIL DIAGNOSTICS

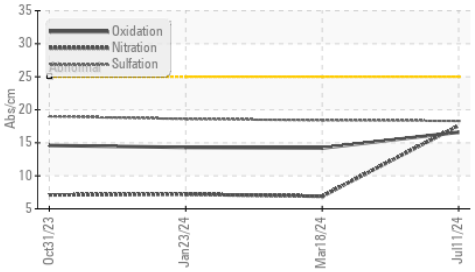
Glycol Contamination



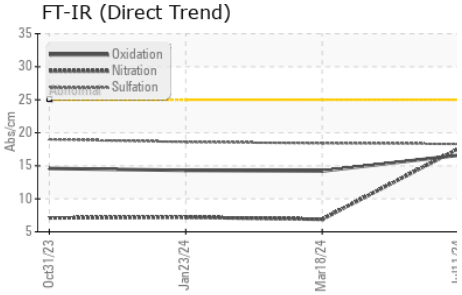
Aluminum (ppm)



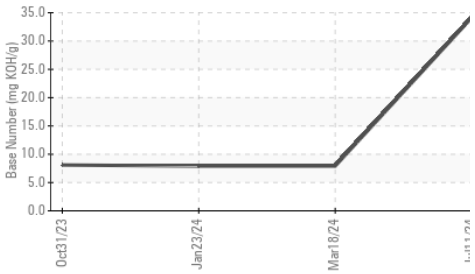
FT-IR (Direct Trend)



FT-IR (Direct Trend)



Base Number

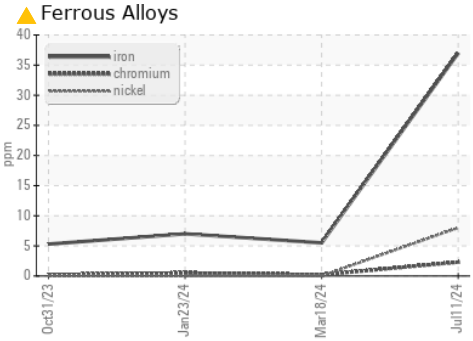


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

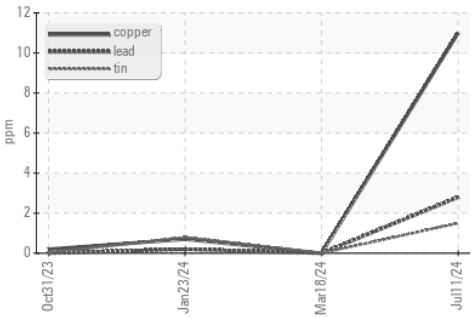
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	**12.9**	11.3	11.3

GRAPHS

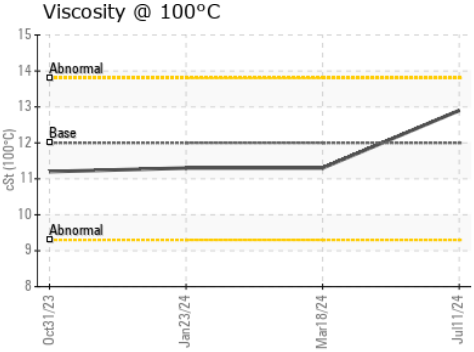
Ferrous Alloys



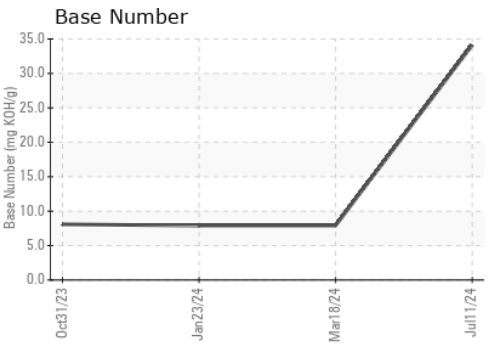
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0122165
Lab Number : 06235589
Unique Number : 11124423
Test Package : FLEET (Additional Tests: Glycol)

Received : 15 Jul 2024
Tested : 17 Jul 2024
Diagnosed : 17 Jul 2024 - Jonathan Hester

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)

BLUE MAX TRUCKING
1015 E. WESTINGHOUSE BLVD.
CHARLOTTE, NC
US 28273
Contact: Jody Greer
jgreer@bluemaxtrucking.com
T: (980)225-9968
F: (704)588-2901

Report Id: BLUCHA [WUSCAR] 06235589 (Generated: 07/17/2024 10:57:27) Rev: 1

Submitted By: Jody Greer