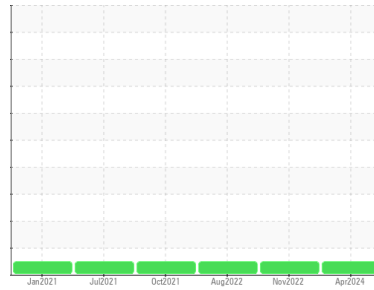


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
MERCEDES 162

Component
Front Diesel Engine

Fluid
PETRO CANADA DURON-E XL 15W40 (4 GAL)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			PCA0111558	PCA0085118	PCA0076594
Sample Date	Client Info			12 Apr 2024	15 Nov 2022	02 Aug 2022
Machine Age	mls	Client Info		195070	158501	151841
Oil Age	mls	Client Info		6684	6660	8323
Oil Changed	Client Info			Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	18	38	57
Chromium	ppm	ASTM D5185m	>20	2	2	2
Nickel	ppm	ASTM D5185m	>4	<1	0	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	10	15	20
Lead	ppm	ASTM D5185m	>40	<1	<1	<1
Copper	ppm	ASTM D5185m	>330	1	2	2
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Antimony	ppm	ASTM D5185m		---	---	---
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	1	198	171	152
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	71	73	75
Manganese	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	1010	34	43	21
Calcium	ppm	ASTM D5185m	1070	1560	1698	1745
Phosphorus	ppm	ASTM D5185m	1150	799	796	837
Zinc	ppm	ASTM D5185m	1270	906	934	936
Sulfur	ppm	ASTM D5185m	2060	2321	2526	2291

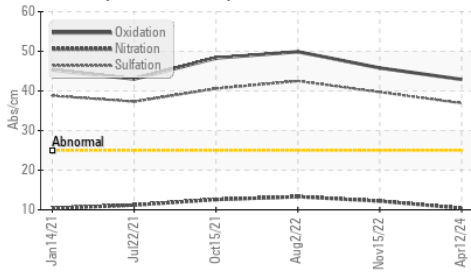
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	5	5	6
Sodium	ppm	ASTM D5185m		3	<1	1
Potassium	ppm	ASTM D5185m	>20	2	0	4
Fuel	%	ASTM D3524	>5	<1.0	<1.0	<1.0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.4	0.6	0.7
Nitration	Abs/cm	*ASTM D7624	>20	10.4	12.2	13.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	36.9	39.7	42.5

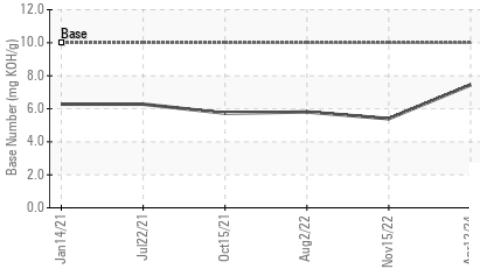
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	42.9	45.8	49.9
Base Number (BN)	mg KOH/g	ASTM D2896	10.0	7.45	5.40	5.81

OIL ANALYSIS REPORT

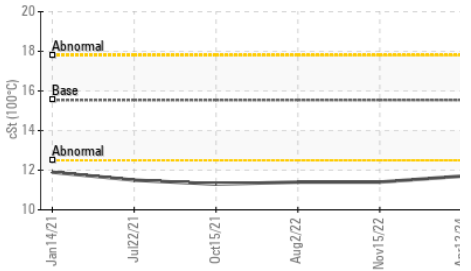
FT-IR (Direct Trend)



Base Number



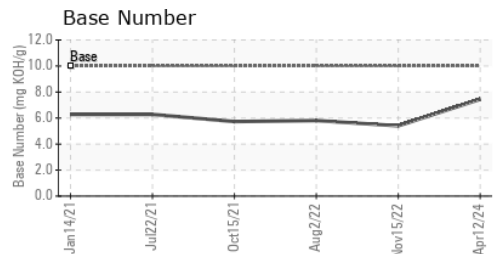
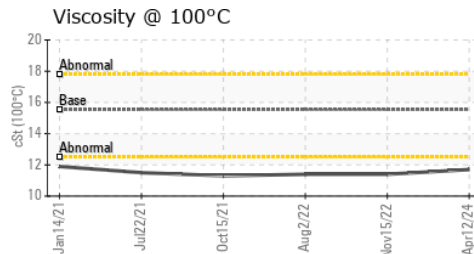
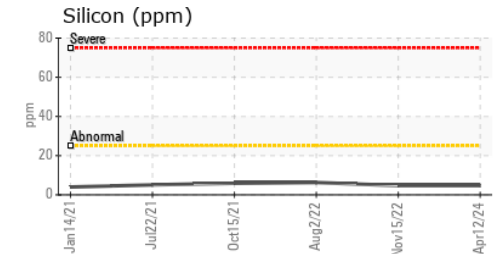
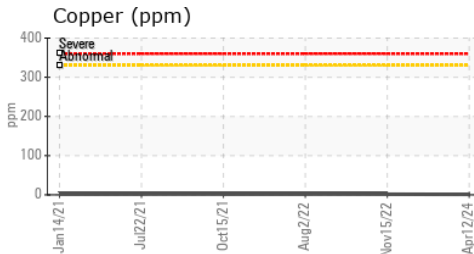
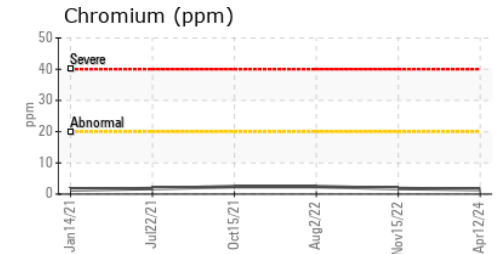
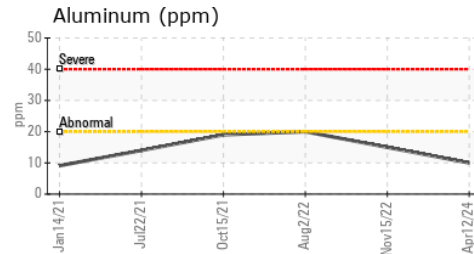
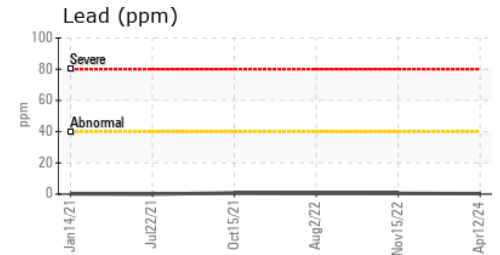
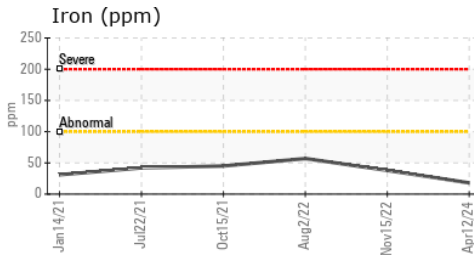
Viscosity @ 100°C



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	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.54	11.7	11.4

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0111558 **Received** : 24 Apr 2024
Lab Number : 06159324 **Tested** : 25 Apr 2024
Unique Number : 10994747 **Diagnosed** : 26 Apr 2024 - Don Baldrige
Test Package : MOB 2 (Additional Tests : FuelDilution)

BROWN BUS COMPANY - UPSTATE TRANSIT
 50 VENNERS ROAD
 AMSTERDAM, NY
 US 12010
 Contact: CONNIE WILBUR
 cwilbur@browncoach.com
 T: (518)843-4700
 F: (518)843-3600

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)