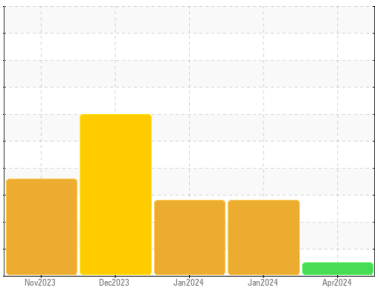
OIL ANALYSIS REPORT

Area
Bernardsville
Machine Id
MACK 2436
Component
Diesel Engine
Fluid
GIBRALTAR 15W/40 SUPER S-3 LX (11)

Sample Rating Trend



NORMAL

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
Light fuel dilution occurring. No other contaminants were detected 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		**WC0900063**	WC0875319	WC0875348
Sample Date		Client Info		**07 Apr 2024**	15 Jan 2024	04 Jan 2024
Machine Age	hrs	Client Info		**16347**	16029	15959
Oil Age	hrs	Client Info		**16347**	16029	0
Oil Changed		Client Info		**Not Changd**	Changed	N/A
Sample Status				**NORMAL**	ABNORMAL	ABNORMAL

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	>120	**23**	34	34
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>5	**4**	14	13
Titanium	ppm	ASTM D5185m	>2	**<1**	<1	<1
Silver	ppm	ASTM D5185m	>2	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**2**	2	2
Lead	ppm	ASTM D5185m	>40	**<1**	2	2
Copper	ppm	ASTM D5185m	>330	**4**	18	15
Tin	ppm	ASTM D5185m	>15	**<1**	4	4
Vanadium	ppm	ASTM D5185m		**<1**	0	<1
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**10**	18	18
Barium	ppm	ASTM D5185m		**0**	1	<1
Molybdenum	ppm	ASTM D5185m	66	**58**	66	61
Manganese	ppm	ASTM D5185m		**<1**	2	2
Magnesium	ppm	ASTM D5185m	1000	**767**	489	533
Calcium	ppm	ASTM D5185m	1050	**1380**	1396	1460
Phosphorus	ppm	ASTM D5185m	1150	**1050**	751	784
Zinc	ppm	ASTM D5185m	1270	**1274**	927	979
Sulfur	ppm	ASTM D5185m		**3778**	2320	2532

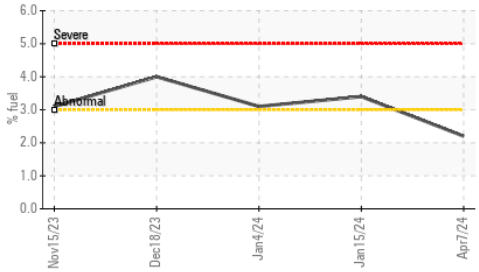
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**14**	▲ 71	▲ 72
Sodium	ppm	ASTM D5185m		**5**	6	9
Potassium	ppm	ASTM D5185m	>20	**3**	8	7
Fuel	%	ASTM D3524	>3.0	**2.2**	▲ 3.4	▲ 3.1

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	**0.4**	0.6	0.5
Nitration	Abs/cm	*ASTM D7624	>20	**8.8**	11.0	10.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	**19.5**	22.8	22.2

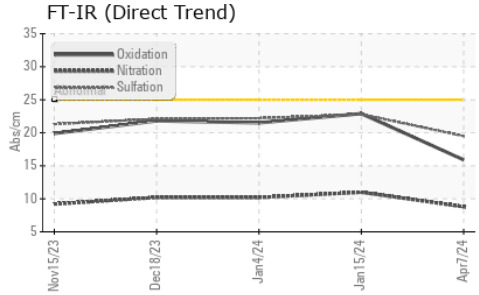
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**15.9**	22.9	21.5
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	**7.3**	5.91	5.61

OIL ANALYSIS REPORT

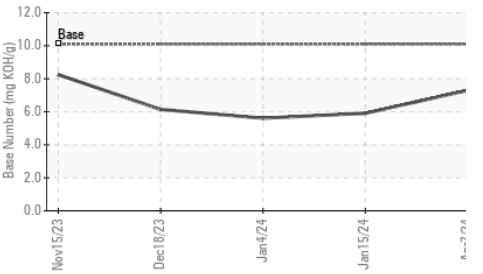
Fuel Dilution



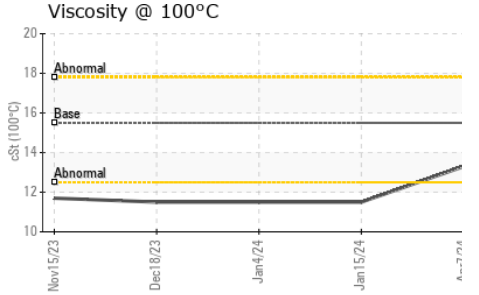
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

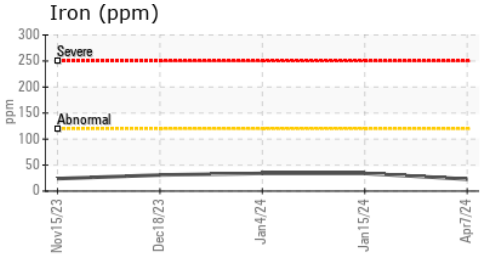


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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

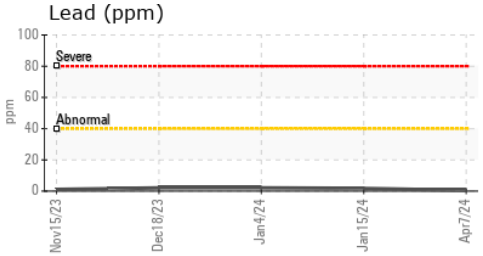
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.5	**13.3**	▲ 11.5	▲ 11.5

GRAPHS

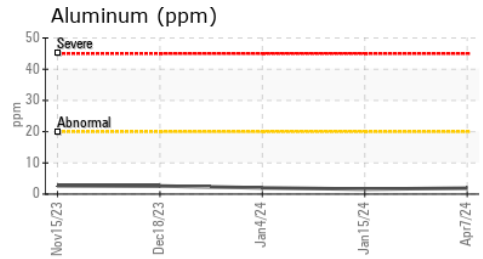
Iron (ppm)



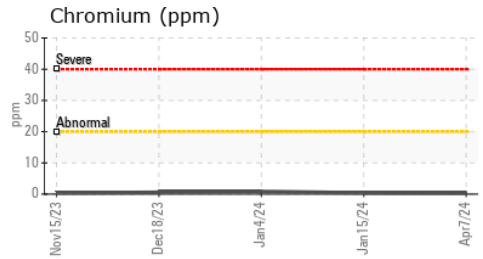
Lead (ppm)



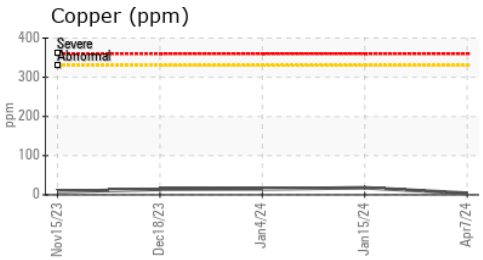
Aluminum (ppm)



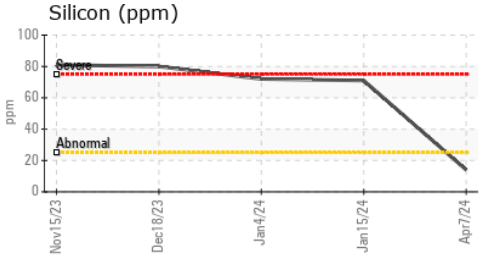
Chromium (ppm)



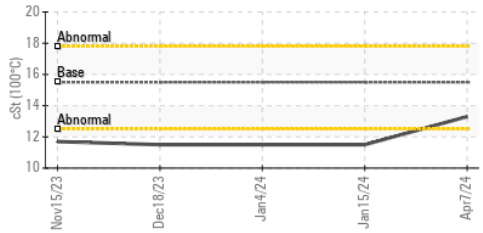
Copper (ppm)



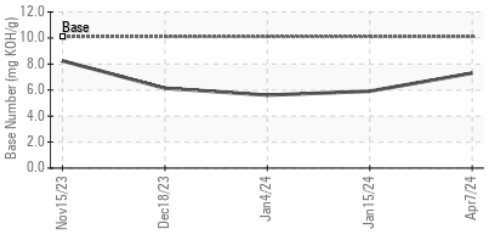
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0900063
Lab Number : 06142014
Unique Number : 10966822
Test Package : MOB 1 (Additional Tests: PercentFuel, TBN)

Received : 08 Apr 2024
Tested : 11 Apr 2024
Diagnosed : 11 Apr 2024 - Wes Davis

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)

INTERSTATE WASTE-BERNARDSVILLE
33 OLD QUARRY ROAD
BERNARDSVILLE, NJ
US 07924
Contact: Pablo Chardon
PChardon@interstatewaste.com
T:
F:

Report Id: INTBER [WUSCAR] 06142014 (Generated: 04/12/2024 03:10:25) Rev: 1

Contact/Location: Pablo Chardon - INTBER