



OIL ANALYSIS REPORT

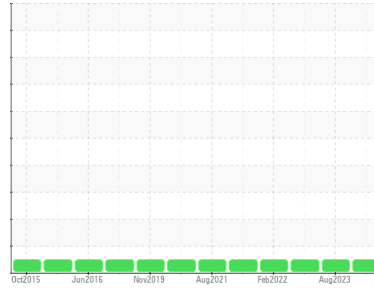
Sample Rating Trend

NORMAL



Area
[Z20406]
Machine Id
MACK 44

Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 40 (40 LTR)



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 40. Please confirm.

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			WC05961580	WC05944063	WC05638018
Sample Date	Client Info			23 Sep 2023	08 Aug 2023	08 Aug 2022
Machine Age	kms	Client Info		790859	709124	705923
Oil Age	kms	Client Info		0	20000	0
Oil Changed	Client Info			Changed	Not Changd	N/A
Sample Status				NORMAL	NORMAL	NORMAL

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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	6	8	9
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>5	0	0	<1
Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	0	2	1
Lead	ppm	ASTM D5185m	>40	0	1	2
Copper	ppm	ASTM D5185m	>330	1	2	8
Tin	ppm	ASTM D5185m	>15	<1	<1	2
Antimony	ppm	ASTM D5185m		---	---	---
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	3	0	2
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	<1	1	6
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	842	850	14
Calcium	ppm	ASTM D5185m	3000	1651	1609	2085
Phosphorus	ppm	ASTM D5185m	1150	1016	958	842
Zinc	ppm	ASTM D5185m	1350	1255	1205	1032
Sulfur	ppm	ASTM D5185m	4250	3438	3539	3235

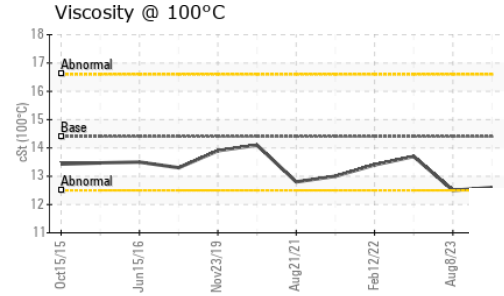
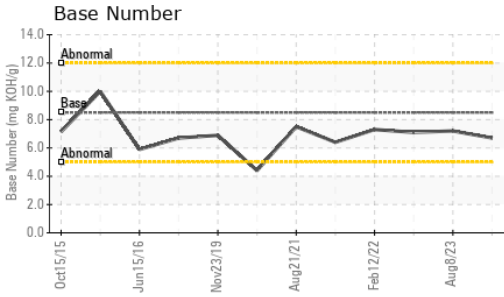
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	5	5	6
Sodium	ppm	ASTM D5185m	>216	5	4	8
Potassium	ppm	ASTM D5185m	>20	<1	1	0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	0.1	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	5.6	5.9	8.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	15.0	15.5	19.3

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	7.9	8.2	11.3
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.7	7.2	7.1



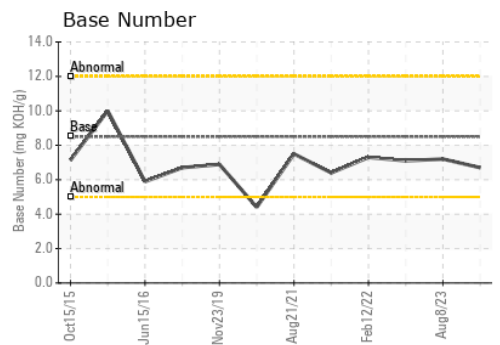
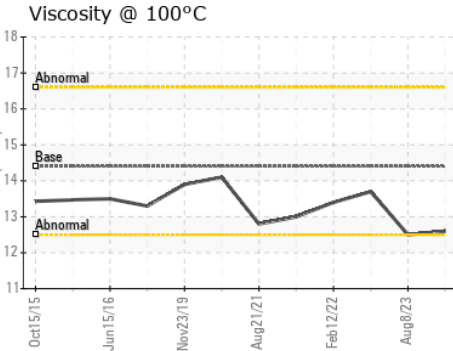
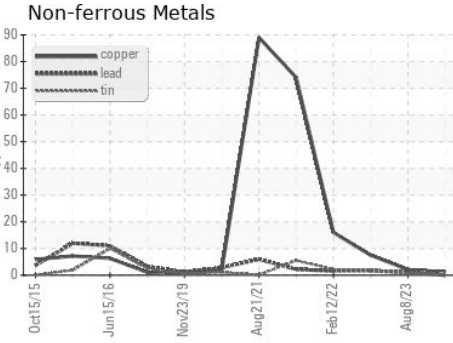
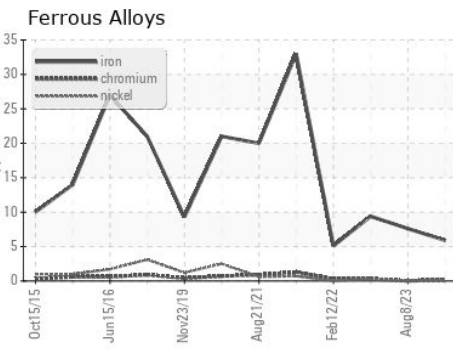
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VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
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	14.4	12.6	12.5	13.7

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC05961580 **Received** : 26 Sep 2023
Lab Number : **05961580** **Diagnosed** : 27 Sep 2023
Unique Number : 10662793 **Diagnostician** : Wes Davis
Test Package : FLEET

BONNEYS

AUCKLAND,
NZ

Contact: MIKE VESLY
mike.vesly@bonneys.co.nz

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)

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