



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id
2009 MACK GU713 GRANITE T-52 (S/N 1M2AX04C69M006066)
 Component
Diesel Engine
 Fluid
CONOCO PHILLIPS GUARDOL ECT 15W40 (11 GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0920298	WC0819324	WC0723303
Sample Date		Client Info		19 Jun 2024	26 Sep 2023	20 Jul 2022
Machine Age	mls	Client Info		438754	432268	399109
Oil Age	mls	Client Info		6486	16030	12992
Filter Age	mls	Client Info		6486	16030	12992
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	SEVERE	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	15	75	43
Chromium	ppm	ASTM D5185m	>20	<1	2	<1
Nickel	ppm	ASTM D5185m	>5	1	▲ 11	<1
Titanium	ppm	ASTM D5185m	>2	69	77	75
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	10	▲ 31	5
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	<1	6	4
Tin	ppm	ASTM D5185m	>15	0	0	2
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

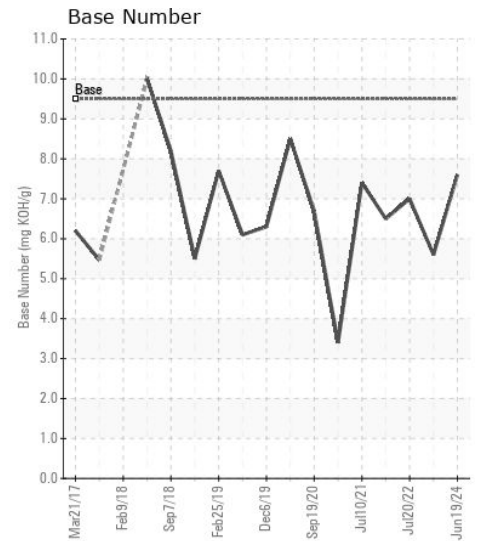
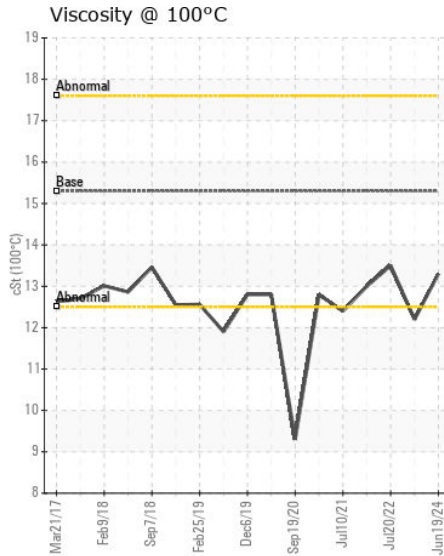
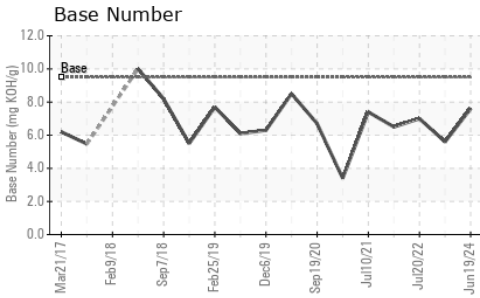
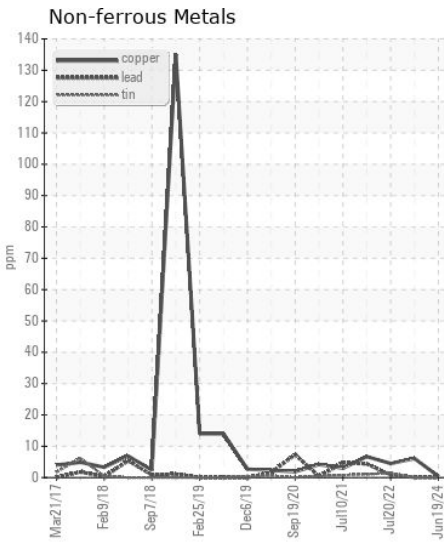
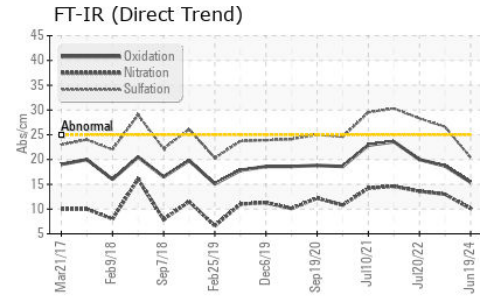
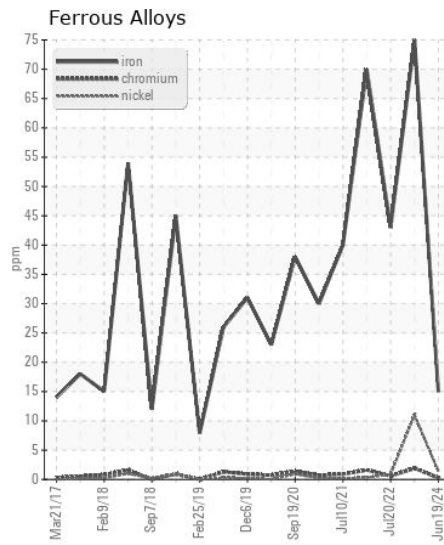
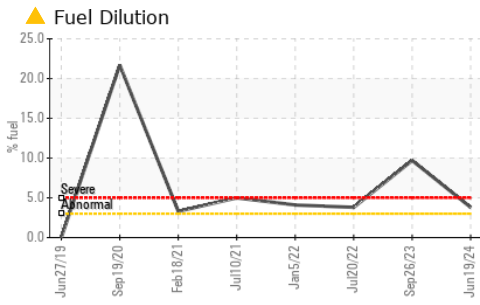
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185m	>25	5	9	11
Potassium	ppm	ASTM D5185m	>20	3	13	0
Fuel	%	ASTM D3524	>3.0	▲ 3.8	▲ 9.7	▲ 3.8
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.6	1.6	1.5
Nitration	Abs/cm	*ASTM D7624	>20	10.1	13.0	13.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.4	26.6	28.3
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

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		9	66	6
Boron	ppm	ASTM D5185m	85	65	16	31
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		4	5	18
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	350	383	373	396
Calcium	ppm	ASTM D5185m	1800	1643	1567	1625
Phosphorus	ppm	ASTM D5185m	1000	954	839	876
Zinc	ppm	ASTM D5185m	1100	1135	1041	1076
Sulfur	ppm	ASTM D5185m	3500	4136	3473	3623
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.4	18.7	20.0
Base Number (BN)	mg KOH/g	ASTM D2896	9.5	7.6	5.6	7.0
Visc @ 100°C	cSt	ASTM D445	15.3	13.3	▲ 12.2	13.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0920298 **Received** : 27 Jun 2024
Lab Number : 06222147 **Tested** : 01 Jul 2024
Unique Number : 11100344 **Diagnosed** : 01 Jul 2024 - Wes Davis
Test Package : CONST (Additional Tests: PercentFuel, TBN)

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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)