

PROBLEM SUMMARY

Sample Rating Trend

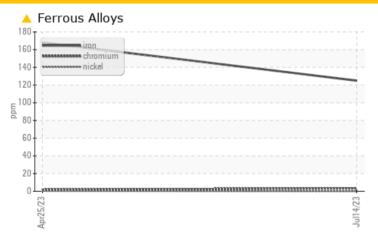
WEAR

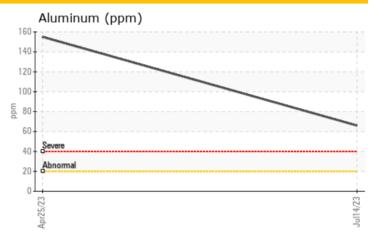
Machine Id 2321
Component

Diesel Engine

DIESEL ENGINE OIL SAE 5W30 (--- QTS)

COMPONENT CONDITION SUMMARY





RECOMMENDATION

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

PROBLEMATIC TEST RESULTS Sample Status ABNORMAL ABNORMAL -- Iron ppm ASTM D5185m >100 ▲ 125 ▲ 168 --

Customer Id: MABEDE
Sample No.: WC0814837
Lab Number: 05903688
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldridge +1
don.b505@comcast.net

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.				

HISTORICAL DIAGNOSIS

25 Apr 2023 Diag: Doug Bogart

WEAR

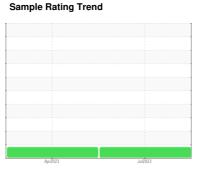


Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Cylinder, crank, or cam shaft wear is indicated. Elevated aluminum (AI) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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.





OIL ANALYSIS REPORT







Machine Id 2321 Component

Diesel Engine

DIESEL ENGINE OIL SAE 5W30 (--- QTS)

DIAGNOSIS

Recommendation

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

Wear

Cylinder, crank, or cam shaft wear is indicated.

Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

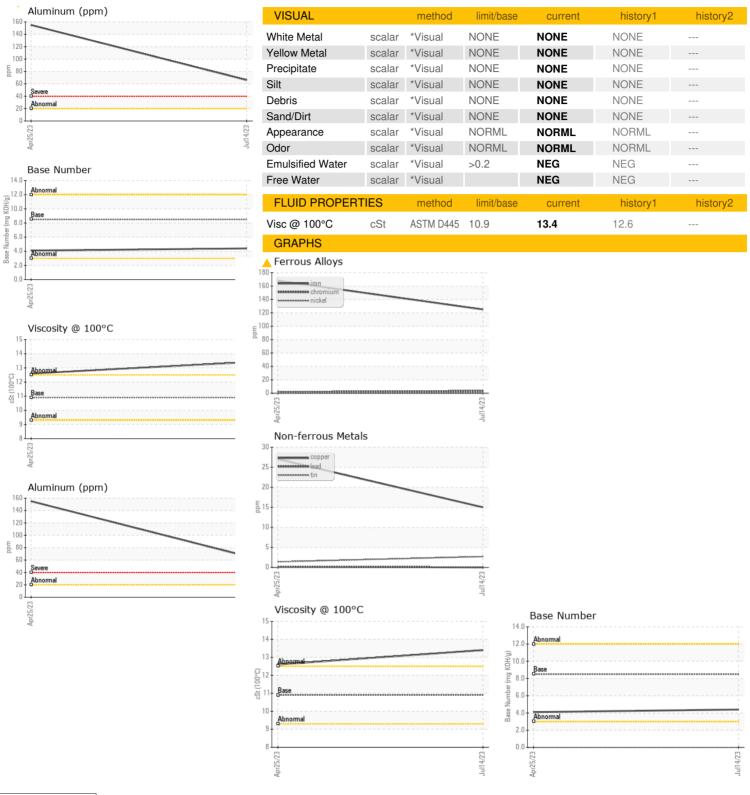
Fluid Condition

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

Sample Number Client Info WC0814837 WC0786109 Sample Date Client Info 14 Jul 2023 25 Apr 2023 Machine Age mls Client Info 100000 107818 Oil Age mls Client Info 100000 100000 Oil Changed Client Info Changed Changed Sample Status Method Imitibbase current history1 history1 Fuel WC Method NEG NEG Rivel WC Method NEG NEG Bron MEAR METALS method limit/base current history1 history1 Bron MEAR METALS method limit/base current history1 history1 Bron Part Mothod limit/base current history1 history1 Bron App ASTM D5185m >10 <1 <1 <1 <				Apr2023	Jul2023		
Sample Date Client Info 14 Jul 2023 25 Apr 2023 Machine Age mls Client Info 110887 107818 Oil Age mls Client Info 100000 100000 Oil Changed Client Info Changed Changed Sample Status Client Info Changed Changed CONTAMINATION method limit/base current history1 history1 Fuel WC Method NEG NEG WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >100 A 125 A 168 Iron ppm ASTM D5185m >20 3 2 Ohronium ppm ASTM D5185m >3 -1 -1 Chromium ppm ASTM D5185m >3 -1 -1 Iron ppm ASTM	SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Machine Age mls Client Info 110887 107818	Sample Number		Client Info		WC0814837	WC0786109	
Machine Age mls Client Info 110887 107818 Coll Age mls Client Info 100000 1000000 Client Info Changed Changed Changed Changed Changed ABNORMAL CONTAMINATION method Imit/base current history1 history1 Fuel	Sample Date		Client Info		14 Jul 2023	25 Apr 2023	
Client Info	·	mls	Client Info		110887	107818	
CONTAMINATION	Oil Age	mls	Client Info		100000	100000	
CONTAMINATION	Oil Changed		Client Info		Changed	Changed	
Fuel	_				_	ABNORMAL	
Colycol WC Method NEG NEG WEAR METALS method limit/base current history1 history Iron ppm ASTM D5185m >100 ▲ 125 ▲ 168 Chromium ppm ASTM D5185m >20 3 2 Nickel ppm ASTM D5185m >4 0 <1 Silver ppm ASTM D5185m >3 <1 <1 Aluminum ppm ASTM D5185m >3 <1 <1 Aluminum ppm ASTM D5185m >40 0 <1 Lead ppm ASTM D5185m >40 0 <1 Copper ppm ASTM D5185m >40 0 <1 Copper ppm ASTM D5185m >15 3 1 Copper ppm ASTM D5185m >15 2 2 <td>CONTAMINATION</td> <td></td> <td>method</td> <td>limit/base</td> <td>current</td> <td>history1</td> <td>history2</td>	CONTAMINATION		method	limit/base	current	history1	history2
WEAR METALS method limit/base current history1 history1 Iron ppm ASTM D5185m >100 ▲ 125 ▲ 168 Chromium ppm ASTM D5185m >20 3 2 Nickel ppm ASTM D5185m >20 3 2 Titanium ppm ASTM D5185m >4 0 <1	Fuel		WC Method	>5	<1.0	<1.0	
Iron	Glycol		WC Method		NEG	NEG	
Chromium Dpm ASTM D5185m >20 3 2	WEAR METALS		method	limit/base	current	history1	history2
Nickel	ron	ppm	ASTM D5185m	>100	125	▲ 168	
Silver	Chromium	ppm	ASTM D5185m	>20	3	2	
Silver	Nickel	ppm	ASTM D5185m	>4	0	<1	
Aluminum	Titanium	ppm	ASTM D5185m		<1	<1	
Lead	Silver	ppm	ASTM D5185m	>3	<1	<1	
Copper ppm ASTM D5185m >330 15 27 Tin ppm ASTM D5185m 0 <1	Aluminum	ppm	ASTM D5185m	>20	66	155	
Tin	Lead	ppm	ASTM D5185m	>40	0	<1	
Vanadium ppm ASTM D5185m 0 <1 Cadmium ppm ASTM D5185m 0 0 ADDITIVES method limit/base current history1 history Boron ppm ASTM D5185m 250 20 14 Barium ppm ASTM D5185m 10 0 0 Molybdenum ppm ASTM D5185m 100 36 37 Manganese ppm ASTM D5185m 100 36 37 Manganesium ppm ASTM D5185m 450 979 1026 Calcium ppm ASTM D5185m 3000 1481 1327 Phosphorus ppm ASTM D5185m 150 989 949 Zinc ppm ASTM D5185m 1350 1255 1221 CONTAMINANTS method limit/base current histor	Copper	ppm	ASTM D5185m	>330	15	27	
Cadmium ppm ASTM D5185m 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 250 20 14 Barium ppm ASTM D5185m 10 0 0 Molybdenum ppm ASTM D5185m 100 36 37 Manganese ppm ASTM D5185m 100 36 37 Magnesium ppm ASTM D5185m 450 979 1026 Calcium ppm ASTM D5185m 3000 1481 1327 Phosphorus ppm ASTM D5185m 1150 989 949 Zinc ppm ASTM D5185m 1350 1255 1221 Sulfur ppm ASTM D5185m 25 16 22 Solicon ppm ASTM D5185m 8 8<	Tin	ppm	ASTM D5185m	>15	3	1	
ADDITIVES method limit/base current history1 history Boron ppm ASTM D5185m 250 20 14 Barium ppm ASTM D5185m 10 0 0 Molybdenum ppm ASTM D5185m 100 36 37 Manganese ppm ASTM D5185m 3 4 Magnesium ppm ASTM D5185m 450 979 1026 Calcium ppm ASTM D5185m 3000 1481 1327 Phosphorus ppm ASTM D5185m 1150 989 949 Zinc ppm ASTM D5185m 1350 1255 1221 Sulfur ppm ASTM D5185m 4250 3992 3681 CONTAMINANTS method limit/base current history1 history Solicon ppm ASTM D5185m >25	Vanadium	ppm	ASTM D5185m		0	<1	
Boron	Cadmium	ppm	ASTM D5185m		0	0	
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 100 36 37 Manganese ppm ASTM D5185m 3 4 Magnesium ppm ASTM D5185m 450 979 1026 Calcium ppm ASTM D5185m 3000 1481 1327 Phosphorus ppm ASTM D5185m 1150 989 949 Zinc ppm ASTM D5185m 1350 1255 1221 Sulfur ppm ASTM D5185m 4250 3992 3681 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >25 16 22 Sodium ppm ASTM D5185m >20 164 379 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >3	Boron	ppm	ASTM D5185m	250	20	14	
Manganese ppm ASTM D5185m 3 4 Magnesium ppm ASTM D5185m 450 979 1026 Calcium ppm ASTM D5185m 3000 1481 1327 Phosphorus ppm ASTM D5185m 1150 989 949 Zinc ppm ASTM D5185m 1350 1255 1221 Sulfur ppm ASTM D5185m 4250 3992 3681 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >25 16 22 Sodium ppm ASTM D5185m 8 8 Potassium ppm ASTM D5185m >20 164 379 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7624 >20 14.8	Barium	ppm	ASTM D5185m	10	0	0	
Magnesium ppm ASTM D5185m 450 979 1026 Calcium ppm ASTM D5185m 3000 1481 1327 Phosphorus ppm ASTM D5185m 1150 989 949 Zinc ppm ASTM D5185m 1350 1255 1221 Sulfur ppm ASTM D5185m 4250 3992 3681 CONTAMINANTS method limit/base current history1 history1 Silicon ppm ASTM D5185m >25 16 22 Sodium ppm ASTM D5185m >20 164 379 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >3 0.6 0.8 Nitration Abs/.1mm *ASTM D7624 >20 14.8 15.1 FLUID DEGRADATION method	Molybdenum	ppm	ASTM D5185m	100	36	37	
Calcium ppm ASTM D5185m 3000 1481 1327 Phosphorus ppm ASTM D5185m 1150 989 949 Zinc ppm ASTM D5185m 1350 1255 1221 Sulfur ppm ASTM D5185m 4250 3992 3681 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >25 16 22 Sodium ppm ASTM D5185m >20 164 379 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >3 0.6 0.8 Nitration Abs/cm *ASTM D7624 >20 14.8 15.1 Sulfation Abs/.1mm *ASTM D7415 >30 31.6 31.5 FLUID DEGRADATION method	Manganese	ppm	ASTM D5185m		3	4	
Phosphorus ppm ASTM D5185m 1150 989 949 Zinc ppm ASTM D5185m 1350 1255 1221 Sulfur ppm ASTM D5185m 4250 3992 3681 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >25 16 22 Sodium ppm ASTM D5185m 8 8 Potassium ppm ASTM D5185m >20 164 379 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >3 0.6 0.8 Nitration Abs/cm *ASTM D7624 >20 14.8 15.1 Sulfation Abs/.1mm *ASTM D7415 >30 31.6 31.5 FLUID DEGRADATION method limit/base	Magnesium	ppm	ASTM D5185m	450	979	1026	
Zinc ppm ASTM D5185m 1350 1255 1221 Sulfur ppm ASTM D5185m 4250 3992 3681 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >25 16 22 Sodium ppm ASTM D5185m 8 8 Potassium ppm ASTM D5185m >20 164 379 INFRA-RED method limit/base current history1 history Soot % *ASTM D7844 >3 0.6 0.8 Nitration Abs/cm *ASTM D7624 >20 14.8 15.1 Sulfation Abs/.1mm *ASTM D7415 >30 31.6 31.5 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 32.3 31.0	Calcium	ppm	ASTM D5185m	3000	1481	1327	
Sulfur ppm ASTM D5185m 4250 3992 3681 CONTAMINANTS method limit/base current history1 history Silicon ppm ASTM D5185m >25 16 22 Sodium ppm ASTM D5185m 8 8 Potassium ppm ASTM D5185m >20 164 379 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >3 0.6 0.8 Nitration Abs/cm *ASTM D7624 >20 14.8 15.1 Sulfation Abs/.1mm *ASTM D7415 >30 31.6 31.5 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 32.3 31.0	Phosphorus	ppm	ASTM D5185m	1150	989	949	
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 16 22 Sodium ppm ASTM D5185m 8 8 Potassium ppm ASTM D5185m >20 164 379 INFRA-RED method limit/base current history1 history Soot % % *ASTM D7844 >3 0.6 0.8 Nitration Abs/cm *ASTM D7624 >20 14.8 15.1 Sulfation Abs/.1mm *ASTM D7415 >30 31.6 31.5 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 32.3 31.0	Zinc	ppm	ASTM D5185m	1350	1255	1221	
Silicon ppm ASTM D5185m >25 16 22	Sulfur	ppm	ASTM D5185m	4250	3992	3681	
Sodium ppm ASTM D5185m 8 8 Potassium ppm ASTM D5185m >20 164 379 INFRA-RED method limit/base current history1 history1 Soot % % *ASTM D7844 >3 0.6 0.8 Nitration Abs/cm *ASTM D7624 >20 14.8 15.1 Sulfation Abs/.1mm *ASTM D7415 >30 31.6 31.5 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 32.3 31.0	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 164 379 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >3 0.6 0.8 Nitration Abs/cm *ASTM D7624 >20 14.8 15.1 Sulfation Abs/.1mm *ASTM D7415 >30 31.6 31.5 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 32.3 31.0	Silicon	ppm	ASTM D5185m	>25	16	22	
INFRA-RED	Sodium	ppm	ASTM D5185m		8	8	
Soot % *ASTM D7844 >3 0.6 0.8 Nitration Abs/cm *ASTM D7624 >20 14.8 15.1 Sulfation Abs/.1mm *ASTM D7415 >30 31.6 31.5 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 32.3 31.0	Potassium	ppm	ASTM D5185m	>20	164	379	
Nitration Abs/cm *ASTM D7624 >20 14.8 15.1 Sulfation Abs/.1mm *ASTM D7615 >30 31.6 31.5 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 32.3 31.0	INFRA-RED		method	limit/base	current	history1	history2
Sulfation Abs/.1mm *ASTM D7415 >30 31.6 31.5 FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 32.3 31.0	Soot %	%	*ASTM D7844	>3	0.6	8.0	
FLUID DEGRADATION method limit/base current history1 history Oxidation Abs/.1mm *ASTM D7414 >25 32.3 31.0	Nitration	Abs/cm	*ASTM D7624	>20	14.8	15.1	
Oxidation	Sulfation	Abs/.1mm	*ASTM D7415	>30	31.6	31.5	
	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Base Number (BN) mg KOH/g ASTM D2896 8.5 4.4 4.1	Oxidation	Abs/.1mm	*ASTM D7414	>25	32.3	31.0	
	Base Number (BN)	mg KOH/g	ASTM D2896	8.5	4.4	4.1	



OIL ANALYSIS REPORT







Certificate L2367

Laboratory Sample No. Lab Number Unique Number

: WC0814837 : 05903688 : 10565044 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 20 Jul 2023 Diagnosed : 24 Jul 2023

Diagnostician

: Don Baldridge

MABE TRUCKING PO BOX 1081 EDEN, NC

US 27289 Contact: MAINTENANCE

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)

maintenancemanager@mabetrucking.com T:

Contact/Location: MAINTENANCE ? - MABEDE

F: (336)635-1791