



CONSTRUCTION EQUIPMENT

MACK 1M1AA13Y6YW125473 - DIESEL ENGINE



Sample No: VCE254063

Oil Type: NOT GIVEN

Job No:



SAMPLE INFORMATION

Sample Number	VCE254063	VC450444	VC432396	VCP240691
Sample Date	28 Nov 2023	14 Nov 2022	17 Feb 2022	02 Nov 2020
Machine Hours	452057	444398	438750	429728
Oil Hours	350	234	9022	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



OIL CONDITION

Visc @ 100°C	cSt	13.7	14.2	14.2	16.8
Base Number (BN)	mg KOH/g	8.8	9.7	9.7	---
Oxidation (PA)	%	60	65	76	83



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	2.3	2.3	2	3.4
Nitration (PA)	%	73	73	80	92
Sulfation (PA)	%	62	68	69	76
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	4	3	4	2
Sodium	ppm	3	1	2	<1
Potassium	ppm	<1	<1	<1	<1



WEAR METALS

Iron	ppm	25	16	22	26
Copper	ppm	3	1	3	4
Lead	ppm	1	3	5	8
Tin	ppm	0	0	<1	<1
Aluminum	ppm	2	1	<1	0
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	64	60	62	50
Nickel	ppm	0	<1	0	0
Titanium	ppm	0	0	0	<1
Silver	ppm	0	0	0	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	1068	1070	1147	896
Magnesium	ppm	1005	942	1071	814
Zinc	ppm	1279	1241	1395	1022
Phosphorus	ppm	1005	1012	1112	856
Barium	ppm	0	0	0	0
Boron	ppm	0	<1	<1	2



LIPSCOMB COUNTY

P.O. BOX 144
LIPSCOMB, TX
US 79056

Contact: MARK BERNIE
lipscombco1@gmail.com
T: (806)862-5455
F:

Diagnosis

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. 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.

Depot: LIPLIP
Unique No: 10779641
Signed: Wes Davis
Report Date: 12 Dec 2023



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GRAPHS

