

LIEBHERR

CONSTRUCTION EQUIPMENT



TOYOTA GR86 JF1ZNBB14N9752464 - Diesel Engine

Sample No: LH0252148

Oil Type: PETRO CANADA SUPREME 5W30



Sample Information

Sample Number	LH0252148	LH0252141	LH0252127	LH0256973
Sample Date	03 May 2024	27 Nov 2023	31 Jul 2023	27 Mar 2023
Machine Hours	2537	2001	1467	1015
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

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Oil Condition

Visc @ 100°C	cSt	11.8	13.2	13.5	13.2
Oxidation (PA)	%	78	64	60	73



Contamination

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0	0	0	0
Nitration (PA)	%	82	67	62	71
Sulfation (PA)	%	56	51	54	62
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	0.0	<1.0	<1.0	<1.0
Silicon	ppm	5	7	8	6
Sodium	ppm	4	2	1	1
Potassium	ppm	<1	<1	<1	0

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.



Wear Metals

Iron	ppm	5	4	4	6
Copper	ppm	1	2	2	5
Lead	ppm	0	<1	<1	2
Tin	ppm	0	0	<1	<1
Aluminum	ppm	1	1	1	2
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	59	58	57	58
Nickel	ppm	<1	0	0	<1
Titanium	ppm	0	0	0	<1
Silver	ppm	0	<1	0	0
Manganese	ppm	0	0	<1	<1
Vanadium	ppm	0	0	0	0



Additives

Calcium	ppm	856	1046	1050	1163
Magnesium	ppm	1095	983	987	961
Zinc	ppm	1198	1188	1183	1155
Phosphorus	ppm	981	1009	1062	1053
Barium	ppm	<1	<1	<1	2
Boron	ppm	30	4	4	10

Depot: CLOPEM
 Unique No: 5775000
 Signed: Kevin Marson
 Report Date: 08 May 2024



Graphs

