



CONSTRUCTION EQUIPMENT

CATERPILLAR C 12 CATERPILLAR C 12 (S/N NOT GIVEN) - DIESEL ENGINE



Sample No: VCP431625
Oil Type: SHELL ROTELLA T 15W40
Job No:



SAMPLE INFORMATION

Sample Number	VCP431625	---	---	---
Sample Date	03 Apr 2024	---	---	---
Machine Hours	0	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Chngd	---	---	---
Sample Status	SEVERE	---	---	---

FRANK JOKEL
 PO BOX 304
 STEPHENVILLE, TX
 US 76401
 Contact: FRANK JOKEL
 frankjokel@ymail.com
 T:
 F:



OIL CONDITION

Visc @ 100°C	cSt	█ 16.6	---	---	---
Base Number (BN)	mg KOH/g	█ 7.4	---	---	---
Oxidation (PA)	%	70	---	---	---



CONTAMINATION

Water	%	NEG	---	---	---
Soot %	%	█ 0.3	---	---	---
Nitration (PA)	%	91	---	---	---
Sulfation (PA)	%	63	---	---	---
Glycol	%	▲ 0.10	---	---	---
Fuel	%	<1.0	---	---	---
Silicon	ppm	▲ 33	---	---	---
Sodium	ppm	● 652	---	---	---
Potassium	ppm	▲ 172	---	---	---



WEAR METALS

Iron	ppm	█ 27	---	---	---
Copper	ppm	▲ 280	---	---	---
Lead	ppm	▲ 21	---	---	---
Tin	ppm	█ 3	---	---	---
Aluminum	ppm	█ 1	---	---	---
Chromium	ppm	█ <1	---	---	---
Molybdenum	ppm	█ 7	---	---	---
Nickel	ppm	█ 0	---	---	---
Titanium	ppm	█ 0	---	---	---
Silver	ppm	█ 0	---	---	---
Manganese	ppm	█ <1	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	█ 1833	---	---	---
Magnesium	ppm	█ 14	---	---	---
Zinc	ppm	█ 1022	---	---	---
Phosphorus	ppm	█ 902	---	---	---
Barium	ppm	█ 0	---	---	---
Boron	ppm	█ 52	---	---	---

Diagnosis

We advise that you check for the source of the coolant leak. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition. Bearing and/or bushing wear is indicated. In the absence of other significant wear metals, suspect some copper due to sources other than wear (i.e. cooling core). Sodium and/or potassium levels are high. Test for glycol is positive. Elemental level of silicon (Si) above normal indicating ingress of seal material. 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.

Depot: FRASTETX
Unique No: 10965812
Signed: Doug Bogart
Report Date: 17 Apr 2024



CONSTRUCTION EQUIPMENT



GRAPHS

