



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL

Machine Id
CASE 165 PUMA 35317
Component
Diesel Engine
Fluid
CHEVRON DELO 400 50T 15W40 - API CK 4/5N (17 QTS)

RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KLKF202284	---	---
Sample Date		Client Info		28 May 2024	---	---
Machine Age	hrs	Client Info		27909	---	---
Oil Age	hrs	Client Info		691	---	---
Filter Age	hrs	Client Info		691	---	---
Oil Changed		Client Info		Not Chngd	---	---
Filter Changed		Client Info		Not Chngd	---	---
Sample Status				ATTENTION	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	13	---	---
Chromium	ppm	ASTM D5185m	>20	<1	---	---
Nickel	ppm	ASTM D5185m	>4	<1	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>3	0	---	---
Aluminum	ppm	ASTM D5185m	>20	3	---	---
Lead	ppm	ASTM D5185m	>40	0	---	---
Copper	ppm	ASTM D5185m	>330	2	---	---
Tin	ppm	ASTM D5185m	>15	0	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

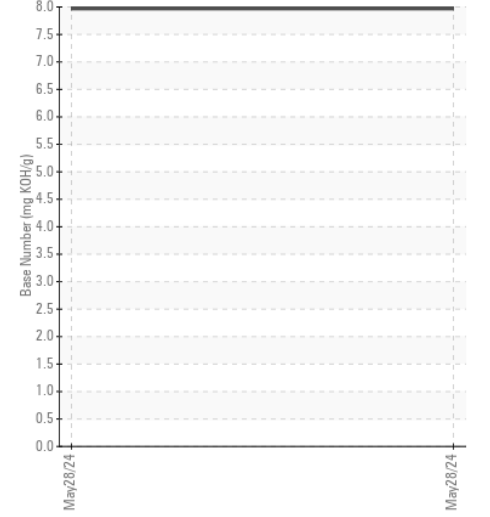
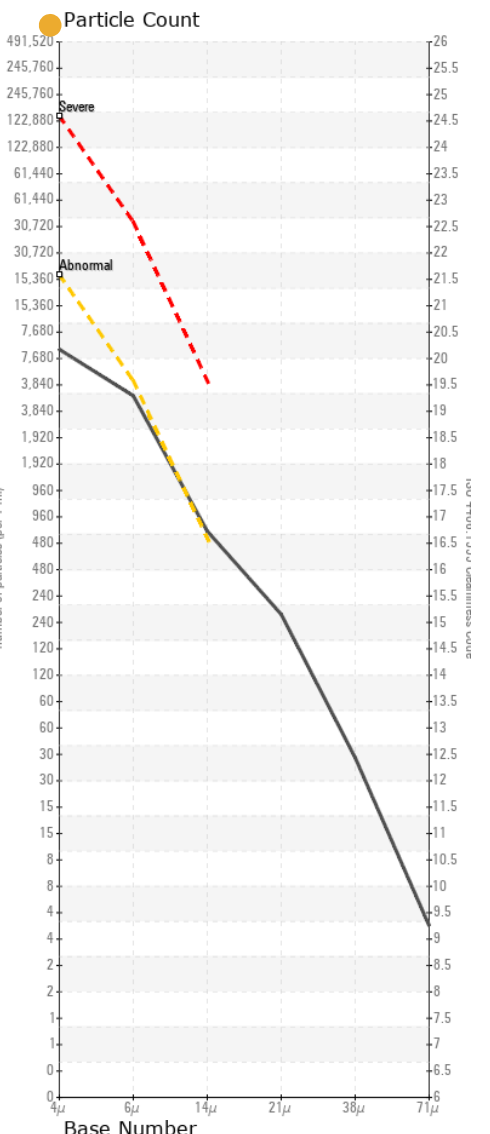
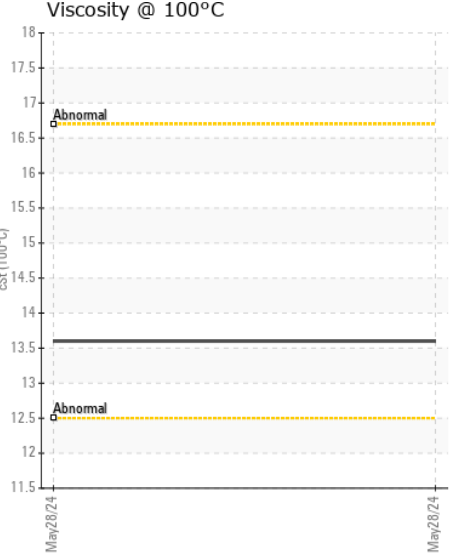
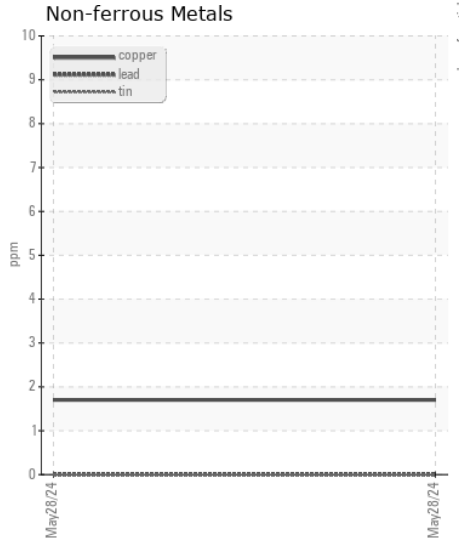
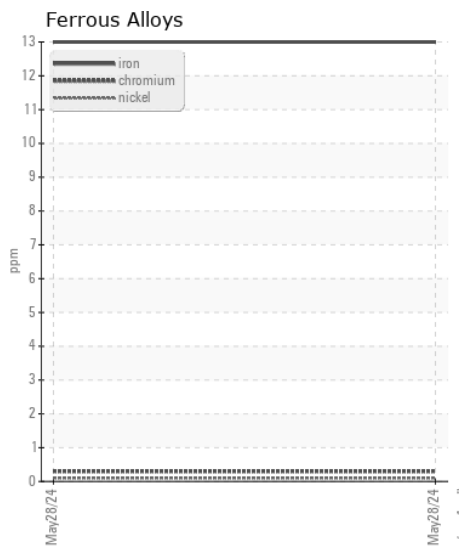
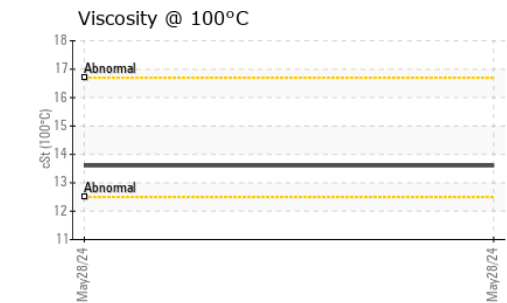
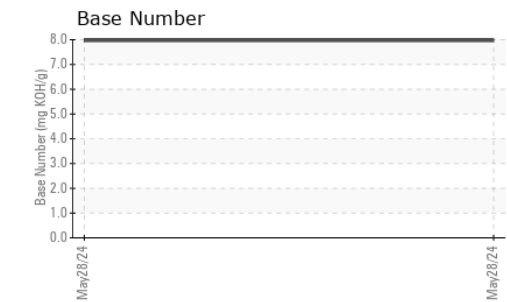
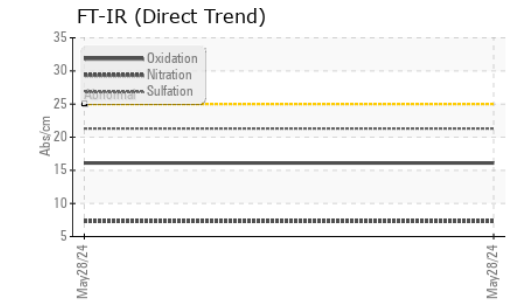
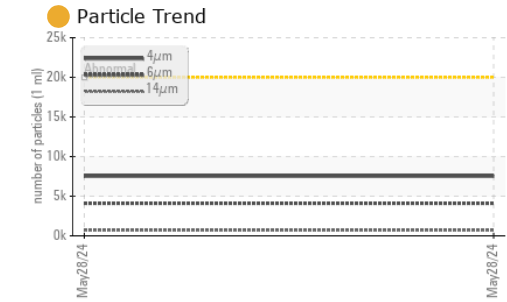
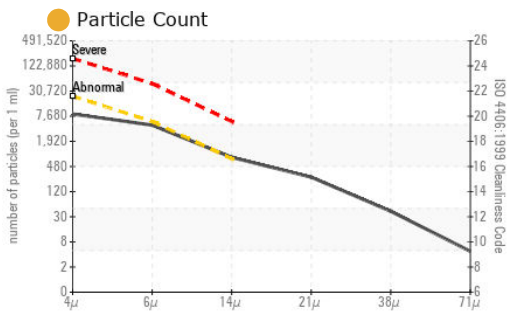
There is a light amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>25	4	---	---
Potassium	ppm	ASTM D5185m	>20	2	---	---
Fuel		WC Method	>5	<1.0	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.3	---	---
Nitration	Abs/cm	*ASTM D7624	>20	7.3	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.3	---	---
Particles >4µm		ASTM D7647	>20000	7534	---	---
Particles >6µm		ASTM D7647	>5000	4104	---	---
Particles >14µm		ASTM D7647	>640	698	---	---
Particles >21µm		ASTM D7647	>160	235	---	---
Particles >38µm		ASTM D7647	>40	36	---	---
Particles >71µm		ASTM D7647	>10	4	---	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	20/19/17	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---

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.

Sodium	ppm	ASTM D5185m		2	---	---
Boron	ppm	ASTM D5185m		295	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		85	---	---
Manganese	ppm	ASTM D5185m		0	---	---
Magnesium	ppm	ASTM D5185m		346	---	---
Calcium	ppm	ASTM D5185m		1366	---	---
Phosphorus	ppm	ASTM D5185m		1041	---	---
Zinc	ppm	ASTM D5185m		1239	---	---
Sulfur	ppm	ASTM D5185m		3131	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.1	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		7.97	---	---
Visc @ 100°C	cSt	ASTM D445		13.6	---	---



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KLFK202284 **Received** : 16 Jul 2024
Lab Number : 06238570 **Tested** : 18 Jul 2024
Unique Number : 11127404 **Diagnosed** : 18 Jul 2024 - Wes Davis
Test Package : MOB 2 (Additional Tests: PrtCount)

KLENOIL MEXICO
 , ZZ
 MX
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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)