



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
COLLIER BROTHERS
Component
Diesel Engine
Fluid
CHEVRON DELO 400 MULTIGRADE 15W40 (55 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0008719	KL0008900	KL0008717
Sample Date		Client Info		08 Jul 2024	08 Jun 2024	03 Jun 2024
Machine Age	hrs	Client Info		56096	55614	41283
Oil Age	hrs	Client Info		890	408	370
Filter Age	hrs	Client Info		890	408	370
Oil Changed		Client Info		Changed	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	12	3	9
Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	2	1	1
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>330	2	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

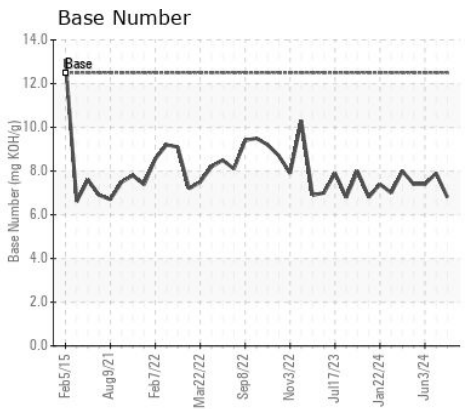
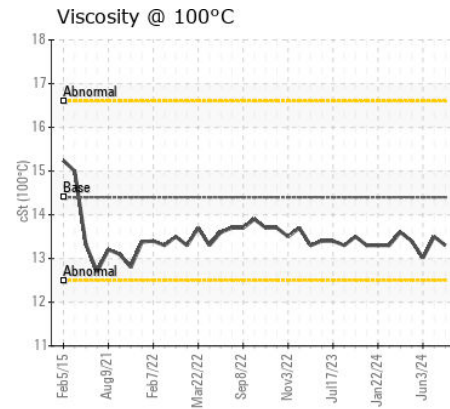
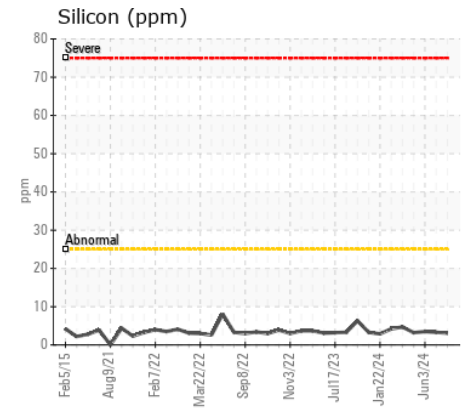
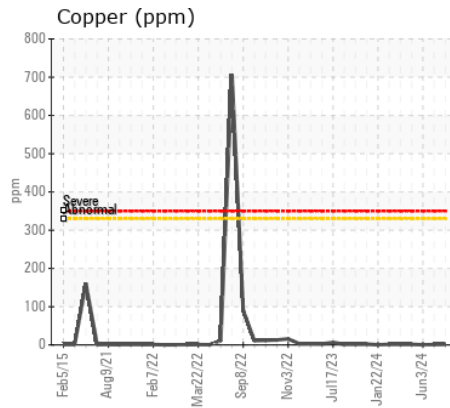
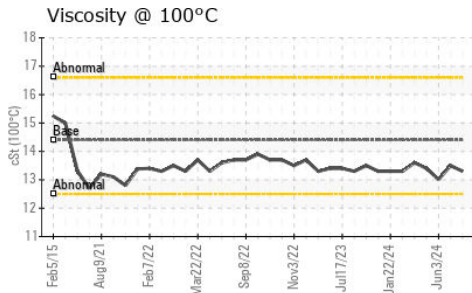
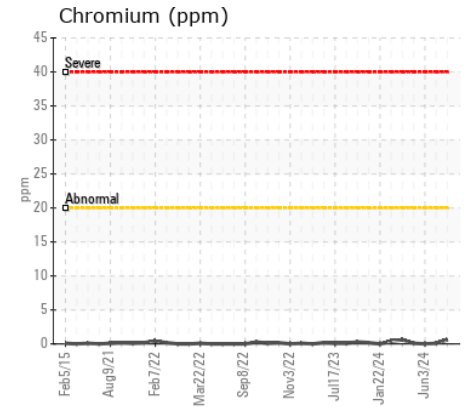
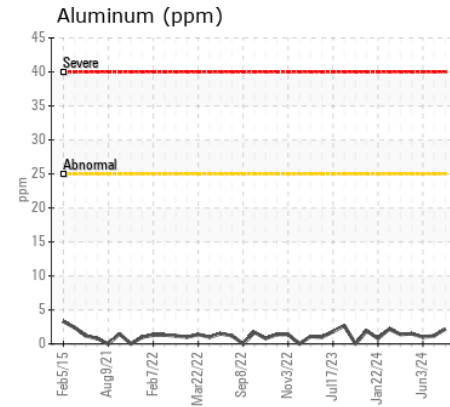
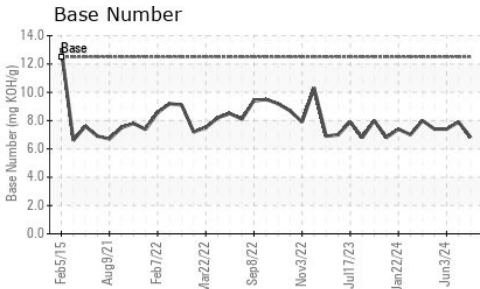
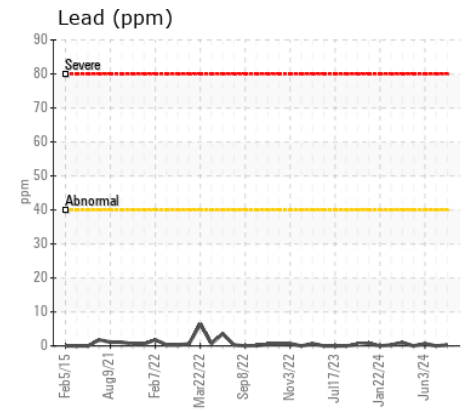
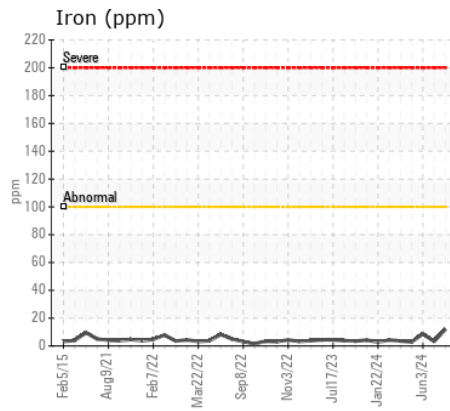
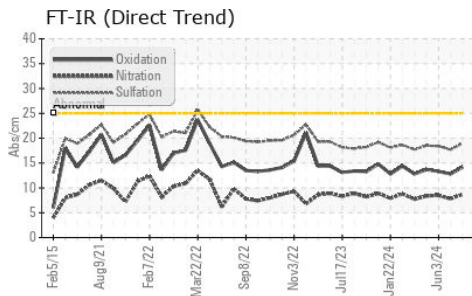
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	3	3	4
Potassium	ppm	ASTM D5185m	>20	2	2	1
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8.7	7.8	8.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.0	17.7	18.4
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	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		0	2	2
Boron	ppm	ASTM D5185m	151	58	74	87
Barium	ppm	ASTM D5185m	0.4	0	0	0
Molybdenum	ppm	ASTM D5185m	250	2	2	5
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	0	713	738	766
Calcium	ppm	ASTM D5185m	2046	1353	1361	1499
Phosphorus	ppm	ASTM D5185m	1043	743	724	790
Zinc	ppm	ASTM D5185m	943	832	839	891
Sulfur	ppm	ASTM D5185m	5012	2740	3473	3615
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.2	12.8	13.3
Base Number (BN)	mg KOH/g	ASTM D2896	12.5	6.8	7.9	7.4
Visc @ 100°C	cSt	ASTM D445	14.4	13.3	13.5	13.01



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0008719
Lab Number : 06234697
Unique Number : 11123531
Test Package : MOB1+

Received : 12 Jul 2024
Tested : 15 Jul 2024
Diagnosed : 15 Jul 2024 - Don Baldridge

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 775 CEDAR CT
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 US 97351
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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)