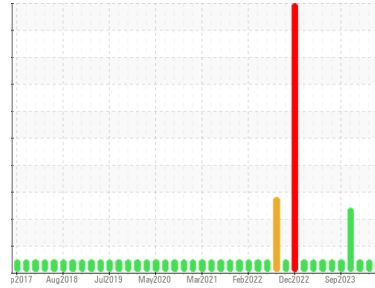




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
CRANE - T LANGE
 Machine Id
T LANGE MAIN ENGINE
 Component
Main Engine
 Fluid
CHEVRON DELO 400 LE 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0892643	WC0892615	WC0892614
Sample Date	Client Info			18 Mar 2024	08 Mar 2024	24 Jan 2024
Machine Age	hrs	Client Info		36090	35918	35127
Oil Age	hrs	Client Info		0	500	421
Oil Changed	Client Info			Not Changed	Changed	Not Changed
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>4.0		<1.0	<1.0	1.2
Water	WC Method	>0.1		NEG	NEG	NEG
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>75	3	5	1
Chromium	ppm	ASTM D5185m	>8	<1	<1	0
Nickel	ppm	ASTM D5185m	>2	<1	0	<1
Titanium	ppm	ASTM D5185m	>3	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	<1	0
Aluminum	ppm	ASTM D5185m	>15	4	3	4
Lead	ppm	ASTM D5185m	>18	2	5	2
Copper	ppm	ASTM D5185m	>80	3	4	<1
Tin	ppm	ASTM D5185m	>14	1	2	<1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
Cadmium	ppm	ASTM D5185m		<1	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		325	266	376
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		120	111	117
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		631	649	650
Calcium	ppm	ASTM D5185m		1535	1632	1455
Phosphorus	ppm	ASTM D5185m	1200	716	716	681
Zinc	ppm	ASTM D5185m	1300	850	868	830
Sulfur	ppm	ASTM D5185m	3200	2757	3027	2458

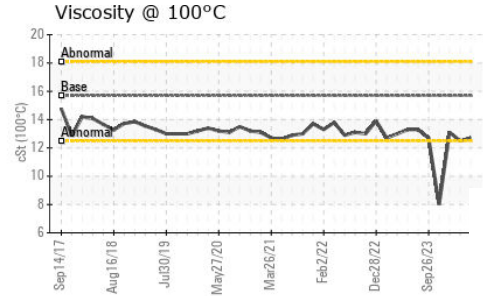
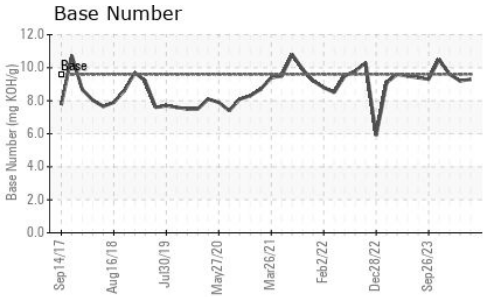
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>20	6	5	5
Sodium	ppm	ASTM D5185m	>75	2	3	1
Potassium	ppm	ASTM D5185m	>20	1	2	2

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		0.2	0.3	0.1
Nitration	Abs/cm	*ASTM D7624	>20	6.1	7.2	5.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.7	23.0	22.4

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.2	16.9	15.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.6	9.3	9.2	9.6



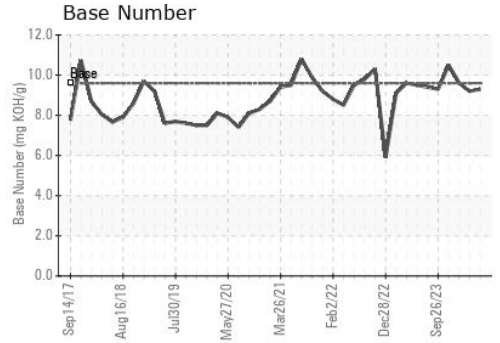
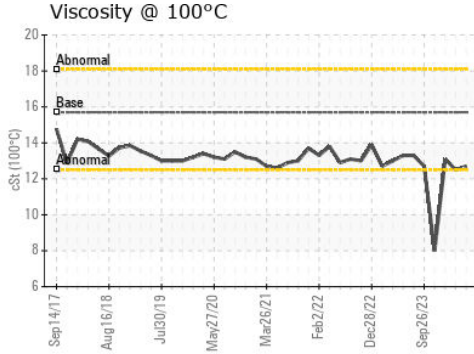
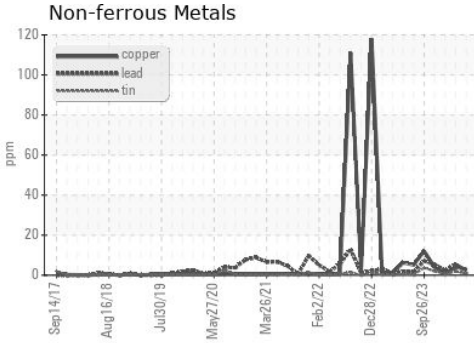
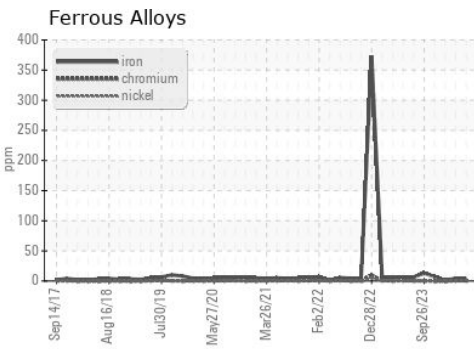
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.7	12.7	12.5	13.1

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0892643
Lab Number : 06123477
Unique Number : 10937628
Test Package : FLEET
Received : 20 Mar 2024
Tested : 21 Mar 2024
Diagnosed : 21 Mar 2024 - Wes Davis

ASSOCIATED TERMINALS - CRANE

CONVENT, LA
 US 70723
 Contact: GREG JOSEY
 gjosey@associatedterminals.com
 T:
 F: (225)562-3515

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)