



Area
KEMP QUARRIES / HULBERT
Machine Id
WL131
Component
Diesel Engine
Fluid
MOBIL DELVAC 1300 SUPER15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PCA0085920	PCA0109162	PCA0109235
Sample Date		Client Info		06 Apr 2024	27 Jan 2024	03 Nov 2023
Machine Age	hrs	Client Info		11256	10805	10240
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>86	18	20	13
Chromium	ppm	ASTM D5185m	>3	<1	<1	<1
Nickel	ppm	ASTM D5185m	>3	0	1	<1
Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>15	1	1	<1
Lead	ppm	ASTM D5185m	>16	0	1	1
Copper	ppm	ASTM D5185m	>250	6	10	6
Tin	ppm	ASTM D5185m	>2	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

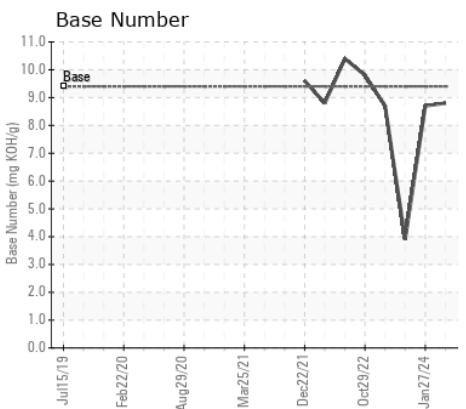
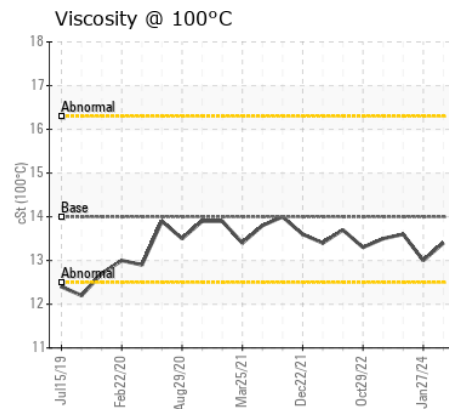
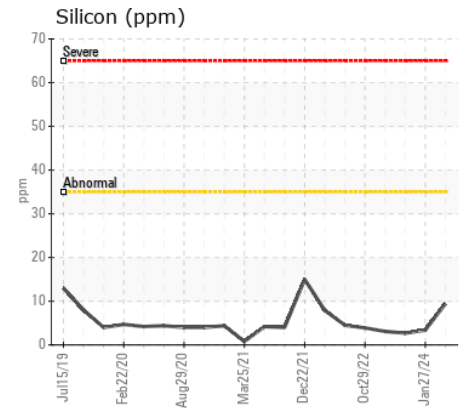
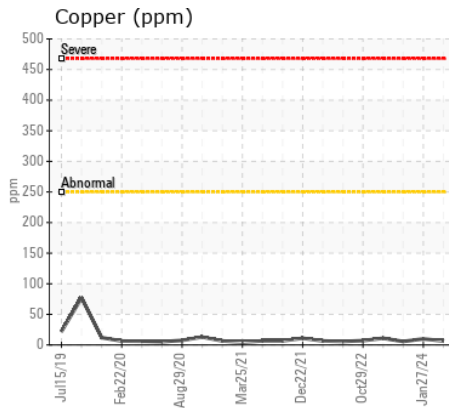
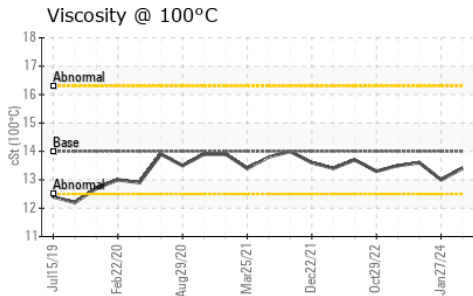
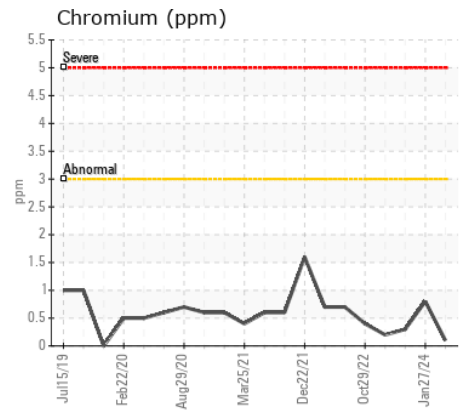
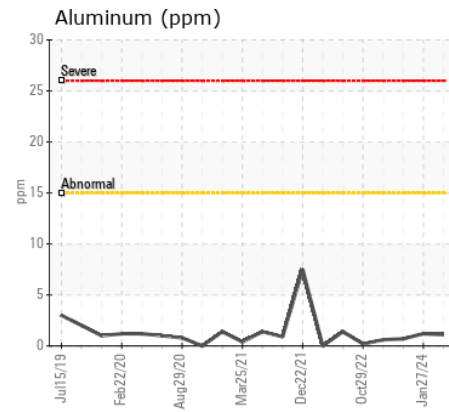
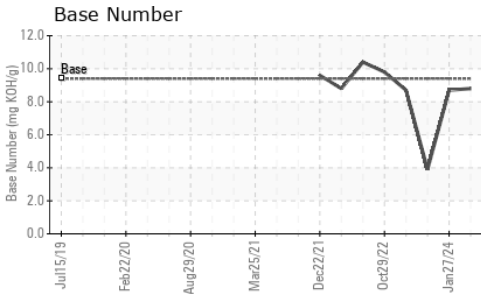
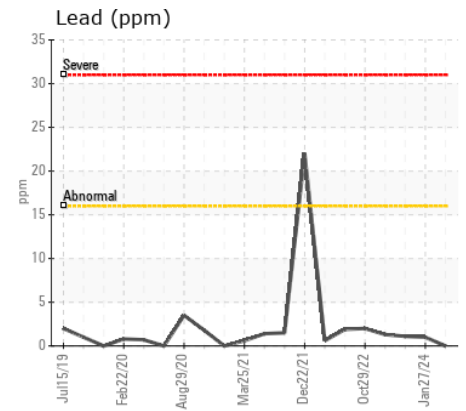
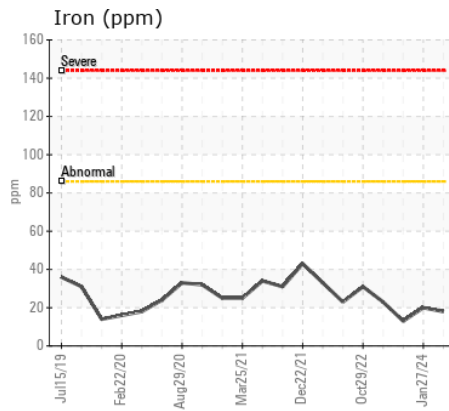
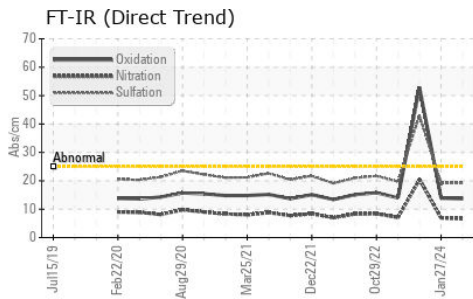
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>35	9	3	3
Potassium	ppm	ASTM D5185m	>20	0	1	2
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	0.8	0.8	1.1
Nitration	Abs/cm	*ASTM D7624	>20	6.6	6.9	20.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.2	19.2	42.9
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		2	1	<1
Boron	ppm	ASTM D5185m	0	4	2	0
Barium	ppm	ASTM D5185m	0	<1	0	0
Molybdenum	ppm	ASTM D5185m	0	60	54	57
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	0	1034	863	945
Calcium	ppm	ASTM D5185m		1156	1042	1024
Phosphorus	ppm	ASTM D5185m		1133	1096	1023
Zinc	ppm	ASTM D5185m		1366	1119	1288
Sulfur	ppm	ASTM D5185m		3781	3244	3111
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.7	13.9	52.8
Base Number (BN)	mg KOH/g	ASTM D2896	9.4	8.8	8.7	3.9
Visc @ 100°C	cSt	ASTM D445	14	13.4	13.0	13.6



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0085920 **Received** : 15 Apr 2024
Lab Number : 06149409 **Tested** : 16 Apr 2024
Unique Number : 10979487 **Diagnosed** : 17 Apr 2024 - Don Baldrige
Test Package : MOB 1 (Additional Tests: TBN)

Kemp Quarries - Kemp Stone - Hulbert
 17801 Hwy 80
 Hulbert, OK
 US 74441
 Contact:
 hulbert@kempstone.com

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)