



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL

Machine Id
FP60
 Component
Diesel Engine
 Fluid
{not provided} (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

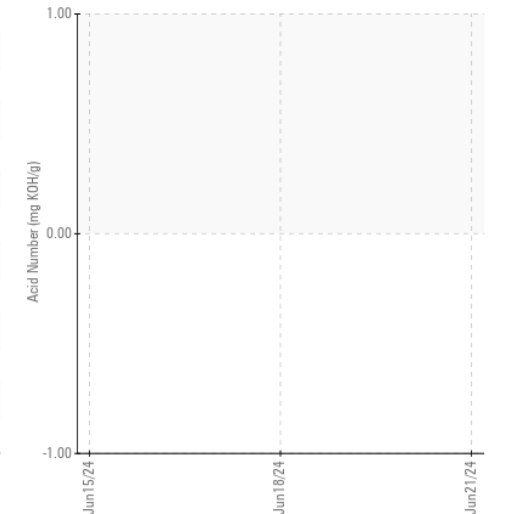
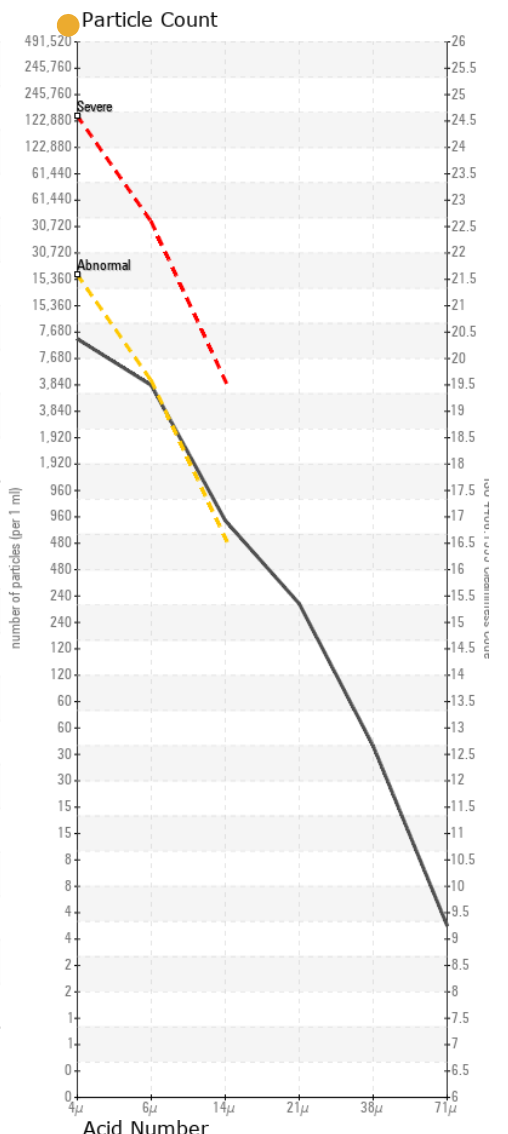
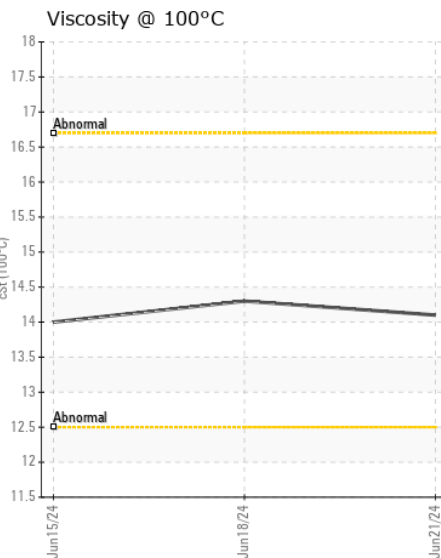
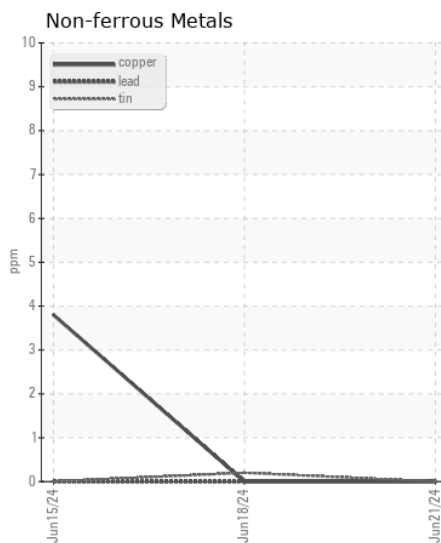
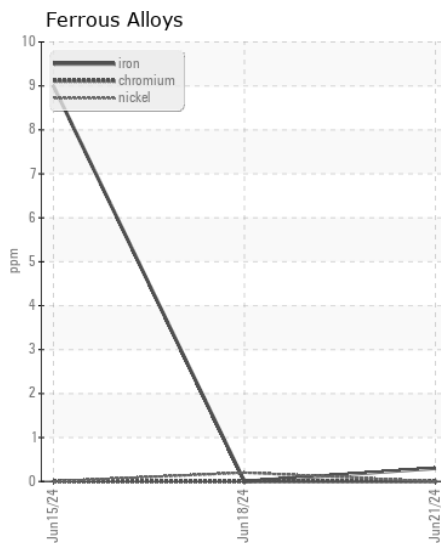
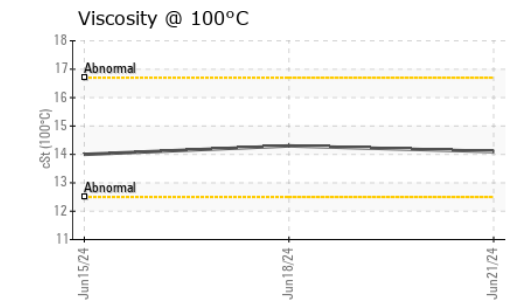
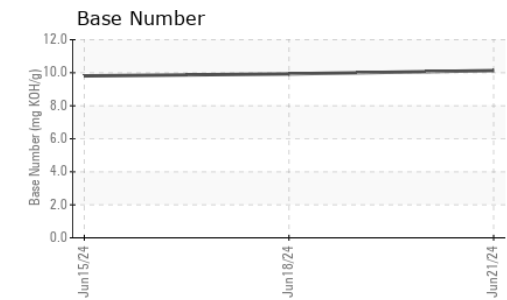
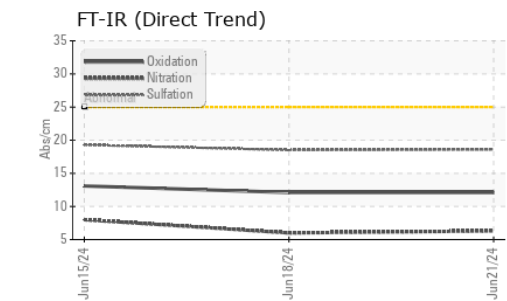
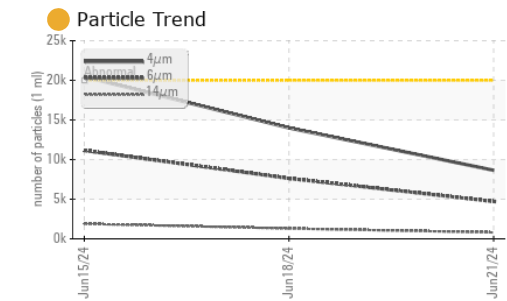
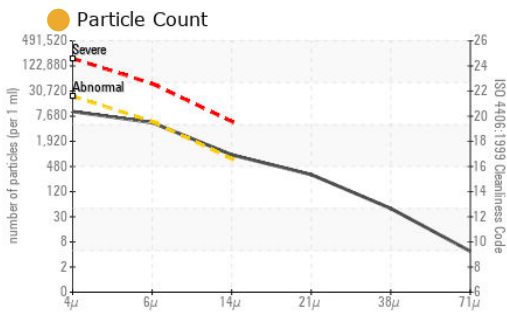
CONTAMINATION

There is a moderate amount of particulates present 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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0014467	KL0014466	KL0014473
Sample Date		Client Info		21 Jun 2024	18 Jun 2024	15 Jun 2024
Machine Age	hrs	Client Info		11952	11879	11838
Oil Age	hrs	Client Info		114	40	900
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Chngd	Not Chngd	Changed
Filter Changed		Client Info		Not Chngd	Not Chngd	N/A
Sample Status				ATTENTION	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>100	<1	0	9
Chromium	ppm	ASTM D5185m	>20	0	0	0
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	<1	<1	2
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	0	0	4
Tin	ppm	ASTM D5185m	>15	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	LIGHT	NONE	▲ MODER
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	3	4	5
Potassium	ppm	ASTM D5185m	>20	2	3	6
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	6.3	6.0	8.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.6	18.5	19.3
Particles >4µm		ASTM D7647	>20000	8647	13998	▲ 20470
Particles >6µm		ASTM D7647	>5000	4711	● 7625	▲ 11151
Particles >14µm		ASTM D7647	>640	● 802	● 1298	▲ 1898
Particles >21µm		ASTM D7647	>160	● 270	▲ 437	▲ 639
Particles >38µm		ASTM D7647	>40	● 42	● 67	▲ 99
Particles >71µm		ASTM D7647	>10	● 4	7	▲ 10
Oil Cleanliness		ISO 4406 (c)	>21/19/16	● 20/19/17	● 21/20/17	▲ 22/21/18
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
Sodium	ppm	ASTM D5185m		2	2	26
Boron	ppm	ASTM D5185m		83	86	74
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	2
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		715	733	759
Calcium	ppm	ASTM D5185m		1378	1411	1508
Phosphorus	ppm	ASTM D5185m		1068	1089	1110
Zinc	ppm	ASTM D5185m		1201	1251	1352
Sulfur	ppm	ASTM D5185m		5109	5266	4795
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.1	12.1	13.1
Base Number (BN)	mg KOH/g	ASTM D2896		10.13	9.93	9.81
Visc @ 100°C	cSt	ASTM D445		14.1	14.3	14.0



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0014467
Lab Number : 06226440
Unique Number : 11109933
Test Package : MOB 2 (Additional Tests: KV40, PrtCount, TAN Man)

IRON CLAD ENERGY
 9015 W COUNTY RD 127
 MIDLAND, TX
 US 79706
 Contact: TREVOR FRENETTE

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)

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F: