



WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
6151009
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0669458	WC0669498	WC0669523
Sample Date		Client Info		14 Jun 2024	15 Dec 2023	10 Oct 2023
Machine Age	hrs	Client Info		7924	7655	7445
Oil Age	hrs	Client Info		126	210	194
Filter Age	hrs	Client Info		126	210	194
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	20	38	20
Chromium	ppm	ASTM D5185m	>20	1	1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	6	3
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	2	3	1
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

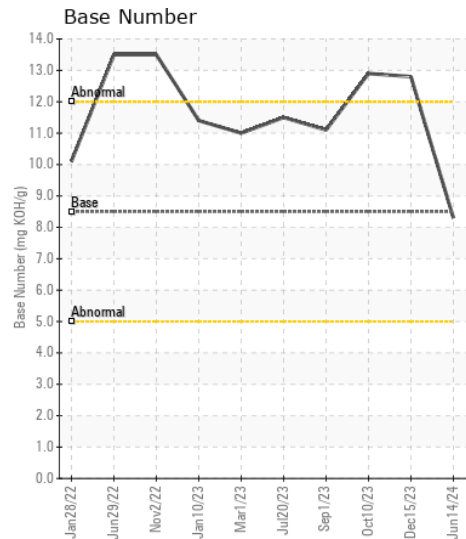
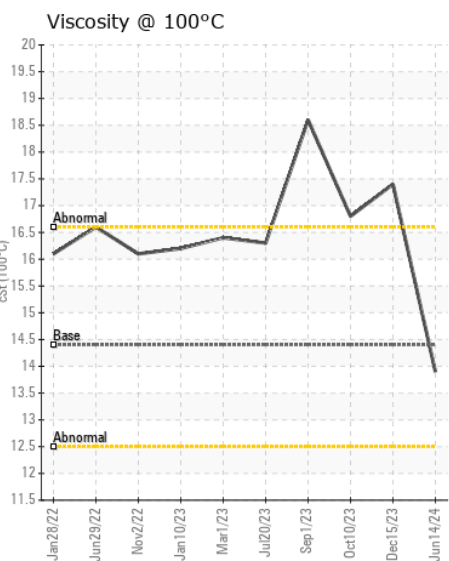
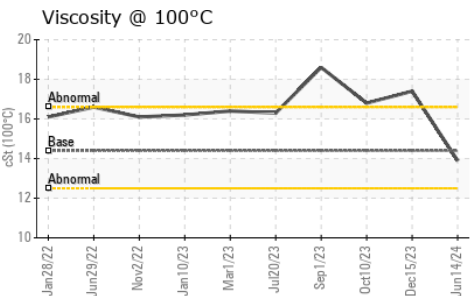
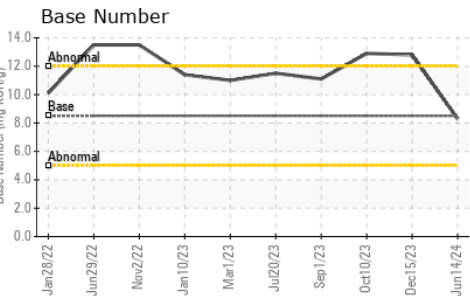
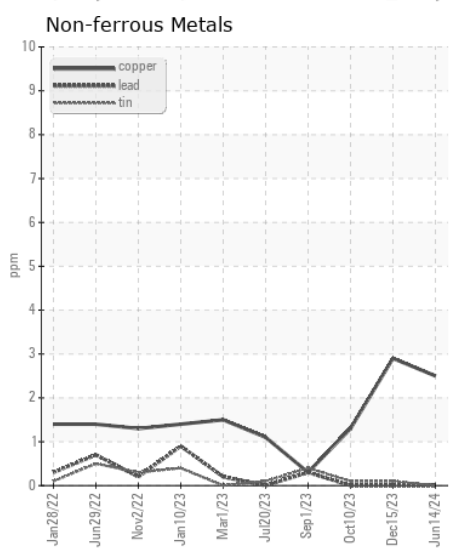
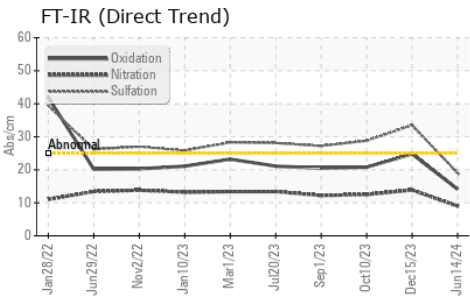
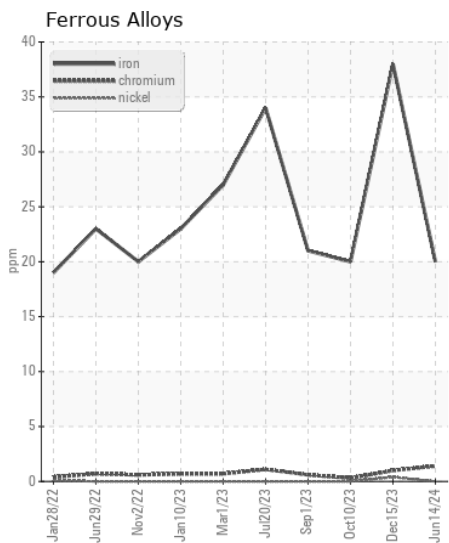
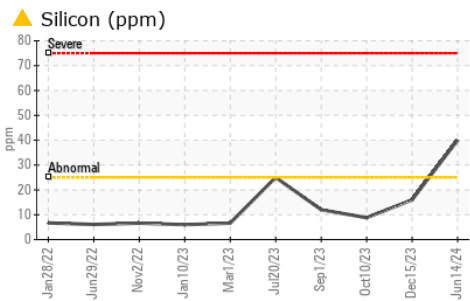
Elemental level of silicon (Si) above normal indicating ingress of seal material.

Silicon	ppm	ASTM D5185m	>25	▲ 40	16	9
Potassium	ppm	ASTM D5185m	>20	<1	<1	0
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	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	9.0	13.9	12.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.0	33.5	28.8
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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>216	5	5	2
Boron	ppm	ASTM D5185m	250	46	42	33
Barium	ppm	ASTM D5185m	10	0	<1	0
Molybdenum	ppm	ASTM D5185m	100	41	139	107
Manganese	ppm	ASTM D5185m		<1	1	<1
Magnesium	ppm	ASTM D5185m	450	130	311	262
Calcium	ppm	ASTM D5185m	3000	2654	5159	4252
Phosphorus	ppm	ASTM D5185m	1150	1027	1634	1197
Zinc	ppm	ASTM D5185m	1350	1168	1718	1366
Sulfur	ppm	ASTM D5185m	4250	5603	8916	6934
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.1	24.8	20.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	8.3	12.8	12.9
Visc @ 100°C	cSt	ASTM D445	14.4	13.9	▲ 17.4	16.8



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0669458
Lab Number : 06234322
Unique Number : 11123156
Test Package : FLEET
Received : 11 Jul 2024
Tested : 12 Jul 2024
Diagnosed : 14 Jul 2024 - Don Baldridge

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Certificate L2367
 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)