



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
KOMATSU PC228 PC228-1 (S/N 1028)
 Component
Diesel Engine
 Fluid
MOBIL DELVAC SUPER 1400 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		TLY0002326	TLY0001789	TLY0001085
Sample Date		Client Info		14 May 2024	19 Jun 2023	19 Jul 2022
Machine Age	hrs	Client Info		6143	5605	5094
Oil Age	hrs	Client Info		5605	511	404
Filter Age	hrs	Client Info		5605	511	404
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	40	37	45
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	3	<1	3
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>330	1	2	3
Tin	ppm	ASTM D5185m	>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

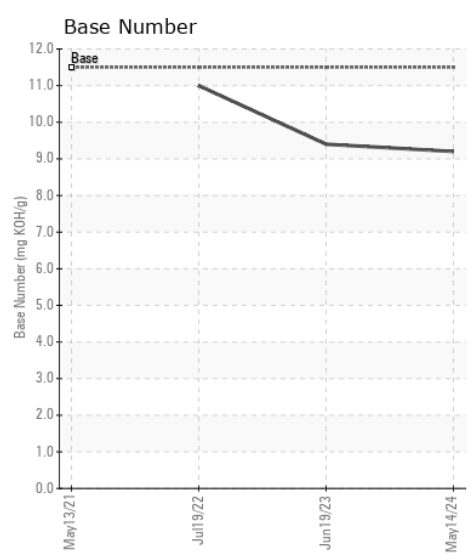
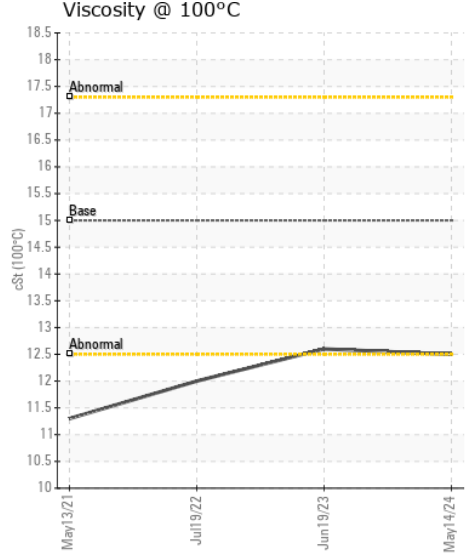
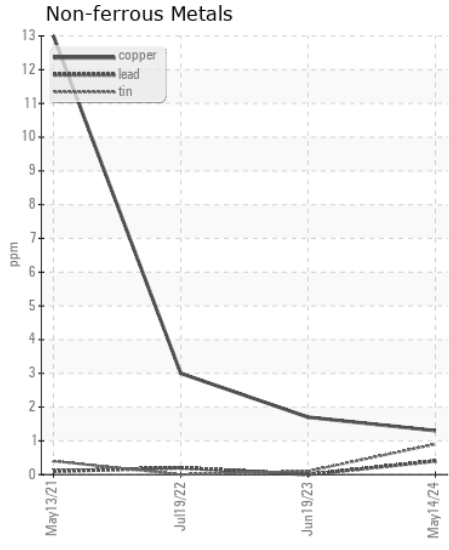
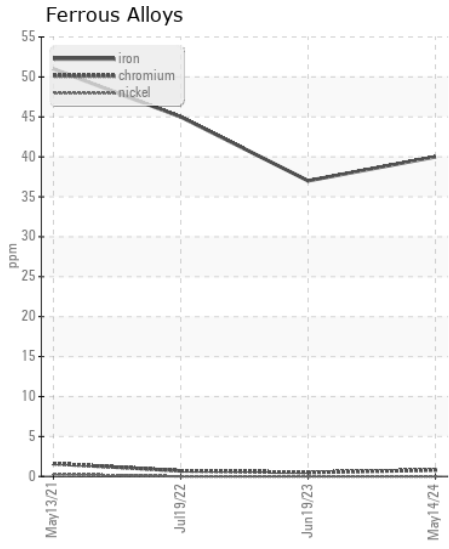
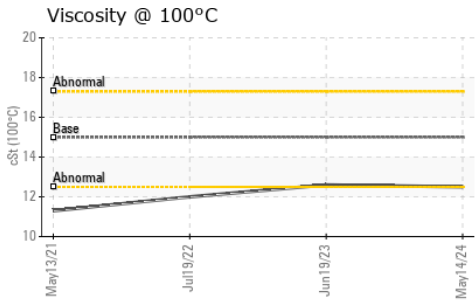
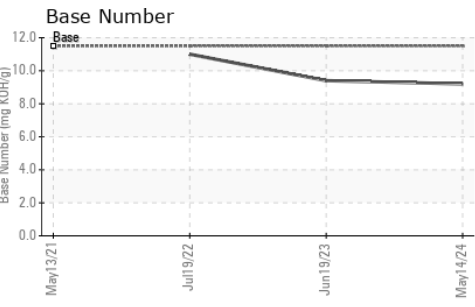
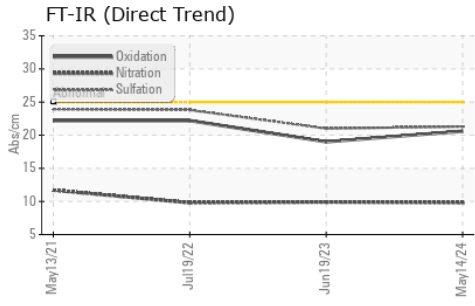
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	7	5	5
Potassium	ppm	ASTM D5185m	>20	3	<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	0.4	0.4	0.5
Nitration	Abs/cm	*ASTM D7624	>20	9.8	9.9	9.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.3	21.0	23.8
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 suitable for further service.

Sodium	ppm	ASTM D5185m		3	2	2
Boron	ppm	ASTM D5185m		35	25	37
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		49	52	50
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		557	723	530
Calcium	ppm	ASTM D5185m		1547	1515	1675
Phosphorus	ppm	ASTM D5185m		771	865	753
Zinc	ppm	ASTM D5185m		939	1067	918
Sulfur	ppm	ASTM D5185m		2789	3208	2959
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.6	19.0	22.2
Base Number (BN)	mg KOH/g	ASTM D2896	11.5	9.2	9.4	11.0
Visc @ 100°C	cSt	ASTM D445	15.0	12.5	12.6	12.0



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TLY0002326 **Received** : 29 May 2024
Lab Number : 06193807 **Tested** : 30 May 2024
Unique Number : 11055930 **Diagnosed** : 30 May 2024 - Wes Davis
Test Package : CONST (Additional Tests: TBN)

GAINES & COMPANY
 112 WESTMINSTER RD
 REISTERSTOWN, MD
 US 21136
 Contact: LANCE TANCRAITOR
 ltancraitor@gainesandco.com
 T: (410)833-9833
 F:

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)