



ASCENDUM

OIL ANALYSIS REPORT



Area

Ascendum Machinery/250 Hour CSA

Machine Id

CATERPILLAR D5G 1028 (S/N WGB01909)

Component

Diesel Engine

Fluid

VOLVO VDS-4.5 Premium Motor Oil 15W40 (--- GAL)

WEAR

NORMAL

CONTAMINATION

ABNORMAL

FLUID CONDITION

NORMAL

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		ASC0007318	VCP0005776	VCP0001775
Sample Date		Client Info		06 May 2024	22 May 2023	15 Jun 2022
Machine Age	hrs	Client Info		1800	1750	25
Oil Age	hrs	Client Info		50	1725	25
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	11	23	16
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>25	5	5	3
Lead	ppm	ASTM D5185m	>40	<1	<1	<1
Copper	ppm	ASTM D5185m	>330	4	2	1
Tin	ppm	ASTM D5185m	>15	1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

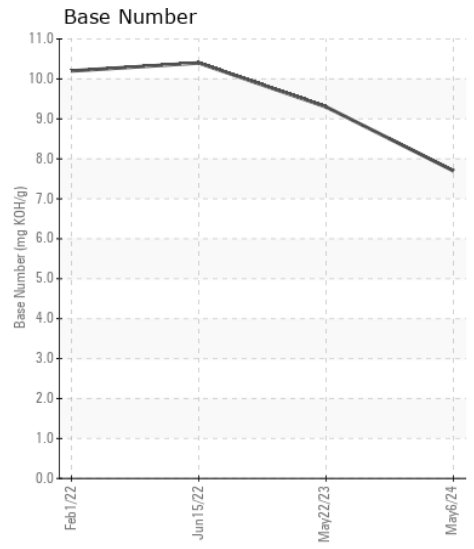
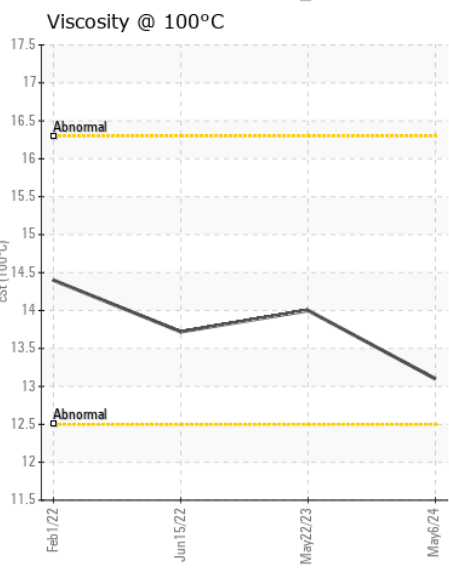
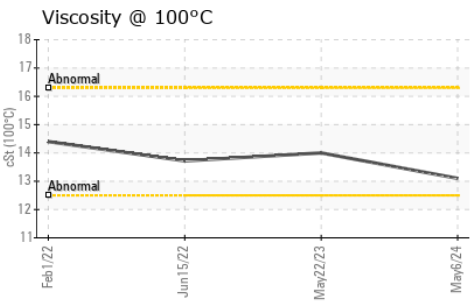
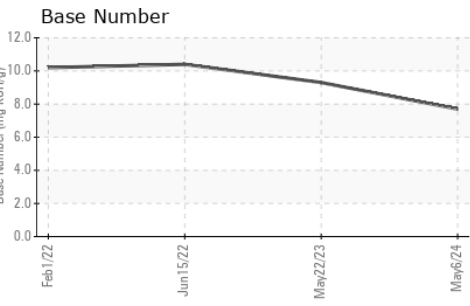
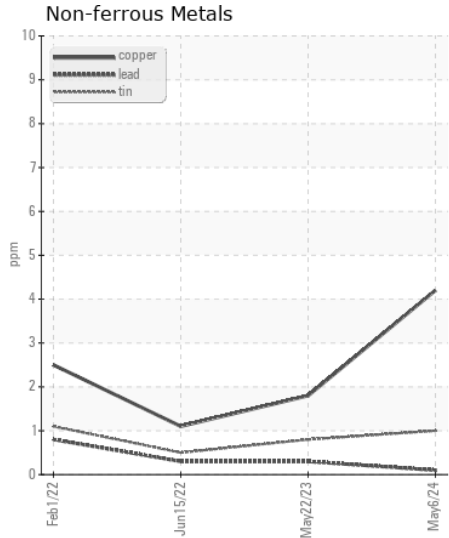
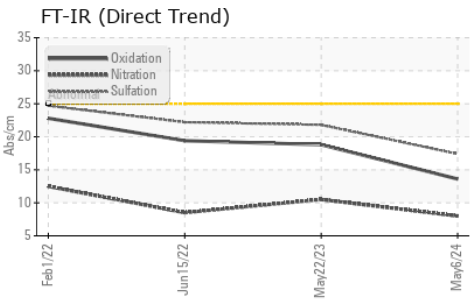
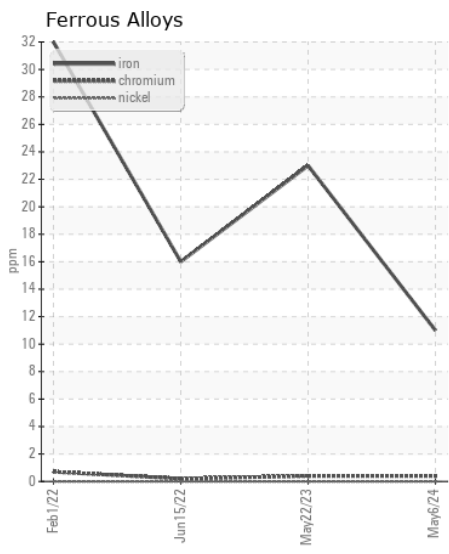
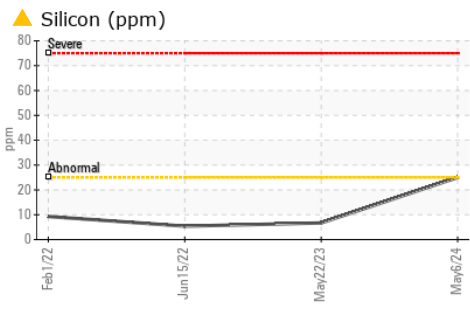
Elemental level of silicon (Si) above normal indicating ingress of seal material.

Silicon	ppm	ASTM D5185m	>25	▲ 25	7	5
Potassium	ppm	ASTM D5185m	>20	0	4	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	0.3	0.8	0.6
Nitration	Abs/cm	*ASTM D7624	>20	8.0	10.5	8.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.4	21.8	22.2
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		3	1	1
Boron	ppm	ASTM D5185m		55	55	46
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		78	59	48
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		423	786	640
Calcium	ppm	ASTM D5185m		1822	1914	1603
Phosphorus	ppm	ASTM D5185m		1060	1234	998
Zinc	ppm	ASTM D5185m		1237	1574	1201
Sulfur	ppm	ASTM D5185m		3938	4807	3144
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.6	18.8	19.4
Base Number (BN)	mg KOH/g	ASTM D2896		7.7	9.3	10.4
Visc @ 100°C	cSt	ASTM D445		13.1	14.0	13.72



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ASC0007318 **Received** : 13 May 2024
Lab Number : 06176691 **Tested** : 14 May 2024
Unique Number : 11022744 **Diagnosed** : 14 May 2024 - Sean Felton
Test Package : CONST (Additional Tests: TBN)

TRIANGLE GRADING AND PAVING INC
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 US 27216
 Contact: ADAM CORBETT
 wacorbett@trianglegradingpaving.com

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) F: (336)584-0145