



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
[KNUDSON]
 Machine Id
VOLVO PENTA 7011449657
 Component
Starboard Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VPA050914	VPA050920	VPA047199
Sample Date		Client Info		19 Jun 2024	12 Feb 2024	27 Sep 2023
Machine Age	hrs	Client Info		895	735	678
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Chngd	N/A	N/A
Filter Changed		Client Info		Not Chngd	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	7	3	8
Chromium	ppm	ASTM D5185m	>6	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	1	<1	0
Titanium	ppm	ASTM D5185m	>2	0	<1	0
Silver	ppm	ASTM D5185m	>2	<1	<1	0
Aluminum	ppm	ASTM D5185m	>20	2	1	2
Lead	ppm	ASTM D5185m	>95	<1	1	<1
Copper	ppm	ASTM D5185m	>85	43	20	4
Tin	ppm	ASTM D5185m	>9	1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

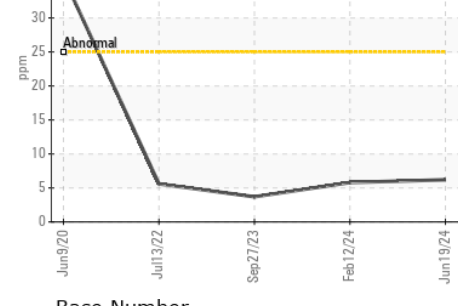
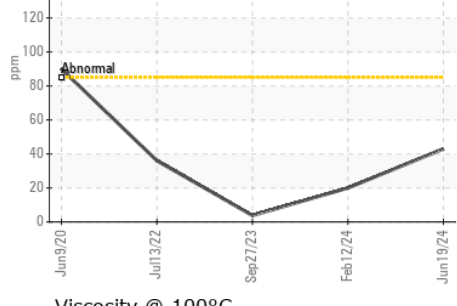
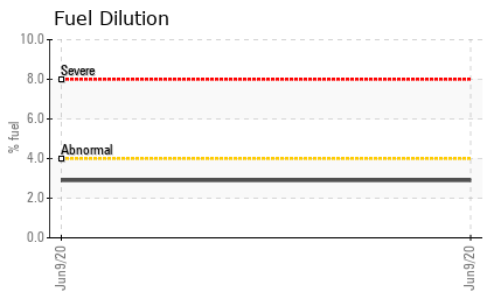
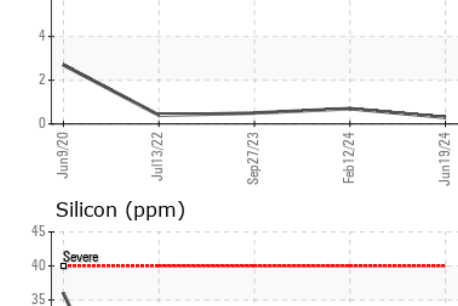
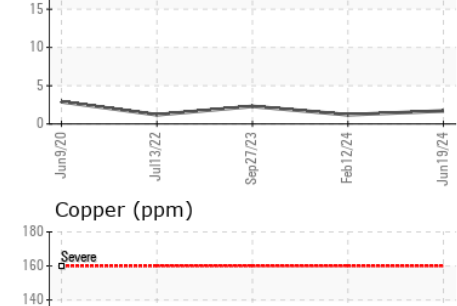
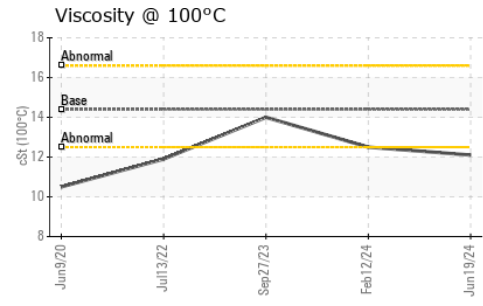
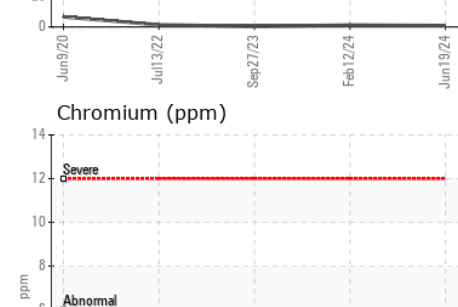
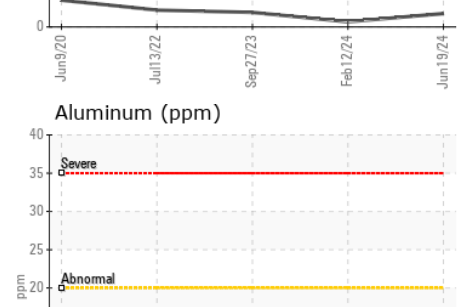
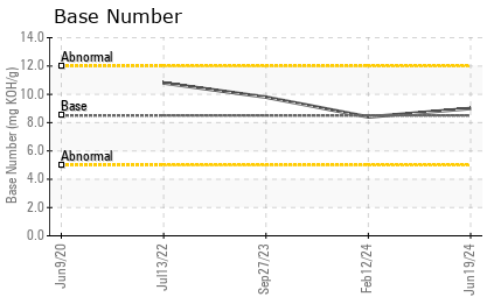
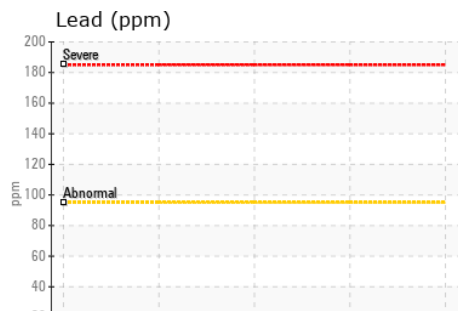
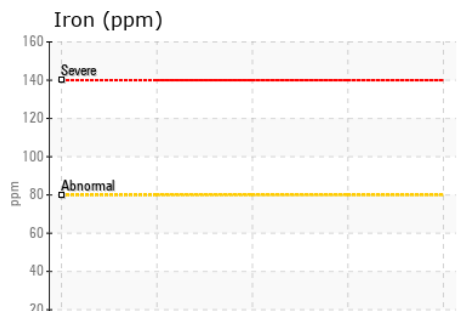
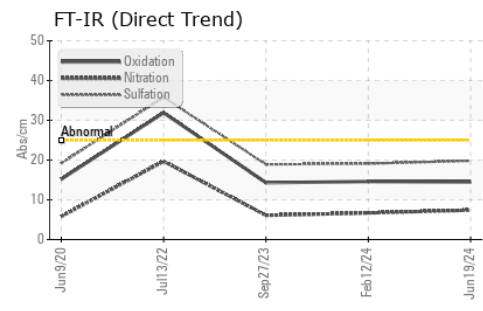
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	6	4
Potassium	ppm	ASTM D5185m	>20	2	2	17
Fuel	%	ASTM D3524	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.5	0.4	0.2
Nitration	Abs/cm	*ASTM D7624	>20	7.4	6.7	6.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.8	19.1	18.9
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	>0.1	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	>158	1	0	15
Boron	ppm	ASTM D5185m	250	3	2	7
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	62	80	61
Manganese	ppm	ASTM D5185m		<1	<1	1
Magnesium	ppm	ASTM D5185m	450	1028	1262	958
Calcium	ppm	ASTM D5185m	3000	1103	1316	1223
Phosphorus	ppm	ASTM D5185m	1150	1136	1336	1058
Zinc	ppm	ASTM D5185m	1350	1383	1645	1319
Sulfur	ppm	ASTM D5185m	4250	4023	5019	3290
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.5	14.6	14.3
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.0	8.4	9.8
Visc @ 100°C	cSt	ASTM D445	14.4	12.1	12.5	14.0



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VPA050914 **Received** : 27 Jun 2024
Lab Number : 06222951 **Tested** : 28 Jun 2024
Unique Number : 11101148 **Diagnosed** : 28 Jun 2024 - Jonathan Hester
Test Package : MOB 1 (Additional Tests: FuelDilution, TBN)

SUNCOAST DIESEL MARINE
 6341 PORTER ROAD, SUITE 6
 SARASOTA, FL
 US 34240
 Contact: SERVICE MANAGER
 info@suncoastdmi.com
 T: (941)342-0033
 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)