



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
M/V COHO FERRY
 Component
2 Auxiliary Engine
 Fluid
SHELL ROTELLA T3 15W40 (9 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PE0001583	PE0001455	PE0001458
Sample Date		Client Info		16 Jun 2024	18 Mar 2024	16 Dec 2023
Machine Age	hrs	Client Info		6193	5680	5370
Oil Age	hrs	Client Info		195	180	122
Filter Age	hrs	Client Info		195	180	122
Oil Changed		Client Info		Filtered	Filtered	Changed
Filter Changed		Client Info		Not Chngd	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	4	4	2
Chromium	ppm	ASTM D5185m	>20	0	<1	0
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m	>2	0	<1	0
Silver	ppm	ASTM D5185m	>2	<1	<1	0
Aluminum	ppm	ASTM D5185m	>20	<1	2	0
Lead	ppm	ASTM D5185m	>40	1	2	<1
Copper	ppm	ASTM D5185m	>330	<1	2	1
Tin	ppm	ASTM D5185m	>15	0	1	0
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.

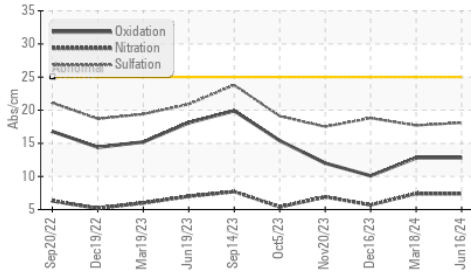
Silicon	ppm	ASTM D5185m	>25	2	4	3
Potassium	ppm	ASTM D5185m	>20	<1	2	0
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.1	1.5
Nitration	Abs/cm	*ASTM D7624	>20	7.4	7.4	5.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.1	17.7	18.8
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	>0.1	NEG	NEG	NEG

FLUID CONDITION

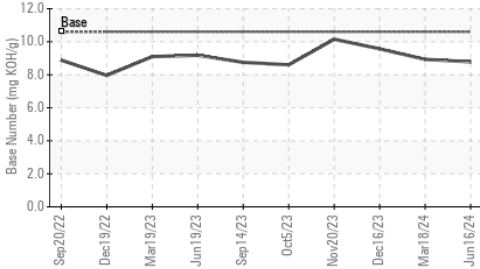
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		3	0	1
Boron	ppm	ASTM D5185m	10	23	25	25
Barium	ppm	ASTM D5185m	0	0	1	0
Molybdenum	ppm	ASTM D5185m	10	14	15	16
Manganese	ppm	ASTM D5185m		<1	<1	0
Magnesium	ppm	ASTM D5185m	10	96	90	107
Calcium	ppm	ASTM D5185m	2600	2453	2151	2114
Phosphorus	ppm	ASTM D5185m	1050	982	893	866
Zinc	ppm	ASTM D5185m	1250	1078	1036	1073
Sulfur	ppm	ASTM D5185m	3900	4034	3531	3415
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.8	12.8	10.1
Base Number (BN)	mg KOH/g	ASTM D2896	10.6	8.78	8.93	9.57
Visc @ 100°C	cSt	ASTM D445	15.5	12.8	12.9	13.1

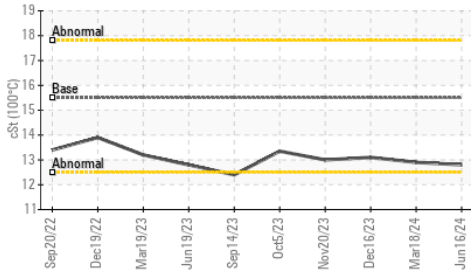
FT-IR (Direct Trend)



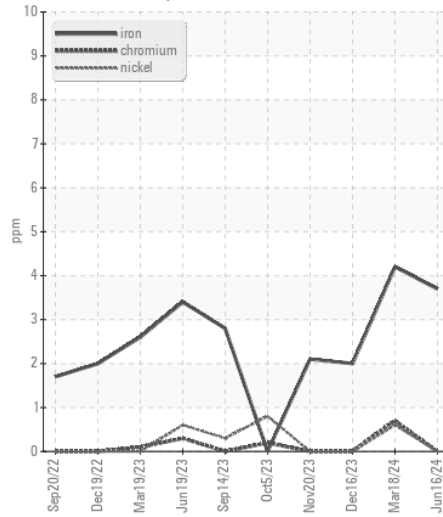
Base Number



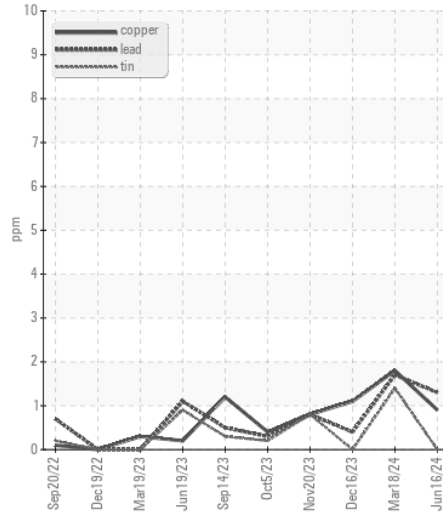
Viscosity @ 100°C



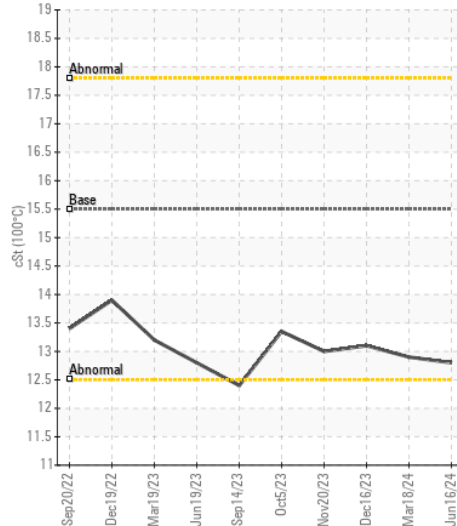
Ferrous Alloys



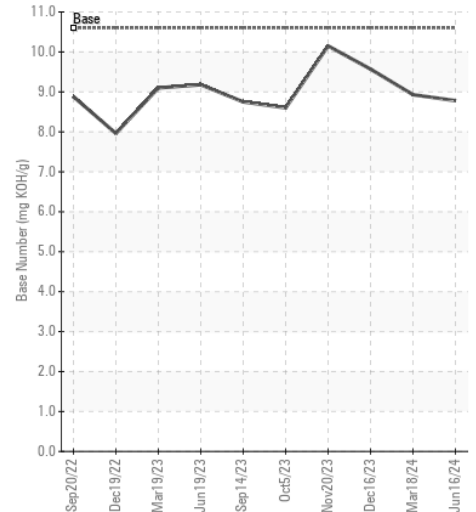
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PE0001583
Lab Number : 06222888
Unique Number : 11101085
Test Package : PLANT (Additional Tests: FT-IR, ICP, KV100, SCREEN, TBN)

Received : 27 Jun 2024
Tested : 28 Jun 2024
Diagnosed : 30 Jun 2024 - Don Baldrige

BLACK BALL TRANSPORT INC
 4209 21ST AVE W, SUITE 307
 SEATTLE, WA
 US 98199
 Contact: REBECCA CHERRIER
 RCHERRIER@COHOFERRY.COM

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: