



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
INTERNATIONAL 108731
Component
Diesel Engine
Fluid
SHELL ROTELLA T 15W40 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		IL0032935	IL0032725	IL0027431
Sample Date		Client Info		25 Jun 2024	25 Sep 2023	14 Mar 2023
Machine Age	mls	Client Info		311113	274964	245809
Oil Age	mls	Client Info		36149	29155	26023
Filter Age	mls	Client Info		36149	29155	26023
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	44	21	17
Chromium	ppm	ASTM D5185m	>20	2	<1	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	6	6	5
Lead	ppm	ASTM D5185m	>40	7	5	4
Copper	ppm	ASTM D5185m	>330	1	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<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.

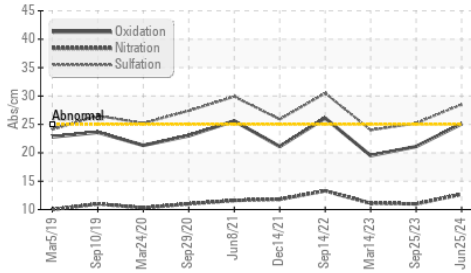
Silicon	ppm	ASTM D5185m	>25	6	4	5
Potassium	ppm	ASTM D5185m	>20	8	8	10
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	1.3	0.7	0.6
Nitration	Abs/cm	*ASTM D7624	>20	12.7	11.0	11.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	28.5	25.2	24.0
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

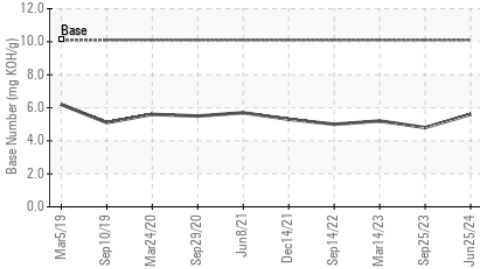
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		4	2	0
Boron	ppm	ASTM D5185m	316	22	32	27
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	1.2	50	43	102
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	24	469	141	41
Calcium	ppm	ASTM D5185m	2292	1819	2035	2240
Phosphorus	ppm	ASTM D5185m	1064	1028	946	944
Zinc	ppm	ASTM D5185m	1160	1286	1222	1160
Sulfur	ppm	ASTM D5185m	4996	3357	3304	3489
Oxidation	Abs/.1mm	*ASTM D7414	>25	25.1	21.1	19.5
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	5.6	4.8	5.2
Visc @ 100°C	cSt	ASTM D445	15.7	13.8	13.7	13.5

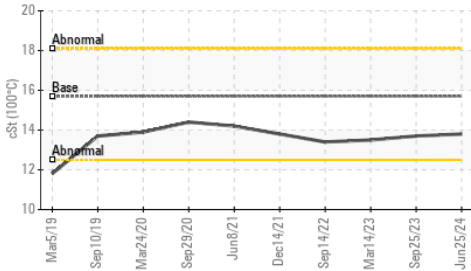
FT-IR (Direct Trend)



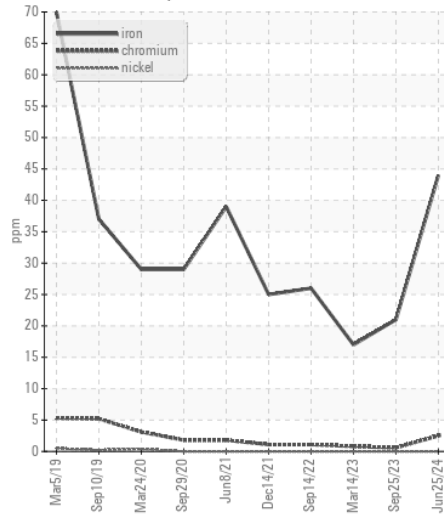
Base Number



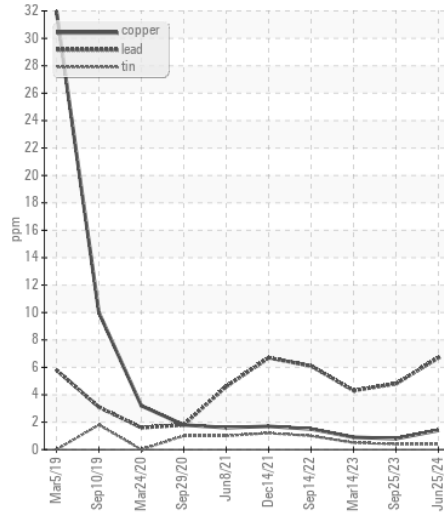
Viscosity @ 100°C



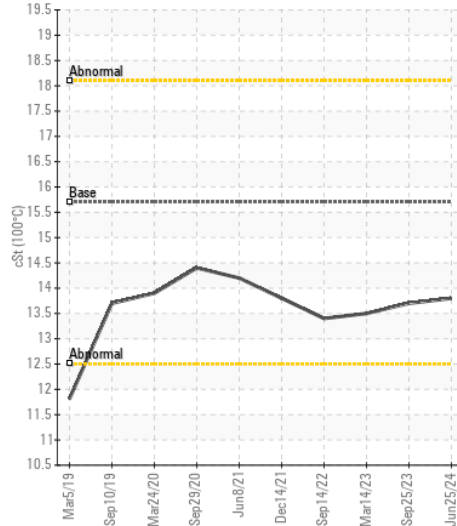
Ferrous Alloys



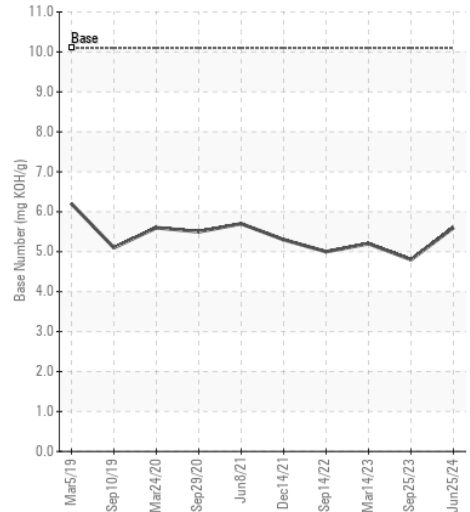
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : IL0032935

Lab Number : 06225875

Unique Number : 11109368

Test Package : FLEET

Received : 02 Jul 2024

Tested : 03 Jul 2024

Diagnosed : 03 Jul 2024 - Angela Borella

IDEALASE OF NORTHWEST WI

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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)