



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**6041**  
 Component  
**Diesel Engine**  
 Fluid  
**SHELL ROTELLA T 15W40 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>JR0221773</b>	JR0184966	JR0159218
Sample Date		Client Info		<b>25 Jun 2024</b>	28 Sep 2023	27 Mar 2023
Machine Age	hrs	Client Info		<b>3543</b>	2548	1740
Oil Age	hrs	Client Info		<b>500</b>	2000	500
Filter Age	hrs	Client Info		<b>500</b>	2000	500
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	ATTENTION	ATTENTION

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>24</b>	36	24
Chromium	ppm	ASTM D5185m	>20	<b>2</b>	2	2
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>3</b>	4	2
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>11</b>	13	4
Tin	ppm	ASTM D5185m	>15	<b>0</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

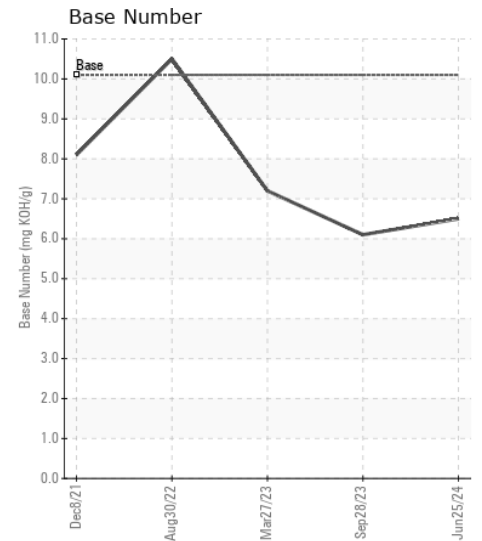
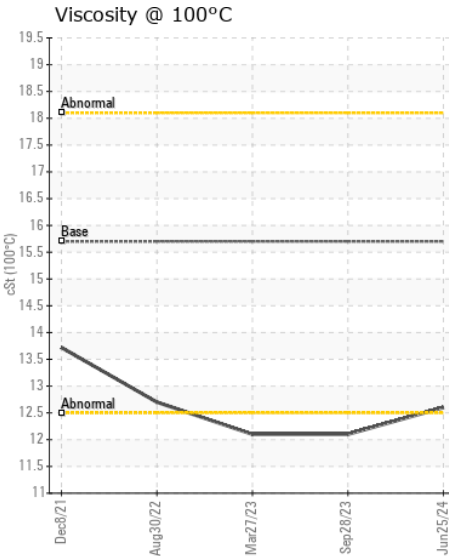
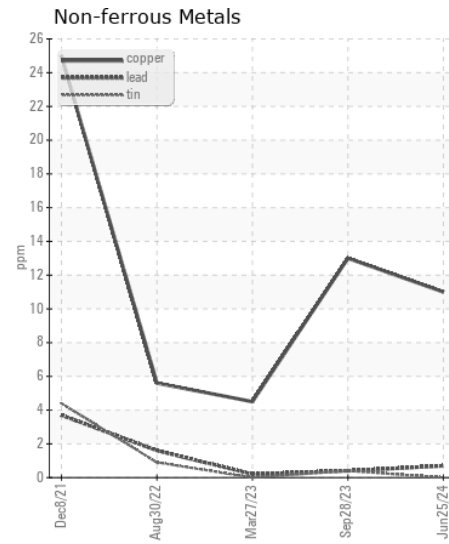
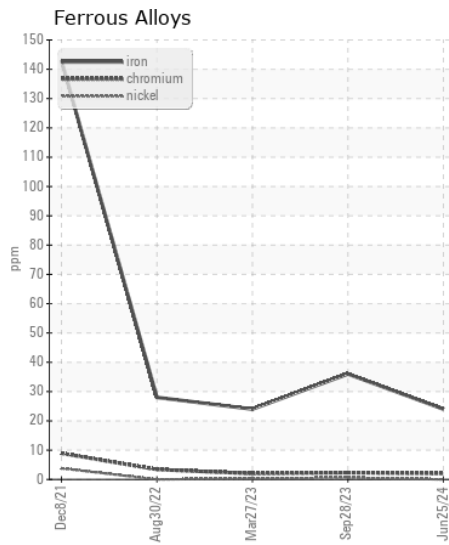
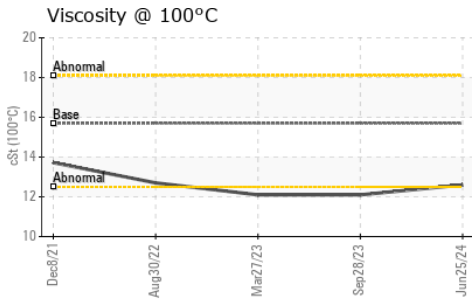
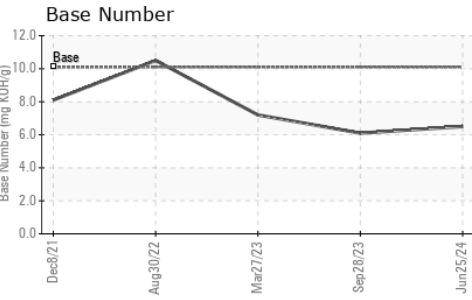
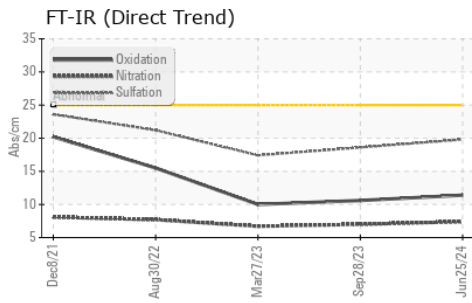
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>12</b>	17	13
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	2	2
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	0.3
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.4</b>	7.0	6.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.8</b>	18.6	17.4
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	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		<b>2</b>	1	2
Boron	ppm	ASTM D5185m	316	<b>27</b>	6	40
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	1.2	<b>11</b>	10	35
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	24	<b>101</b>	61	144
Calcium	ppm	ASTM D5185m	2292	<b>2642</b>	2383	2136
Phosphorus	ppm	ASTM D5185m	1064	<b>986</b>	922	857
Zinc	ppm	ASTM D5185m	1160	<b>1206</b>	1163	1039
Sulfur	ppm	ASTM D5185m	4996	<b>4444</b>	4074	3342
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>11.4</b>	10.6	10.0
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	<b>6.5</b>	6.1	7.2
Visc @ 100°C	cSt	ASTM D445	15.7	<b>12.6</b>	12.1	12.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0221773 **Received** : 18 Jul 2024  
**Lab Number** : 06240154 **Tested** : 19 Jul 2024  
**Unique Number** : 11128988 **Diagnosed** : 19 Jul 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: TBN )

**PATRIOT DEVELOPMENT CORP**  
 22721 LADBROOK DRIVE STE 120  
 STERLING, VA  
 US 20166  
 Contact: ROBERT MOSS  
 robert.moss@patriotdev.net

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)

T:  
F: