



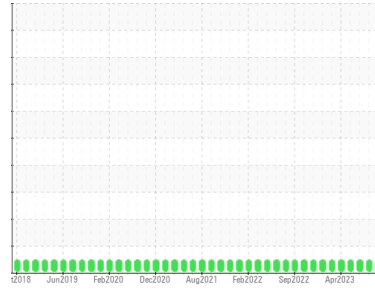
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
MACHINE SHOP
 Machine Id
0-9024-0000 STRADDLE CARRIER
 Component
Diesel Engine
 Fluid
ROYAL PURPLE MOTOR OIL 15W40 (23 QTS)



DIAGNOSIS

Recommendation
 Resample at the next service interval to monitor.

Wear
 All component wear rates are normal.

Contamination
 There is no indication of any contamination in the oil.

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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0864204	WC0821654	WC0821646
Sample Date	Client Info			09 Nov 2023	19 Sep 2023	24 Aug 2023
Machine Age	hrs Client Info			5794	5569	5360
Oil Age	hrs Client Info			0	5569	0
Oil Changed	Client Info			N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>5		<1.0	<1.0	<1.0
Water	WC Method	>0.2		NEG	NEG	NEG
Glycol	WC Method			NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	2	7	19
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	11	4
Lead	ppm	ASTM D5185m	>40	2	2	3
Copper	ppm	ASTM D5185m	>330	<1	6	8
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	4	<1	3
Barium	ppm	ASTM D5185m	0	0	2	0
Molybdenum	ppm	ASTM D5185m	100	77	59	86
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	60	18	13	17
Calcium	ppm	ASTM D5185m	3050	3289	3226	4768
Phosphorus	ppm	ASTM D5185m	1050	1124	1120	1563
Zinc	ppm	ASTM D5185m	1200	1386	1367	1898
Sulfur	ppm	ASTM D5185m	12500	17025	17343	24498

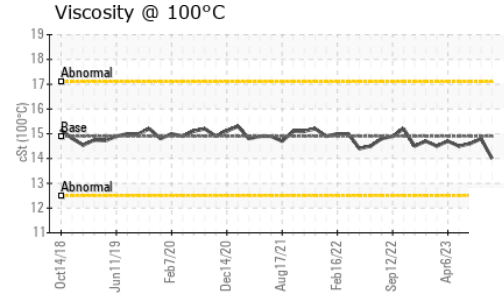
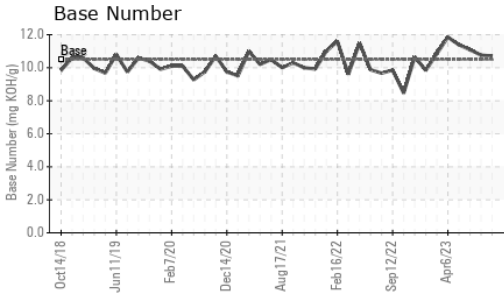
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	3	4	6
Sodium	ppm	ASTM D5185m		<1	4	3
Potassium	ppm	ASTM D5185m	>20	<1	2	3

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.1	0.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	5.8	8.5	8.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.4	28.2	27.7

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.6	19.1	18.6
Base Number (BN)	mg KOH/g	ASTM D2896	10.5	10.71	10.76	11.09



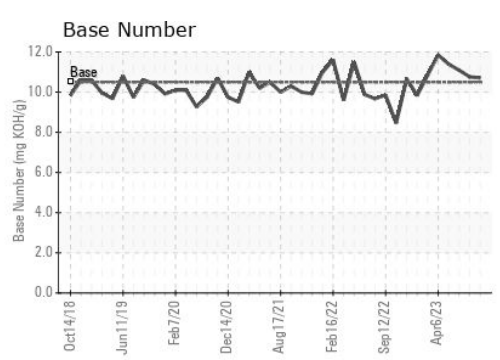
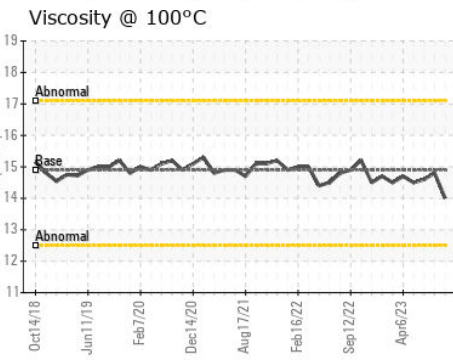
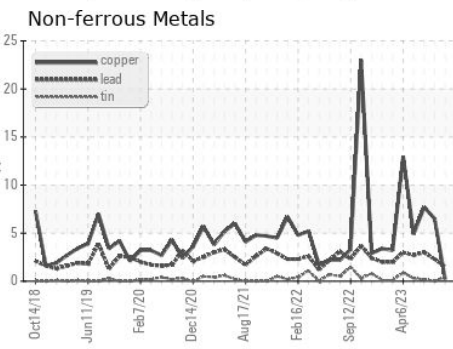
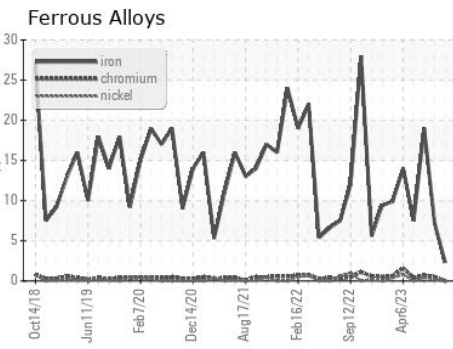
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	14.9	14.0	14.8	14.6

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0864204 **Received** : 16 Nov 2023
Lab Number : **06010295** **Diagnosed** : 20 Nov 2023
Unique Number : 10749439 **Diagnostician** : Sean Felton
Test Package : IND 2

ALLVAC - MACHINE SHOP
 2020 ASHCRAFT AVE
 MONROE, NC
 US 28110

Contact: mark eilerman
 mark.eilerman@atimaterials.com
 T: (704)292-4051
 F: (704)282-0665

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)