



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id  
**NISSAN ROGUE**  
Component  
**Gasoline Engine**  
Fluid  
**MOBIL 1 0W20 (--- QTS)**

## RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

## WEAR

All component wear rates are normal.

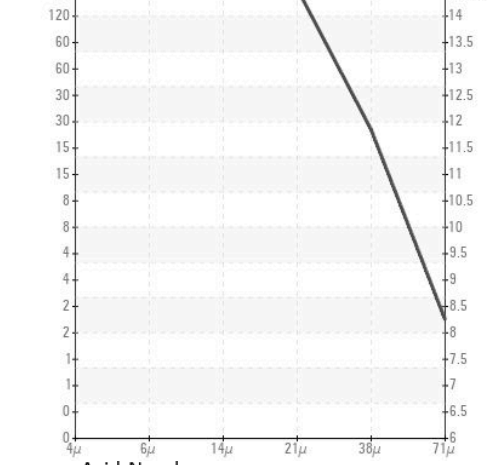
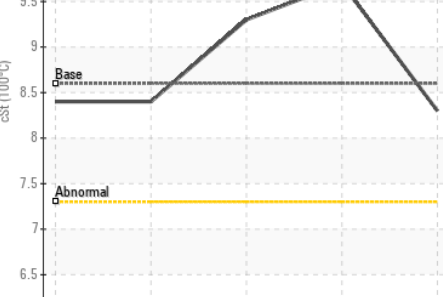
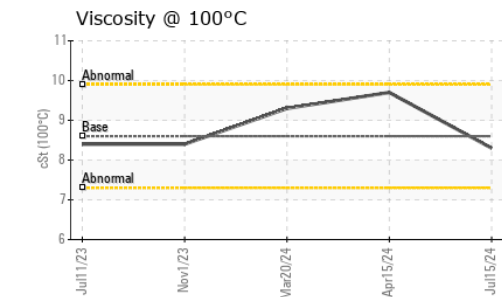
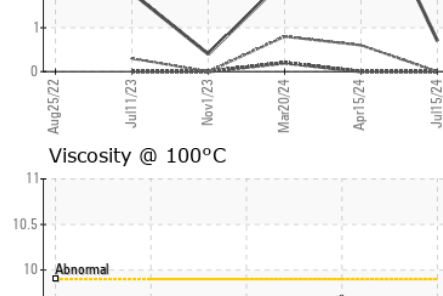
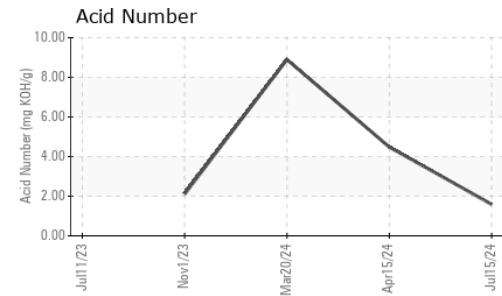
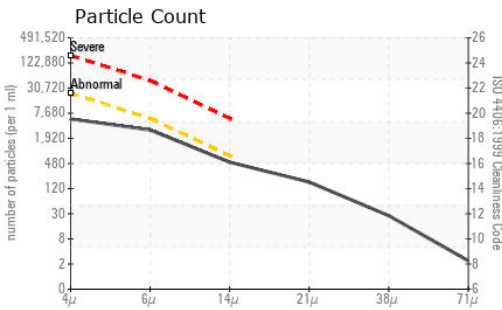
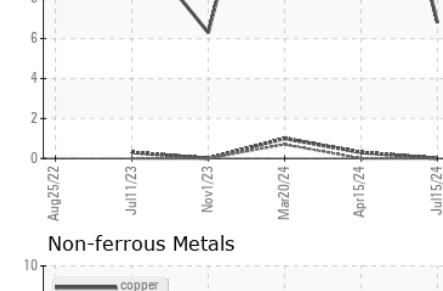
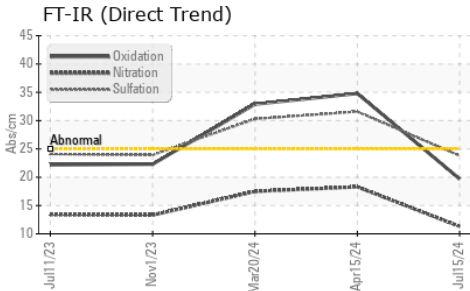
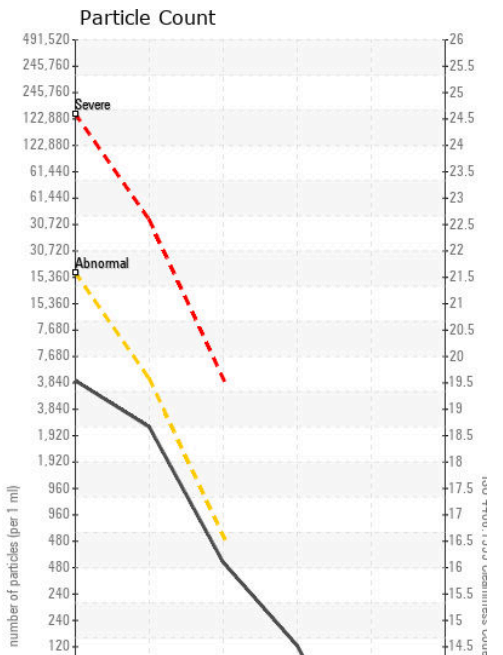
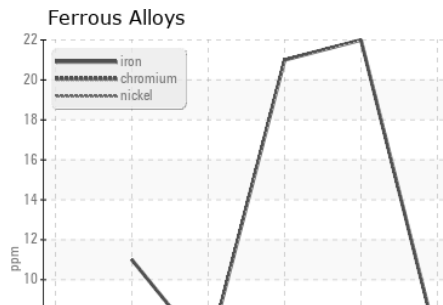
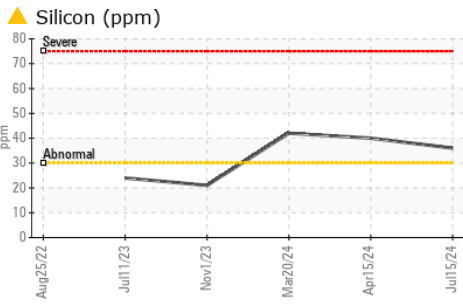
## CONTAMINATION

Elemental level of silicon (Si) above normal. The amount and size of particulates present in the system are acceptable.

## FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0886230</b>	WC0886233	WC0886234
Sample Date		Client Info		<b>15 Jul 2024</b>	15 Apr 2024	20 Mar 2024
Machine Age	mls	Client Info		<b>167123</b>	161586	161113
Oil Age	mls	Client Info		<b>0</b>	0	0
Filter Age	mls	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Chngd</b>	N/A	N/A
Filter Changed		Client Info		<b>Not Chngd</b>	N/A	N/A
Sample Status				<b>ABNORMAL</b>	SEVERE	SEVERE
Iron	ppm	ASTM D5185m	>150	<b>7</b>	22	21
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	1
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>40	<b>3</b>	9	8
Lead	ppm	ASTM D5185m	>50	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>155	<b>&lt;1</b>	4	2
Tin	ppm	ASTM D5185m	>10	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Silicon	ppm	ASTM D5185m	>30	<b>▲ 36</b>	▲ 40	▲ 42
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	3	2
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.3</b>	18.3	17.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.8</b>	31.6	30.3
Particles >4µm		ASTM D7647	>20000	<b>4880</b>	5011	8717
Particles >6µm		ASTM D7647	>5000	<b>2659</b>	2730	4749
Particles >14µm		ASTM D7647	>640	<b>452</b>	465	808
Particles >21µm		ASTM D7647	>160	<b>152</b>	156	272
Particles >38µm		ASTM D7647	>40	<b>24</b>	24	42
Particles >71µm		ASTM D7647	>10	<b>2</b>	2	4
Oil Cleanliness		ISO 4406 (c)	>21/19/16	<b>19/19/16</b>	20/19/16	20/19/17
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
Sodium	ppm	ASTM D5185m	>400	<b>1</b>	3	3
Boron	ppm	ASTM D5185m	70	<b>37</b>	30	26
Barium	ppm	ASTM D5185m	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	60	<b>84</b>	98	101
Manganese	ppm	ASTM D5185m	0	<b>3</b>	2	2
Magnesium	ppm	ASTM D5185m	620	<b>621</b>	704	668
Calcium	ppm	ASTM D5185m	875	<b>1041</b>	725	737
Phosphorus	ppm	ASTM D5185m	450	<b>750</b>	725	643
Zinc	ppm	ASTM D5185m	525	<b>905</b>	870	838
Sulfur	ppm	ASTM D5185m	1300	<b>3309</b>	2535	2140
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.7</b>	34.8	32.9
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>1.59</b>	▲ 4.48	▲ 8.898
Visc @ 100°C	cSt	ASTM D445	8.6	<b>8.3</b>	9.7	9.3



Certificate L2367

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

Sample No. : WC0886230

Lab Number : 06239639

Unique Number : 11128473

Test Package : MOB 2 ( Additional Tests: PrtCount, TBN )

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)

Received : 17 Jul 2024

Tested : 19 Jul 2024

Diagnosed : 19 Jul 2024 - Don Baldridge

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