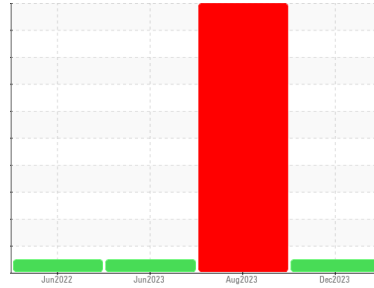




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
F-71201

Component
Tank Hydraulic System
Fluid
MOBIL JET OIL II (--- LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

All component wear rates are normal. The ferrography results are normal indicating no abnormal wear in the system.

Contaminants

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. The system and fluid cleanliness is acceptable.

Oil Condition

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

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	PP	WC	PP
Sample Date	Client Info	10 Dec 2023	31 Aug 2023	02 Jun 2023
Machine Age	hrs	0	0	0
Oil Age	hrs	0	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		NORMAL	SEVERE	NORMAL

WEAR METALS

method	limit/base	current	history1	history2	
PQ	ASTM D8184*	0	0	0	
Iron	ppm	ASTM D5185(m) >20	0	<1	0
Chromium	ppm	ASTM D5185(m) >10	0	0	0
Nickel	ppm	ASTM D5185(m) >10	<1	<1	0
Titanium	ppm	ASTM D5185(m)	0	0	0
Silver	ppm	ASTM D5185(m)	<1	0	<1
Aluminum	ppm	ASTM D5185(m) >10	0	0	<1
Lead	ppm	ASTM D5185(m) >20	<1	▲ 8	0
Copper	ppm	ASTM D5185(m) >20	<1	0	<1
Tin	ppm	ASTM D5185(m) >10	0	0	0
Antimony	ppm	ASTM D5185(m)	0	0	0
Vanadium	ppm	ASTM D5185(m)	0	0	0
Beryllium	ppm	ASTM D5185(m)	0	0	0
Cadmium	ppm	ASTM D5185(m)	0	0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	<1	<1	2
Barium	ppm	ASTM D5185(m)	<1	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0
Manganese	ppm	ASTM D5185(m)	0	0	0
Magnesium	ppm	ASTM D5185(m)	0	0	0
Calcium	ppm	ASTM D5185(m)	0	1	<1
Phosphorus	ppm	ASTM D5185(m)	2669	▲ 15	2690
Zinc	ppm	ASTM D5185(m)	<1	6	2
Sulfur	ppm	ASTM D5185(m)	2	▲ 2225	0
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

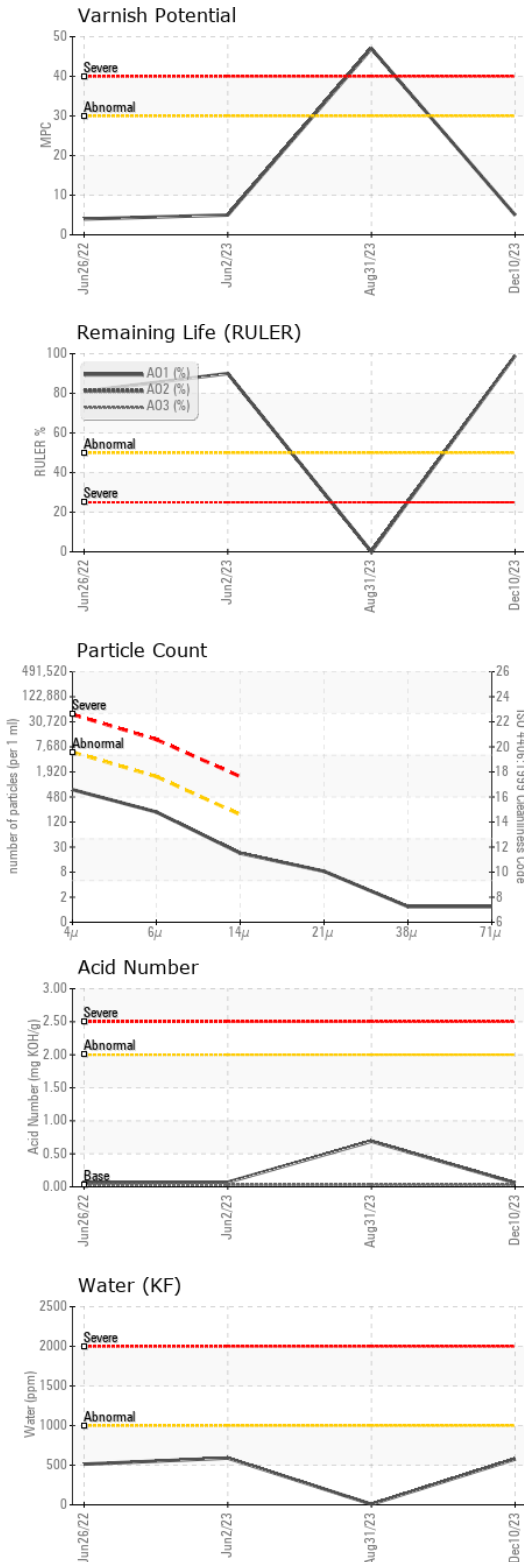
method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m) >15	<1	2	0
Sodium	ppm	ASTM D5185(m)	<1	0	<1
Potassium	ppm	ASTM D5185(m) >20	0	0	0
Water	%	ASTM D6304* >.1	0.057	0.001	0.058
ppm Water	ppm	ASTM D6304* >1000	577	7.0	589.8

INFRA-RED

method	limit/base	current	history1	history2	
Soot %	%	ASTM D7844*	0.2	0	0.1
Nitration	Abs/cm	ASTM D7624*	8.7	3.1	8.7
Sulfation	Abs/.1mm	ASTM D7415*	170.2	20.8	164.9



OIL ANALYSIS REPORT



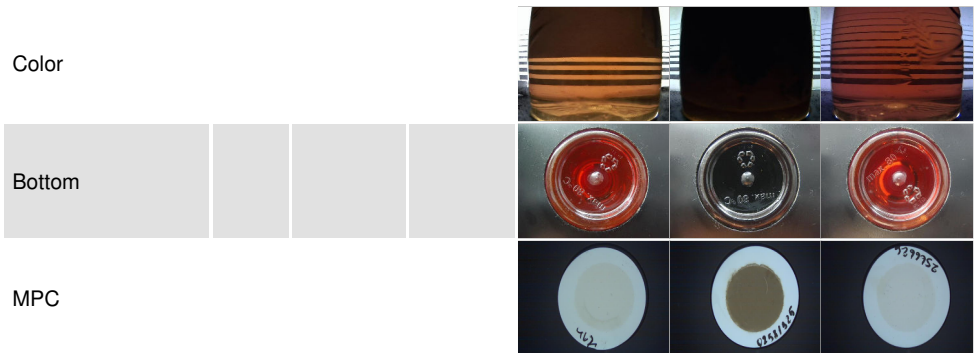
FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	631	61332	168
Particles >6µm	ASTM D7647	>1300	184	14673	64
Particles >14µm	ASTM D7647	>160	19	1069	9
Particles >21µm	ASTM D7647	>40	7	324	4
Particles >38µm	ASTM D7647	>10	1	18	0
Particles >71µm	ASTM D7647	>3	1	2	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	16/15/11	23/21/17	15/13/10

FLUID DEGRADATION	method	limit/base	current	history1	history2
Oxidation	Abs./1mm	ASTM D7414*	229.1	14.9	222.2
Acid Number (AN)	mg KOH/g	ASTM D974*	0.06	0.69	0.07
Anti-Oxidant 1	%	ASTM D6971*	99	0	90
MPC Varnish Potential	Scale	ASTM D7843(m)*	5	47	5

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	VLITE	NONE
Debris	scalar	Visual*	NONE	VLITE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	NEG	NEG	NEG
Free Water	scalar	Visual*	NEG	NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	25.3	22.9	25.7
Visc @ 100°C	cSt	ASTM D7279(m)	5	4.7	5
Viscosity Index (VI)	Scale	ASTM D2270*	125	125	122

SAMPLE IMAGES



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 HIBERNIA MGMT & DEVELOPMENT CO. LTD
 Sample No. : PP
 Lab Number : 02603462
 Unique Number : 5696547
 Test Package : AOM 2
 Recieved : 15 Dec 2023
 Diagnosed : 21 Dec 2023
 Diagnostician : Bill Quesnel

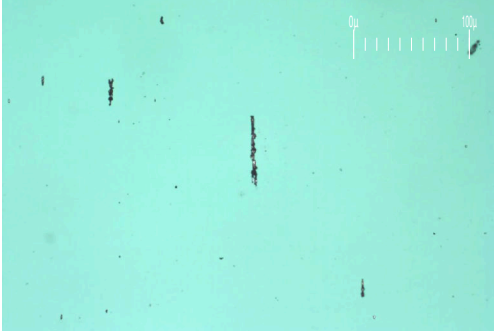
To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

ST. JOHNS, NL
 CA A1C 6K3
 Contact: Sam Nash
 samantha.m.nash@exxonmobil.com
 T:
 F: (709)722-3766

FERROGRAPHY REPORT

Machine Id
F-71201
 Component
Tank Hydraulic System
 Fluid
MOBIL JET OIL II (--- LTR)

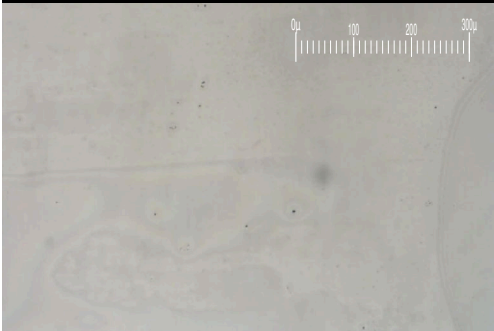
Magn: 200x Illum: BC



Magn: 50x Illum: RW



Magn: 100x Illum: RW

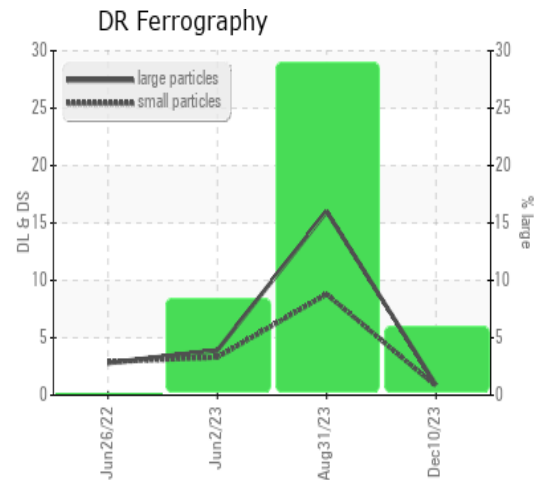


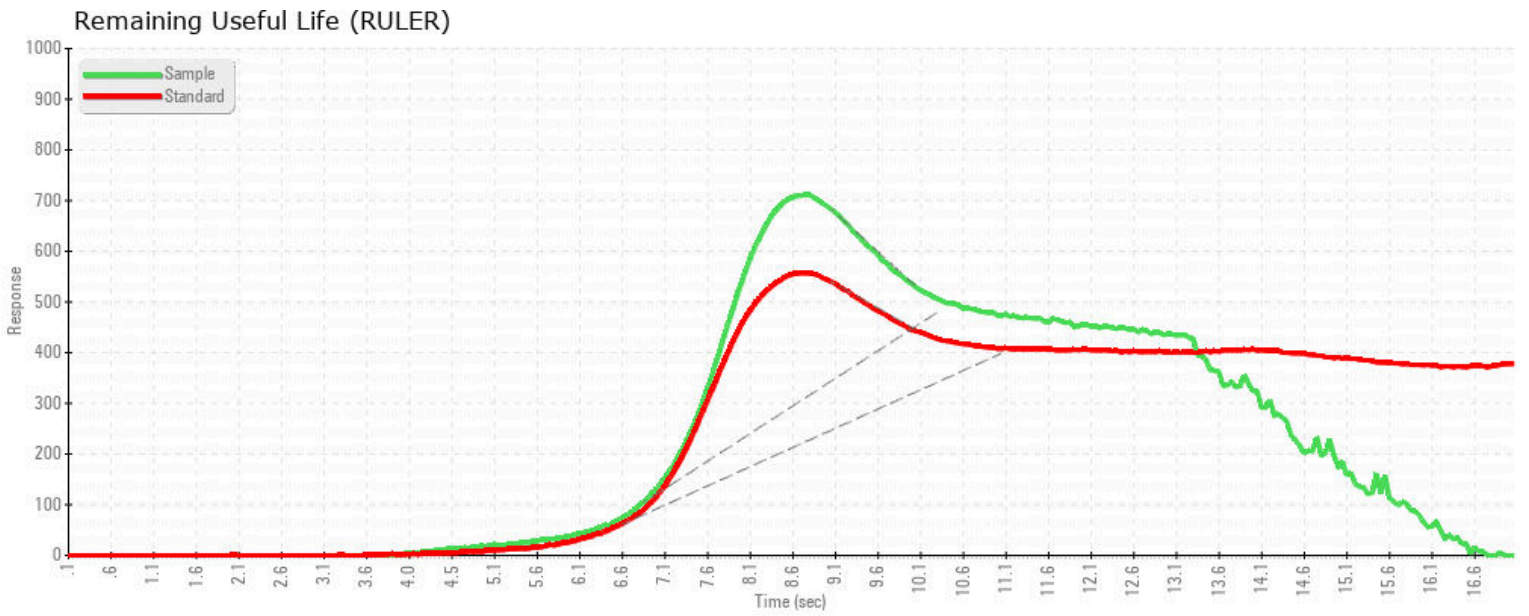
DR-FERROGRAPHY		method	limit/base	current	history1	history2
Large Particles		DR-Ferr*		0.9	16.0	3.9
Small Particles		DR-Ferr*		0.8	8.8	3.3
Total Particles		DR-Ferr*	>---	1.7	24.8	7.2
Large Particles Percentage	%	DR-Ferr*		5.9	29	8.3
Severity Index		DR-Ferr*		0	115	2

FERROGRAPHY		method	limit/base	current	history1	history2
Ferrous Rubbing	Scale 0-10	ASTM D7684*		2	3	1
Ferrous Sliding	Scale 0-10	ASTM D7684*				
Ferrous Cutting	Scale 0-10	ASTM D7684*				
Ferrous Rolling	Scale 0-10	ASTM D7684*		1	1	1
Ferrous Break-in	Scale 0-10	ASTM D7684*				
Ferrous Spheres	Scale 0-10	ASTM D7684*				
Ferrous Black Oxides	Scale 0-10	ASTM D7684*			1	
Ferrous Red Oxides	Scale 0-10	ASTM D7684*				
Ferrous Corrosive	Scale 0-10	ASTM D7684*				
Ferrous Other	Scale 0-10	ASTM D7684*				
Nonferrous Rubbing	Scale 0-10	ASTM D7684*				
Nonferrous Sliding	Scale 0-10	ASTM D7684*				
Nonferrous Cutting	Scale 0-10	ASTM D7684*				
Nonferrous Rolling	Scale 0-10	ASTM D7684*				
Nonferrous Other	Scale 0-10	ASTM D7684*				
Carbonaceous Material	Scale 0-10	ASTM D7684*				
Lubricant Degradation	Scale 0-10	ASTM D7684*				
Sand/Dirt	Scale 0-10	ASTM D7684*		1	1	1
Fibres	Scale 0-10	ASTM D7684*				
Spheres	Scale 0-10	ASTM D7684*				
Other	Scale 0-10	ASTM D7684*		1	2	1

WEAR

All component wear rates are normal. The ferrography results are normal indicating no abnormal wear in the system.





MPC (Varnish Test)



Sample Color & Clarity

