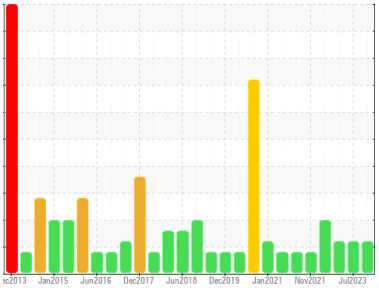
PROBLEM SUMMARY

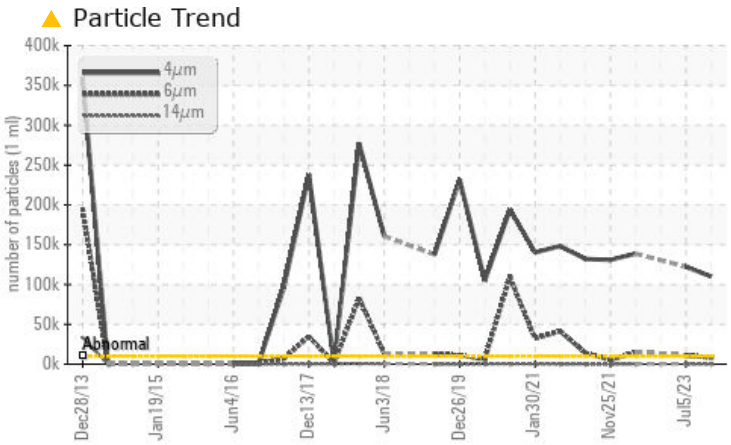
Sample Rating Trend



ISO

Area
412
Machine Id
74 BANBURY MOTOR
Component
Outboard Journal Bearing
Fluid
ESSO NUTO H ISO 68 (1 QTS)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

The oil change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL
Particles >4µm		ASTM D7647	>10000	▲ **110082**	▲ 122381	---
Particles >6µm		ASTM D7647	>2500	▲ **8419**	▲ 10868	---
Oil Cleanliness		ISO 4406 (c)	>20/18/14	▲ **24/20/12**	▲ 24/21/13	---

Customer Id: BRIDES
Sample No.: WC0397547
Lab Number: 05923339
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Doug Bogart +1 (800)237-1369 x4016
dougb@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

05 Jul 2023 Diag: Angela Borella

ISO

The oil change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

09 Apr 2023 Diag: Don Baldridge

VISUAL METAL

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. We were unable to perform a particle count due to metal particles present in this sample.Moderate concentration of visible metal present. All component wear rates are normal. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

view report

30 Dec 2022 Diag: Angela Borella

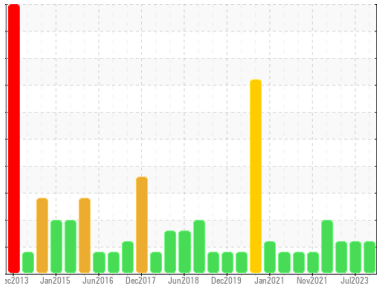
WEAR

The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. Resample at the next service interval to monitor.A sharp increase in the tin level is noted. All other component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
412
Machine Id
74 BANBURY MOTOR
Component
Outboard Journal Bearing
Fluid
ESSO NUTO H ISO 68 (1 QTS)

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Fluid 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		**WC0397547**	WC0569521	WC0569583
Sample Date		Client Info		**07 Aug 2023**	05 Jul 2023	09 Apr 2023
Machine Age	mths	Client Info		**1**	6	0
Oil Age	mths	Client Info		**0**	0	4
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**ABNORMAL**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		**6**	17	13
Iron	ppm	ASTM D5185m	>60	**<1**	3	<1
Chromium	ppm	ASTM D5185m	>20	**0**	0	0
Nickel	ppm	ASTM D5185m	>20	**0**	0	0
Titanium	ppm	ASTM D5185m		**<1**	0	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>4	**<1**	<1	0
Lead	ppm	ASTM D5185m	>250	**6**	10	10
Copper	ppm	ASTM D5185m	>125	**8**	12	7
Tin	ppm	ASTM D5185m	>80	**21**	37	38
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**0**	0	0
Barium	ppm	ASTM D5185m	0	**<1**	0	0
Molybdenum	ppm	ASTM D5185m	0	**<1**	<1	<1
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	5	**6**	0	4
Calcium	ppm	ASTM D5185m	50	**41**	39	49
Phosphorus	ppm	ASTM D5185m	330	**327**	332	336
Zinc	ppm	ASTM D5185m	420	**392**	411	423
Sulfur	ppm	ASTM D5185m	3100	**3014**	3016	2734

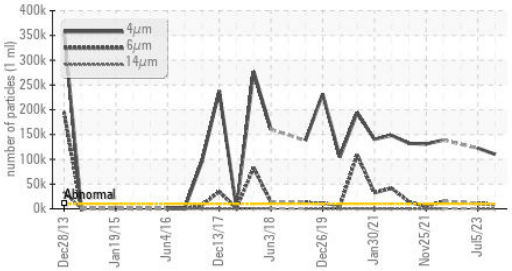
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**3**	3	2
Sodium	ppm	ASTM D5185m		**2**	0	0
Potassium	ppm	ASTM D5185m	>20	**<1**	1	0

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	▲ **110082**	▲ 122381	---
Particles >6µm		ASTM D7647	>2500	▲ **8419**	▲ 10868	---
Particles >14µm		ASTM D7647	>160	**38**	41	---
Particles >21µm		ASTM D7647	>40	**8**	7	---
Particles >38µm		ASTM D7647	>10	**0**	0	---
Particles >71µm		ASTM D7647	>3	**0**	0	---
Oil Cleanliness		ISO 4406 (c)	>20/18/14	▲ **24/20/12**	▲ 24/21/13	---

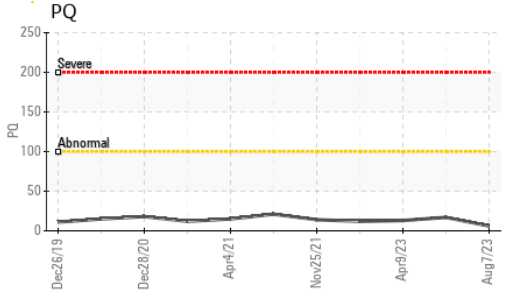
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	.40	**0.42**	0.41	0.44

OIL ANALYSIS REPORT

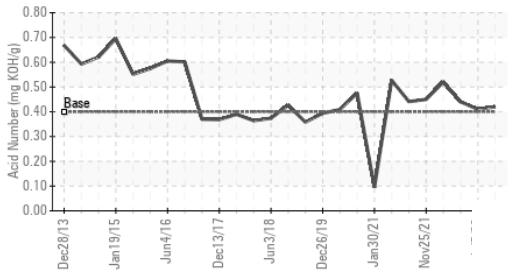
Particle Trend



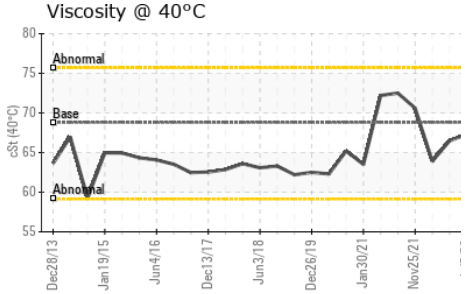
PQ



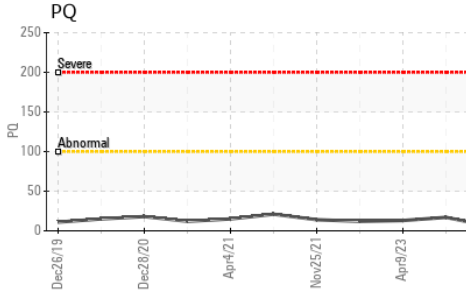
Acid Number



Viscosity @ 40°C



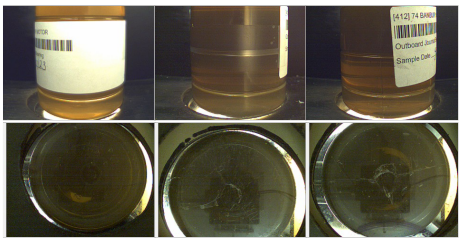
PQ



VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**LIGHT**	NONE	▲ MODER
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
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	>2	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

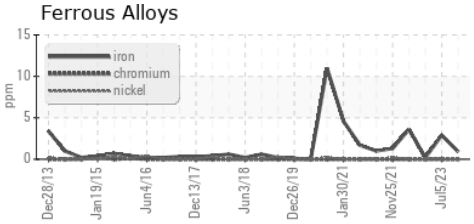
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	68.8	**66.1**	67.3	66.5

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

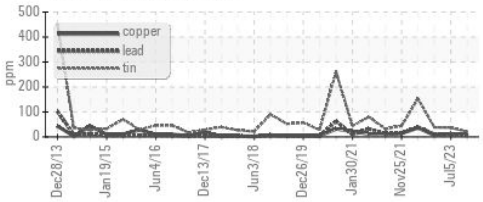


GRAPHS

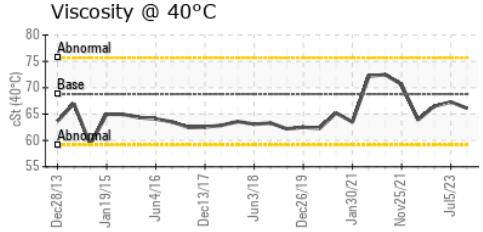
Ferrous Alloys



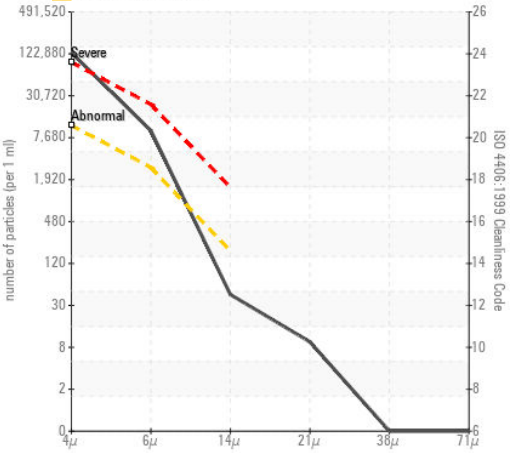
Non-ferrous Metals



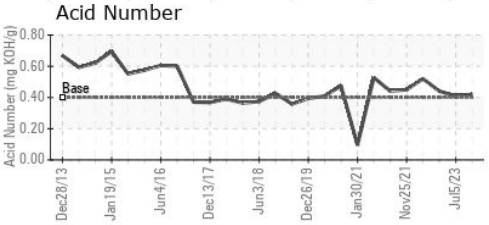
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0397547 **Received** : 14 Aug 2023
Lab Number : 05923339 **Diagnosed** : 18 Aug 2023
Unique Number : 10603286 **Diagnostician** : Doug Bogart
Test Package : IND 2 (Additional Tests: PQ, PrtCount)

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)

BRIDGESTONE FIRESTONE - DES MOINES
4600 NW 2ND AVE
DES MOINES, IA
US 50313
Contact: SCOTT CARTER
CarterScottA@FirestoneAg.com
T: x:
F: x: