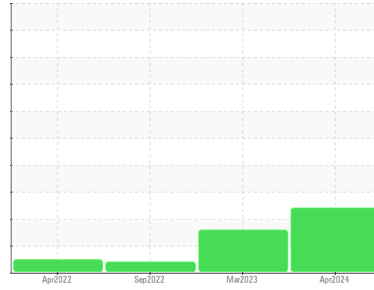




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
HOWARD SHEPPARD
 Machine Id
2567 HOWARD SHEPPARD
 Component
Front Differential
 Fluid
GEAR OIL SAE 75W90 (--- GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. Please note that this is a corrected copy for laboratory data updates of elemental data and confirmation of viscosities.

Wear

All component wear rates are normal.

Contamination

There is a high amount of particulates 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			WC0934657	WC0728455	WC0771232
Sample Date	Client Info			15 Apr 2024	06 Mar 2023	12 Sep 2022
Machine Age	mls	Client Info		196543	95639	48859
Oil Age	mls	Client Info		0	0	0
Oil Changed	Client Info			N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	158	234	126
Chromium	ppm	ASTM D5185m	>10	<1	2	<1
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	4	9	13
Lead	ppm	ASTM D5185m	>25	0	0	0
Copper	ppm	ASTM D5185m	>100	1	2	<1
Tin	ppm	ASTM D5185m	>10	0	0	0
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

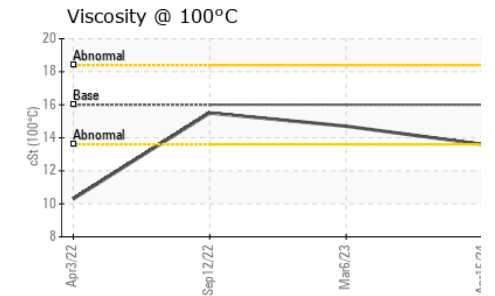
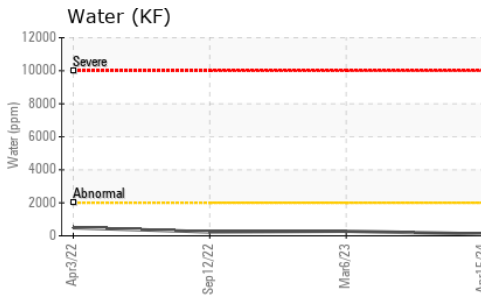
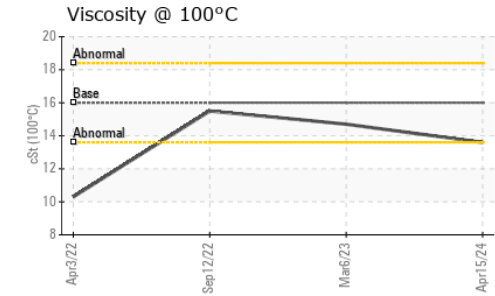
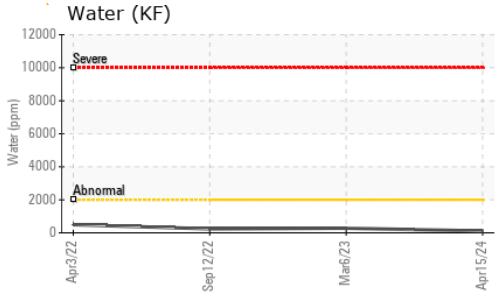
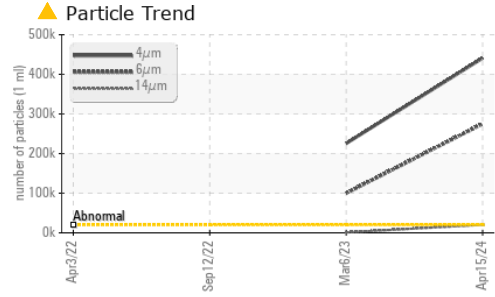
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	400	6	156	175
Barium	ppm	ASTM D5185m	200	0	0	0
Molybdenum	ppm	ASTM D5185m	12	<1	2	2
Manganese	ppm	ASTM D5185m		3	5	3
Magnesium	ppm	ASTM D5185m	12	4	27	29
Calcium	ppm	ASTM D5185m	150	14	69	73
Phosphorus	ppm	ASTM D5185m	1650	292	989	1008
Zinc	ppm	ASTM D5185m	125	17	47	53
Sulfur	ppm	ASTM D5185m	22500	17086	24224	25672

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>75	45	44	37
Sodium	ppm	ASTM D5185m		9	4	3
Potassium	ppm	ASTM D5185m	>20	1	0	<1
Water	%	ASTM D6304	>.2	0.011	0.027	0.023
ppm Water	ppm	ASTM D6304	>2000	111	279.0	238.3

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>20000	▲ 441146	▲ 225727	---
Particles >6µm		ASTM D7647	>5000	▲ 275020	▲ 100242	---
Particles >14µm		ASTM D7647	>640	▲ 20298	▲ 1032	---
Particles >21µm		ASTM D7647	>160	▲ 3867	137	---
Particles >38µm		ASTM D7647	>40	▲ 68	3	---
Particles >71µm		ASTM D7647	>10	0	0	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ 26/25/22	▲ 25/24/17	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	2.00	1.00	2.54	2.96

OIL ANALYSIS REPORT

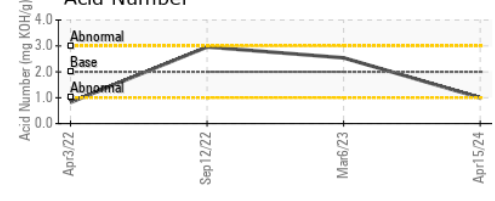
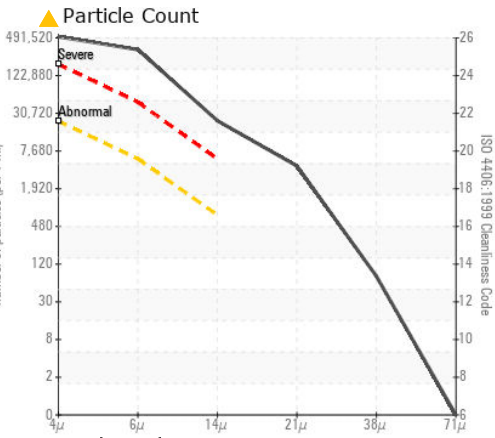
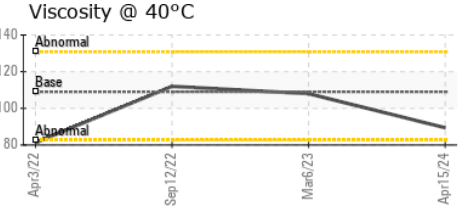
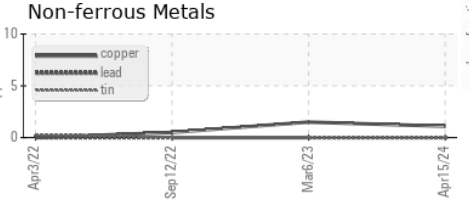
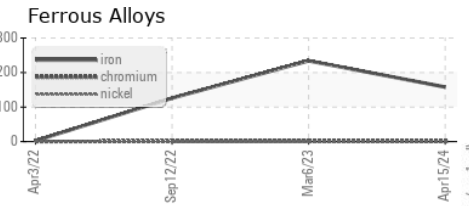


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	VLITE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	109	89.4	108
Visc @ 100°C	cSt	ASTM D445	16.0	13.6	14.7
Viscosity Index (VI)	Scale	ASTM D2270	157	154	145

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0934657 **Received** : 30 May 2024
Lab Number : 06195918 **Tested** : 13 Jun 2024
Unique Number : 11058041 **Diagnosed** : 13 Jun 2024 - Doug Bogart
Test Package : MOB 2 (Additional Tests: KF, KV100, PrtCount, VI)

BASF - GIANNA CREDAROLI
 500 WHITE PLAINS RD
 TARRYTOWN, NY
 US 10591
 Contact: MIKE BARRY
 mike.barry@basf.com

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)