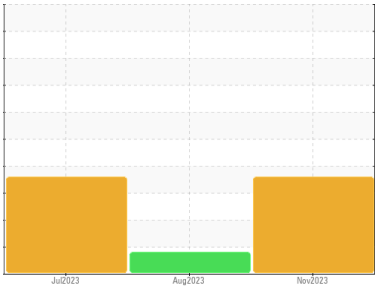
PROBLEM SUMMARY

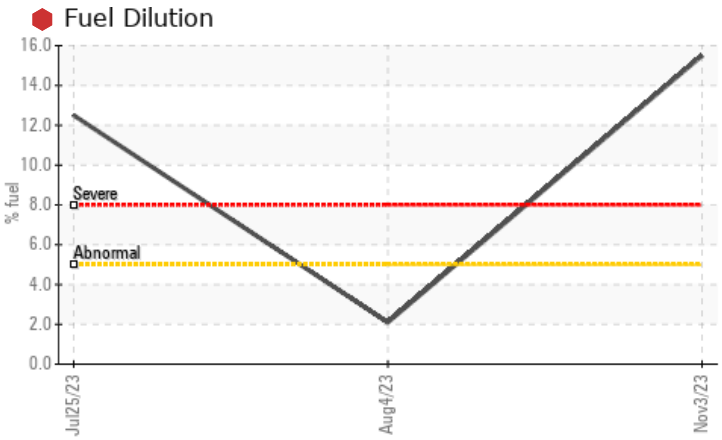
Area
Omaha Tire Warehouse
Machine Id
FORD 1910
Component
1 Diesel Engine
Fluid
AMERIGUARD 10W30 (--- GAL)

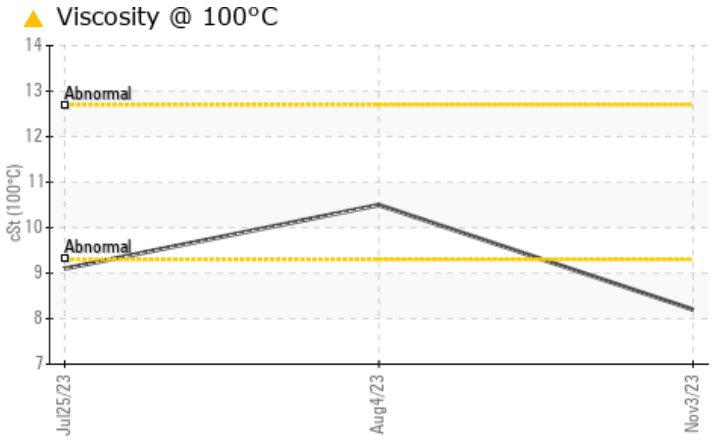
Sample Rating Trend



FUEL

COMPONENT CONDITION SUMMARY





RECOMMENDATION

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	MARGINAL	SEVERE
Fuel	%	ASTM D3524	>5	**15.5**	2.1	12.5
Base Number (BN)	mg KOH/g	ASTM D2896		**2.3**	8.3	3.7
Visc @ 100°C	cSt	ASTM D445		**8.2**	10.5	9.1

Customer Id: SAPPOMA
Sample No.: SBP0004646
Lab Number: 06008198
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldridge +1
don.b505@comcast.net

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

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Fuel/injector System	---	---	?	We advise that you check the fuel injection system.

HISTORICAL DIAGNOSIS

04 Aug 2023 Diag: Jonathan Hester

FUEL

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.All component wear rates are normal. Fuel content negligible. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report

25 Jul 2023 Diag: Jonathan Hester

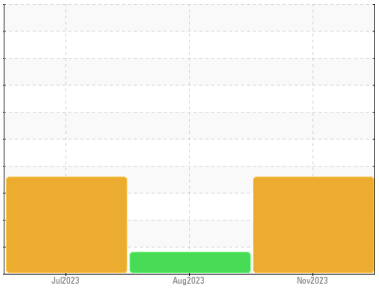
FUEL

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.All component wear rates are normal. There is a high amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The BN level is low.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



FUEL

Area
Omaha Tire Warehouse
Machine Id
FORD 1910
Component
1 Diesel Engine
Fluid
AMERIGUARD 10W30 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a high amount of fuel present in the oil.

Fluid Condition

Fuel is present in the oil and is lowering the viscosity. The BN level is low.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**SBP0004646**	SBP0004650	SBP0003627
Sample Date		Client Info		**03 Nov 2023**	04 Aug 2023	25 Jul 2023
Machine Age	mls	Client Info		**172802**	164255	163164
Oil Age	mls	Client Info		**8547**	164255	0
Oil Changed		Client Info		**Changed**	Changed	Changed
Sample Status				**SEVERE**	MARGINAL	SEVERE

CONTAMINATION		method	limit/base	current	history1	history2
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	**8**	5	17
Chromium	ppm	ASTM D5185m	>20	**0**	<1	<1
Nickel	ppm	ASTM D5185m	>4	**0**	<1	<1
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m	>3	**0**	0	0
Aluminum	ppm	ASTM D5185m	>20	**<1**	1	3
Lead	ppm	ASTM D5185m	>40	**<1**	0	0
Copper	ppm	ASTM D5185m	>330	**<1**	<1	1
Tin	ppm	ASTM D5185m	>15	**0**	<1	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**<1**	2	2
Barium	ppm	ASTM D5185m		**<1**	0	0
Molybdenum	ppm	ASTM D5185m		**46**	54	50
Manganese	ppm	ASTM D5185m		**0**	<1	<1
Magnesium	ppm	ASTM D5185m		**775**	838	772
Calcium	ppm	ASTM D5185m		**873**	993	936
Phosphorus	ppm	ASTM D5185m		**860**	938	828
Zinc	ppm	ASTM D5185m		**1045**	1105	1007
Sulfur	ppm	ASTM D5185m		**2633**	3113	2745

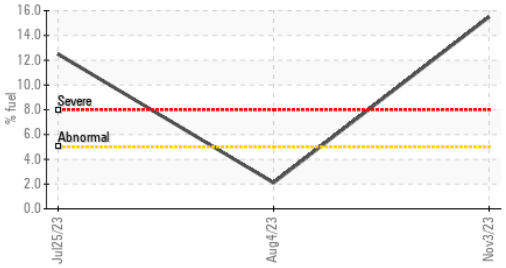
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	**7**	6	9
Sodium	ppm	ASTM D5185m		**2**	<1	2
Potassium	ppm	ASTM D5185m	>20	**<1**	<1	1
Fuel	%	ASTM D3524	>5	**15.5**	2.1	12.5

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.3**	0.1	0.3
Nitration	Abs/cm	*ASTM D7624	>20	**10.1**	6.1	11.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	**31.8**	20.4	31.0

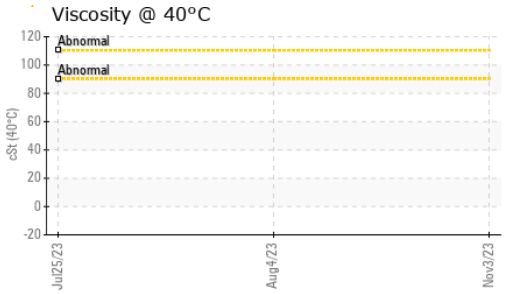
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**45.0**	19.7	41.9
Base Number (BN)	mg KOH/g	ASTM D2896		**2.3**	8.3	3.7

OIL ANALYSIS REPORT

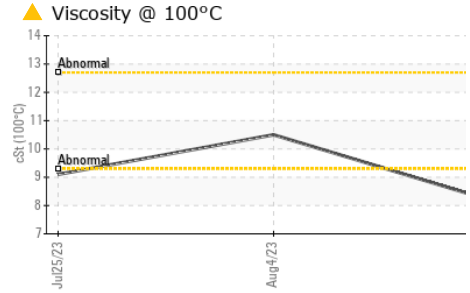
Fuel Dilution



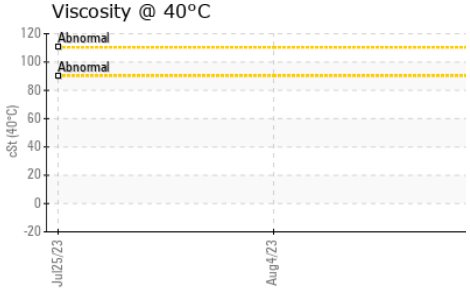
Viscosity @ 40°C



Viscosity @ 100°C



Viscosity @ 40°C

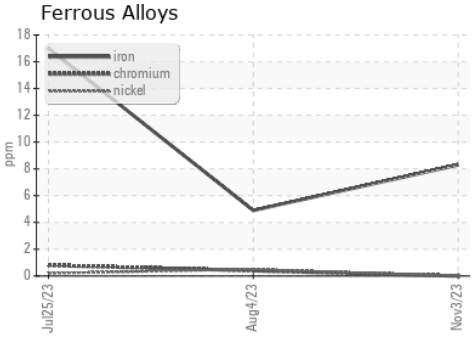


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

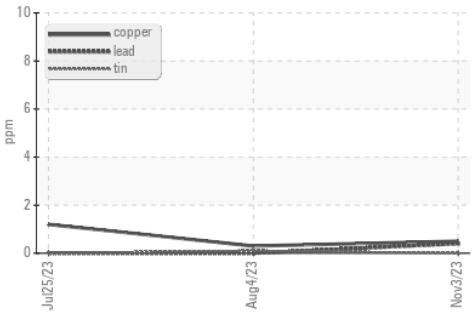
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		▲ **8.2**	10.5	▲ 9.1

GRAPHS

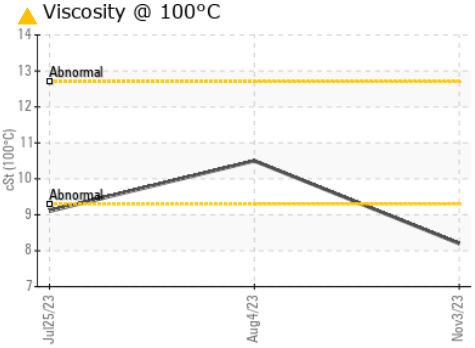
Ferrous Alloys



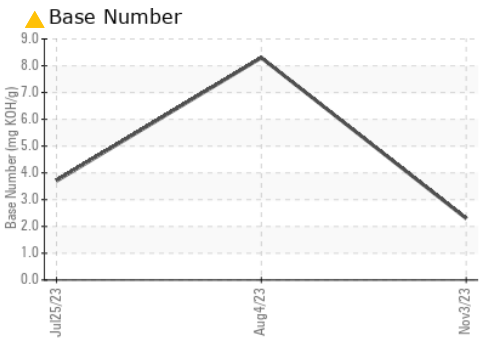
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : SBP0004646
Lab Number : 06008198
Unique Number : 10741960
Test Package : FLEET (Additional Tests: FuelDilution, KV40, PercentFuel)

Received : 15 Nov 2023
Diagnosed : 17 Nov 2023
Diagnostician : Don Baldridge

Sapp Bros. Petroleum - Omaha - OMA
9915 South 148th
OMAHA, NE
US 68138
Contact: Service Manager
T:
F:

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)