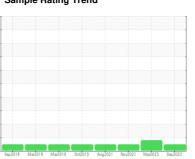


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



FSP133180 (S/N FVGS8303)

Component

Diesel Engine

DIESEL ENGINE OIL SAE 15W40 (44 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

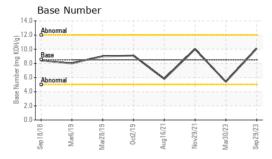
Fluid Condition

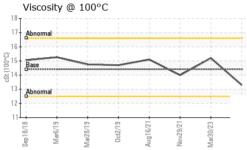
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Smg2018 Mmg2019 Mmg2019 Onc2019 Amg2021 Nov2021 Mmg2022 Smg20223							
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2	
Sample Number		Client Info		WC0787680	WC0787540	WC0640763	
Sample Date		Client Info		29 Sep 2023	30 Mar 2023	29 Nov 2021	
Machine Age	mls	Client Info		527939	0	484246	
Oil Age	mls	Client Info		0	0	0	
Oil Changed		Client Info		N/A	N/A	Changed	
Sample Status				NORMAL	ABNORMAL	NORMAL	
CONTAMINATION	١	method	limit/base	current	history1	history2	
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0	
Glycol		WC Method		NEG	NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>200	10	89	30	
Chromium	ppm	ASTM D5185m	>20	<1	4	2	
Nickel	ppm	ASTM D5185m	>2	0	0	<1	
Titanium	ppm	ASTM D5185m	>2	0	0	<1	
Silver	ppm	ASTM D5185m	>2	0	0	1	
Aluminum	ppm	ASTM D5185m	>30	5	△ 36	16	
Lead	ppm	ASTM D5185m	>30	0	0	<1	
Copper	ppm	ASTM D5185m	>30	1	7	3	
Tin	ppm	ASTM D5185m	>15	0	0	<1	
Antimony	ppm	ASTM D5185m				<1	
Vanadium	ppm	ASTM D5185m		0	0	<1	
Cadmium	ppm	ASTM D5185m		0	0	<1	
ADDITIVES		method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	250	4	<1	0	
Barium	ppm	ASTM D5185m	10	5	0	0	
Molybdenum	ppm	ASTM D5185m	100	61	69	61	
Manganese	ppm	ASTM D5185m		0	2	<1	
Magnesium	ppm	ASTM D5185m	450	877	1086	962	
Calcium	ppm	ASTM D5185m	3000	993	1295	1223	
Phosphorus	ppm	ASTM D5185m	1150	973	1101	1044	
Zinc	ppm	ASTM D5185m	1350	1151	1413	1311	
Sulfur	ppm	ASTM D5185m	4250	3283	3308	2792	
CONTAMINANTS		method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>30	4	11	5	
Sodium	ppm	ASTM D5185m	>158	2	2	1	
Potassium	ppm	ASTM D5185m	>20	2	8	4	
INFRA-RED		method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	0.3	1.8	0.7	
Nitration	Abs/cm	*ASTM D7624	>20	5.9	13.7	8.4	
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.3	27.5	21.6	
FLUID DEGRADA	TION	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.9	22.2	16.1	
Base Number (BN)	mg KOH/g	ASTM D2896		10.1	5.4	10	
(=)	0 3						



OIL ANALYSIS REPORT

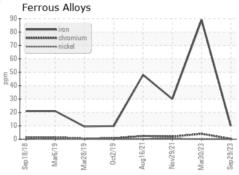


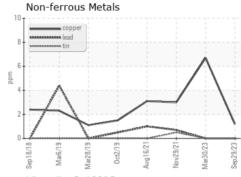


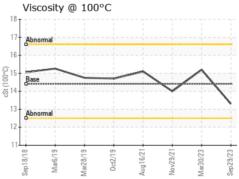
VISUAL		method				history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	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

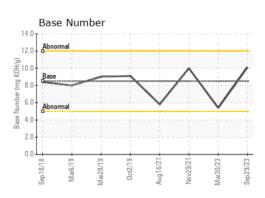
FLUID PROPER	THES	metnoa	ilmit/base	current	nistory i	nistory2
Visc @ 100°C	cSt	ASTM D445	14.4	13.3	15.2	14.0

GRAPHS













Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10729286 Test Package : FLEET

: WC0787680 : 06000926

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

: 07 Nov 2023 : 08 Nov 2023 Diagnostician : Wes Davis

FRESHPOINT 8801 EXCHANGE DRVIE ORLANDO, FL US 32809

Contact: CRAIG EVANS evans_craig@sbcglobal.net T:

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)

F: