



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
D-232
 Component
Diesel Engine
 Fluid
PHILLIPS 66 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0828487	WC0828529	WC0780335
Sample Date		Client Info		20 Dec 2023	21 Sep 2023	20 Jul 2023
Machine Age	hrs	Client Info		2533	2279	1957
Oil Age	hrs	Client Info		254	322	261
Filter Age	hrs	Client Info		254	322	261
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	4	10	9
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		<1	1	4
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	<1	4
Lead	ppm	ASTM D5185m	>40	<1	9	1
Copper	ppm	ASTM D5185m	>330	1	<1	<1
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

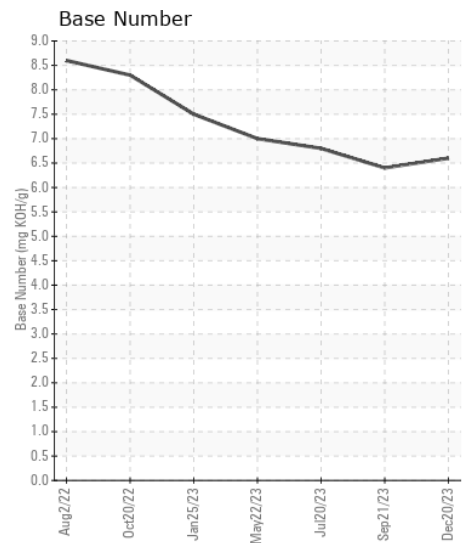
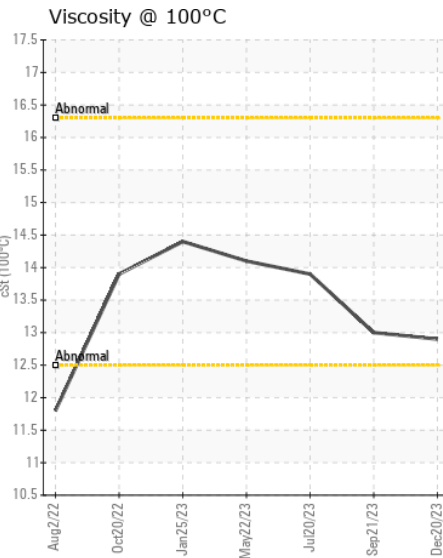
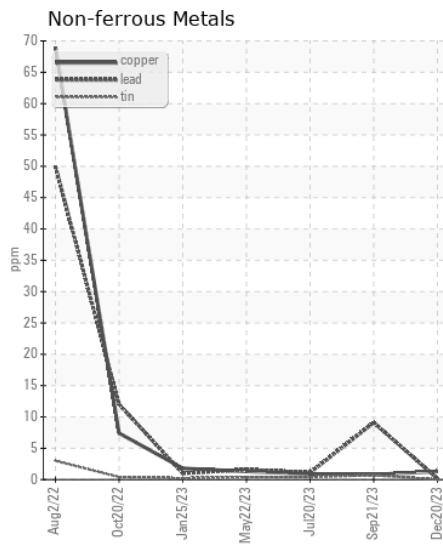
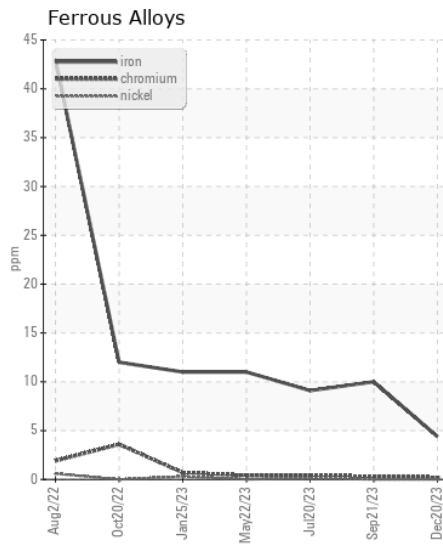
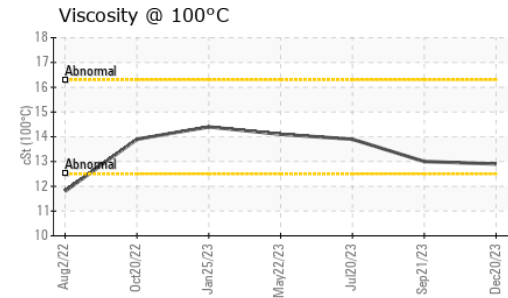
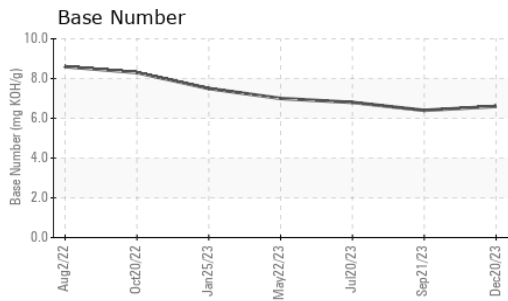
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	4	5	4
Potassium	ppm	ASTM D5185m	>20	0	<1	0
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.5	0.5
Nitration	Abs/cm	*ASTM D7624	>20	10.5	10.9	10.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.1	20.0	19.6
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

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.

Sodium	ppm	ASTM D5185m		3	1	2
Boron	ppm	ASTM D5185m		47	32	44
Barium	ppm	ASTM D5185m		<1	0	0
Molybdenum	ppm	ASTM D5185m		89	89	94
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		24	25	56
Calcium	ppm	ASTM D5185m		2221	2185	2447
Phosphorus	ppm	ASTM D5185m		1030	1007	1104
Zinc	ppm	ASTM D5185m		1202	1290	1316
Sulfur	ppm	ASTM D5185m		3470	3860	4625
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.3	16.5	15.6
Base Number (BN)	mg KOH/g	ASTM D2896		6.6	6.4	6.8
Visc @ 100°C	cSt	ASTM D445		12.9	13.0	13.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0828487 **Received** : 26 Dec 2023
Lab Number : 06044330 **Diagnosed** : 27 Dec 2023
Unique Number : 10804938 **Diagnostician** : Wes Davis
Test Package : CONST (Additional Tests: TBN)

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)

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