

Machine Id
WESTERN STAR 35 - WESTERN STAR
Component
Diesel Engine
Fluid
FLEETLINE SUPERFLEET XHD 15W40 (10 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PCA0109967	LP0000530	LP0000798
Sample Date		Client Info		14 May 2024	02 Jan 2024	06 Sep 2023
Machine Age	mls	Client Info		204768	193265	182389
Oil Age	mls	Client Info		11503	10876	12509
Filter Age	mls	Client Info		11503	10876	12509
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	>65	12	13	23
Chromium	ppm	ASTM D5185m	>5	1	<1	2
Nickel	ppm	ASTM D5185m	>3	<1	0	0
Titanium	ppm	ASTM D5185m	>5	<1	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>35	7	6	9
Lead	ppm	ASTM D5185m	>10	0	0	<1
Copper	ppm	ASTM D5185m	>180	3	8	17
Tin	ppm	ASTM D5185m	>8	0	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

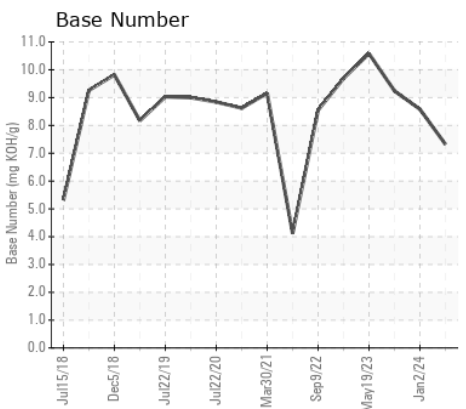
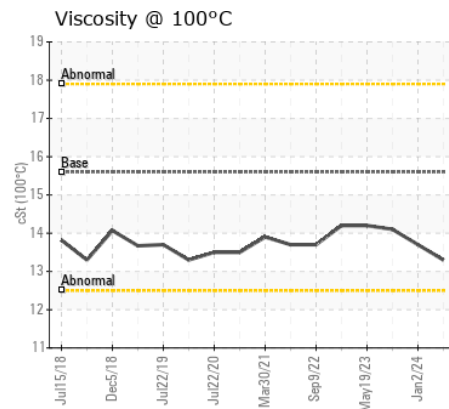
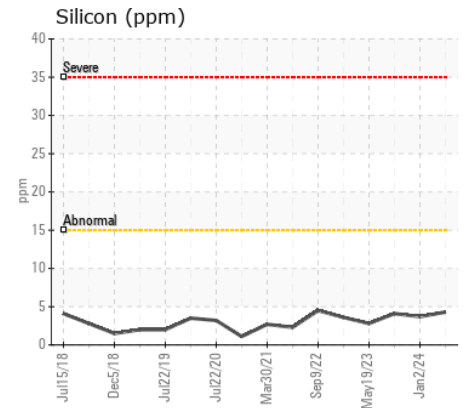
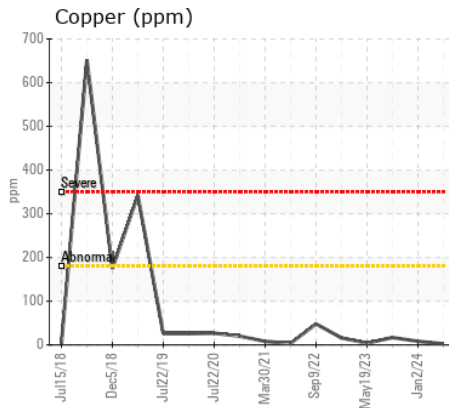
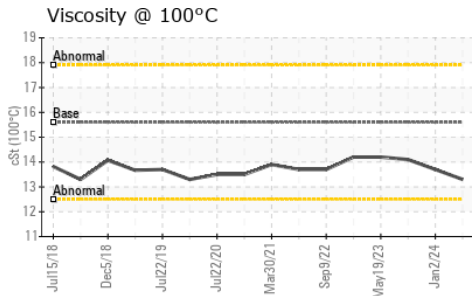
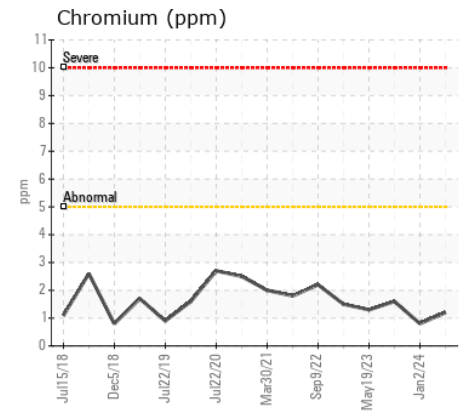
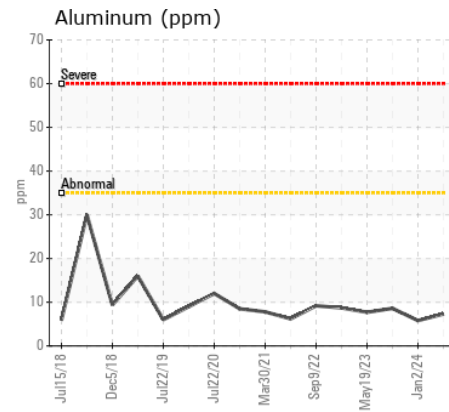
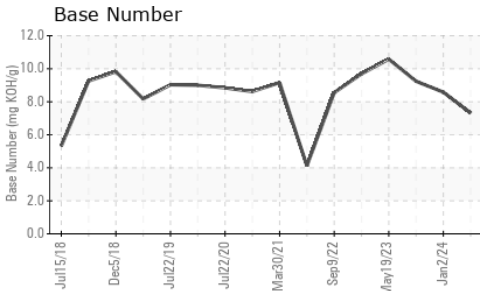
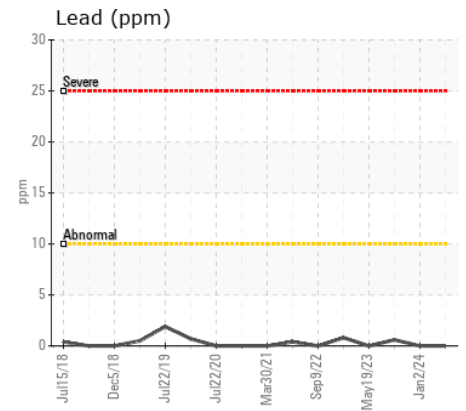
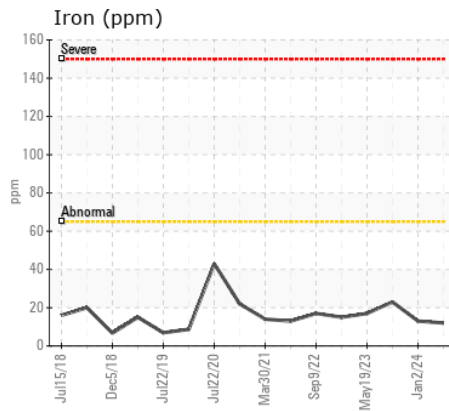
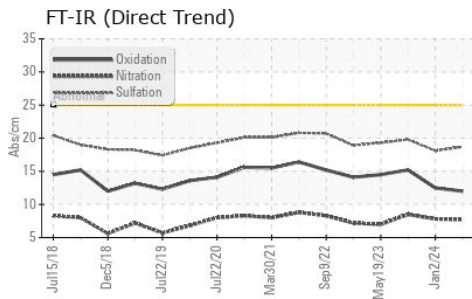
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>15	4	4	4
Potassium	ppm	ASTM D5185m	>20	4	8	11
Fuel	%	ASTM D3524	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.4	0.4	0.6
Nitration	Abs/cm	*ASTM D7624	>20	7.7	7.8	8.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.7	18.1	19.8
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		6	<1	9
Boron	ppm	ASTM D5185m		11	7	7
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		31	32	68
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		167	413	855
Calcium	ppm	ASTM D5185m		1885	1721	1448
Phosphorus	ppm	ASTM D5185m		778	896	1066
Zinc	ppm	ASTM D5185m		1001	1078	1355
Sulfur	ppm	ASTM D5185m		3095	3255	3845
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.0	12.5	15.2
Base Number (BN)	mg KOH/g	ASTM D2896		7.32	8.58	9.24
Visc @ 100°C	cSt	ASTM D445	15.6	13.3	13.7	14.1



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0109967
Lab Number : 06189776
Unique Number : 11046528
Test Package : MOB 2 (Additional Tests: FuelDilution)

Received : 23 May 2024
Tested : 29 May 2024
Diagnosed : 29 May 2024 - Wes Davis

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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)