



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
WESTERN STAR WT-15

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		LP0000529	LP0000717	WC0542231
Sample Date		Client Info		02 Jan 2024	25 Jul 2023	27 Dec 2022
Machine Age	mls	Client Info		714	116085	96499
Oil Age	mls	Client Info		151	12886	13577
Filter Age	mls	Client Info		151	12886	13577
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	4	12	16
Chromium	ppm	ASTM D5185m	>6	0	<1	1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>30	2	4	8
Lead	ppm	ASTM D5185m	>10	<1	<1	<1
Copper	ppm	ASTM D5185m	>150	11	4	7
Tin	ppm	ASTM D5185m	>4	1	0	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

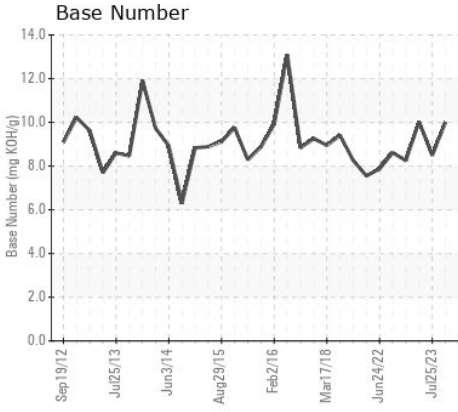
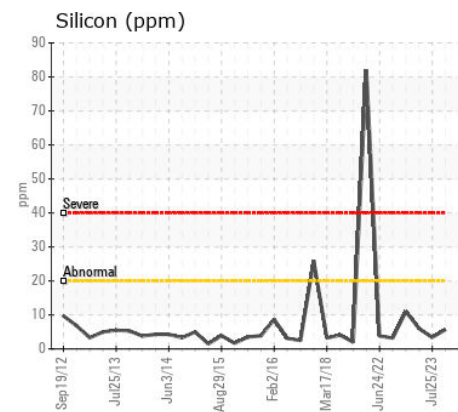
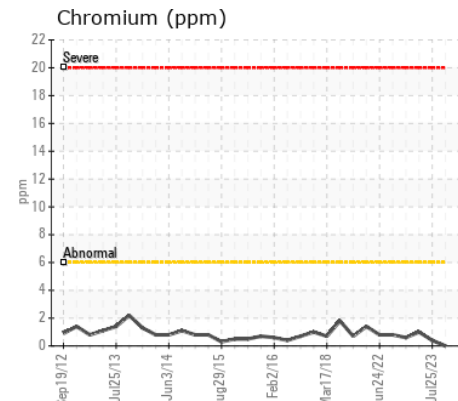
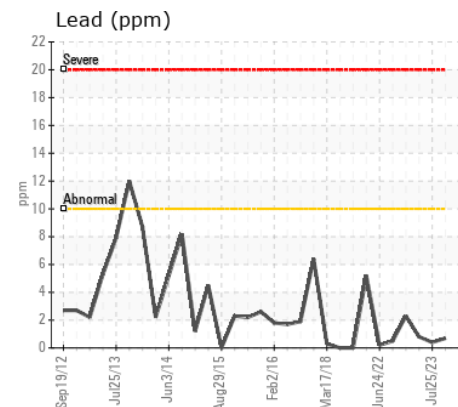
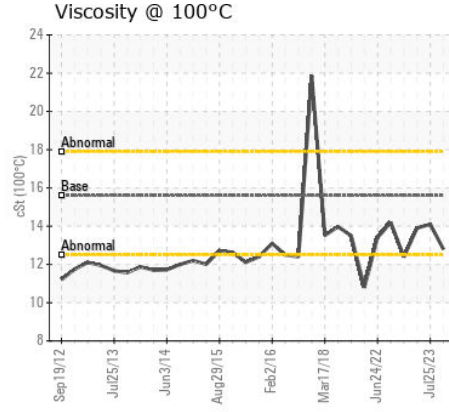
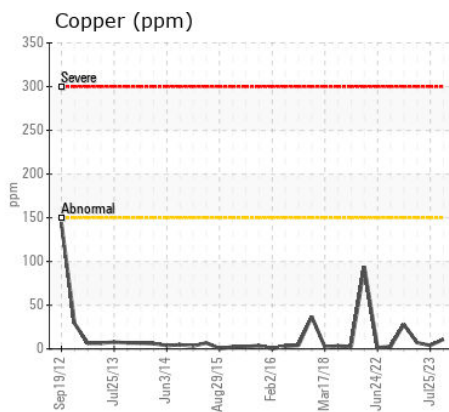
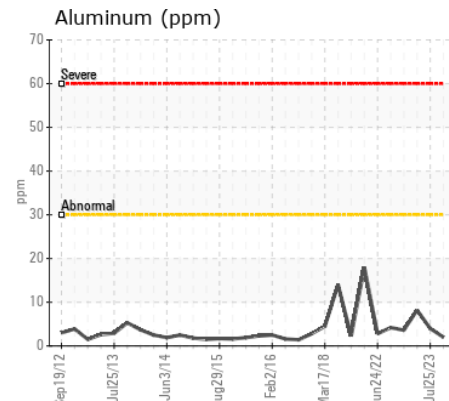
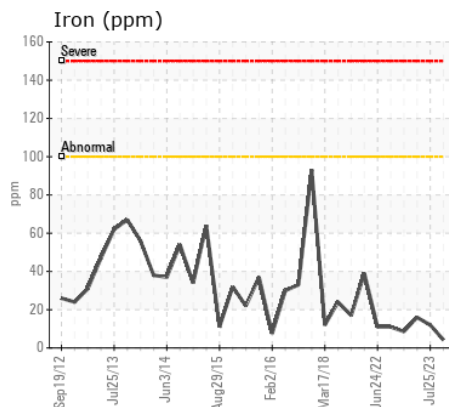
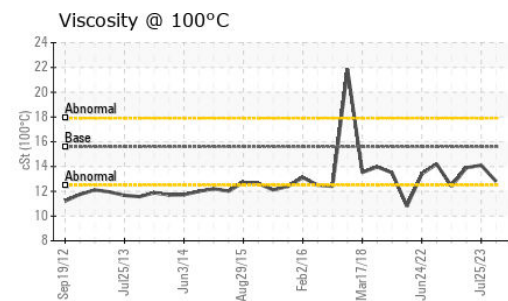
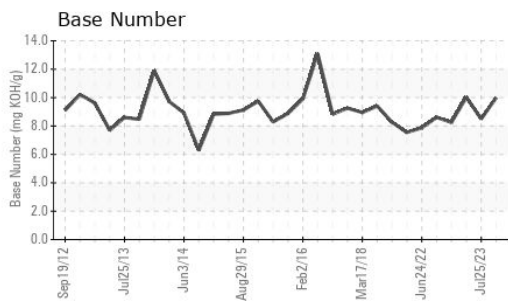
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	6	3	6
Potassium	ppm	ASTM D5185m	>20	4	4	8
Fuel		WC Method	>5	<1.0	<1.0	0.3
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.8	0.8
Nitration	Abs/cm	*ASTM D7624	>20	5.7	9.3	8.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.2	20.5	19.5
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		0	4	4
Boron	ppm	ASTM D5185m		21	12	6
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		65	76	62
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		739	493	998
Calcium	ppm	ASTM D5185m		1258	1841	1237
Phosphorus	ppm	ASTM D5185m		980	1024	1038
Zinc	ppm	ASTM D5185m		1149	1333	1331
Sulfur	ppm	ASTM D5185m		3153	3942	3547
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.4	15.3	15.1
Base Number (BN)	mg KOH/g	ASTM D2896		9.99	8.49	10.03
Visc @ 100°C	cSt	ASTM D445	15.6	12.8	14.1	13.9



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LP0000529 **Received** : 10 Jan 2024
Lab Number : 06057465 **Diagnosed** : 12 Jan 2024
Unique Number : 10823414 **Diagnostician** : Wes Davis
Test Package : MOB 2

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Certificate L2367
 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)