

Machine Id
HYUNDAI L-14
Component
Diesel Engine
Fluid
FLEETLINE SUPERFLEET XHD 15W40 (12 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		PCA0109964	LP0001195	LP0001344
Sample Date		Client Info		20 May 2024	12 Apr 2024	29 Jan 2024
Machine Age	hrs	Client Info		10136	9854	9492
Oil Age	hrs	Client Info		282	359	192
Filter Age	hrs	Client Info		282	359	192
Oil Changed		Client Info		Changed	N/A	Changed
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	5	9	8
Chromium	ppm	ASTM D5185m	>20	0	1	<1
Nickel	ppm	ASTM D5185m	>4	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	7	19
Lead	ppm	ASTM D5185m	>40	2	4	2
Copper	ppm	ASTM D5185m	>330	0	3	<1
Tin	ppm	ASTM D5185m	>15	0	1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	LIGHT	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

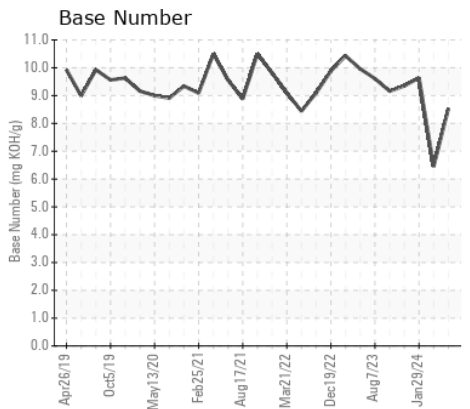
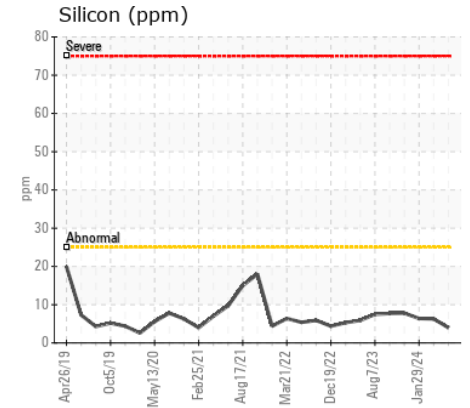
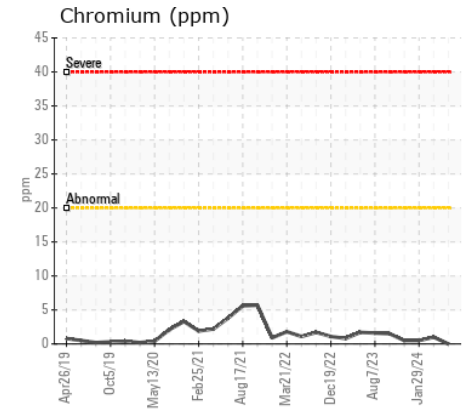
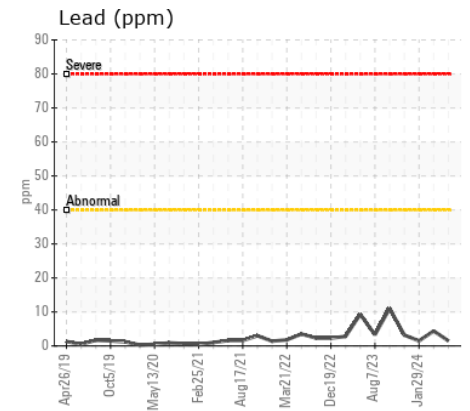
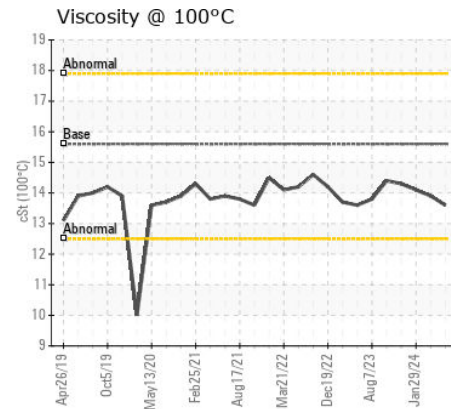
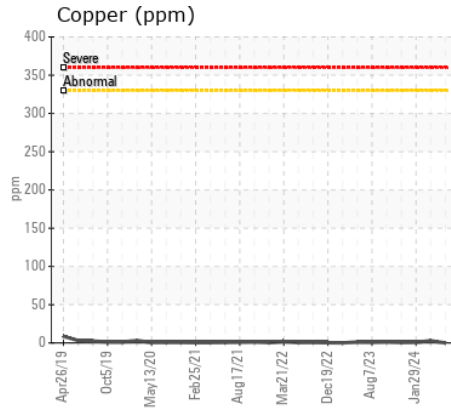
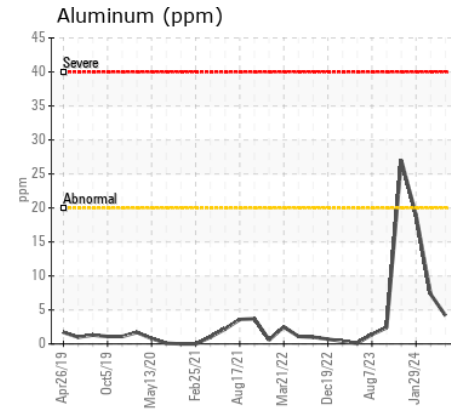
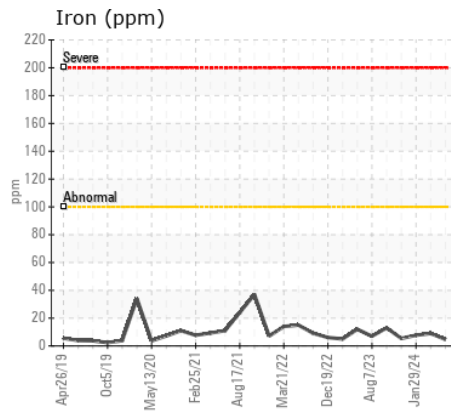
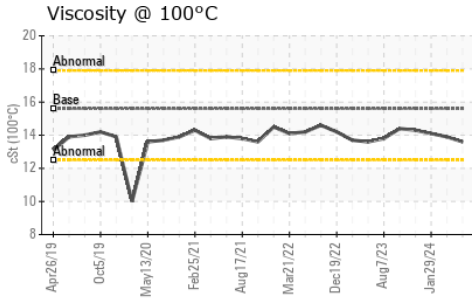
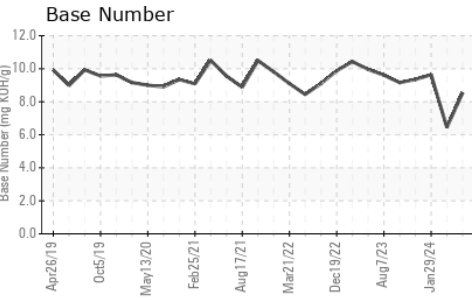
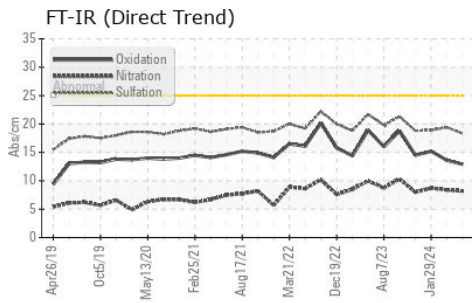
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	4	6	6
Potassium	ppm	ASTM D5185m	>20	<1	2	<1
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	0.1	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8.2	8.4	8.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.3	19.4	18.9
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	0	<1
Boron	ppm	ASTM D5185m		10	26	18
Barium	ppm	ASTM D5185m		0	1	0
Molybdenum	ppm	ASTM D5185m		29	26	58
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m		305	187	615
Calcium	ppm	ASTM D5185m		2185	2084	1537
Phosphorus	ppm	ASTM D5185m		1008	934	994
Zinc	ppm	ASTM D5185m		1243	1093	1236
Sulfur	ppm	ASTM D5185m		4196	3854	3256
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.9	13.6	15.2
Base Number (BN)	mg KOH/g	ASTM D2896		8.54	6.45	9.64
Visc @ 100°C	cSt	ASTM D445	15.6	13.6	13.9	14.1



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0109964
Lab Number : 06196025
Unique Number : 11058148
Test Package : MOB 2

Received : 30 May 2024
Tested : 02 Jun 2024
Diagnosed : 02 Jun 2024 - Wes Davis

S.M. LORUSSO & SONS
 221 NORFOLK ST.
 WALPOLE, MA
 US 02081

Contact: PAUL BECKMAN
 pbeckman@smlorusso.com
 T: (508)668-2603
 F: (508)660-0232

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)