



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
24F2402 HDMO-023
 Component
New (Unused) Oil
 Fluid
Gasoline Engine Oil (--- GAL)

RECOMMENDATION

This is a baseline read-out on the submitted sample. (Customer Sample Comment: RUN TBN)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		HPL0005191	---	---
Sample Date		Client Info		25 Jun 2024	---	---
Machine Age	hrs	Client Info		0	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				NORMAL	---	---

WEAR

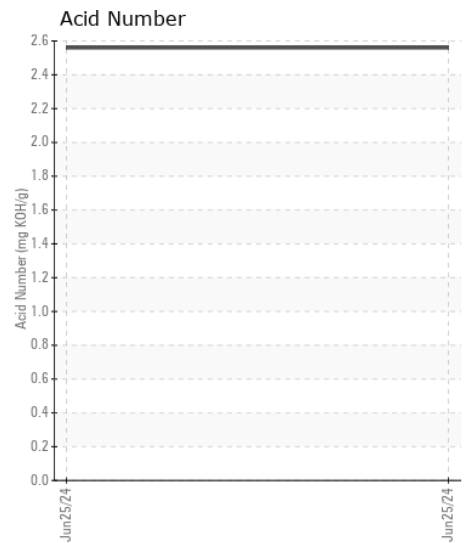
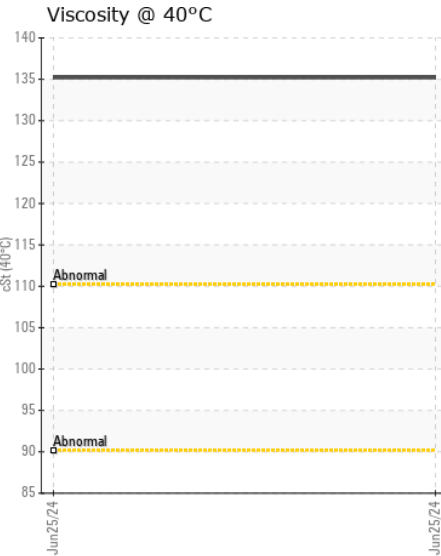
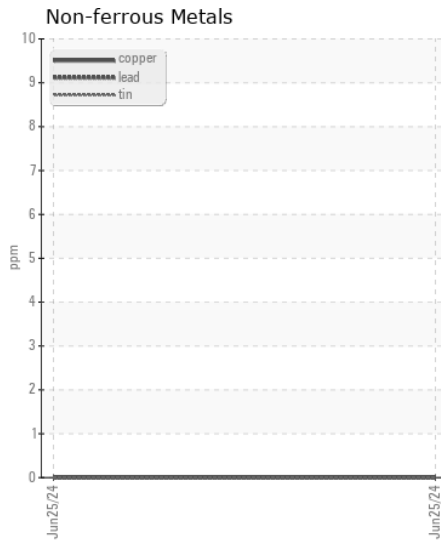
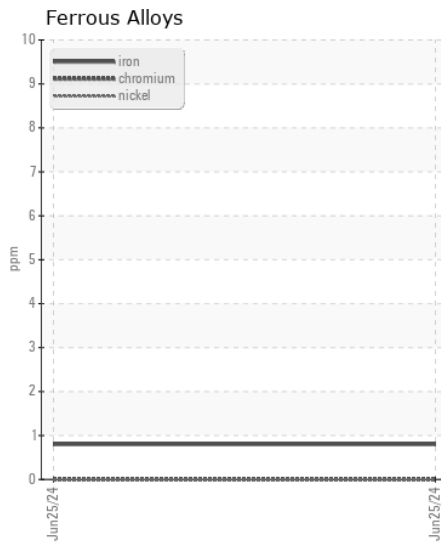
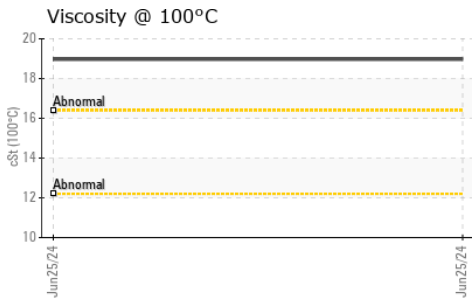
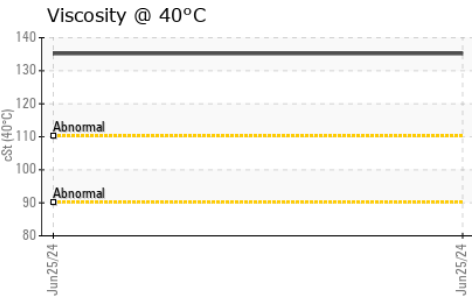
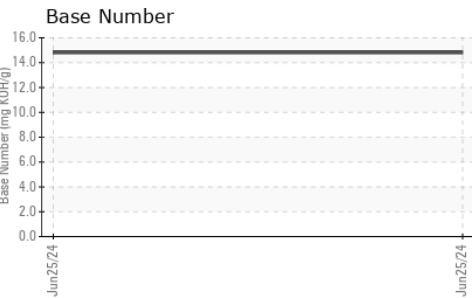
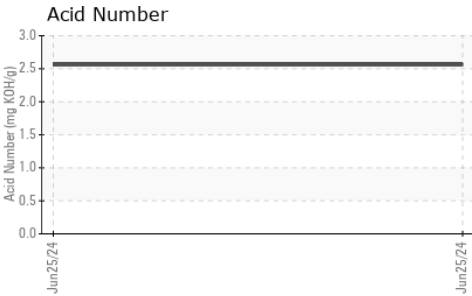
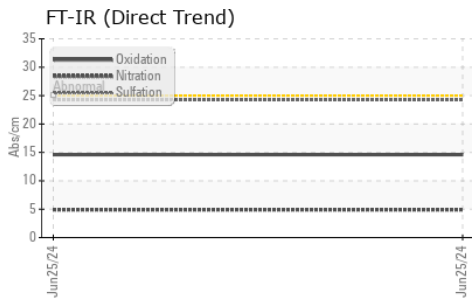
Iron	ppm	ASTM D5185m		<1	---	---
Chromium	ppm	ASTM D5185m		0	---	---
Nickel	ppm	ASTM D5185m		0	---	---
Titanium	ppm	ASTM D5185m		0	---	---
Silver	ppm	ASTM D5185m		0	---	---
Aluminum	ppm	ASTM D5185m		4	---	---
Lead	ppm	ASTM D5185m		0	---	---
Copper	ppm	ASTM D5185m		0	---	---
Tin	ppm	ASTM D5185m		0	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

Silicon	ppm	ASTM D5185m		11	---	---
Potassium	ppm	ASTM D5185m	>20	<1	---	---
Water		WC Method		NEG	---	---
Soot %	%	*ASTM D7844		0.1	---	---
Nitration	Abs/cm	*ASTM D7624		4.9	---	---
Sulfation	Abs/.1mm	*ASTM D7415		24.2	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual		NEG	---	---

FLUID CONDITION

Sodium	ppm	ASTM D5185m		0	---	---
Boron	ppm	ASTM D5185m		180	---	---
Barium	ppm	ASTM D5185m		2	---	---
Molybdenum	ppm	ASTM D5185m		657	---	---
Manganese	ppm	ASTM D5185m		0	---	---
Magnesium	ppm	ASTM D5185m		481	---	---
Calcium	ppm	ASTM D5185m		3694	---	---
Phosphorus	ppm	ASTM D5185m		984	---	---
Zinc	ppm	ASTM D5185m		1189	---	---
Sulfur	ppm	ASTM D5185m		23680	---	---
Oxidation	Abs/.1mm	*ASTM D7414		14.6	---	---
Acid Number (AN)	mg KOH/g	ASTM D8045		2.56	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		14.81	---	---
Visc @ 40°C	cSt	ASTM D445		135.2	---	---
Visc @ 100°C	cSt	ASTM D445		18.97	---	---
Viscosity Index (VI)	Scale	ASTM D2270		159	---	---



Certificate L2367

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

Sample No. : HPL0005191

Lab Number : 06225710

Unique Number : 11103907

Test Package : MOB 2 (Additional Tests: FT-IR, ICP-NewOil, KV100, PrtCount, TBN, VI)

Received : 01 Jul 2024

Tested : 03 Jul 2024

Diagnosed : 03 Jul 2024 - Jonathan Hester

HIGH PERFORMANCE LUBRICANTS LLC

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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)