



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
56E-1C
 Component
Gearbox
 Fluid
HP GEAR LIFE ISO 150 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		HPL0004126	HPL007822	HPL002907
Sample Date		Client Info		05 Feb 2024	02 Feb 2022	26 Jan 2016
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>200	7	37	2
Chromium	ppm	ASTM D5185m	>15	0	<1	0
Nickel	ppm	ASTM D5185m	>15	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	0	2	<1
Lead	ppm	ASTM D5185m	>100	0	<1	2
Copper	ppm	ASTM D5185m	>200	<1	<1	17
Tin	ppm	ASTM D5185m	>25	0	0	2
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

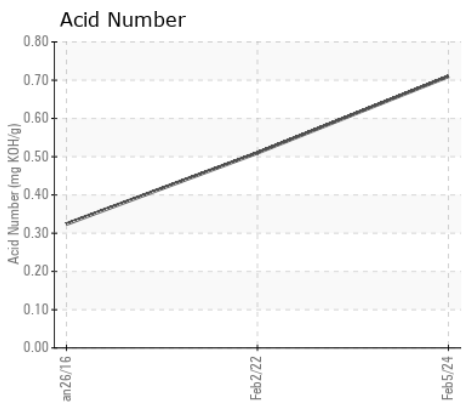
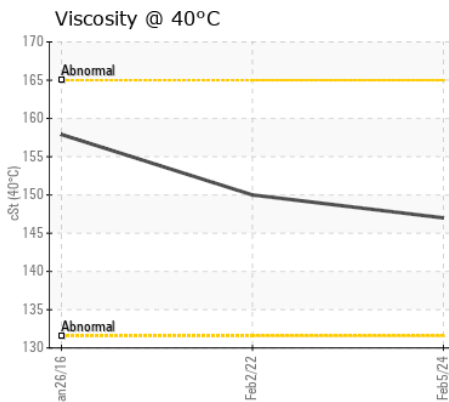
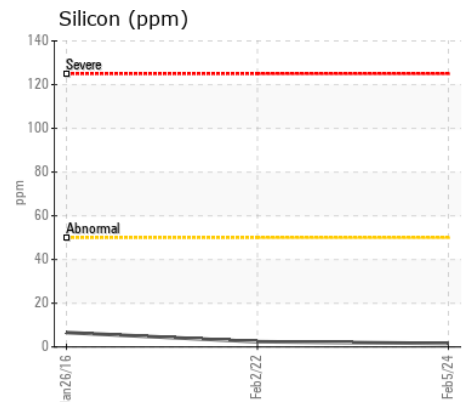
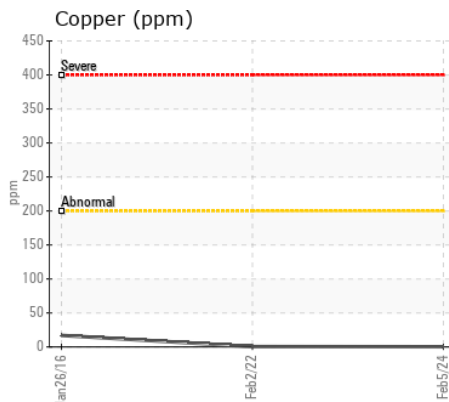
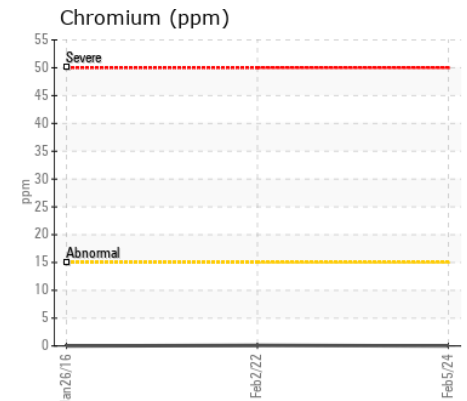
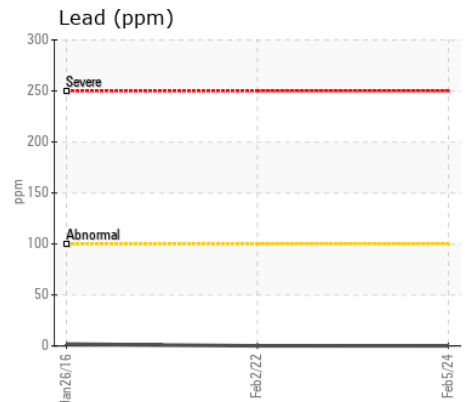
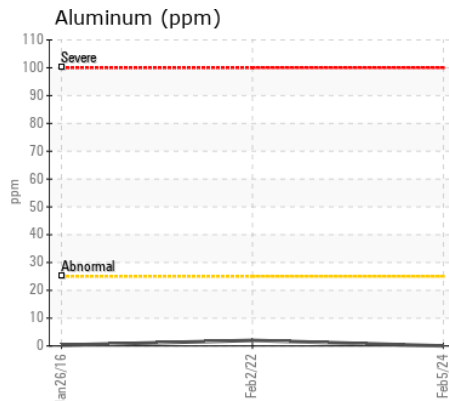
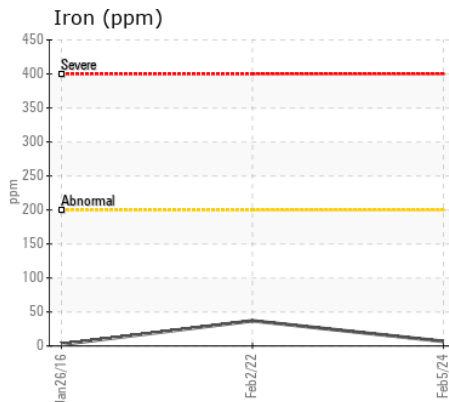
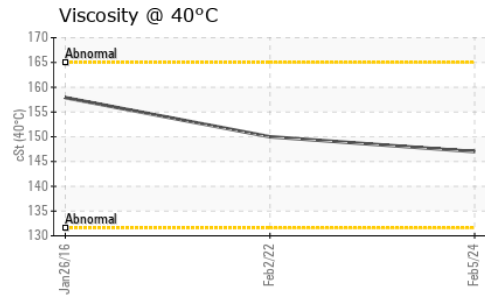
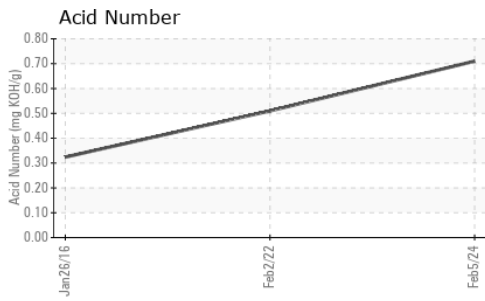
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>50	2	2	7
Potassium	ppm	ASTM D5185m	>20	0	<1	0
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT	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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		0	2	2
Boron	ppm	ASTM D5185m		0	1	<1
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		0	1	0
Magnesium	ppm	ASTM D5185m		0	0	0
Calcium	ppm	ASTM D5185m		0	0	15
Phosphorus	ppm	ASTM D5185m		61	141	132
Zinc	ppm	ASTM D5185m		<1	0	0
Sulfur	ppm	ASTM D5185m		21510	18716	17347
Acid Number (AN)	mg KOH/g	ASTM D8045		0.71	0.51	0.324
Visc @ 40°C	cSt	ASTM D445		147	150	157.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : HPL0004126
Lab Number : 06083102
Unique Number : 10870547
Test Package : MOB 2

Received : 07 Feb 2024
Tested : 08 Feb 2024
Diagnosed : 08 Feb 2024 - Wes Davis

MARATHON PETROLEUM CO.
 IL. REFINING DIVISION, 400 S MARATHON AVE
 ROBINSON, IL
 US 62454

Contact: M.S. MANHART
 mmanhart@marathonpetroleum.com

T: (618)544-2121

F: x:

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)