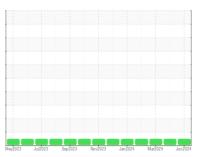


# **OIL ANALYSIS REPORT**

Sample Rating Trend







Machine Id
69K-3
Component
Compressor

**HP R&O ISO 150 (--- GAL)** 

### DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

## Contamination

There is no indication of any contamination in the oil

## **Fluid Condition**

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

		May2023	Jul2023 Sep2023	Nov2023 Jan2024 Mar2024	Jun 2024	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		HPL0004794	HPL0005001	HPL0004525
Sample Date		Client Info		18 Jun 2024	15 Apr 2024	13 Mar 2024
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	<1	1	0
Chromium	ppm	ASTM D5185m	>10	<1	<1	0
Nickel	ppm	ASTM D5185m		<1	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m		<1	<1	0
Aluminum	ppm	ASTM D5185m	>25	3	2	<1
Lead	ppm	ASTM D5185m	>25	<1	0	0
Copper	ppm	ASTM D5185m	>50	4	4	1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		<1	<1	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0	0	0
Barium	ppm	ASTM D5185m		1	<1	0
Molybdenum	ppm	ASTM D5185m		<1	<1	0
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		<1	<1	0
Calcium	ppm	ASTM D5185m		0	<1	<1
Phosphorus	ppm	ASTM D5185m		177	137	173
Zinc	ppm	ASTM D5185m		6	2	0
Sulfur	ppm	ASTM D5185m		17002	16287	18109
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	4	4	5
Sodium	ppm	ASTM D5185m		0	<1	<1
Potassium	ppm	ASTM D5185m	>20	1	<1	1
FLUID DEGRADA	TION	method	limit/base	current	history1	history2

0.48

Acid Number (AN)

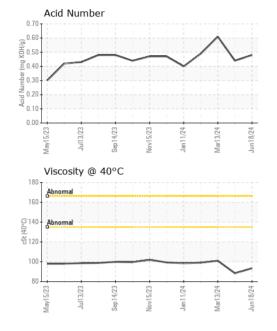
mg KOH/g ASTM D8045

0.44

0.61



## **OIL ANALYSIS REPORT**



VISUAL		method	limit/base	current	history1	history2		
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE		
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE		
Silt	scalar	*Visual	NONE	NONE	NONE	NONE		
Debris	scalar	*Visual	NONE	LIGHT	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	>0.1	NEG	NEG	NEG		
Free Water	scalar	*Visual		NEG	NEG	NEG		
FLUID PROPER	TIES	method	limit/base	current	history1	history2		
Visc @ 40°C	cSt	ASTM D445		93.4	88.4	101		
SAMPLE IMAGE	S	method	limit/base	current	history1	history2		
Color				no image	no image	no image		
Bottom				no image	no image	no image		
GRAPHS				Load (nam)				
Iron (ppm)				Lead (ppm)				
Severe			Edd	Severe				
Abnormal			8	Abnormal				
3 3 3	- 53	24	24	3 3	53	24		
May15/23 Jui13/23 Sep14/23	Nov15/23	Jan11/24 Mar13/24	Jun18/24	May15/23 Jul13/23	Sep14/23 Nov15/23	Jan11/24 Mar13/24		
≥ ¬ ∞ Aluminum (ppm)	_	¬ ≥	⋾	Chromium (ppm)				
00			;;-	30 Severe				
Severe	<u> </u>		E dd					
Abnormal			d.					
73 + 23 + 23 + 23 + 23 + 23 + 23 + 23 +	-23	724	724	23 23	723	24		
May15/23 Jul13/23 Sep14/23	Nov15/23	Jan11/24 Mar13/24	Jun18/24	Mayl 5/23 Jull 3/23	Sep14/23 Nov15/23	Jan 1 1/24 Mar 1 3/24		
Copper (ppm)				Silicon (ppm)				
Severe				Severe				
Abnormal			mdd !	Abnormal				
3/23	5/23	1/24	8/24	13/23	5/23	3/24		
May15/23 Jul13/23 Sep14/23	Nov15/23	Jan11/24 Mar13/24	Jun18/24	May15/23 Jul13/23	Sep 14/23 Nov15/23	Jan 1 1/24 Mar 1 3/24		
Viscosity @ 40°C								
Abnormal			·	00T :				





Certificate 12367

Sample No. Unique Number : 11097046 Test Package : MOB 2

: HPL0004794 Lab Number : 06218849

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received **Tested** 

: 24 Jun 2024 : 25 Jun 2024 : 25 Jun 2024 - Wes Davis Diagnosed

Mar13/24

MARATHON PETROLEUM CO. IL. REFININF DIVISION, 400 S MARATHON AVE

ROBINSON, IL US 62454

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

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)

Sep14/23

Acid 1

F: x: Contact/Location: M.S. MANHART - MARROB

T: (618)544-2121