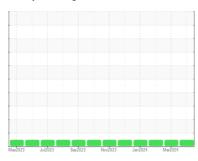


# **OIL ANALYSIS REPORT**

Sample Rating Trend





Machine Id 3K-3 Compressor HP R&O ISO 100 (--- GAL)

## Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

## Contamination

There is no indication of any contamination in the oil.

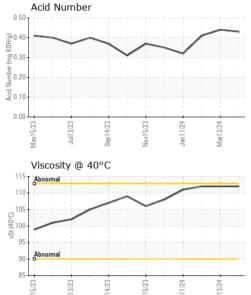
## **Fluid Condition**

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

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2	
Sample Number		Client Info		HPL0005010	HPL0004542	HPL0004514	
Sample Date		Client Info		15 Apr 2024	13 Mar 2024	15 Feb 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	
CONTAMINATIO	V	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	2	
Chromium	ppm	ASTM D5185m	>10	<1	0	<1	
Nickel	ppm	ASTM D5185m		0	0	0	
Titanium	ppm	ASTM D5185m		0	0	0	
Silver	ppm	ASTM D5185m		0	0	0	
Aluminum	ppm	ASTM D5185m	>25	0	<1	2	
Lead	ppm	ASTM D5185m	>25	0	1	<1	
Copper	ppm	ASTM D5185m	>50	7	4	6	
Tin	ppm	ASTM D5185m	>15	<1	<1	0	
Vanadium	ppm	ASTM D5185m		0	0	0	
Cadmium	ppm	ASTM D5185m		0	0	0	
ADDITIVES		method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		0	0	0	
Barium	ppm	ASTM D5185m		4	0	0	
Molybdenum	ppm	ASTM D5185m		0	0	0	
Manganese	ppm	ASTM D5185m		1	<1	0	
Magnesium	ppm	ASTM D5185m		4	2	<1	
Calcium	ppm	ASTM D5185m		11	4	4	
Phosphorus	ppm	ASTM D5185m		95	102	112	
Zinc	ppm	ASTM D5185m		7	<1	6	
Sulfur	ppm	ASTM D5185m		11329	10380	9225	
CONTAMINANTS	;	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	<1	<1	1	
Sodium	ppm	ASTM D5185m		1	1	0	
Potassium	ppm	ASTM D5185m	>20	<1	2	1	
FLUID DEGRADA	TION	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045		0.43	0.44	0.41	



# **OIL ANALYSIS REPORT**



VISU	JAL		method	limit/base	current	r	nistory1	h	istory	
White I	Metal	scalar	*Visual	NONE	NONE	NC	ONE	NC	NE	
Yellow	Metal	scalar	*Visual	NONE	NONE	NC	NONE NO		NE	
Precipi	tate	scalar	*Visual	NONE	NONE	NC	NONE NONI		NE	
Silt		scalar	*Visual	NONE	NONE	NC	ONE	NONE		
Debris		scalar	*Visual	NONE	NONE	NC	ONE	NC	NONE	
Sand/D	Dirt	scalar	*Visual	NONE	NONE	NC	ONE	NC	NONE	
Appear	rance	scalar	*Visual	NORML	NORML	NC	DRML	NC	NORML	
Odor		scalar	*Visual	NORML	NORML	NO	DRML	NC	NORML	
Emulsi	fied Water	scalar	*Visual	>0.1	NEG	NE	EG	NE	NEG	
ree W	/ater	scalar	*Visual		NEG	NE	EG	NE	G	
FLUI	D PROPER	ΓIES	method	limit/base	current	r	nistory1	h	istory	
/isc @	40°C	cSt	ASTM D445		112	11	112		112	
SAM	PLE IMAGE	S	method	limit/base	current	ŀ	nistory1	h	istory	
Color					no image	no	no image		no image	
Bottom	1				no image	no	no image		no image	
Iron Severe	(ppm)			10 Ed	Abnormal					
May15/23	Jul13/23	Nov15/23 +	Jan11/24	Mar 13/24	May15/23 +	Sep14/23 -	Nov15/23 -	Jan 11/24 -	Mar13/24 -	
	inum (ppm)	Z	7 ,	2	≥ Chromium (		Z	7	2	
т	(ppiii)			3	Severe	Shiri				
Severe				E 2						
Abnorm	nal	*********		8						
23	23 +	23	24	+7	23 23	23	23	24-	24	
May15/23	Jul13/23	Nov15/23	Jan11/24	Mar I 3/24	May15/23 Jul13/23	Sep14/23	Nov15/23	Jan11/24	Mar13/24	
	. 0)	Z	7	2	≤ Silicon (ppm		2	⇒	2	
Cobb	er (ppm)			10	10	')				
Severe				E dd	Severe					
Abnorm	and .	***********	-	dd	Abnormal		-			
Abnorm	Idi		_		2 2	23	- 53	24	24	
L		53	24	7					3	
-		ov15/23	an 11/24	ari 3/2'	ay15//	4	3v15	11	ఠ	
May15/23	Jul13/23	Nov15/23	Jan11/24	Mari 3/24	May15/23	Sep14/23	Nov15/23	Jan11/24	Mar13/24	
May15/23 ← -0		Nov15/23 -	Jan11/24		2		Nov15	Jan11	Marl	
Visco	osity @ 40°C	Nov15/23	Jan 11/24		2		Nov15	Jan1	Marl	
Visco Visco	osity @ 40°C	Nov15/23	Jan11/24		2		Nov15	Jan	Marl	
Visco	osity @ 40°C	Nov15/23 Nov15/23		0.0 (mg KOH/g)	2		Nov15/23 Nov15	Jan11/24 Jan11	Mar13/24 + Mar1:	





Sample No. : HPL0005010 Lab Number : 06156174 Unique Number : 10991597

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

Received : 22 Apr 2024 Tested : 23 Apr 2024 : 23 Apr 2024 - Wes Davis Diagnosed

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

US 62454 Contact: M.S. MANHART

Test Package : MOB 2 Certificate 12367 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.

mmanhart@marathonpetroleum.com T: (618)544-2121 F: x:

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)