

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Machine Id 69K-2B (S/N X22XG504) Component

Compressor Fluid HP R&O ISO 100 (--- 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.



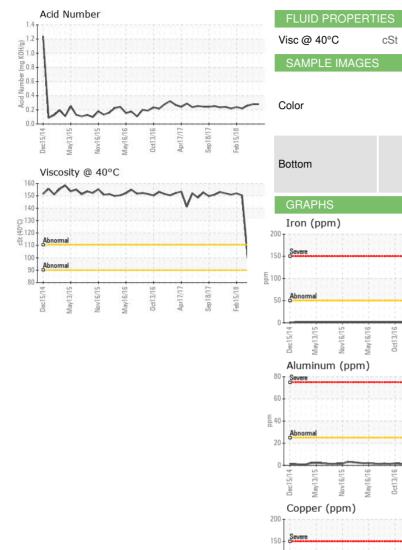


2014 May2015 Nov2015 May2016 Oct2016 Apr2017 Sto2017 Feb2018

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		HPL0003231	HPL0003414	HPL0003422
Sample Date		Client Info		13 Jul 2023	15 Jun 2023	15 May 2023
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
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	14	11	3
Chromium	ppm	ASTM D5185m	>10	0	0	0
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	3	<1	2
Lead	ppm	ASTM D5185m	>25	0	0	0
Copper	ppm	ASTM D5185m		4	6	3
Tin	ppm	ASTM D5185m	>15	2	1	<1
Antimony	ppm	ASTM D5185m				
Vanadium	ppm	ASTM D5185m		0	0	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		0	0	0
Molybdenum	ppm	ASTM D5185m		0	0	0
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		<1	<1	<1
Calcium	ppm	ASTM D5185m		30	47	38
Phosphorus	ppm	ASTM D5185m		230	320	240
Zinc	ppm	ASTM D5185m		8	8	0
Sulfur	ppm	ASTM D5185m		12106	17144	11871
CONTAMINANTS	6	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	7	10	4
Sodium	ppm	ASTM D5185m		0	0	1
Potassium	ppm	ASTM D5185m	>20	<1	<1	<1
FLUID DEGRADA	ATION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.28	0.28	0.26
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	LIGHT	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	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	on: MISGMANH	ARTN⊠KARROB



OIL ANALYSIS REPORT



튭 100·

160

140 (J-0+) 120 cSt (40-C)

100

80

Laboratory

Sample No.

Lab Number

Unique Number

Test Package : MOB 2

Dec15/14 Mav13/15

Abnom 50

Dec15/14

100 99.9 99.8 ASTM D445 no image no image no image no image no image no image Lead (ppm) 80 Seve 60 표 40 20 Sep18/17. Apr17/17 eb15/18 Apr17/17 Sep18/17 Dec15/1 Mav16/1 Mav1 lov1 eh 1 Chromium (ppm) 30 25 20 ۲ ۵,15 10 or17/17 Sep 18/17 ah15/18 vor17/1 Nov16/1 Mav16/1 ep 18/1 eb15/1 Dec15/ Silicon (ppm) 8 Se 60 표 40 Ab 20 eb15/18 Sep 18/17 nr17/17 en 18/17 Dec15/14 lov16/1 Mav1 Viscosity @ 40°C Acid Number (B/HOX 1.0 Ē0.8 and ore 0.4 Point O.2 0.0 Feb15/18 -Apr17/17. Sep18/17 Sep18/17 May13/15 Apr17/17 Nov16/15 Mav16/16 Jov16/15 Mav16/16 Dec15/1 MARATHON PETROLEUM CO. : WearCheck USA - 501 Madison Ave., Cary, NC 27513 : HPL0003231 Received : 18 Jul 2023 IL. REFININF DIVISION, 400 S MARATHON AVE : 05901419 ROBINSON, IL Diagnosed : 19 Jul 2023 : 10562775 : Wes Davis US 62454 Diagnostician Contact: M.S. MANHART To discuss this sample report, contact Customer Service at 1-800-237-1369. mmanhart@marathonpetroleum.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (618)544-2121 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: x:

Certificate L2367

Contact/Location: M.S. MANHART - MARROB