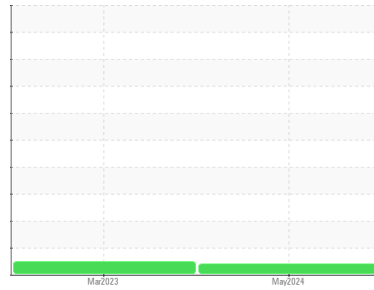




# OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id  
**085-02 WC-19 (S/N 0668)**  
 Component  
**Hydraulic System**  
 Fluid  
**CHEVRON RANDO HD 46 (80 GAL)**

## DIAGNOSIS

### Recommendation

Oil and filter change at the time of sampling has been noted. 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. The amount and size of particulates present in the system are acceptable.

### Fluid Condition

The oil viscosity is higher than normal. The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>PH0002485</b>	PH0000453	---
Sample Date	Client Info			<b>31 May 2024</b>	15 Mar 2023	---
Machine Age	hrs	Client Info		<b>24559</b>	22627	---
Oil Age	hrs	Client Info		<b>24559</b>	22627	---
Oil Changed	Client Info			<b>Changed</b>	N/A	---
Sample Status				<b>ABNORMAL</b>	NORMAL	---

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.05	<b>NEG</b>	NEG	---

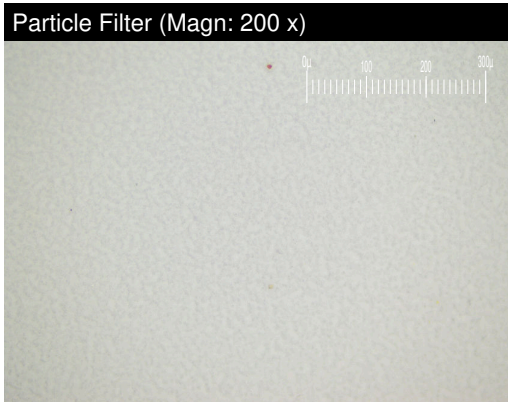
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	<b>9</b>	10	---
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	0	---
Nickel	ppm	ASTM D5185m	>20	<b>0</b>	0	---
Titanium	ppm	ASTM D5185m		<b>0</b>	0	---
Silver	ppm	ASTM D5185m		<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>20	<b>0</b>	<1	---
Lead	ppm	ASTM D5185m	>20	<b>0</b>	0	---
Copper	ppm	ASTM D5185m	>20	<b>8</b>	10	---
Tin	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>0</b>	0	---
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
Magnesium	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
Calcium	ppm	ASTM D5185m		<b>60</b>	71	---
Phosphorus	ppm	ASTM D5185m		<b>365</b>	402	---
Zinc	ppm	ASTM D5185m		<b>476</b>	539	---
Sulfur	ppm	ASTM D5185m		<b>3492</b>	3595	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	<b>2</b>	<1	---
Sodium	ppm	ASTM D5185m		<b>2</b>	0	---
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	<1	---

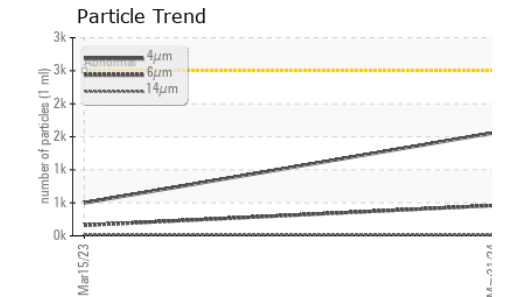
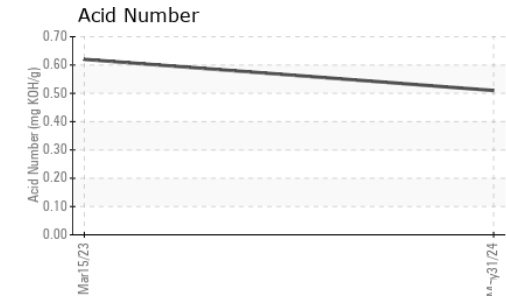
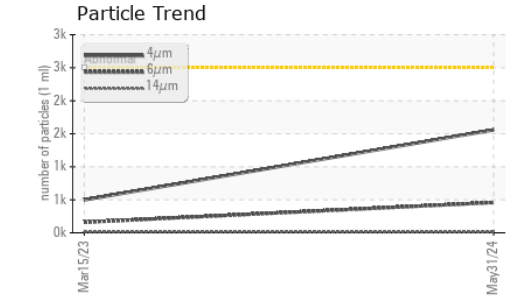
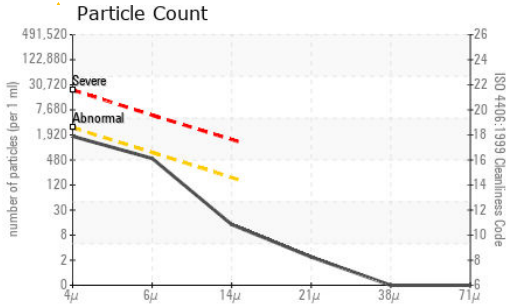
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>2500	<b>1559</b>	499	---
Particles >6µm		ASTM D7647	>640	<b>459</b>	160	---
Particles >14µm		ASTM D7647	>160	<b>12</b>	16	---
Particles >21µm		ASTM D7647	>40	<b>2</b>	5	---
Particles >38µm		ASTM D7647	>10	<b>0</b>	0	---
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	---
Oil Cleanliness		ISO 4406 (c)	>18/16/14	<b>18/16/11</b>	16/14/11	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.51</b>	0.62	---





# OIL ANALYSIS REPORT

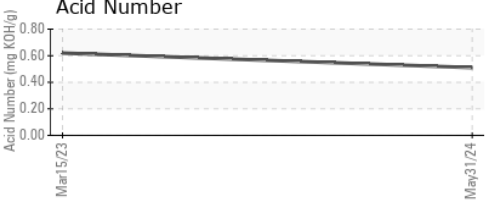
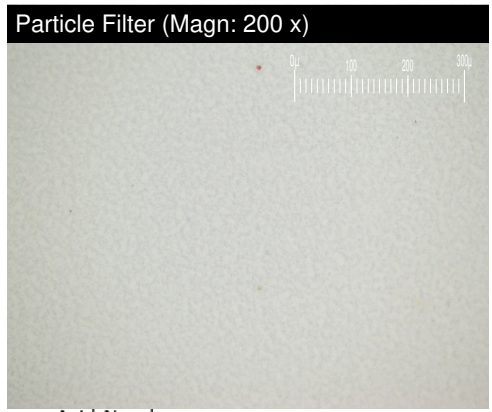
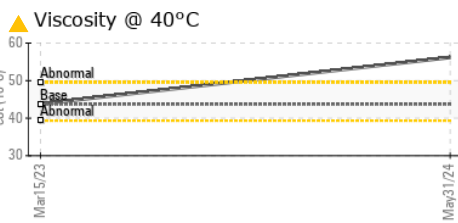
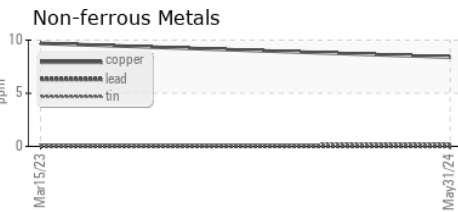
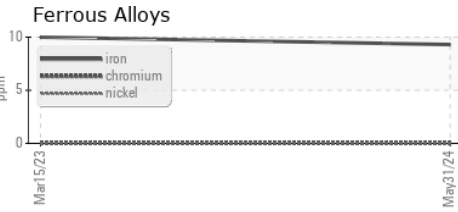


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.05	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	43.7 ▲ 56.2	43.8	---

SAMPLE IMAGES	method	limit/base	current	history1	history2	
Color						no image
Bottom						no image
PrtFilter						no image

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PH0002485      **Received** : 10 Jun 2024  
**Lab Number** : 06204568      **Tested** : 18 Jun 2024  
**Unique Number** : 11072029      **Diagnosed** : 18 Jun 2024 - Jonathan Hester  
**Test Package** : PLANT ( Additional Tests: PrtFilter )

**SMC LTD**  
 3250 BRICKWAY BLVD  
 SANTA ROSA, CA  
 US 95403  
 Contact: SUSAN BENNETT  
 susan.bennett@smcltd.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)