

# **OIL ANALYSIS REPORT**

## Sample Rating Trend

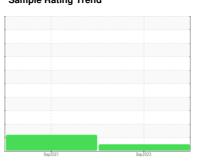
# NORMAL



Area [17339] 5010 Component

**Transmission** 

CONOCO PHILLIPS TO





### Recommendation

Resample at the next service interval to monitor. ( Customer Sample Comment: ConocoPhillips power drive 10w)

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the fluid.

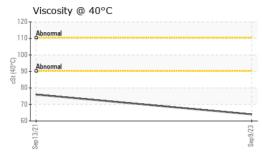
### **Fluid Condition**

The condition of the fluid is acceptable for the time in service.

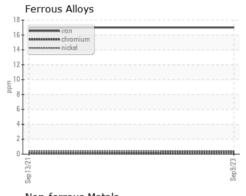
SAMPLE INFORMATION   method   limit/base   current   history1   history2	10 ( GAL)						
Sample Number   Client Info   WC0818638   WC0601610	7 10 ( GAL)			Sep2021	Sep 2023		
Client Info	SAMPLE INFORM	MATION	method				history2
Machine Age   hrs   Client Info   7004   6513       Dil Age   hrs   Client Info   1004   500       Dil Changed   Client Info   1004   500       Dil Changed   Client Info   Changed   Not Changed       NORMAL   ABNORMAL       WEAR METALS   method   limit/base   current   history1   history2     Pron   ppm   ASTM D5185m   >200   17   17       Chromium   ppm   ASTM D5185m   >10   <1   <1       Chromium   ppm   ASTM D5185m   0   <1   <1       Chromium   ppm   ASTM D5185m   0   <1   <1       Chromium   ppm   ASTM D5185m   0   0   <1       Chromium   ppm   ASTM D5185m   >50   2   2   2       Chromium   ppm   ASTM D5185m   >50   3   3       Chromium   ppm   ASTM D5185m   >50   2   2       Chromium   ppm   ASTM D5185m   >10   2   2       Chromium   ppm   ASTM D5185m   >0   0       Chromium   ppm   ASTM D5185m     0   0       Chromium   ppm   ASTM D5185m   0   0   0       Chromium   ppm   ASTM D5185m   0   0   0       ADDITIVES   method   limit/base   current   history1   history2     ADDITIVES   metho	Sample Number		Client Info		WC0818638	WC0601610	
Dil Age	Sample Date		Client Info		09 Sep 2023	13 Sep 2021	
Client Info	Machine Age	hrs	Client Info		7004	6513	
NORMAL   ABNORMAL	Oil Age	hrs	Client Info		1004	500	
WEAR METALS         method         limit/base         current         history1         history2           Fron         ppm         ASTM D5185m         >200         17         17            Chromium         ppm         ASTM D5185m         >10         <1	Oil Changed		Client Info		Changed	Not Changd	
Description	Sample Status				NORMAL	ABNORMAL	
Description	WEAR METALS		method	limit/base	current	history1	history2
ASTM D5185m   ASTM D5185m   ASTM D5185m   ASTM D5185m   DO   ASTM D5185m   DO   DO   DO   DO   ASTM D5185m   DO   DO   DO   DO   DO   DO   DO   D	ron	ppm	ASTM D5185m	>200	17	17	
Description	Chromium	ppm	ASTM D5185m	>10	<1	<1	
Astronomic   Silver   Depth   Astronomic   Astronomic	Nickel	ppm	ASTM D5185m		<1	<1	
ASTM D5185m   SO	Γitanium	ppm	ASTM D5185m		0	<1	
ASTM D5185m   SOUTH   SOUTH	Silver	ppm	ASTM D5185m		0	0	
Description	Aluminum	ppm	ASTM D5185m	>50	2	2	
Description	_ead	ppm	ASTM D5185m	>50	3	3	
Antimony	Copper		ASTM D5185m	>200	42	40	
Anadium	Γin	ppm	ASTM D5185m	>10	2	2	
Cadmium         ppm         ASTM D5185m         0         0            ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         49         24            Barium         ppm         ASTM D5185m         0         0            Molybdenum         ppm         ASTM D5185m         37         44            Manganese         ppm         ASTM D5185m         772         1036            Magnesium         ppm         ASTM D5185m         1653         1115            Calcium         ppm         ASTM D5185m         1114         1030            Phosphorus         ppm         ASTM D5185m         1349         1201            Sulfur         ppm         ASTM D5185m         4081         3223            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         7         5            Sodium         ppm         ASTM D5185m         >20 </td <td>Antimony</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <td></td> <td>0</td> <td></td>	Antimony	ppm	ASTM D5185m			0	
Cadmium         ppm         ASTM D5185m         0         0            ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         49         24            Barium         ppm         ASTM D5185m         0         0            Molybdenum         ppm         ASTM D5185m         37         44            Mangaese         ppm         ASTM D5185m         772         1036            Magnesium         ppm         ASTM D5185m         1653         1115            Phosphorus         ppm         ASTM D5185m         1114         1030            Pinosphorus         ppm         ASTM D5185m         1349         1201            Pinosphorus         ppm         ASTM D5185m         4081         3223            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         7         5            Sodium         ppm         ASTM D5185m         <	Vanadium	ppm	ASTM D5185m		0	0	
Soron   ppm   ASTM D5185m   49   24	Cadmium	ppm	ASTM D5185m		0	0	
Description	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         37         44            Manganese         ppm         ASTM D5185m         <1	Boron	ppm	ASTM D5185m		49	24	
Manganese         ppm         ASTM D5185m         <1         <1         <-1           Magnesium         ppm         ASTM D5185m         772         1036            Calcium         ppm         ASTM D5185m         1653         1115            Phosphorus         ppm         ASTM D5185m         1114         1030            Zinc         ppm         ASTM D5185m         1349         1201            Sulfur         ppm         ASTM D5185m         4081         3223            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         7         5            Godium         ppm         ASTM D5185m         >20         2         0            Potassium         ppm         ASTM D5185m         >20         2         0            VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE         NONE           Vellow Metal         scal	Barium	ppm	ASTM D5185m		0	0	
Magnesium         ppm         ASTM D5185m         772         1036            Calcium         ppm         ASTM D5185m         1653         1115            Phosphorus         ppm         ASTM D5185m         1114         1030            Zinc         ppm         ASTM D5185m         1349         1201            Sulfur         ppm         ASTM D5185m         4081         3223            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         7         5            Sodium         ppm         ASTM D5185m         >20         2         0            Potassium         ppm         ASTM D5185m         >20         2         0            VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE         NONE           Vellow Metal         scalar         *Visual         NONE         NONE         NONE           Verecipitate         <	Molybdenum	ppm	ASTM D5185m		37	44	
Delicition	Manganese	ppm	ASTM D5185m		<1	<1	
Phosphorus         ppm         ASTM D5185m         1114         1030            Zinc         ppm         ASTM D5185m         1349         1201            Sulfur         ppm         ASTM D5185m         4081         3223            CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         7         5            Godium         ppm         ASTM D5185m         >20         2         0            Potassium         ppm         ASTM D5185m         >20         2         0            VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE         NONE           Vellow Metal         scalar         *Visual         NONE         NONE         NONE           Precipitate         scalar         *Visual         NONE         NONE         NONE           Poebris         scalar         *Visual         NONE         NONE         NONE           Poebris	Magnesium	ppm	ASTM D5185m		772	1036	
Table   Part   Part	Calcium	ppm	ASTM D5185m		1653	1115	
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         7         5            Sodium         ppm         ASTM D5185m         4         4            Potassium         ppm         ASTM D5185m         >20         2         0            VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE         NONE           Vellow Metal         scalar         *Visual         NONE         NONE         NONE           Precipitate         scalar         *Visual         NONE         NONE         NONE           Debris         scalar         *Visual         NONE         NONE         NONE           Debris         scalar         *Visual         NONE         NONE         NONE           Appearance         scalar         *Visual         NORML         NORML         NORML           Appearance         scalar         *Visual         NORML         NORML         NORML           Appearance         scalar<	Phosphorus	ppm	ASTM D5185m		1114	1030	
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >50         7         5            Sodium         ppm         ASTM D5185m         4         4            Potassium         ppm         ASTM D5185m         >20         2         0            VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE         NONE           Vellow Metal         scalar         *Visual         NONE         NONE         NONE           Precipitate         scalar         *Visual         NONE         NONE         NONE           Poebris         scalar         *Visual         NORML         NORML         NORML           Appearance         scalar	Zinc	ppm	ASTM D5185m		1349	1201	
Solition	Sulfur	ppm	ASTM D5185m		4081	3223	
ASTM D5185m	CONTAMINANTS	5	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 2 0  VISUAL method limit/base current history1 history2  White Metal scalar *Visual NONE NONE NONE NONE  Precipitate scalar *Visual NONE NONE NONE NONE NONE  Bilt scalar *Visual NONE NONE NONE NONE  Cebris scalar *Visual NONE NONE NONE  Debris scalar *Visual NONE NONE NONE  Sand/Dirt scalar *Visual NONE NONE NONE  Precipitate scalar *Visual NONE NONE NONE  Debris scalar *Visual NONE NONE NONE  Sand/Dirt scalar *Visual NORML NORML NORML  Appearance scalar *Visual NORML NORML NORML  Dodor scalar *Visual NORML NORML NORML  Emulsified Water scalar *Visual >0.1 NEG NEG	Silicon	ppm	ASTM D5185m	>50	7	5	
VISUAL method limit/base current history1 history2  White Metal scalar *Visual NONE NONE MODER  Yellow Metal scalar *Visual NONE NONE NONE  Precipitate scalar *Visual NONE NONE NONE  Silt scalar *Visual NONE NONE NONE  Debris scalar *Visual NONE NONE NONE  Sand/Dirt scalar *Visual NONE NONE NONE  Appearance scalar *Visual NORML NORML NORML  Codor scalar *Visual NORML NORML NORML  Emulsified Water scalar *Visual >0.1 NEG NEG	Sodium	ppm	ASTM D5185m		4	4	
White Metal scalar *Visual NONE NONE MODER Vellow Metal scalar *Visual NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE Silt scalar *Visual NONE NONE NONE Debris scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Appearance scalar *Visual NORML NORML NORML Debris scalar *Visual NORML NORML NORML Appearance scalar *Visual NORML NORML NORML Debris Scalar *Visual NORML NORML NORML Debris NORML NORML NORML Debris Scalar *Visual NORML NORML NORML NORML NORML Debris NORML	Potassium	ppm	ASTM D5185m	>20	2	0	
Vellow Metal     scalar     *Visual     NONE     NONE     NONE       Precipitate     scalar     *Visual     NONE     NONE     NONE       Silt     scalar     *Visual     NONE     NONE     NONE       Debris     scalar     *Visual     NONE     NONE     NONE       Sand/Dirt     scalar     *Visual     NONE     NONE     NONE       Appearance     scalar     *Visual     NORML     NORML     NORML       Dodor     scalar     *Visual     NORML     NORML     NORML       Emulsified Water     scalar     *Visual     >0.1     NEG     NEG	VISUAL		method	limit/base	current	history1	history2
Precipitate scalar *Visual NONE NONE NONE Silt scalar *Visual NONE NONE NONE Debris scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Appearance scalar *Visual NORML NORML NORML Dodor scalar *Visual NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG	White Metal	scalar	*Visual	NONE	NONE	▲ MODER	
Silt scalar *Visual NONE NONE NONE Debris scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Appearance scalar *Visual NORML NORML NORML Ddor scalar *Visual NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG	ellow Metal	scalar	*Visual	NONE	NONE	NONE	
Debris scalar *Visual NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Appearance scalar *Visual NORML NORML NORML Ddor scalar *Visual NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG	Precipitate	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt scalar *Visual NONE NONE NONE Appearance scalar *Visual NORML NORML NORML Odor scalar *Visual NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG	Silt	scalar	*Visual	NONE	NONE	NONE	
Appearance scalar *Visual NORML NORML NORML Odor scalar *Visual NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG	Debris	scalar	*Visual	NONE		NONE	
Appearance scalar *Visual NORML NORML NORML Odor scalar *Visual NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Odor scalar *Visual NORML NORML NORML Emulsified Water scalar *Visual >0.1 NEG NEG	Appearance		*Visual	NORML		NORML	
Emulsified Water scalar *Visual >0.1 NEG NEG	Odor	scalar	*Visual	NORML	NORML	NORML	
	Emulsified Water	scalar	*Visual	>0.1		NEG	
	Free Water	scalar	*Visual		NEG	NEG	



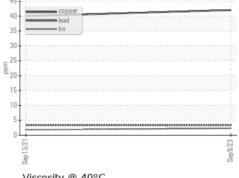
# **OIL ANALYSIS REPORT**



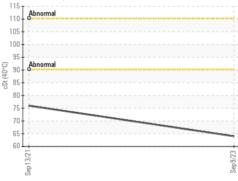




# Non-ferrous Metals



## Viscosity @ 40°C







Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10675047 Test Package : CONST

: WC0818638 : 05968496

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

: 03 Oct 2023

: 04 Oct 2023 Diagnostician : Doug Bogart

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.

MANHATTAN ROAD AND BRIDGE

5601 S 122ND E AVE TULSA, OK

US 74146 Contact: WILL ANDERSON

will.anderson@manhattanrb.com

T: F:

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