

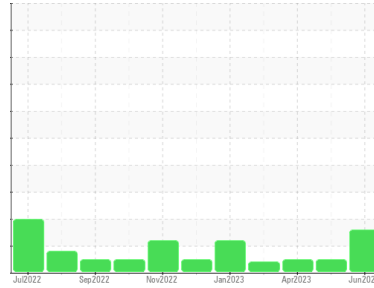


PROBLEM SUMMARY



Machine Id
CATERPILLAR BASIN DRILLING 105
Component
4 Diesel Engine
Fluid
CHEVRON URSA SUPER PLUS EC 15W40 (--- GAL)

Sample Rating Trend

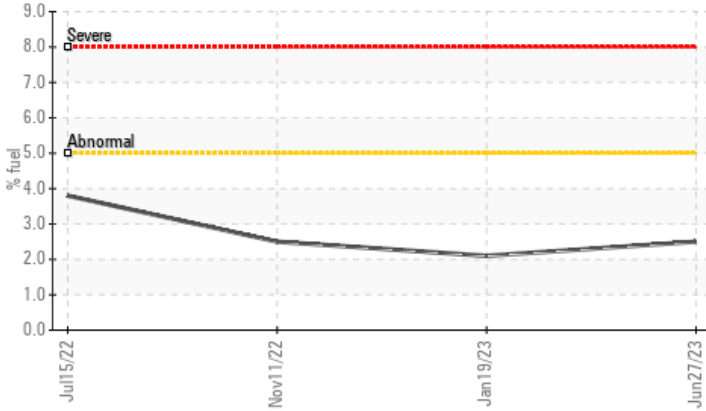


FUEL



COMPONENT CONDITION SUMMARY

▲ Fuel Dilution



RECOMMENDATION

No corrective action is recommended at this time. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

PROBLEMATIC TEST RESULTS

Sample Status			ATTENTION	NORMAL	NORMAL
Boron	ppm	ASTM D5185m	▲ 107	158	224
Magnesium	ppm	ASTM D5185m	▲ 106	447	397
Fuel	%	ASTM D3524 >5	▲ 2.5	<1.0	<1.0

Customer Id: DELSHR
Sample No.: PCA0093215
Lab Number: 05893937
Test Package: IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:
Wes Davis +1 905-569-8600 x223
wesd@wearcheck.ca

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Information Required	---	---	?	NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.
Check Fluid Source	---	---	?	Confirm the source of the lubricant being utilized for top-up/fill.

HISTORICAL DIAGNOSIS

31 May 2023 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report



27 Apr 2023 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

view report



01 Mar 2023 Diag: Jonathan Hester

VISCOSITY



No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

view report

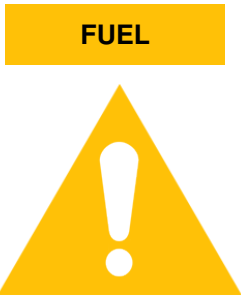
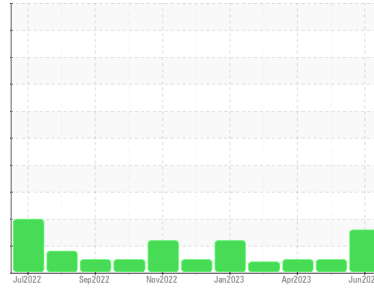


OIL ANALYSIS REPORT



Machine Id
CATERPILLAR BASIN DRILLING 105
 Component
4 Diesel Engine
 Fluid
CHEVRON URSA SUPER PLUS EC 15W40 (--- GAL)

Sample Rating Trend



DIAGNOSIS

Recommendation
 No corrective action is recommended at this time. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear
 All component wear rates are normal.

Contamination
 Light fuel dilution occurring. No other contaminants were detected in the oil.

Fluid Condition
 Additive levels indicate the addition of a different brand, or type of oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

method	limit/base	current	history 1	history 2
Sample Number	Client Info	PCA0093215	PCA0096207	PCA0096210
Sample Date	Client Info	27 Jun 2023	31 May 2023	27 Apr 2023
Machine Age	mls	Client Info	0	0
Oil Age	mls	Client Info	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		ATTENTION	NORMAL	NORMAL

CONTAMINATION

method	limit/base	current	history 1	history 2
Glycol	WC Method	NEG	NEG	NEG

WEAR METALS

method	limit/base	current	history 1	history 2	
Iron	ppm	ASTM D5185m >100	4	4	4
Chromium	ppm	ASTM D5185m >20	0	<1	<1
Nickel	ppm	ASTM D5185m >2	0	0	0
Titanium	ppm	ASTM D5185m >2	<1	0	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >25	2	<1	0
Lead	ppm	ASTM D5185m >40	0	<1	0
Copper	ppm	ASTM D5185m >330	6	5	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	history 1	history 2	
Boron	ppm	ASTM D5185m	▲ 107	158	224
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	74	100	100
Manganese	ppm	ASTM D5185m	0	<1	<1
Magnesium	ppm	ASTM D5185m	▲ 106	447	397
Calcium	ppm	ASTM D5185m	1778	1652	1512
Phosphorus	ppm	ASTM D5185m 1200	857	762	759
Zinc	ppm	ASTM D5185m 1300	1012	929	905
Sulfur	ppm	ASTM D5185m	3909	3392	3379

CONTAMINANTS

method	limit/base	current	history 1	history 2	
Silicon	ppm	ASTM D5185m >25	6	7	6
Sodium	ppm	ASTM D5185m	3	2	1
Potassium	ppm	ASTM D5185m >20	5	2	1
Fuel	%	ASTM D3524 >5	▲ 2.5	<1.0	<1.0

INFRA-RED

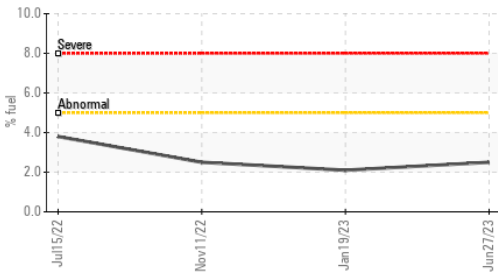
method	limit/base	current	history 1	history 2	
Soot %	%	*ASTM D7844 >3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	7.9	9.3	8.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.5	22.5	19.3

FLUID DEGRADATION

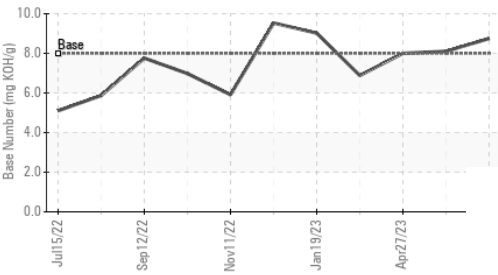
method	limit/base	current	history 1	history 2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	15.6	18.3	15.9
Base Number (BN)	mg KOH/g	ASTM D2896 8.0	8.75	8.10	8.00

OIL ANALYSIS REPORT

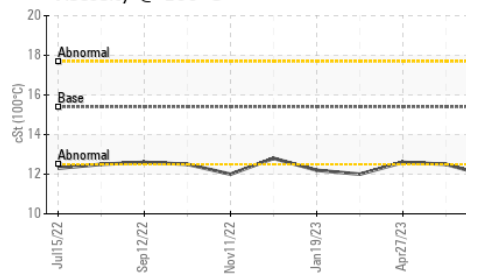
▲ Fuel Dilution



Base Number



Viscosity @ 100°C

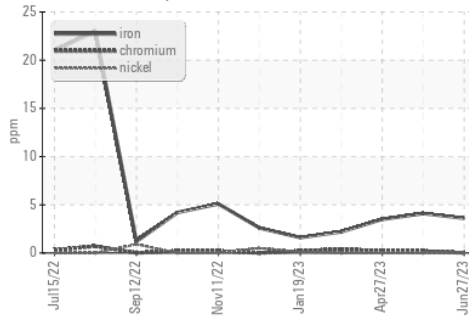


VISUAL	method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

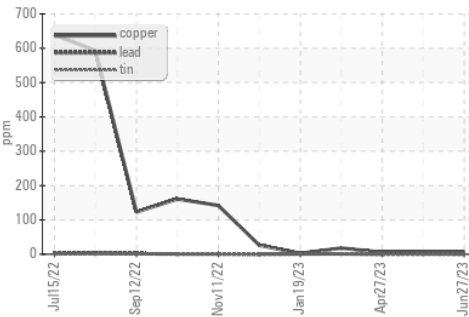
FLUID PROPERTIES	method	limit/base	current	history 1	history 2
Visc @ 100°C	cSt	ASTM D445	15.4	11.9	12.5

GRAPHS

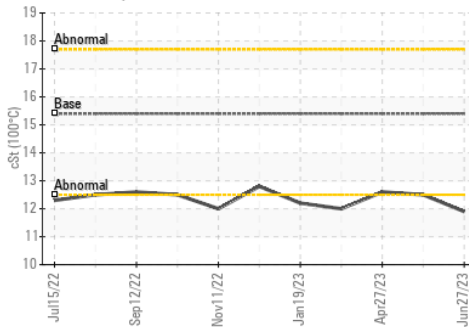
Ferrous Alloys



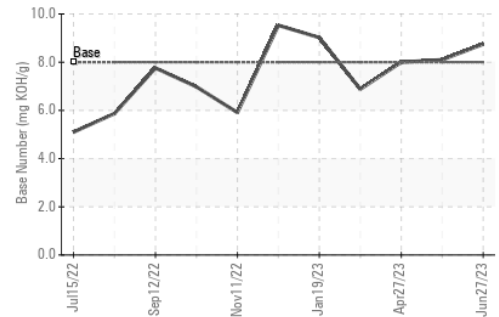
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PCA0093215 **Received** : 10 Jul 2023
Lab Number : 05893937 **Diagnosed** : 12 Jul 2023
Unique Number : 10549747 **Diagnostician** : Wes Davis
Test Package : IND 2 (Additional Tests: FuelDilution, PercentFuel)

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)

DELTA FUEL COMPANY
 1000 WELLS ISLAND RD
 SHREVEPORT, LA
 US 71107
 Contact: BRAD GORDON
 bgordon@deltafuel.com
 T: (318)780-3921
 F: