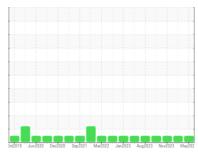


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

94

Hydraulic System

AW HYDRAULIC OIL ISO 46 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

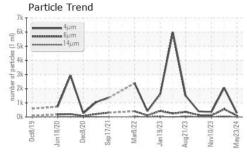
Fluid Condition

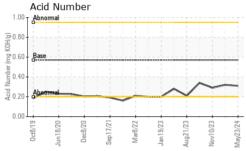
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

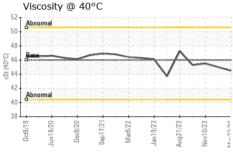
		Jct2019 Jun21	120 Dec2020 Sep2021	Mar2022 Jan2023 Aug2023 Novi	2023 May202	
SAMPLE INFORM	MATION	method				history2
Sample Number		Client Info		PTK0002498	PTK0003393	PTK0004870
Sample Date		Client Info		23 May 2024	13 Feb 2024	10 Nov 2023
Machine Age	mths	Client Info		0	0	0
Oil Age	mths	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	VI.	method	limit/base	ourront	hiotoryi	hiotory?
Water	N	WC Method		current	history1 NEG	history2 NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	0	0	<1
Chromium	ppm	ASTM D5185m	>10	3	3	3
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	<1	2	<1
Lead	ppm	ASTM D5185m	>10	0	<1	0
Copper	ppm	ASTM D5185m	>75	<1	<1	<1
Tin	ppm	ASTM D5185m	>10	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	0	0	0
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	5	0	2	0
•	• •	ASTM D5185m ASTM D5185m	5	0	2	0
Molybdenum Manganese Magnesium	ppm ppm		5 25			-
Manganese	ppm ppm	ASTM D5185m		0	0	0
Manganese Magnesium	ppm	ASTM D5185m ASTM D5185m	25	0	0	0
Manganese Magnesium Calcium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	25 200	0 0 34	0 1 32	0 0 15
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	25 200 300	0 0 34 246	0 1 32 199	0 0 15 187
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	25 200 300 370	0 0 34 246 288	0 1 32 199 246	0 0 15 187 229
Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	25 200 300 370 2500	0 0 34 246 288 4501	0 1 32 199 246 3607	0 0 15 187 229 3887
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	25 200 300 370 2500 limit/base	0 0 34 246 288 4501	0 1 32 199 246 3607 history1	0 0 15 187 229 3887 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	25 200 300 370 2500 limit/base >20	0 0 34 246 288 4501 current	0 1 32 199 246 3607 history1	0 0 15 187 229 3887 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	25 200 300 370 2500 limit/base >20	0 0 34 246 288 4501 current 0	0 1 32 199 246 3607 history1 <1	0 0 15 187 229 3887 history2 <1
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	25 200 300 370 2500 limit/base >20	0 0 34 246 288 4501 current 0 1	0 1 32 199 246 3607 history1 <1 0	0 0 15 187 229 3887 history2 <1 1
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	25 200 300 370 2500 limit/base >20 limit/base	0 0 34 246 288 4501 current 0 1 0	0 1 32 199 246 3607 history1 <1 0 1 history1 2058	0 0 15 187 229 3887 history2 <1 1 0 history2 342
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	25 200 300 370 2500 limit/base >20 limit/base	0 0 34 246 288 4501 current 0 1 0 current 287	0 1 32 199 246 3607 history1 <1 0 1	0 0 15 187 229 3887 history2 <1 1 0
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	25 200 300 370 2500 limit/base >20 limit/base >2500 >2500 >2500 >2500	0 0 34 246 288 4501 current 0 1 0 current	0 1 32 199 246 3607 history1 <1 0 1 history1 2058 553 39	0 0 15 187 229 3887 history2 <1 1 0 history2 342 103
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	25 200 300 370 2500 limit/base >20 limit/base >2500 >2500 >2500 >2500	0 0 34 246 288 4501 current 0 1 0 current 287 89 9	0 1 32 199 246 3607 history1 <1 0 1 history1 2058 553	0 0 15 187 229 3887 history2 <1 1 0 history2 342 103 9
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	25 200 300 370 2500 limit/base >20 >20 limit/base >2500 >320 >80 >20	0 0 34 246 288 4501 current 0 1 0 current 287 89 9 2	0 1 32 199 246 3607 history1 <1 0 1 history1 2058 553 39 8	0 0 15 187 229 3887 history2 <1 1 0 history2 342 103 9
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	25 200 300 370 2500 limit/base >20 >20 limit/base >2500 >320 >80 >20	0 0 34 246 288 4501 current 0 1 0 current 287 89 9	0 1 32 199 246 3607 history1 <1 0 1 history1 2058 553 39 8 0	0 0 15 187 229 3887 history2 <1 1 0 history2 342 103 9 3
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647	25 200 300 370 2500 limit/base >20 >20 limit/base >2500 >320 >80 >20 >4	0 0 34 246 288 4501 current 0 1 0 current 287 89 9 2 0	0 1 32 199 246 3607 history1 <1 0 1 history1 2058 553 39 8 0 0	0 0 0 15 187 229 3887 history2 <1 1 0 history2 342 103 9 3 0

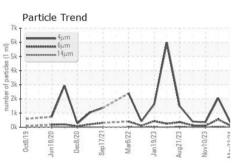


OIL ANALYSIS REPORT









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	NONE	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	NEG	NEG
ELLID DDODED	TIEC	mothod	limit/bass	aurrant	biotom/1	hiotom/0

Visc @ 40°C	cSt	ASTM D445	46	44.5	45.0	45.5

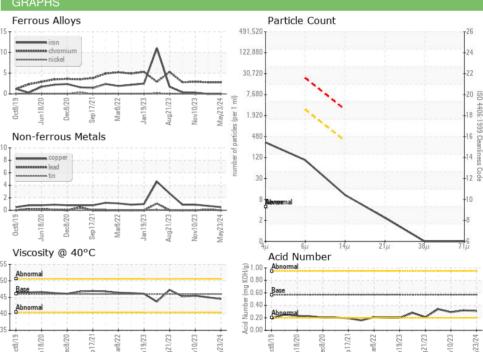
AMPLE IMAGES	method

Color

Bottom











Certificate 12367

Laboratory Sample No.

Lab Number : 06197596

: PTK0002498 Unique Number : 11059719 Test Package : MOB 2

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 03 Jun 2024 **Tested** : 04 Jun 2024

Diagnosed : 04 Jun 2024 - Don Baldridge

US 98422 Contact: JESSIE BAILEY jessie.bailey@calbag.com T: (253)572-6800

CALBAG METALS

TACOMA, WA

1602 MARINE VIEW DR

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)

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