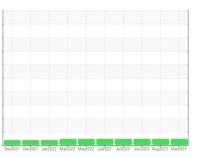


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id

ARBURG ARBURG 3 (S/N 140701)

Hydraulic System

AW HYDRAULIC OIL ISO 46 (--- GAL)

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

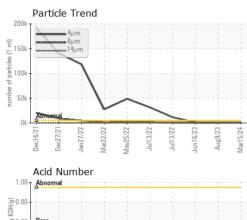
Fluid Condition

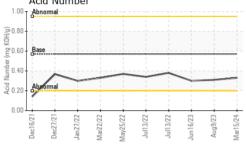
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

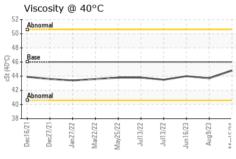
		Dec2021 Dec2	021 Jan2022 Mar2022 May2	022 Jul2022 Jul2023 Aug2	023 Mar2024	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PTK0005483	PTK0004685	PTK0004082
Sample Date		Client Info		15 Mar 2024	09 Aug 2023	16 Jun 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATION	٧	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	<1	0	<1
Chromium	ppm	ASTM D5185m	>10	<1	0	0
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	0	0	0
Lead	ppm	ASTM D5185m	>10	0	0	0
Copper	ppm	ASTM D5185m	>75	2	<1	1
Tin	ppm	ASTM D5185m	>10	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
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	2
Molybdenum	ppm	ASTM D5185m	5	0	0	<1
Manganese						
wanganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m ASTM D5185m	25	0 5	0	0 5
•			25 200	-		
Magnesium	ppm	ASTM D5185m		5	6	5
Magnesium Calcium	ppm	ASTM D5185m ASTM D5185m	200	5 42	6 41	5 48
Magnesium Calcium Phosphorus	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	200 300	5 42 310	6 41 309	5 48 383
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	200 300 370	5 42 310 400	6 41 309 396	5 48 383 497
Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	200 300 370 2500	5 42 310 400 1207	6 41 309 396 716	5 48 383 497 1017
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	200 300 370 2500 limit/base	5 42 310 400 1207 current	6 41 309 396 716 history1	5 48 383 497 1017 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	200 300 370 2500 limit/base >20	5 42 310 400 1207 current	6 41 309 396 716 history1	5 48 383 497 1017 history2 <1
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm	ASTM D5185m	200 300 370 2500 limit/base >20	5 42 310 400 1207 current <1 <1	6 41 309 396 716 history1 0	5 48 383 497 1017 history2 <1 0
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m METHOD ASTM D5185m METHOD ASTM D5185m ASTM D5185m ASTM D5185m	200 300 370 2500 limit/base >20	5 42 310 400 1207 current <1 <1 <1	6 41 309 396 716 history1 0 0	5 48 383 497 1017 history2 <1 0
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm	ASTM D5185m	200 300 370 2500 limit/base >20 >20	5 42 310 400 1207 current <1 <1 <1 current	6 41 309 396 716 history1 0 <1 history1	5 48 383 497 1017 history2 <1 0 0
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m MEthod ASTM D5185m	200 300 370 2500 limit/base >20	5 42 310 400 1207 current <1 <1 <1 current 1099	6 41 309 396 716 history1 0 <1 history1 787	5 48 383 497 1017 history2 <1 0 0 history2 1308
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm	ASTM D5185m	200 300 370 2500 limit/base >20 >20 limit/base >5000 >1300	5 42 310 400 1207 current <1 <1 <1 current 1099 257	6 41 309 396 716 history1 0 0 <1 history1 787 249	5 48 383 497 1017 history2 <1 0 0 history2 1308 242
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	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 ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	200 300 370 2500 limit/base >20 >20 limit/base >5000 >1300 >160 >40 >10	5 42 310 400 1207 current <1 <1 <1 current 1099 257 22	6 41 309 396 716 history1 0 0 <1 history1 787 249 20	5 48 383 497 1017 history2 <1 0 0 history2 1308 242 17
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm	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 ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	200 300 370 2500 limit/base >20 >20 limit/base >5000 >1300 >160 >40 >10	5 42 310 400 1207 current <1 <1 <1 current 1099 257 22 6	6 41 309 396 716 history1 0 0 <1 history1 787 249 20 5	5 48 383 497 1017 history2 <1 0 0 history2 1308 242 17 3 0 0
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	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	200 300 370 2500 limit/base >20 >20 limit/base >5000 >1300 >160 >40 >10	5 42 310 400 1207 current <1 <1 <1 current 1099 257 22 6 1	6 41 309 396 716 history1 0 0 <1 history1 787 249 20 5	5 48 383 497 1017 history2 <1 0 0 history2 1308 242 17 3 0
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm Particles >21µm Particles >38µm Particles >71µm	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7647	200 300 370 2500 limit/base >20 >20 limit/base >5000 >1300 >160 >40 >10 >3	5 42 310 400 1207 current <1 <1 <1 current 1099 257 22 6 1 0	6 41 309 396 716 history1 0 <1 history1 787 249 20 5 1 0	5 48 383 497 1017 history2 <1 0 0 history2 1308 242 17 3 0 0

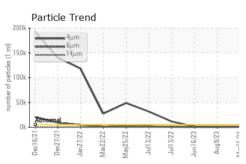


OIL ANALYSIS REPORT







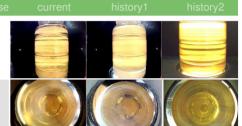


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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	scalar *Visual		NEG	NEG	NEG

I LOID I HOI LITT	ILO	memou			Thistory i	HISTOLYZ
Visc @ 40°C	cSt	ASTM D445	46	44.8	43.7	44.0

O, LL	- IIIII TOLLO	
Color		





GRAPH	lS																	
Ferrous	Alloys	5							491,520 T	rticle	e Cou	nt						r26
8- ——i	ron	ļ																2000
6 -	chromium nickel	J:							122,880 - Sev	re								-24
2									30,720	-								-22
21 21	22			22	22		.33	- 44	7,680 Abr	ormal	1							-20
Dec16/21 Dec27/21	Jan27/22	Mar22/22	May25/22	Jul13/22	Jul13/22	Jun16/23	Aug9/23	Mar15/24	直 1,920	***		1						18
Non-fer						,		_	1,920 480	\								-20 -18 -16 -14
I	copper		T					<u> </u>	b 120		/							14
6 - ***********************************	out								120 - 30 -			1						12
4-		in							8+				\					10
0	2	2	2		2	3	<u></u>	-							/			10
Dec16/21 Dec27/21	Jan27/22	Mar22/22	May25/22	Jul13/22	Jul13/22	Jun16/23	Aug9/23	Mar15/24	2+						1	\		-8
Viscosity			Σ			ゔ		≥	04 _µ		6μ umbe	14μ r		21μ		38μ	71	6 µ
Abnormal			1						S 0.80	onormal								
Base Abnormal									E 0.60 - B	ise								
Abnormal		-	-						Acid Number (mg KOH/g) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	pormal	_				_	-		_
15	2 +	2	2	2	2 +	- 3		-+	P 0.00		2	2	2	2	2			
Dec16/21 Dec27/21	Jan27/22	Mar22/22	May25/22	Jul13/22	Jul13/22	Jun16/23	Aug9/23	Mar15/24	Dec16/21	Dec27/21	Jan27/22	Mar22/22	May25/22	Jul13/22	Jul13/22	Jun16/23	Aug9/23	





Certificate 12367

Laboratory

Sample No. : PTK0005483 Lab Number : 06148648

Test Package : MOB 2

Unique Number : 10978726

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 15 Apr 2024 **Tested** : 16 Apr 2024

Diagnosed : 16 Apr 2024 - Wes Davis

Contact: STUART SHEPHERD stuart.shepherd@federalplasticscorp.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)

Contact/Location: STUART SHEPHERD - FEDMAH

FEDERAL MOLDING

16 LONG LAKE RD

MAHTOMEDI, MN

US 55115

T:

F: