

OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL

Plant US1 Greenville Machine Id MAF3 - D-1 Hydraulic

Component Hydraulic System Fluid SHELL TELLUS S2 M 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.

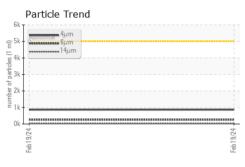
Fluid Condition

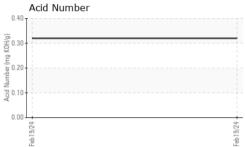
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

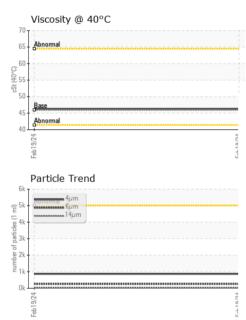
SAMPLE INFORM	1ATION	method	limit/base	current	history1	history2
Sample Number		Client Info	in the babb	TLC0001488		
Sample Date		Client Info		19 Feb 2024		
Machine Age	hrs	Client Info		19 Feb 2024		
Oil Age	hrs	Client Info		0		
Oil Changed	1115	Client Info		U N/A		
-		Client Inio		NORMAL		
Sample Status				NORMAL		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	1		
Chromium	ppm	ASTM D5185m	>20	<1		
Nickel	ppm	ASTM D5185m	>20	<1		
Titanium	ppm	ASTM D5185m		<1		
Silver	ppm	ASTM D5185m		<1		
Aluminum	ppm	ASTM D5185m	>20	<1		
Lead	ppm	ASTM D5185m	>20	1		
Copper	ppm	ASTM D5185m	>20	2		
Tin	ppm	ASTM D5185m	>20	<1		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		<1		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0		
Barium	ppm	ASTM D5185m		5		
Molybdenum	ppm	ASTM D5185m		<1		
Manganese	ppm	ASTM D5185m		<1		
Magnesium	ppm	ASTM D5185m		16		
Calcium	ppm	ASTM D5185m		25		
Phosphorus	ppm	ASTM D5185m		222		
Zinc	ppm	ASTM D5185m		318		
Sulfur	ppm	ASTM D5185m		659		
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	<1		
Sodium	ppm	ASTM D5185m		0		
Potassium	ppm	ASTM D5185m	>20	<1		
Water	%	ASTM D6304	>0.05	NEG		
FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	865		
Particles >6µm		ASTM D7647	>1300	256		
Particles >14µm		ASTM D7647	>160	19		
Particles >21µm		ASTM D7647	>40	5		
Particles >38µm		ASTM D7647	>10	0		
Particles >71µm		ASTM D7647	>3	0		
Oil Cleanliness		ISO 4406 (c)	>19/17/14	17/15/11		
FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.32		



OIL ANALYSIS REPORT







Appearance scalar Visual NORML Codor scalar Visual NORML NORML Free Water scalar Visual NORML NORML Free Water scalar Visual NORML FLUID PROPERTIES method Innthbase current historyl historyl Visc @ 40°C cst ASTIN D45 46.0 46.3 SAMPLE IMAGES method Innthbase current historyl historyl Color no image no image no image no image no image no image Non-ferrous Aloys 		VISUAL	r	nethod	limit/base	current	history1	history2
Yellow Metal scalar Visual NONE Precipitale scalar Visual NONE Bit scalar Visual NONE Debris scalar Visual NONE Appearance scalar Visual NONE Appearance scalar Visual NORML Appearance scalar Visual NORML Color scalar Visual NORML Free Water scalar Visual NORML			scalar *V	'isual				
Precipitate scalar Visual NONE NONE				'isual				
Siti scalar Visual NONE NONE Badd'offit scalar Visual NONE NONE Apparance scalar Visual NONE NONE Apparance scalar Visual NONE NONE Free Water scalar Visual NORML Enulsified Water scalar Visual NORML NORML Free Water scalar Visual NORM NORML Free Water scalar Visual NORM NORML SAMPLE IMAGES nethod Inthbase current historyl historyl Color cit a STM D45 46.0 46.3 SAMPLE IMAGES nethod Inthbase current historyl historyl Color cit a STM D45 46.0 46.3 SAMPLE IMAGES nethod Inthbase current historyl historyl Color no image no image or image no image Color no image no image Ferrous Aloys Viscosly @ 40°C Viscosly @ 40°C Sample No. Sample No. Sa								
bebris scalar Visual NONE NONE SandDirt scalar Visual NONE NONE SandDirt scalar Visual NORML NORML Fielder Sands Fielder Sands Free Water scalar Visual NORML NORML Free Water scalar Visual NORML NORML				'isual	NONE			
Appearance scalar 'Visual NORML NORML Emulsified Water scalar 'Visual NORML NORML Free Water scalar 'Visual NORML NORML FLUID PROPERTIES method innit/base current history! history Nisce @ 40°C cSt ASTM D445 46.0 46.3 SAMPLE IMAGES method innit/base current history! history Color no image no image no image no image no image no image Non-Ferrous Mitols Non-Ferrous Metals Viscosity @ 40°C Viscosity								
Appearance scalar 'Visual NORML NORML Emulsified Water scalar 'Visual NORML NORML Free Water scalar 'Visual NORML NORML FLUID PROPERTIES method innit/base current history! history Nisce @ 40°C cSt ASTM D445 46.0 46.3 SAMPLE IMAGES method innit/base current history! history Color no image no image no image no image no image no image Non-Ferrous Mitols Non-Ferrous Metals Viscosity @ 40°C Viscosity		Sand/Dirt	scalar *V	'isual	NONE	NONE		
Emulsified Water scalar Visual >0.05 NEG Free Water scalar Visual >0.05 NEG Free Water scalar Visual >0.05 NEG Free Water scalar Visual >0.05 NEG FLUID PROPERTIES method imit/base ourrent history1 history2 Visc @ 40°C cSt ASTM D445 46.0 46.3 SAMPLE IMAGES method imit/base ourrent history1 history2 Color no image no image no image no image GRAPHS Ferrous Miloys 	9/24 .	Appearance	scalar *V	'isual	NORML	NORML		
Free Water scalar Visual NEG FLUID PROPERTIES method innibase current history1 history1 Visc @ 40°C c51 ASTM D445 46.0 46.3 SAMPLE IMAGES method innibase current history1 history1 history1 Ocior Color Innibase current history1 history2 history1 Bottom Innibase ourmage no image no image no image no image Mon-ferrous Metals Innibase Innibase Innibase Innibase Innibase Innibase Innibase Viscosity @ 40°C Innibase In	Feb 1	Odor	scalar *V	'isual	NORML	NORML		
FLUID PROPERTIES method linit/base current history1 history1 Visc @ 40°C CSI ASTM D445 46.0 46.3		Emulsified Water	scalar *V	'isual	>0.05	NEG		
Visc @ 40°C CSI ASTM D445 46.0 46.3 SAMPLE IMAGES method initibase current history1 history2 Color no image no image no image no image Color	1	Free Water	scalar *V	'isual		NEG		
SAMPLE IMAGES method limitbase ourrent history1 history2 Color no image no image no image no image Non-ferrous Alloys Wiscosity @ 40°C Viscosity @		FLUID PROPERT	IES r	nethod	limit/base	current	history1	history2
Color no image no image no image no image no image no image no ima		Visc @ 40°C	cSt AS	STM D445	46.0	46.3		
Botom no image no image CRAPHS Ferrous Alloys Particle Count Particle Coun		SAMPLE IMAGES	; r	nethod	limit/base	current	history1	history2
Big Stress CRAPHS Ferrous Alloys Particle Count Image: Stress of the	Feb 19/24	Color				•	no image	no image
Laboratory :: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. :: TLC0001488 Received :: 23 Feb 2024 Use Stars Til Count rest Package :: PLANT Est Package :: PLANT Es		Bottom					no image	no image
Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : TLC0001488 : Received : 23 Feb 2024 : 1401 ANTIOCH CHURCH ROJ Lab Number : 10096566 : Diagnosed : 26 Feb 2024 - Don Baldridge US 296 Unique Number : 10996566 : Diagnosed : 26 Feb 2024 - Don Baldridge US 296 Contact: Nicolas Jackson@michelin.co		GRAPHS						
Laboratory :: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. :: TLC0001488 : Received :: 23 Feb 2024 Digge Number :: 10296566 : Diagnosed :: 25 Feb 2024 : Don Baldridge Uscuss this sample report, contact Customer Service at 1-800-237-1369.								
Laboratory: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. :: TLC:0001488 Received :: 23 Feb 2024 Diagnosed :: 26 Feb 2024 - Don Baldridge US 296 Tested :: 26 Feb 2024 - Don Baldridge US 296 Contact: Nicolas Jacks Siculas Jackson@michelin.com					491,5	20		T ²
Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : TLC0001488 Received ::23 Feb 2024 Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : TLC0001488 Received ::23 Feb 2024 Laboratory : 102905366 Tested ::26 Feb 2024 Using Number : 102905866 Diagnosed ::26 Feb 2024 Don Baldridge US 296 Test Package : PLANT Scuss this sample report, contact Customer Service at 1-800-237-1369.	vc	o minkel			122,8	80 -		-2
Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : TLC0001488 : Received :: 23 Feb 2024 Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : TLC0001488 : Received :: 23 Feb 2024 Laboratory :: Tested :: 26 Feb 2024 Usios this sample report, contact Customer Service at 1-800-237-1369.					30.7	Severe		2
Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : TLC0001488 Received : 23 Feb 2024 Unique Number : 10896566 Diagnosed : 26 Feb 2024 - Don Baldridge Unique Number : 10896566 Diagnosed : 26 Feb 2024 - Don Baldridge Unique Number : 10896566 Diagnosed : 26 Feb 2024 - Don Baldridge Unique Number : 10896566 Diagnosed : 26 Feb 2024 - Don Baldridge Unique Number : 10896566 Diagnosed : 26 Feb 2024 - Don Baldridge Unique Number : 10896566 Diagnosed : 26 Feb 2024 - Don Baldridge Unique Number : 10896566 Diagnosed : 26 Feb 2024 - Don Baldridge Scuttor : The Contract Customer Service at 1-800-237-1369.		2-						
Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : TLC0001488 Received : 23 Feb 2024 Lab Number : 10896566 Diagnosed : 26 Feb 2024 Or Hon Baldridge Creaville, S Unique Number : 10896566 Diagnosed : 26 Feb 2024 Contact: Nicolas Jackson@michelin.cd			****			80 Abnormal		-2
Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : TLC0001488 Received : 23 Feb 2024 Lab Number : 10896566 Diagnosed : 26 Feb 2024 Or Hon Baldridge Creaville, S Unique Number : 10896566 Diagnosed : 26 Feb 2024 Contact: Nicolas Jackson@michelin.cd		19/2			o19/2.	20		-1
Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : TLC0001488 Received : 23 Feb 2024 Lab Number : 10896566 Diagnosed : 26 Feb 2024 Or Hon Baldridge Creaville, S Unique Number : 10896566 Diagnosed : 26 Feb 2024 Contact: Nicolas Jackson@michelin.cd					Fel les (p			
Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : TLC0001488 Received : 23 Feb 2024 Lab Number : 10896566 Diagnosed : 26 Feb 2024 Or Hon Baldridge Creaville, S Unique Number : 10896566 Diagnosed : 26 Feb 2024 Contact: Nicolas Jackson@michelin.cd			5		partic	80		-1
Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : TLC0001488 Received : 23 Feb 2024 Lab Number : 10896566 Diagnosed : 26 Feb 2024 Or Hon Baldridge Creaville, S Unique Number : 10896566 Diagnosed : 26 Feb 2024 Contact: Nicolas Jackson@michelin.cd		8 - copper			t per of	20-		-1
Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : TLC0001488 Received : 23 Feb 2024 Lab Number : 10896566 Diagnosed : 26 Feb 2024 Or Hon Baldridge Creaville, S Unique Number : 10896566 Diagnosed : 26 Feb 2024 Contact: Nicolas Jackson@michelin.cd		Ctip						
Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : TLC0001488 Lab Number : 06098336 Lab Number : 06098336 Lab Number : 06098336 Tested : 26 Feb 2024 Unique Number : 10896566 Diagnosed : 26 Feb 2024 Test Package : PLANT Socurs this sample report, contact Customer Service at 1-800-237-1369.		¹ d 4				10		1
Viscosity @ 40°C Viscosity @	2	2				8-		-1
Viscosity @ 40°C Viscosity @		0				2	/	
Viscosity @ 40°C Viscosity @	L	619/2			b19/2	2	/	
Acid Number Acid Acid Number Acid Number		—			B	0 4µ 6µ	14µ 21µ	38µ 71µ
Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 MICHELIN TIRE-GREENVILLE US 1 JN DO Sample No. : TLC0001488 Received : 23 Feb 2024 1401 ANTIOCH CHURCH RO/ Lab Number : 06098336 Tested : 26 Feb 2024 Greenville, S Unique Number : 10896566 Diagnosed : 26 Feb 2024 On Baldridge US 296 cente L2807 Test Package : PLANT Contact Customer Service at 1-800-237-1369.						Acid Number	00000000	
Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 MICHELIN TIRE-GREENVILLE US 1 JN DO Sample No. : TLC0001488 Received : 23 Feb 2024 1401 ANTIOCH CHURCH RO/ Lab Number : 06098336 Tested : 26 Feb 2024 Greenville, S Unique Number : 10896566 Diagnosed : 26 Feb 2024 - Don Baldridge US 296 Test Package : PLANT Contact: Nicolas Jacks ricolas.jackson@michelin.cd					(^B /H	40		
Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 MICHELIN TIRE-GREENVILLE US 1 JN DO Sample No. : TLC0001488 Received : 23 Feb 2024 1401 ANTIOCH CHURCH RO/ Lab Number : 06098336 Tested : 26 Feb 2024 Greenville, S Unique Number : 10896566 Diagnosed : 26 Feb 2024 - Don Baldridge US 296 Test Package : PLANT Contact: Nicolas Jacks ricolas.jackson@michelin.cd		ç 60 -			Q Q	30		
Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 MICHELIN TIRE-GREENVILLE US 1 JN DO Sample No. : TLC0001488 Received : 23 Feb 2024 1401 ANTIOCH CHURCH RO/ Lab Number : 06098336 Tested : 26 Feb 2024 Greenville, S Unique Number : 10896566 Diagnosed : 26 Feb 2024 - Don Baldridge US 296 Test Package : PLANT Contact: Nicolas Jacks ricolas.jackson@michelin.cd		문 55			ے ۔ ود	20		
Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 MICHELIN TIRE-GREENVILLE US 1 JN DO Sample No. : TLC0001488 Received : 23 Feb 2024 1401 ANTIOCH CHURCH RO/ Lab Number : 06098336 Tested : 26 Feb 2024 Greenville, S Unique Number : 10896566 Diagnosed : 26 Feb 2024 - Don Baldridge US 296 Easte L2307 Test Package : PLANT Contact: Nicolas Jacks riscuss this sample report, contact Customer Service at 1-800-237-1369.		45				10		
Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 MICHELIN TIRE-GREENVILLE US 1 JN DO Sample No. : TLC0001488 Received : 23 Feb 2024 1401 ANTIOCH CHURCH RO/ Lab Number : 06098336 Tested : 26 Feb 2024 Greenville, S Unique Number : 10896566 Diagnosed : 26 Feb 2024 - Don Baldridge US 296 Easte L2307 Test Package : PLANT Contact: Nicolas Jacks riscuss this sample report, contact Customer Service at 1-800-237-1369.		40 Abnormal			- Acid	00		
Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 MICHELIN TIRE-GREENVILLE US 1 JN DO Sample No. : TLC0001488 Received : 23 Feb 2024 1401 ANTIOCH CHURCH RO/ Lab Number : 06098336 Tested : 26 Feb 2024 Greenville, S Unique Number : 10896566 Diagnosed : 26 Feb 2024 - Don Baldridge US 296 Test Package : PLANT Contact: Nicolas Jacks scuss this sample report, contact Customer Service at 1-800-237-1369.		19/24			19/24			
Unique Number : 10896566 Diagnosed : 26 Feb 2024 - Don Baldridge US 296 Contact: Nicolas Jacks iscuss this sample report, contact Customer Service at 1-800-237-1369. Diagnosed : 26 Feb 2024 - Don Baldridge US 296	Sample No.	: WearCheck USA - 501 : TLC0001488	Received	d : 23	NC 27513 Feb 2024	MICHELIN	1 ANTIOCH C	HURCH ROA
	Unique Number icate L2367 Test Package	: 10896566 : PLANT	Diagnos	ed : 26	Feb 2024 - Do	-	Contact: N	US 296 licolas Jacks
						r	nicolas.jackson	@michelin.co

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

Ø

H

F: