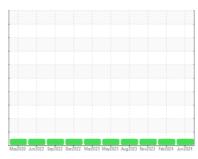


# **OIL ANALYSIS REPORT**

Sample Rating Trend







Machine Id

# CALE\_U2 CALE\_U2\_P2

Drive End Pump

SHELL TELLUS 32 (--- GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

The water content is negligible. There is no indication of any contamination in the oil.

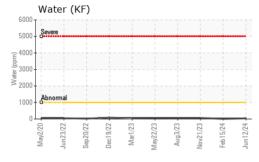
### **Fluid Condition**

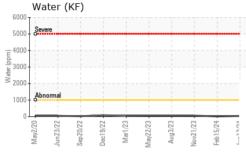
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

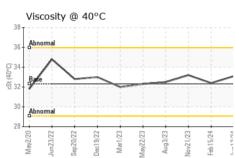
SAMPLE INFORMATION			May2020 Jun2	022 Sep2022 Dec2022 Mar2	023 May2023 Aug2023 Nov2023 Feb2	024 Jun2024	
Sample Date	SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Machine Age   hrs   Client Info   0   0   0   0   0   0   0   0   0	Sample Number		Client Info		RP0037020	RP0036999	RP0032728
Oil Age         hrs         Client Info         N/A	Sample Date		Client Info		12 Jun 2024	15 Feb 2024	21 Nov 2023
Oil Changed   Client Info   N/A   N/A   NORMAL   NORMAL	Machine Age	hrs	Client Info		0	0	0
NORMAL   NORMAL   NORMAL   WEAR METALS   method   limit/base   current   history1   history2   history2	Oil Age	hrs	Client Info		0	0	0
NORMAL   NORMAL   NORMAL   WEAR METALS   method   limit/base   current   history1   history2	Oil Changed		Client Info		N/A	N/A	N/A
Iron	Sample Status				NORMAL	NORMAL	NORMAL
Chromium         ppm         ASTM D5185m         >5         <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel	Iron	ppm	ASTM D5185m	>90	1	1	<1
Titanium	Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Silver	Nickel	ppm	ASTM D5185m	>5	<1	<1	<1
Aluminum	Titanium	ppm	ASTM D5185m	>3	<1	<1	<1
Lead	Silver	ppm	ASTM D5185m	>3	<1	<1	0
Lead	Aluminum	ppm	ASTM D5185m	>7	3	<1	<1
Copper         ppm         ASTM D5185m         >30         2         2         1           Tin         ppm         ASTM D5185m         >9         3         4         2           Vanadium         ppm         ASTM D5185m         <1         0         0           Cadmium         ppm         ASTM D5185m         <1         <1         <1           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         0         0           Barium         ppm         ASTM D5185m         1         5         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1	Lead		ASTM D5185m	>12	1	1	<1
Tin	Copper		ASTM D5185m	>30	2	2	1
Vanadium         ppm         ASTM D5185m         <1	• •		ASTM D5185m	>9	3	4	2
Cadmium         ppm         ASTM D5185m         <1	Vanadium		ASTM D5185m			0	0
Boron   ppm   ASTM D5185m   0			ASTM D5185m		<1	<1	<1
Barium	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         <1	Boron	ppm	ASTM D5185m		0	0	0
Manganese         ppm         ASTM D5185m         <1	Barium	ppm	ASTM D5185m		1	5	<1
Manganese         ppm         ASTM D5185m         <1	Molybdenum	ppm	ASTM D5185m		<1	<1	<1
Calcium         ppm         ASTM D5185m         35         8         11         11           Phosphorus         ppm         ASTM D5185m         259         310         239         283           Zinc         ppm         ASTM D5185m         277         368         337         326           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >60         2         2         1           Sodium         ppm         ASTM D5185m         >60         0         0         0           Potassium         ppm         ASTM D5185m         >20         1         <1         <1           Water         %         ASTM D6304         >.1         0.004         0.001         0.006           ppm Water         ppm         ASTM D6304         >.1         0.004         0.001         0.006           ppm Water         ppm         ASTM D6304         >.1000         40         8         65           FLUID DEGRADATION         method         limit/base         current         history1         history2           Acid Number (AN)         mg KOHg	Manganese	ppm	ASTM D5185m		<1	<1	<1
Phosphorus         ppm         ASTM D5185m         259         310         239         283           Zinc         ppm         ASTM D5185m         277         368         337         326           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >60         2         2         1           Sodium         ppm         ASTM D5185m         >0         0         0         0           Potassium         ppm         ASTM D5185m         >20         1         <1         <1           Water         %         ASTM D6304         >.1         0.004         0.001         0.006           ppm Water         ppm         ASTM D6304         >.1         0.004         0.001         0.006           ppm Water         ppm         ASTM D6304         >.1000         40         8         65           FLUID DEGRADATION         method         limit/base         current         history1         history2           Acid Number (AN)         mg KOHg         ASTM D8045         0.32         0.32         0.33         0.33           VISUAL	Magnesium	ppm	ASTM D5185m	11	69	66	65
Zinc         ppm         ASTM D5185m         277         368         337         326           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >60         2         2         1           Sodium         ppm         ASTM D5185m         >60         0         0         0           Potassium         ppm         ASTM D5185m         >20         1         <1         <1           Water         %         ASTM D6304         >.1         0.004         0.001         0.006           ppm Water         ppm         ASTM D6304         >.1         0.004         0.001         0.006           ppm Water         ppm         ASTM D6304         >.1         0.004         0.001         0.006           ppm Water         ppm         ASTM D6304         >.1         0.004         0.001         0.006           ppm Water         ppm         ASTM D6304         >.1         0.004         0.001         0.006           ppm Water         ppm         ASTM D6304         >.1         0.000         8         65           FLUID DEGRADATION         method<	Calcium	ppm	ASTM D5185m	35	8	11	11
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >60         2         2         1           Sodium         ppm         ASTM D5185m         0         0         0         0           Potassium         ppm         ASTM D5185m         >20         1         <1         <1           Water         %         ASTM D6304         >.1         0.004         0.001         0.006           ppm Water         ppm         ASTM D6304         >.1         0.004         0.001         0.006           ppm Water         ppm         ASTM D6304         >.1000         40         8         65           FLUID DEGRADATION         method         limit/base         current         history1         history2           Acid Number (AN)         mg KOH/g         ASTM D8045         0.32         0.32         0.33         0.33           VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE         NONE           Yellow Metal         scalar         *Visual	Phosphorus	ppm	ASTM D5185m	259	310	239	283
Silicon         ppm         ASTM D5185m         >60         2         2         1           Sodium         ppm         ASTM D5185m         0         0         0         0           Potassium         ppm         ASTM D5185m         >20         1         <1	Zinc	ppm	ASTM D5185m	277	368	337	326
Sodium         ppm         ASTM D5185m         0         0         0           Potassium         ppm         ASTM D5185m         >20         1         <1         <1           Water         %         ASTM D6304         >.1         0.004         0.001         0.006           ppm Water         ppm         ASTM D6304         >1000         40         8         65           FLUID DEGRADATION         method         limit/base         current         history1         history2           Acid Number (AN)         mg KOH/g         ASTM D8045         0.32         0.32         0.33         0.33           VISUAL         method         limit/base         current         history1         history2           White Metal         scalar         *Visual         NONE         NONE         NONE           Yellow Metal         scalar         *Visual         NONE         NONE         NONE           Yellow Metal         scalar         *Visual         NONE         NONE         NONE         NONE           Yellow Metal         scalar         *Visual         NONE         NONE         NONE         NONE           Precipitate         scalar         *Visual         NO	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 1 <1 <1 Value	Silicon	ppm	ASTM D5185m	>60	2	2	1
Water % ASTM D6304 >.1 0.004 0.001 0.006 ppm Water ppm ASTM D6304 >1000 40 8 65  FLUID DEGRADATION method limit/base current history1 history2 Acid Number (AN) mg KOH/g ASTM D8045 0.32 0.32 0.33 0.33  VISUAL method limit/base current history1 history2 White Metal scalar *Visual NONE NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE NONE Appearance scalar *Visual NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Dedric Scalar *Visual NORML NORML NORML NORML DODOR Scalar *Visual NORML NORML NORML NORML Emulsified Water scalar *Visual >.1 NEG NEG NEG	Sodium	ppm	ASTM D5185m		0	0	0
ppm Water ppm ASTM D6304 >1000 40 8 65  FLUID DEGRADATION method limit/base current history1 history2  Acid Number (AN) mg KOH/g ASTM D8045 0.32 0.32 0.33 0.33  VISUAL method limit/base current history1 history2  White Metal scalar *Visual NONE NONE NONE NONE NONE NONE  Yellow Metal scalar *Visual NONE NONE NONE NONE NONE  Precipitate scalar *Visual NONE NONE NONE NONE NONE  Silt scalar *Visual NONE NONE NONE NONE NONE  Debris scalar *Visual NONE NONE NONE NONE NONE  Appearance scalar *Visual NONE NONE NONE NONE NONE  Appearance scalar *Visual NONE NONE NONE NONE NONE  Appearance scalar *Visual NORML NORML NORML NORML  Odor scalar *Visual NORML NORML NORML NORML  Emulsified Water scalar *Visual >.1 NEG NEG NEG	Potassium	ppm	ASTM D5185m	>20	1	<1	<1
FLUID DEGRADATION method limit/base current history1 history2  Acid Number (AN) mg KOH/g ASTM D8045 0.32 0.32 0.33 0.33  VISUAL method limit/base current history1 history2  White Metal scalar *Visual NONE NONE NONE NONE NONE  Yellow Metal scalar *Visual NONE NONE NONE NONE NONE  Precipitate scalar *Visual NONE NONE NONE NONE NONE  Silt scalar *Visual NONE NONE NONE NONE NONE  Debris scalar *Visual NONE NONE NONE NONE NONE  Appearance scalar *Visual NONE NONE NONE NONE NONE  Appearance scalar *Visual NORML NORML NORML NORML  Odor scalar *Visual NORML NORML NORML NORML  Emulsified Water scalar *Visual >.1 NEG NEG NEG	Water	%	ASTM D6304	>.1	0.004	0.001	0.006
Acid Number (AN) mg KOH/g ASTM D8045 0.32 0.32 0.33 0.33  VISUAL method limit/base current history1 history2  White Metal scalar *Visual NONE NONE NONE NONE NONE Yellow Metal scalar *Visual NONE NONE NONE NONE NONE Precipitate scalar *Visual NONE NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE LIGHT Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML Emulsified Water scalar *Visual >.1 NEG NEG NEG	ppm Water	ppm	ASTM D6304	>1000	40	8	65
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 LIGHT Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML Emulsified Water scalar *Visual >.1 NEG NEG NEG	FLUID DEGRADA	TION	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 NONE Debris scalar *Visual NONE NONE NONE NONE LIGHT Sand/Dirt scalar *Visual NONE NONE NONE NONE NONE Appearance scalar *Visual NORML NORML NORML NORML Odor scalar *Visual NORML NORML NORML NORML Emulsified Water scalar *Visual >.1 NEG NEG NEG	Acid Number (AN)	mg KOH/g	ASTM D8045	0.32	0.32	0.33	0.33
Yellow Metalscalar*VisualNONENONENONENONEPrecipitatescalar*VisualNONENONENONENONESiltscalar*VisualNONENONENONENONEDebrisscalar*VisualNONENONENONELIGHTSand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.1NEGNEGNEG	VISUAL		method	limit/base	current	history1	history2
Precipitate scalar *Visual NONE NONE NONE NONE Silt scalar *Visual NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE LIGHT 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 >.1 NEG NEG NEG	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silt scalar *Visual NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE LIGHT 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 >.1 NEG NEG NEG	Yellow Metal	scalar		NONE		NONE	NONE
Debrisscalar*VisualNONENONENONELIGHTSand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.1NEGNEGNEG	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.1NEGNEGNEG	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearancescalar*VisualNORMLNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>.1NEGNEGNEG	Debris	scalar	*Visual	NONE	NONE	NONE	LIGHT
Odor scalar *Visual NORML NORML NORML NORML NORML Emulsified Water scalar *Visual >.1 NEG NEG NEG	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Emulsified Water scalar *Visual >.1 NEG NEG NEG	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Free Water scalar *Visual NEG Subgritted By: Nigolas Puc	Emulsified Water	scalar	*Visual	>.1	NEG		
	Free Water	scalar	*Visual		NEG	Suppositted B	y: Nippelas Puca



## **OIL ANALYSIS REPORT**

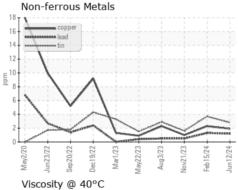


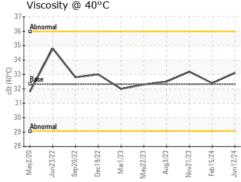


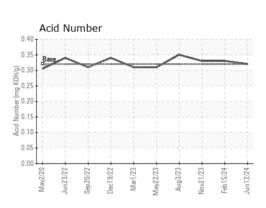




# **GRAPHS** Ferrous Alloys 20 10











Laboratory Sample No.

: RP0037020 Lab Number : 06217362 Unique Number : 11090226

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 21 Jun 2024 **Tested** 

: 25 Jun 2024 Diagnosed : 25 Jun 2024 - Don Baldridge

**ENERGY TRANSFER - CALEDONIA** 

3591 COLD SPRING ROAD CALEDONIA, NY US 14423

Contact: JERRY HIGGINS

Test Package : IND 2 Certificate 12367 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) T: (610)858-3838 F: