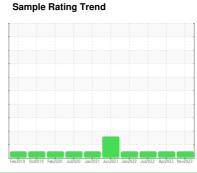


OIL ANALYSIS REPORT

Area CTL74 CTL 74 SCREW DOWN MAIN B/S

Gearbox

GEAR OIL ISO 220 (--- QTS)





DIAGNOSIS

Recommendation

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

Contamination

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 Number Client Info RP0038598 RP0029611 RP0028666 Sample Date Client Info 02 Nov 2023 17 Apr 2023 15 Jul 2022 Machine Age hrs Client Info 0 0 0 0 Oil Age hrs Client Info 0 0 0 0 Oil Changed Client Info N/A N/A N/A N/A Sample Status NORMAL NORMAL NORMAL NORMAL NORMAL WEAR METALS method Imitivase current history PQ ASTM D8184 26 31 28 Iron ppm ASTM D8185m >15 <1			Feb 2019 Oct2	019 Feb2020 Jul2020 Jan2	021 Jun2021 Jan2022 Jul2022 Apri	Ž023 NovŽ023	
Sample Date Client Info 02 Nov 2023 17 Apr 2023 15 Jul 2022 Machine Age hrs Client Info 0 0 0 0 Oil Age hrs Client Info 0 0 0 0 Oil Changed Client Info N/A N/A N/A N/A Sample Status NORMAL NORMAL NORMAL NORMAL NORMAL WEAR METALS method Imit/base current history1 history2 PQ ASTM D8184 26 31 28 Iron ppm ASTM D8185m >200 57 65 55 Chromium ppm ASTM D8185m >15 <1	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Machine Age hrs Client Info 0 0 0 0 Oil Age hrs Client Info 0 0 0 0 Oil Changed Client Info N/A N/A N/A N/A Sample Status NORMAL NORMAL NORMAL NORMAL WEAR METALS method limit/base current history1 history2 WEAR METALS method limit/base current history1 history2 PQ ASTM D5185m 26 31 28 Iron ppm ASTM D5185m 220 57 65 55 Chromium ppm ASTM D5185m >15 -1 -1 -1 1 Nickel ppm ASTM D5185m >15 -1 1 1 1 Alluminum ppm ASTM D5185m >25 2 -1 -1 4 Alluminum ppm ASTM D5185m >20 96 92	Sample Number		Client Info		RP0038598	RP0029611	RP0028666
Oil Age hrs Client Info N/A	Sample Date		Client Info		02 Nov 2023	17 Apr 2023	15 Jul 2022
Oil Changed Client Info N/A N/A	Machine Age	hrs	Client Info		0	0	0
NORMAL NORMAL NORMAL WEAR METALS method limit/base current history1 history2	Oil Age	hrs	Client Info		0	0	0
WEAR METALS method limit/base current history1 history2 PQ ASTM D8184 26 31 28 Iron ppm ASTM D5185m >200 57 65 55 Chromium ppm ASTM D5185m >15 <1	Oil Changed		Client Info		N/A	N/A	N/A
PQ	Sample Status				NORMAL	NORMAL	NORMAL
Iron	WEAR METALS		method	limit/base	current	history1	history2
Chromium ppm ASTM D5185m >15 <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 <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 <1 <1 <1 <td>PQ</td> <td></td> <td>ASTM D8184</td> <td></td> <th>26</th> <td>31</td> <td>28</td>	PQ		ASTM D8184		26	31	28
Nickel	Iron	ppm	ASTM D5185m	>200	57	65	55
Titanium	Chromium	ppm	ASTM D5185m	>15	<1	<1	<1
Silver	Nickel	ppm	ASTM D5185m	>15	<1	1	1
Aluminum ppm ASTM D5185m >25 2 <1 <1 Lead ppm ASTM D5185m >100 2 0 2 Copper ppm ASTM D5185m >200 96 92 85 Tin ppm ASTM D5185m >25 5 5 5 Antimony ppm ASTM D5185m 0 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 50 2 1 4 Barium ppm ASTM D5185m 15 19 0 0 0 Molybdenum ppm ASTM D5185m 15 0 <1	Titanium	ppm	ASTM D5185m		0	0	0
Lead ppm ASTM D5185m >100 2 0 2 Copper ppm ASTM D5185m >200 96 92 85 Tin ppm ASTM D5185m >25 5 5 5 Antimony ppm ASTM D5185m 0 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 50 2 1 4 Barium ppm ASTM D5185m 15 19 0 0 0 Molybdenum ppm ASTM D5185m 15 0 <1	Silver	ppm	ASTM D5185m		0	<1	4
Copper ppm ASTM D5185m >200 96 92 85 Tin ppm ASTM D5185m >25 5 5 5 Antimony ppm ASTM D5185m >5 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 50 2 1 4 Barium ppm ASTM D5185m 15 19 0 0 Molybdenum ppm ASTM D5185m 15 0 <1	Aluminum	ppm	ASTM D5185m	>25	2	<1	<1
Tin ppm ASTM D5185m >25 5 5 5 Antimony ppm ASTM D5185m 0 0 0 0 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m 0 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 50 2 1 4 Barium ppm ASTM D5185m 15 19 0 0 Molybdenum ppm ASTM D5185m 15 0 <1	Lead	ppm	ASTM D5185m	>100	2	0	2
Antimony ppm ASTM D5185m >5	Copper	ppm	ASTM D5185m	>200	96	92	85
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 50 2 1 4 Barium ppm ASTM D5185m 15 19 0 0 Molybdenum ppm ASTM D5185m 15 0 <1	Tin	ppm	ASTM D5185m	>25	5	5	5
Cadmium ppm ASTM D5185m 0 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 50 2 1 4 Barium ppm ASTM D5185m 15 19 0 0 Molybdenum ppm ASTM D5185m 15 0 <1	Antimony	ppm	ASTM D5185m	>5			
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 50 2 1 4 Barium ppm ASTM D5185m 15 19 0 0 Molybdenum ppm ASTM D5185m 15 0 <1	Vanadium	ppm	ASTM D5185m		0	0	0
Boron ppm ASTM D5185m 50 2 1 4 Barium ppm ASTM D5185m 15 19 0 0 Molybdenum ppm ASTM D5185m 15 0 <1 1 Manganese ppm ASTM D5185m 50 2 3 0 Calcium ppm ASTM D5185m 50 17 18 12 Phosphorus ppm ASTM D5185m 350 229 206 182 Zinc ppm ASTM D5185m 100 88 91 70 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 39 40 30 Sodium ppm ASTM D5185m >20 <1 0 Potassium ppm ASTM D5185m >20 <1 <1 0 Water % ASTM D6304 >0.2 0.007 <th< td=""><td>Cadmium</td><td>ppm</td><td>ASTM D5185m</td><td></td><th>0</th><td>0</td><td>0</td></th<>	Cadmium	ppm	ASTM D5185m		0	0	0
Barium ppm ASTM D5185m 15 19 0 0 Molybdenum ppm ASTM D5185m 15 0 <1 1 Manganese ppm ASTM D5185m 0 <1 <1 Magnesium ppm ASTM D5185m 50 2 3 0 Calcium ppm ASTM D5185m 50 17 18 12 Phosphorus ppm ASTM D5185m 350 229 206 182 Zinc ppm ASTM D5185m 100 88 91 70 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 39 40 30 Sodium ppm ASTM D5185m >20 <1 0 Potassium ppm ASTM D5185m >20 <1 <1 0 Water % ASTM D6304 >0.2 0.007 0.005	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum ppm ASTM D5185m 15 0 <1 1 Manganese ppm ASTM D5185m 0 <1 <1 Magnesium ppm ASTM D5185m 50 2 3 0 Calcium ppm ASTM D5185m 50 17 18 12 Phosphorus ppm ASTM D5185m 350 229 206 182 Zinc ppm ASTM D5185m 100 88 91 70 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 39 40 30 Sodium ppm ASTM D5185m >50 39 40 30 Sodium ppm ASTM D5185m >20 <1 <1 0 Potassium ppm ASTM D6304 >0.2 0.007 0.005 0.052 ppm Water ppm ASTM D6304 >2000	Boron	ppm	ASTM D5185m	50	2	1	4
Manganese ppm ASTM D5185m 0 <1 <1 Magnesium ppm ASTM D5185m 50 2 3 0 Calcium ppm ASTM D5185m 50 17 18 12 Phosphorus ppm ASTM D5185m 350 229 206 182 Zinc ppm ASTM D5185m 100 88 91 70 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 39 40 30 Sodium ppm ASTM D5185m >20 <1	Barium	ppm	ASTM D5185m	15	19	0	0
Magnesium ppm ASTM D5185m 50 2 3 0 Calcium ppm ASTM D5185m 50 17 18 12 Phosphorus ppm ASTM D5185m 350 229 206 182 Zinc ppm ASTM D5185m 100 88 91 70 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 39 40 30 Sodium ppm ASTM D5185m 0 <1 0 Potassium ppm ASTM D5185m >20 <1 <1 0 Water % ASTM D6304 >0.2 0.007 0.005 0.052 ppm Water ppm ASTM D6304 >2000 76.4 59.7 525.3 FLUID DEGRADATION method limit/base current history1 history2	Molybdenum	ppm	ASTM D5185m	15	0	<1	1
Calcium ppm ASTM D5185m 50 17 18 12 Phosphorus ppm ASTM D5185m 350 229 206 182 Zinc ppm ASTM D5185m 100 88 91 70 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 39 40 30 Sodium ppm ASTM D5185m 0 <1	Manganese	ppm	ASTM D5185m		0	<1	<1
Phosphorus ppm ASTM D5185m 350 229 206 182 Zinc ppm ASTM D5185m 100 88 91 70 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 39 40 30 Sodium ppm ASTM D5185m 0 <1	Magnesium	ppm	ASTM D5185m	50	2	3	0
Zinc ppm ASTM D5185m 100 88 91 70 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 39 40 30 Sodium ppm ASTM D5185m 0 <1	Calcium	ppm	ASTM D5185m	50	17	18	12
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 39 40 30 Sodium ppm ASTM D5185m 0 <1	Phosphorus	ppm	ASTM D5185m	350	229	206	182
Silicon ppm ASTM D5185m >50 39 40 30 Sodium ppm ASTM D5185m 0 <1 0 Potassium ppm ASTM D5185m >20 <1 <1 0 Water % ASTM D6304 >0.2 0.007 0.005 0.052 ppm Water ppm ASTM D6304 >2000 76.4 59.7 525.3 FLUID DEGRADATION method limit/base current history1 history2	Zinc	ppm	ASTM D5185m	100	88	91	70
Sodium ppm ASTM D5185m 0 <1 0 Potassium ppm ASTM D5185m >20 <1	CONTAMINANTS	3	method	limit/base	current	history1	history2
Potassium ppm ASTM D5185m >20 <1 <1 0 Water % ASTM D6304 >0.2 0.007 0.005 0.052 ppm Water ppm ASTM D6304 >2000 76.4 59.7 525.3 FLUID DEGRADATION method limit/base current history1 history2	Silicon	ppm	ASTM D5185m	>50	39	40	30
Water % ASTM D6304 >0.2 0.007 0.005 0.052 ppm Water ppm ASTM D6304 >2000 76.4 59.7 525.3 FLUID DEGRADATION method limit/base current history1 history2	Sodium	ppm	ASTM D5185m		0	<1	0
ppm Water ppm ASTM D6304 >2000 76.4 59.7 525.3 FLUID DEGRADATION method limit/base current history1 history2	Potassium	ppm	ASTM D5185m	>20	<1	<1	0
FLUID DEGRADATION method limit/base current history1 history2	Water	%	ASTM D6304	>0.2	0.007	0.005	0.052
	ppm Water	ppm	ASTM D6304	>2000	76.4	59.7	525.3
Acid Number (AN) mg KOH/g ASTM D8045 0.85 0.37 0.38 0.38	FLUID DEGRADA	ATION	method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g	ASTM D8045	0.85	0.37	0.38	0.38



OIL ANALYSIS REPORT







Certificate L2367

Laboratory Sample No. Lab Number **Unique Number**

: 05998081 : 10726441

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : RP0038598 Received Diagnosed Diagnostician

: 03 Nov 2023

: 06 Nov 2023 : Wes Davis

Test Package : IND 2 (Additional Tests: PQ)

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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F: x: