

OIL ANALYSIS REPORT

Area **97** [97] A97 Fan 901

Center Gearbox

GEAR LIFE 150 (5 GAL)

Sample Rating Trend

DIAGNOSIS

Recommendation

We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

Wear

Gear wear is indicated.

Contamination

Appearance is milky. There is a high concentration of water present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The oil is no longer serviceable due to the presence of contaminants.

Sample Date Client Info 01 Sep 2022 16 May 2022 23 Feb 2022 Machine Age hrs Client Info 0		шg2017 Мти2018 Ашg2018 Мту2019 Feb2020 Ашg2020 Feb2021 Ашg2021 Feb2022 Smp202						
Sample Date Client Info 01 Sep 2022 16 May 2022 23 Feb 2022 Machine Age hrs Client Info 0	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2	
Machine Age hrs Client Info 0 0 0 0 Oil Age hrs Client Info 1440 2660 350 Not Changd	Sample Number		Client Info		HPL0001167	HPL0000172	HPL0000084	
Dil Age	Sample Date		Client Info		01 Sep 2022	16 May 2022	23 Feb 2022	
Oil Changed Sample Status Client Info Changed SEVERE Not Changd ABNORMAL Not Changd ABNORMAL Not Changd ABNORMAL ABNORMAL	Machine Age	hrs	Client Info		0	0	0	
Sample Status SEVERE ABNORMAL ABSORMAL ABNORMAL ABNORMAL ABNORMAL ABNORMAL ABSORMAL ABDORMAL ABD	Oil Age	hrs	Client Info		1440	2660	350	
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >200 583 449 265 Chromium ppm ASTM D5185m >10 4 4 2 Nickel ppm ASTM D5185m -1 -1 -1 -1 Silver ppm ASTM D5185m -21 0 1 -1 Aluminum ppm ASTM D5185m >25 10 17 10 Lead ppm ASTM D5185m >50 5 7 5 Copper ppm ASTM D5185m >200 2 2 -1 Tin ppm ASTM D5185m -0 0 -1 0 Antimony ppm ASTM D5185m 18 18 Vanadium ppm ASTM D5185m 0 0 0 0 Cadmium ppm ASTM D5185m -1 -1	Oil Changed		Client Info		Changed	Not Changd	Not Changd	
Iron	Sample Status				SEVERE	ABNORMAL	ABNORMAL	
Chromium ppm ASTM D5185m >10 4 4 2 Nickel ppm ASTM D5185m 0 <1 2 Titanium ppm ASTM D5185m <1 <1 <1 Silver ppm ASTM D5185m <1 0 1 Aluminum ppm ASTM D5185m >25 10 17 10 Lead ppm ASTM D5185m >20 2 2 <1 Copper ppm ASTM D5185m >20 2 2 <1 Tin ppm ASTM D5185m >10 0 <1 0 Antimony ppm ASTM D5185m -1 0 0 0 Vanadium ppm ASTM D5185m -1 0 0 0 Cadmium ppm ASTM D5185m -1 1 0 0 Barium ppm ASTM D5185m 0 0 0 0 Magnesium	WEAR METALS		method	limit/base	current	history1	history2	
Nickel	Iron	ppm	ASTM D5185m	>200	583	449	<u>▲</u> 265	
Titanium	Chromium	ppm	ASTM D5185m	>10	4	4	2	
Silver	Nickel	ppm	ASTM D5185m		0	<1	2	
Aluminum ppm ASTM D5185m >25 10 17 10 Lead ppm ASTM D5185m >50 5 7 5 Copper ppm ASTM D5185m >200 2 2 <1	Titanium	ppm	ASTM D5185m		<1	<1	<1	
Lead ppm ASTM D5185m >50 5 7 5 Copper ppm ASTM D5185m >200 2 2 <1 Tin ppm ASTM D5185m >10 0 <1 0 Antimony ppm ASTM D5185m 18 Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 3 2 <1 0 0 Molybdenum ppm ASTM D5185m 0 0 0 0 0 Molybdenum ppm ASTM D5185m 6 5 4 Manganese ppm ASTM D5185m 17 45 28 Calcium ppm ASTM D5185m 182 154 153 Zinc ppm <td>Silver</td> <td>ppm</td> <td>ASTM D5185m</td> <td></td> <th><1</th> <td>0</td> <td>1</td>	Silver	ppm	ASTM D5185m		<1	0	1	
Copper ppm ASTM D5185m >200 2 2 <1 Tin ppm ASTM D5185m >10 0 <1	Aluminum	ppm	ASTM D5185m	>25	10	17	10	
Tin ppm ASTM D5185m >10 0 <1 0 Antimony ppm ASTM D5185m 18 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 3 2 <1 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m <1 <1 <1 <1 Manganese ppm ASTM D5185m 6 5 4 Magnesium ppm ASTM D5185m 17 45 28 Calcium ppm ASTM D5185m 56 96 62 Phosphorus ppm ASTM D5185m 2 0 0 Sulfur ppm ASTM D5185m 2 19677 17938 <td>Lead</td> <td>ppm</td> <td>ASTM D5185m</td> <td>>50</td> <th>5</th> <td>7</td> <td>5</td>	Lead	ppm	ASTM D5185m	>50	5	7	5	
Antimony ppm ASTM D5185m 18 Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m <1	Copper	ppm	ASTM D5185m	>200	2	2	<1	
Vanadium ppm ASTM D5185m 0 0 0 Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 3 2 <1 Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m <1 <1 <1 <1 Manganese ppm ASTM D5185m 6 5 4 Magnesium ppm ASTM D5185m 17 45 28 Calcium ppm ASTM D5185m 56 96 62 Phosphorus ppm ASTM D5185m 182 154 153 Zinc ppm ASTM D5185m 2 0 0 Sulfur ppm ASTM D5185m 19677 17938 17854 CONTAMINANTS method limit/base current history1	Tin	ppm	ASTM D5185m	>10	0	<1	0	
Cadmium ppm ASTM D5185m <1 0 0 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 3 2 <1	Antimony	ppm	ASTM D5185m				18	
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 3 2 <1	Vanadium	ppm	ASTM D5185m		0	0	0	
Boron ppm ASTM D5185m 3 2 <1	Cadmium	ppm	ASTM D5185m		<1	0	0	
Barium ppm ASTM D5185m 0 0 0 Molybdenum ppm ASTM D5185m <1 <1 <1 Manganese ppm ASTM D5185m 6 5 4 Magnesium ppm ASTM D5185m 17 45 28 Calcium ppm ASTM D5185m 56 96 62 Phosphorus ppm ASTM D5185m 182 154 153 Zinc ppm ASTM D5185m 2 0 0 Sulfur ppm ASTM D5185m 19677 17938 17854 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 26 44 20 Sodium ppm ASTM D5185m >20 4 3 4 Water % ASTM D6304 >0.2 1.48 △ 0.183 ppm Water ppm AS	ADDITIVES		method	limit/base	current	history1	history2	
Molybdenum ppm ASTM D5185m <1 <1 <1 <1 <1 <1 <1 Manganese ppm ASTM D5185m 6 5 4 5 6 9 6 6 2 8 6 6 2 8 6 6 2 8 6 6 2 8 6 6 2 8 6 6 2 9 6 6 2 9 6 6 2 9 6 6 2 9 6 6 2 9 6 2 9 8 9 8 7 9 8 1 <t< td=""><td>Boron</td><td>ppm</td><td>ASTM D5185m</td><td></td><th>3</th><td>2</td><td><1</td></t<>	Boron	ppm	ASTM D5185m		3	2	<1	
Manganese ppm ASTM D5185m 6 5 4 Magnesium ppm ASTM D5185m 17 45 28 Calcium ppm ASTM D5185m 56 96 62 Phosphorus ppm ASTM D5185m 182 154 153 Zinc ppm ASTM D5185m 2 0 0 Sulfur ppm ASTM D5185m 19677 17938 17854 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 26 44 20 Sodium ppm ASTM D5185m 2 13 10 Potassium ppm ASTM D5185m >20 4 3 4 Water % ASTM D6304 >0.2 1.48 △ 0.183 ppm Water ppm ASTM D6304 >2000 14800 △ 1830	Barium	ppm	ASTM D5185m		0	0	0	
Magnesium ppm ASTM D5185m 17 45 28 Calcium ppm ASTM D5185m 56 96 62 Phosphorus ppm ASTM D5185m 182 154 153 Zinc ppm ASTM D5185m 2 0 0 Sulfur ppm ASTM D5185m 19677 17938 17854 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 26 44 20 Sodium ppm ASTM D5185m 2 13 10 Potassium ppm ASTM D5185m >20 4 3 4 Water % ASTM D6304 >0.2 1.48 △ 0.183 ppm Water ppm ASTM D6304 >2000 14800 △ 1830	Molybdenum	ppm	ASTM D5185m		<1	<1	<1	
Calcium ppm ASTM D5185m 56 96 62 Phosphorus ppm ASTM D5185m 182 154 153 Zinc ppm ASTM D5185m 2 0 0 Sulfur ppm ASTM D5185m 19677 17938 17854 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 26 44 20 Sodium ppm ASTM D5185m 2 13 10 Potassium ppm ASTM D5185m >20 4 3 4 Water % ASTM D6304 >0.2 1.48 △ 0.183 ppm Water ppm ASTM D6304 >2000 14800 △ 1830 FLUID DEGRADATION method limit/base current history1 history2	Manganese	ppm	ASTM D5185m		6	5	4	
Phosphorus ppm ASTM D5185m 182 154 153 Zinc ppm ASTM D5185m 2 0 0 Sulfur ppm ASTM D5185m 19677 17938 17854 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 26 44 20 Sodium ppm ASTM D5185m 2 13 10 Potassium ppm ASTM D5185m >20 4 3 4 Water % ASTM D6304 >0.2 1.48 △ 0.183 ppm Water ppm ASTM D6304 >2000 14800 △ 1830 FLUID DEGRADATION method limit/base current history1 history2	Magnesium	ppm	ASTM D5185m		17	45	28	
Zinc ppm ASTM D5185m 2 0 0 Sulfur ppm ASTM D5185m 19677 17938 17854 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 26 44 20 Sodium ppm ASTM D5185m 2 13 10 Potassium ppm ASTM D5185m >20 4 3 4 Water % ASTM D6304 >0.2 1.48 △ 0.183 ppm Water ppm ASTM D6304 >2000 14800 △ 1830 FLUID DEGRADATION method limit/base current history1 history2	Calcium	ppm	ASTM D5185m		56	96	62	
Sulfur ppm ASTM D5185m 19677 17938 17854 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 26 44 20 Sodium ppm ASTM D5185m 2 13 10 Potassium ppm ASTM D5185m >20 4 3 4 Water % ASTM D6304 >0.2 1.48 △ 0.183 ppm Water ppm ASTM D6304 >2000 14800 △ 1830 FLUID DEGRADATION method limit/base current history1 history2	Phosphorus	ppm	ASTM D5185m		182	154	153	
CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >50 26 44 20 Sodium ppm ASTM D5185m 2 13 10 Potassium ppm ASTM D5185m >20 4 3 4 Water % ASTM D6304 >0.2 1.48 △ 0.183 ppm Water ppm ASTM D6304 >2000 14800 △ 1830 FLUID DEGRADATION method limit/base current history1 history2	Zinc	ppm	ASTM D5185m		2	0	0	
Silicon ppm ASTM D5185m >50 26 44 20 Sodium ppm ASTM D5185m 2 13 10 Potassium ppm ASTM D5185m >20 4 3 4 Water % ASTM D6304 >0.2 1.48 △ 0.183 ppm Water ppm ASTM D6304 >2000 14800 △ 1830 FLUID DEGRADATION method limit/base current history1 history2	Sulfur	ppm	ASTM D5185m		19677	17938	17854	
Sodium ppm ASTM D5185m 2 13 10 Potassium ppm ASTM D5185m >20 4 3 4 Water % ASTM D6304 >0.2 1.48 △ 0.183 ppm Water ppm ASTM D6304 >2000 14800 △ 1830 FLUID DEGRADATION method limit/base current history1 history2	CONTAMINANTS	3	method	limit/base	current	history1	history2	
Potassium ppm ASTM D5185m >20 4 3 4 Water % ASTM D6304 >0.2 1.48 △ 0.183 ppm Water ppm ASTM D6304 >2000 14800 △ 1830 FLUID DEGRADATION method limit/base current history1 history2	Silicon	ppm	ASTM D5185m	>50	26	44	20	
Water % ASTM D6304 > 0.2 1.48 △ 0.183 ppm Water ppm ASTM D6304 > 2000 14800 △ 1830 FLUID DEGRADATION method limit/base current history1 history2	Sodium	ppm	ASTM D5185m		2	13	10	
ppm Water ppm ASTM D6304 >2000	Potassium	ppm	ASTM D5185m	>20	4	3	4	
FLUID DEGRADATION method limit/base current history1 history2	Water	%	ASTM D6304	>0.2	1.48		△ 0.183	
	ppm Water	ppm	ASTM D6304	>2000	14800		<u></u> 1830	
Acid Number (AN) mg KOH/g ASTM D8045 0.53 0.25 0.40	FLUID DEGRADA	NOITA	method	limit/base	current	history1	history2	
	Acid Number (AN)	mg KOH/g	ASTM D8045		0.53	0.25	0.40	



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