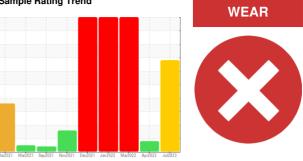


### **PROBLEM SUMMARY**

Sample Rating Trend

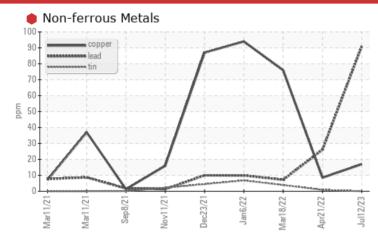


## MHTF\_1B MHTF\_1B\_M1

Non-Drive End Bearing

ROYAL PURPLE SYNFILM GT 32 (--- GAL)

### COMPONENT CONDITION SUMMARY



### RECOMMENDATION

We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

PROBLEMATIC	TEST R	ESULTS				
Sample Status				SEVERE	ABNORMAL	SEVERE
Lead	ppm	ASTM D5185m	>20	<b>9</b> 1	<u>^</u> 26	7
Copper	ppm	ASTM D5185m	>20	<b>1</b> 7	8	<b>1</b> 76

Customer Id: ENEAST Sample No.: RP0033010 Lab Number: 05898673 Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data: Jonathan Hester +1 919-379-4092 x4092 jhester@wearcheckusa.com

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

### RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Inspect Wear Source			?	We advise that you inspect for the source(s) of wear.
Resample			?	We recommend an early resample to monitor this condition.

### HISTORICAL DIAGNOSIS

### 21 Apr 2022 Diag: Jonathan Hester

### WEAR



No corrective action is recommended at this time. Resample at the next service interval to monitor. Bearing wear is indicated. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



### 18 Mar 2022 Diag: Angela Borella

### WEAR



We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. The iron level is severe. The copper level is severe. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid.

# view report

### 06 Jan 2022 Diag: Jonathan Hester

### WEAR



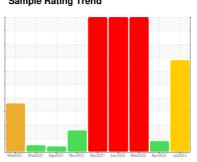
We advise that you check all areas where dirt can enter the system. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. The iron level is severe. The copper level is severe. Moderate concentration of visible metal present. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. Moderate concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid.





### **OIL ANALYSIS REPORT**

Sample Rating Trend





MHTF\_1B MHTF\_1B\_M1

**Non-Drive End Bearing** 

IFILM GT 32 (--- GAL)

ı	lulu						
F	30	YAL	PU	<b>IRPL</b>	_E	SY	NI

### Recommendation

DIAGNOSIS

We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

Bearing and/or bushing wear is indicated.

### Contamination

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

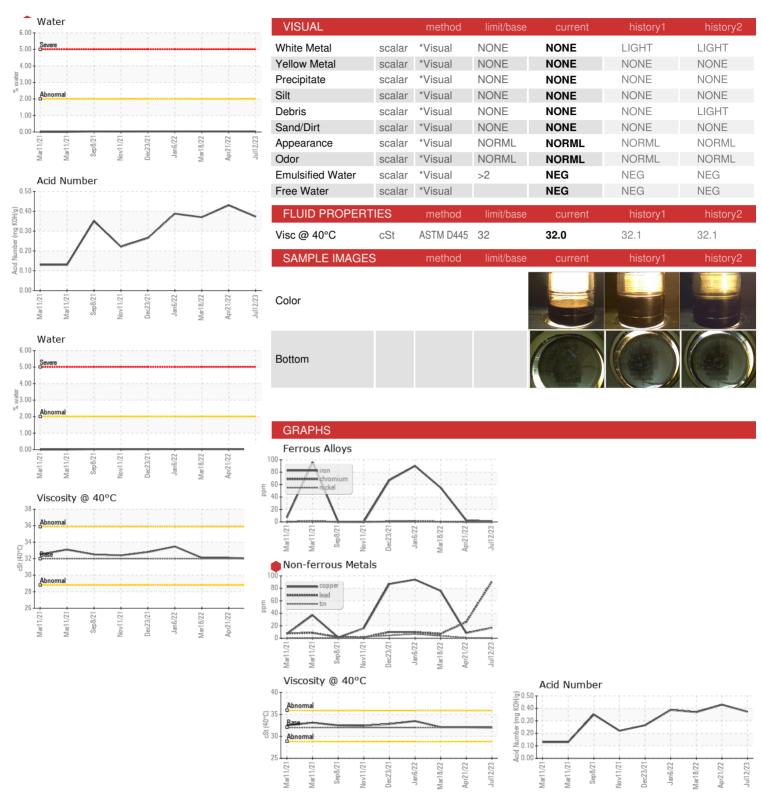
### **Fluid Condition**

The AN level is acceptable for this fluid.

SAMPLE INFORMATION         method         limit/base         current         history1         history2           Sample Number         Client Info         RP0033010         RP0012603         RP0012753           Sample Date         Client Info         12 Jul 2023         21 Apr 2022         18 Mar 2022           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         SEVERE         ABNORMAL         SEVERE           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >20         <1         2         55           Chromium         ppm         ASTM D5185m         >20         <1         <1         <0         <1           Nickel         ppm         ASTM D5185m         >20         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1         <1 <th></th> <th></th> <th>Mar2021 Ma</th> <th>r2021 Sep2021 Nov2021</th> <th>Dec2021 Jan2022 Mar2022 Apr2</th> <th>022 Jul2023</th> <th></th>			Mar2021 Ma	r2021 Sep2021 Nov2021	Dec2021 Jan2022 Mar2022 Apr2	022 Jul2023	
Sample Date         Client Info         12 Jul 2023         21 Apr 2022         18 Mar 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         SEVERE         ABNORMAL         SEVERE           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >20         <1	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
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         Client Info         N/A         N/A         N/A           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >20         <1	Sample Number		Client Info		RP0033010	RP0012603	RP0012753
Oil Age         hrs         Client Info         N/A         N/A         N/A         N/A           Sample Status         method         Imit/base         current         history1         history2           WEAR METALS         method         Imit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >20         <1	Sample Date		Client Info		12 Jul 2023	21 Apr 2022	18 Mar 2022
Oil Changed Sample Status         Client Info         N/A SEVERE         N/A ABNORMAL         N/A SEVERE           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >20         <1	Machine Age	hrs	Client Info		0	0	0
Sample Status         SEVERE         ABNORMAL         SEVERE           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >20         <1         2         55           Chromium         ppm         ASTM D5185m         >20         <1         <1         0           Nickel         ppm         ASTM D5185m         >20         <1         <1         0           Silver         ppm         ASTM D5185m         0         0         <1         <1         0           Aluminum         ppm         ASTM D5185m         >20         <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	Oil Age	hrs	Client Info		0	0	0
WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >20         <1         2         55           Chromium         ppm         ASTM D5185m         >20         0         0         <1           Nickel         ppm         ASTM D5185m         >20         <1         <1         0           Silver         ppm         ASTM D5185m         >20         <1         <1         <1           Aluminum         ppm         ASTM D5185m         >20         <1         <1         <1           Aluminum         ppm         ASTM D5185m         >20         <1         <1         <1           Lead         ppm         ASTM D5185m         >20         <17         8         76           Copper         ppm         ASTM D5185m         >20         <17         8         76           Tin         ppm         ASTM D5185m         >20         <1         4         4           Antimony         ppm         ASTM D5185m         0         <1         4         4           Antimony         ppm         ASTM D5185m         0         <0 <td< th=""><th>Oil Changed</th><th></th><th>Client Info</th><th></th><th>N/A</th><th>N/A</th><th>N/A</th></td<>	Oil Changed		Client Info		N/A	N/A	N/A
Iron	Sample Status				SEVERE	ABNORMAL	SEVERE
Chromium         ppm         ASTM D5185m         >20         0         0         <1	WEAR METALS		method	limit/base	current	history1	history2
Nickel         ppm         ASTM D5185m         >20         <1         <1         0           Titanium         ppm         ASTM D5185m         0         0         0         0           Silver         ppm         ASTM D5185m         0         0         <1	Iron	ppm	ASTM D5185m	>20	<1	2	<b>5</b> 5
Titanium         ppm         ASTM D5185m         0         0         0           Silver         ppm         ASTM D5185m         0         0         <1           Aluminum         ppm         ASTM D5185m         >20         <1         <1         <1           Lead         ppm         ASTM D5185m         >20         91         △         26         7           Copper         ppm         ASTM D5185m         >20         ♠ 17         8         ♠ 76           Tin         ppm         ASTM D5185m         >20         ♠ 17         8         ♠ 76           Antimony         ppm         ASTM D5185m         >20         ♠ 17         8         ♠ 76           Antimony         ppm         ASTM D5185m         —         —         —         —           Vanadium         ppm         ASTM D5185m         ♠ 0         0         0         0           Cadmium         ppm         ASTM D5185m         ♠ 0         0         0         0           Barium         ppm         ASTM D5185m         ♠ 0         0         0         0           Magnesium         ppm         ASTM D5185m         ♠ 0         0         0 </td <td>Chromium</td> <td>ppm</td> <td>ASTM D5185m</td> <td>&gt;20</td> <th>0</th> <td>0</td> <td>&lt;1</td>	Chromium	ppm	ASTM D5185m	>20	0	0	<1
Silver       ppm       ASTM D5185m       0       0       <1         Aluminum       ppm       ASTM D5185m       >20       <1       <1       <1         Lead       ppm       ASTM D5185m       >20       91       △       26       7         Copper       ppm       ASTM D5185m       >20       △       17       8       ♠ 76         Tin       ppm       ASTM D5185m       >20       ♠       17       8       ♠ 76         Antimony       ppm       ASTM D5185m       >20       ♠       17       8       ♠ 76         Vanadium       ppm       ASTM D5185m       Po       0       0       0       0         Cadmium       ppm       ASTM D5185m       Ø       0       0       0       0         ADDITIVES       method       limit/base       current       history1       history2         Barium       ppm       ASTM D5185m       Ø       0       0       <1         Barium       ppm       ASTM D5185m       Ø       0       <1       <1         Magnesium       ppm       ASTM D5185m       Ø       0       <1       <1       <1         Calc	Nickel	ppm	ASTM D5185m	>20	<1	<1	0
Aluminum         ppm         ASTM D5185m         >20         <1	Titanium	ppm	ASTM D5185m		0	0	0
Lead         ppm         ASTM D5185m         >20         91         ≥26         7           Copper         ppm         ASTM D5185m         >20         177         8         76           Tin         ppm         ASTM D5185m         >20         0         <1	Silver	ppm	ASTM D5185m		0	0	<1
Copper         ppm         ASTM D5185m         >20         ▲ 17         8         ♠ 76           Tin         ppm         ASTM D5185m         >20         0         <1         4           Antimony         ppm         ASTM D5185m         0         0         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         0         0         <1           Barium         ppm         ASTM D5185m         2         0         2           Molybdenum         ppm         ASTM D5185m         0         0         0           Magnaese         ppm         ASTM D5185m         50         67         67           Calcium         ppm         ASTM D5185m         50         67         67           Calcium         ppm         ASTM D5185m         2         13         11           Zinc         ppm         ASTM D5185m         2         13         1	Aluminum	ppm	ASTM D5185m	>20	<1	<1	<1
Tin         ppm         ASTM D5185m         >20         0         <1	Lead	ppm	ASTM D5185m	>20	91	<u>^</u> 26	7
Antimony         ppm         ASTM D5185m              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         0         0         <1           Barium         ppm         ASTM D5185m         2         0         2           Molybdenum         ppm         ASTM D5185m         0         0         0         0           Manganese         ppm         ASTM D5185m         50         67         67         67           Calcium         ppm         ASTM D5185m         0         0         2         2           Phosphorus         ppm         ASTM D5185m         2         13         11         2           Zinc         ppm         ASTM D5185m         6         3         6           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m	Copper	ppm	ASTM D5185m	>20	<u> </u>	8	<b>•</b> 76
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         0         0         <1	Tin	ppm	ASTM D5185m	>20	0	<1	4
Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         <1           Barium         ppm         ASTM D5185m         2         0         2           Molybdenum         ppm         ASTM D5185m         0         0         0           Manganese         ppm         ASTM D5185m         50         67         67           Calcium         ppm         ASTM D5185m         0         0         2           Phosphorus         ppm         ASTM D5185m         2         13         11           Zinc         ppm         ASTM D5185m         2         13         11           Zinc         ppm         ASTM D5185m         2         13         11           Zinc         ppm         ASTM D5185m         >15         8         12         13           Sodium         ppm         ASTM D5185m         >20         <1         0         <1           Water         %         ASTM D6304         >2         0.024         0.028	Antimony	ppm	ASTM D5185m				
ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         0         0         <1           Barium         ppm         ASTM D5185m         2         0         2           Molybdenum         ppm         ASTM D5185m         0         0         0           Manganese         ppm         ASTM D5185m         50         67         67           Calcium         ppm         ASTM D5185m         0         0         2           Phosphorus         ppm         ASTM D5185m         2         13         11           Zinc         ppm         ASTM D5185m         6         3         6           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         1         3         3           Sodium         ppm         ASTM D5185m         1         3         3           Potassium         ppm         ASTM D5185m         >20         <1         0         <1           Water         %         ASTM D6304         >2         0.024         0.028	Vanadium	ppm	ASTM D5185m		0	0	0
Boron         ppm         ASTM D5185m         0         0         <1	Cadmium	ppm	ASTM D5185m		0	0	0
Barium         ppm         ASTM D5185m         2         0         2           Molybdenum         ppm         ASTM D5185m         0         0         0           Manganese         ppm         ASTM D5185m         0         <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         0         0         0           Manganese         ppm         ASTM D5185m         0         <1	Boron	ppm	ASTM D5185m		0	0	<1
Manganese         ppm         ASTM D5185m         0         <1	Barium	ppm	ASTM D5185m		2	0	2
Magnesium         ppm         ASTM D5185m         50         67         67           Calcium         ppm         ASTM D5185m         0         0         2           Phosphorus         ppm         ASTM D5185m         2         13         11           Zinc         ppm         ASTM D5185m         6         3         6           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >15         8         12         13           Sodium         ppm         ASTM D5185m         1         3         3           Potassium         ppm         ASTM D5185m         >20         <1         0         <1           Water         %         ASTM D6304         >2         0.024         0.028         0.028           ppm Water         ppm         ASTM D6304         246.4         289.6         285.0           FLUID DEGRADATION         method         limit/base         current         history1         history2	Molybdenum	ppm	ASTM D5185m		0	0	0
Calcium         ppm         ASTM D5185m         0         0         2           Phosphorus         ppm         ASTM D5185m         2         13         11           Zinc         ppm         ASTM D5185m         6         3         6           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >15         8         12         13           Sodium         ppm         ASTM D5185m         1         3         3           Potassium         ppm         ASTM D5185m         >20         <1         0         <1           Water         %         ASTM D6304         >2         0.024         0.028         0.028           ppm Water         ppm         ASTM D6304         246.4         289.6         285.0           FLUID DEGRADATION         method         limit/base         current         history1         history2	Manganese	ppm	ASTM D5185m		0	<1	<1
Phosphorus         ppm         ASTM D5185m         2         13         11           Zinc         ppm         ASTM D5185m         6         3         6           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >15         8         12         13           Sodium         ppm         ASTM D5185m         >1         3         3           Potassium         ppm         ASTM D5185m         >20         <1         0         <1           Water         %         ASTM D6304         >2         0.024         0.028         0.028           ppm Water         ppm         ASTM D6304         246.4         289.6         285.0           FLUID DEGRADATION         method         limit/base         current         history1         history2	Magnesium	ppm	ASTM D5185m		50	67	67
Zinc         ppm         ASTM D5185m         6         3         6           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >15         8         12         13           Sodium         ppm         ASTM D5185m         1         3         3           Potassium         ppm         ASTM D5185m         >20         <1         0         <1           Water         %         ASTM D6304         >2         0.024         0.028         0.028           ppm Water         ppm         ASTM D6304         246.4         289.6         285.0           FLUID DEGRADATION         method         limit/base         current         history1         history2	Calcium	ppm	ASTM D5185m		0	0	2
CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >15         8         12         13           Sodium         ppm         ASTM D5185m         1         3         3           Potassium         ppm         ASTM D5185m         >20         <1         0         <1           Water         %         ASTM D6304         >2         0.024         0.028         0.028           ppm Water         ppm         ASTM D6304         246.4         289.6         285.0           FLUID DEGRADATION         method         limit/base         current         history1         history2	Phosphorus	ppm	ASTM D5185m		2	13	11
Silicon         ppm         ASTM D5185m         >15         8         12         13           Sodium         ppm         ASTM D5185m         1         3         3           Potassium         ppm         ASTM D5185m         >20         <1	Zinc	ppm	ASTM D5185m		6	3	6
Sodium         ppm         ASTM D5185m         1         3         3           Potassium         ppm         ASTM D5185m         >20         <1         0         <1           Water         %         ASTM D6304         >2         0.024         0.028         0.028           ppm Water         ppm         ASTM D6304         246.4         289.6         285.0           FLUID DEGRADATION         method         limit/base         current         history1         history2	CONTAMINANTS	8	method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         <1	Silicon	ppm	ASTM D5185m	>15	8	12	13
Water         %         ASTM D6304         >2         0.024         0.028         0.028           ppm Water         ppm         ASTM D6304         246.4         289.6         285.0           FLUID DEGRADATION         method         limit/base         current         history1         history2	Sodium	ppm	ASTM D5185m		1	3	3
ppm Water     ppm     ASTM D6304     246.4     289.6     285.0       FLUID DEGRADATION     method     limit/base     current     history1     history2	Potassium	ppm	ASTM D5185m	>20	<1	0	<1
FLUID DEGRADATION method limit/base current history1 history2	Water	%	ASTM D6304	>2	0.024	0.028	0.028
	ppm Water	ppm	ASTM D6304		246.4	289.6	285.0
Acid Number (AN)         mg KOH/g         ASTM D8045         0.373         0.43         0.37	FLUID DEGRADA	ATION	method	limit/base	current	history1	history2
	Acid Number (AN)	mg KOH/g	ASTM D8045		0.373	0.43	0.37



### OIL ANALYSIS REPORT







Certificate L2367

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

: RP0033010 : 05898673 : 10560029

Test Package : IND 2

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 14 Jul 2023 : 18 Jul 2023

Diagnosed Diagnostician : Jonathan Hester **ENERGY TRANSFER - MARCUS HOOK TF** 

7 COMMERCE DRIVE ASTON, PA US 19014

Contact: QUITA MORGAN

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)220-8386 F: