

# **OIL ANALYSIS REPORT**

## Sample Rating Trend



# [W52619 JR CASKEY] **HAMM GRW180I H2280193**

Right Final Drive

GEAR OIL ISO 220 (--- QTS)

### Recommendation

Resample at the next service interval to monitor. NOTE: one of two samples received with same ID and sampling date.

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the

#### Fluid Condition

The condition of the oil is acceptable for the time in

			Jun2024	Jun2024		
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		JR0224936	JR0224937	
Sample Date		Client Info		21 Jun 2024	21 Jun 2024	
Machine Age	hrs	Client Info		1215	1215	
Oil Age	hrs	Client Info		0	0	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	NORMAL	
CONTAMINATIO	N	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		60	40	
ron	ppm	ASTM D5185m	>500	155	147	
Chromium	ppm	ASTM D5185m	>10	2	2	
Nickel	ppm	ASTM D5185m	>10	<1	<1	
Гitanium	ppm	ASTM D5185m		<1	<1	
Silver	ppm	ASTM D5185m		<1	<1	
Aluminum	ppm		>25	3	3	
_ead	ppm		>25	1	1	
Copper	ppm	ASTM D5185m	>50	2	2	
in	ppm	ASTM D5185m		- <1	<1	
/anadium	ppm	ASTM D5185m		<1	<1	
Cadmium	ppm	ASTM D5185m		<1	<1	
ADDITIVES		method				history2
	ppm	method ASTM D5185m	limit/base 50	current <1	history1 <1	history2
Boron	ppm				· ·	history2
Boron Barium		ASTM D5185m	50	<1	<1	
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m	50 15	<1 2	<1	
Boron Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 15	<1 2 1	<1 3 1	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 15 15	<1 2 1 4	<1 3 1 4	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 15 15 50	<1 2 1 4 6	<1 3 1 4 6	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 15 15 50	<1 2 1 4 6 103	<1 3 1 4 6 105	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 15 15 50 50 350	<1 2 1 4 6 103 259	<1 3 1 4 6 105 255	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 15 15 50 50 350 100	<1 2 1 4 6 103 259 33	<1 3 1 4 6 105 255 34	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 15 15 50 50 350 100 12500	<1 2 1 4 6 103 259 33 22410	<1 3 1 4 6 105 255 34 21511	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Gulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	50 15 15 50 50 350 100 12500 limit/base	<1 2 1 4 6 103 259 33 22410 current	<1 3 1 4 6 105 255 34 21511 history1	    history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	50 15 15 50 50 350 100 12500 limit/base	<1 2 1 4 6 103 259 33 22410 current	<1 3 1 4 6 105 255 34 21511 history1	    history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Gulfur CONTAMINANTS Silicon Godium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	50 15 15 50 50 350 100 12500 limit/base >75	<1 2 1 4 6 103 259 33 22410 current 2	<1 3 1 4 6 105 255 34 21511 history1 2 5	
Boron Barium Molybdenum Manganese Magnesium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	50 15 15 50 50 350 100 12500 limit/base >75 >20	<1 2 1 4 6 103 259 33 22410 current 2 9 3	<1 3 1 4 6 105 255 34 21511 history1 2 5 3	
Boron Barium Molybdenum Manganese Magnesium Phosphorus Zinc Gulfur CONTAMINANTS Bilicon Sodium Potassium VISUAL White Metal	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	50 15 15 50 50 350 100 12500 limit/base >75 >20	<1 2 1 4 6 103 259 33 22410 current 2 9 3 current	<1 3 1 4 6 105 255 34 21511 history1 2 5 3	
Boron Barium Molybdenum Manganese Magnesium Phosphorus Zinc Bulfur CONTAMINANTS Bilicon Bodium Potassium VISUAL White Metal Kellow Metal	ppm	ASTM D5185m  Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 15 15 50 50 350 100 12500 limit/base >75 >20 limit/base	<1 2 1 4 6 103 259 33 22410 current 2 9 3 current NONE	<1 3 1 4 6 105 255 34 21511 history1 2 5 3 history1 NONE	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate	ppm	ASTM D5185m  Method  *Visual  *Visual	50 15 15 50 50 350 100 12500 limit/base >75 >20 limit/base NONE NONE	<1 2 1 4 6 103 259 33 22410 current 2 9 3 current NONE NONE	<1 3 1 4 6 105 255 34 21511 history1 2 5 3 history1 NONE NONE	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Gulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt	ppm	ASTM D5185m  method  *Visual  *Visual	50 15 15 50 50 350 100 12500 limit/base >75 >20 limit/base NONE NONE	<1 2 1 4 6 103 259 33 22410 current 2 9 3 current NONE NONE	<1 3 1 4 6 105 255 34 21511 history1 2 5 3 history1 NONE NONE NONE	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris	ppm	ASTM D5185m  method  *Visual  *Visual  *Visual	50 15 15 50 50 350 100 12500 limit/base >75 >20 limit/base NONE NONE NONE	<1 2 1 4 6 103 259 33 22410 current 2 9 3 current NONE NONE NONE	<1 3 1 4 6 105 255 34 21511 history1 2 5 3 history1 NONE NONE NONE NONE	history2
Boron Barium Molybdenum Manganese Magnesium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt	ppm	ASTM D5185m  MEthod  ASTM D5185m ASTM D5185m  *Visual *Visual *Visual *Visual *Visual *Visual	50 15 15 50 50 350 100 12500 limit/base >75 >20 limit/base NONE NONE NONE NONE NONE	<1 2 1 4 6 103 259 33 22410 current 2 9 3 current NONE NONE NONE NONE NONE	<1 3 1 4 6 105 255 34 21511 history1 2 5 3 history1 NONE NONE NONE NONE NONE NONE	
Boron Barium Molybdenum Manganese Magnesium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Yellow Metal Precipitate Silt Debris Sand/Dirt Appearance	ppm	ASTM D5185m  ASTM D5185m  **Comparison of the comparison of the co	50 15 15 50 50 350 100 12500 limit/base >75 >20 limit/base NONE NONE NONE NONE NONE NONE NONE NON	<1 2 1 4 6 103 259 33 22410 current 2 9 3 current NONE NONE NONE NONE NONE NONE NONE NON	<1 3 1 4 6 105 255 34 21511 history1 2 5 3 history1 NONE NONE NONE NONE NONE NONE NONE NON	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm	ASTM D5185m  **Visual	50 15 15 15 50 50 350 100 12500 limit/base >75 >20 limit/base NONE NONE NONE NONE NONE NONE NONE NON	<1 2 1 4 6 103 259 33 22410 current 2 9 3 current NONE NONE NONE NONE NONE NONE NONE NON	<1 3 1 4 6 105 255 34 21511 history1 2 5 3 history1 NONE NONE NONE NONE NONE NONE NONE NON	history2



# **OIL ANALYSIS REPORT**







Certificate 12367

Laboratory Sample No.

Lab Number : 06219971

: JR0224936

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received **Tested** Unique Number : 11098168

Diagnosed Test Package : CONST ( Additional Tests: PQ )

: 25 Jun 2024 : 26 Jun 2024 : 27 Jun 2024 - Jonathan Hester 11047 LEADBETTER RD ASHLAND, VA US 23005

JRE - ASHLAND

Contact: DAVID ZIEG dzieg@jamesriverequipment.com

T: (804)798-6001

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) Contact/Location: DAVID ZIEG - JAMASH

F: (804)798-0292