

## **OIL ANALYSIS REPORT**

# **FORMING**

## **ACCELERATION BELT NOSE HYD UNIT (S/N FM310H05U)**

**Hydraulic System** 

AW HYDRAULIC OIL ISO 68 (--- GAL)

Sample Rating Trend



## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

### Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

### **Fluid Condition**

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

Client Info	Sample Number			y2020 Nov20		Apr2022 Sep2022 Feb2023	Jul2023	
Client Info	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	Machine Age	Sample Number		Client Info		WC0834685	WC0834767	WC0783018
Dick   Age   Arm   Client Info   N/A   N	Oil Age         hrs         Client Info         N/A         N/A         N/A         N/A           Sample Status         NoRMAL         NORMAL         NORMAL         NORMAL         NORMAL           CONTAMINATION         method         limit/base         current         history1         history2           Water         WC Method         >0.05         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >20         <1         0         0           Chromium         ppm         ASTM D5185m         >20         <1         0         0           Nickel         ppm         ASTM D5185m         >20         0         0         0           Silver         ppm         ASTM D5185m         >20         0         0         0           Aluminum         ppm         ASTM D5185m         >20         0         0         0           Copper         ppm         ASTM D5185m         >20         0         0         0           Vanadium         ppm         ASTM D5185m         >20         0         0 <th>Sample Date</th> <th></th> <th>Client Info</th> <th></th> <th>30 Nov 2023</th> <th>04 Oct 2023</th> <th>07 Sep 2023</th>	Sample Date		Client Info		30 Nov 2023	04 Oct 2023	07 Sep 2023
Contamination   Cilient Info   N/A   N/A   N/A   NORMAL	Oil Changed Sample Status         Client Info         N/A         N/A         N/A         N/A         N/A         N/A         N/A         NA         Sample Status         NORMAL         NORMAL	Machine Age	hrs	Client Info		0	0	0
NORMAL   NORMAL   NORMAL   NORMAL   NORMAL	Sample Status         Mormation         Imitibase         current         history1         history2           Water         WC Method         >0.05         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM D5185m         >20         <1         0         0           Chromium         ppm         ASTM D5185m         >20         <1         0         0           Nickel         ppm         ASTM D5185m         >20         0         0         0           Silver         ppm         ASTM D5185m         >20         0         0         0           Aluminum         ppm         ASTM D5185m         >20         6         0         0           Lead         ppm         ASTM D5185m         >20         0         0         0           Copper         ppm         ASTM D5185m         >20         0         0         0           Copper         ppm         ASTM D5185m         >20         0         0         0           Vanadium         ppm         ASTM D5185m         >20         0         0         0 </th <th>Oil Age</th> <th>hrs</th> <th>Client Info</th> <th></th> <th>0</th> <th>0</th> <th>0</th>	Oil Age	hrs	Client Info		0	0	0
CONTAMINATION         method         limit/base         current         history1         history2           Water         WC Method         >0.05         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           ron         ppm         ASTM D5185m         >20         <1	Water	Oil Changed		Client Info		N/A	N/A	N/A
Water         WC Method         >0.05         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Von         ppm         ASTM D5185m         >20         <1	Water         WC Method         >0.05         NEG         NEG         NEG           WEAR METALS         method         limit/base         current         history1         history2           Iron         ppm         ASTM DS185m         >20         <1         0         0           Chromium         ppm         ASTM DS185m         >20         <1         0         0           Nickel         ppm         ASTM DS185m         >20         0         0         0           Silver         ppm         ASTM DS185m         0         0         0         0           Aluminum         ppm         ASTM DS185m         >20         6         0         0         0           Lead         ppm         ASTM DS185m         >20         0         3         3         3         1         1         0 <td< th=""><th>Sample Status</th><th></th><th></th><th></th><th>NORMAL</th><th>NORMAL</th><th>NORMAL</th></td<>	Sample Status				NORMAL	NORMAL	NORMAL
WEAR METALS         method         limit/base         current         history1         history2           ron         ppm         ASTM D5185m         >20         <1         0         0           Chromium         ppm         ASTM D5185m         >20         <1         0         0           Silver         ppm         ASTM D5185m         >20         0         0         0           Silver         ppm         ASTM D5185m         >20         6         0         0           Silver         ppm         ASTM D5185m         >20         6         0         0           ALUMINIUM         ppm         ASTM D5185m         >20         0         0         0           ALEAD         ppm         ASTM D5185m         >20         0         0         0           Copper         ppm         ASTM D5185m         5         62         2 <td< th=""><th>WEAR METALS         method         limit/base         current         history2           Iron         ppm         ASTM D5185m         &gt;20         &lt;1         0         0           Chromium         ppm         ASTM D5185m         &gt;20         &lt;1         0         0           Nickel         ppm         ASTM D5185m         &gt;20         0         0         0           Silver         ppm         ASTM D5185m         0         0         0         0           Aluminum         ppm         ASTM D5185m         &gt;20         6         0         0           Lead         ppm         ASTM D5185m         &gt;20         0         0         0           Lead         ppm         ASTM D5185m         &gt;20         0         0         0           Copper         ppm         ASTM D5185m         &gt;20         0         0         0           Vanadium         ppm         ASTM D5185m         &gt;20         0         0         0           Vanadium         ppm         ASTM D5185m         &gt;         0         0         0           Cadmium         ppm         ASTM D5185m         5         62         2         1         1</th><th>CONTAMINATION</th><th>I</th><th>method</th><th>limit/base</th><th>current</th><th>history1</th><th>history2</th></td<>	WEAR METALS         method         limit/base         current         history2           Iron         ppm         ASTM D5185m         >20         <1         0         0           Chromium         ppm         ASTM D5185m         >20         <1         0         0           Nickel         ppm         ASTM D5185m         >20         0         0         0           Silver         ppm         ASTM D5185m         0         0         0         0           Aluminum         ppm         ASTM D5185m         >20         6         0         0           Lead         ppm         ASTM D5185m         >20         0         0         0           Lead         ppm         ASTM D5185m         >20         0         0         0           Copper         ppm         ASTM D5185m         >20         0         0         0           Vanadium         ppm         ASTM D5185m         >20         0         0         0           Vanadium         ppm         ASTM D5185m         >         0         0         0           Cadmium         ppm         ASTM D5185m         5         62         2         1         1	CONTAMINATION	I	method	limit/base	current	history1	history2
Part	Iron	Water		WC Method	>0.05	NEG	NEG	NEG
ASTM D5185m   S20   S1	Chromium         ppm         ASTM D5185m         >20         <1	WEAR METALS		method	limit/base	current	history1	history2
Strickel	Nickel         ppm         ASTM D5185m         >20         0         0         0           Titanium         ppm         ASTM D5185m         0         0         0           Silver         ppm         ASTM D5185m         0         0         0           Aluminum         ppm         ASTM D5185m         >20         6         0         0           Lead         ppm         ASTM D5185m         >20         0         3         3           Tin         ppm         ASTM D5185m         >20         0         0         0           Vanadium         ppm         ASTM D5185m         >20         0         0         0           Vanadium         ppm         ASTM D5185m         >20         0         0         0           Vanadium         ppm         ASTM D5185m         >20         0         0         0           Addium         ppm         ASTM D5185m         5         62         2         1           Boron         ppm         ASTM D5185m         5         62         2         1           Barium         ppm         ASTM D5185m         5         0         1         0           Molybdenum<	Iron	ppm	ASTM D5185m	>20	<1	0	0
Titanium	Titanium         ppm         ASTM D5185m         0         0         0           Silver         ppm         ASTM D5185m         0         0         0           Aluminum         ppm         ASTM D5185m         >20         6         0         0           Lead         ppm         ASTM D5185m         >20         0         0         0           Copper         ppm         ASTM D5185m         >20         0         3         3           Tin         ppm         ASTM D5185m         >20         0         0         0           Vanadium         ppm         ASTM D5185m         >20         0         0         0           Vanadium         ppm         ASTM D5185m         >20         0         0         0           Vanadium         ppm         ASTM D5185m         0         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         5         62         2         1           Barium         ppm         ASTM D5185m         5         0         1         0           Magnesiu	Chromium	ppm	ASTM D5185m	>20	<1	0	0
Silver	Silver         ppm         ASTM D5185m         0         0         0           Aluminum         ppm         ASTM D5185m         >20         6         0         0           Lead         ppm         ASTM D5185m         >20         0         0         0           Copper         ppm         ASTM D5185m         >20         0         3         3           Tin         ppm         ASTM D5185m         >20         0         0         0           Vanadium         ppm         ASTM D5185m         >20         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0           Boron         ppm         ASTM D5185m         5         62         2         1         1           Barium         ppm         ASTM D5185m         5         0         1         0           Manganese         ppm         ASTM D5185m         5         0         1         0           Manganese         ppm         ASTM D5185m         25         2         11         12           Calcium         ppm         ASTM D5185m         20         436         79         83	Nickel	ppm	ASTM D5185m	>20	0	0	0
Astronometric   Astronometri	Aluminum         ppm         ASTM D5185m         >20         6         0         0           Lead         ppm         ASTM D5185m         >20         0         0         0           Copper         ppm         ASTM D5185m         >20         0         3         3           Tin         ppm         ASTM D5185m         >20         0         0         0           Vanadium         ppm         ASTM D5185m         -         1         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         5         62         2         1           Barium         ppm         ASTM D5185m         5         3         0         0           Molybdenum         ppm         ASTM D5185m         5         0         1         0           Manganese         ppm         ASTM D5185m         25         2         11         12           Calcium         ppm         ASTM D5185m         25         2         11         12 <th>Titanium</th> <th>ppm</th> <th>ASTM D5185m</th> <th></th> <th>0</th> <th>0</th> <th>0</th>	Titanium	ppm	ASTM D5185m		0	0	0
Lead         ppm         ASTM D5185m         >20         0         0         0           Copper         ppm         ASTM D5185m         >20         0         3         3           Fin         ppm         ASTM D5185m         >20         0         0         0           Adandium         ppm         ASTM D5185m         < 1	Lead         ppm         ASTM D5185m         >20         0         0         0           Copper         ppm         ASTM D5185m         >20         0         3         3           Tin         ppm         ASTM D5185m         >20         0         0         0           Vanadium         ppm         ASTM D5185m         20         0         0         0           Cadmium         ppm         ASTM D5185m         0         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         5         62         2         1           Barium         ppm         ASTM D5185m         5         62         2         1           Barium         ppm         ASTM D5185m         5         0         1         0           Molybdenum         ppm         ASTM D5185m         25         2         11         1           Galcium         ppm         ASTM D5185m         25         2         11         12           Calcium         ppm         ASTM D5185m         200         436         79         83 </th <th>Silver</th> <th>ppm</th> <th>ASTM D5185m</th> <th></th> <th>0</th> <th>0</th> <th>0</th>	Silver	ppm	ASTM D5185m		0	0	0
Description	Copper         ppm         ASTM D5185m         >20         0         3         3           Tin         ppm         ASTM D5185m         >20         0         0         0           Vanadium         ppm         ASTM D5185m         <1         0         0           Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         5         62         2         1           Barium         ppm         ASTM D5185m         5         62         2         1           Molybdenum         ppm         ASTM D5185m         5         0         1         0           Manganese         ppm         ASTM D5185m         25         2         11         12           Calcium         ppm         ASTM D5185m         25         2         11         12           Calcium         ppm         ASTM D5185m         200         436         79         83           Phosphorus         ppm         ASTM D5185m         370         213         442         445 <tr< th=""><th>Aluminum</th><th>ppm</th><th>ASTM D5185m</th><th>&gt;20</th><th>6</th><th>0</th><th>0</th></tr<>	Aluminum	ppm	ASTM D5185m	>20	6	0	0
Tin	Tin         ppm         ASTM D5185m         >20         0         0         0           Vanadium         ppm         ASTM D5185m         <1	Lead	ppm	ASTM D5185m	>20	0	0	0
Fin	Tin	Copper	ppm	ASTM D5185m	>20	0	3	3
Anandium         ppm         ASTM D5185m         <1	Vanadium         ppm         ASTM D5185m         <1		ppm		>20	0	0	0
Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         5         62         2         1           Barium         ppm         ASTM D5185m         5         3         0         0           Molybdenum         ppm         ASTM D5185m         5         0         1         0           Manganese         ppm         ASTM D5185m         25         2         11         12           Magnesium         ppm         ASTM D5185m         25         2         11         12           Calcium         ppm         ASTM D5185m         200         436         79         83           Phosphorus         ppm         ASTM D5185m         300         252         389         356           Zinc         ppm         ASTM D5185m         370         213         442         445           Sulfur         ppm         ASTM D5185m         2500         628         858         1170           CONTAMINANTS         method         limit/base         current         history1	Cadmium         ppm         ASTM D5185m         0         0         0           ADDITIVES         method         limit/base         current         history1         history2           Boron         ppm         ASTM D5185m         5         62         2         1           Barium         ppm         ASTM D5185m         5         3         0         0           Molybdenum         ppm         ASTM D5185m         5         0         1         0           Manganese         ppm         ASTM D5185m         0         0         0         0           Magnesium         ppm         ASTM D5185m         25         2         11         12           Calcium         ppm         ASTM D5185m         200         436         79         83           Phosphorus         ppm         ASTM D5185m         370         213         442         445           Sulfur         ppm         ASTM D5185m         370         213         442         445           Sulfur         ppm         ASTM D5185m         >15         2         0         <1           Sodium         ppm         ASTM D5185m         >15         2         0 <td< th=""><th>Vanadium</th><th></th><th>ASTM D5185m</th><th></th><th>&lt;1</th><th>0</th><th>0</th></td<>	Vanadium		ASTM D5185m		<1	0	0
Boron         ppm         ASTM D5185m         5         62         2         1           Barium         ppm         ASTM D5185m         5         3         0         0           Molybdenum         ppm         ASTM D5185m         5         0         1         0           Manganese         ppm         ASTM D5185m         25         2         11         12           Calcium         ppm         ASTM D5185m         200         436         79         83           Phosphorus         ppm         ASTM D5185m         200         436         79         83           Phosphorus         ppm         ASTM D5185m         370         213         442         445           Sulfur         ppm         ASTM D5185m         2500         628         858         1170           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >15         2         0         <1	Boron         ppm         ASTM D5185m         5         62         2         1           Barium         ppm         ASTM D5185m         5         3         0         0           Molybdenum         ppm         ASTM D5185m         5         0         1         0           Manganese         ppm         ASTM D5185m         0         0         0         0           Magnesium         ppm         ASTM D5185m         25         2         11         12           Calcium         ppm         ASTM D5185m         200         436         79         83           Phosphorus         ppm         ASTM D5185m         200         252         389         356           Zinc         ppm         ASTM D5185m         370         213         442         445           Sulfur         ppm         ASTM D5185m         2500         628         858         1170           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >15         2         0         <1           Sodium         ppm         ASTM D5185m         >20	Cadmium				0	0	0
Sarium	Barium         ppm         ASTM D5185m         5         3         0         0           Molybdenum         ppm         ASTM D5185m         5         0         1         0           Manganese         ppm         ASTM D5185m         25         2         11         12           Calcium         ppm         ASTM D5185m         200         436         79         83           Phosphorus         ppm         ASTM D5185m         300         252         389         356           Zinc         ppm         ASTM D5185m         370         213         442         445           Sulfur         ppm         ASTM D5185m         2500         628         858         1170           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >15         2         0         <1           Sodium         ppm         ASTM D5185m         >20         <1         2           Potassium         ppm         ASTM D5185m         >20         <1         2           Particles >4µm         ASTM D7647         >5000         2867         2903<	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum         ppm         ASTM D5185m         5         0         1         0           Manganese         ppm         ASTM D5185m         0         0         0           Magnesium         ppm         ASTM D5185m         25         2         11         12           Calcium         ppm         ASTM D5185m         200         436         79         83           Phosphorus         ppm         ASTM D5185m         300         252         389         356           Zinc         ppm         ASTM D5185m         370         213         442         445           Sulfur         ppm         ASTM D5185m         2500         628         858         1170           CONTAMINANTS         method         limit/base         current         history1         history2           Solicon         ppm         ASTM D5185m         20         <1	Molybdenum         ppm         ASTM D5185m         5         0         1         0           Manganese         ppm         ASTM D5185m         0         0         0           Magnesium         ppm         ASTM D5185m         25         2         11         12           Calcium         ppm         ASTM D5185m         200         436         79         83           Phosphorus         ppm         ASTM D5185m         300         252         389         356           Zinc         ppm         ASTM D5185m         370         213         442         445           Sulfur         ppm         ASTM D5185m         2500         628         858         1170           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >15         2         0         <1           Sodium         ppm         ASTM D5185m         >20         4         2         3           FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4µm         ASTM D7647         >5000         2867	Boron	ppm	ASTM D5185m	5	62	2	1
Manganese         ppm         ASTM D5185m         0         0         0           Magnesium         ppm         ASTM D5185m         25         2         11         12           Calcium         ppm         ASTM D5185m         200         436         79         83           Phosphorus         ppm         ASTM D5185m         300         252         389         356           Zinc         ppm         ASTM D5185m         370         213         442         445           Sulfur         ppm         ASTM D5185m         2500         628         858         1170           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         20         <1         2           Potassium         ppm         ASTM D5185m         20         <1         2           Potassium         ppm         ASTM D7647         >5000         2867         2903         2487           Particles >6µm         ASTM D7647         >640         181         137         88           Particles >14µm         ASTM D7647         >80         12         8         3	Manganese         ppm         ASTM D5185m         0         0         0           Magnesium         ppm         ASTM D5185m         25         2         11         12           Calcium         ppm         ASTM D5185m         200         436         79         83           Phosphorus         ppm         ASTM D5185m         300         252         389         356           Zinc         ppm         ASTM D5185m         370         213         442         445           Sulfur         ppm         ASTM D5185m         2500         628         858         1170           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >15         2         0         <1           Sodium         ppm         ASTM D5185m         >20         4         2         3           FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >5000         2867         2903         2487           Particles >514μm         ASTM D7647         >80         12<	Barium	ppm	ASTM D5185m	5	3	0	0
Magnesium         ppm         ASTM D5185m         25         2         11         12           Calcium         ppm         ASTM D5185m         200         436         79         83           Phosphorus         ppm         ASTM D5185m         300         252         389         356           Zinc         ppm         ASTM D5185m         370         213         442         445           Sulfur         ppm         ASTM D5185m         2500         628         858         1170           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >15         2         0         <1           Godium         ppm         ASTM D5185m         >20         <1         2           Potassium         ppm         ASTM D5185m         >20         4         2         3           FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >5000         2867         2903         2487           Particles >14μm         ASTM D7647         >80         12	Magnesium         ppm         ASTM D5185m         25         2         11         12           Calcium         ppm         ASTM D5185m         200         436         79         83           Phosphorus         ppm         ASTM D5185m         300         252         389         356           Zinc         ppm         ASTM D5185m         370         213         442         445           Sulfur         ppm         ASTM D5185m         2500         628         858         1170           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >15         2         0         <1           Sodium         ppm         ASTM D5185m         >20         <1         2           Potassium         ppm         ASTM D5185m         >20         4         2         3           FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4µm         ASTM D7647         >5000         2867         2903         2487           Particles >514µm         ASTM D7647         >80	Molybdenum	ppm	ASTM D5185m	5	0	1	0
Calcium         ppm         ASTM D5185m         200         436         79         83           Phosphorus         ppm         ASTM D5185m         300         252         389         356           Zinc         ppm         ASTM D5185m         370         213         442         445           Sulfur         ppm         ASTM D5185m         2500         628         858         1170           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >15         2         0         <1         2           Sodium         ppm         ASTM D5185m         >20         <1         2         3           Potassium         ppm         ASTM D5185m         >20         4         2         3           FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >5000         2867         2903         2487           Particles >6μm         ASTM D7647         >80         12         8         3	Calcium         ppm         ASTM D5185m         200         436         79         83           Phosphorus         ppm         ASTM D5185m         300         252         389         356           Zinc         ppm         ASTM D5185m         370         213         442         445           Sulfur         ppm         ASTM D5185m         2500         628         858         1170           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >15         2         0         <1         2           Sodium         ppm         ASTM D5185m         >20         <1         2         2           Potassium         ppm         ASTM D5185m         >20         4         2         3           FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >5000         2867         2903         2487           Particles >6μm         ASTM D7647         >80         12         8         3           Particles >21μm         ASTM D7647         >	Manganese	ppm	ASTM D5185m		0	0	0
Calcium         ppm         ASTM D5185m         200         436         79         83           Phosphorus         ppm         ASTM D5185m         300         252         389         356           Zinc         ppm         ASTM D5185m         370         213         442         445           Sulfur         ppm         ASTM D5185m         2500         628         858         1170           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >15         2         0         <1         2           Sodium         ppm         ASTM D5185m         20         <1         2         2           Potassium         ppm         ASTM D5185m         >20         4         2         3           FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles > 4μm         ASTM D7647         >5000         2867         2903         2487           Particles > 5μm         ASTM D7647         >80         12         8         3	Calcium         ppm         ASTM D5185m         200         436         79         83           Phosphorus         ppm         ASTM D5185m         300         252         389         356           Zinc         ppm         ASTM D5185m         370         213         442         445           Sulfur         ppm         ASTM D5185m         2500         628         858         1170           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >15         2         0         <1           Sodium         ppm         ASTM D5185m         >20         <1         2           Potassium         ppm         ASTM D5185m         >20         4         2         3           FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >5000         2867         2903         2487           Particles >6μm         ASTM D7647         >80         12         8         3           Particles >21μm         ASTM D7647         >20         2 <td< th=""><th>Magnesium</th><th>ppm</th><th>ASTM D5185m</th><th>25</th><th>2</th><th>11</th><th>12</th></td<>	Magnesium	ppm	ASTM D5185m	25	2	11	12
Zinc         ppm         ASTM D5185m         370         213         442         445           Sulfur         ppm         ASTM D5185m         2500         628         858         1170           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >15         2         0         <1           Sodium         ppm         ASTM D5185m         20         <1         2           Potassium         ppm         ASTM D5185m         >20         4         2         3           FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >5000         2867         2903         2487           Particles >6μm         ASTM D7647         >640         181         137         88           Particles >14μm         ASTM D7647         >80         12         8         3	Zinc         ppm         ASTM D5185m         370         213         442         445           Sulfur         ppm         ASTM D5185m         2500         628         858         1170           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >15         2         0         <1           Sodium         ppm         ASTM D5185m         20         <1         2           Potassium         ppm         ASTM D5185m         >20         4         2         3           FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >5000         2867         2903         2487           Particles >6μm         ASTM D7647         >640         181         137         88           Particles >14μm         ASTM D7647         >80         12         8         3           Particles >21μm         ASTM D7647         >4         0         0         0           Particles >71μm         ASTM D7647         >3         0         0         0	-	ppm	ASTM D5185m	200	436	79	83
Zinc         ppm         ASTM D5185m         370         213         442         445           Sulfur         ppm         ASTM D5185m         2500         628         858         1170           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >15         2         0         <1           Sodium         ppm         ASTM D5185m         20         <1         2           Potassium         ppm         ASTM D5185m         >20         4         2         3           FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >5000         2867         2903         2487           Particles >6μm         ASTM D7647         >640         181         137         88           Particles >14μm         ASTM D7647         >80         12         8         3	Zinc         ppm         ASTM D5185m         370         213         442         445           Sulfur         ppm         ASTM D5185m         2500         628         858         1170           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >15         2         0         <1           Sodium         ppm         ASTM D5185m         20         <1         2           Potassium         ppm         ASTM D5185m         >20         4         2         3           FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >5000         2867         2903         2487           Particles >6μm         ASTM D7647         >640         181         137         88           Particles >14μm         ASTM D7647         >80         12         8         3           Particles >21μm         ASTM D7647         >4         0         0         0           Particles >71μm         ASTM D7647         >3         0         0         0	Phosphorus	ppm	ASTM D5185m	300	252	389	356
Sulfur         ppm         ASTM D5185m         2500         628         858         1170           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >15         2         0         <1           Sodium         ppm         ASTM D5185m         20         <1         2           Potassium         ppm         ASTM D5185m         >20         4         2         3           FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >5000         2867         2903         2487           Particles >6μm         ASTM D7647         >640         181         137         88           Particles >14μm         ASTM D7647         >80         12         8         3	Sulfur         ppm         ASTM D5185m         2500         628         858         1170           CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >15         2         0         <1         2           Sodium         ppm         ASTM D5185m         >20         4         2         3           Potassium         ppm         ASTM D5185m         >20         4         2         3           FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >5000         2867         2903         2487           Particles >6μm         ASTM D7647         >640         181         137         88           Particles >14μm         ASTM D7647         >80         12         8         3           Particles >21μm         ASTM D7647         >4         0         0         0           Particles >71μm         ASTM D7647         >3         0         0         0           Oil Cleanliness         ISO 4406 (c)         >19/16/13         19/15/11			ASTM D5185m	370	213	442	445
Solition   ppm   ASTM D5185m   >15   2   0   <1   2   2   2   2   2   2   2   2   2	Silicon         ppm         ASTM D5185m         >15         2         0         <1	Sulfur		ASTM D5185m	2500	628	858	1170
Godium         ppm         ASTM D5185m         20         <1	Sodium         ppm         ASTM D5185m         20         <1	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium         ppm         ASTM D5185m         >20         4         2         3           FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >5000         2867         2903         2487           Particles >6μm         ASTM D7647         >640         181         137         88           Particles >14μm         ASTM D7647         >80         12         8         3	Potassium         ppm         ASTM D5185m         >20         4         2         3           FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >5000         2867         2903         2487           Particles >6μm         ASTM D7647         >640         181         137         88           Particles >14μm         ASTM D7647         >80         12         8         3           Particles >21μm         ASTM D7647         >20         2         2         1           Particles >38μm         ASTM D7647         >4         0         0         0           Particles >71μm         ASTM D7647         >3         0         0         0           Oil Cleanliness         ISO 4406 (c)         >19/16/13         19/15/11         19/14/10         18/14/9	Silicon	ppm	ASTM D5185m	>15	2	0	<1
Potassium         ppm         ASTM D5185m         >20         4         2         3           FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >5000         2867         2903         2487           Particles >6μm         ASTM D7647         >640         181         137         88           Particles >14μm         ASTM D7647         >80         12         8         3	Potassium         ppm         ASTM D5185m         >20         4         2         3           FLUID CLEANLINESS         method         limit/base         current         history1         history2           Particles >4μm         ASTM D7647         >5000         2867         2903         2487           Particles >6μm         ASTM D7647         >640         181         137         88           Particles >14μm         ASTM D7647         >80         12         8         3           Particles >21μm         ASTM D7647         >20         2         2         1           Particles >38μm         ASTM D7647         >4         0         0         0           Particles >71μm         ASTM D7647         >3         0         0         0           Oil Cleanliness         ISO 4406 (c)         >19/16/13         19/15/11         19/14/10         18/14/9	Sodium		ASTM D5185m		20	<1	2
Particles >4μm       ASTM D7647       >5000       2867       2903       2487         Particles >6μm       ASTM D7647       >640       181       137       88         Particles >14μm       ASTM D7647       >80       12       8       3	Particles >4μm       ASTM D7647       >5000       2867       2903       2487         Particles >6μm       ASTM D7647       >640       181       137       88         Particles >14μm       ASTM D7647       >80       12       8       3         Particles >21μm       ASTM D7647       >20       2       2       1         Particles >38μm       ASTM D7647       >4       0       0       0         Particles >71μm       ASTM D7647       >3       0       0       0         Oil Cleanliness       ISO 4406 (c)       >19/16/13       19/15/11       19/14/10       18/14/9				>20			
Particles >6μm       ASTM D7647       >640       181       137       88         Particles >14μm       ASTM D7647       >80       12       8       3	Particles >6μm         ASTM D7647         >640         181         137         88           Particles >14μm         ASTM D7647         >80         12         8         3           Particles >21μm         ASTM D7647         >20         2         2         1           Particles >38μm         ASTM D7647         >4         0         0         0           Particles >71μm         ASTM D7647         >3         0         0         0           Oil Cleanliness         ISO 4406 (c)         >19/16/13         19/15/11         19/14/10         18/14/9	FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >6μm       ASTM D7647       >640       181       137       88         Particles >14μm       ASTM D7647       >80       12       8       3	Particles >6μm       ASTM D7647       >640       181       137       88         Particles >14μm       ASTM D7647       >80       12       8       3         Particles >21μm       ASTM D7647       >20       2       2       1         Particles >38μm       ASTM D7647       >4       0       0       0         Particles >71μm       ASTM D7647       >3       0       0       0         Oil Cleanliness       ISO 4406 (c)       >19/16/13       19/15/11       19/14/10       18/14/9	Particles >4µm		ASTM D7647	>5000	2867	2903	2487
Particles >14µm ASTM D7647 >80 <b>12</b> 8 3	Particles >14μm       ASTM D7647       >80       12       8       3         Particles >21μm       ASTM D7647       >20       2       2       1         Particles >38μm       ASTM D7647       >4       0       0       0         Particles >71μm       ASTM D7647       >3       0       0       0         Oil Cleanliness       ISO 4406 (c)       >19/16/13       19/15/11       19/14/10       18/14/9			ASTM D7647	>640	181	137	88
·	Particles >21μm       ASTM D7647       >20       2       2       1         Particles >38μm       ASTM D7647       >4       0       0       0         Particles >71μm       ASTM D7647       >3       0       0       0         Oil Cleanliness       ISO 4406 (c)       >19/16/13       19/15/11       19/14/10       18/14/9	Particles >14µm		ASTM D7647	>80		8	3
5. 1. 5. 50 F = 1 p. 1. 5 F = 1	Particles >38μm       ASTM D7647       >4       0       0       0         Particles >71μm       ASTM D7647       >3       0       0       0         Oil Cleanliness       ISO 4406 (c)       >19/16/13       19/15/11       19/14/10       18/14/9	·						
	Particles >71μm       ASTM D7647       >3       0       0       0         Oil Cleanliness       ISO 4406 (c)       >19/16/13       19/15/11       19/14/10       18/14/9							
	Oil Cleanliness         ISO 4406 (c)         >19/16/13         19/15/11         19/14/10         18/14/9			ASTM D7647				
	FLUID DEGRADATION method limit/base current history1 history2	Particles >38μm						
FILLID DECORADATION	TOTAL THOU MOTION MINICIPAL CONTROL MISTORY	Particles >38μm Particles >71μm		ASTM D7647	>3	0	0	0
FLUID DEGRADATION method limit/base current history1 history2	Acid Number (AN) mg KOH/g ASTM D8045 0.57 0.26 0.25 0.24	Particles >38µm Particles >71µm Oil Cleanliness	TION _	ASTM D7647	>3	0	0	0



### **OIL ANALYSIS REPORT**







Laboratory Sample No. Lab Number

**Unique Number** Test Package : IND 2

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : 08 Dec 2023 : WC0834685 Received : 06029337 : 11 Dec 2023 Diagnosed : 10779128 Diagnostician : Don Baldridge

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)

J.M. Huber Corporation

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