

### **OIL ANALYSIS REPORT**

Area **Recovery** Machine Id **FFI15AB01 Harvest Tank** Component **Agitator Gearbox** 

# JAX FGG-AW ISO 220 (7 GAL)

#### DIAGNOSIS

#### Recommendation

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. NOTE: one of two samples received with same ID.

#### Wear

All component wear rates are normal.

#### Contamination

There is a high amount of particulates present in the oil.

#### Fluid Condition

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

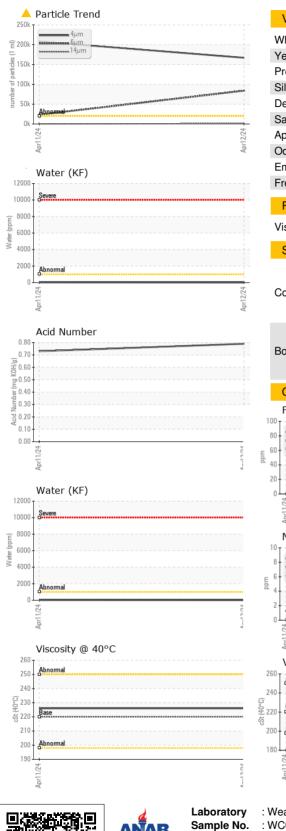
Boron     ppm     ASTM D5185m     0        Barium     ppm     ASTM D5185m     0     <1        Molybdenum     ppm     ASTM D5185m     0     0        Manganese     ppm     ASTM D5185m     <1     1        Magnesium     ppm     ASTM D5185m     <1     2        Calcium     ppm     ASTM D5185m     <66     7        Phosphorus     ppm     ASTM D5185m     595     663        Zinc     ppm     ASTM D5185m     12     9        Sulfur     ppm     ASTM D5185m     666     678        Solicon     ppm     ASTM D5185m     50     7     7        Sodium     ppm     ASTM D5185m     >20     0     1        Sodium     ppm     ASTM D5185m     >20     0     1        Yeater     %     ASTM D5185m     >20     0     1 <th></th> <th></th> <th></th> <th>Apr2024</th> <th>Apr2024</th> <th></th> <th></th>				Apr2024	Apr2024		
Sample Number     Client Info     WC0883712     WC083708        Oll Changed     Client Info     N/A     N/A     N/A     N/A     N/A	SAMPLE INFORM		method	limit/base	current	historv1	history2
Sample Date     Client Info     12 Apr 2024     11 Apr 2024							
Machine Age     hrs     Client Info     0     0        Oil Age     hrs     Client Info     0     0        Oil Changed     Client Info     N/A     N/A     N/A        WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >10     <1	,						
Dil Age     hrs     Client Info     0     0        Sample Status     Client Info     N/A     N/A     N/A     ABNORMAL     ABNORMAL        WEAR METALS     method     limit/base     current     history1     history2       fron     ppm     ASTM 05185m     >10     61     0        Nickel     ppm     ASTM 05185m     >10     0         Nickel     ppm     ASTM 05185m     >10     0     0        Silver     ppm     ASTM 05185m     >10     0     0        Copper     ppm     ASTM 05185m     >10     0     0        Addition     ppm     ASTM 05185m     0     0         ADDITIVES     method     limit/base     current     history1     history2       Barium     ppm     ASTM 05185m     0     0         ADDITIVES     method     limit/base     current		hre			•		
Dir Changed     Client Info     N/A     N/A        Sample Status     Client Info     N/A     ABNORMAL        WEAR METALS     method     Imit/base     current     history1     history2       Iron     ppm     ASTM D5185m     >10     <1	0				-		
Sample Status     method     Imit base     current     history1     history2       WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185n     >10     <1	-	1113			-	÷	
WEAR METALS     method     limit/base     current     history1     history2       Iron     ppm     ASTM D5185m<>150     88     63        Nickel     ppm     ASTM D5185m<>10     0        Nickel     ppm     ASTM D5185m     10     0        Nickel     ppm     ASTM D5185m     0     0        Silver     ppm     ASTM D5185m     25     8     9        Aduminum     ppm     ASTM D5185m     >50     0     1        Copper     ppm     ASTM D5185m     >50     0     1        Vanadium     ppm     ASTM D5185m     10     0     0        Adaminum     ppm     ASTM D5185m     0     0         Vanadium     ppm     ASTM D5185m     0     0         Adamium     ppm     ASTM D5185m     0     0         Barium	•						
ron     ppm     ASTM D5185m     >150     88     63        Nickel     ppm     ASTM D5185m     >10     0         Nickel     ppm     ASTM D5185m     >10     0         Silver     ppm     ASTM D5185m     >25     8     9        Aluminum     ppm     ASTM D5185m     >50     0     1        Aduminum     ppm     ASTM D5185m     >50     0     1        Vanadium     ppm     ASTM D5185m     >10     <1			un ette e el	line it /le e e e			
Ppm     ASTM D5185m     >10     <1     0        Nickel     ppm     ASTM D5185m     >10     0     <1							nistory2
Nickel     ppm     ASTM D5185m     >10     0     <1        Titanium     ppm     ASTM D5185m     0     0        Sliver     ppm     ASTM D5185m     225     8     9        Aluminum     ppm     ASTM D5185m     >250     0     1        Copper     ppm     ASTM D5185m     >10     0     0        Cadmium     ppm     ASTM D5185m     >10     <1	-						
Titanium   ppm   ASTM D5185m							
Silver     ppm     ASTM D5185m     0     0        Aluminum     ppm     ASTM D5185m     >25     8     9        Aluminum     ppm     ASTM D5185m     >100     0     0        Copper     ppm     ASTM D5185m     >100     0     0        Vanadium     ppm     ASTM D5185m     0     0     0        ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0     0         Molybdenum     ppm     ASTM D5185m     0     0         Magnesium     ppm     ASTM D5185m     0     0         Magnesium     ppm     ASTM D5185m     0     0         Magnesium     ppm     ASTM D5185m     <1				>10	-		
Atuminum     ppm     ASTM D5185m     >25     8     9        Lead     ppm     ASTM D5185m     >100     0     0        Copper     ppm     ASTM D5185m     >50     0     1        Vanadium     ppm     ASTM D5185m     >10     <1							
Lead     ppm     ASTM D5185m     >100     0     0        Copper     ppm     ASTM D5185m     >50     0     1        Vanadium     ppm     ASTM D5185m     >10     <1		ppm			-		
Copper     ppm     ASTM D5185m     >50     0     1        Tin     ppm     ASTM D5185m     >10     <1					-		
Tin     ppm     ASTM D5185m     >10     <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	Lead	ppm			-		
Vanadium     ppm     ASTM D5185m     0     0        Cadmium     ppm     ASTM D5185m     0     0        ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0     0        Barium     ppm     ASTM D5185m     0     0        Maganese     ppm     ASTM D5185m     0     0        Magnesium     ppm     ASTM D5185m     <1	Copper	ppm	ASTM D5185m	>50	0	1	
Cadmium     pm     ASTM D5185m     0        ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0     0        Barium     ppm     ASTM D5185m     0     0        Malybdenum     ppm     ASTM D5185m     0     0        Magnese     ppm     ASTM D5185m     <1     1        Magnese     ppm     ASTM D5185m     <1     2        Calcium     ppm     ASTM D5185m     <66     7        Calcium     ppm     ASTM D5185m     595     663        Sulfur     ppm     ASTM D5185m     50     7     7        Sodium     ppm     ASTM D5185m     >20     0     1        Sodium     ppm     ASTM D5185m     >50     7     7        Sodium     ppm     ASTM D5185m     >20     0	Tin	ppm	ASTM D5185m	>10	<1	<1	
ADDITIVES     method     limit/base     current     history1     history2       Boron     ppm     ASTM D5185m     0     0        Barium     ppm     ASTM D5185m     0     0        Molybdenum     ppm     ASTM D5185m     0     0        Magnese     ppm     ASTM D5185m      1     1        Magnesium     ppm     ASTM D5185m      6     7        Phosphorus     ppm     ASTM D5185m      6     7        Sulfur     ppm     ASTM D5185m      6666     678        Sulfur     ppm     ASTM D5185m      7     7        Solium     ppm     ASTM D5185m     >50     7     7        Sulfur     ppm     ASTM D5185m     >20     0     1        Sulfur     ppm     ASTM D5185m     >20     0     1        Vater<	Vanadium	ppm	ASTM D5185m		0	0	
Boron     ppm     ASTM D5185m     0        Barium     ppm     ASTM D5185m     0     <1	Cadmium	ppm	ASTM D5185m		0	0	
Barium     ppm     ASTM D5185m     0     <1        Molybdenum     ppm     ASTM D5185m     0     0        Manganese     ppm     ASTM D5185m     <1	ADDITIVES		method	limit/base	current	history1	history2
Molybdenum     ppm     ASTM D5185m     0     0        Manganese     ppm     ASTM D5185m     <1	Boron	ppm	ASTM D5185m		0	0	
Manganese   ppm   ASTM D5185m   <1   1      Magnesium   ppm   ASTM D5185m   <1	Barium	ppm	ASTM D5185m		0	<1	
Magnesium   ppm   ASTM D5185m   <1	Molybdenum	ppm	ASTM D5185m		0	0	
Calcium     ppm     ASTM D5185m     6     7        Phosphorus     ppm     ASTM D5185m     595     663        Zinc     ppm     ASTM D5185m     12     9        Sulfur     ppm     ASTM D5185m     666     678        CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >50     7     7        Sodium     ppm     ASTM D5185m     >50     7     7        Sodium     ppm     ASTM D5185m     >20     0     1        Water     %     ASTM D6304     >0.1     0.001     0.002        ppm Water     ppm     ASTM D7647     >20000     167088     207930        FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     >640     1018     120 <td< td=""><td>Manganese</td><td>ppm</td><td>ASTM D5185m</td><td></td><td>&lt;1</td><td>1</td><td></td></td<>	Manganese	ppm	ASTM D5185m		<1	1	
Phosphorus     ppm     ASTM D5185m     595     663        Zinc     ppm     ASTM D5185m     12     9        Sulfur     ppm     ASTM D5185m     666     678        CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >50     7     7        Sodium     ppm     ASTM D5185m     >50     7     7        Sodium     ppm     ASTM D5185m     >20     0     1        Water     %     ASTM D5185m     >20     0     1        Water     %     ASTM D504     >0.1     0.001     0.002        ppm Water     ppm     ASTM D7647     >20000     167088     207930        Particles >4µm     ASTM D7647     >640     1018     120        Particles >14µm     ASTM D7647     >640     1018     120	Magnesium	ppm	ASTM D5185m		<1	2	
Zinc     ppm     ASTM D5185m     12     9        Sulfur     ppm     ASTM D5185m     666     678        CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >50     7     7        Sodium     ppm     ASTM D5185m     >50     7     7        Sodium     ppm     ASTM D5185m     >20     0     1        Potassium     ppm     ASTM D5185m     >20     0     1        Water     %     ASTM D6304     >0.1     0.0001     0.002        ppm Water     ppm     ASTM D6304     >1000     3     17        FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     >20000     167088     207930        Particles >6µm     ASTM D7647     5000     83931     23276	Calcium	ppm	ASTM D5185m		6	7	
Sulfur     ppm     ASTM D5185m     666     678        CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >50     7     7      7       Sodium     ppm     ASTM D5185m     >50     7     7     7      7     7      7     7      7     7      7     7      7     7      7     7     7     7     7     7     7     7     7     7     7     7     7     7     7	Phosphorus	ppm	ASTM D5185m		595	663	
CONTAMINANTS     method     limit/base     current     history1     history2       Silicon     ppm     ASTM D5185m     >50     7     7      5       Sodium     ppm     ASTM D5185m     >50     7     7      6      6      7      7      7      7      7      7      7      7      7      7      7     7      7      7      7     7      7     7      7     7      7     7      7     7      7     7      7     7      7     7     7      7     7      7     7      7     7     7     7     7     7     7     7     7     7     7     7     7	Zinc	ppm	ASTM D5185m		12	9	
Silicon   ppm   ASTM D5185m   >50   7   7      Sodium   ppm   ASTM D5185m   66   6      Potassium   ppm   ASTM D5185m   >20   0   1      Water   %   ASTM D6304   >0.1   0.001   0.002      ppm Water   ppm   ASTM D6304   >1000   3   17      FLUID CLEANLINESS   method   limit/base   current   history1   history2     Particles >4µm   ASTM D7647   >20000   ▲ 167088   ▲ 207930      Particles >6µm   ASTM D7647   >640   ▲ 1018   120      Particles >1µm   ASTM D7647   >640   ▲ 1018   120      Particles >1µm   ASTM D7647   >160   93   16      Particles >38µm   ASTM D7647   >10   0   0      Oil Cleanliness   ISO 4406 (c)   >21/19/16   25/24/17   25/22/14      FLUID DEGRADATION   method   limit/base   current	Sulfur		ASTM D5185m		666	678	
Sodium     ppm     ASTM D5185m     6     6        Potassium     ppm     ASTM D5185m     >20     0     1        Water     %     ASTM D6304     >0.1     0.001     0.002        ppm Water     ppm     ASTM D6304     >1000     3     17        FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     >20000     ▲ 167088     ▲ 207930        Particles >6µm     ASTM D7647     >5000     ▲ 83931     ▲ 23276        Particles >6µm     ASTM D7647     >640     ▲ 1018     120        Particles >14µm     ASTM D7647     >160     93     16        Particles >21µm     ASTM D7647     >40     1     1        Particles >71µm     ASTM D7647     >10     0     0        Oil Cleanliness     ISO 4406 (c)     >21/19/16     25/24/17     25/22/14    <	CONTAMINANTS		method	limit/base	current	history1	history2
Potassium     ppm     ASTM D5185m     >20     0     1        Water     %     ASTM D6304     >0.1     0.001     0.002        ppm     ASTM D6304     >1000     3     17        FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     >20000     ▲ 167088     ▲ 207930        Particles >6µm     ASTM D7647     >5000     ▲ 83931     ▲ 23276        Particles >14µm     ASTM D7647     >640     ▲ 1018     120        Particles >14µm     ASTM D7647     >160     93     16        Particles >21µm     ASTM D7647     >160     93     16        Particles >38µm     ASTM D7647     >10     0     0        Oil Cleanliness     ISO 4406 (c)     >21/19/16     25/24/17     25/22/14        FLUID DEGRADATION     method     limit/base     current     history1 <th< td=""><td>Silicon</td><td>ppm</td><td>ASTM D5185m</td><td>&gt;50</td><td>7</td><td>7</td><td></td></th<>	Silicon	ppm	ASTM D5185m	>50	7	7	
Water   %   ASTM D6304   >0.1   0.001   0.002      ppm Water   ppm   ASTM D6304   >1000   3   17      FLUID CLEANLINESS   method   limit/base   current   history1   history2     Particles >4µm   ASTM D7647   >20000   ▲   167088   ▲   207930      Particles >6µm   ASTM D7647   >5000   ▲   83931   ▲   23276      Particles >14µm   ASTM D7647   >640   ▲   1018   120      Particles >21µm   ASTM D7647   >160   93   16      Particles >38µm   ASTM D7647   >10   0   0      Particles >71µm   ASTM D7647   >10   0   0      Oil Cleanliness   ISO 4406 (c)   >21/19/16   25/24/17   25/22/14      FLUID DEGRADATION   method   limit/base   current   history1   history2	Sodium	ppm	ASTM D5185m		6	6	
Water     %     ASTM D6304     >0.1     0.001     0.002        ppm Water     ppm     ASTM D6304     >1000     3     17        FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     >20000     ▲     167088     ▲     207930        Particles >6µm     ASTM D7647     >20000     ▲     167088     ▲     207930        Particles >6µm     ASTM D7647     >5000     ▲     83931     ▲     23276        Particles >14µm     ASTM D7647     >640     ▲     1018     120        Particles >21µm     ASTM D7647     >160     93     16         Particles >38µm     ASTM D7647     >10     0     0         Oil Cleanliness     ISO 4406 (c)     >21/19/16     ▲     25/24/17     ▲     25/22/14        FLUID DEGRADATION     method     limit/base	Potassium	ppm	ASTM D5185m	>20	0	1	
ppm Water     ppm     ASTM D6304     >1000     3     17        FLUID CLEANLINESS     method     limit/base     current     history1     history2       Particles >4µm     ASTM D7647     >20000     ▲ 167088     ▲ 207930        Particles >6µm     ASTM D7647     >5000     ▲ 83931     ▲ 23276        Particles >6µm     ASTM D7647     >640     ▲ 1018     120        Particles >14µm     ASTM D7647     >640     ▲ 1018     120        Particles >21µm     ASTM D7647     >160     93     16        Particles >38µm     ASTM D7647     >10     0     0        Particles >71µm     ASTM D7647     >10     0     0        Oil Cleanliness     ISO 4406 (c)     >21/19/16     25/24/17     25/22/14        FLUID DEGRADATION     method     limit/base     current     history1     history2	Water		ASTM D6304	>0.1	0.001	0.002	
Particles >4μm   ASTM D7647   >20000   ▲ 167088   ▲ 207930      Particles >6μm   ASTM D7647   >5000   ▲ 83931   ▲ 23276      Particles >14μm   ASTM D7647   >640   ▲ 1018   120      Particles >14μm   ASTM D7647   >160   93   16      Particles >21μm   ASTM D7647   >160   93   16      Particles >38μm   ASTM D7647   >40   1   1      Particles >71μm   ASTM D7647   >10   0   0      Oil Cleanliness   ISO 4406 (c)   >21/19/16   25/24/17   ▲ 25/22/14      FLUID DEGRADATION   method   limit/base   current   history1   history2	ppm Water						
Particles >6µm   ASTM D7647   >5000   ▲ 83931   ▲ 23276      Particles >14µm   ASTM D7647   >640   ▲ 1018   120      Particles >14µm   ASTM D7647   >160   93   16      Particles >21µm   ASTM D7647   >160   93   16      Particles >38µm   ASTM D7647   >40   1   1      Particles >38µm   ASTM D7647   >40   1   0   0      Particles >71µm   ASTM D7647   >10   0   0    0     Oil Cleanliness   ISO 4406 (c)   >21/19/16   25/24/17   25/22/14      FLUID DEGRADATION   method   limit/base   current   history1   history2	FLUID CLEANLIN	IESS	method	limit/base	current	history1	history2
Particles >14µm   ASTM D7647   >640   ▲ 1018   120      Particles >21µm   ASTM D7647   >160   93   16      Particles >38µm   ASTM D7647   >40   1   1      Particles >38µm   ASTM D7647   >40   1   0   0      Particles >71µm   ASTM D7647   >10   0   0      Oil Cleanliness   ISO 4406 (c)   >21/19/16   25/24/17   25/22/14      FLUID DEGRADATION   method   limit/base   current   history1   history2	Particles >4µm		ASTM D7647	>20000	<b>167088</b>	▲ 207930	
Particles >21μm     ASTM D7647     >160     93     16        Particles >38μm     ASTM D7647     >40     1     1      1       Particles >38μm     ASTM D7647     >40     1     1      1       Particles >71μm     ASTM D7647     >10     0     0      1       Oil Cleanliness     ISO 4406 (c)     >21/19/16     25/24/17     25/22/14        FLUID DEGRADATION     method     limit/base     current     history1     history2	Particles >6µm		ASTM D7647	>5000	<u> </u>	<b>A</b> 23276	
Particles >21μm     ASTM D7647     >160     93     16        Particles >38μm     ASTM D7647     >40     1     1        Particles >38μm     ASTM D7647     >40     1     1        Particles >71μm     ASTM D7647     >10     0     0        Oil Cleanliness     ISO 4406 (c)     >21/19/16     25/22/17     25/22/14        FLUID DEGRADATION     method     limit/base     current     history1     history2	Particles >14µm		ASTM D7647				
Particles >38µm     ASTM D7647     >40     1     1        Particles >71µm     ASTM D7647     >10     0     0        Oil Cleanliness     ISO 4406 (c)     >21/19/16     25/24/17     ▲ 25/22/14        FLUID DEGRADATION     method     limit/base     current     history1     history2							
Particles >71μm     ASTM D7647     >10     0     0        Oil Cleanliness     ISO 4406 (c)     >21/19/16     ▲ 25/24/17     ▲ 25/22/14        FLUID DEGRADATION     method     limit/base     current     history1     history2	•						
Oil Cleanliness   ISO 4406 (c) >21/19/16 ▲ 25/24/17 ▲ 25/22/14      FLUID DEGRADATION   method   limit/base   current   history1   history2	•						
	FLUID DEGRADA	TION	method	limit/base	current	history1	history2

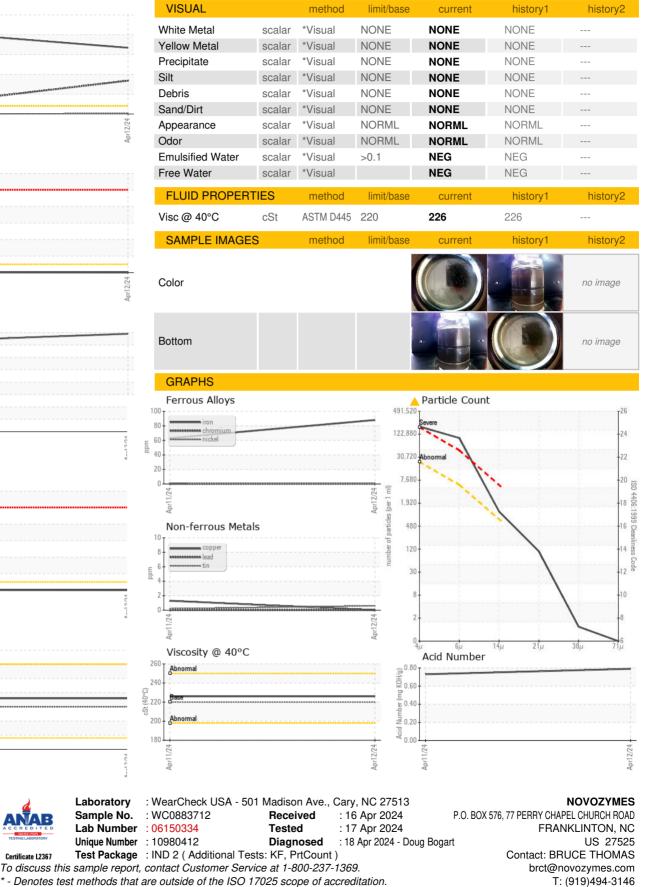
ISO

Sample Rating Trend



## **OIL ANALYSIS REPORT**





\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Lab Number

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Report Id: NOVFRANC [WUSCAR] 06150334 (Generated: 04/18/2024 09:23:16) Rev: 1

Certificate 12367

Submitted By: JOSH DARNELL

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