

# WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL

#### Machine Id **120FI (S/N 18100800)** Component **Rear Left Final Drive** Fluid **GEAR OIL (PAG) ISO 220 (1 QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor. ( Customer Sample Comment: Resample 6-12-24 )

#### WEAR

All component wear rates are normal.

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#### CONTAMINATION

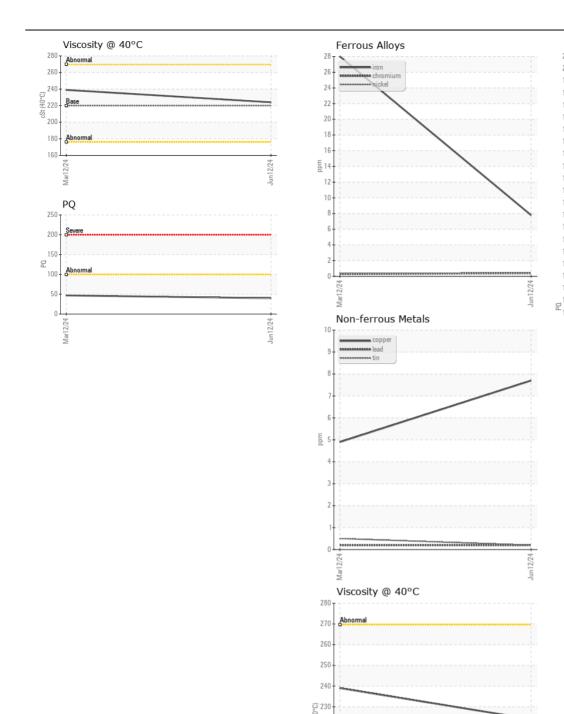
There is no indication of any contamination in the oil.

## **FLUID CONDITION**

The condition of the oil is acceptable for the time in service.

TestUOMMethodLimitAnCurrentHistory1History2Sample NumberClient InfoJR020352JR020555Sample DatClient Info12 Jun 202412 Mar 2024Machine AgehrsClient Info27482536Filter AgehrsClient Info2000Filter AgehrsClient InfoN/AN/AFilter ChangedClient InfoN/AN/AFilter ChangedClient InfoN/AN/ASample StatusClient InfoN/AABNORMALFilter ChangedASTM D8185A040Filter MangedASTM D8185So828Filter MangeppmASTM D8185-10<1<1NickelppmASTM D8185>10<1<1NickelppmASTM D8185>2532AluminumppmASTM D8185>5085AluminumppmASTM D8185>5085VanadumppmASTM D8185>5085VanadumppmASTM D8185>5085SilverppmASTM D8185>5085SilverppmASTM D8185>5012VanadumppmASTM D8185>5012 <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>							
Sample DateClient InfoI2 Jun 2024I2 Mar 2024Machine AgehrsClient Info2002536Filter AgehrsClient Info2000Gli ChangedClient InfoN/AN/AChangedFilter AgenrsClient InfoN/AN/AFilter ChangedClient InfoN/AN/ASample StatusN/AABNORMALPQASTM D5185>500828PCASTM D5185>10<1<1NickelppmASTM D5185>10<1<1NickelppmASTM D5185>10<1<1SilverppmASTM D5185>2532AluminumppmASTM D5185>5085AluminumppmASTM D5185>5085VanadiumppmASTM D5185>5085VanadiumppmASTM D5185>201<1VanadiumppmASTM D5185>2012VanadiumppmASTM D5185>2012VanadiumppmASTM D5185>2012SiliconppmASTM D5185>2012SiliconppmASTM D5185>2012 </th <th>Test</th> <th>UOM</th> <th>Method</th> <th>Limit/Abn</th> <th>Current</th> <th>History1</th> <th>History2</th>	Test	UOM	Method	Limit/Abn	Current	History1	History2
Machine Age         hrs         Client Info         2748         2536            Oil Age         hrs         Client Info         200         2536            Filter Age         hrs         Client Info         N/A         Changed            Oil Changed         Client Info         N/A         Changed            Filter Changed         Client Info         N/A         N/A            Sample Status         Viral         N/A         N/A            PQ         ASTM D5185m         500         8         28            Iron         ppm         ASTM D5185m         >10         <1             Nickel         ppm         ASTM D5185m         >10         <1             Silver         ppm         ASTM D5185m         >25         3         2            Aluminum         ppm         ASTM D5185m         >25         <1         <1            Aluminum         ppm         ASTM D5185m         >50         8         5            Vanadum         ppm         ASTM D5185m         >50 <th>Sample Number</th> <th></th> <th>Client Info</th> <th></th> <th>JR0220352</th> <th>JR0205595</th> <th></th>	Sample Number		Client Info		JR0220352	JR0205595	
Oil AgehrsClient Info2002536Filter AgehrsClient Info2000Oil ChangedClient InfoN/AKAKAFilter ChangedQClient InfoN/AN/AFilter ChangedQClient InfoN/AN/ASample StatusNORMALABNORMALPQASTM D5185m>500828IronppmASTM D5185m>10<1<1NickelppmASTM D5185m>10<1<1NickelppmASTM D5185m>10<1<1SilverppmASTM D5185m>25<1<1AluminumppmASTM D5185m>25<1<1VanadiumppmASTM D5185m>501<1VanadiumppmASTM D5185m>7556Yellow Metalscalar'VisualNONENONENONESiliconppmASTM D5185m>7556SiliconppmASTM D5185m>2012SiliconppmASTM D5185m>2012SiliconppmASTM D5185m>2012SiliconppmASTM D5185mS012Solitscalar'VisualNONE <td< th=""><th>Sample Date</th><th></th><th>Client Info</th><th></th><th>12 Jun 2024</th><th>12 Mar 2024</th><th></th></td<>	Sample Date		Client Info		12 Jun 2024	12 Mar 2024	
Filter Age         hrs         Client Info         200         0            Oil Changed         Client Info         N/A         Changed            Filter Changed         Client Info         N/A         N/A         A           Sample Status         N/A         N/A         ABNORMAL            PQ         ASTM D8184         40         47            Iron         ppm         ASTM D5185m         >10         <1         <1            Nickel         ppm         ASTM D5185m         >10         <1         <1            Silver         ppm         ASTM D5185m         >10         <1         <1            Quminum         ppm         ASTM D5185m         >25         3         2            Silver         ppm         ASTM D5185m         >50         8         5            Quadum         ppm         ASTM D5185m         >50         8         5            Vanaduum         ppm         ASTM D5185m         >75         5         6            Yellow Metal         scalar         Yuisual         NONE	Machine Age	hrs	Client Info		2748	2536	
Oil Changed Filter ChangedClient InfoN/AChangedFilter Changed Sample StatusClient InfoN/AN/AN/AASTOPQASTM D818440447IronppmASTM D5185>5008289ChromiumppmASTM D5185>10<1<1NickelppmASTM D5185>10<1<1NickelppmASTM D5185<1<1<1NickelppmASTM D5185>2532AluminumppmASTM D5185>25<1<1<1AluminumppmASTM D5185>5085AluminumppmASTM D5185>5085VanadiumppmASTM D5185>5085VanadiumppmASTM D5185>5085Yellow Metalscalar*VisualNONENONENONEYellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185>2012SiliconppmASTM D5185>2012SiliconppmASTM D5185>2012SiliconppmASTM D5185>2012SoliconppmASTM D5185>2012 <t< th=""><th>Oil Age</th><th>hrs</th><th>Client Info</th><th></th><th>200</th><th>2536</th><th></th></t<>	Oil Age	hrs	Client Info		200	2536	
Filter Changed Sample Status         Client Info         N/A         N/A            PQ         ASTM D8184         40         47            Iron         ppm         ASTM D8184         40         47            Iron         ppm         ASTM D8185         >500         8         28            Nickel         ppm         ASTM D51855         >10         <1         <1            Nickel         ppm         ASTM D51855         >10         <1         <1            Silver         ppm         ASTM D51855         >25         3         2            Aluminum         ppm         ASTM D51855         >25         <1         <1            Aluminum         ppm         ASTM D51855         >50         8         5            Lead         ppm         ASTM D51855         >50         8         5            Vanadium         ppm         ASTM D51855         >50         8         5            Vanadium         ppm         ASTM D51855         >75         5         6            Vellow Metal	Filter Age	hrs	Client Info		200	0	
Sample StatusNORMALABNORMALPQASTM D81844047IronppmASTM D5185m>500828NickelppmASTM D5185m>10<1<1NickelppmASTM D5185m>10<1<1TitaniumppmASTM D5185m<1<1<SilverppmASTM D5185m2000AluminumppmASTM D5185m>2532LeadppmASTM D5185m>25<1<1CopperppmASTM D5185m>25<1<1VanadiumppmASTM D5185m>5085VanadiumppmASTM D5185m>10<1<1VanadiumppmASTM D5185m>7556Yellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m>7556SulforppmASTM D5185m>2012SoliconppmASTM D5185m>2012SulforppmASTM D5185m>2012SoliconppmASTM D5185m>00SoliconppmASTM D5185m54<1Appearancescalar*Visual	Oil Changed		Client Info		N/A	Changed	
PQ         ASTM D8184         40         47            Iron         ppm         ASTM D5185m         >500         8         28            Chromium         ppm         ASTM D5185m         >10         <1         <1            Nickel         ppm         ASTM D5185m         >10         <1         <1            Silver         ppm         ASTM D5185m         <10         <1         <1            Aluminum         ppm         ASTM D5185m         <25         3         2            Lead         ppm         ASTM D5185m         >25         3         2            Copper         ppm         ASTM D5185m         >20         8         5            Vanadium         ppm         ASTM D5185m         >50         8         5            Valde         scalar         *Visual         NONE         NONE         NONE            Vallow Metal         scalar         *Visual         NONE         NONE         NONE            Silicon         ppm         ASTM D5185m         >20         1         22	Filter Changed		Client Info		N/A	N/A	
Iron         ppm         ASTM D5185m         >500         8         28            Chromium         ppm         ASTM D5185m         >10         <1         <1            Nickel         ppm         ASTM D5185m         >10         <1         <1            Titanium         ppm         ASTM D5185m          <1         <1            Silver         ppm         ASTM D5185m         >25         3         2            Aluminum         ppm         ASTM D5185m         >25         <1         <1            Lead         ppm         ASTM D5185m         >25         <1         <1            Copper         ppm         ASTM D5185m         >10         <1         <1            Vanadium         ppm         ASTM D5185m         >10         <1         <1            Vanadium         ppm         ASTM D5185m         >10         <1         <1            Vanadium         ppm         ASTM D5185m         >75         5         6            Yellow Metal         scalar<*Visual         NONE         N	Sample Status				NORMAL	ABNORMAL	
Iron         ppm         ASTM D5185m         >500         8         28            Chromium         ppm         ASTM D5185m         >10         <1         <1            Nickel         ppm         ASTM D5185m         >10         <1         <1            Titanium         ppm         ASTM D5185m          <1         <1            Silver         ppm         ASTM D5185m         >25         3         2            Aluminum         ppm         ASTM D5185m         >25         <1         <1            Lead         ppm         ASTM D5185m         >25         <1         <1            Copper         ppm         ASTM D5185m         >10         <1         <1            Vanadium         ppm         ASTM D5185m         >10         <1         <1            Vanadium         ppm         ASTM D5185m         >10         <1         <1            Vanadium         ppm         ASTM D5185m         >75         5         6            Yellow Metal         scalar<*Visual         NONE         N	 ΡΩ		ASTM D8184		40	47	
Chromium         ppm         ASTM D5185m         >10         <1		nnm		<u>\500</u>			
Nickel         ppm         ASTM D5185m         >10         <1					-		
Titanium         ppm         ASTM D5185m         <1							
Silver         ppm         ASTM D5185m         0         0            Aluminum         ppm         ASTM D5185m<>25         3         2            Lead         ppm         ASTM D5185m<>25         <1         <1            Copper         ppm         ASTM D5185m         >50         8         5            Tin         ppm         ASTM D5185m         >10         <1         <1            Vanadium         ppm         ASTM D5185m         >75         5         6            Yellow Metal         scalar         *Visual         NONE         NONE         NONE            Silicon         ppm         ASTM D5185m         >20         1         2            Silit         scalar         *Visual         NONE         NONE         NONE <t< th=""><th></th><th></th><th></th><th>210</th><th></th><th></th><th></th></t<>				210			
Aluminum         ppm         ASTM D5185m         >25         3         2            Lead         ppm         ASTM D5185m         >25         <1							
Lead         ppm         ASTM D5185m         >25         <1				>25			
CopperppmASTM D5185m>5085TinppmASTM D5185m>10<1<1VanadiumppmASTM D5185m>10<1<1White Metalscalar*VisualNONENONENONEYellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m>7556PotassiumppmASTM D5185m>2012WaterWC Method>0.2NEGNEGSilitscalar*VisualNONENONENONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNORENONEAppearancescalar*VisualNORMLNORMLNORMLGodorscalar*VisualNORMLNORMLNORMLSodiumppmASTM D5185m522BoronppmASTM D5185m54<1MaganeseppmASTM D5185m511MagnesiumppmASTM D5185m5331MagnesiumppmASTM D5185m5331MagnesiumppmASTM D5185m5272MagnesiumppmASTM D5185m52					-		
TinppmASTM D5185m>10<1							
VanadiumppmASTM D5185m<1					-	-	
White Metalscalar*VisualNONENONENONENONEYellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m>7556PotassiumppmASTM D5185m>2012WaterWC Method>0.2NEGNEGSilitscalar*VisualNONENONENONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLSodiumppmASTM D5185m44BoronppmASTM D5185m522ManganeseppmASTM D5185m54<1ManganeseppmASTM D5185m511ManganeseppmASTM D5185m5831PhosphorusppmASTM D5185m5272ZincppmASTM D5185m5272SulfurppmASTM D5185m5272SulfurppmASTM D5185m5272SulfurppmASTM D5185m2000372 <th></th> <th></th> <th></th> <th>&gt;10</th> <th></th> <th></th> <th></th>				>10			
Yellow Metalscalar*VisualNONENONENONESiliconppmASTM D5185m>7556PotassiumppmASTM D5185m>2012WaterWC Method>0.2NEGNEGSiltscalar*VisualNONENONENONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEG0.2%SodiumppmASTM D5185m522BoronppmASTM D5185m54<-1ManganeseppmASTM D5185m54<1ManganeseppmASTM D5185m5831PhosphorusppmASTM D5185m5831ZincppmASTM D5185m5272SulfurppmASTM D5185m5272SulfurppmASTM D5185m5272SolufurppmASTM D5185m5272SulfurppmASTM D5185m5 <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>							
SiliconppmASTM D5185m>7556PotassiumppmASTM D5185m>2012WaterWC Method>0.2NEGNEGSiltscalar*VisualNONENONENONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEG0.2%SodiumppmASTM D5185m522BoronppmASTM D5185m500MolybdenumppmASTM D5185m54<1ManganeseppmASTM D5185m511ManganeseppmASTM D5185m5831PhosphorusppmASTM D5185m5272ZincppmASTM D5185m5272SulfurppmASTM D5185m5272SoulifurppmASTM D5185m5272SulfurppmASTM D5185m5272SulfurppmASTM D5185m5272					-	-	
PotassiumppmASTM D5185m>2012WaterWC Method>0.2NEGNEGSiltscalar*VisualNONENONENONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEG0.2%SodiumppmASTM D5185m522BariumppmASTM D5185m500ManganeseppmASTM D5185m511MagnesiumppmASTM D5185m5831PhosphorusppmASTM D5185m5287ZincppmASTM D5185m5272SulfurppmASTM D5185m53331			visuai			NONE	
WaterWC Method>0.2NEGNEGSiltscalar*VisualNONENONENONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEG0.2%SodiumppmASTM D5185m522BoronppmASTM D5185m54<-1MalganeseppmASTM D5185m54<1MagnesiumppmASTM D5185m5831PhosphorusppmASTM D5185m5831ZincppmASTM D5185m5287SulfurppmASTM D5185m5287SulfurppmASTM D5185m52831	Silicon	ppm	ASTM D5185m	>75	5	6	
Siltscalar*VisualNONENONENONEDebrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEG0.2%SodiumppmASTM D5185m522BoronppmASTM D5185m500MalganeseppmASTM D5185m54<1MagnesiumppmASTM D5185m511PhosphorusppmASTM D5185m5831ZincppmASTM D5185m5272SulfurppmASTM D5185m51338	Potassium	ppm	ASTM D5185m	>20	1	2	
Debrisscalar*VisualNONENONENONENONESand/Dirtscalar*VisualNONENONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*VisualNORMLNORMLNORMLSodiumppmASTM D5185m544BoronppmASTM D5185m500BariumppmASTM D5185m54<1ManganeseppmASTM D5185m54<1MagnesiumppmASTM D5185m5831PhosphorusppmASTM D5185m7754452877ZincppmASTM D5185m5272SulfurppmASTM D5185m51338	Water		WC Method	>0.2	NEG	NEG	
Sand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEG0.2%SodiumppmASTM D5185m522BoronppmASTM D5185m522BariumppmASTM D5185m54<1MalganeseppmASTM D5185m54<1MagnesiumppmASTM D5185m5831PhosphorusppmASTM D5185m5831ZincppmASTM D5185m5272SulfurppmASTM D5185m5831XincppmASTM D5185m5272XincppmASTM D5185m5272XincppmASTM D5185m5272	Silt	scalar	*Visual	NONE	NONE	NONE	
Appearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEG0.2%SodiumppmASTM D5185m522BoronppmASTM D5185m500BariumppmASTM D5185m54<1MolybdenumppmASTM D5185m54<1MagnesiumppmASTM D5185m511MagnesiumppmASTM D5185m5831PhosphorusppmASTM D5185m775445287ZincppmASTM D5185m5272SulfurppmASTM D5185m5272	Debris	scalar	*Visual	NONE	NONE	NONE	
Odorscalar*VisualNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.2NEG0.2%SodiumppmASTM D5185m44BoronppmASTM D5185m522BariumppmASTM D5185m500MolybdenumppmASTM D5185m54<1ManganeseppmASTM D5185m511MagnesiumppmASTM D5185m5831PhosphorusppmASTM D5185m775445287ZincppmASTM D5185m5272SulfurppmASTM D5185m51338	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Emulsified Water         scalar         *Visual         >0.2         NEG         0.2%            Sodium         ppm         ASTM D5185m         4         4            Boron         ppm         ASTM D5185m         5         2         2            Barium         ppm         ASTM D5185m         5         0         0            Malybdenum         ppm         ASTM D5185m         5         4         <1            Manganese         ppm         ASTM D5185m         5         4         <1            Magnesium         ppm         ASTM D5185m         5         1         1            Calcium         ppm         ASTM D5185m         5         83         1            Phosphorus         ppm         ASTM D5185m         775         445         287            Zinc         ppm         ASTM D5185m         5         27         2            Sulfur         ppm         ASTM D5185m         5         283         1	Appearance	scalar	*Visual	NORML	NORML	NORML	
Sodium         ppm         ASTM D5185m         4         4            Boron         ppm         ASTM D5185m         5         2         2            Barium         ppm         ASTM D5185m         5         0         0            Barium         ppm         ASTM D5185m         5         0         0            Molybdenum         ppm         ASTM D5185m         5         4         <1            Manganese         ppm         ASTM D5185m         5         4         <1            Magnesium         ppm         ASTM D5185m         5         1         1            Calcium         ppm         ASTM D5185m         5         83         1            Phosphorus         ppm         ASTM D5185m         775         445         287            Zinc         ppm         ASTM D5185m         5         27         2            Sulfur         ppm         ASTM D5185m         2000         372         1338	Odor	scalar	*Visual	NORML	NORML	NORML	
Boron         ppm         ASTM D5185m         5         2         2            Barium         ppm         ASTM D5185m         5         0         0            Molybdenum         ppm         ASTM D5185m         5         4         <1            Manganese         ppm         ASTM D5185m         5         4         <1            Magnesium         ppm         ASTM D5185m         5         1         1            Calcium         ppm         ASTM D5185m         5         1         1            Phosphorus         ppm         ASTM D5185m         5         83         1            Zinc         ppm         ASTM D5185m         775         445         287            Sulfur         ppm         ASTM D5185m         5         27         2	Emulsified Water	scalar	*Visual	>0.2	NEG	0.2%	
Barium         ppm         ASTM D5185m         5         0         0            Molybdenum         ppm         ASTM D5185m         5         4         <1	Sodium	ppm	ASTM D5185m		4	4	
Molybdenum         ppm         ASTM D5185m         5         4         <1	Boron	ppm	ASTM D5185m	5	2	2	
Manganese         ppm         ASTM D5185m         <1	Barium	ppm	ASTM D5185m	5	0	0	
Magnesium         ppm         ASTM D5185m         5         1         1            Calcium         ppm         ASTM D5185m         5         83         1            Phosphorus         ppm         ASTM D5185m         775         445         287            Zinc         ppm         ASTM D5185m         5         27         2            Sulfur         ppm         ASTM D5185m         2000         372         1338							
Calcium         ppm         ASTM D5185m         5         83         1            Phosphorus         ppm         ASTM D5185m         775         445         287            Zinc         ppm         ASTM D5185m         5         27         2            Sulfur         ppm         ASTM D5185m         2000         372         1338	Molybdenum	ppm	ASTM D5185m	5	4	<1	
Phosphorus         ppm         ASTM D5185m         775         445         287            Zinc         ppm         ASTM D5185m         5         27         2            Sulfur         ppm         ASTM D5185m         2000         372         1338	-			5			
Zinc         ppm         ASTM D5185m         5         27         2            Sulfur         ppm         ASTM D5185m         2000         372         1338	Manganese	ppm	ASTM D5185m		<1	<1	
Zinc         ppm         ASTM D5185m         5         27         2            Sulfur         ppm         ASTM D5185m         2000 <b>372</b> 1338	Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m	5	<1 1	<1 1	
	Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	5 5	<1 1 83	<1 1 1	
	Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 775	<1 1 83 445	<1 1 1 287	 
	Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 5 775 5	<1 1 83 445 27	<1 1 1 287 2	

Submitted By: Mike Young - CHARLOTTE SHOP



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 220
 Base

 210

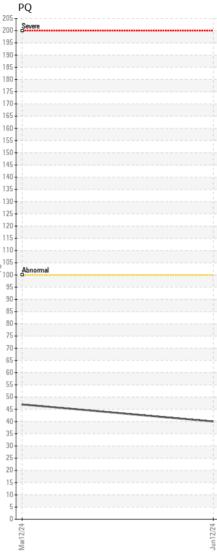
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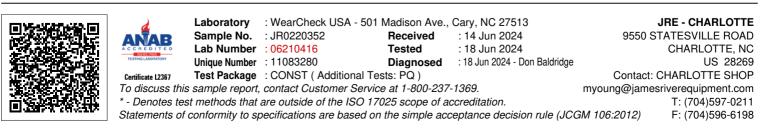
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Jun 12/24

Submitted By: Mike Young - CHARLOTTE SHOP Page 2 of 2