

OCT 25, 2024



TUBE-FAB LTD.
1020 BREVIK PLACE, UNIT 11
MISSISSAUGA, ON
L4W 4N7
CANADA

SAP Supplier no: **107489**
SAP Notification no: 1000072243

Attention: Tiberiu Moga, Director of Quality
Subject: **Approval Letter – Rev E**

Tibi Moga,

Bombardier is pleased to inform you that **TUBE-FAB LTD.** located at the above noted address, is now approved and holds the following Bombardier approvals:

• **BAPS 174-009 – INSTALLATION OF WIGGINS TYPE COUPLINGS ON RIGID PLUMBING LINES**

Approved Wiggins Tooling Configurations:

Configuration ID	OD (in)	WT (in)	Tube Material	Fitting ID	Fitting Material	Tooling	Approval Date
.5x.028 Al T6 W902-8D DB908-28	0.500	0.028	Al 6061 T6	W902-8D	Al	DB908-28	17-Nov-2023
.625x.028 Al T6 W902-10D B910-28	0.625	0.028	Al 6061 T6	W902-10D	Al	B910-28	13-Oct-2023
.75x.028 Al T6 W902-12D B912-28	0.750	0.028	Al 6061 T6	W902-12D	Al	B912-28	13-Oct-2023
1.0x.028 Al T6 W902-16D B916-28	1.000	0.028	Al 6061 T6	W902-16D	Al	B916-28	13-Oct-2023
1.25x.028 Al T6 W902-20D B920-28	1.250	0.028	Al 6061 T6	W902-20D	Al	B920-28	13-Oct-2023
1.25x.035 Al T6 W902-20D B920-35	1.250	0.035	Al 6061 T6	W902-20D	Al	B920-35	13-Oct-2023
1.5x.028 Al T6 W902-24D B924-2835	1.500	0.028	Al 6061 T6	W902-24D	Al	B924-2835	13-Oct-2023
1.5x.035 Al T6 W902-24D B924-2835	1.500	0.035	Al 6061 T6	W902-24D	Al	B924-2835	13-Oct-2023
1.75x.028 Al T6 W902-28D B928-2835	1.750	0.028	Al 6061 T6	W902-28D	Al	B928-2835	13-Oct-2023
1.75x.035 Al T6 W902-28D B928-2835	1.750	0.035	Al 6061 T6	W902-28D	Al	B928-2835	13-Oct-2023
2.0x.028 Al T6 W902-32D B932-2835	2.000	0.028	Al 6061 T6	W902-32D	Al	B932-2835	13-Oct-2023
2.0x.035 Al T6 W902-32D B932-2835	2.000	0.035	Al 6061 T6	W902-32D	Al	B932-2835	13-Oct-2023

• **BAPS 174-016 – ASSEMBLY AND INSTALLATION OF SIERRACIN/HARRISON INTERNALLY SWAGED FITTINGS**
 ▪ **Limited to Three Grooved Fittings**

Approved SIERRACIN/HARRISON Tooling Configurations:

Configuration ID	OD (in)	WT (in)	Tube Material	Fitting ID	Fitting Material	Tooling	Approval Date
.625"x.032" Ti 4945 35211AV10 7320-10032/9884-10/6885-110	0.625	0.032	Ti 4945	B0302132AV10 35211-AV10	CRES	7320T-10032 9884-10 6885-110	23-Aug-2024
.625"x.032" Ti 4945 35212AV10 7320-10032/6886-102	0.625	0.032	Ti 4945	B0302133AV10 35212-AV10	CRES	7320T-10032 6886-102	23-Aug-2024
.75"x.039" Ti 4945 35212AV12 7320-12039/9448-12/6886-112	0.750	0.039	Ti 4945	B0302133AV12 35212-AV12	CRES	7320T-12039 6886-112	23-Aug-2024

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- **BAERD GEN-018 ENGINEERING REQUIREMENTS FOR LABORATORIES Field 1B**
 - *Wet Chemistry, Treatment of Solutions and Waters performed by classical non-instrumental techniques such as Gravimetric, Volumetric, Colorimetric or Titration.)*
 - **Capability List is attached in Appendix A**

- **BAERD GEN-018 ENGINEERING REQUIREMENTS FOR LABORATORIES Field 5E**
 - *Evaluation of Paints*
 - **Capability List is attached in Appendix A**
 - **Limitation:** *Process control tests*

- **BAPS 180-040 – AQUEOUS DEGREASING**
 - **Equipment:** *Tank B1*
 - **Chemistry:** *Bonderite C-AK 6849 Aero (Turco 6849)*
 - **Material:** *No restrictions*
 - **Process:** *General Aqueous Degreasing*

- **BAPS 180-001 – ALKALINE CLEANING**
 - **Equipment:** *Tank 1*
 - **Chemistry:** *Bonderite C-AK 4215 NC-LT Aero*
 - **Material:** *No restrictions*
 - **Process:**
 - *Cleaning prior Deoxidizing*
 - *Cleaning prior Passivation*
 - *Cleaning prior Conversion Coating*
 - **Limitation:** *Type 1*

- **BAPS 180-015 – PASSIVATION OF CORROSION RESISTANT STEEL**
 - **Equipment:** *Tank 7*
 - **Chemistry:** *Nitric Acid Solution 1 per BAPS 180-015*
 - **Material:** *Austenitic Stainless Steels (CRES 200 and 300 series)*
 - **Process:**
 - *Passivation of Austenitic Stainless Steels*
 - **Limitation:** *Immersion method*

- **BAPS 180-032 – ACID CLEANING AND DEOXIDIZING ALUMINUM ALLOYS**
 - **Equipment:** *Tank 4*
 - **Chemistry:** *Oakite Deoxidizer LNC (Gardacid P 4299)*
 - **Material:** *Aluminum Alloys*
 - **Process:**
 - *General Deoxidizing of Aluminum Alloys*
 - *Deoxidizing Aluminum Alloys prior Conversion Coating*

- **BAPS 160-020 – CHEMICAL CONVERSION TREATMENT FOR ALUMINIUM ALLOYS**
 - **Equipment:** *Tank 10*
 - **Chemistry:** *BONDERITE M-CR 600 AERO (Alodine 600)*
 - **Material:** *Aluminum Alloys*
 - **Process:**
 - *Chemical Conversion Coating*
 - **Limitation:** *Type 1 Grade A*

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- **BAPS 160-020 – CHEMICAL CONVERSION TREATMENT FOR ALUMINIUM ALLOYS**
 - **Equipment:** N/A
 - **Chemistry:** BONDERITE M-CR 1132 AERO (Alodine 1132 Touch-N-Prep Pen)
 - **Material:** Aluminum Alloys
 - **Process:**
 - Manual touch-up Chemical Conversion Coating
 - **Limitation:** Type 2 Grade A touch-up

- **BAPS 160-040 – CONDUCTIVE CHEMICAL CONVERSION TREATMENT FOR ALUMINIUM ALLOYS**
 - **Equipment:** N/A
 - **Chemistry:** BONDERITE M-CR 1132 AERO (Alodine 1132 Touch-N-Prep Pen)
 - **Material:** Aluminum Alloys
 - **Process:**
 - Manual touch-up Conductive Chemical Conversion Coating
 - **Limitation:** Type 2 Grade A touch-up

- **BAPS 138-043 – APPLICATION OF FLUID RESISTANT PRIMER**
 - **Paint Booth in Chemical Area**

- **BAPS 138-044 – APPLICATION OF FLUID RESISTANT (FR) ENAMELS AND DECORATIVE TOPCOATS**
 - **Paint Booth in Chemical Area**

- **BAPS 157-026 – SPRAY APPLICATION OF BAMS 565-010 INTEGRAL FUEL TANK COATING**
 - **Paint Booth in Chemical Area**

This approval will be maintained on the condition that your company continues to comply with QD 4.6-40, Quality Requirements for Suppliers, and maintains acceptable product delivery performance.

Bombardier Quality may elect to audit your facility at any time during or prior to any contract, in order to:

- Assure continuing compliance with contractual and quality requirements.
- Investigate any quality problems and assure that effective corrective action measures are implemented.
- Evaluate the effect of any change in facility, process, equipment or management.

Your approval status will be periodically reviewed. Based on supplier performance, the approval status of your facility may be revised. It is Bombardier's policy to purchase only from approved suppliers, who meet our standards of quality and reliability. We look forward to building a mutually beneficial and lasting relationship, driven by a desire for continuous quality improvement.

Sincerely yours,

Stephen Mota
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Supplier Quality Assurance
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