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By Email: robert.sincennes@tc.gc.ca

Mr. Robert Sincennes Director Standards, Civil Aviation Transport Canada 330 Sparks St Ottawa ON K1A 0N5 CANADA By Email: <u>rick.domingo@faa.gov</u>

Mr. Rick Domingo Executive Director, Flight Standards Service Federal Aviation Administration 800 Independence Avenue, SW Washington, D.C. 20591 USA

Subject Request for changes to the FAA-TCCA Maintenance Implementation Procedures regarding use of maintenance data and certain FAA foreign repair stations

Dear Messrs. Sincennes and Domingo:

This letter supplements the discussions held during the Maintenance Management Team's (MMT) industry day on Oct. 25, 2019 in Cologne, Germany.

The undersigned associations appreciate the efforts of Transport Canada (TCCA) and the FAA to improve the agencies' Maintenance Implementation Procedures (MIP). We also commend your governments' commitment and leadership in the MMT. In the spirit of the MIP's vision for easier flow of maintenance services between the United States and Canada, we request that TCCA and FAA amend the MIP to authorize the use of (1) maintenance instructions not included in the current manufacturers' manuals or Instructions for Continued Airworthiness (ICA), and (2) FAA-certificated repair stations located outside the United States to perform work on Canadian articles without regard to whether they are recommended by the manufacturer.

In our view, the requested changes will clarify the MIP by resolving inconsistencies with other MIP provisions, eliminate inappropriate barriers to competition and facilitate the use of FAA-certificated foreign repair stations by Canadian Approved Maintenance Organizations (AMO) and operators. Most importantly, the changes will not adversely impact safety.

## (1) <u>Authorizing the Use of Maintenance Data Not Included in the Current Manufacturer's</u> <u>Manual or ICA</u>

The subject requirements, with minor variations referenced in the endnotes, are set forth in:

- MIP Section B, paragraphs 1.2(e),<sup>1</sup>  $2.2(f)^2$  and 4.2(d),<sup>3</sup> and
- MIP Section C, paragraphs 1.2(e)<sup>4</sup> and 2.2(e)<sup>5</sup> as follows:

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Maintenance and modifications<sup>6</sup> on aircraft<sup>7</sup>, engines, propellers, appliances, or components must be done in accordance with<sup>8</sup> the methods, techniques, and practices prescribed in the current<sup>9</sup> applicable manufacturer's manuals.<sup>10</sup> Where applicable, this work may also be accomplished in accordance with current instructions for continued airworthiness<sup>11</sup> (ICA) issued by the manufacturer.

These provisions are significantly more restrictive than both Canadian<sup>12</sup> and United States<sup>13</sup> regulations, which authorize appropriately certificated and rated aviation maintenance professionals and organizations to rely on, and if necessary, develop information and processes other than those found in the current manufacturer's manuals or current ICA. Even manufacturers develop proprietary repairs outside their manual systems and/or ICA, yet these are not authorized under a literal reading of the MIP. We do not believe the authorities intended this result.

## (a) Currency of maintenance data:

The most current version of the manufacturer's manual or ICA is commonly used to perform maintenance. However, there are many situations in which the use of a prior revision is acceptable.

Under both Canadian and United States regulations, if use of the current manufacturer's manual or ICA<sup>14</sup> is required (e.g., when its use is directed by an air carrier) it must be obtained and used when performing the work. Conversely, if it is not required, maintenance providers may use other methods, techniques and practices that will result in an airworthy repair or modification, including using prior revisions to the manufacturer's instructions.

In that regard, a repair station recently reported to the Aeronautical Repair Station Association (ARSA) that, "[a manufacturer] revised their [repair] manual and removed schematics & parts lists of older manufactured circuit boards. However, there is [sic] still aircraft flying today . . . that have these older version circuit boards in them. The only way a [maintenance provider] can support these units is to reference the older (non-current) manual for those schematics and parts lists." Use of a prior manual revision in this circumstance is generally authorized under the Canadian and U.S. regulations;<sup>15</sup> however, it is not recognized under the referenced paragraphs of the MIP.

## (b) Source of maintenance data<sup>16</sup>

The cited MIP provisions are also too restrictive with respect to the source of maintenance data. Moreover, they are contrary to the international regulatory

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framework which recognizes that repairs and modifications may be developed outside the manufacturer's maintenance manuals or ICA provided they comply with the applicable airworthiness standards. Both Canadian<sup>17</sup> and United States' regulations<sup>18</sup> permit maintenance providers and others (including manufacturers) to develop their own repairs and modifications.

The use of such work instructions is explicitly recognized in other sections of the MIP which requires that technical data<sup>19</sup> in support of major repairs and major modifications be approved by TCCA or the FAA, as applicable.<sup>20</sup> However, the use of maintenance data from these sources is not recognized under the above-referenced provisions.

We therefore recommend revising Section B, paragraphs 1.2(e), 2.2(f), 4.2(d); and Section C, paragraphs 1.2(e) and 2.2(e) of the MIP to read as follows:

...must be accomplished using methods, techniques, and practices prescribed in the applicable manufacturer's manuals, instructions for continued airworthiness, or other work instructions acceptable to the authority.

## (2) Use of FAA Repair Stations Located Outside the U.S. to Maintain Canadian Articles<sup>21</sup>

Section B paragraph 4.1 of the MIP provides:

TCCA special conditions are applicable to FAA-certificated repair stations located outside the United States. When requested, TCCA agrees that an FAA-certificated repair station located outside of the United States may perform maintenance and modifications on aeronautical products (this includes only components or sub-components, but not complete aircraft) under TCCA regulatory control based on an authorization given in accordance with the following criteria:

\* \* \*

c. The FAA-certificated repair station is identified by the original equipment manufacturer (OEM) as a facility that is recommended for maintenance of its product; or

d. If the FAA-certificated repair station is not recommended by the OEM, then the maintenance provided must not be available in Canada....

Pursuant to the "Bilateral agreement between the Government of Canada and the Government of the United States of America for Promotion of Aviation Safety" (the Bilateral Agreement), Canada and the United States have developed mutual confidence in their respective aviation maintenance systems and in the quality of work

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that results. For this reason, our governments rely primarily on the geographic authorities' rules when that work is performed on aeronautical products located in Canada and the U.S., unless otherwise provided.

Unlike most provisions in the MIP, this section applies only to the use of FAA repair stations located <u>outside the U.S.</u> to perform maintenance and modifications on Canadian articles. (The MIP does not authorize a TCCA AMO to work on U.S. articles unless they are located in Canada.<sup>22</sup>) Section B, paragraph 4.1 exists because TCCA recognizes the need to provide an alternative for Canadian operators and AMOs when maintenance is needed on a component located outside Canada and the U.S. and the maintenance provider holds an FAA repair station certificate but not a TCCA AMO certificate. However, the limitation found in Section B, paragraph 4.1(c) is inappropriate for several reasons:

- It elevates the manufacturer's recommendation as to whether a repair station is qualified to perform certain work over the FAA's determination, which like all CAAs is charged with that responsibility under its national law.
- The selection of a repair station recommended by a manufacturer may be based on commercial considerations such as a licensing arrangement and royalties. For a regulatory authority to give such facilities a preference not enjoyed by other certificated and appropriately rated repair stations is inconsistent with governments' focus on technical competence, which is the foundation of international civil aviation regulation.
- The bilateral agreement,<sup>23</sup> and the many forums, meetings, and consultations through which the governments of Canada and the United States regularly communicate provide convenient and frequent opportunities for the signatories to assure each is meeting their obligations under that agreement. No such convenient mechanism exists to hold non-governmental parties (i.e., manufacturers) accountable for their recommendations.

Subparagraph 4.1(d) provides that if a repair station located outside the U.S. is not recommended by the manufacturer, it may be authorized to perform the work only if the maintenance is not available in Canada. This erects a barrier to entry for independent repair stations that is inconsistent with the international civil aviation regulatory system. Moreover, merely removing subparagraph 4.1(d) eliminates independent repair stations from consideration if they have not been recommended by the OEM. Such trade preferences have no place in a bilateral agreement on aviation safety.

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No safety data has been presented by either TCCA or the FAA that support the inclusion of Section B paragraphs 4.1(c) or 4.1(d) of the MIP. These provisions have the effect of restricting the sources of maintenance services for Canadian AMOs and operators, thereby hampering their international competitiveness.

We therefore recommend deleting subparagraphs (c) and (d) from Section B, paragraph 4.1 of the MIP. If TCCA desires to further limit the scope of paragraph 4.1, it should do so by substituting justified technical considerations that apply equally to all repair stations located outside the U.S. rather than bestowing a special privilege on those recommended by the manufacturer.

We look forward to working closely with TCCA and FAA to resolve these issues as soon as possible.

Sincerely,

Marshall S. Filler Managing Director & General Counsel Aeronautical Repair Station Association 121 North Henry Street Alexandria, VA 22314-2905 703.739.9543 Ext. 201 marshall.filler@arsa.org

Mark Beauregard Vice President, Regulatory Affairs Aerospace Industries Association of Canada 255 Albert Street Suite 703 Ottawa, Ontario K1P 6A9 613.232.4297 Ext. 261 mbeauregard@aiac.ca David Silver Vice President, Civil Aviation Aerospace Industries Association 1000 Wilson Boulevard Suite 1700 Arlington, VA 22209-3928 703.358.1038 david.silver@aia-aerospace.org

Les Aalders Executive Vice President Air Transport Association of Canada 222 Queen Street Suite 1505 Ottawa, Ontario K1P 5V9 613.233.7727 Iaalders@atac.ca

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Chris Cooper Director, Regulatory Affairs Aircraft Owners and Pilots Association 50 F Street, NW Suite 750 Washington, DC 20001-1578 202.851.7501 christopher.cooper@aopa.org

Michele Dickstein President Aviation Suppliers Association 2233 Wisconsin Avenue, NW Suite 503 Washington, DC 20007-4104 202.347.6896 michele@aviationsuppliers.org

Yvette Rose Senior Vice President Cargo Airline Association 1620 L Street, NW Suite 610 Washington, D.C. 20036-5605 202.293.1030 yrose@cargoair.org

Jason Dickstein President Modification and Replacement Parts Association 2233 Wisconsin Avenue, NW Suite 503 Washington, DC 20007-4104 202.628.6777 jason@washingtonaviation.com Robert Ireland Managing Director, Engineering & Maintenance Airlines for America 1275 Pennsylvania Avenue, NW Suite 1300 Washington, DC 20004-2450 202.626.4228 rireland@airlines.org

Crystal Maguire Executive Director Aviation Technician Education Council Post Office Box 234 Jenks, OK 74037-0234 703.548.2030 crystal.maguire@atec-amt.org

Joe Sambiase Director, Maintenance & Airworthiness General Aviation Manufacturers Association 1400 K Street, NW Suite 801 Washington, DC 20005-2402 202.393.1500 jsambiase@gama.aero

George Paul Vice President, Technical Services National Air Carrier Association 1735 North Lynn Street Suite 105 Arlington, VA 22209-2013 703.358.8063 gpaul@naca.cc

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Bill Whyte Vice President, Aviation Operations and Technical Services Regional Airline Association 1201 15<sup>th</sup> Street, NW Suite 430 Washington, DC 20005-2899 202.367.1170 whyte@raa.org

cc: Jeff Phipps Nick Robinson Jackie Black Bruce Decleene jeff.phipps@tc.gc.ca nicholas.robinson@tc.gc.ca jackie.l.black@faa.gov bruce.decleene@faa.gov

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<sup>&</sup>lt;sup>1</sup> This provision applies to: "FAA-Certificated A&P Mechanics Located Within the United States Performing Work on Canadian-registered Aircraft That Are Not Operated in Commercial Air Service Pursuant to Part VII of The CARs. No TCCA Supplement Is Required."

<sup>&</sup>lt;sup>2</sup> This provision applies to: "FAA-certificated Repair Stations Located Within the United States Performing Work on Canadian-registered Aircraft That Are Not Operated in Commercial Air Service Pursuant to Part VII of The CARs and/or Aeronautical Products. No TCCA Supplement Is Required."

<sup>&</sup>lt;sup>3</sup> This provision applies to: "FAA certificated Repair Stations Located Outside The United States. No TCCA Supplement Is Required."

<sup>&</sup>lt;sup>4</sup> This provision applies to: "TCCA-licensed AMEs Located in Canada Performing Maintenance on U.S.registered Aircraft That Are Not Operated in Commercial Air Service Pursuant To 14 CFR Part 121 or 135. No FAA Supplement Is Required."

<sup>&</sup>lt;sup>5</sup> This provision applies to: "TCCA AMOs Located in Canada Performing Work on U.S.-registered Aircraft That Are Not Operated in Commercial Air Service Pursuant To 14 CFR Part 121 or 135 and/or Aeronautical Products. No FAA Supplement is Required."

<sup>&</sup>lt;sup>6</sup> Section C, paragraphs 1.2(e) and 2.2(e) substitute the term "alterations."

<sup>&</sup>lt;sup>7</sup> Section B paragraph 4.2(d) addresses "[m]aintenance and modifications on aeronautical products (excluding aircraft)".

<sup>&</sup>lt;sup>8</sup> Section B paragraphs 2.2(f) and 4.2(d), and Section C paragraphs 1.2(e) and 2.2(e) substitute the phrase "accomplished using".

<sup>&</sup>lt;sup>9</sup> Section B paragraph 4.2(d) omits this instance of the word "current".

<sup>&</sup>lt;sup>10</sup> Section B Paragraph 2.2(f) and Section C paragraphs 1.2(e) and 2.2(e) change the word order to "current manufacturer's applicable manuals".

<sup>&</sup>lt;sup>11</sup> Section B paragraphs 2.2(f) and 4.2(d), and Section C paragraphs 1.2(e) and 2.2(e) omit the expanded term "instructions for continued airworthiness".

<sup>&</sup>lt;sup>12</sup> Canadian Aviation Regulations (CAR) <u>571.02(1)(b) and (c)</u>; Standard <u>571.02</u> ("Persons who perform maintenance or elementary work are required to follow the manufacturer's recommendations, **or equivalent practices.**" *Emphasis added*); CAR <u>573.08(3)</u>(" Where an AMO uses standards equivalent to those of the manufacturer of an aeronautical product for the performance of work pursuant to paragraph 571.02(1)(b), those standards shall be identified in accordance with section 573.10."). See, also CAR 521.251 through 521.257 pertaining to repair design approvals.

<sup>&</sup>lt;sup>13</sup> FAA regulation 14 CFR <u>43.13(a)</u> provides, in pertinent part, "Each person performing maintenance, alteration, or preventive maintenance on an aircraft, engine, propeller, or appliance shall use the methods, techniques, and practices prescribed in the current manufacturer's maintenance manual or Instructions for Continued Airworthiness prepared by its manufacturer, or other methods, techniques, and practices acceptable to the Administrator, except as noted in §43.16.(*Emphasis added.*) 14 CFR § <u>43.16</u> references the Airworthiness Limitations section of a manufacturer's maintenance manual or Instructions for Continued Airworthiness; that section is not pertinent to the issues raised in this letter. *See also*, 14 CFR <u>145.201(c)(1) and (2)</u>; 14 CFR <u>145.205</u> (An FAA-certificated repair station that performs maintenance, preventive maintenance, or alterations for an air carrier or commercial operator must do so in accordance with the operator's manual, if applicable, and approved maintenance program, even where these diverge from the manufacturer's documentation.)

<sup>&</sup>lt;sup>14</sup> Maintenance data is synonymous with methods, techniques and practices (i.e., work instructions). It should not be confused with technical data, which is the engineering information shown to comply with the applicable airworthiness standards.

<sup>&</sup>lt;sup>15</sup> See footnotes 12 and 13, above.

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<sup>22</sup> See, MIP Section C, paragraph 4; 14 CFR § <u>43.17</u>.

<sup>23</sup> Article IV of the Bilateral Agreement provides, "Any disagreement regarding the interpretation or application of this Agreement or its Implementation Procedures shall be resolved by consultation between the Contracting Parties or their civil aviation authorities, respectively."

<sup>&</sup>lt;sup>16</sup> As used herein, the term "maintenance data" refers to the methods, techniques and practices (i.e., work instructions) used by technicians when performing maintenance and alterations (modifications).

<sup>&</sup>lt;sup>17</sup> See, e.g., CAR <u>571.06(4)</u>; Airworthiness Manual § <u>571.06</u>.

<sup>&</sup>lt;sup>18</sup> See 14 CFR § <u>145.201(c)(1) and (2)</u>.

<sup>&</sup>lt;sup>19</sup> The term "technical data" refers to engineering information including, but not limited to, drawings and specifications showing the configuration, structural strength and other qualities affecting airworthiness.

<sup>&</sup>lt;sup>20</sup> Section B, paragraph 1.2(c), 2.2(c) and 4.2(b) and Section C, paragraph 1.2(c) and 2.2(c) <sup>21</sup> Section B, Paragraphs 4.1(c) and (d) These provisions apply to "EAA-certificated Repair.

<sup>&</sup>lt;sup>21</sup> Section B, Paragraphs 4.1(c) and (d). These provisions apply to, "FAA-certificated Repair Stations Located Outside the United States. No TCCA Supplement Is Required."