



U.S. Department
of Transportation
**Federal Aviation
Administration**

Vandalia Mfg. Inspection
District Office (MIDO)
3800 Wright Drive
Vandalia, OH 45377
Phone: 937-898-3991
FAX 937-898-8717

July 22, 2005

Unison Industries LLC - Dayton
2455 Dayton-Xenia Road
Dayton, OH 45434-7199

FEDERAL AVIATION ADMINISTRATION - PARTS MANUFACTURER APPROVAL

In accordance with the provisions of 14 CFR part 21, Subpart K, the FAA has found that the design data, as submitted by Unison Industries LLC – Dayton (Unison-Dayton), (hereinafter referred to as “the Manufacturer”) on July 22, 2005, meets the airworthiness requirements of the Federal Aviation Regulations applicable to the product(s) on which the part(s) is to be installed. Additionally, the FAA has determined that the manufacturer has established the fabrication inspection system required by part 21 § 21.303(h) at 2455 Dayton-Xenia Road, Dayton, OH 45434. Accordingly, Parts Manufacturer Approval (PMA) is hereby granted to the manufacturer, to produce the replacement parts (or modification parts, as applicable) listed in the enclosed supplement(s) in conformity with the FAA-approved design data. Any subsequent changes to these design data must be approved in a manner acceptable to the FAA.

The following terms and conditions are applicable to this approval:

1. The manufacturer’s fabrication system, methods, procedures, and manufacturing facilities, including suppliers, are subject to FAA surveillance or investigations. Accordingly, the manufacturer must advise their suppliers that their facilities are also subject to FAA surveillance and investigations.

2. The manufacturer must notify our district office located at 3800 Wright Drive, Vandalia, Ohio 45377 in writing within 10 days from the date the manufacturing facilities at which parts are manufactured are relocated or expanded to include additional facilities at other locations. This requirement also applies to the manufacturer’s suppliers, but only those who have been delegated major inspection authorization and those who furnish parts or related services where a determination as to safety and conformance to the approved design cannot or will not be made upon receipt at the approved receiving facility.

3. The manufacturer must make available to the FAA, upon request, any pertinent information concerning their suppliers who furnish parts/services, including:

- a. A description of the part or service;
- b. Where and by whom the part or service will undergo inspection;

- c. Any delegation of inspection duties;
- d. Any delegation of material review authority;
- e. Name and title of FAA contact at supplier facility;
- f. The inspection procedures required to be implemented;
- g. Any direct shipment authority;
- h. Results of the manufacturer's evaluation, audit, and/or surveillance of their suppliers;
- i. The purchase/work order number (or equivalent);
- j. Any feedback relative to service difficulties originating at the manufacturer's suppliers.

4. Parts, appliances, or manufacturing services furnished by any suppliers located in a foreign country may not be used in the production of any part or appliance listed in the enclosed supplement unless:

a. That part or service can and will be completely inspected for conformity at the manufacturer's U. S. facility; or

b. The FAA has determined that the location of the foreign supplier facility places no undue burden on the FAA in administering applicable airworthiness requirements. When the use of such foreign suppliers are contemplated, the manufacturer must advise the FAA at least 10 days in advance to allow the FAA to make this determination; or

c. The parts/services furnished by the foreign supplier are produced under the "components" provisions of U. S. bilateral airworthiness agreements and approved for import to the U. S. in accordance with part 21 § 21.502.

5. Parts produced under the terms of this approval must be permanently marked with the identification information as required by 14 CFR part 45 § 45.15, i.e., with the letters "FAA-PMA," the name, trademark, or symbol of the company, the part number, and the name and model designation of each type certificated product on which the part is eligible for installation. Alternate means of identification, if the part is too small or if it is otherwise impractical to mark, must be approved by the FAA. In the case of a part based on an STC, the identification of installation-eligible type certificated products must include reference to the STC on the shipping document. If a PMA is granted for an assembly, detail parts of the assembly sold separately must also be marked in accordance with the requirements of part 45 § 45.15 and reference the assembly PMA part number on the shipping document.

6. This approval is not transferable and it may be withdrawn for any reason which would preclude its issuance; or at any time the FAA finds that the fabrication inspection system is not being maintained; or if unsafe or nonconforming parts are accepted under the fabrication inspection system.

7. Our district office must be notified within 10 days from the date that the address shown in the approval has been changed.

8. The manufacturer must maintain their fabrication system in continuous compliance with the requirements of part 21 § 21.303(h), and ensure that each part conforms with the approved design data and is safe for installation on type certificated products.

9. The manufacturer is eligible for the appointment of qualified individuals in their employ to represent the FAA as Designated Manufacturing Inspection Representatives (DMIRs) or Organization Designated Airworthiness Representatives (ODARs) for the purpose of issuing Export Airworthiness Approvals for Class II and Class III products.

10. The manufacturer shall report to our district office in a timely manner, information concerning service difficulties on any part produced under this approval, in addition to any failures, malfunctions, and defects required to be reported in accordance with part 21 § 21.3.

11. All technical data required by part 21 § 21.303(c)(3), for the parts to be produced under this approval, must be readily available to the FAA at the facility at which the parts are being produced.

12. The manufacturer shall notify our district office immediately in writing of any changes to the Fabrication Inspection System that may affect the inspection, conformity, or airworthiness of the parts approved in this letter.

13. The manufacturer shall produce all parts in accordance with Unison Industries LLC - Dayton, PMA Manual (AL-500), dated July 20, 2005 or later FAA approved, which has been presented as evidence of compliance with part 21 § 21.303(h). Accordingly, any revisions to these data must be submitted for approval by this office prior to implementation.



Larry A. Hinkle
Acting Manager, Vandalia Mfg. Inspection
District Office

Enclosures
Parts Manufacturer Approval Listing-
Supplement No. 1

FEDERAL AVATION ADMINISTRATION – PARTS MANUFACTURER APPROVAL

Unison Industries LLC - Dayton
 2455 Dayton-Xenia Road
 Dayton, OH 45434-7199
 (937) 426-0621

PMA No. PQ3943CE
 SUPPLEMENT NO. 1
 DATE July 22, 2005

<u>Part Name</u>	<u>Part Number</u>	<u>Approved Replacement For</u>	<u>FAA Approval Basis and Approved Design Data</u>	<u>Installation Eligibility MAKE</u>	<u>Installation Eligibility MODEL</u>
Anti-Ice Tube, Inlet	ER2417G01	Aermacchi SPA: 14C0710001	PMA Assist Letter between Embrear and Unison dated 4/6/05. T.C. No.: A56NM Embrear Dwg. No.: 14C0710 *	Embrear	ERJ-170-100 STD ERJ-170-100 LR
Link, Support	ER1818G02	Aermacchi SPA: 14E0114001	PMA Assist Letter between Embrear and Unison dated 4/6/05. T.C. No.: A56NM Embrear Dwg. No.: 14E0114 *	Embrear	ERJ-170-100 STD ERJ-170-100 LR
Link, Support	ER1781G19	Aermacchi SPA: 14E0115016	PMA Assist Letter between Embrear and Unison dated 4/6/05. T.C. No.: A56NM Embrear Dwg. No.: 14E0115 *	Embrear	ERJ-170-100 STD ERJ-170-100 LR
Tube, Valve Sense Line	ER1746G01	Aermacchi SPA: 14E0146001	PMA Assist Letter between Embrear and Unison dated 4/6/05. T.C. No.: A56NM Embrear Dwg. No.: 14E0146 *	Embrear	ERJ-170-100 STD ERJ-170-100 LR
Firewall Upper Triangle	ER1909G03	Aermacchi SPA: 14E0150005	PMA Assist Letter between Embrear and Unison dated 4/6/05. T.C. No.: A56NM Embrear Dwg. No.: 14E0150 *	Embrear	ERJ-170-100 STD ERJ-170-100 LR
Bushing	ER1830P01	Aermacchi SPA: 14E0160001	PMA Assist Letter between Embrear and Unison dated 4/6/05. T.C. No.: A56NM Embrear Dwg. No.: 14E0160 *	Embrear	ERJ-170-100 STD ERJ-170-100 LR
Bushing	ER1830P03	Aermacchi SPA: 14E0160003	PMA Assist Letter between Embrear and Unison dated 4/6/05. T.C. No.: A56NM Embrear Dwg. No.: 14E0160 *	Embrear	ERJ-170-100 STD ERJ-170-100 LR
Bushing	ER1830P05	Aermacchi SPA: 14E0160009	PMA Assist Letter between Embrear and Unison dated 4/6/05. T.C. No.: A56NM Embrear Dwg. No.: 14E0160 *	Embrear	ERJ-170-100 STD ERJ-170-100 LR

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Tube-Anti-Ice	ER2476G02	Aermacchi SPA: 14E0163003	PMA Assist Letter between Embrear and Unison dated 4/6/05. T.C. No.: A56NM Embrear Dwg. No.: 14E0163 *	Embrear	ERJ-170-100 STD ERJ-170-100 LR
Tube, A/I, Fan	ER2413G03	Aermacchi SPA: 14E0164005	PMA Assist Letter between Embrear and Unison dated 4/6/05. T.C. No.: A56NM Embrear Dwg. No.: 14E0164 *	Embrear	ERJ-170-100 STD ERJ-170-100 LR
Bracket	ER2160G01	Aermacchi SPA: 14E0222001	PMA Assist Letter between Embrear and Unison dated 4/6/05. T.C. No.: A56NM Embrear Dwg. No.: 14E0222 *	Embrear	ERJ-170-100 STD ERJ-170-100 LR
Bracket	ER2407G01	Aermacchi SPA: 14E0224001	PMA Assist Letter between Embrear and Unison dated 4/6/05. T.C. No.: A56NM Embrear Dwg. No.: 14E0224 *	Embrear	ERJ-170-100 STD ERJ-170-100 LR
Insul Boot	ER2648G01DS	Aermacchi SPA: 14E0226001	PMA Assist Letter between Embrear and Unison dated 4/6/05. T.C. No.: A56NM Embrear Dwg. No.: 14E0226 *	Embrear	ERJ-170-100 STD ERJ-170-100 LR
E-Seal, Bifurcation	ER2853	Aermacchi SPA: 14E0227001	PMA Assist Letter between Embrear and Unison dated 4/6/05. T.C. No.: A56NM Embrear Dwg. No.: 14E0227 *	Embrear	ERJ-170-100 STD ERJ-170-100 LR
Tube, Line Sense – Variable Stator	ER2987G01	Aermacchi SPA: 14E0228001	PMA Assist Letter between Embrear and Unison dated 4/6/05. T.C. No.: A56NM Embrear Dwg. No.: 14E0228 *	Embrear	ERJ-170-100 STD ERJ-170-100 LR
Duct, Turbine Air	ER1677G01	Aermacchi SPA: 14E0904001	PMA Assist Letter between Embrear and Unison dated 4/6/05. T.C. No.: A56NM Embrear Dwg. No.: 14E0904 *	Embrear	ERJ-170-100 STD ERJ-170-100 LR

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Duct, Stage 6 – Engine, Steel	ER2058G02	Aermacchi SPA: 15E0103003	PMA Assist Letter between Embreair and Unison dated 4/6/05. T.C. No.: A56NM Embreair Dwg. No.: 15E0103 *	Embreair	ERJ-170-100 STD ERJ-170-100 LR
Link, Support	ER1781G29	Aermacchi SPA: 15E0115006	PMA Assist Letter between Embreair and Unison dated 4/6/05. T.C. No.: A56NM Embreair Dwg. No.: 15E0115 *	Embreair	ERJ-170-100 STD ERJ-170-100 LR
Bracket Bridge	ER2007P01	Aermacchi SPA: 15E0121001	PMA Assist Letter between Embreair and Unison dated 4/6/05. T.C. No.: A56NM Embreair Dwg. No.: 15E0121 *	Embreair	ERJ-170-100 STD ERJ-170-100 LR
Duct, HP/LP	ER2018G01	Aermacchi SPA: 15E0158001	PMA Assist Letter between Embreair and Unison dated 4/6/05. T.C. No.: A56NM Embreair Dwg. No.: 15E0158 *	Embreair	ERJ-170-100 STD ERJ-170-100 LR
HP-LP Duct, LWR	ER2120G01	Aermacchi SPA: 15E2121001	PMA Assist Letter between Embreair and Unison dated 4/6/05. T.C. No.: A56NM Embreair Dwg. No.: 15E2121 *	Embreair	ERJ-170-100 STD ERJ-170-100 LR
Bracket, Support	ER2516G01	Aermacchi SPA: 15E2128001	PMA Assist Letter between Embreair and Unison dated 4/6/05. T.C. No.: A56NM Embreair Dwg. No.: 15E2128 *	Embreair	ERJ-170-100 STD ERJ-170-100 LR
Tube, Air – HPSOV Return	ER2966G01	Aermacchi SPA: 15E2146001	PMA Assist Letter between Embreair and Unison dated 4/6/05. T.C. No.: A56NM Embreair Dwg. No.: 15E2146 *	Embreair	ERJ-170-100 STD ERJ-170-100 LR
Tube, Air – PRSOV Return	ER2967G01	Aermacchi SPA: 15E2147001	PMA Assist Letter between Embreair and Unison dated 4/6/05. T.C. No.: A56NM Embreair Dwg. No.: 15E2147 *	Embreair	ERJ-170-100 STD ERJ-170-100 LR

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Tube, Air-Sense Line	ER2968G01	Aermacchi SPA: 15E2148001	PMA Assist Letter between Embreair and Unison dated 4/6/05. T.C. No.: A56NM Embreair Dwg. No.: 15E2148 *	Embreair	ERJ-170-100 STD ERJ-170-100 LR
Tube, Air-Sense Line	ER2969G01	Aermacchi SPA: 15E2149001	PMA Assist Letter between Embreair and Unison dated 4/6/05. T.C. No.: A56NM Embreair Dwg. No.: 15E2149 *	Embreair	ERJ-170-100 STD ERJ-170-100 LR
Tube, Air-PRSOV Supply	ER2970G01	Aermacchi SPA: 15E2150001	PMA Assist Letter between Embreair and Unison dated 4/6/05. T.C. No.: A56NM Embreair Dwg. No.: 15E2150 *	Embreair	ERJ-170-100 STD ERJ-170-100 LR
Tube, Air-Sense Line	ER2971G01	Aermacchi SPA: 15E2151001	PMA Assist Letter between Embreair and Unison dated 4/6/05. T.C. No.: A56NM Embreair Dwg. No.: 15E2151 *	Embreair	ERJ-170-100 STD ERJ-170-100 LR
Tube, Air-HPSOV Inlet	ER2972G01	Aermacchi SPA: 15E2152001	PMA Assist Letter between Embreair and Unison dated 4/6/05. T.C. No.: A56NM Embreair Dwg. No.: 15E2152 *	Embreair	ERJ-170-100 STD ERJ-170-100 LR
Tube, Air-Sense Line	ER2973G01	Aermacchi SPA: 15E2153001	PMA Assist Letter between Embreair and Unison dated 4/6/05. T.C. No.: A56NM Embreair Dwg. No.: 15E2153 *	Embreair	ERJ-170-100 STD ERJ-170-100 LR
Bracket Assy.	ER2975G01	Aermacchi SPA: 15E2154001	PMA Assist Letter between Embreair and Unison dated 4/6/05. T.C. No.: A56NM Embreair Dwg. No.: 15E2154 *	Embreair	ERJ-170-100 STD ERJ-170-100 LR

NOTE 1: * Denotes "Or later FAA Approved Revision."

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NOTE 2: The procedures that have been accepted by the type certificate or TSOA holder and their cognizant FAA Aircraft Certification Office, for minor changes to original parts used on type certificated products, are also acceptable for incorporating the same minor changes on identical FAA-PMA replacement parts. The FAA-PMA holder shall be able to show traceability relating to the TC, STC, or TSOA holder on all minor changes incorporated by this procedure. When these procedures are no longer applicable because of completion of the production contract, or termination of the licensing agreement or Business relationship, all subsequent minor design changes to the PMA parts must be submitted in a manner as determined by the ACO. Major design changes (reference 14 CFR Part 21 § 21.93 and 21.97) to drawings and specifications are to be handled in the same manner as that for an original FAA-PMA.



Larry A. Hinkle
Acting Manager, Vandalia MIDO