

# **INSTRUCTIONS FOR CONTINUED AIRWORTHINESS**

**Aero Twin, Inc. Exhaust Deflectors Part No. AT-CASA-212-EXDF-1001**  
for  
**CASA Models C-212-CB, -CC, -CD, -CE, -CF, & -DF**

Document No. CASA-212-EXDF-ICA

Maintenance Manual  
Airworthiness Limitations  
Illustrated Parts List

<b>LOG OF REVISIONS</b>			
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# 1.0 Maintenance Manual

## Aero Twin, Inc. Exhaust Deflector, Part No. AT-CASA-212-EXDF-1001

### 1.1 Description

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The Aero Twin exhaust deflectors for the Casa 212 series of aircraft consist of annealed stainless steel sheet metal parts. The stainless steel deflectors mount onto the existing exhaust system by means of 62 screws each. The exhaust deflectors provide protection from exhaust impingement, and subsequent corrosion, on the underside of the wings.

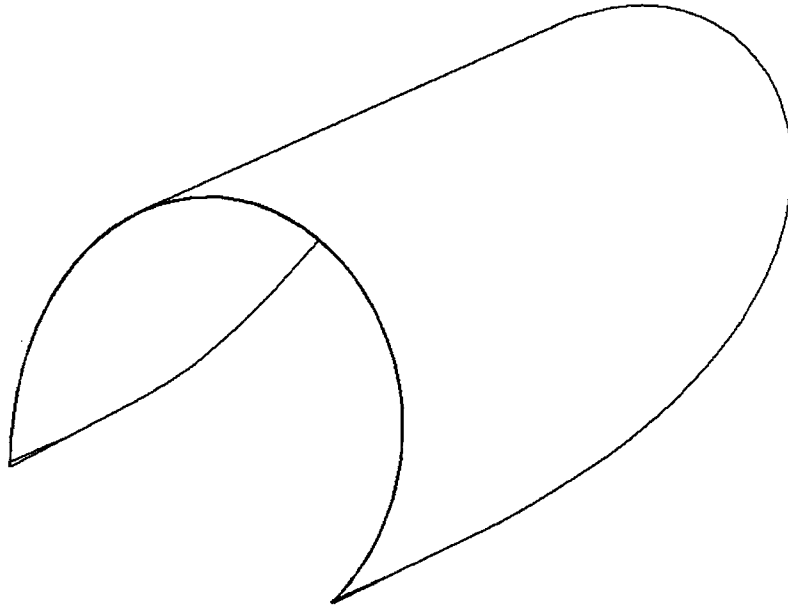


Figure 1.1.1 Exhaust Deflector

### 1.2 Installation / Removal

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#### 1.2.1 Installation:

1. Installation of the exhaust deflectors is performed in accordance with the installation instructions contained in drawing number AT-CASA-EXDF-1000. See that drawing for further installation instructions.

#### 1.2.2 Removal:

1. To remove exhaust deflectors, the exhaust ducts may need to be temporarily removed, see CASA maintenance manual chapter 78 for details on removal.
2. Remove all 62 screw from each deflector
3. Remove deflector from existing exhaust system, and reinstall all screws, nuts, and washers.
4. If exhaust duct was removed, reinstall per CASA maintenance manual
5. Update the weight and balance as specified in section 1.3.

### 1.3 Weight and Balance

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When the exhaust deflectors are installed or removed, the aircraft empty weight and balance must be updated to reflect the configuration change. This section includes information required for weight and balance calculations pertaining to the installation of the exhaust deflectors.

The exhaust deflectors weigh 10 pounds and are located at fuselage station 239.4, giving a total moment of 2394 in-lbs. When the deflectors are installed on the aircraft, the weight of the deflectors must be added to the empty aircraft weight. The moment contribution from the exhaust deflectors must be added to the previous empty aircraft moment. The new empty aircraft center of gravity is then calculated by dividing the total moment by the total empty weight. If the exhaust deflectors are removed from the aircraft, the weight and balance of the aircraft must be updated by subtracting the weight and moment contribution of the exhaust deflectors from the empty aircraft weight and moment and dividing the new moment by the new weight to achieve the new aircraft center of gravity.

### 1.4 Maintenance Instructions

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#### 1.4.1 General:

The Aero Twin Exhaust Deflectors installation is designed to be highly durable and fairly maintenance free. However, a maintenance program has been established, in accordance with Appendix G of 14 CFR Part 23, to assure the continued airworthiness of the exhaust deflector and its installation. Adherence to the established plan is mandatory and records of performance of required inspections and maintenance must be maintained. See Section 2.0, Airworthiness Limitations, for required maintenance items and intervals.

#### 1.4.2 Corrosion Prevention:

The annealed stainless steel exhaust deflectors are inherently resistant to corrosion. Corrosion prevention is enhanced by keeping the structure clean. The stainless steel should be kept free of dirt and may be cleaned using water and a mild detergent.

#### 1.4.4 Exhaust Deflector Repair:

##### 1.4.4.1 Hardware Replacement:

Hardware and fittings used throughout the exhaust deflectors' installation are aircraft standard. Hardware should be replaced if corroded, damaged, or excessively worn. Do not substitute hardware - refer to the Illustrated Parts List for correct part numbers. If you encounter difficulty procuring replacement hardware or fittings, contact Aero Twin, Inc. at (907) 274-6166. Refer to previous section for assembly information.

##### 1.4.4.2 Stainless Steel Frame:

**Before any repairs may be made to the stainless steel deflectors, written approval must be obtained from the manufacturer, Aero Twin Inc. Contact Aero Twin Engineering Department at (907) 274-6166 or write: Aero Twin Inc., Engineering Dept., 2403 Merrill Field Dr., Anchorage AK, 99501.**

## **2.0 Airworthiness Limitations**

### **Aero Twin, Inc. Exhaust Deflector Part No. AT-CASA-212-EXDF-1001**

**The Airworthiness Limitations section is FAA approved and specifies maintenance required under paragraphs 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.**

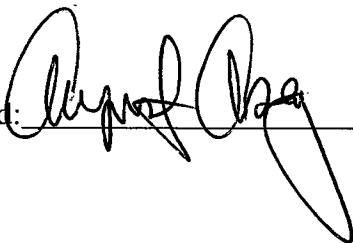
This section describes required inspection, maintenance, and replacement items. When repairs are deemed necessary, follow accepted standard practices and/or specific maintenance instructions in Section 1.4 of this manual. This section constitutes Component Airworthiness Limitations which apply to the exhaust deflector installation only.

### **2.1 Scheduled Inspections and Maintenance:**

At each inspection interval for which inspection of the exhaust system assembly is required by the FAA approved CASA 212 Maintenance Manual or other FAA approved maintenance program, the following inspections shall be performed on the exhaust deflectors:

- Visually inspect the stainless steel structure for cracks, bends, dents, corrosion, or other defects.
- Visually inspect the hardware and fittings for security and condition.

FAA Approved: \_\_\_\_\_



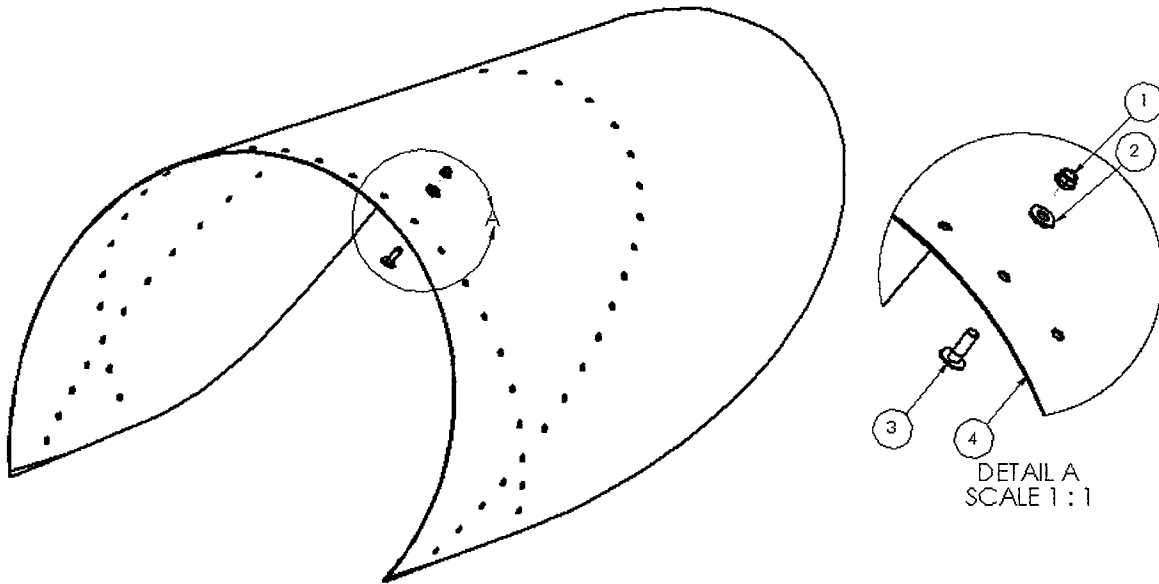
-----End of Section 2.0 Airworthiness Limitations-----

## 3.0 Illustrated Parts List

### Aero Twin, Inc. Exhaust Deflector, Part AT-CASA-212-EXDF-1001

#### 3.1 Complete Parts List:

The following is a complete parts list for the AT-CASA-212-EXDF-1001 exhaust deflectors including all installation hardware. The installation instruction for those items is detailed in document AT-CASA-212-EXDF-1000, which was supplied with the exhaust deflectors.



Item	Qty	Part Number	Item Description
1	124	MS21043-08	Nut
2	124	NAS1149EN832R	Washer
3	124	AN526C832R8	Screw
4	2	AT-CASA-EXDF-1001	Exhaust Deflector

Figure 3.1