

Air Research Technology Inc.
Instructions for Continued Airworthiness
No. ICA17025
Issue 8, Oct 16, 2020.

Cessna 170, 172 and 175 models modified by installation of *WingExtensions* in accordance with Transport Canada STC Approval Number SA01-35.

The information and data contained in this document supersede or supplement that contained in the basic Maintenance Manual in those areas listed herein. For procedures not contained in this document refer to the Approved Maintenance Manual or any other Approved Maintenance Manual Supplements.

This Supplement is to be attached to the Approved Maintenance Manual for the aircraft with the subject design change incorporated.

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REVISION AND DISTRIBUTION

When this document requires revision it will be reissued in whole and the issue number will be increased. Air Research Technology Inc. will provide copies of this document to all registered operators of the equipment, and will provide revision service to all registered users of the equipment. This document is also available on line at:

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1. DESCRIPTION

The A.R.T. *WingExtensions* increase the wing span by 36 inches and provide additional lift. The *WingExtensions* are conventional sheet metal construction, and they attach to the wing with machine screws. In addition, the main wing spar is reinforced from wing station 91 to 109 and from wing station 128 to 160. For aircraft without wet wings, the rear spar is reinforced from wing station 40 to 57.25. The *WingExtensions* are classified as secondary structure.

2. INSTALLATION PROCEDURES

REMOVAL:

- 1) Remove the (13) AN525-832R8 screws securing the *WingExtension* to the wing.
- 2) Support the *WingExtension* when removing the last screw, then carefully slide the *WingExtension* off the wing.
- 3) Disconnect the navigation light connection before fully removing the *WingExtension*.

INSTALLATION:

- 1) Connect the navigation light wire before sliding the *WingExtension* onto the wing.
- 2) Secure the to the wing with (13) AN525-832R8 machine screws.
- 3) Confirm correct function of the navigation light.

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3. PERIODIC INSPECTION

The following items must be inspected at the annual inspection:

Item	Area to be Inspected	Inspection Action	Initial
1	Main Spar lower surface reinforcement at Wing Station 100.	Visual inspection for loose or missing fasteners, cracks, and corrosion. Loose rivets must be replaced with CR3243-6-6 or -7 as applicable.	
2	Main Spar upper surface reinforcement at Wing Station 128 to 160.	Remove inspection panels and visually inspect all structural elements for loose or missing fasteners, cracks, and corrosion. Replace fasteners if required.	
3	Fuel tank well cover inspection on aircraft not equipped with wet wings at aft upper spar cap from wing station 40 to 57.25. (see Figure 1)	Visual inspection for loose or missing fasteners, cracks, and corrosion and to ensure that angle stiffener is present along the aft upper spar cap. Note that screw part number MS27039-08-08 must be used to secure the angle stiffeners.	
4	<i>WingExtensions</i>	Visual inspection for missing or loose fasteners and physical damage and corrosion. AN525-832R8 must be used to secure the WingExtension.	
5	Placards	Visually inspect to ensure that the required cockpit placards are installed in full view of the pilot (see section 6 for required placards)	

Note: Corrosion inspection, removal and treatment must be in accordance with FAA AC43.13-1B Chapter 6, Sections 1 through 8.

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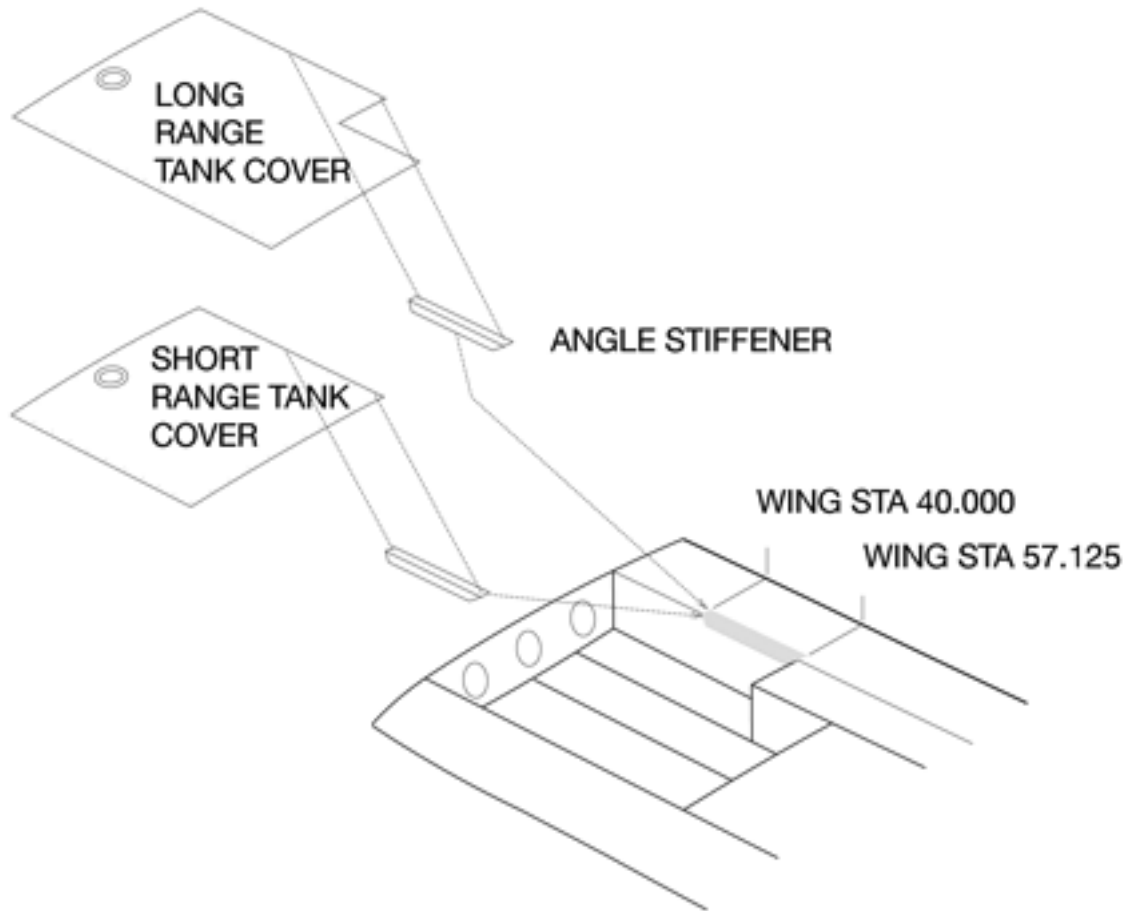


Figure 1: Angle Stiffener, Aft Upper Spar Cap

4. WEIGHT AND BALANCE

The following typical weights are provided for reference only. USE ACTUAL MEASURED WEIGHTS

Item	Total Weight (lbs)	Arm (in. aft of datum)	Moment (in.lbs.)
<i>WingExtensions</i>	16	52	832

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5. REQUIRED MARKINGS AND PLACARDS

The following placards must be installed in full view of the pilot when the *WingExtensions* are installed:

ALL MODELS:

**AEROBATIC MANEUVERS INCLUDING
SPINS PROHIBITED WITH WING
EXTENSIONS INSTALLED
OPERATE IN NORMAL CATEGORY**

MODELS 170A, 170B, 172, 172A THRU 172N,
P172D, 175, 175A THRU 175C, R172E THRU R172J,
R172K S/N R1722000 THRU R1723399:

**MAXIMUM FLAPS 30°
AT INCREASED GROSS WEIGHT
WITH WING EXTENSIONS**

For Cessna R172K, 172RG, 172R and 172S, the airspeed indicator must be marked with a red radial line at 160 KIAS. The line should be 0.05" wide by 0.30" long. The instrument should be marked by one of the following methods:

- 1) Red line should preferably be placed directly on the instrument face by an appropriately rated instrument shop.
- 2) If red line is placed on the cover glass of the instrument, the line must extend onto the instrument bezel so that correct alignment of the cover glass with the face of the dial is maintained, and any rotation of the cover glass is apparent.

6. REPAIRS

Repairs to the sheet metal structure may be accomplished in accordance with AC 43.13-1B, Chapter 4, Section 4.

For parts, placards, or information contact Air Research Technology Inc. at (888) 325 2588 or at www.wingxstol.com.

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7. AIRWORTHINESS LIMITATIONS SECTION

There are no Airworthiness Limitations introduced by this modification.

The Airworthiness Limitations section is approved by the Minister and specifies maintenance required under any applicable airworthiness or operating rule, unless an alternative program has been approved by the Minister.

The Airworthiness Limitations section is FAA approved and specifies maintenance required under §§43.16 and 91.403 of Title 14 of the Code of Federal Regulations unless an alternative program has been FAA approved.