

INSTALLATION INSTRUCTIONS

READ AND UNDERSTAND ALL INSTRUCTIONS BEFORE BEGINNING INSTALLATION

These instructions cover the installation of Airframe Innovations Firewall Fastening System at the firewall location. AI-RE is a trim to fit plate assembly, see instructions below for guidance.

- 1). Remove Piper P/N 484-301 cowl fastener receptacle from mount by carefully removing the two countersunk rivets retaining it.
- 2). Remove any debris from the surface around and under the previously removed receptacle.
- 3). Test fit the plate/nut assembly to the firewall bracket. The plate/nut-plate assembly should fit in the same position as the original receptacle removed. The rounded corners of the plate, AI-RE, should be located closest to the firewall. The two remaining #40 holes in the plate should be aligned with the original rivet holes in the aircraft bracket. The #10 hole in the new plate should be approximately centered in the large hole in the center of the original firewall bracket.
- 4). If the holes in the plate do not align properly, the plate may be trimmed to accommodate proper alignment. Proper edge distance from rivets must be maintained. Trimming the plate to a point that minimum edge distance to any rivet hole is compromised renders the AI-RE plate un-airworthy.

NOTE: DUE TO SMALL VARIATIONS IN ALL AIRCRAFT, THE FIT OF EACH PLATE SHOULD BE CHECKED FOR EACH BRACKET

- 5). When the plate fits the aircraft properly, secure it to the underside of the original aircraft firewall bracket. Secure the plate with (2) MS20426AD3-4 rivets. These rivets go in the same holes that rivets were removed from in step 1.
- 6). Airframe Innovations Inc. provides the NFFS with special heat treated stainless steel bushings in various sizes to accommodate a variety of cowling repairs. As such various sized screws are required depending on bushing length. To insure three threads of protrusion out of the nutplate, the following screws are required for each bushing type:

Minimum screw length to insure proper engagement:

- 01 bushings use MS24694S51 (steel) or MS24694C51 (Stainless Steel) screws
- 02 bushings use MS24694S52 (steel) or MS24694C52 (Stainless Steel) screws
- 03 bushings use MS24694S53 (steel) or MS24694C53 (Stainless Steel) screws
- 04 bushings use MS24694S54 (steel) or MS24694C54 (Stainless Steel) screws

IT IS THE RESPONSIBILITY OF THE INSTALLER TO INSURE THAT SCREW PROTRUSION DOES NOT CREATE AN INTERFERENCE FIT WITH ANY OTHER AIRCRAFT COMPONENT. SPECIAL CARE SHOULD BE TAKEN WHEN INSTALLING SCREWS NEAR THE ENGINE MOUNT OR PROPELLER.

AIRFRAME INNOVATIONS INC.
NAVAJO FIREWALL FASTENER SYSTEM (NFFS)
FAA-PMA DIRECT REPLACEMENT

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- 7). Once plate / nutplate assembly, AI-RE, has been fitted to the firewall bracket epoxy prime and allow to dry before final installation.
- 8). Once the plate / nut-plate assembly, AI-RE, has been attached to the firewall bracket, test fit the bushing p/n AI-CF-100- XX. Place a MS24694SXX Screw through the AI-CF-100-XX special heat treated stainless steel bushing. Install the screw/bushing assembly, AI-FA-xx, into the nut-plate of the plate/nut-plate assembly, AI-RE. You should only need to install it a few threads, just to check the fit. The bushing P/N AI-CF-100-XX should slide down the screw and sit flat on the AI-RE. Although the bushing may touch the sides of the original hole in the firewall bracket, it should not prevent the bushing P/N AI-CF-100-XX from sitting flat on the AI-RE plate.
- 9). Install remaining fasteners in similar fashion.
- 10). Install aircraft cowling and check fit. Due to minor airframe variations, it is recommended to install all threaded fasteners loose, before tightening any. This will allow for some minor shifting of the cowling for proper fit. Tighten all cowl fasteners. When the fasteners are installed properly they should fit flush, and look remarkably similar to the original fasteners.
- 11). Check the ends of the screws under the cowling for interference. Correct any interference before flight.

Notify accounting/parts departments you will no longer be needing to purchase the old style OEM fasteners.