

## Multi-Engine Turboprop Communiqué

Communiqué ME-TP-0037  
September 2024

### ATA 20 – Bird Strike Inspection-Leading Edge Damage Limits

Effectivity: All

Airplanes occasionally experience leading edge damage. Bird strikes are the most common event, however there are other instances where a leading edge can be damaged by being struck by fuel trucks, ladders, etc. Technical Support often gets calls from operators looking “bird strike damage limits.”

You will not find a section in the King Air Maintenance Manuals titled “Bird Strike Damage Limits,” however, there are leading edge dent limits that are called out in the King Air Structural Inspection and Repair Manual under the Aerodynamic Smoothness Requirements section in Chapter 20-10-03 and associated figure 209.

This section provides leading edge limits applying an aerodynamic smoothing material to the affected damaged area if the damage is below the published limits. Any damage that exceeds these limits will have to be repaired by replacing the affected skin or some other form of repair. It is recommended that you contact the Textron Aviation Structures Team for assistance for a factory approved repair procedure for the damage. This team can be contacted at [Structures@txtav.com](mailto:Structures@txtav.com)



**Horizontal Stabilizer Bird Strike**

## **ATA 27 – Raising and Lowering Stuck Flaps**

### **Effectivity: All models**

The King Air flap system can become stuck for multiple reasons such as:

1. Faulty dynamic braking relay allowing flaps to coast past selected position;
2. An asymmetric flap event;
3. Faulty flap motor, flex shaft, actuator; and
4. Out of rig conditions.

Operators may need to lower stuck flaps to begin troubleshooting or raise them to make it back to base. This can be done as follows:

1. The asymmetry or safety switches on both set of flaps will need to be disconnected and secured if the airplane is to be flown;
2. If installed, the RVDT will need to be disconnected before moving flaps and then reconnected;
3. Then, the flex shafts can be disconnected at the gearbox. Using a cordless drill on its lowest clutch setting, slowly rotate the shafts (in the correct direction of rotation) until the flaps are in the desired position; and

**CAUTION:** Applying rotational forces in the wrong direction will damage the flex shaft.

4. Finally, reconnect everything and, if necessary, placard the flap system as inoperative.

## **ATA 32 – Nose Wheel Balance Procedures**

### **Effectivity: All**

Some operators are receiving nose wheel and tire assemblies from overhaul shops with balance weights bonded to the rim as shown below and have asked if this is acceptable. Textron Aviation has consulted with the manufacturer of the wheels who have declared that using weights of this type is not acceptable and it is NOT an approved method.

The reason provided is that there is the chance that these weights can depart the airplane during normal operation creating a FOD hazard for the airplane or other airplanes operating at the airport.

Refer to the wheel Component Maintenance Manual (CMM) for the approved method to balance the wheel. Please note that there are no published procedures to balance the wheel and tire assembly. The CMM provides the procedures on how to balance the wheel without the tire. The tire must be mounted on the wheel using standard procedures, noting the location of the mark on the tire denoting its heavy point.



**ATA 34 – Pitot Static Mast Replacement Kit**  
**Effectivity: 1900 Series**

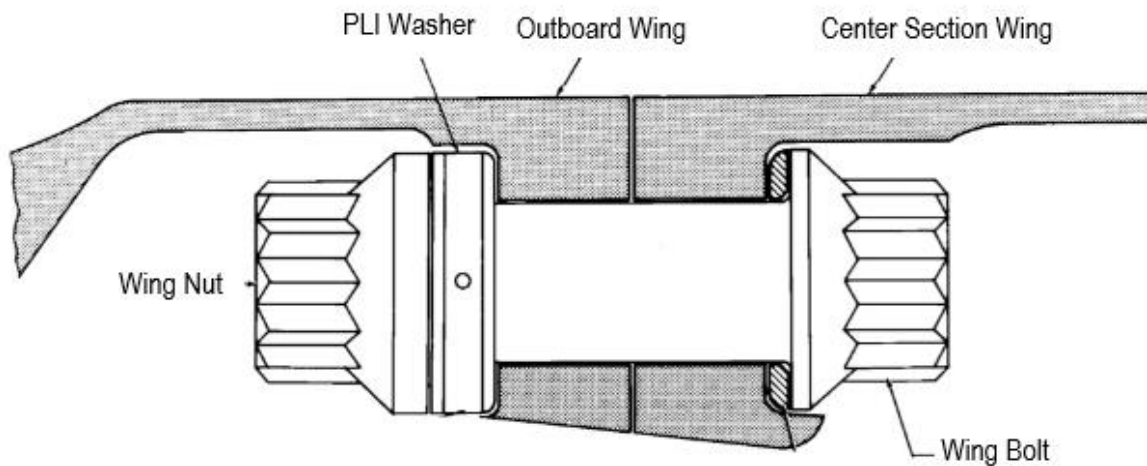
The replacement of the pitot static mast on the 1900 series airplanes requires precise location of the assembly in relation to the airframe. This requires the application of a liquid shim and a pitot repair fixture. The instructions and the fixture are available via kit 114-3051-1. The kit provides everything needed for both pitot tubes, except for the liquid shim material, EA9394, which should be purchased separately. This kit is available for rent from Textron Aviation Parts and Distribution (TAPD) under part number 114-3051-0001REN.

**ATA 57 – Installation of Kit 90-4077, 100-4077, 99-4023 - How to Tell if It is Installed**  
**Effectivity: LJ-1 thru LJ-1087 except LJ-1085; LW-1 and after/B-1 and after, BE-1 and after/U-1 thru U-164, except U-50.**

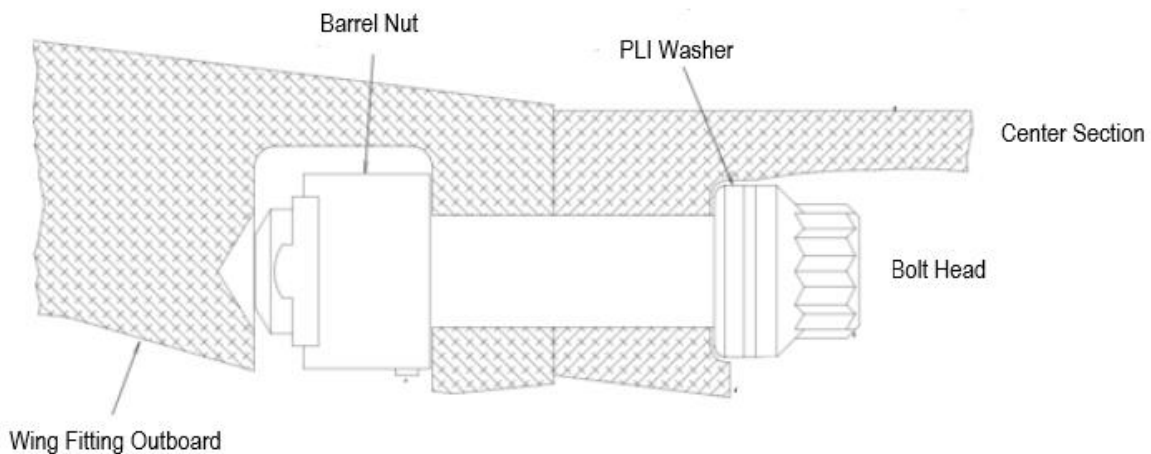
The King Air Structural Inspection and Repair Manual (SIRM) contains wing inspection procedures that references kits 90-4077 (for the King Air 90s) or 100-4077 (for the King Air 100s), 99-4023 (for the 99s) installed. A question often asked to Technical Support is how to tell if the kit is installed.

These kits remove and replace the lower forward center section lower spar cap and the outboard wing main spar assemblies. Apart from checking the airplane's log books you can visually check lower forward wing bolt and wing fitting configuration as a telltale sign if the kit has been incorporated.

Wing fitting and bolt/nut configuration with the bathtub fitting and a wing bolt and regular nut configuration, is an indication that the kit has NOT been incorporated (Figure 1). Wing fitting and bolt/barrel nut configuration is an indication that the kit has been incorporated. See Figure 2. Another thing to notice is that on an airplane where the kit has NOT been incorporated, the Pre-Load Indicating (PLI) washer is installed under the nut; however, on airplanes WITH the kit, the PLI washer is installed under the bolt head.



**Lower Forward Wing Fitting Configuration Without Kit Installed  
Figure 1**



**Lower Forward Wing Fitting Configuration With Kit Installed  
Figure 2**

**ATA 76 – FCU Control Arm Installation**

**Effectivity: All**

Recently, Technical Support received a report that during a maintenance event the FCU Control Arm (a.k.a. the Beechcraft green arm) serrations were not engaged to the FCU input shaft.

The engine was received from an overhaul facility where a new green arm was installed. The green arm did not have internal serrations to keep the arm securely engaged. The new green arms come from the factory with a virgin input arm bore, see picture below. The internal locking serrations on the green arm are created when the attaching hardware is torqued to the specified torque values of 90-100 In-Lbs.

An improperly installed arm can lead to engine rigging difficulties, or worse case scenario, the green arm may slide off the FCU input shaft during operation.

