Beechcraft

BY TEXTRON AVIATION

Multi-Engine Turboprop Communiqué

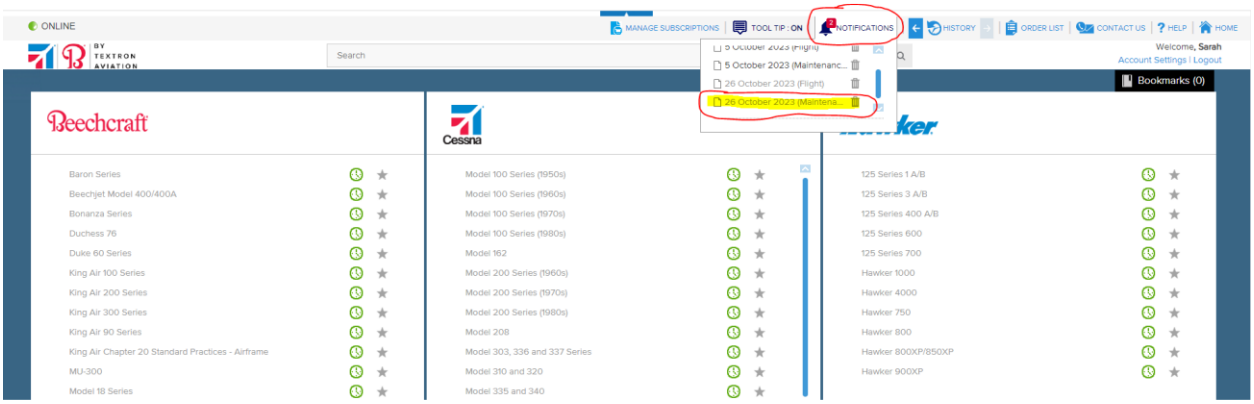
Communiqué ME-TP-0035
January 2024

ATA 00- 1View Inclusion Date versus Revision Date

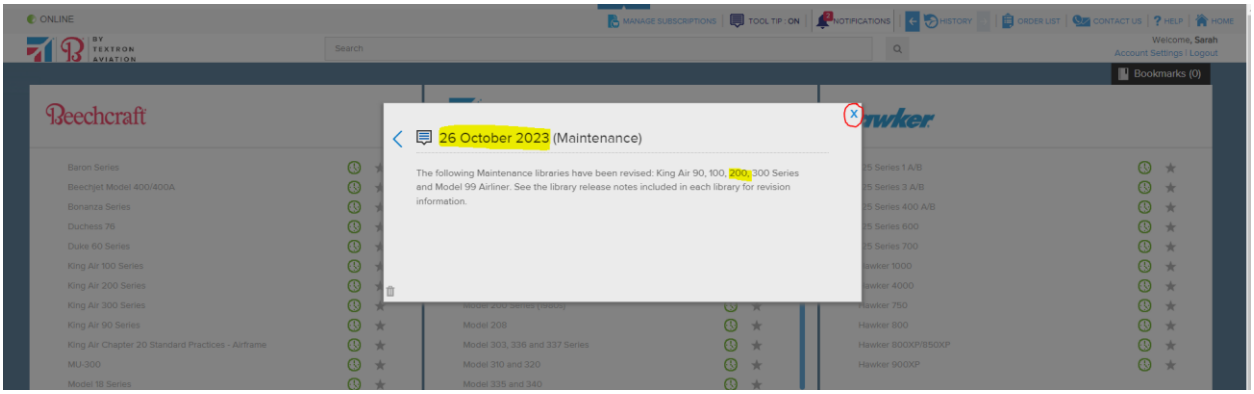
Effectivity: All

In response to questions about when a particular revision became available in the online 1View application versus the publication revision date, our Technical Publications Team provided us instructions below for seeing these different dates in 1View. We are now passing it on to you.

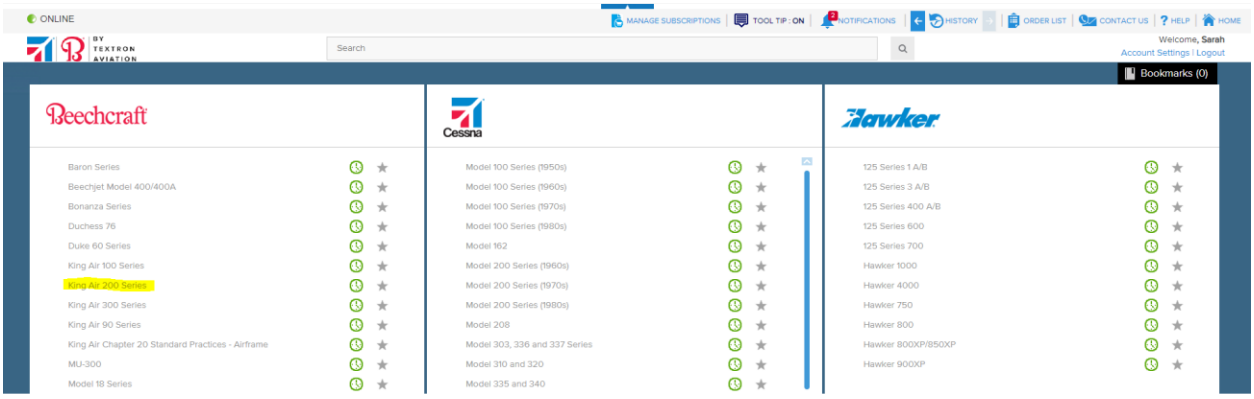
1) To see the date that a manual revision was added to 1View, click on "NOTIFICATIONS" and click on a date. In this example we are selecting 26 October 2023.



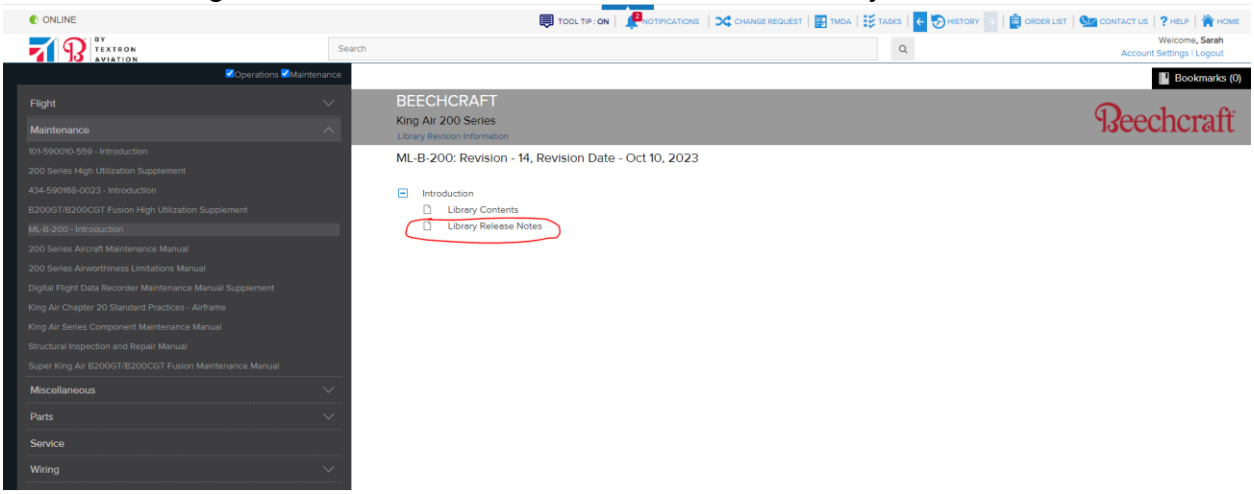
2) This screen will show you which Maintenance Libraries were revised on the selected date.



3) In the following example, we will look at the details of the King Air 200 library. Close the pop up by selecting the “X” in the top right corner. Now navigate to the King Air 200 Series Library.



4) Select the base library introduction. In this example the “ML-B-200 – Introduction”. If necessary, expand the Introduction Table of Contents by selecting the “+” icon next to the line and select “Library Release Notes.”



5) The Release Notes will show that a manual revision was added to 1View. The example below is dated 15 September 2023, but as the notification stated, it was not added to the online version until 26 October 2023.

ATA 20 – Beech Specification 130909

Effectivity: All

You may have noticed a trend in the Illustrated Parts Catalogues where the regular hardware part numbers used on the King Air, such as AN and MS, haves changed to a 130909 number. This has prompted questions regarding this number and what it means. This article will answer these questions.

Since the introduction of the King Air in 1964, the Illustrated Parts Catalogue has shown the part numbers of bolts, nuts, screws by their military standard nomenclatures such as AN-3 bolts or MS320-14 nuts. As part of a quality control effort, Beechcraft Standard 130909 was created. The scope of the Beechcraft Standard states:

This standard defines part numbers for the purpose of identifying those standard parts which have been 100% magnetic particle inspected. This standard also contains provisions for identification of fasteners that require 100% hardness testing using Rockwell testing method.

Basically, the Beechcraft Standard provides this hardware that has been magnetically particle inspected and, in some cases, even hardness tested, so an AN3-4 bolt under the 130909 Beechcraft Spec, is an AN3-4 bolt that has been magnetically particle inspected.

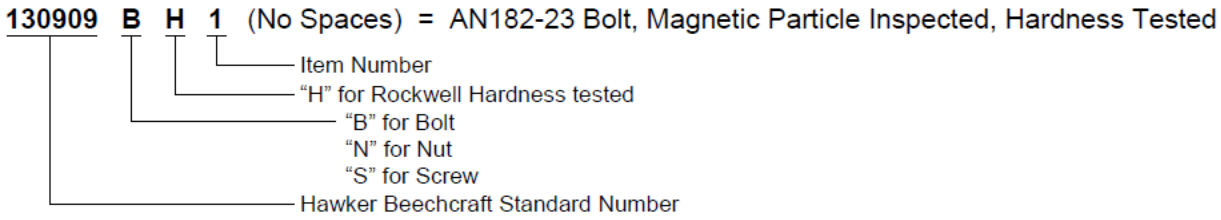
The 130909 specification document does have a substitution statement that is worth mentioning. It says:

Parts which have been 100% magnetic particle inspected in accordance with this standard may be used in place of the equivalent fastener which does not have the higher inspection requirement. Non-inspected fasteners, however, shall NOT be substituted for 130909 fasteners.

Example: 130909BH1 may be substituted for AN182-23, but AN182-23 shall NOT be substituted for 130909BH1.

The 130909 nomenclature is defined as:

Part Number Example



ATA 21 – Pressurization Leaks/Troubleshooting

Effectivity: All

Reports of pressurization issues in the King Air can lead to an extensive troubleshooting effort because there are many factors that can cause pressurization issues. One of them is cabin pressure vessel leaks that is frequently ignored or not thought of, but it should be one of the first things considered when troubleshooting a pressurization issue. When you call for assistance in solving a pressurization issue, one of the first things you will be asked for is the cabin leak rate of the airframe.

Sometimes the first thought when troubleshooting a condition is to replace a component to fix the problem. So many times, operators have replaced, both flow-packs, controllers, landing gear safety switches, etc. and sometimes multiple times in an effort to solve a pressurization problem, but they have not yet asserted the cabin leak rate. A lot of labor and money has been wasted replacing components, when the problem was a leaky cabin.

There are times when the symptoms point specifically to a component, but when they do not, consider checking the cabin leak rate. Refer to appropriate Maintenance Manual for the procedures how to do so. Better yet, if the airplane is flying-in for maintenance, have the crew perform a simple test to find the cabin leak rate while in route.

Fly the airplane at about 18,000 feet and pressurize the airplane as much as the system would allow. Have the crew turn OFF both flow packs at the same time. The cabin VSI will report a high pressure change but within a few seconds the cabin VSI should settle to a number of rate of change. We are looking for a maximum leak rate of 2200 to 2400 feet per minute (fpm) which is the maximum allowable cabin leak rate per the Maintenance Manual. As soon as you determine the cabin leak rate, turn ON both flow packs again without delay. Cabin leak rates higher than 2200 to 2400 fpm will require the cabin to be pressurized in the hanger with a pressurization cart. The cabin then can be pressurized and the search for cabin leaks can begin.

CAUTION: Do not let the cabin differential drop too far, otherwise you will need to repack the passenger oxygen masks on models equipped with the automatic oxygen mask deployment system.

For this in-flight method to work, the pressure vessel should be pressurized to a minimum 50% of max differential (pressures lower than 50% of the cabin rated value will require a cabin leak rate test on the ground with the pressurization car). As an example, a King Air 200 with cabin rated value of 6.0 psi, the cabin should be pressurized to 3.0 psi or better to be able to get a valid indication.

Please see the following list of places/components to look for:

- Cabin windows
- Windshield frame and screws
- Antennas
- Emergency exit(s) and seals
- Forward and aft pressure bulkhead wiring feed throughs
- Control surface cable pressure seals on the aft pressure bulkhead and cables leading to the wings.
- Landing gear torque tubes pressure seals, (refer to King Air Communiqué 2001-01)
- Forward evaporator pressure box under the RH nose avionics floor (200/300 series)
- Forward evaporator pressure box under the LH nose avionics floor (90/F90/100 series, except LJ-1 thru LJ-501)
- Airconditioning cross over duct and the hoses on each side on nose of the 90/F90/100 series.
- Ram air door on the nose, LH side on the 90/F90/100 series; RH on the 200/300 series.
- Cabin door seals.
- Also, please refer to the picture below. This is an image of the main spar as it crosses the fuselage under the cabin floor. The red arrow is pointing to the seal plate on the aft side of the spar assembly where it meets with the belly skin of the airplane. A crack on the radius of this seal plate as shown by the red arrow, as well as forward side of the spar assembly, can result in pressure vessel leaks.

Main Spar Assembly Looking Forward At Aft Seal Plate

ATA 32 – Vibration on Take-Off - Nose Wheel Balance
Effectivity: All

Reports of vibration, felt through the rudder pedals, is generally found to be a nose wheel assembly that is out of balance. Apart from checking the condition and correct inflation of the nose tire, it is recommended that the wheel assembly be removed from the airplane and a static balance performed. Refer to the appropriate wheel Component Maintenance Manual for the correct procedures and parts to achieve a balanced condition on the wheel assembly. The shimmy dampener should also be checked for condition, security of attachment and proper servicing.

ATA 32 – Nose Tire Rolling off Rim
Effectivity: All

Reports of the nose tire rolling off the rim are not frequent, but they can happen (see picture below). One of the reasons a nose tire could roll off the rim is if the airplane lands with a deflated nose tire; however, it is more likely that the airplane was forced to turn using differential power and brakes. It is possible to drag the nose of the airplane sideways using differential power and brakes. When this is done, the nose tire is dragged sideways and can force it off its rim. Extreme caution should be exercised when maneuvering the airplane in limited spaces. If the nose steering mechanism is at its limit and you need to turn tightly, it is best to shut down and maneuver the airplane using the tow tractor and not utilize differential power and brakes. Apart from the risk of rolling the nose tire off its rim, it also causes an unnecessary risk of introducing FOD into the engines as this requires large amounts of power that could result in flat spotting the main tires as the airplane pivots on the inside main tires. It is also important that the nose wheel is straight when doing high power engine runs.

Nose Tire Rolled off the Rim

ATA 73 – Engine Preservation and Firewall Valve Procedures
Effectivity: FL-1300, FL-1307 and after: FM-110 and after

There was a recent change to the Pilot's Operating Handbook ENGINE FIRE ON GROUND procedures for FL-1300, FL-1307 and after and FM-110 and after. Textron Aviation added an inhibit wire to the GCU for the firewall shutoff valve position in the closed position. When the firewall valve is closed the jumper inhibits the GCU and the affected starter generator. This causes the starter to be disabled. The new procedure in the Super King Air 350 & 350C Fusion POH part number 434-590169-0003 reflects the change. Reference Figure 1 below.

Figure 2 (below) shows the way it was prior to the inhibit being wired to the GCU.

The reason this is being discussed is the change that took place. Now the procedure does not say to place the starter switch in starter only. This is unnecessary as it is inhibited. The only time that you might need to use the starter when the firewall valve is in the CLOSED position is when you are preserving the engine. This can be done by closing the firewall fuel valve normally, disconnecting the cannon plug at the valve on the side being preserved, and turning the firewall valve switch back to open. This will reactivate the starter while ensuring the firewall valve is off. Perform the preserve procedure as normal, then reconfigure the airplane.

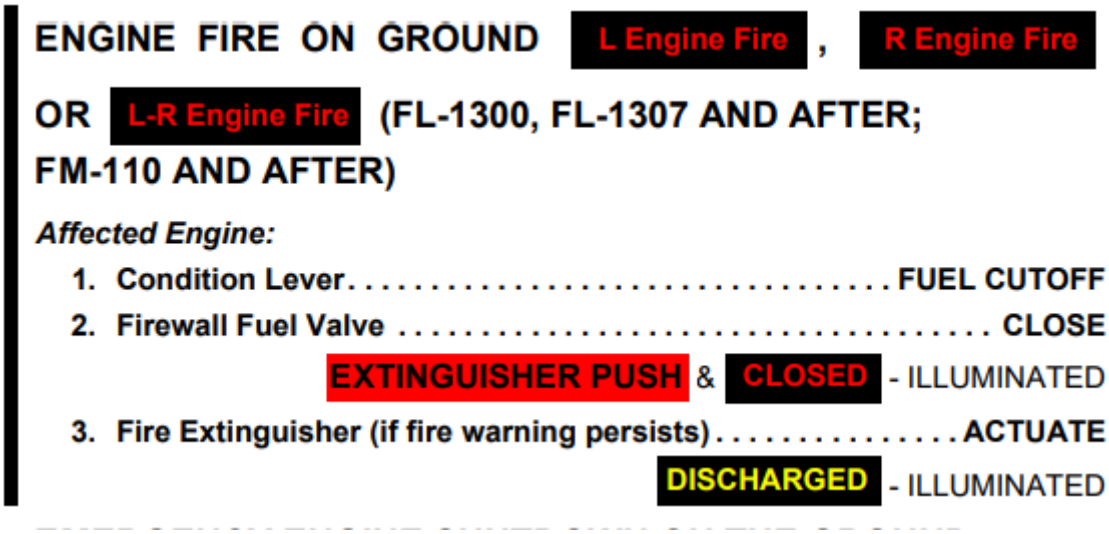


Figure 1

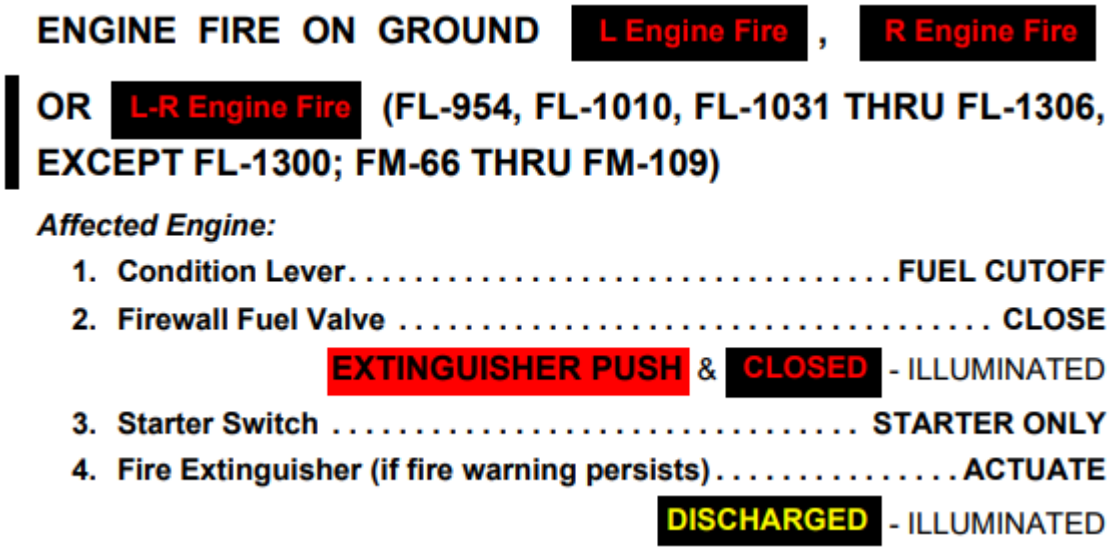


Figure 2