



VAN'S AIRCRAFT
TOTAL PERFORMANCE

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SERVICE BULLETIN SB-00027

Date Released: April 2, 2021 (Rev 1 - Updated Figure 3, notch width matches new factory part dimension – see notes)
November 5, 2020 (Initial Release)

Date Effective: April 2, 2021

Subject: Changes to RV-14A Nose Gear Attach Opening/Washer

Affected Models: RV-14A
Affects the nose gear on all RV-14A Finish Kits delivered prior to November 4, 2020

Required Action: Enlarge the opening on the U-01406 Nose Gear Leg through which the U-01416 Nose Gear Link is attached.
Additionally, for RV-14A kits delivered prior to November 4, 2020: replace the NAS1149F0632P washer with a WASHER-00023, or replace the U-01420 Link Assembly Cap with replacement cap U-01420-1.

Time of Compliance: Within the next 10 flight hours or during the next annual condition inspection, whichever occurs first. Until the modifications described in this bulletin are completed, avoid operation on rough, unimproved surfaces.

Level of Certification: Owner (certification not required)
Check the rules of the local controlling authority/agency and the operating limitations for your aircraft.

Synopsis:

Data from the field suggests that, during a nose gear collapse, the upper end of the U-01416 Nose Gear Link Assembly can strike the fuel pump inlet fitting that is directly ahead of it, severing the fitting from the fuel pump along with the attached VA-139 hose. Refer to Figure 1.

NOTE: Owners who have already complied with the initial release of this Service Bulletin do not need to further modify the U-01406 Nose Gear Leg. This document was updated to Rev 1 to reflect the actual dimensions of the new manufactured part. Either modification addresses the requirements of this document.

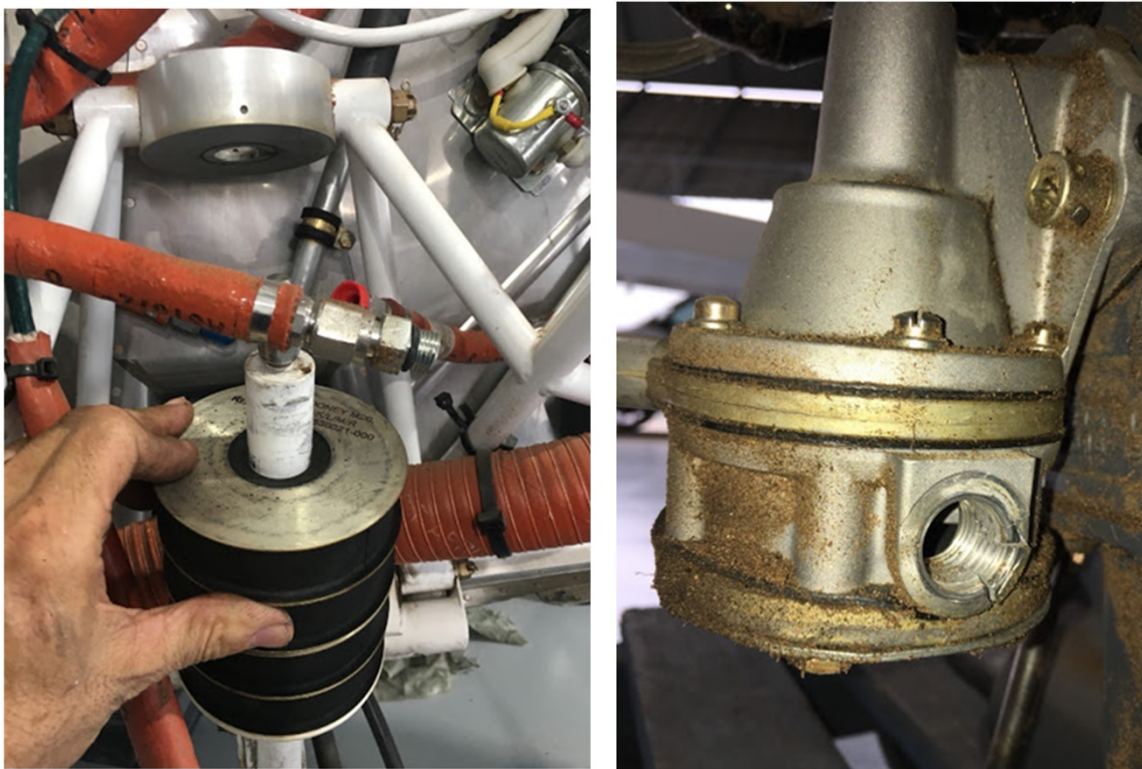


FIGURE 1: SEVERED FUEL PUMP INLET FITTING DUE TO NOSE GEAR COLLAPSE DURING EMERGENCY LANDING

Tests at Van's Aircraft have verified that after enlarging the opening on the U-01406 Nose Gear Leg where the U-01416 Nose Gear Link Assembly is attached, the possibility of this scenario is eliminated. This is the case because after the modification, the upper end of the of the U-01416 Nose Gear Link Assembly will pass beneath the fuel line when the nose gear is deflected aft.

In addition, the U-01420 Link Assembly Cap has been revised to a higher-strength version. Where the original part would fail at the cap itself, the new U-01420-1 cap causes the upper end of the Link Assembly (i.e. the threads) to break off during a gear collapse, giving sufficient clearance for the Link Assembly to pass beneath the fuel line. The same outcome is achieved by replacing the NAS1149F0632P washer by the larger-diameter WASHER-00023. Therefore, builders/owners may choose either to add the new washer, or to replace the original cap with the new version.

Materials Required:

In addition to enlarging the opening on the Nose Gear Leg, one of the following components is required to complete the steps necessary to achieve compliance with this Service Bulletin.

Part no. WASHER-00023, one per airplane, provided free of charge

As an alternative to the washer, one may order the higher-strength link assembly cap. If this cap is used, no washer is required.

Part no. U-01420-1 Link Assembly Cap, one per airplane

Method of Compliance:

Step 1: Remove the COWL-0001 Top Cowl, the COWL-0002 Bottom Cowl and the U-01424 Nose Gear Leg Fairing. Remove the MS21045-6 nut from the U-01416 Nose Gear Link Assembly.

Step 2: Either replace the NAS1149F0632P washer with the larger WASHER-00023, or replace the U-01420 Link Assembly Cap with the newer U-01420-1.

Fully torque the MS21045-6 nut, per Kit Assembly Instructions page 40A-06.

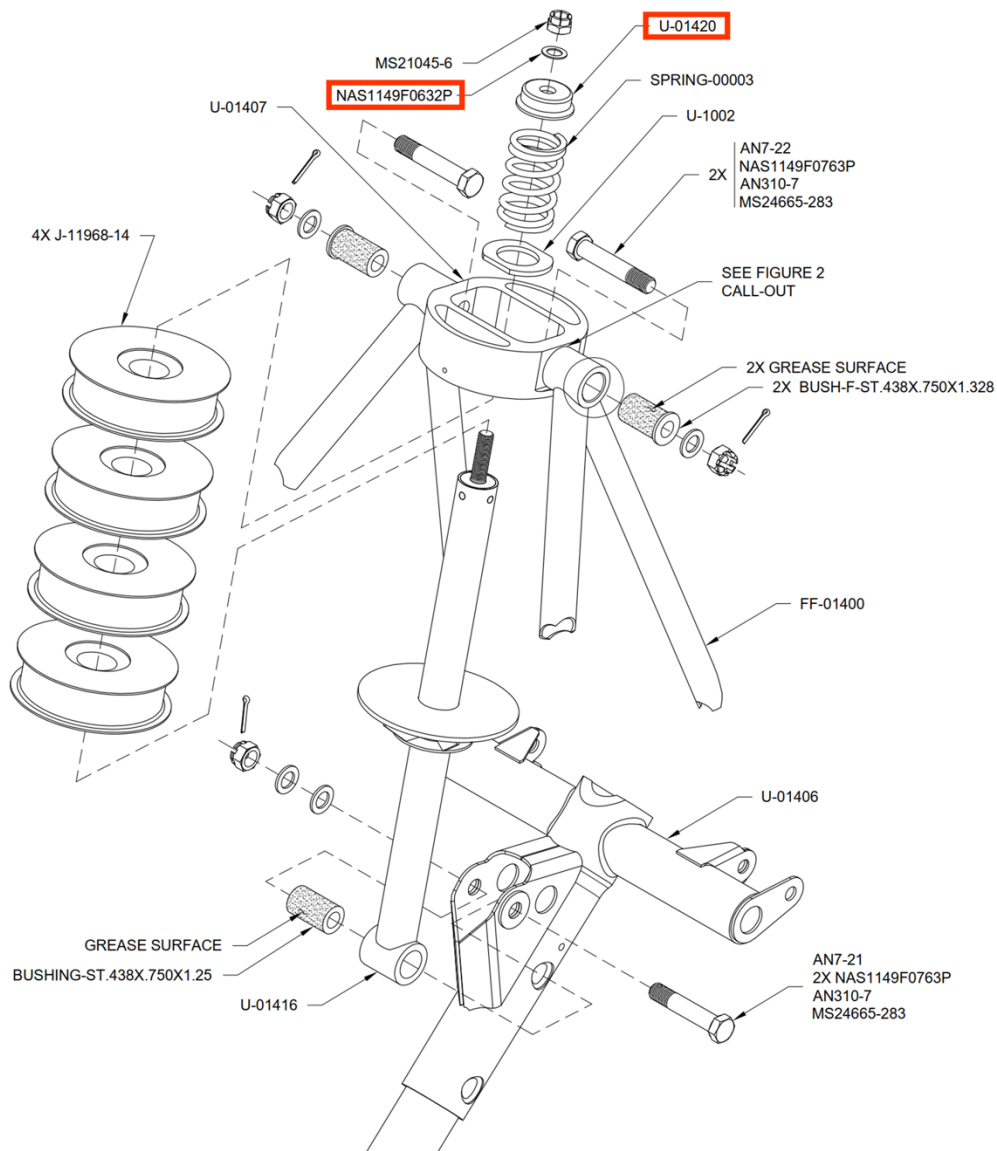


FIGURE 2: EXCERPT FROM RV-14 KIT ASSEMBLY INSTRUCTIONS PAGE 40A-06

Step 3: Raise and hold the airplane's nose off the ground by attaching a weight to the tail tie-down ring.

Step 4: Remove the AN7-21 bolt that attaches the U-01406 Nose Gear Leg to the U-01416 Nose Gear Link. The Nose Gear Leg will then be free to swing downwards.

Step 5: Cut and/or grind material from the aft end of the opening on the Nose Gear Leg where the Nose Gear Link is attached. Sand the surface of the cut until it is smooth. Refer to Figure 3.

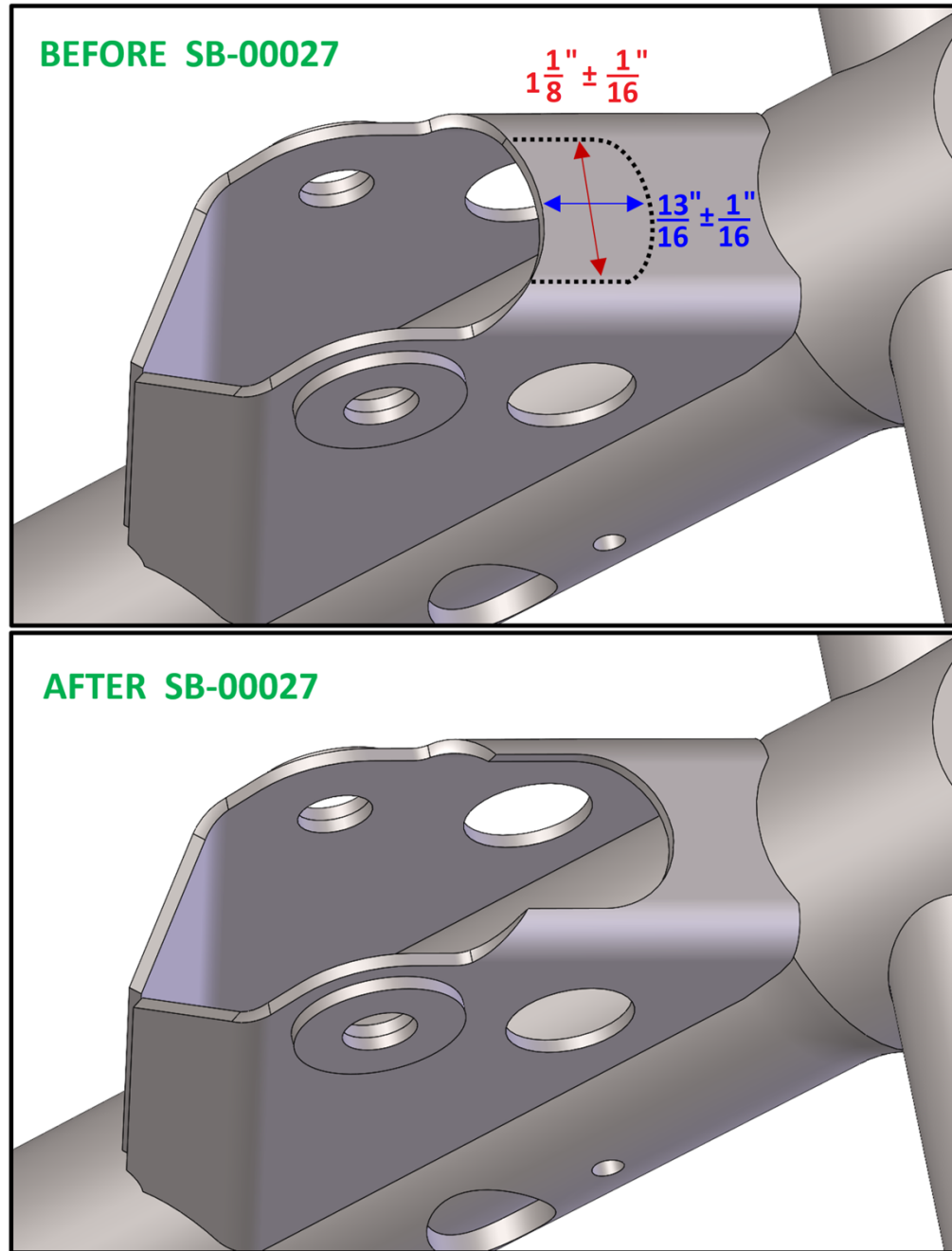


FIGURE 3: ENLARGING THE OPENING ON U-01406.

Step 6: Apply a coat of paint onto the exposed steel along the new edge of the opening, for corrosion prevention. Van's recommended paints for powder-coated parts can be found in our web-based FAQ, at:

<https://www.vansaircraft.com/faq/what-paint-brands-and-colors-does-vans-aircraft-use/>

Step 7: Reverse steps 4, 3, and 1: Reattach the Nose Gear Leg to the Nose Gear Link using the AN7-21 bolt and its associated washers, nut, and pin. Lower the airplane back onto its nosewheel. Reinstall the Nose Gear Leg Fairing and both Cowls.

Step 8: Make a logbook entry indicating compliance with service document per the requirements of the controlling authority/agency.

If you are no longer in possession of this aircraft, please forward this information to the present owner/operator and immediately notify Van's Aircraft, Inc. via email at registrations@vansaircraft.com.

Information regarding establishing/transferring aircraft ownership, registration and licensing is available at: <https://www.vansaircraft.com/qr/transfer-of-ownership/>