



DroMight™ Rudder Lock Installation Instructions For your Vans Aircraft RV-14

For a color version of the instructions below, please visit www.terrestrialimaging.com/controllocks/rv14

Please read all directions prior to installation and first use.

Thank you for purchasing the DroMight™ Rudder Lock. You are now the proud owner of the best, safest, and easiest to use rudder locking systems for the Vans RV14 Aircraft. This revolutionary product prevents wind from causing unexpected movements of the rudder control surface and can be secured from within your aircraft while parked on the ground. The DroMight™ Rudder Lock is significantly safer than rudder locks that are installed on the exterior of the aircraft. The likelihood of forgetting to remove the DroMight™ Rudder Lock from the interior of your aircraft prior to your next flight is significantly reduced.

As an owner of the Vans RV14, you know that the large rudder can easily be damaged by a gust of wind when parked on the ground. In fact, many rudders have been damaged immediately after pulling the aircraft out of the hangar, or while parked on the ramp during a fuel stop. It only takes a second or two for a gust of wind to force the rudder against its stops resulting in a damaged rudder. The DroMight™ Rudder Lock solves this problem and is the best insurance money can buy against rudder damage from wind gusts while parked on the ground.

There is only one thing more important than the protection of your rudder and that is the protection and safety of the pilot and passengers. A Rudder Lock can pose a serious safety hazard if it is not removed before an aircraft's movement. A locked rudder can result in an inoperative control service and lead to a crash and loss of life. External rudder locks can easily be forgotten and have led to many accidents over the years. Internal rudder locks are much safer as they typically make it difficult or impossible to move the aircraft without removing the rudder lock. The DroMight™ Rudder Lock is installed inside the aircraft, and makes it nearly impossible for the pilot to place their feet on the rudders without first removing the rudder lock.

Regardless of how safe a rudder lock might be, or how it is installed, mistakes happen and it is still possible to forget to remove it. We caution all pilots and users of the DroMight™ Rudder Lock to modify their pre-flight check list to include **"Remove and Stow DroMight™ Rudder Locks"**. Never skip this item or any other items on your checklist as your life might depend on it.

DroMight™ Rudder Lock

Kit Contents

Your DroMight™ Rudder Lock kit includes the following items:

- 2 x Adjustable Red Anodized Aluminum Rudder Locking Tubes
- 1 x Black Anodized Rudder Locking Base Plate (small)
- 1 x Black Anodized Rudder Locking Base Plate (big)
- 8 x AN526C832R7 screws



If any of these items are missing from your kit, please notify us immediately.

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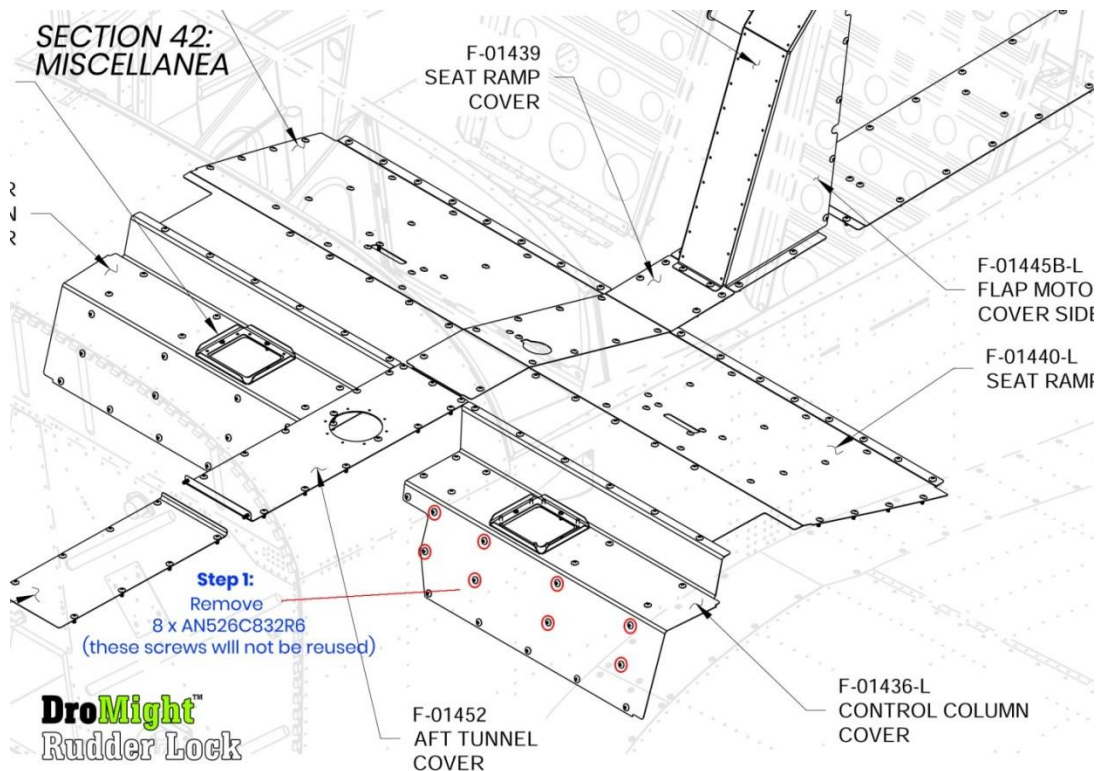
Installation

Installation of the DroMight™ Rudder Lock is very simple and can be accomplished in only a few minutes. The only tool required is a medium sized Phillips screwdriver. You will be removing eight AN526C832R6 screws, installing two base plates on the left side control column cover (Vans Aircraft part number F-01436-L), and installing eight new AN526C832R7 screws. If you have carpeting or fabric that covers F-01436-L control column cover, you will have to remove enough material to allow room for the two base plates to be installed flush against the control column cover. Follow the instructions below to permanently install the DroMight™ Rudder Lock base plates to the control column cover **on the left side of the aircraft.**

If you are interested in watching our installation video, please enter the link below into your web browser:

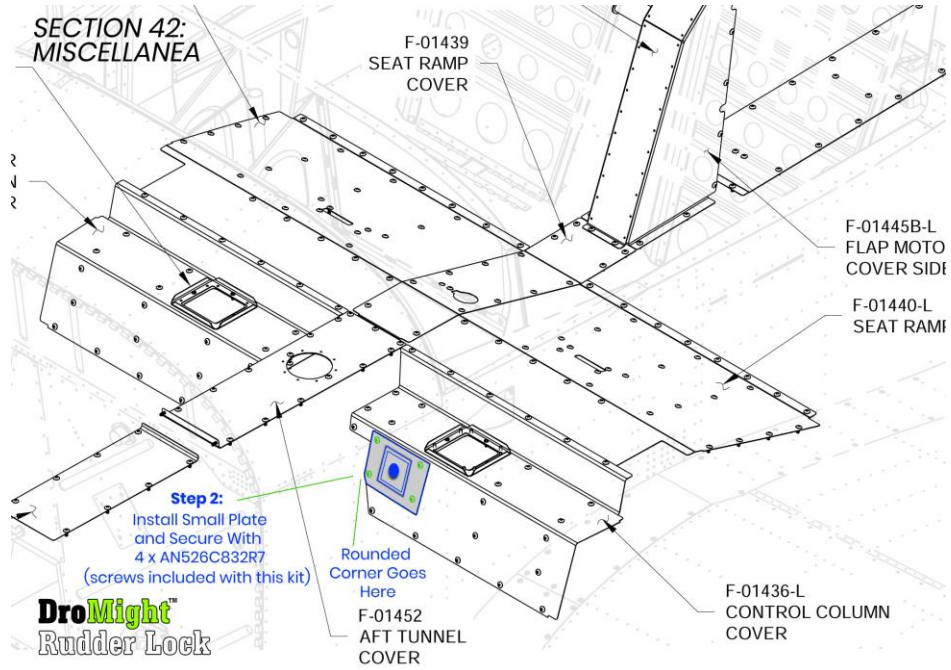
https://youtu.be/YzPrJpWGAIQ?si=YQI6gy70nkl_Scpn

Step 1: Remove existing screws.

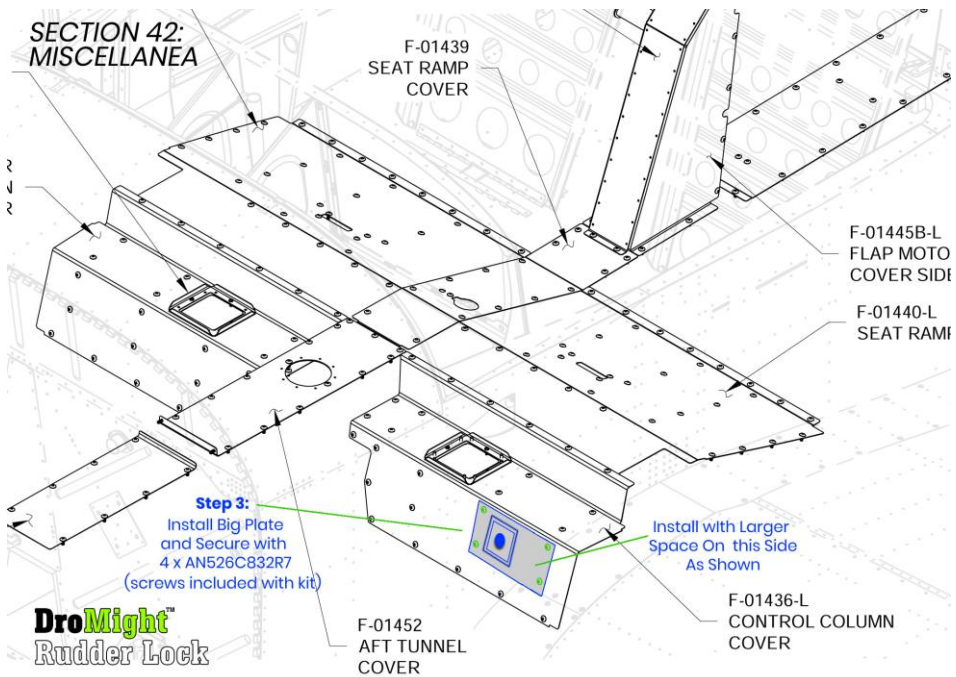


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Step 2: Install small base plate.

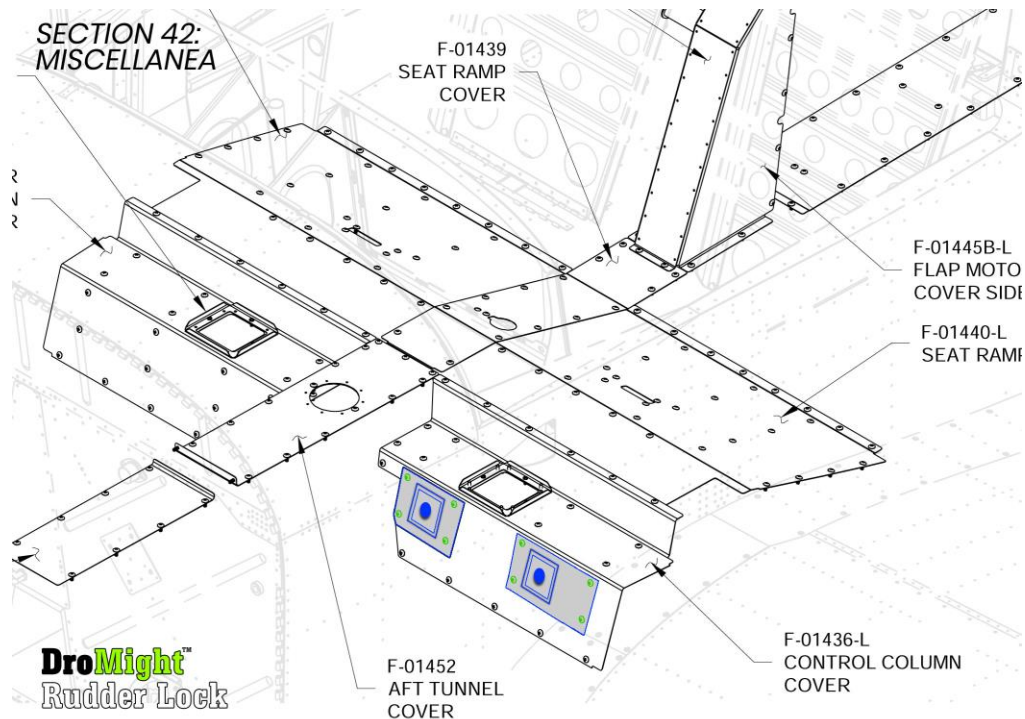


Step 3: Install big base plate.



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Step 4: Inspect your work. Base plate installation complete.



With the two base plates installed, secure the rudder pedals on the left side of the aircraft as follows:

1. Select one red tube and place the black tip of the tube over the left rudder's lower steel tubing so that the rudder is fully captured in the tip of the red tube as shown in figure 1.
2. Rotate the tube so that the yellow "Remove Before Flight" sticker is facing up and then take the rear side of the red tube (black plastic rocker) and place it in the center of the base plate making sure it is fully seated in the base plate. Put slight pressure on the right rudder pedal to put pressure on the red tube to secure in place as shown in figure 2.
3. Select the second red tube and place the black tip of the tube over the right rudder's lower steel tubing so that the rudder is fully captured in the tip of the red tube as shown in figure 1.
4. Rotate the tube so that the yellow "Remove Before Flight" sticker is facing up and then take the rear side of the red tube (black plastic rocker) and place it in the center of the base plate making sure it is fully seated in the base plate. You will need to compress the red tube by pushing forward in order for the tube to snap into the base plate as shown in figure 2.
5. Pull up and down on both red tubes and inspect them carefully to make sure they are securely locked into both the base plate and on the bottom of the rudder pedals. See figure 3.

CAUTION: Always remove both red rudder locking pedals before flight. Modify your pre-flight check list to include the words "Remove and Stow DroMight™ Rudder Locks".

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Figure 1: Rudder Lock Tip Installation



Figure 2: Rudder Lock Base Installation



Figure 3: Proper Installation



Figure 4: Length Adjustment Bolt

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Figure 5. Tube Length Requirement

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Removing the Red Rudder Locking Tubes.

The red rudder locking tubes can easily be removed by holding one of the tubes and gently pushing it forward towards the rudder. The built in tension spring will compress and release the tube from its base plate. Once the first red tube is removed, the second tube will no longer be under tension and can be easily removed. After removal, place both red tubes in a carry bag and safely stow.

Extending the Rudder Lock Length

You might have the need to extend the length of the red rudder locking tubes in order to fit your particular aircraft. The Vans RV-14 build plans show the proper method for installing the rudder pedals into the bearing blocks. There are three possible builder configurations for the permanent installation of your rudder pedals: closest to the firewall, closest to the pilot, and in the middle. In addition, it is possible that your rudder pedals default placement is affected by how you rig the rudder pedal cables. These factors affect how far the rudder pedals will be from the base plates installed on the control column cover. For these reasons, we have designed the DroMight™ Rudder Lock so that the length can easily be adjusted by the user. To lengthen or shorten the red tubes, remove the bolt shown in Figure 4. Adjust the length as needed by sliding the smaller tube into the outer tube. Reinstall the bolt through a set of pre-drilled holes that will give the desired length. Pre-drilled holes are spaced 20mm apart. If you need smaller adjustments, you can rotate the inner tube 90 degrees and use the second row of holes. This will give you a maximum of 10mm of adjustment. If you cannot find the perfect length using the pre drilled holes, you can always custom drill a new set of holes to suit your needs.

Important tip: When setting your rudder tube length, it is very important that each aluminum piston pin compresses a minimum of 50% when installed in the aircraft (see figure 5). Failure to do so could result in the tubes not seating properly and falling out of their bases. You can confirm the 50% compression requirement by making a mark with a sharpie pen in the middle of each aluminum piston prior to installation. Then, install both red locking tubes and confirm that the marks you made have disappeared into the black shoulder at the end of the red tube, or is at the very edge of the black shoulder. Both tubes should always be the exact same length.

Disclaimer

While we are very confident that the DroMight Rudder lock is the most secure rudder locking system that you can purchase, many damaging effects can happen to your rudder in high winds even while the rudder lock is in place. If you anticipate that your aircraft will be subject to high winds, we recommend that you use multiple locking methods to reduce the chance of damage. When high winds are forecasted, it is always best to relocate your aircraft to an area where the winds are calmer or seek shelter in a hangar. When in doubt, always refer to the manufacturers recommendations for keeping your aircraft safe and airworthy. Using this rudder locking system in your airplane is confirmation that you agree to assume the responsibility associated with the use of the device.



Warranty

Manufacturer warrants that the DroMight™ Rudder Lock system conform to Manufacturer's specifications and are free from defects in material and workmanship. Unless otherwise specified by manufacturer in writing, this warranty extends for **two years from the date of original purchase**. All warranties apply only to the original Purchaser unless otherwise agreed by Seller and manufacturer in writing. Manufacturer's sole obligation and Purchaser's exclusive remedy for any justified claim under this warranty shall be limited to one of the following, at Manufacturer's sole discretion: (a) repair or replacement of the Product or (b) a credit for the price paid by the original Purchaser of the Product. This express warranty does not apply to, and no warranty remedy will be given for, Product issues resulting from (a) accident, acts of nature, improper installation, improper assembly, unreasonable or improper use, lack of proper maintenance, unauthorized repairs or modifications, abuse, normal wear, or other causes not directly arising from defects in materials or workmanship; (b) use of this product in any way that is deemed illegal; (c) use of this product for military purposes; (d) any Product damaged by the failure of the owner to use, maintain, or store the Product as specified in any applicable instructions and/or warnings provided by Seller or the manufacturer. EXCEPT FOR LIMITED WARRANTY SET FORTH ABOVE, SELLER MAKES NO WARRANTY WHATSOEVER, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR AGAINST INFRINGEMENT. IN THE EVENT WARRANTIES EXIST AT LAW THAT MAY NOT BE DISCLAIMED, PURCHASER AGREES THAT SUCH WARRANTIES SHALL BE LIMITED IN DURATION TO THE TWO YEAR WARRANTY PERIOD AND TO THE REPLACEMENT VALUE OF THE PRODUCT.