

# TOTAL PERFORMANCE VAN'S AIRCRAFT

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## SERVICE BULLETIN 14-12-22

**Date Released:** December 22<sup>nd</sup>, 2014

**Date Effective:** December 22<sup>nd</sup>, 2014

**Subject:** WD-631-PC Nose Stop Flange installation orientation

**Affected Models:** RV-6A,7A,8A,9A,10

**Required Action:** Check for proper installation orientation and correct if required.

**Time of Compliance:** Before Further Flight

**Supersedes Notice:** None

**Level of Certification:** None

### Synopsis:

Van's Aircraft has received reports of damage resulting from the WD-631-PC or WD-1031 Nose Stop Flange (stop flange) having been oriented incorrectly during installation. If the stop flange is installed incorrectly, it will allow insufficient rotation of the nose fork during tight taxi turns and can cause the tire to drag sideways. This induces excessive loads on the stop flange, nose gear leg, engine mount and the associated attach hardware. The 'arms' of the stop flange should be oriented forward, not aft. See Figure 1 and Figure 2. If the stop flange is oriented with the 'arms' aft, it is installed incorrectly.

### Method of Compliance:

Reference Drawings:

C1	RV-6A,7A,8A,9A Nose Fork / Nose Stop Flange installation
RV-6A/7A/9A	DWG 46A Nose gear leg and engine mount installation
RV-8A	DWG 49 Nose gear leg and engine mount installation
RV-10	Section 46 for the RV-10.

Step 1: Check the stop flange orientation (with the nose wheel pant installed).

**NOTE: Use an appropriate tow-bar for this step. Ensure that the aircraft master switch and ignition are turned off.**

Using the tow bar, pull the aircraft forward in as tight a turn as the stop flange will allow. The nose fork should be up against the stop flange during this check. If the main gear tire on the inside of the turn stays stationary or moves backward during this turn, the stop flange is installed correctly. Make a logbook entry indicating compliance with this service bulletin. No further action is required.

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If the inside tire moves forward during this tight turn, the stop flange is likely installed incorrectly. Proceed with the remaining steps in this service bulletin.

Step 2: If installed, remove the nose wheel pant from the aircraft. Visually inspect the orientation of the stop flange. If the stop flange orientation is incorrect, proceed to Step 3.

**WARNING: Loads induced by an incorrectly installed stop flange can damage the hardware holding the nose gear to the engine mount and the stop flange to the gear leg. This hardware must be replaced!**

Step 3: Remove and discard the hardware that holds the stop flange to the nose gear leg. See applicable drawings for the aircraft type being inspected. Inspect the stop flange for damage.

Step 4: Re-Install a serviceable stop flange in the correct orientation using new hardware. See Figure 2.

Step 5: Remove and discard the hardware that holds the nose gear leg to the engine mount. See applicable drawings for the aircraft type being inspected.

For 6A/7A/8A/9A Inspect the engine mount socket and associated bolt hole for damage.

For RV-10 inspect all connections of the nose gear leg to the engine mount. Also inspect the nose gear link assembly.

Contact Van's Aircraft prior to reassembly if damage is detected.

Step 6: Install new hardware holding the nose gear to the engine mount.

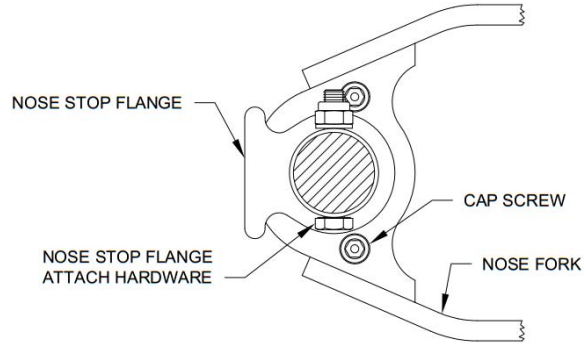
Step 7: If applicable, reinstall the nose wheel pant. If the 'arms' of the stop flange interfere with the forward half of the nose wheel pant, it is permissible to remove material from the 'arms' as shown in Figure 3. Do not remove material from any part of the stop flange that contacts the cap screws mounted in the nose wheel fork.

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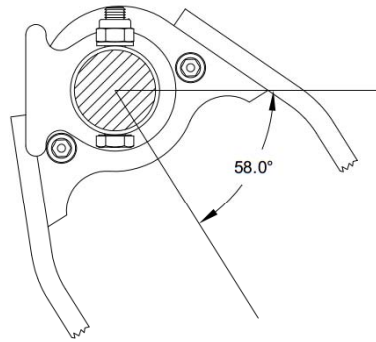
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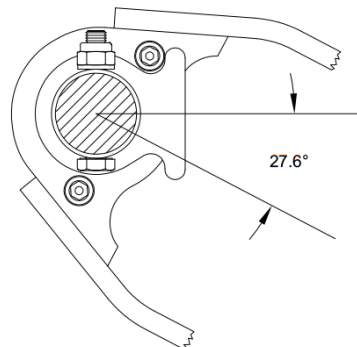
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**CORRECT INSTALLATION  
IN TRAIL  
(VIEW FROM ABOVE)**



**CORRECT INSTALLATION  
FULL RIGHT TURN**



**INCORRECT INSTALLATION  
FULL RIGHT TURN**

**FIGURE 1:** Nose Gear Range of Travel

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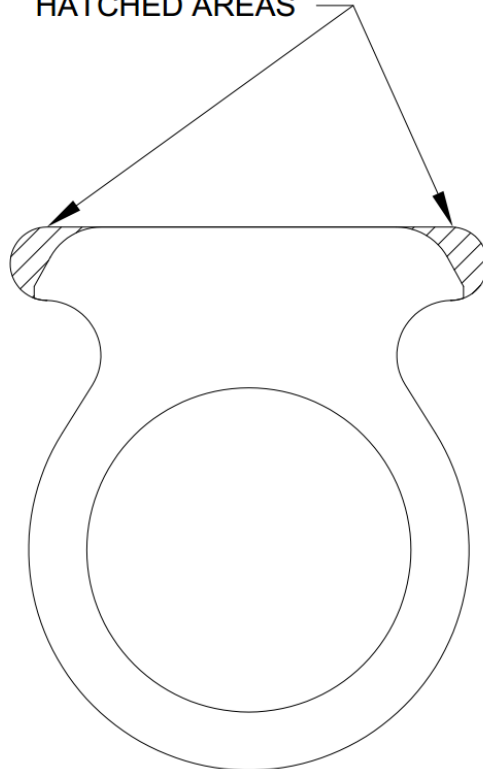
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**FIGURE 2:** Nose Stop Flange Correctly Installed (Full Right Turn)

OPTIONAL REMOVE  
HATCHED AREAS



**FIGURE 3:** Nose stop flange optional trim to remove interference with nose wheel pant