VAN'S AIRCRAFT
TOTAL PERFORMANCE
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Service Letters and Bulletins: www.vansaircraft.com/public/service.htm

NOTIFICATION 18-03-21

Date Released: March 21, 2018

Date Effective: March 21, 2018

Subject: Cracks near the top of the step

Affected Models: RV-6A, RV-7A and RV-9A

Required Action: Weld cracks shut then install WD-657Z

Time of Compliance: Before further use of the step if cracks are found upon inspection

Supercedes Notice: None

Labor Required / SLSA Warranty Allowance: 1.0 Hours / Not Applicable

Level of Certification: Not Applicable

Synopsis:
Some steps may experience cracking after prolonged use near the top of the step. The cracks will begin where the WD-657D Streamlined Tube is welded to the lower edge of the WD-657A Plate. The cracks will then propagate around the streamlined tube until they are visible on the outboard boarding side of the step.

Parts shipped after July 1, 2016 are not affected by this service bulletin.

Method of Compliance:

NOTE: All components are made from 4130 Steel Tube. Reference AC 43.13 for proper welding methods. If you do not have the ability to weld these components together as described below please purchase a new WD-657-L or -R Step assembly from Van's Aircraft with WD-657Z already installed.

Step 1: Clamp WD-657Z Gusset in a vise along the bend line. See Figure 1.

Step 2: Bend the part as called out for a left or right step.

Step 3: Remove the hatched area shown in Figure 1.

Step 4: Using progressive bends along the dashed lines shown in Figure 1 curve the part to match the shape shown in Figure 2 (note a right hand part is shown in Figure 2).

Step 5: Inspect the upper region of the step for cracks. Cracks that have been progressing for a while will be easier to see due to rust corrosion at and near the crack. Remove paint from the upper portion of the step. Weld each crack shut along their entire length (this includes cracks that may have progressed to the outboard face of the step).

Step 6: Drill #30 a drain / vent hole in the bottom horizontal step portion of WD-657.

Step 7: Check WD-657Z against the step. Grind away weld material from Step 5 as required to help the fit of WD-657Z. Continue to shape WD-657Z until the part fits the contour of the WD-657D Streamlined Tube, aligns with the lower edge of the WD-657A Plate and the sharp pointed portion of WD-657Z nests between the plate and streamlined tube. Small gaps between the parts are ok. Consult your welder regarding gap size versus ability of weld material to fill those gaps. Significant gap sizes will result in concave welds that will in themselves become stress concentrations that will crack over time defeating the purpose of adding the gusset.

Step 8: Weld along edges “A” and “B”. See Figure 3.

Step 9: Further bend WD-657Z to match the lower edge of WD-657A and the contour of WD-657D. Weld edges “C” and “D”.

Step 10: Bend edge “E” down slightly if necessary. Weld along edge “E”. When finished weld all remaining gaps along all edges surrounding WD-657Z.

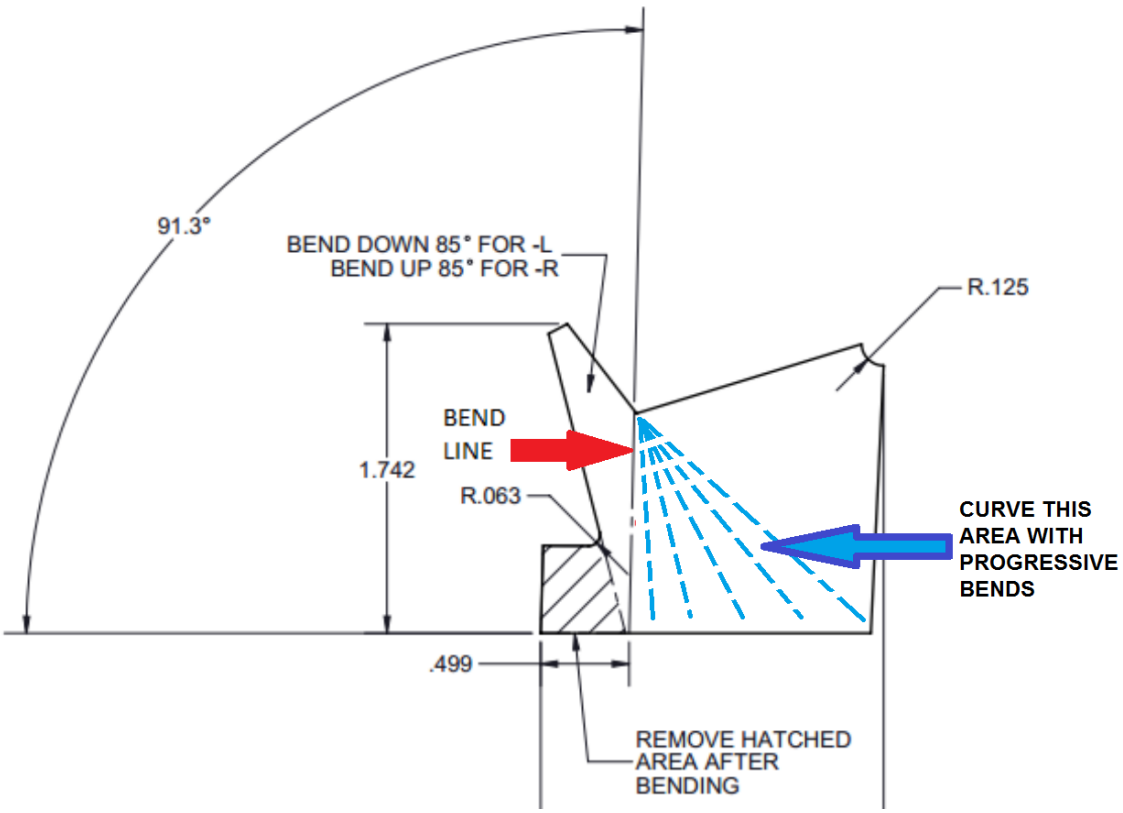


FIGURE 1: Forming the gussets

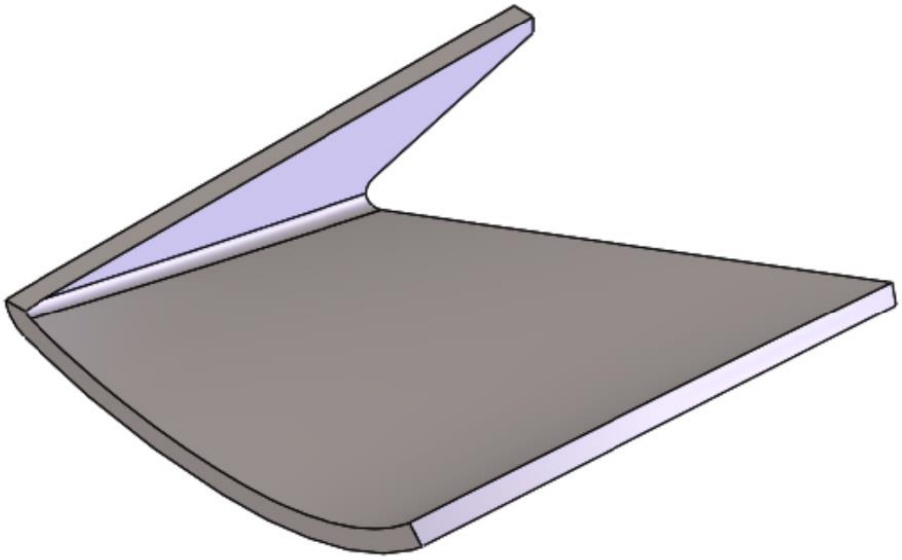
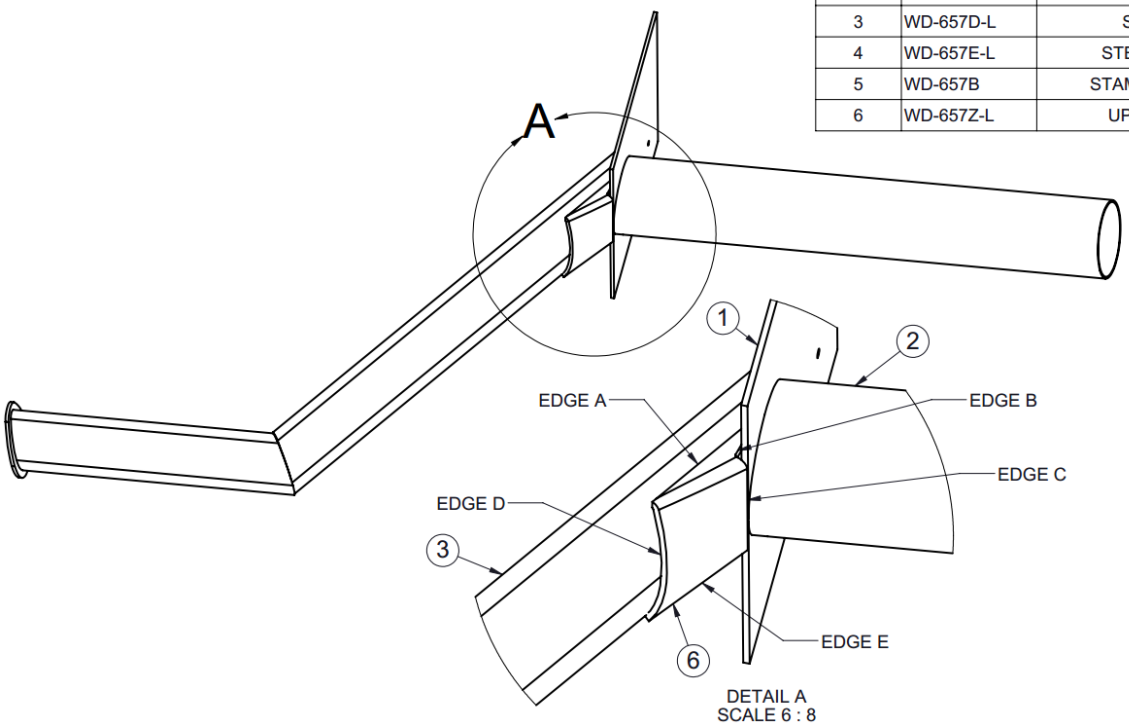


FIGURE 2: Curving the gusset face to match the streamlined tube

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	WD-657A	STEP MOUNTING PLATE	1
2	WD-657C	STEP TORQUE TUBE	1
3	WD-657D-L	STEP STRUT	1
4	WD-657E-L	STEP FOOT TUBE	1
5	WD-657B	STAMPING END CAP	1
6	WD-657Z-L	UPPER GUSSET	1



NOTE: LEFT PART SHOWN
RIGHT INSTALLATION IS A
MIRROR OF THE LEFT.

FIGURE 3: Welding the gusset to the assembly

FIGURE 4: Welded assembly aft

FIGURE 5: Welded assembly inboard

Step 11: Make a logbook entry indicating compliance with N 18-03-21.

PART NUMBER
Qty 1 per step WD-657Z