

LAA/AWA/20/03
27th February 2020

Van's RV-12

Nose Undercarriage Leg Replacement (Van's SB 19-08-26)

Van's Aircraft have recently issued a Service Bulletin (SB) strongly recommending that owners of Van's RV-12 aircraft consider replacing the nose undercarriage leg with a reinforced leg (part Number WD-1201-1-RTR).

The SB applies only to aircraft assembled from kits (or replacement legs supplied), before the 10th June 2019.

The reason given by the manufacturer for this recommendation is that a high-hour RV-12 aircraft, being used for training, suffered a nose undercarriage failure. The failure occurred where the leg itself meets the lower attachment bracket (see Fig. 1); engineers at Van's Aircraft believe this failure to have been caused by fatigue at this point.

Because of this failure, a reinforced leg is now available for purchase and, as previously stated, they strongly suggest that owners upgrade the nose undercarriages on their aircraft.

The aircraft that suffered the nose undercarriage failure had accumulated over 1700 hours and, as a training machine, a very high number of landing and take-off cycles. Material failure due to fatigue is a function of the local stress in a material relative to the materials ultimate strength (load) and the number of applications of this local stress (cycles).

Because of this failure, we now know that this point in the RV-12 is subject to fatigue cracking and should be regularly inspected. LAA engineering wouldn't advise owners to change the nose undercarriage legs on their aircraft unless or until their aircraft have accumulated a significant number of hours, or are aware that the undercarriage leg on their aircraft has had to resist an unusually high number of cycles.

A copy of Van's SB 19-08-26 can be downloaded [HERE](#).

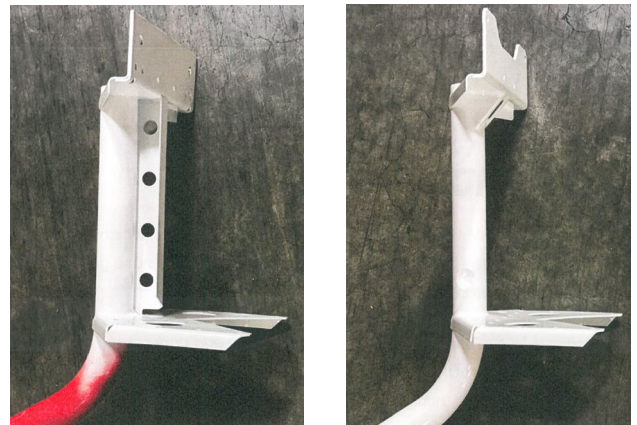
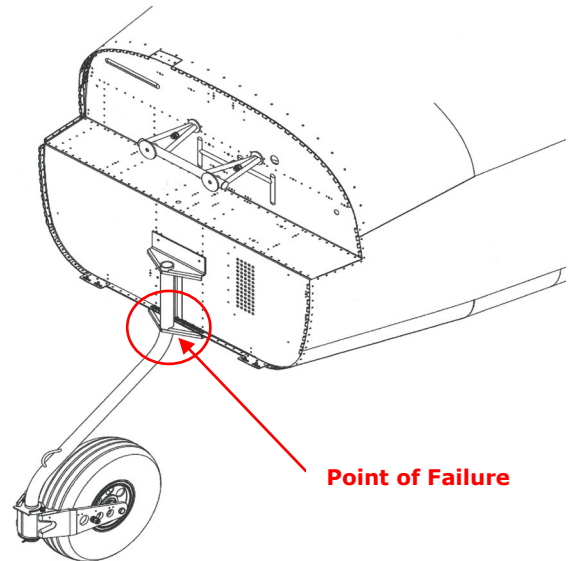


Fig. 1 (Top) Shows the general arrangement of the Van's RV-12 nose undercarriage and the point where the recent failure on a high-hour training aircraft occurred.

Fig. 2 (Bottom/left) Shows the firewall attachment point of the original (WD-1201) leg which Van's recommend should be changed.

Fig. 3 (Bottom/right) Shows the reinforced leg (WD-1201-1-RTR) which is available for purchase from Van's Aircraft.