

0106 Home Built Ultra-light Vehicle Occurrence Investigation

Executive Summary

On January 6, 2018, a home designed and built ultra-light vehicle, with no inspection certificate, and no registration number, was forced to land at about 1530 hours on the beach near 104.7 km of the 11th Provincial Highway of Chenggong Township, Taitung County. The vehicle was completely destroyed, and two on board operators were no injuries.

The Draft Investigation Report on this occurrence was, following the proper procedure, adopted by the 70th Board meeting of the Aviation Safety Council on August 31, 2018.

Conclusion

The two operators in the occurrence were all members of legal ultra-light vehicle activity association and held valid operation certificates issued by the Civil Aeronautics Administration, Ministry of Transportation and Communications (hereinafter CAA). However, the vehicle was designed and built by an individual and did not hold a valid inspection certificate issued by the CAA. Furthermore, the vehicle did not take off from a legal site. As a result, the operation was an illegal ultra-light vehicle activity.

The contributing factors preclude weather, fuselage structure and flight control system related factors. The occurrence vehicle experienced engine rotational speed decrease and subsequent decrease of output horsepower during cruise, which resulted in the flight altitude of vehicle could not be maintained, therefore, the operators executed emergency landing, causing the vehicle destroyed. The two operators were no injuries. Due to severe damage to the engine, relevant functional tests could not be performed. Therefore, exact causes of insufficient engine horsepower could not be determined.

The CAA has stipulated relevant provisions for inspection and issuance of certificate of ultra-light vehicle designed and built by individuals or manufacturers. However, up to the present, there is no application case. The CAA may go deep into the realities to find out the reasons, enhance the dissemination of relevant procedures and regulations, and provide guidance to intended applicants.

Safety Recommendations

To Civil Aeronautics Administration, Ministry of Transportation and Communications

1. Continuously strengthen the banning of illegal ultra-light vehicle activities and disseminating the legalization issues of ultra-light vehicle operation. Advocate relevant

procedures and regulations for obtaining home built ultra-light vehicle inspection certificates, and provide guidance to those individuals or manufacturers wish to apply.

To Hualien Ultra-light Vehicle Activity Association

1. Advocate and restrain the affiliated members to engage in legal ultra-light vehicle activities to ensure flight safety.