Civil Aviation Authority

# SAFETY NOTICE

**Number: SN–2019/004**

**Issued: 17 June 2019**

# Use of the Fuel Pump Primer in an Emergency: Yak 50/52 Aeroplanes

**This Safety Notice contains recommendations regarding operational safety.**

Recipients must ensure that this Notice is copied to all members of their staff who need to take appropriate action or who may have an interest in the information (including any 'in-house' or contracted maintenance organisations and relevant outside contractors).

| **Applicability:** | |
|---|---|
| **Aerodromes:** | Not primarily affected |
| **Air Traffic:** | Not primarily affected |
| **Airspace:** | Not primarily affected |
| **Airworthiness:** | Not primarily affected |
| **Flight Operations:** | Operators of Yak 50/52 Aeroplanes |
| **Licensed/Unlicensed Personnel:** | General Aviation Pilots Flying Yak 50/52 Aeroplanes |

## 1 Introduction

1.1 This Safety Notice provides advice to pilots on the use of the fuel pump primer in the event of an emergency, such as loss of fuel pressure or engine power during flight.

1.2 In their **report on the accident involving Yak 52 G-YAKB** in 2016, the Air Accidents Investigations Branch (AAIB) investigated the use of the fuel pump primer in an attempt to restart the engine following a loss of power.

1.3 The primer was pumped at a rate of once every three-four seconds, producing brief bursts of power but not enough to maintain level flight. The report mentioned that a pumping rate of around one stroke per second may have been necessary to achieve this.

1.4 Following the subsequent inquest, the Coroner requested the CAA to consider communicating this information to the Yak pilot community.

1.5 The CAA carried out a review of how best to address this request, which included consultation with representatives from across the Yak community.

1.6 The discussions concluded that while the use of the fuel pump primer in an emergency could maintain some level of engine operation, the physical effort required, and concentration needed perform this action could distract the pilot or crew at a critical time.

1.7 The discussions also noted that variables such as the internal system friction of individual primer controls could affect the efficacy of this action between aircraft and that the use of the fuel pump primer would not correct all failure scenarios. It is possible in some cases that continuing to pump fuel could exacerbate the situation, such as when the engine failure/power loss was caused by fuel line failure in the vicinity of hot exhaust parts.

1.8 As a consequence of the discussions, the CAA has decided not to require a specific cycle rate for the fuel pump primer to be added to the existing flight manual material.

1.9 During the discussions, it was noted that of the aircraft sampled during the review there was some variation between manuals in their instructions for corrective action in a fuel pressure failure scenario. The CAA therefore also recommends that aircraft owners and operators review the applicable procedures in their manuals against the configuration of their aircraft to ensure their emergency procedures are wholly applicable.

## 2 Compliance/Action to be Taken

2..1 In the event of a of loss of fuel pressure or engine power during flight, the priority should be:

- Follow the emergency procedures in the aircraft's flight manual/POH
- The fuel pump primer may be used to attempt to maintain engine operation but **only** if doing so would not reduce safety margins or affect the likelihood of a successful forced landing.

2.2 Emergency procedures in the aircraft flight manual/POH should be reviewed to ensure that they are appropriate to the configuration of the aircraft, particularly with respect to the left or right position selection of the fuel primer lever.

## 3 Queries

3.1 Any queries or requests for further guidance because of this communication should be addressed to:

GA Unit, Safety & Airspace Regulation Group,
Civil Aviation Authority,
Aviation House,
Gatwick Airport South,
West Sussex,
RH6 0YR Tel: +44 (0)1293 573988

E-mail: **GA@caa.co.uk**

## 4 Cancellation

4.1 This Safety Notice will remain in force until further notice.