



MEMORANDUM FOR RECORD

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January 19, 2021

Subject: Post accident examination conducted by owner/operator; email summary/paraphrase of findings. The owner/operator, with NTSB IIC and FAA approval agreed to allow the owner/operator to conduct his own examination with regular updates. The owner/operator followed through and sent an e-mail detailing his findings.

Looking into the root cause of the accident, the owner determined that this was not an actual engine failure, but a fuel starvation issue. Based on conversations with the NTSB IIC and FAA, it was discussed beforehand, that many times, the issue could be “upstream or downstream” of the engine, so he shifted his focus from the engine to the fuel lines. He checked both fuel pickups and found nothing wrong, then checked the fuel filter and found it to be 100% serviceable. He then moved to the primer bulb as shown in the drawing. (Figure 1)

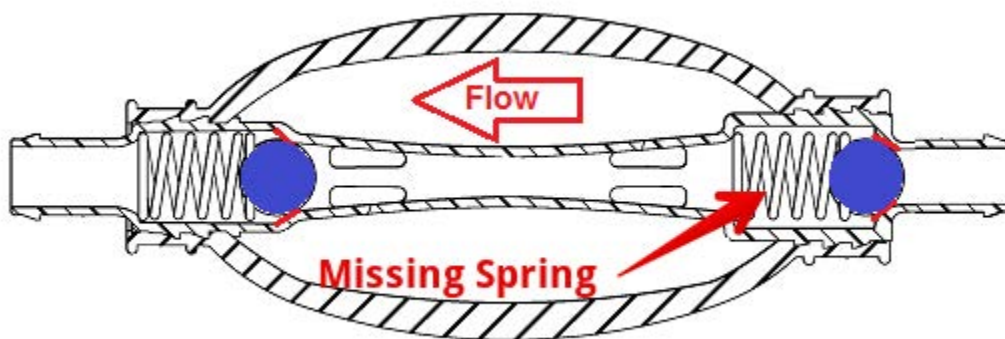


Figure 1 Primer bulb drawing

He found that the spring closest to the fuel tanks was missing. This meant that during the priming phase, gravity was letting the check ball drop to the bottom, which closed the valve. However, nothing was preventing it from migrating to the top during normal operation. As you can see from the installation on the airplane (Figure 2) the primer bulb was not mounted vertically. Though he cannot find conclusive evidence that the bulb should be mounted vertically, there were indications that the bulbs work better when vertically mounted. Though he can't prove it, had it been mounted vertically, gravity may

have been sufficient to keep the check ball from migrating to the top end and blocking off the fuel flow. “I could hardly believe that this was the cause, so I started looking at forums to research if this had happened to anyone in the past.” A quick search yielded similar findings (4) from other owner/operators.

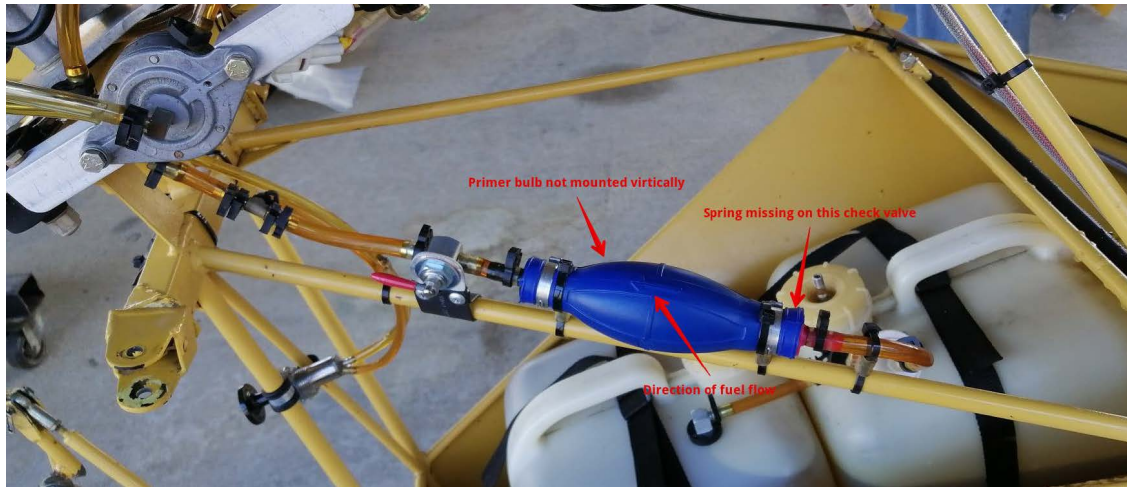


Figure 2 Primer bulb as installed on accident airplane.

[END]