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General Aviation Joint Steering Committee
Loss of Control Working Group 1

Outreach Guidance Document

This outreach guidance is provided to all FAA and aviation industry groups that are participating in outreach efforts sponsored by the General Aviation Joint Steering Committee (GAJSC). It is important that all outreach on a given topic is coordinated and is free of conflicts. Therefore, all outreach products should be in alignment with the outline and concepts listed below for this topic.

Outreach Month: October 2013

Topic: Fuel Monitoring [Safety Enhancement (SE15) Output 1]

Background: After a long review of the available technology, it is very clear that there is an abundance of technology available for pilots to install to monitor engine status and fuel. For the most part, the technology is relatively affordable for even the most recreational pilot. By far, the greatest benefit of having this technology installed is the ability to easily and quickly examine all aspects of the engine and fuel system and their performance. Having such visibility vastly improves safety as well as preservation of the engine.

While careful monitoring of basic gauges like oil pressure, temperature and fuel level are, of course, very important, having an expanded and precise knowledge of the operation of the engine can save owners and operators time, money and potentially their lives.

Extensive analysis of loss of control accidents from 2001-2011 showed that in multiple accidents, pilots were unaware of continuing issues with their engine. Unfortunately, in the accidents that the General Aviation Joint Steering Committee (GAJSC) Loss of Control working group examined, this unfamiliarity of the status of their engine proved fatal.

Accidents related to awareness of fuel flow and level were also prevalent, yet easily avoided if the pilot is aware and making conscious decisions to prevent potentially hazardous situations. Many engine monitors available today not only monitor engine parameters, but fuel as well. For example, the JPI engine data monitoring (EDM) line monitors everything from oil pressure to fuel flow, cylinder head temperature to approximate flight time based on fuel levels and fuel burn calculations. This kind of situational awareness can be invaluable to all pilots.

An additional benefit provided by many engine monitors is the ability to monitor the data post-flight. Several units on the market today allow the pilot, owner or mechanic to download the data to further monitor and analyze engine performance. Having a more extensive knowledge of the operation of the engine can ultimately prevent future accidents.

To prevent future loss of control accidents related to lack of awareness of the engine and fuel systems, the General Aviation Joint Steering Committee Loss of Control Working Group strongly recommends the installation and proper use of engine and fuel monitoring systems.

Teaching Points:

- Emphasize fuel awareness

- Encourage pilots to install and use fuel monitoring technology for every flight
- Emphasize the importance of knowing fuel state at all times
- Encourage pilots to never land with less than one hour's fuel remaining.

References:

- Airplane Flying Handbook
http://www.faa.gov/regulations_policies/handbooks_manuals/aircraft/airplane_handbook/media/FAA-H-8083-3B.pdf
 - page 8-7,
- Fuel monitoring Power Point File
 - [Approved Presentations - Approved Presentations](#) /Operations/GAJSC/Outreach Guidance/Fuel Monitoring Outreach Guidance October 13

IMPORTANT – Once you have completed outreach on this topic, please help us track the outreach you have done by entering a PTRS record.

PTRS Activity Code	National Use	Primary Area	Key Word	Description	Performance Target	Date Due	LDR 12XXFAFAAST
2685 4685 6685	NPP14	K	032	Promote “Topic of the Month” within the FSDO area.	1 per FSDO, per month, per FY (except for Oct. 2013)	09/15/14	OR0010