§ 121.346 Flight data recorders: filtered data.

(a) A flight data signal is filtered when an original sensor signal has been changed in any way, other than changes necessary to:

(1) Accomplish analog to digital conversion of the signal;
(2) Format a digital signal to be DFDR compatible; or
(3) Eliminate a high frequency component of a signal that is outside the operational bandwidth of the sensor.

(b) An original sensor signal for any flight recorder parameter required to be recorded under §121.344 may be filtered only if the recorded signal value continues to meet the requirements of Appendix B or M of this part, as applicable.

(c) For a parameter described in §121.344(a) (12) through (17), (42), or (88), or the corresponding parameter in Appendix B of this part, if the recorded signal value is filtered and does not meet the requirements of Appendix B or M of this part, as applicable, the certificate holder must:

(1) Remove the filtering and ensure that the recorded signal value meets the requirements of Appendix B or M of this part, as applicable; or
(2) Demonstrate by test and analysis that the original sensor signal value can be reconstructed from the recorded data. This demonstration requires that:

(i) The FAA determine that the procedure and the test results submitted by the certificate holder as its compliance with paragraph (c)(2) of this section are repeatable; and
(ii) The certificate holder maintains documentation of the procedure required to reconstruct the original sensor signal value. This documentation is also subject to the requirements of §121.344(i).

(d) Compliance. Compliance is required as follows:

(1) No later than October 20, 2011, each operator must determine, for each airplane on its operations specifications, whether the airplane’s DFDR system is filtering any of the parameters listed in paragraph (c) of this section. The operator must create a record of this determination for each airplane it operates, and maintain it as part of the correlation documentation required by §121.344(j)(3) of this part.
(2) For airplanes that are not filtering any listed parameter, no further action is required unless the airplane’s DFDR system is modified in a manner that would cause it to meet the definition of filtering on any listed parameter.
(3) For airplanes found to be filtering a parameter listed in paragraph (c) of this section, the operator must either:

(i) No later than April 21, 2014, remove the filtering; or
(ii) No later than April 22, 2013, submit the necessary procedure and test results required by paragraph (c)(2) of this section.

(4) After April 21, 2014, no aircraft flight data recording system may filter any parameter listed in paragraph (c) of this section that does not meet the requirements of Appendix B or M of this part, unless the certificate holder possesses test and analysis procedures and the test results that have been approved by the FAA. All records of tests, analysis and procedures used to comply with this section must be maintained as part of the correlation documentation required by §121.344(j)(3) of this part.

§ 121.347 Communication and navigation equipment for operations under VFR over routes navigated by pilotage.

(a) No person may operate an airplane under VFR over routes that can be navigated by pilotage unless the airplane is equipped with the radio communication equipment necessary under normal operating conditions to fulfill the following:

(1) Communicate with at least one appropriate station from any point on the route;