



SA-06-003

23 June 2006

SERVICE ALERT

Avidyne Primary Flight Display

{P/Ns: 700-00006-000,-001,-002,-003,-100}

This **SERVICE ALERT** communicates important safety information concerning aircraft with Avidyne Primary Flight Displays (PFD) installed while flying in instrument meteorological conditions (IMC) or in conditions in which visual reference to the horizon cannot be reliably maintained.

BACKGROUND INFORMATION

Over a short period of time in 2005, Avidyne received a limited number of field reports of PFDs displaying incorrect attitude and heading information. These occurrences were accompanied by a "CROSSCHECK ATTITUDE" alert annunciation displayed approximately 45 seconds after initiation of this condition. During these occurrences, altitude and airspeed indications on the PFD and attitude, airspeed and altimeter back-up instruments were unaffected. None of these occurrences led to an accident or incident.

In response to these reports, Avidyne issued Service Alert SA-05-001, calling attention to the issue and offering means by which the pilot could recognize a PFD affected by the issue. In addition, SA-05-001 advised pilots that a diligent instrument scan including the backup instruments represents the best defense against incorrect indications of any kind.

Retain SA-05-001 and SA-06-001 in the Primary Flight Display Pilot's Guide which is to be in the aircraft.

UPDATE

Avidyne has developed a modification to the attitude and heading reference system (AHRS) contained within the PFD. This modification is designed to reduce the likelihood that a particular unit will be affected by this issue. This modification is intended to improve the overall serviceability of the PFD and is part of our ongoing program of incremental product improvements.

This modification has already been installed on a number of new-production PFDs and has, consistent with our general service policy, been installed on PFDs recently returned for factory service for any reason, including returns for software upgrades. It is available to all owners who may wish to have it installed on their PFDs under the normal terms and conditions of our service policies.

SERVICE ACTIONS

Owners who are interested in this modification should contact the Avidyne Service Center at 1-888-723-7592 for further information. If the PFD has been serviced by Avidyne at any time since SA-05-001 was issued (that is, since October 17, 2005), please have your serial number available so that we can determine whether the modification has already been installed.

SAFETY WARNINGS

BEFORE CONDUCTING FLIGHT OPERATIONS PILOTS MUST REVIEW AND FAMILIARIZE THEMSELVES WITH THE CROSS-CHECK MONITOR SECTION OF THE AVIDYNE PRIMARY FLIGHT DISPLAY PILOT'S GUIDE AND ALL LIMITATIONS CONTAINED IN THEIR AIRCRAFT OPERATING HANDBOOK.

FOR FLIGHT OPERATIONS IN INSTRUMENT METEOROLOGICAL CONDITIONS (IMC) OR IN OTHER CONDITIONS IN WHICH VISUAL REFERENCE TO THE HORIZON CANNOT BE RELIABLY MAINTAINED (E.G., NIGHT OPERATIONS, FLIGHT OPERATIONS OVER WATER, IN HAZE OR SMOKE, ETC.):

- FULL OR PARTIAL FAILURE OF THE PFD CAN LEAD TO SPATIAL DISORIENTATION OF THE PILOT AND SUBSEQUENT LOSS OF AIRCRAFT CONTROL. THIS COULD RESULT IN AN ACCIDENT CAUSING DEATH, SERIOUS BODILY INJURY, OR PROPERTY DAMAGE.
- WHERE THE PILOT HAS REASONS TO SUSPECT THAT ANY SOURCE (PFD OR BACK-UP INSTRUMENTS) OF ATTITUDE, AIRSPEED OR ALTITUDE IS NOT FUNCTIONING PROPERLY, FLIGHT IN THESE CONDITIONS SHOULD BE DISCONTINUED UNTIL EQUIPMENT IS SERVICED AND FUNCTIONING PROPERLY.

IMC operations of aircraft, not equipped with an operating back-up, or standby, attitude indicator, located where it is readily visible to the pilot, are not recommended and may violate limitations contained in the aircraft operating handbook.

Pilots should frequently scan and cross-check flight instruments. Make sure the information depicted on the PFD correlates and agrees with the information depicted on your back-up, or standby attitude indicator, and other instruments.

Exercise basic airmanship and practice partial panel flight operations. If you are not comfortable or current flying partial panel, avoid flight in IMC and marginal VFR conditions.

Electronic copies of the Primary Flight Display Pilot's Guide are available on the Avidyne website at <http://www.avidyne.com/techpubs.shtm>.