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<b>Title:</b>	PFD Mandatory Service Bulletin
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## **1. Planning Information**

### **1.1 Distribution/Eligibility**

This Service Bulletin may be distributed only to those groups indicated below with a check mark:

<i>Group</i>	<i>Distribution?</i>
Avidyne internal	√
Avidyne-authorized Service Facility	√
Avidyne Web Post	√
Avidyne-authorized Installer	√
Avidyne OEM customers	√
End-use customers, owners and operators	√

### **1.2 Description**

This Service Bulletin provides instructions to determine if a Primary Flight Display (PFD) must be returned to Avidyne for MOD 25 or MOD 26.

### **1.3 Reason**

Revised to update the effectivity, this **MANDATORY SERVICE BULLETIN** communicates important safety information concerning aircraft with Avidyne Primary Flight Displays (PFD), 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 PFD's 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.

Avidyne released Service Alert SA-06-003 on June 23, 2006 which describes a modification Avidyne has developed for 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.

Consistent with our general service policy, this modification has already been installed on new PFDs produced after February 17, 2006 and has been installed on PFDs returned for factory service after February 17, 2006 for any reason, including returns for software upgrades.

The FAA released a Special Airworthiness Information Bulletin (SAIB) on October 31, 2006 referencing Avidyne Service Alerts SA-05-001 and SA 06-003 along with a table of aircraft manufacturer and models which may be affected.

Avidyne previously released this Service Bulletin on March 12, 2007, calling for configuration checks to determine whether specific PFDs included the modifications described above. The purpose of this revision to the Bulletin is to present a list of PFDs, identified by serial number, that have not yet been modified and to require their return to Avidyne for service. Avidyne feels it is prudent to take the actions stated in this service bulletin.

#### ***1.4 Effectivity/Compatibility***

This Mandatory Service Bulletin is a follow-up to SA-05-001, SA-06-003 and Rev 01 of this Bulletin. This revision of the Service Bulletin requires that all affected Avidyne Primary Flight Displays (PFDs) listed by serial number in Table 1 be returned to Avidyne to have the modifications described in SA-06-003 performed. These PFDs may be installed on Cirrus Design Corporation Models SR20 and SR22, Columbia Aircraft Manufacturing Models LC41-550FG and LC42-550FG, Diamond DA40, Cessna 442, King Air 90 and 200 series, and various Piper Aircraft, Inc. models listed in Table 2.

**Table 1 - PFDs Requiring Modification**

20004255	20223265	20404174	20981434
20006255	20227265	20404225	20982365
20009255	20228265	20410225	20991434
20011255	20239175	20415074	21005365
20036115	20245265	20420074	21007365
20044434	20249265	20431074	21009365
20047434	20256125	20432074	21012134
20048434	20258125	20450315	21013134
20093145	20260125	20460315	21014434
20110224	20269355	20527094	21016434
20121224	20275355	20528094	21033134
20123224	20313305	20529094	21035134
20124134	20322305	20532094	21051395
20125134	20323305	20535094	21055184
20126224	20325384	20546094	21061184
20176175	20327305	20589065	21080195
20178175	20333384	20591065	21083195
20182194	20336384	20597065	21085195
20183175	20337384	20600065	21092195
20184175	20341384	20606065	21188045
20185175	20342305	20615065	21193045
20186194	20346384	20616065	21210045
20188175	20350384	20730074	21211045
20188194	20353305	20737074	21214045
20200175	20355225	20813015	21215045
20207175	20367305	20819015	21298414
20211175	20383225	20823015	21299414
20217265	20394225	20975434	21301414
20221265	20398225	20979434	21312414
20223175	20399225	20980434	21314414

**Table 2 - PFDs Requiring Modification (cont'd)**

21322414	22566135	24254144	26573095
21329414	22567135	24357324	26582464
21599354	22573135	24368324	26588095
21602354	22587135	24372324	26598464
21606354	22593135	24375324	27866034
21615354	22596135	24376324	29016044
21619354	22630264	24377324	29027044
21813514	22643264	24385324	D1008
21814514	22648493	24729144	D1014
21816514	22649493	24733144	D1042
21834304	22652493	24742144	D1063
21834514	22756364	24747144	D1070
21841304	22769364	24749144	D1074
21850304	22776364	24765085	D1093
21857304	22779364	24866155	D1094
22033473	22913334	24869155	D1097
22350014	22914334	24874155	D1103
22394294	22917334	24985084	D1109
22406085	22927334	24992084	D1121
22493524	22930334	26283114	D1123
22497524	23582144	26289114	D1130
22498524	23590244	26297114	D1142
22511204	23596244	26298114	D1146
22523264	23597224	26301114	D1150
22526204	23603244	26551095	D1151
22528264	24028335	26555095	D1156
22536264	24235144	26560464	D1162
22544264	24240114	26565464	D1168
22552264	24249144	26569095	D1169
22560135	24250144	26571464	D1175

**Table 3 - PFDs Requiring Modification (cont'd)**

D1181	D1332	F0039	
D1186	D1336		
D1187	D1344		
D1214	D1345		
D1227	D1349		
D1229	D1353		
D1242	D1354		
D1245	D1367		
D1246	D1368		
D1248	D1397		
D1257	D1399		
D1264	D1401		
D1267	D1407		
D1276	D1409		
D1284	D1416		
D1285	D1417		
D1289	D1426		
D1290	D1427		
D1292	D1431		
D1293	D1449		
D1294	F0008		
D1295	F0009		
D1300	F0010		
D1301	F0013		
D1303	F0019		
D1312	F0020		
D1322	F0024		
D1325	F0025		
D1328	F0026		
D1330	F0038		



**Table 4**

<b>Manufacturer</b>	<b>Model</b>	<b>Serial Numbers</b>
Cirrus Design Corporation	SR20	1337 thru 1930
Cirrus Design Corporation	SR22	0002 thru 2979
Columbia Aircraft Manufacturing	LC42-550FG	41002 thru 415333 and 41651
Columbia Aircraft Manufacturing	LC41-550FG	42002 thru 42501
Piper Aircraft, Inc	PA-28-161	2842223 thru 2842322
Piper Aircraft, Inc	PA-28-181	2843607 thru 2843672
Piper Aircraft, Inc	PA-28R-201	2844118 thru 2844138
Piper Aircraft, Inc	PA-32R-301	3246227 thru 3249244
Piper Aircraft, Inc	PA-32R-301T	3257372 thru 3257487
Piper Aircraft, Inc	PA-32-301FT	3232020 thru 3232071
Piper Aircraft, Inc	PA-32-301XTC	3255028 thru 3255051
Piper Aircraft, Inc	PA-34-220T	3449311 thru 3449496
Piper Aircraft, Inc	PA44-180	4496224 thru 4496265
Piper Aircraft, Inc	PA-46-350P	4636375 thru 4636454
Piper Aircraft, Inc	PA-46-500TP	4697216 thru 4697348
Diamond Aircraft	DA40	40.282 and C0342
Beach Aircraft	King Air 90 Series	LW-223 and LW-319
Beach Aircraft	King Air 200 Series	BB-220, BB-554, BB-664, BB-773, BB-1014, BB-1523, BB-1776, BC-67
Cessna	442	441-0105

### **1.5 Compliance**

**This Service Bulletin is mandatory.** This modification must be completed within twelve months of the issuance of this service bulletin. Avidyne encourages owners to have this modification performed when the aircraft is scheduled for an annual or other periodic inspection. Avidyne recommends that compliance is confirmed at the first periodic inspection regardless of the method used to initially determine compliance.

### **1.6 Approval**

The engineering data underlying the accomplishment instructions contained in Section 3 are FAA approved. No other portion of this service bulletin is FAA approved.

### **1.7 Reference**

Avidyne ECO-10-018

### **1.8 Publications affected**

Not Applicable

## **2. Material – Cost and Availability**

Not Applicable.

## **3. Accomplishment Instructions**

### **3.1 Accomplishment Procedure**

1. \_\_\_\_ If the PFD serial number is known from reliable log information, check to see whether it is listed in Table 1.
2. \_\_\_\_ If the PFD serial number is unknown or if the log information is unreliable, an Authorized Service Facility must partially remove the PFD to read the serial number from the label. Once the serial number is known, check to see whether it is listed in Table 1.
3. \_\_\_\_ If the PFD serial number is listed in Table 1, and the label on the PFD is visible (this will normally require at least partial removal from the panel), an Avidyne authorized dealer may determine compliance by checking the MOD level marked on the TSO label. If MOD 25 or MOD 26 has already been installed, the PFD is in compliance with this service bulletin and no further action is required.
3. \_\_\_\_ If the PFD serial number is not listed in Table 1, the required modification has already been installed and the PFD is in compliance with this SB and no further action is required.
4. \_\_\_\_ If the PFD is not in compliance with this service bulletin, **an Authorized Service Facility must call Avidyne Technical Support at 888-723-7592 (781-402-7592) to schedule the return of the unit to Avidyne for the required modification.**