



The New Piper Aircraft, Inc.
2926 Piper Drive
Vero Beach, Florida, U.S.A. 32960

SERVICE *No.* 1036 BULLETIN

PIPER CONSIDERS COMPLIANCE MANDATORY

Date: October 1, 1999 (M)

SUBJECT:

**Garmin Service Bulletin No. 9905
"GNS430 Mod. 1"**

MODELS AFFECTED:

PA-28-181 Archer III
PA-32R-301 Saratoga II HP
PA-32R-301T Saratoga II TC

SERIAL NUMBERS AFFECTED:

2843203, 2843213 through 2843227,
2843235 thru 2843271
3246126, 3246130 through 3246145
3257076 through 3257105 and 3257107

COMPLIANCE TIME:

Prior to next flight if utilizing the Garmin GNS 430 coupled to the aircraft CD/HSI. To coincide with the next regularly scheduled maintenance event if alternate navigation is used.

APPROVAL:

The technical contents of this Service Bulletin have been approved by the Federal Aviation Administration (F.A.A.).

PURPOSE:

We have been notified by Garmin, the manufacturer of the GNS 430 navigation system installed in the aircraft noted above, that a condition exists where the aircraft course display indicator or horizontal situation indicator (CDI/HSI) may display an erroneous CDI needle indication. This condition is due to internal circuitry sensitivity to common aircraft electrical noise. To remedy this condition, Service Bulletin 9905 has been issued by Garmin, which requires the modification of the appropriate internal circuitry. Left uncorrected, this condition may result in the inability to maintain the appropriate course in navigation including instrument approach modes.

This Service Bulletin requires compliance with Garmin Service Bulletin 9905 and provides notice that alternate navigation sources must be used when operating the aircraft until compliance is achieved.

INSTRUCTIONS:

1. Contact your New Piper Distributor or a Garmin Aviation Service Center to make arrangements for compliance with Garmin SB 9905. Due to the technical nature of the Garmin Service Bulletin, we have included the informational pages only. (1 through 3 only.)
2. Using appropriately trained personnel, remove the GNS 430 from the instrument panel and inspect the serial number against the affected list of serial numbers presented on pages 4 and 5 of this service bulletin. (Excerpt of Garmin Service Bulletin 9905.) If the serial number is not affected, reinstall the GNS 430, perform an operational check and if successful proceed to instruction 4. If the serial number is on the affected list, continue with these instructions.

(OVER)
ATA: 3426

INSTRUCTIONS: CONT'D

3. If continued operation of the aircraft is desired, compliance may be deferred to the next maintenance event by accomplishing the following: Enter a log book statement of an alternate means of navigation and apply a placard in full view of the pilot, next to the CDI/HSI which states "Use of the CDI needle for navigation or approaches with GNS 430 is prohibited." The placard must be clearly visible and readable to the pilot and must be manufactured locally of materials which will firmly adhere to the instrument panel. When compliance with Garmin SB 9905 is achieved, remove the placard and refer to instruction 4.
4. Upon successful completion of Garmin Service Bulletin 9905, make an appropriate log book entry of compliance with this Service Bulletin.

MATERIAL REQUIRED: As required by Garmin Service Bulletin 9905.

AVAILABILITY OF PARTS: Garmin Aviation Service Centers

EFFECTIVITY DATE: This Service Bulletin is effective upon receipt.

SUMMARY: For any applicable warranty participation, requests must be submitted through Garmin Aviation Service Centers.

Please contact your factory authorized Piper Field Service Facility to make arrangements for compliance with this Service Bulletin in accordance with the compliance time indicated and to obtain additional information concerning any applicable factory participation.

NOTE: If you are no longer in possession of this aircraft, please forward this information to the present owner/operator and notify the factory of address/ownership corrections. Changes should include aircraft model, serial number, current owner's name and address.

Corrections/Changes should be directed to:

The New Piper Aircraft, Inc.
ATTN: Customer Services
2926 Piper Drive
Vero Beach, FL 32960



SERVICE BULLETIN

SERVICE BULLETIN

NO.: 9905

TO: All GARMIN Aviation Service Centers

DATE: 17 September 1999

SUBJECT: GNS 430, GNC 420, GPS 400 Mod 1

BACKGROUND

The GNS 430, GNC 420, and GPS 400 units have been designed and tested to meet or exceed all TSO requirements, including susceptibility to noise being generated from other sources within the aircraft.

Recently, GARMIN received a limited number of reports regarding GNS 430 installations where the deviation indicator on the CDI/HSI was offset by a couple of dots from the actual course.

Investigation determined that these installations had electrical noise between 1 and 3 volts AC peak-peak induced into the GNS 430 CDI output which came from other items installed on the aircraft. This high level of noise caused an undesirable oscillation of the CDI outputs which resulted in inaccurate course deviation as seen in the CDI/HSI.

PURPOSE

This modification incorporates circuitry changes to the unit deviation and flag outputs to eliminate the oscillation of the CDI outputs caused by external electrical noise.

DESCRIPTION

This modification consists of the removal and replacement of six (6) capacitors, the removal of two (2) diodes, the removal and replacement of two (2) resistors, and the addition of two (2) resistors and two jumpers to the Main Board. The removal and replacement of seven (7) capacitors and the addition of four (4) capacitors to the Nav Board. The addition of four (4) capacitors to the Gildeslope Board.

APPROVAL

TSO-C129a Class A (1)	(GPS)
TSO-C37d Class 4 & 6, JTSO-2C37e	(GNS 430 & GNC 420 only)
TSO-C38d Class C & E, JTSO-2C38e	(GNS 430 & GNC 420 only)
TSO-C40c, JTSO-2C40c	(GNS 430 only)
TSO-C38e, JTSO-C38e	(GNS 430 only)
TSO-C34e, JTSO-C34e	(GNS 430 only)

EFFECTIVITY

GNS 430, P/N 011-00280-00, Serial number 96303639 and below
 GNC 420, P/N 011-00506-00, Serial number 96800008 and below
 GPS 400, P/N 011-00504-00, Serial number 96700007 and below

COMPLIANCE

Required for the following units:

GNS 430, P/N 011-00280-00, Serial number 96301298 through 96303200,

And the following Serial Numbers:

96300001	96300002	96300017	96300028	96300034	96300040
96300068	96300104	96300108	96300122	96300125	96300130
96300142	96300149	96300161	96300165	96300218	96300222
96300232	96300269	96300272	96300308	96300333	96300340
96300348	96300354	96300369	96300372	96300382	96300394
96300411	96300413	96300429	96300437	96300451	96300484
96300485	96300489	96300504	96300506	96300513	96300522
96300549	96300563	96300585	96300587	96300618	96300621
96300624	96300628	96300641	96300653	96300664	96300713
96300734	96300756	96300766	96300781	96300785	96300786

96300808	96300831	96300837	96300842	96300846	96300866
96300870	96300872	96300899	96300916	96300923	96300925
96300929	96300941	96300961	96300984	96300987	96301021
96301108	96301130	96301280	96301319	96301343	96301350
96301397	96301399	96301405	96301428	96301458	96301476
96301490	96301506	96301561	96301662	96301739	96301754
96301823	96301893	96301925	96301941	96301952	96302059
96302150	96302172	96302341	96302555		

Recommended for the following units if the problem is exhibited in the installation:

- GNS 430, P/N 011-00280-00, Serial number 96301295 and below,
and Serial numbers 96303201 through 96303639
- GNC 420, P/N 011-00506-00, Serial number 96800008 and below
- GPS 400, P/N 011-00504-00, Serial number 96700007 and below

REFERENCES

- 400 Series Installation Manual, P/N 190-00140-02
- 400 Series Maintenance/Overhaul Manual, P/N 190-00140-05

MANPOWER

Three hours (3.0) labor including testing.

WARRANTY INFORMATION

This modification is warranty reimbursable for parts and labor required during the modification. When completing the GARMIN warranty claim, be sure to note the unit's serial number and clearly indicate that this Service Bulletin has been complied with to ensure proper credit.

End Excerpt