US Department of Transportation
Federal Aviation Administration

MAJOR REPAIR AND ALTERATION
(Airframe, Powerplant, Propeller, or Appliance)

Form Approved
OMB No. 2120-0020

For FAA Use Only
Office Identification

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. 1421). Failure to report can result in a civil penalty not to exceed $1,000 for each violation (Section 901 of Federal Aviation Act of 1958).

1. Aircraft	Make: Ryan	Model: Navion B
	Serial No.: NAV-4-2313B	Nationality and Registration Mark: N5413K
2. Owner	Name *(As shown on registration certificate)*: Putney, William W III Rodgers, Gail C	Address *(As shown on registration certificate)*: 5780 Balmoral Drive Oakland, CA 94619

3. For FAA Use Only

The data identified herein complies with the applicable airworthiness requirements and is approved for the above described aircraft, subject to conformity inspection by a person authorized in FAR 43, Section 43.7

05-29-03 — DATE — SIGNATURE — OAK-FSDO

4. Unit Identification / **5. Type**

Unit	Make	Model	Serial No.	Repair	Alteration
AIRFRAME	~~~~~~~~~~ *(As described in Item 1 above)* ~~~~~~~~~~				X
POWERPLANT					
PROPELLER					
APPLIANCE	Type				
	Manufacturer				

6. Conformity Statement

A. Agency's Name and Address	B. Kind of Agency	C. Certificate No.
Pierre Borduas 875A Island Dr. #253 Alameda, CA. 94502	X U.S. Certificated Mechanic Foreign Certificated Mechanic Certified Repair Station Manufacturer	A.P. 2020552 I.A.

D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Date	Signature of Authorized Individual
6-2-03	P Borduas

7. Approval for Return To Service

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is x APPROVED o REJECTED

BY		FAA Flt. Standards Inspector		Manufacturer	X	Inspection Authorization
		FAA Designee		Repair Station		Person Approved by Transport Canada Airworthiness Group

Other *(Specify)*

Date of Approval or Rejection	Certificate or Designation No.	Signature of Authorized Individual
6-2-03	A.P. 2020552 I.A.	P Borduas

FAA Form 337 (12-88)

NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Description of alteration: This alteration removes a Narco Mk-12A NAV/COM, CDI, VOR Resolver, Glideslope Receiver and Power Unit. This alteration also installs a Bendix/King model KX-125 NAV/COMM and a Bendix/King model KI214 VOR/LOC – GS indicator.

Description of work: The Narco radio and it's wiring and accessories were removed and discarded. Installation of the new radio at location 7b and indicator at location 6b (see N5413K Panel dwg attached) were accomplished according to the installation instructions in the Bendix/King "KX 125 Communication Transceiver/Navigation Receiver Installation Manual" (manual number 006-00655-0001) and the King "KI214 VOR/LOC-OBS Indicator Installation Manual (manual number 006-0092-01). 6-#6-32 flathead screws attaché the radio tray to the radio rack. Audio inputs and outputs are provided to the aircraft's audio panel (see attached N5413K Audio drawing). The existing communication and navigation antennas were reused for this installation.

A dedicated 10A (Klixon PN: 7277-2-10) circuit breaker located in the switch panel to the left of the pilot labeled "Nav/Comm 1" provides power to the radio and the indicator. The breaker is located in the switch panel on the left forward cockpit side panel. The total aircraft system electrical load does not exceed 80% of the generating capacity after this alteration. Connections to aircraft power comply with 23.1365 "Electrical cables and equipment" (a, d, e) and 23.1357 "Circuit protective devices".

After installation a check for interactions with other systems was made to comply with 23.1309 "Equipment, systems and installations" (a)(1).

A new weight and balance measurement in accordance with 43.13 chapter 10 has been done which includes this alteration.

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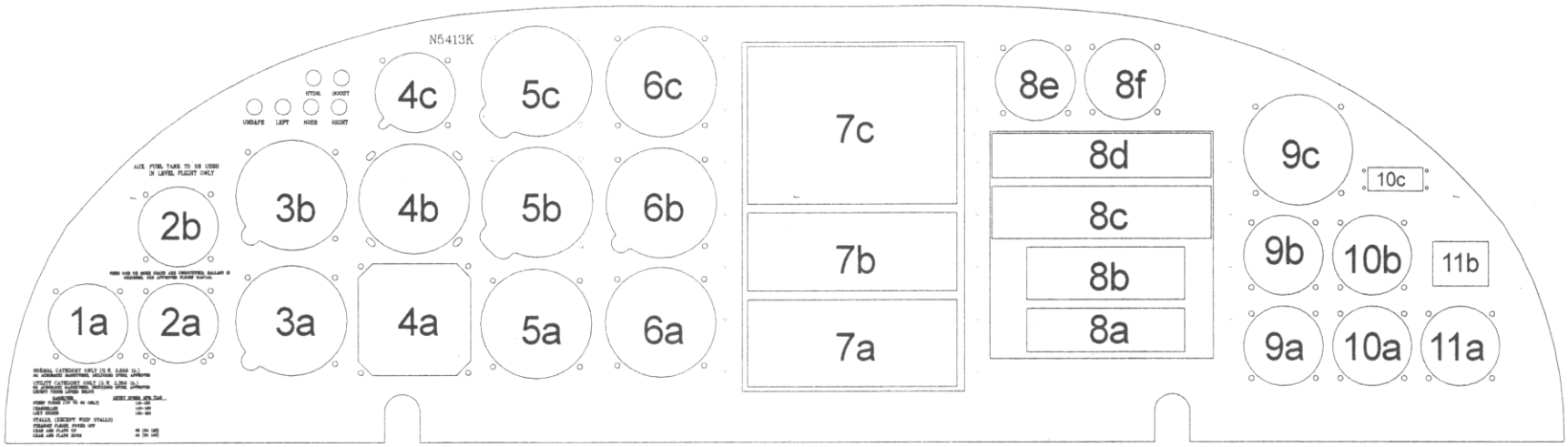
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

1) **Introduction:** See above (Form 337 section 8).
2) **Description:** See above (Form 337 section 8).
3) **Control:** Complete operational information is included in the Bendix/King "KX125 Pilots Guide".
4) **Servicing information:** Not applicable.
5) **Maintenance Instructions:** Not applicable.
6) **Trouble shooting information:** Not applicable.
7) **Removal and replacement information:** The unit can be removed from its tray by turning the allen head screw in the middle of the KX125's face plate counterclockwise. When free it can be pulled out. The KI214 is attached to the instrument panel by 3-#6-32 flat head screws. Disconnect the multi-pin connector and the BNC connector on the rear of the unit. If the aircraft is to be returned to service without this unit installed, insure that cables and connectors are secured out of the way of flight controls.
8) **Diagrams:** Not applicable.
9) **Special inspection requirements:** Not applicable.
10) **Application of protective treatments:** Not applicable.
11) **Data:** No structural fasteners were used in the installation of this unit.
12) **List of special tools:** No special tools are required to install or maintain any components associated with this alteration.
13) **For commuter category aircraft:** Not applicable.
14) **Recommended overhaul periods:** Not applicable.
15) **Airworthiness Limitation Section:** Not applicable.
16) **Revision:** A letter will be submitted to the local FSDO with a copy of the revised FAA Form 337 and revised ICA. The FAA inspector accepts the change by signing Block 3 of the 337.

x Additional Sheets are Attached



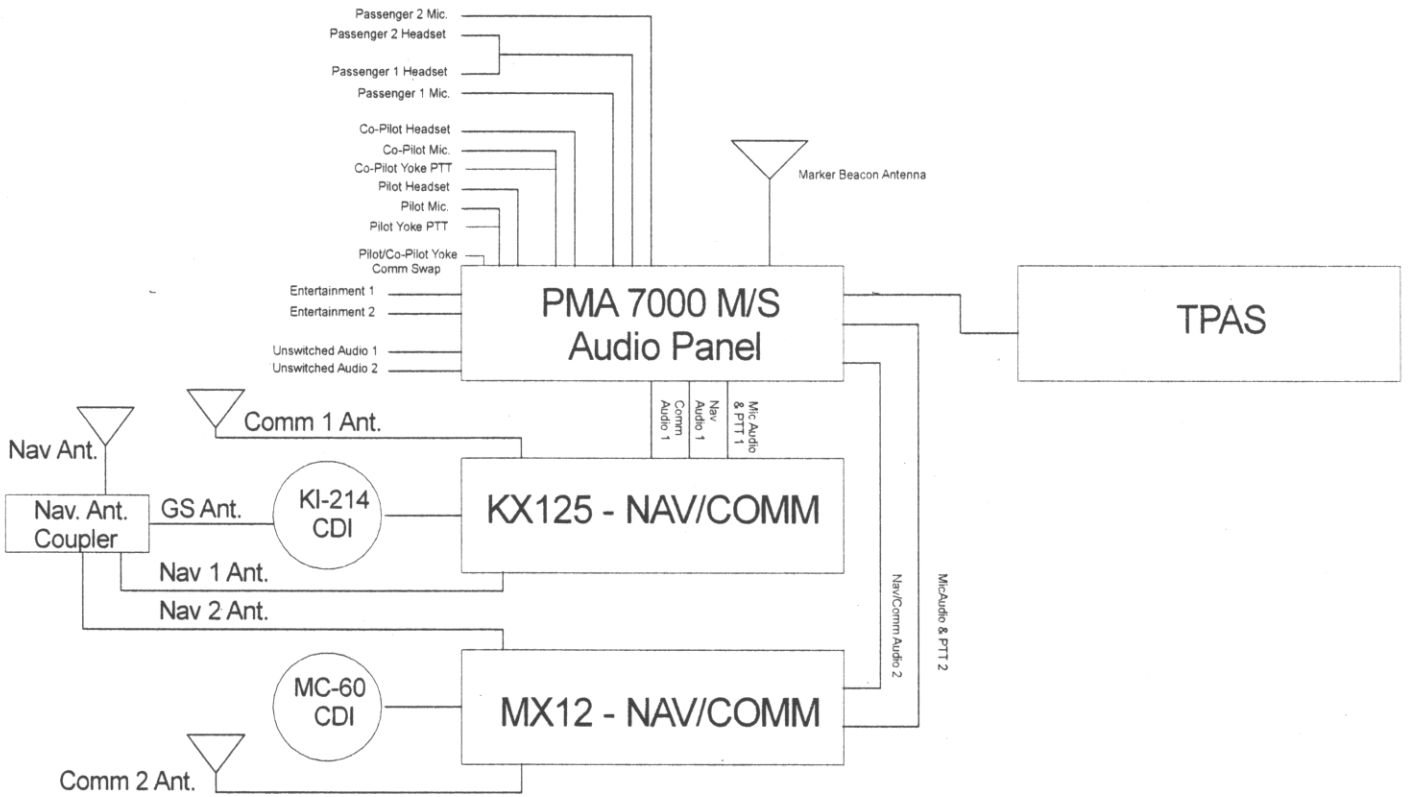
Material: 6061-T6
Thickness: 0.100"
Finish: Low reflectivity powder coating

Reg: N5413K
SN: NAV-4-2313B

N5413K Panel

SIZE	FSCM NO.	DWG NO.	REV
A		NAV-2452781-13888	1.0

SCALE	DATE	SHEET
1:5	22 May, 2003	1 of 1



Reg: N5413K
SN: NAV-4-2313B

N5413K - Audio

SIZE	FSCM NO.	DWG NO.	REV
A		NAV-2452787.14244	1.0

SCALE	Date	SHEET
NA	May 27, 2003	1 of 1