



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

### 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** *[Signature]*  
DATE SIGNATURE OAK-FSDO

### 4. Unit Identification

### 5. Type

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

### 6. Conformity Statement

A. Agency's Name and Address <b>Pierre Borduas 875A Island Dr. #253 Alameda, CA. 94502</b>	B. Kind of Agency <input checked="" type="checkbox"/> U.S. Certificated Mechanic <input type="checkbox"/> Foreign Certificated Mechanic <input type="checkbox"/> Certified Repair Station <input type="checkbox"/> Manufacturer	C. Certificate No. <b>A.P. 2020552 I.A.</b>
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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 <b>6-2-03</b>	Signature of Authorized Individual <i>[Signature]</i>
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### 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  APPROVED  REJECTED

BY	FAA Flt. Standards Inspector	Manufacturer	<input checked="" type="checkbox"/>	Inspection Authorization	Other (Specify)
	FAA Designee	Repair Station		Person Approved by Transport Canada Airworthiness Group	

Date of Approval or Rejection <b>6-2-03</b>	Certificate or Designation No. <b>A.P. 2020552 I.A.</b>	Signature of Authorized Individual <i>[Signature]</i>
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## 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 ARNAV Star 5000 GPS and installs the Bendix/King model SM2202 Rack Mounting Kit for a Bendix/King model Skymap IIIC portable GPS. This unit was designed for installation and removal of the GPS by the pilot by simple means. No interface to aircraft systems other than power and antenna as described.

**Description of work:** The ARNAV Star 5000 GPS and it's wiring was removed and discarded. Installation of SM2202 Rack Mount Kit was accomplished in accordance with the Bendix/King Rack Mount Kit data sheet (iss04). The unit will be mounted at panel location 7c (see attached N5413K Panel dwg).

The existing GPS antenna was reused. A dedicated 3A circuit breaker (Kilixon PN: 7277-2-3) located in the switch panel to the left of the pilot labeled "GPS" provides power to the rack mount. The GPS unit is connected to the rack mount unit by antenna and power connectors that are part of the rack mount unit. 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".

The Bendix/King Rack Mount Kit data sheet states "The attachment system between the mount and the Skymap has been tested to +/-6G in shock for normal operation and attachment in all planes. It has additionally been tested to +/-15G for crash security."

A placard above the unit will state "GPS Limited to VFR use only." This will comply with 23.1301 "Function and installation".

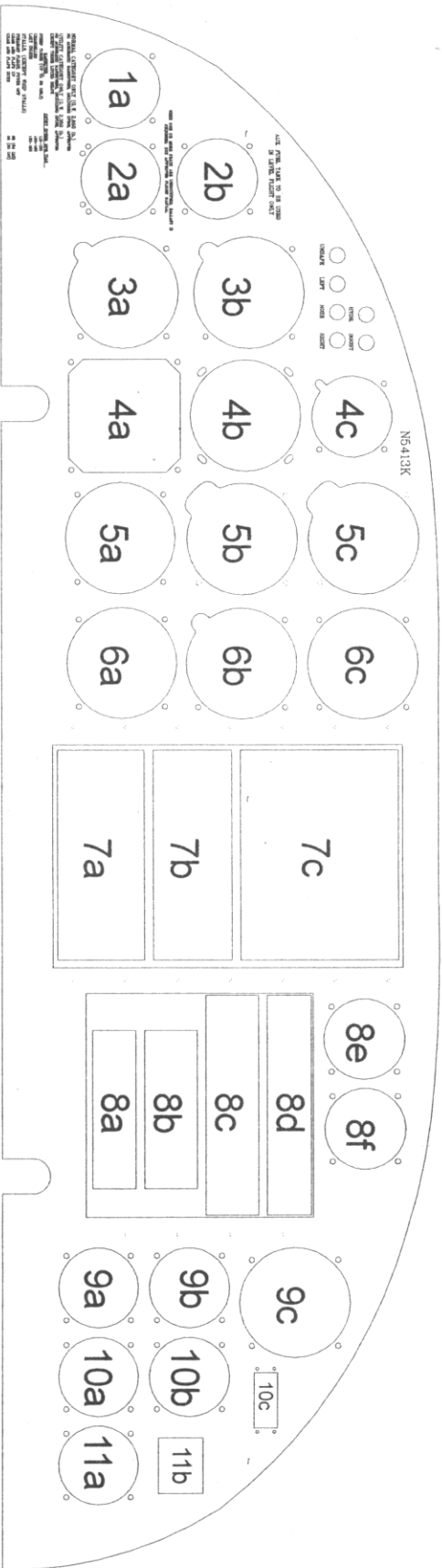
After installation a check for interactions with other systems, including magnetic compass, navigation and communications radios was made to comply with 23.1309 "Equipment, systems and installations" (a)(1).

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 "Skymap IIIC Pilot's Guide".
- 4) **Servicing information:** Not applicable.
- 5) **Maintenance Instructions:** Not applicable.
- 6) **Trouble shooting information:** Not applicable.
- 7) **Removal and replacement information:** Open the circuit breaker to isolate power. Remove the GPS from the mount by pushing forward and releasing the GPS. Disconnect the antenna and power connectors. The unit is attached to the radio rack with 4-#6-32 pan head screws. If the aircraft is to be returned to service without this mounting kit installed, insure that cables and the 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:** Placarded "GPS Limited to VFR use only."
- 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.



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

Reg: N5413K		N5413K Panel
SN: NAV-4-2313B		
SIZE	FSCM NO.	DWG NO.
A		NAV-2452781-13888
SCALE	DATE	SHEET
1:5	22 May, 2003	1 of 1
REV		
1.0		