

United States of America  
Department of Transportation — Federal Aviation Administration  
**Supplemental Type Certificate**

*Number* SA477NW

*This certificate, issued to* ROBERT FITTS

*certifies that the change in the type design for the following product with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part 3 of the Civil Air Regulations, Effective November 13, 1945.*

*Original Product — Type Certificate Number:* A-782  
*Make:* Navion  
*Model:* "B"

*Description of Type Design Change:* Installation of a Lycoming GO-480-G2D6 engine and a Hartzell PHC-A3VF-4/9333C-3 propeller and associated systems in accordance with Robert Fitts photographs 1 through 7.

*Limitations and Conditions:* Data pertaining to this modification are considered inadequate for duplication in other aircraft. This approval is limited to the installation in Navion Model "B", Serial Number NAV-4-2100B. A copy of this Certificate and Addendum Number SA477NW shall be maintained as part of the permanent records for the modified aircraft.

*This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.*

*Date of application:* January 10, 1977

*Date issued:*

*Date of issuance:* July 8, 1977

*Date amended:*



*By direction of the Administrator*  
*Charles C. Schroeder*  
(Signature)

Chief, Engineering and Manufacturing Branch  
(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

This certificate may be transferred in accordance with FAR 21.47.



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**Supplemental Type Certificate**  
(Continuation Sheet)

July 8, 1977 *Number* SA477NW

SUPPLEMENTAL TYPE CERTIFICATE ADDENDUM NO. SA477NW

The conditions and limitations of Type Certificate Data Sheet Number A-782 apply except where superseded by the following:

This Supplemental Type Certificate Data Sheet, which is part of STC SA477NW prescribes the conditions and limitations under which the product for which the STC was issued meets the airworthiness requirements of the Federal Aviation Regulations.

SUPPLEMENTAL TYPE CERTIFICATE HOLDER: Robert Fitts

NAVION MODEL "B", 4PCLM (NORMAL CATEGORY) AS MODIFIED BY STC SA477NW

Engine: Lycoming G0-480-G2D6

Engine Limits: 295 HP at 3400 RPM for One Minute  
Maximum Continuous Power - 285 HP @ 3100 RPM

Fuel: 100/130 Octane

Fuel Pressure Limits: 15 psi maximum, 9 psi minimum

Propeller and  
Propeller Limits: Hartzell PHC-A3VF-4/9333C-3  
Diameter: 93" maximum; 89 5/8" minimum  
Pitch Setting at 30" Sta:  
High - 32.3°; Low - 12.0°

Cylinder Head Temperature: 475°F (Bayonet Type) maximum

Oil Inlet Temperature: 235°F maximum

Oil Pressure Limits: 85 psi maximum; 65 psi minimum; 25 psi idle

Serial Number Eligible: NAV-4-2100B

Airspeed Limits: Same as shown on Data Sheet A-782

Maximum Weight: 2850 pounds. Same as shown on Data Sheet A-782

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July 8, 1977

STC SA477NW

Oil Coolers: Harrison Models 1070UA314A and 5" x 7"

Auxiliary Fuel Pump: Adel Type 23967, 12 volt D.C., 50 gpm

Electrical Equipment: Battery No. 2 added to system at Sta. +190 - 35 pounds

Instrument Markings: Manifold Pressure:  
Green Arc - Between 15" and 29.5"  
Tachometer:  
Green Arc - 2500 rpm to 3100 rpm  
Yellow Arc - 3100 rpm to 3400 rpm  
Red Line - 3400 rpm

Placards:

1. POWER LIMITS

TAKEOFF FOR ONE MIN.  
FULL THROTTLE-3400  
RPM MAXIMUM CONTINUOUS  
POWER - 3100 RPM

2. AIRCRAFT LOADING: The following placard shall be displayed in full view of the piloe:

<u>CONFIGURATION</u>	<u>LOADING</u>
PILOT/COPILOT ONLY	10 GALLON FUEL REQD IN AUX TANK
PILOT/COPILOT PAS SEAT MIN. 100 LBS.	NO BALLAST REQUIRED

Noise Certification Procedure:

Compliance with FAR 36, Appendix F, was shown with the following procedure:  
Level flyover at 1000 feet AGL at 3100 engine rpm and full throttle manifold pressure. The certificated noise level is 72.25 dB(A). This noise level reflects correction of as measured data to a standard 70° F, 77% R.H. acoustic day as well as a -5 dB(A) credit resulting from aircraft takeoff and climb characteristics. Maximum dB(A) allowed is 77 dB(A).

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