United States of America

Department of Transportation—Federal Aviation Administration

Supplemental Type Certificate

Number SA31NW

This certificate, issued to Madras Air Service

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,* (see Type Certificate Data Sheet 1A15)

Original Product—Type Certificate Number: 1A15

Make: PIPER

Model: PA-24-260, PA-24-400

Description of Type Design Change:

Installation of Madras Air Service Wing Tips in accordance with FAA Sealed Drawing MAS103, dated 15 April 1969, and MAS103-1, dated 5 March 1973. Madras Air Service FAA Approved Airplane Flight Manual Supplement, dated 13 MAR 1973 is required.

LIMITATIONS AND CONDITIONS:

This approval should not be extended to other specific airplanes of those models on which other previously approved modifications are incorporated unless it is ~~[illegible]~~ determined that the interrelationship between this change and any of those other previously approved modifications will introduce no adverse effect upon the airworthiness of that airplane.

Supplemental Type Certificate Addendum No. SA31NW limits the airspeeds and is a portion of this certificate. A copy of this Certificate and Addendum 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: 15 November 1972

Date of issuance: 13 MAR 1973

Date reissued:

Date amended:

By direction of the Administrator

James C. Robinson

(Signature)

Acting Chief, Engineering & 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.

FAA Form 8110-2 (10-68)

United States of America
Department of Transportation—Federal Aviation Administration

Supplemental Type Certificate

(Continuation Sheet)

Number SA31NW

SUPPLEMENTAL TYPE CERTIFICATE ADDENDUM NO. SA31NW

The conditions and limitations of Aircraft Specification No. 1A15 apply except as follows:

This Supplemental Type Certificate Addendum, which is a part of Supplemental Type Certificate No. SA31NW prescribes conditions and limitations under which the product for which the STC was issued meets the airworthiness requirements of the Civil Air Regulations. A copy of this STC Addendum is required to be maintained as a part of the modified aircrafts' permanent records.

Supplemental Type Certificate Holder: MADRAS AIR SERVICE

III. Model PA-24-400 as modified by STC SA31NW.

Airspeed Limits (CAS)

V_{ne} (never exceed)	242 MPH (210K)
V_{no} (Max. Structural Cruising)	203 MPH (176K)
V_p (Maneuvering)	155 MPH (135K)

IV. Model PA-24-260 as modified by STC SA31NW.

Airspeed Limits (CAS)

V_{ne} (Never exceed)	220 MPH (191K)
V_{no} (Max. Structural Cruising)	174 MPH (151K)
V_p (Maneuvering)*	139 MPH (121K)
V_p (Maneuvering)**	145 MPH (126K)

* Serial No. 24-3642, 24-4000 through 24-4782 and 24-4784 through 24-4803.

** Serial No. 24-4783, 24-4804 and up.

NOTE 1. The Weight and Balance Report must be revised as follows at the time of modification:

Weight of wing tips 2.4 lbs. total; deduct weight of the tips being removed and add the difference to the aircraft empty weight. The moment change is negligible.

NOTE 3. Conformity to Madras Air Service Drawing No. MAS103 dated 15 April 1969 and MAS103-1 dated 5 March 1973 must be established prior to release of the aircraft to Normal Category operation.

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

MADRAS AIR SERVICE

FAA APPROVED AIRPLANE FLIGHT MANUAL SUPPLEMENT

TO

PIPER MODEL PA-24-260 and PA-24-400

AIRPLANE FLIGHT MANUAL

The information in this document is FAA/Approved material which together with the appropriate Basic CAA/FAA Approved Airplane Flight Manual is applicable and must be carried in the Basic Manual when the airplane is modified by the installation of Madras Air Service P/N 103, Wing Tip, in accordance with STC SA31NW.

The information in this document supersedes the Basic Manual only where covered in the items contained herein. For Limitations, Procedures and Performance not contained in this supplement, consult the manual proper.

I. LIMITATIONS:

Airspeed Limits - CAS

PA-24-400

Maneuvering	155 MPH	(135 Knots)
Maximum Structural Cruising	203 MPH	(176 Knots)
Never Exceed	242 MPH	(210 Knots)

PA-24-260

Maneuvering	139 MPH	(121 Knots)*
Maneuvering	145 MPH	(126 Knots)**
Maximum Structural Cruising	174 MPH	(151 Knots)
Never Exceed	220 MPH	(191 Knots)

* PA-24-260 S/N 24-3642, 24-4000 thru 24-4782 and 24-4784 thru 24-4803.
** PA-24-260 S/N 24-4783, 24-4804 and up.

II. EMERGENCY OPERATING PROCEDURES: NO CHANGE.

III. NORMAL OPERATING PROCEDURES: NO CHANGE.

IV. PERFORMANCE: NO CHANGE.

FAA Approved _____
Acting Chief, Engineering and Manufacturing Branch.

Approval Date: 16 MAR 1973