

United States Of America
Department of Transportation - Federal Aviation Administration

Supplemental Type Certificate

Number SA1741WE

This Certificate issued to Mike Smith
500 West Meadow Lane
Big Bear City, California 92314

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.

Original Product Type Certificate Number : 2A13
Make : Piper
Model : PA-28-140,-150,-160,-180,-235,-28R-180,-28R-200

Description of Type Design Change:

Installation of hand control for the rudder system in accordance with operating instructions for the Blackwood hand control. Mk I., dated May 28, 1969. Detail parts are manufactured in accordance with Blackwood FAA Sealed Drawing No. WB-2. Installation of the hand control device does not require a log book entry and may be made by the pilot.

Limitations and Conditions: This approval should not be extended to other specific airplanes of these models on which other previously approved modifications are incorporated unless it is 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. William H. Blackwood FAA-Approved Airplane Flight Manual Supplement dated June 23, 1973 is required.

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 : July 12, 1968

Date reissued : May 5, 1997

Date of issuance : July 12, 1968

Date amended : June 18, 1969, Oct. 16, 1969, July 2, 1971, April 23, 1973, June 13, 1973,



By direction of the Administrator

Carlton K. Woo, acting manager
(Signature)

Michael A. Murphy, Manager,
Technical and Administrative
Support Staff, ANM-103L

(Title)

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

INSTRUCTIONS: The transfer endorsement below may be used to notify the appropriate FAA Regional Office of the transfer of this Supplemental Type Certificate.

The FAA will reissue the certificate in the name of the transferee and forward it to him.

TRANSFER ENDORSEMENT

Transfer the ownership of Supplemental Type Certificate Number SA1741 WE

to (Name of transferee) _____

(Address of transferee) _____

from (Name of grantor) (Print or type) MIKE

(Address of grantor) 500 W. MEADOW LANE

(Number and street)

Big Bear City, CA 92314

(City, State, and ZIP code)

Extent of Authority (if licensing agreement): Manufacture & Licensing
of the hand control.

Date of Transfer: 3-15-2011

Signature of grantor (In ink): Mike [Signature]

WILLIAM H. BLACKWOOD

FAA APPROVED AIRPLANE FLIGHT MANUAL SUPPLEMENT
TO
PIPER PA-28-140, -150, -160, -180, -235, -28R-180, -28R-200
AIRPLANE FLIGHT MANUALS

The information in this document is FAA Approved material which, together with the basic Piper PA-28-140, -150, -160, -180, -235, -28R-180, -28R-200 AFM, is applicable and must be carried in the basic manual when the airplane is modified by the installation of a hand-operated rudder control system in accordance with Supplemental Type Certificate SA1741WE.

The information in this document supersedes the basic manual only where covered in the items contained in this Supplement. For Limitations and Procedures, not contained in this Supplement, consult the manual proper.

1. LIMITATIONS

- A. The following placard is to be installed on the Rudder Hand Control in full view of the Pilot:

"OPERATION OF THE AIRCRAFT WITH THE HAND-CONTROLLED RUDDER SYSTEM INSTALLED MUST BE CONDUCTED IN ACCORDANCE WITH W.H. BLACKWOOD FAA APPROVED AFM SUPPLEMENT DATED JUN 13 1973."

- B. Prior to Solo operation of the Aircraft by a student pilot, authorization (Pilot's Logbook Entry) by either a certificated flight instructor or FAA General Aviation Operations Inspector must have been obtained.
- C. Prior to operation of the aircraft by a certificated pilot, proficiency in the use of the system must have been demonstrated to an FAA General Operations Inspector in accordance with FAA Medical Flight Test procedures.

2. PROCEDURES

Prior to flight check for full rudder travel.

3. PERFORMANCE

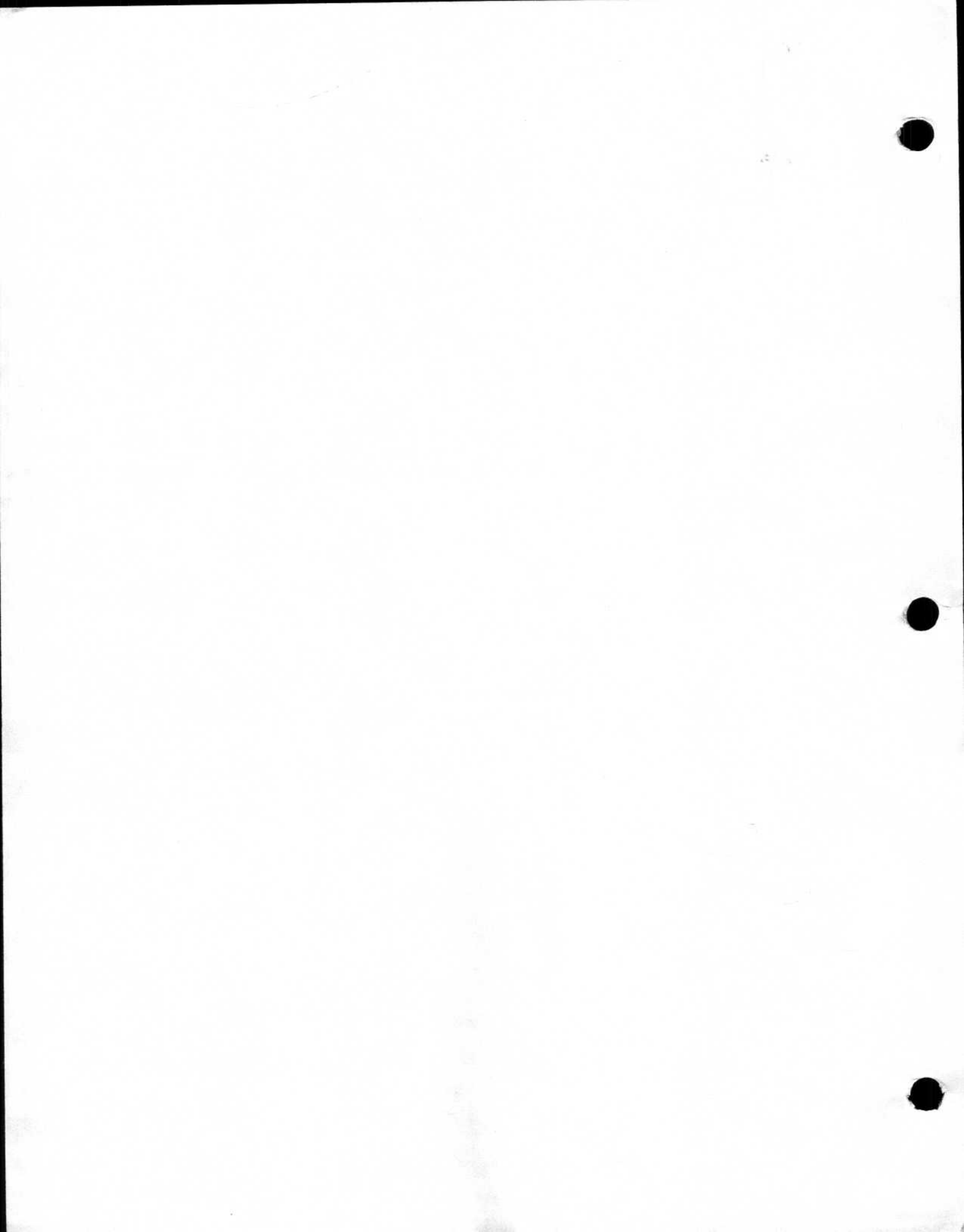
No change.

FAA APPROVED:

William H. Blackwood

Rocco Lippin
Chief, Aircraft Engineering Division
Western Region,
Federal Aviation Administration

DATE June 13, 1973



OPERATING INSTRUCTIONS FOR THE BLACKWOOD HAND CONTROL, MK. 1.

THE CONTROL IS DESIGNED TO PROVIDE FULLY OPERATED HAND CONTROL IN ALL PIPER PA-28-140, 150, 160, 180, 235, PA-28R180, 200 AIRCRAFT, EXCEPT THOSE EQUIPPED WITH TOE BRAKES ON THE RIGHT SIDE AND SOME EARLIER MODELS WITH THE SHORT 6" VERTICAL RUDDER POST. FAA APPROVED BY STC SA1741WE.

THE CONTROL ATTACHES TO THE VERTICAL POST ASSEMBLY OF THE LEFT RUDDER ON THE RIGHT SIDE. ATTACHMENT IS MADE BY DRAWING THE NUTS TIGHT AGAINST THE LOCK WASHERS. WHEN PROPERLY INSTALLED, THE END OF THE HANDLE WILL BE NEAR THE THROTTLE.

THE CONTROL IS EQUIPPED WITH THREADED END FITTINGS THAT ALLOW IT TO BE ADJUSTED. MEASUREMENTS ARE TAKEN FROM THE END OF THE TUBING TO THE NEAREST CENTERLINE NOTCH OF THE V FITTING.

THE DIMENSIONS ARE AS FOLLOWS:

	<u>TOP</u>	<u>LOWER</u>
PA-28-235	2 7/8"	3 7/8"
ALL OTHER PA-28 & PA-28R MODELS	2 5/16"	2 15/16"

(TOLERANCES PLUS OR MINUS 1/16".)

PRIOR TO FLIGHT THE PILOT SHOULD DETERMINE THAT HE CAN OBTAIN FULL RUDDER DEFLECTION IN BOTH DIRECTIONS. WILLIAM H. BLACKWOOD FAA APPROVED AFM SUPPLEMENT DATED JUNE 18, 1969 IS REQUIRED WHEN THIS CONTROL IS INSTALLED. THE HAND CONTROL IS OPERATED BY THE LEVERAGE PRINCIPLE. A DOWNWARD FORCE APPLIES LEFT RUDDER AND AN UPWARD FORCE APPLIES RIGHT RUDDER. THE GREATEST FORCE IS REQUIRED WHEN TAXIING AT LOW SPEED. IN FLIGHT THE CONTROL FORCES ARE MINIMAL.

THE HAND CONTROL CAN BE OPERATED FROM EITHER THE LEFT OR RIGHT COCKPIT. IT DOES NOT INTERFERE WITH THE NORMAL RUDDER LEG OPERATION BY EITHER PILOT.

MAY 28, 1969 (REV. 5/71)

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