

**MOONEY AIRCRAFT CORPORATION  
P.O. BOX 72  
KERRVILLE, TEXAS 78029**

**FAA APPROVED**

**AIRPLANE FLIGHT MANUAL SUPPLEMENT  
FOR**

**Mooney Models M20J AND M20K**

**WITH**

**PROPELLER DE-ICE SYSTEM**

REG. NO. \_\_\_\_\_

SERIAL NO. \_\_\_\_\_

This Supplement must be attached to the applicable Airplane Flight Manual when the De-Ice System, is installed by Mooney Aircraft Corporation. The information contained herein supplements or supersedes the basic manual only in those areas listed. For limitations, procedures and performance information not contained in this supplement, consult the basic Airplane Flight Manual.

FAA APPROVED: *D. D. Castle*

*for*

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Southwest Region  
Fort Worth, TX

Date: 10 - 8 - 79

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AFM SUPPLEMENT - PROPELLER DE-ICE  
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LOG OF REVISIONS

Revision Number	Revision Pages	Description of Revisions	FAA Approved	Date
F	Title Page,  2 of 3	Added "REV. F" to page.  Added effectivity- S/N 25-1196	<i>MM Cusby</i>	<i>9/28/90</i>

The revised portions of affected pages are indicated by vertical black lines in the margin.

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**SECTION I - GENERAL**

The propeller de-ice system is intended for use if unexpected icing conditions are encountered. The system is operated by a rocker switch/circuit breaker located in the pilot's panel.

When the switch is placed in the "ON" position, current flows to a timing device which supplies power to the heating elements in the propeller boots. Each propeller blade boot contains heating elements which are cycled ON and OFF by the timer.

\* A De-Ice ammeter located in the instrument panel is provided to monitor operation of the de-ice system.

..... \* M20J-S/N 24-0001 thru 24-3153  
..... M20K-S/N 25-0001 thru 25-1224, Excludes S/N 25-1196

Beginning with M20J, S/N 24-3154 & M20K, S/N 25-1225 (including S/N 25-1196), the de-ice ammeter is deleted and system operation is monitored by a "PROP DE-ICE" light on annunciator panel. This light will cycle ON & OFF with the de-ice system timer operation.

**SECTION II - LIMITATIONS**

There is no change to the airplane limitations when the propeller de-ice system is installed.

Flight into known icing conditions is prohibited, regardless of installed ice protection equipment. (Placard "This A/C Not Certified For Flight INTO Known Icing Conditions" is standard in all aircraft equipped with Prop De-Ice; location: Top of panel).

\* Placard: Prop De-Ice (located on prop de-ice ammeter).

\* SEE S/N's above.

**NOTE**

**No reduction in propeller diameter is permitted with de-ice boots installed.**

**SECTION III - EMERGENCY PROCEDURES**

There is no change to the airplane emergency procedures.

**SECTION IV - NORMAL PROCEDURES**

Flight into known or forecast icing conditions is prohibited. If unexpected icing conditions are encountered, the following procedure is recommended:

1. "PROP DE-ICE" switch - ON.
2. Verify PROP DE-ICE light is illuminated on annunciator panel.

\* 3. "PROP DE-ICE" ammeter - CHECK in green arc (8 to 12 amps, 12 volt system) or (8 amps, 24 volt system).

\* SEE S/N's above.

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NOTE

- \* AMMETER should flicker every 90 seconds as heating elements are switched (12 volt system only).
- \* AMMETER should drop to zero for 90 seconds and back to green arc (8 amps) for 90 seconds as long as system is ON (24 volt system only).

\* CAUTION

An unusually high or low ammeter reading is an indication that a malfunction has occurred and it is imperative that the system be turned OFF. Uneven de-icing may result, causing propeller unbalance.

- \* SEE S/N's above.

CAUTION

Prolonged use of the landing light with prop de-ice, pitot heat and all other electrical systems operating will cause battery discharge.

**SECTION V - PERFORMANCE (M20K ONLY)**

With the de-ice boots installed, a slight reduction in performance occurs, a 6 KT. loss in true airspeed during cruise conditions and a 30 FPM reduction in sea level climb performance. During a climb above critical altitude in the M20K, increase climb speed to 92 KIAS to ensure adequate engine cooling (this will result in an additional 45 FPM loss in climb performance above critical altitude).

**SECTION V PERFORMANCE (M20J ONLY)**

With the de-ice boots installed, a slight reduction in performance occurs, a 6 KT. loss in true airspeed during cruise conditions and a 30 FPM reduction in sea level climb performance.

Sea level rate of climb will be reduced approximately 50 FPM, with no reduction in cruise true airspeed.

**SECTION VIII - HANDLING AND SERVICE**

Jacking: **DO NOT** place jack directly on prop de-ice boots, cushion with firm rubber between jack and boot.

**SECTION IX THRU X**

No Change

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