

FOR BETTER NAVION FLYING

HELP YOUR NAVION HELP YOU IN MARGINAL WEATHER

By "Doc" Sloan, Navion Sales Field Representative

How many times during this past year have you attempted to go from point A to point B when the weather enroute has dropped below 1000 feet and three miles? If you are an average pilot you may have gotten away with it several times in the past - or flown through moderate rain showers VFR with reduced visibility and low ceilings. In all probability, you "got through" with no difficulty, or at best with a slightly perspired shirt and a feeling of thankfulness to be on the ground again. On the other hand, a careful look at the Civil Air Board's statistics for the past couple of years will convince you that below-minimum weather has provided a one-way ticket to the happy hunting ground for many pilots who, like us, are always sure that accidents always happen to the other pilot.

Because of the Navion's excellent slow-flight characteristics, stability, and visibility, we often tend to push weather when a one-eighty turn would be the more sensible course. On the other hand, schedules flown with the Navion have been much more complete in turbulent, marginal weather because of its ability to ride the rough air and afford the pilot a sense of security not experienced in other aircraft. Admittedly, none of us are perfect, and old man weather has a mean way of closing in rapidly at the most unexpected times on cross country trips. Any good pilot will naturally check the weather as thoroughly as possible before any flight, and file a flight plan to cover his route. If the forecast for the trip is unreliable and below-minimum weather is encountered, again, the smartest move is a one-eighty. However, the degree of marginal VFR weather that can be flown is dependent upon three things:

1. The experience of the pilot and knowledge of instrument flying.
2. The severity of the weather as pertains to turbulence, ceiling, and visibility.
3. The type of airplane and its equipment.

The average Navion owner has a smattering of in-

strument training, or has intended to get an instrument course "when I get time." He feels that with those fine gyro instruments he could probably take care of himself if he ever got caught. This fallacy has led to many an unpleasant statistic. However, a few, simple basic rules can be of aid in keeping the average pilot from getting to the point where its too late to do anything but go on instruments.

1. Drop partial flap and slow the airplane down to 100-120 miles per hour. Since mental RPM and tension increases in direct ratio to the adversity of the weather and engine RPM, a decrease in speed and RPM will give the pilot more room for maneuvering and more time to think logically.
2. Make a one-eighty turn before conditions get so poor that it is impossible to maneuver the airplane without getting into the overcast.
3. If trapped on top of an overcast and dwindling fuel supply makes a descent imperative, drop the gear and use full flaps; trim the tab full nose high and keep your hands off of the wheel. Maintain directional control with your feet on the rudder. The airplane will automatically settle into a 750-1000 foot per minute rate of descent at approximately 70-80 mph. Slight rudder pressure will take care of directional control and keep the wings level. Gear and flaps down will decrease the possibility of exceeding design speeds and resultant loads due to overcontrolling.
4. Take that instrument course; it will do more to convince you that you've no business flirting with marginal weather than any single factor.

There is no fast and fixed set of rules to cover any or every condition of marginal weather. The above is offered as a guide when extremes are encountered. The pilot who is cognizant of his own experience and ability will avoid such extremes, or prepare himself through proper training to meet marginal conditions.

PERSONAL AIRCRAFT INSPECTION MANUAL IS ISSUED (Reprinted from February 1951 Issue of CAA Journal)

A practical guide for the personal aircraft owner in inspecting his plane for better maintenance and safer flying is offered by the Civil Aeronautics Administration in the form of the "Personal Aircraft Inspection Manual" just placed on sale at the Government Printing Office, Washington 25, D.C., for 55 cents.

Designed especially for use by student mechanics, pilots, and especially for personal aircraft owners, the 80-page, illustrated manual concentrates attention on the inspection process, pointing out that inspection is one of the three major elements of proper maintenance of the airplane.

This manual tells the owner or student of maintenance what places to inspect for possible wear and tear, where to look for possible defects, and, in general, when such inspections should be made. Use of the manual by the novice "does not qualify him to make

final determinations regarding the airworthiness of the aircraft" says the manual, but following its advice will certainly make for safer flying and more economical upkeep.

The manual indicates helpful practices in preventive maintenance which the owner can perform, but it urges that a "competent repair station or mechanic" be called upon to make important repairs, or to make an inspection after a plane has been in an accident or subjected to unusual loads or stresses.

The manual, CAA officials say, will be helpful to every flying club and conscientious plane owner, and it should be useful to flight and mechanic schools as a text for study. Its use in conjunction with the manufacturer's service handbook is strongly recommended.

The manual was prepared by the personal aircraft and agencies branch of the Office of Aviation Safety.

CORRECT USE OF THROTTLE FOR BOTH HOT AND COLD STARTS WITH LYCOMING ENGINE

When starting a cold Lycoming GO-435-C2 engine equipped with a Marvel-Schebler carburetor, set mixture control in full rich position, open and close throttle two or three times depending on air temperature, and then set the cockpit throttle lever so that the throttle stop at the carburetor is approximately $3/32$ " from the carburetor throttle stop screw. With the throttle in this position, turn the engine over two or three times before the ignition is turned on. This will draw a finely emulsified mixture of air and fuel through the manifold into the combustion chamber, then if the ignition is turned on, the engine should start on the next turn over and with the carburetor throttle stop $3/32$ " from the carburetor throttle stop screw there should be sufficient throttle opening to keep the engine running. The carburetor is calibrated to give the richest mixture at this throttle opening and therefore, a cold engine will run

the smoothest with the throttle in this position. For this reason the engine should be allowed to warm up for several minutes before opening the throttle further.

When starting a warm engine, put mixture control in full rich position and pull the carburetor throttle stop back against the carburetor throttle stop screw. If the ignition has just been shut off, turn on the ignition and the engine should start on the first turn, but if the engine has been shut off for several minutes, it may be necessary to turn the engine over once or twice before turning on the ignition. A warm or hot engine should start and continue with throttle in the idling position.

CAUTION - Do not open and close throttle when starting a hot engine, as this will cause flooding and make starting difficult.