

Operating Tips . . .

FOR BETTER NAVION FLYING

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Published by the Field Service Department of the Ryan Aeronautical Company, San Diego, to help those who own, operate, and service Navion airplanes obtain the full utility and satisfaction of which the Navion is capable.

MARCH 1950

HERE'S SAFE WAY TO CLEAN NAVION WINDSHIELDS AND CANOPY WINDOWS

The windshields and canopy windows on your Navion are made of plastic sheet having a highly polished lustrous surface. To maintain this polish, certain procedures should be followed. Because of its transparency, plastic has the appearance of glass or crystal, but does not have so hard a surface, hence some methods of cleaning, which are recommended for glass, should not be employed for plastic. Window cleaning compounds should be avoided, as some of them are known to contain abrasives or solvents which harm the plastic.

Grease or oil can be removed by wiping the panel with a pad or cotton saturated with unleaded gasoline or kerosene. Never use denatured alcohol, benzene, carbon tetrachloride, acetone or leaded gasoline for cleaning plastic. Ordinarily, the use of abrasives or abrasive cleaners should be avoided. It is essential that all cleaning materials and cloths be free of grit and other foreign substances.

The surface of the window panel should first be flushed with clean water, to remove particles of dirt or other abrasive matter. It should then be sponged gently with a water solution of mild soap, then flushed with clean water. Remaining drops of water should be wiped away with a clean, soft chamois or a pad of absorbent cotton. As a final step, the panel should be polished with a good wax polish. The polish should be applied with a pad of clean, soft flannel and a similar pad should be used for the final polishing. Waxing will make subsequent cleaning of the panels easier. To minimize the attraction of dust to the panels by a static charge, they may be treated with DuPont H-145 anti-static cleaner.

If plastic sheet becomes marred, a special technique can be used for the removal of scratches and abrasions, but only in extreme cases is it recommended that the removal of scratches be undertaken, and then only by one thoroughly familiar with the operation.

RYAN NAVION SERVICE PUBLICATIONS RATE CAREFUL READING

Quite frequently the factory receives letters from Navion owners and mechanics, who have started the installation of some item of Navion equipment without first making a careful study of the instructions furnished with the kit. Our technical writers always endeavor to make the instructions in Service Bulletins and Special Instructions as clear and concise as possible. However, in many instances, a complete and careful reading of the entire publication before starting any installation work will clarify steps in the fore part of the instructions that might otherwise be misinter-

preted if the whole bulletin or instructions are not read.

Every word of these instructions is important, as it is a part of technical writing technique to eliminate all superfluous wording so as to make the instructions as brief as possible, consistent with thorough coverage of the problem. Two recent cases of misinterpretation, or lack of careful reading, on the part of persons working from such instructions, prompted us to include this article in this publication.

CORRECT MIXTURE CONTROL OPERATION ESSENTIAL TO LONG ENGINE LIFE AND FUEL ECONOMY

Navion pilots are reminded that the engine in their aircraft is fairly sensitive to the proportion of the fuel and air charge supplied to the cylinders. Failure to observe the instructions pertaining to the use of the mixture control may easily result in engine overheating and detonation, either of which will affect the reliability, fuel economy and useful life of the engine. In case of doubt a comparatively rich mixture is advisable.

A commonly used method of adjusting a manually operated mixture control is to observe the tachometer reading closely during the leaning operation. By careful observation of the r.p.m., a fair indication of mixture strength can be obtained. Too lean a mixture will cause a drop in engine r.p.m. Excessive leaning will cause the engine to backfire through the induction system or stop completely. This method is recommend-

ed to those pilots who doubt their ability to judge correct engine operation during leaning by the feel or sound method.

It should be noted that the mixture control is much more sensitive on the earlier "single bar" type carburetors than on the "four-bar" type, used on Navions, factory serial number 1271 and subsequent. In view of this fact, more care must be taken in the adjustment of the control on these earlier carburetors.

THE WHY AND WHEREFORE OF THE NAVION CIRCUIT BREAKER PANEL

Many a Navion owner has come into the Customer Service Hangar, here at the factory, with what he supposes to be a serious case of electrical system trouble when, in reality, all that was necessary was to reset one or more of the circuit breakers on the aircraft's circuit breaker panel. In case you've forgotten where this panel is located, it's hinged to the bottom edge of the stationary instrument panel just to the left of the pilot's control wheel shaft. The panel is spring loaded so that it swings back out of sight when not held down by hand.

The "thermal-type" circuit breakers on the panel provide overload protection for all electrical circuits on the airplane, with the exception of the starter, turn-and-bank indicator and cigarette lighter circuits. The turn-and-bank indicator circuit is protected by a 2 amp. fuse mounted on the circuit breaker panel, while the cigarette lighter has a separate fuse contained within

the unit. The starter circuit needs no overload protection, as it performs no flight function and its wiring is of sufficient size to withstand large overloads.

Occasionally, an electrical circuit of the airplane may be subjected to a momentary overload due to sluggish operation of the devices in the circuit, in which case a temperature rise takes place in the circuit breaker, causing it to automatically disconnect the circuit from the battery. To reset a circuit breaker that has caused a disconnect of this kind, it is simply necessary to press its reset button. If no serious trouble exists in the wiring or devices, resetting the circuit breaker is all that will be necessary to restore the unit to normal operation; however, if the circuit breaker continues to break contact, a capable electrician or mechanic should inspect the electrical system and units for shorts or overloading for other reasons.

TRAVELER - KNOW YOUR NAVION DISTRIBUTORS

The following is an up-to-date list of all Navion Distributors in the Western Hemisphere. These organizations are your most direct link with the factory in matters pertaining to Navion part procurement and ser-

vice. Be sure to channel your Navion service problems to, or through, them whenever possible. Why not carry this list in the glove compartment of your Navion for ready reference?

PALO ALTO AIRPORT, INC.

Palo Alto Airport
Palo Alto, California

MOUNTAIN STATES AVIATION, INC.

Hangar 2, Stapleton Field
Denver 7, Colorado

WOOTTEN AVIATION INDUSTRIES, INC.

Box 711
Orlando, Florida

AIRCRAFT SERVICE COMPANY

Bradley Field
Boise, Idaho

HOWARD AVIATION, INC.

Mt. Hawley Airport
Peoria 5, Illinois

LOUISIANA AIRCRAFT

Municipal Airport
Baton Rouge, Louisiana

NORTH ATLANTIC AIRWAYS, INC.

Beverly Airport
Beverly, Massachusetts

NORTHERN AIR SERVICE, INC.

Grand Rapids Airport
Grand Rapids 8, Michigan

VAN'S AIR SERVICE, INC.

Municipal Airport
St. Cloud, Minnesota

TOTH AIRCRAFT & ACCESSORIES CO.

Municipal Airport
Kansas City 6, Missouri

ST. LOUIS FLYING SERVICE

Kratz Airport
St. Louis 21, Missouri

GILLIS FLYING SERVICE

Municipal Airport
Billings, Montana