

Operating Tips . . .

FOR BETTER NAVION FLYING

VOL. 2 NO. 6

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.

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HOW TO KEEP FAIRING ATTACHING SCREWS TIGHT

You, who have been receiving "Operating Tips" regularly for some time, will remember that an article appeared in the September 1950 issue recommending that fairing attaching screws on the Navion be tightened by the following method. "After screws are tightened to apparent tightness, an additional 1/4 to 1/2 turn should be applied to deflect the prongs of the nut sufficiently to provide constant spring pressure against the screw threads." This is still good advice, but now something new had been added. Service experience

has shown that if the threaded shank of the screw is coated with a fairly heavy coating of ordinary 3-M rubber cement before it is inserted in the hole there is much less chance of its loosening as a result of vibration and yet no difficulty will be experienced in removing the screw with a screwdriver whenever necessary. The rubber cement places a drag, so to speak, on the threads thus preventing their loosening. TRY IT and see if screw loss isn't reduced to a minimum.

CANOPY CHARACTERISTICS

According to Ryan Field Representatives, many Navion owners are uninformed or misinformed about what to expect if it ever becomes necessary or desirable to open the canopy during flight due to fumes, fogging or excessive heat. Therefore, we offer the following information as the result of actual flight tests conducted by Ryan pilots.

First of all the canopy rollers should be checked for condition before planning any "canopy open" flights. On early Navions badly worn or missing rollers might result in the canopy becoming detached from the fuselage under some conditions, later models have a modified roller and safety designed to prevent this from ever happening. The next thing to remember is to always notify your passengers that you are going to open the canopy as the sudden rush of air past the opening may be rather disconcerting to anyone not forewarned. As soon as the canopy latch hook is disengaged the canopy will float back for an inch or two, but from there

on it becomes necessary to use an ever increasing effort to force the canopy open as the opening widens. In other words, the aerodynamics of the canopy are such that it resists opening in level flight; therefore, there is no danger of its flying back as soon as the latch is released except during take-off and climb. This enables the pilot to easily control the amount and rate of opening.

Tests have shown that the Navion can be flown at any reasonable rate of speed with the canopy open and locked in the intermediate lock hole in the canopy rail. On later model Navions it is necessary to slide the canopy past the lock hole and then forward in order for the lock pin to drop into the hole in the rail. Flying with the canopy open and locked in the intermediate position will assist in ventilating and cooling the cabin, but the increased noise level is usually enough to discourage one from doing this as a general practice.

CAUSES OF BATTERY ACID CORROSION

Inspectors and mechanics in the factory's Customer Service Hangar are noticing an increasing number of battery acid corrosion spots in the baggage compartment and on the left upper wing skin. This would seem to be evidence that the instructions printed on the top of the battery boxes in regard to the battery service are

being overlooked. These instructions read as follows:

CAUTION

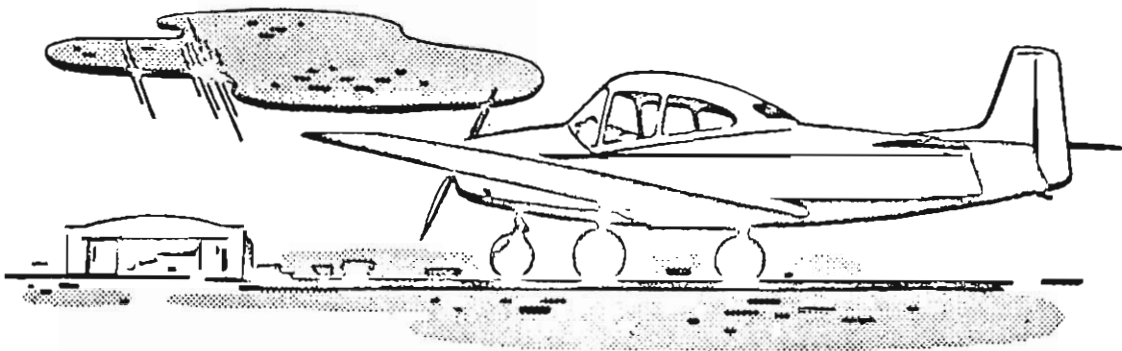
"To prevent damage to airplane finish do not remove battery from box while inside plane. When

battery removal is required, disconnect wires and remove complete box. Water level and hydrometer reading may be taken by removing cover only. Recharge battery if hydrometer reading is less than 1240.

See Navion Service Manual NA-46-378 for additional service information.

Failure to follow these instructions is only partially responsible for some of the corrosion that has been noted. A good share of it is caused by carelessness in placing the battery cell caps on the floor of the compartment or on the light weight sheet metal angle just

above the battery box. There is always wet acid or acid vapor on these caps that will attack any surface on which they are placed and over a period of time the amount of corrosion so caused can weaken the structure and mar the general appearance of the compartment. The corrosion on the top skin of the left wing is supposedly caused by setting the battery out on the wing before climbing in or out of the cockpit. Here again there is often some acid or acid salt on the bottom of the battery that will be deposited on the wing and cause corrosion. Observing the instructions printed on the top of the battery box will prevent this occurrence.



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