Operating Tips . . .
FOR BETTER NAVION FLYING

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CLEAN THAT CARBURETOR AIR FILTER

With the coming of hot, dusty summer weather the wire gauze air filter at the carburetor air scoop entrance begins to take on an increasingly important significance in respect to your obtaining maximum service life from the engine in your Navion, whether it be a Continental or Lycoming.

The purpose of this filter is to catch and hold foreign particles, i.e. sand and dust, in the air that would otherwise enter the innards of the engine and cause considerable damage. In fact, there are known cases on record where dirt entering the engine through the carburetor air induction system was responsible for serious damage comparatively early in an engines service life.

The following is the proper method of servicing the carburetor air filter as quoted from the latest issue of the Navion Service Manual:

1. Immerse filter, dirty side down, in unleaded gasoline or other suitable cleaning fluid. While cleaning, rock filter or agitate cleaning fluid to remove dirt from the innermost part of the filter element.
2. Dry the filter thoroughly. When dry, immerse filter in engine oil (Grade SAE 20 or 30) for a period of 2 to 5 minutes.

NOTE: Make sure filter element is thoroughly dry before immersing in oil; otherwise, the filter will not be properly coated, resulting in impaired cleaning efficiency.

3. Drain the filter from 2 to 4 hours prior to installation to remove excess oil. If filters are too heavily lubricated, clogging may result.

Local conditions will largely determine how often the above described service should be performed. In very dusty areas it may be necessary to clean the filter daily, while cleaning only once a week or every two or three days may be all that is required when all operations are off hard surfaced runways and if no dust storms are encountered during flight.

An extra stand-by filter which can be processed for use while flying is continued with another filter is recommended in the case of Navions being used every day under adverse conditions.

DON'T UNDERRATE THE IMPORTANCE OF THIS SERVICE,

KEEP HYDRAULIC PRESSURE ON DURING TAXI OPERATIONS

As stated in all recent issues of the Navion Operation Manual, hydraulic power should be left ON during all taxi operations preceding a take-off and following a landing.

The reason for this is, that while the Navion is equipped with spring bungees to hold the landing gear retract linkage in the past-center locked position, the added pressure applied to this linkage by the hydraulic actuating cylinders provides an added margin of safety against the accidental retraction of the main or nose gear struts. Such a retraction might occur if the past-center adjustment of the retract linkage was marginal and a chuck hole or other obstruction was encountered which resulted in a sharp blow being struck against one of the landing gear legs.

This is no reflection on the design of the Navion landing gear actuating linkage, but this added safety measure is recommended to pilots as economical insurance against what could be a costly mishap under certain unusual circumstances.

FUEL SYSTEM TROUBLE SHOOTING HINTS

Mr. A. T. Armstrong, with the Aero Repair Station on Bob Shank Airport at Indianapolis, Indiana, recently wrote the factory a letter containing a list of six fuel system trouble shooting hints, which he feels should be included in the Navion Service Manual. His hints are worthy of inclusion in the manual and an effort will be made to so augment the fuel system trouble shooting section of the manual at the next revision.

In the meantime, it is felt Mr. Armstrong's suggestions could help some pilots and mechanics to quickly and accurately diagnose and correct any fuel system trouble that might occur on either a Continental or Lycoming Powered Navion. Here are his hints.

Low or zero fuel pressure may be caused by:

1. Improper adjustment of fuel pressure relief valve.
2. System pressure relief valve dirty, worn or stuck. This valve is located behind the right gill at the Adel pump.
3. Air leak on any fuel supply line. Test by applying 2 to 3 pounds per square inch pressure at gas tank outlet and hold while an inspection is made of all lines and fittings from the tank to the carburetor.
4. Air leak at primer, or unlocked primer.
5. Dirty, worn or loose Romec pump vanes.
6. Worn shaft or shaft seals on the Romec or Adel pumps, which cause fuel to be dumped overboard from the drain lines of either pump.

Why not follow A. T. Armstrong's lead and write us about any information you think should be brought to the attention of Navion owners. We'll try to publish your tips or write tips on the information you request. Let us hear from you.