Duncan Intelligence

Nav Blade Antennas

• *Joe Austin*

We are seeing a lot of NAV blade antennas cracked at the mounting screw holes during a routine inspection. According to Cessna and the manufacturer of the antenna, this is cause for replacement of both antennas (one on each side of the vertical stabilizer).

We have dissected this area of the antenna and found that the cracking is in the exterior coating only, and not into the mounting bracket. No repairs are allowed to the antenna in any area without additional testing from the manufacturer. This is considered an airworthy item, so both antennas are to be replaced. Our suggestion is that you contact Cessna if you find this condition to see if any new designs are in the works to prevent cracking.

Stand-By Gyros

• *Joe Austin*

Your aircraft may have one of three different stand-by gyros installed depending on the model and serial number of your aircraft.

During a phase inspection, a check of the stand-by gyro is required. If the aircraft has a Meggitt or Goodrich stand-by gyro, the inspection form should be signed off as "N/A" or "equipment not installed." If you have the small attitude only indicator, it should be checked per the maintenance manual.

According to Cessna, the Meggitt and Goodrich have internal checks that are performed on each power-up of the unit, therefore, an inspection and functional check is not required.

Air Conditioning Leaks at Valve Ports

• *Joe Austin*

When looking for leaks on your air-conditioning system, whether it's an R-12 or R134a system make sure to check the servicing valves before connecting your cart to the system. Leaks can be at the valves but once you hook up the system, you've lost your chance to see a leak at the valve. It is possible that all your system needed was to reseat the valve to correct the leak (our suggestion would be to change the valve if possible).

If you have not changed your system from the R-12 to the R134a yet, I suggest that you do so. Remember, using an automotive change-over kit is not an approved method. Adding R-134a to an R-12 system is also not recommended, as this will contaminate any Freon servicing carts used in the future.

Trivia Question

• *Joe Austin*

The previous question was: **In the vacuum operated pressurization systems of models 500, 550 (non Bravo), S550 and 560, what is the primary function of the 3 micron cabin air filter that is located by the outflow valves?**

The answer: The filter is installed in the system to provide a "calibrated leak" to lower the vacuum intensity and provide a smoother operating system. The air ejector in the tailcone creates a vacuum of about 4.5 inches of mercury, which is far more that what the system requires to operate normally. The up side of it being too strong is that it starts the outflow valves opening at a faster rate during engine start to avoid a pressure bump. It does filter the air for the vacuum system, but very little airflow actually flows through the system.

This edition's question is: **What two functions is the speed sensor used for on the starter generator?**

The first 15 callers with the correct answer will receive a small gift. Call 800.525.2376 and ask for Joe Austin.