offer a replacement part or product must get a parts manufacturer approval from the FAA before that part is legal.

PMA Parts

According to FAR Part 45.15, PMA (parts manufacturer approval) parts must be marked with the letters FAA-PMA, name, trademark or symbol, part number, and name and model designation on which the product is eligible for installation. Parts such as a ball bearing, which are too small to be marked with an etching, must have a tag, even if it is only enclosed in a plastic bag with the part, or a similar method of identification. These methods of marking make it difficult for the unscrupulous dealer to sell unapproved parts to the aware aircraft owner.

When purchasing a part, to be certain of acceptability, you could ask for evidence of a PMA letter of approval listed by part number and eligibility for the type of product on which it may be used. Every FAA-PMA part will have one on file. Unfortunately, most distributors are unlikely to have such a letter, as it is issued to the manufacturer. Distributors might want to purchase a copy of the "Parts Manufacturer Approvals" publication from the U.S. Superintendent of Documents. Concerned aircraft owners could do the same, but the most practical course of action is simply to deal with an established and reputable dealer.

OEM Versus PMA Parts

Why should PMA parts be considered? Some manufacturers think they have come up with a better idea than the original manufacturer. They offer what they consider to be an improved part. To get a PMA, they must convince the FAA that the part is as good as the original and also must obtain an STC incorporating the changes or improvements.

There is quite a controversy between OEMs and PMA manufacturers. The problem isn't so much who makes the part. Airframe and engine manufacturers don't manufacture all of their own parts. It is not uncommon for an independent contractor to build a part under contract with the original manufacturer using the OEM blueprints and specifications. For instance, the pistons and rings that come with a new Continental engine actually are built to Continental's specifications by an independent contractor. The problem is that OEMs dislike replacement parts being built by another manufacturer as PMAs.

OEMs sometimes think PMA manufacturers typically do little or no research and testing of their own prior to getting FAA approval. Some manufacturers claim FAA enforcement of PMA quality control practices is not as strict as that for OEMs. But virtually all OEMs express concern about liability when their product is overhauled with PMA parts. It's a fact of life that when there's trouble with a component, the OEM gets sued, regardless of whose parts went in it during its last overhaul.

Some manufacturers would have you believe PMA parts are not as good as OEM, but FAA-sponsored independent research evaluating the PMA process found there was no significant problem with PMA parts. If you ask the average FAA airworthiness inspector if a PMA part is as good as an OEM, the answer is invariably, "Does the part have FAA-PMA on it? If so, it's as good as original."