

# SERVICE



# LETTER

Service Letter No. 161

February 13, 1951

TO: All Distributors and Dealers

SUBJECT: "Duraclad" Finish

We have received many inquiries relative to the new "Duraclad" finish on our 1951 Model airplanes. Inquiries which, when analyzed, boiled down to the following points:

- (A) What is the new "Duraclad" finish?
- (B) How does it compare with nitrate dope?
- (C) What methods are used to patch or refinish?

First of all, the name "Duraclad" is one which has been coined by the Piper Aircraft Corporation to identify the type of finish on our 1951 Models. Actually, "Duraclad" is a cellulose acetate butyrate dope.

Cellulose acetate butyrate dopes are unlike nitrate dopes in that there are several different types and, generally speaking, these types are not compatible with one another. Each dope manufacturer has its own formula which falls within a certain type classification and, consequently, it is of the utmost importance that repairs be made using the same dope as was the original finish. There will be attached to the firewall of all 1951 Model airplanes a placard identifying the manufacturer whose dope was used on the airplane.

We have been told that cellulose acetate butyrate dope will last three times as long as nitrate dope. However, we will be unable to verify this report until our "Duraclad" has been in the field for awhile. We do know, however, that "Duraclad" is fire resistant and will not support combustion by itself, whereas nitrate dope will burn rapidly. We also know that "Duraclad" has a much higher and more desirable gloss than nitrate dope, even though the coverage quality of "Duraclad" is approximately five per cent (5%) less than that of nitrate. Both dopes have approximately the same tautening qualities.

Patching or refinishing of an airplane with "Duraclad" should be done using approximately the same methods as used with nitrate dope. There are, however, a few variations and pointers which we would like to list:

(over)

**PIPER AIRCRAFT CORPORATION, LOCK HAVEN, PA., U. S. A.**

1. If a doubt exists about the type of dope on an airplane, try this simple test: Place a small amount of nitrate dope thinner on the surface in question. Rub the thinner in a small area with your finger. If the finish is a nitrate dope, it will soften very rapidly. If it does not soften rapidly the finish is more than likely butyrate.
2. Nitrate dope, if sprayed or brushed over a butyrate finish, will in most cases produce cracking in a very short time; however, butyrate dope may be sprayed or brushed over a nitrate finish with good results.
3. The normal drying time of a cellulose acetate butyrate dope is twice that of nitrate dope.
4. Refinishing with cellulose acetate butyrate dope should be done at temperatures of not less than 70<sup>0</sup>F. Low temperatures retard the drying action of the dope and if the temperature is low enough it may take several days for the finish to dry completely.
5. Never use nitrate materials with butyrate materials.

It is possible that, with the development of new materials, procedures may be changed to a considerable extent and when this happens, we will advise you at the earliest possible time

When shipping replacements from the Factory, all covered surfaces will be finished up to silver with nitrate dope. This will take care of stocking interchangeable parts in the field. Whenever parts are ordered and shipped for a specific airplane, the surfaces will be finished with the proper material.

It might be well to note that when ordering painted parts for the 1950 and 1951 Models, it is absolutely necessary to advise us of the serial number of the airplane.

"Duraclad" finishing materials are available through your regular sources, as well as through Piper Aircraft Corporation.

Very truly yours,

PIPER AIRCRAFT CORPORATION



Rolland Boardman  
Service Manager

RB:mh