

Mooney Mite Series M-13
Service Bulletin No. 14

Purpose:

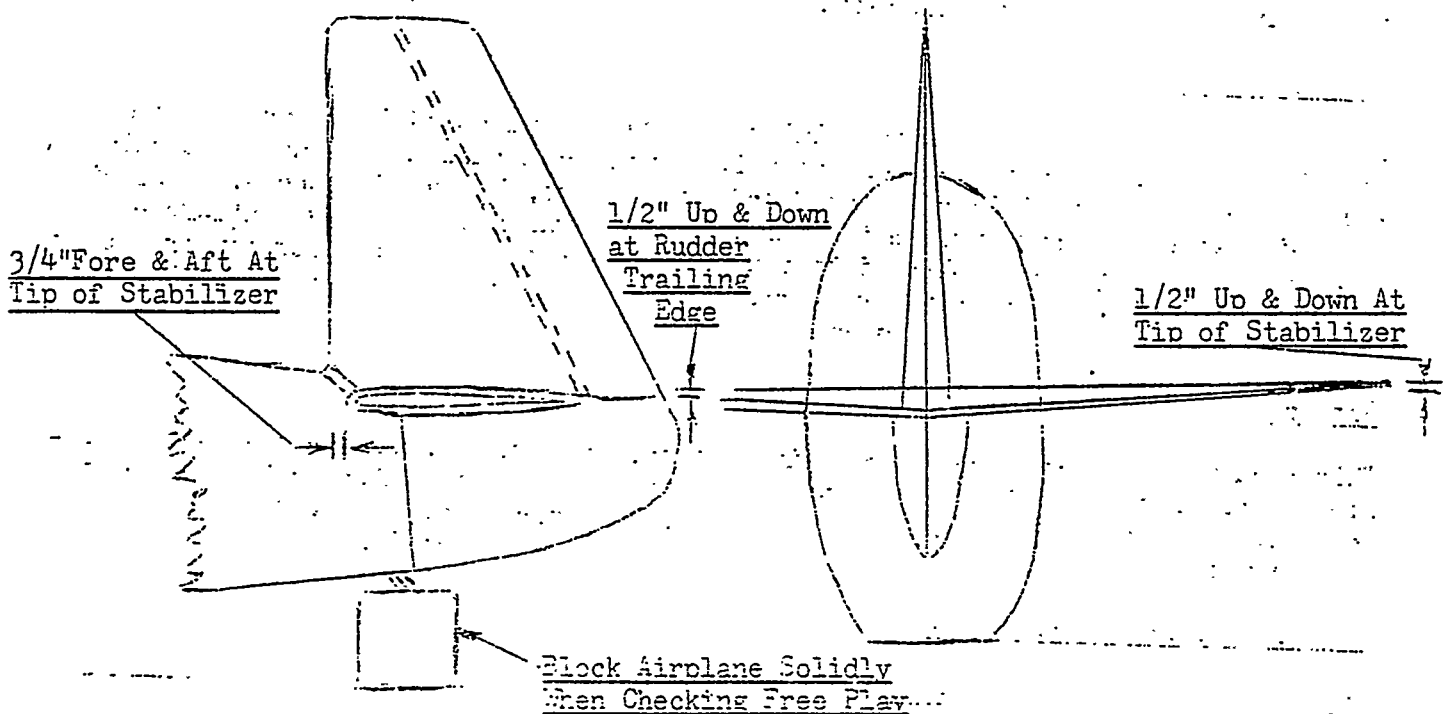
The purpose of this Bulletin is to provide information on the allowable free play of the tail surfaces of the subject model aircraft and such other information concerning bushing wear, etc., as is necessary to correct an unsatisfactory condition found on several airplanes, which if allowed to continue, could perhaps result in a dangerous situation.

Serial Number Affected

<u>Model</u>	<u>Serials</u>
M-18L	2 to 82
M-18C	201 to 322
M-18LA	101 to 145
M-18C 55	323 to 357

Allowable Free Play Limits

The following sketch illustrates the maximum allowable free play at the specified points.



When checking stabilizer tip free play, either fore and aft or up and down, measure free play on the opposite tip from where the stabilizer is moved by application of hand pressure. This eliminates errors in measuring due to bending deflections of the stabilizer itself.

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Procedure

First inspect all tail surface joints and attachment bolts for tightness. All Bolts Should Be Tight, since bushings are intended to take the wear. If any bolt is loose, inspect for wear, and replace if necessary, using washers if required, and make sure all bolts are tight. Then block tail of airplane solidly and check free play as indicated by sketch.

If dimensions are within limits, there is nothing further to be done, except to be sure in the future to see that bolts are tight and free play limits are not exceeded at regular periodical airplane inspections.

If any or all of free play limits are exceeded, find which joint or joints seem to have most play and replace bushings until free play is within limits. In this connection, the up and down free play at the rudder root trailing edge is also affected by wear in the adjustable stabilizer trim system, particularly for the Model M-18L, where the 886 screwjack, located at the rear fuselage bulkhead, may exhibit excessive end play. In this case, either replace or rework the screwjack to eliminate the excessive end play.

General Notes

In most cases if play exceeds the limits it will be found that bolts are loose or have been loose, allowing wear on the bolts or attaching lugs. The main attaching bolts through the stabilizer may be found to be loose, in some instances. Replacing the main attachment bushings on the earlier models which did not have anti-friction bearings and getting all bolts tight usually will bring the stabilizer tip free play within the limits. If bushings or parts such as the screwjack are needed, they are readily obtainable from the factory.

Summary

This required inspection and corrective action, if required, will prevent any possible trouble resulting from excessive free play at the tail surfaces of the subject models. The information provided also serves as future service and inspection data for personnel responsible for the maintenance of these aircraft.

Bearing And Screwjack Summary

<u>Model</u>	<u>M-18L</u>	<u>M-18C</u>	<u>M-18LA</u>	<u>M-18C 55</u>
Plain Mounting Bushings	2 to 82	201 to 277	101 to 135	-
Needle Mounting Bearings	-	278 to 322	136 to 145	323 to 357
P/I 886 Screwjack*	2 to 82	-	-	-

*Supply Drawing 886 to owners of M-18L airplanes.

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