

No. 64-10

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## NEW SHIMMY DAMPENER FOR THE MUSKETEER

### MODELS AFFECTED: All Model 23.

A larger shimmy dampener with attaching components is now available for the Musketeer as a replacement for the original shimmy dampener. The new shimmy dampener is designed to dampen any shimmy before it can progress. It is a sealed unit requiring no maintenance and incorporates orifices allowing smooth operation without voids or skips at temperatures of  $-40^{\circ}\text{F}$  to  $160^{\circ}\text{F}$ . It is particularly recommended where rough or unsurfaced runways tend to induce shimmy.

Installation of the new shimmy dampener may be accomplished as follows:

1. To make modification work easier, it is recommended that the propeller and nose cowling be removed.
2. Remove the bolts securing the shimmy dampener and discard the dampener.
3. If nose wheel steering is installed, disconnect it from the adapter plate.
4. If installed, remove the shimmy dampener anchor blocks from the engine mount and discard.
5. Remove the shimmy dampener adapter plate at the strut and discard.
6. On Musketeers prior to M-469, except M-2 and M-340 thru M-347 that do not have the travel stop installed, position and locate the travel stop on the strut flange approximately  $3/4$  inch from the vertical engine mount tube (refer to illustration) and clamp the travel stop to the flange.
7. Adjust the travel stop to allow  $40^{\circ}$  nose wheel travel in either direction from neutral. Use the three holes in the travel stop to mark location holes on the strut flange.
8. Remove the clamp and travel stop and use an angle drill and a  $11/64$  inch bit to drill the holes through the strut flange.
9. Smooth and burr the holes in the strut flange and

secure the travel stop to the strut flange with three AN525-10-10 screws, three AN960-10 washers and three AN364-1032 nuts.

10. Attach the new adapter plate to the strut.

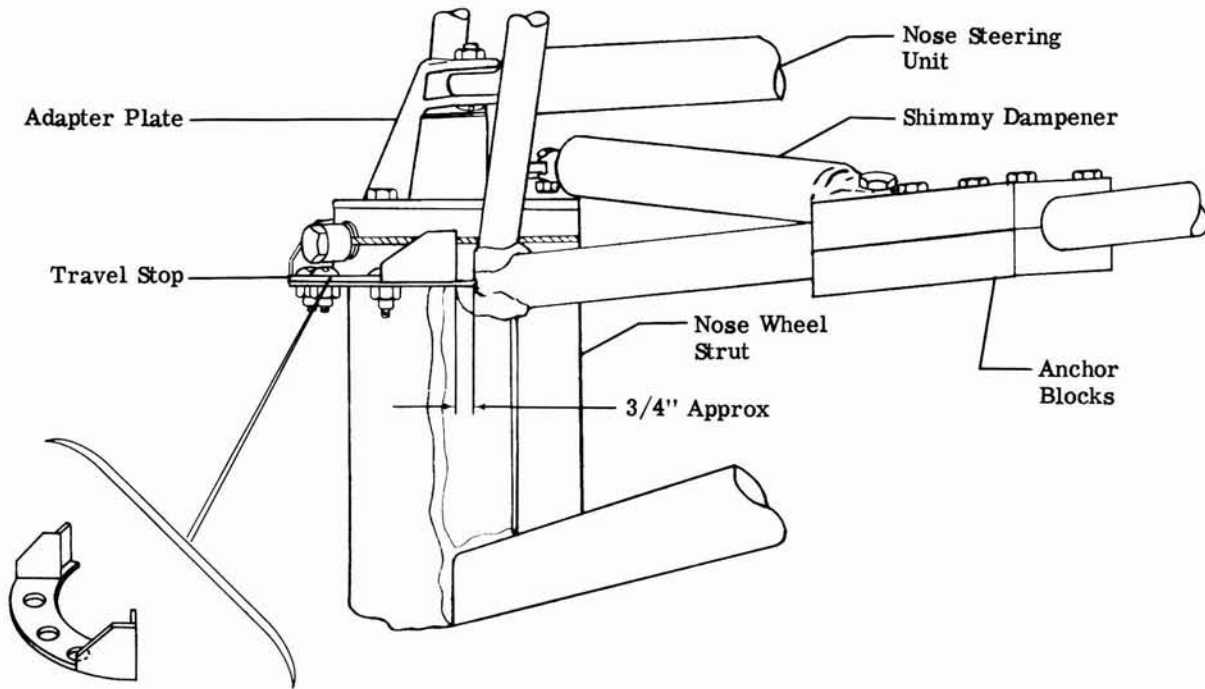
### NOTE

Discard one existing attaching bolt in the area of increased adapter plate thickness and install an AN73A-13 bolt.

11. Attach the shimmy dampener anchor blocks to the engine mount and secure with four AN4-14 bolts, four AN960-416 washers and four AN365-428 nuts. (Do not fully tighten the bolts at this time.)
12. Place the AN316-6R check nut and the 169-810023-1 clevis on the shimmy dampener piston rod.
13. Attach the clevis end of the shimmy dampener to the adapter plate on the strut and secure with an AN23-14 bolt, AN960-10 washer, AN320-3 nut and an AN380-2-2 cotter pin.
14. Attach the other end of the shimmy dampener to the anchor blocks on the engine mount with an AN6-30 bolt, three AN960-616 washers and an AN365-624 nut. At this point, adjust the anchor blocks on the engine mount to allow the nose wheel to rotate to the  $40^{\circ}$  stop positions on the travel stop and so that the shimmy dampener will not bottom out in either direction of travel. Fully tighten the anchor block bolts at this time.
15. Check the clevis at the attaching plate to assure no binding exists during nose wheel travel.
16. Connect the nose wheel steering unit (if installed) to the new adapter plate.
17. Reinstall the nose cowling and propeller if they were removed. The propeller should be installed as indicated in the Owner's Manual.

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The following parts are required as noted:

PART NUMBER	NOMENCLATURE	QUANTITY
169-380029	Shimmy Dampener	1
169-810000-63	Travel Stop	1 (if req)
169-810022-1	Adapter Plate	1
169-810023-1	Clevis	1
169-810023-17	Anchor Block	1
169-810023-19	Anchor Block	1
AN525-10-10	Screw	3 (if req)
AN960-10	Washer	3 (if req)
AN364-1032	Nut	3 (if req)
AN4-14	Bolt	4
AN960-416	Washer	4
AN365-428	Nut	4
AN316-6R	Check Nut	1
AN23-14	Bolt	1
AN960-10	Washer	1
AN320-3	Nut	1
AN380-2-2	Cotter Pin	1
AN6-30	Bolt	1
AN960-616	Washer	3
AN365-624	Nut	1
AN73A-13	Bolt	1