SERVICE BULLETIN

Seabee Service News

REPUBLIC AVIATION CORPORATION
FARMINGDALE, LONG ISLAND, NEW YORK
SERVICE DEPARTMENT

JANUARY 16, 1947 **MANDATORY CHANGE** SERVICE BULLETIN NO. 6

INSPECTION OF RIVETS – ELEVATOR CONTROL COLUMN

(This Service Bulletin has C.A.A. (FAA) Approval)

REASONS FOR INSPECTION:

Some Seabees have been delivered with four 5/32" diameter rivets and some with four 3/16" diameter rivets at the forward end of the elevator control push-pull tube. Although with the 5/32" rivets ample margin of safety exists for flight, it is possible to shear these rivets if some unusual stress, such as a heavy vertical load which places excessive torque on the rivets, is exerted on one of the control wheels. Should this occur and not be noticed, a dangerous condition will exist. To prevent this from occurring, the part in question must be inspected as outlined below.

AIRPLANES AFFECTED:

All Republic Serial Numbers between 5 and 234 inclusive should be inspected. Serial No. 235 and subsequent airplanes have been modified at the factory.

DESCRIPTION OF INSPECTION:

Inspect the rivet heads attaching the forked fitting at the forward end of the push-pull tube in front of the instrument panel. If 3/16" rivets have been used the rivet head diameter is .390" (25/64"). If 5/32" rivets have been used the rivet head diameter is .312" (5/16"). It is recommended that a pair of outside calipers or dividers be set for .390" and used to check the rivet head diameter.

To inspect rivets for looseness, move the control wheel vertically (being certain not to exert too much force) and watch the connection between the push-pull tube and the forked fitting for signs of relative movement.

ACTION REQUIRED:

If the installation has been made with four 3/16" diameter rivets and no looseness is apparent, it can be considered safe to continue flights with no further action. If the rivets appear loose, the tube should be removed and the rivets or control column replaced as per attached instructions before the next flight.

If the installation has been made with four 5/32" diameter rivets and no looseness is apparent, the assembly may be reworked as per attached instructions or flights continued and the Service Department, Republic Aviation Corporation notified so that a replacement part can be forwarded immediately. However, preflight inspections should be made and the modification should be accomplished as soon as possible. If the rivets are loose, the tube should be removed and the rivets or control column replaced as per attached instructions before the next flight.

The rework calls for six 3/16" diameter rivets in place of the original four as an added safety precaution.

REQUIRED PARTS:

Should it be necessary to replace the control tube, order the following from your local dealer or distributor and it will be furnished at no cost to you, provided the replaced control tube is promptly returned to Republic Aviation Corporation. The installation will be made free of charge on all airplanes within warranty at the time of the modification.

SERVICE BULLETIN KIT NO. 6 consists of the following:

QUANTITY	PART NO.	PART NAME
1	1218	Tube Assy.-Control Wheel Horizontal

W. H. EHMANN
SERVICE MANAGER

REMOVAL, REWORK AND REINSTALLATION OF ELEVATOR CONTROL TUBE ASSEMBLY

A. REMOVAL

1. Remove co-pilot's control wheel assembly.
2. Remove top of dust cover fairing on pilot's control wheel yoke.
3. Unsafety and disconnect chain on pilot's side of control yoke and clear sprocket on torque shaft assembly.
4. Remove three (3) AN502-416-8 Fillister head screws that secure yoke to push-pull tube.
5. Remove yoke and pilot's control wheel assembly.
6. Remove two (2) ¼" clevis head bolts at forward end of push-pull tube.
7. Remove torque tube connection from universal socket on forward end.
8. Remove push-pull tube assembly by pulling it forward through instrument panel.

B. REWORK (Only if entire modification is accomplished in field.)

NOTE: Before riveting, place tape over bushings on fork collar to prevent same from being shaken out.

1. Remove torque tube shaft inside of push-pull tube by removing pin and sprocket on aft end of assembly and pulling torque tube shaft out forward end of tube.
2. Four (4) rivets holding the forked fitting on forward end of push-pull tube, if found to be 5/32", will be replaced with 6 (six) 3/16" rivets, AN456-AD6-6. If four (4) 3/16" rivets are already installed two (2) additional 3/16" rivets may be added (one on each side evenly spaced).
3. Check for satisfactorily formed riveted heads, then reassemble torque shaft and sprocket.

C. REINSTALLATION

1. Install reworked push-pull tube assembly through instrument panel from forward side.
2. With ailerons in neutral set half moon on rear sprocket of tube assembly in vertical position (to match co-pilot assembly when installed).
3. Insert universal square into mating socket of pulley.
4. Install two (2) ¼" clevis bolts, shear nuts and safety (tighten snug then back off one castellation).
5. Install yoke with three (3) AN502 screws and pilot's control wheel. Connect chain making sure wheel is horizontal and ailerons are in neutral. Check for proper aileron travel in both directions and correct tension of chain (tight with free movement of wheel).
6. Safety chain and fasten dust cover and reinstall co-pilot's wheel and pin.

D. Make proper entry in log.

If you have sold your airplane, please forward this bulletin to the present owner.

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