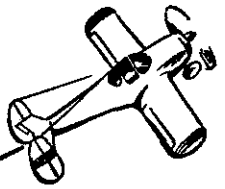
Ercoupe BULLETIN

ERCOUPE SERVICE BULLETIN No. 19



SUBJECT: Filter Assembly—Modification of

Interference of the baffle with the filter element within the carburetor filter assembly, resulting in a jamming of the throttle and a lack of proper carburetor heat control, has been reported. This is caused by the filter element slipping back into the travel arc of the baffle, interfering with throttle operation. It may be followed by the baffle control arm slipping on the baffle shaft. Effective Serial numbers 113 to 2749, inclusive, a wire type filter element was installed. A new type non-metallic filter element (415-40533-10), which is somewhat thinner, has been installed in Ercoupes, Serial numbers 2750 and subsequent. The filter assembly using the new type filter element has recently been modified with three dimples to hold this thinner element from slipping too deep into the filter assembly element recess. It is recommended that all the filter assemblies with old type elements (Serial Nos. 113 to 2749, inclusive) and the filter assemblies, with new type elements (Serial Nos. 2750 and subsequent), without the three retaining dimples, be modified. The filter baffle control arm was attached to the baffle shaft with an elastic stop nut on a few Ercoupes (Serial Nos. 1600 to 4400). This should be changed to a welded attachment on these airplanes at time of this modification. It is recommended that this Bulletin be complied with as soon as possible but no later than the next 25 hour check.

1. *Removal of Filter Assembly:*

a. Remove filter assembly as follows:

(1) Slide carburetor heat flexible tube from filter after removing the three round head sheet metal screws, No. 4 x 3/8".

(2) Disconnect manual carburetor heat control (415-51071) by straightening end of wire, removing brass wire guide, (415-40528) and removing elastic stop nut and screw in clip (415-40400-48) at rear bracket.

(3) Disconnect throttle control (415-51048) from filter lever assembly by removing castle nut, washers, and bolt.

(4) Disconnect oil breather tube support from filter by removing elastic stop nut and screw.

(5) Cut safety wire and remove four castle nuts attaching filter assembly to carburetor.

(6) Slide filter assembly from carburetor base studs and remove from airplane.

2. *Disassembly of Filter Assembly:*

a. Slide element from filter assembly after removing elastic stop nut, screw, and element clamp.

3. *Modification of Filter Assembly:*

a. Install bolt (AN3-54A) as follows:

(Ref. Page 2, Fig. 1) (Ser. Nos. 113 to 2748, inclusive).

(1) Drill two No. 11 holes through the centerline of the filter assembly in the vertical plane, 3/16" forward of the element retainer flange. On the filter assemblies that are formed with a flange in this plane, the holes should be located about 10° off the vertical to clear the flange.

(2) Install bolt (AN3-54A), with hexagon head at top of filter and secure with elastic stop nut (AN365-1032).

(3) Check travel arc of baffle for interference with bolt. If the baffle touches bolt, file forward end of baffle until adequate clearance is obtained.

(4) Insert filter element, and secure with original clamp, screw and elastic stop nut. The stop nut may be replaced by an anchor nut which will simplify removal of the filter element when filter is in place.

b. Modify Baffle Control Arm (415-40530) where applicable as follows:

(Ref. Page 2, Fig. 1). Approx. Serial Nos. 1600 to 4400).

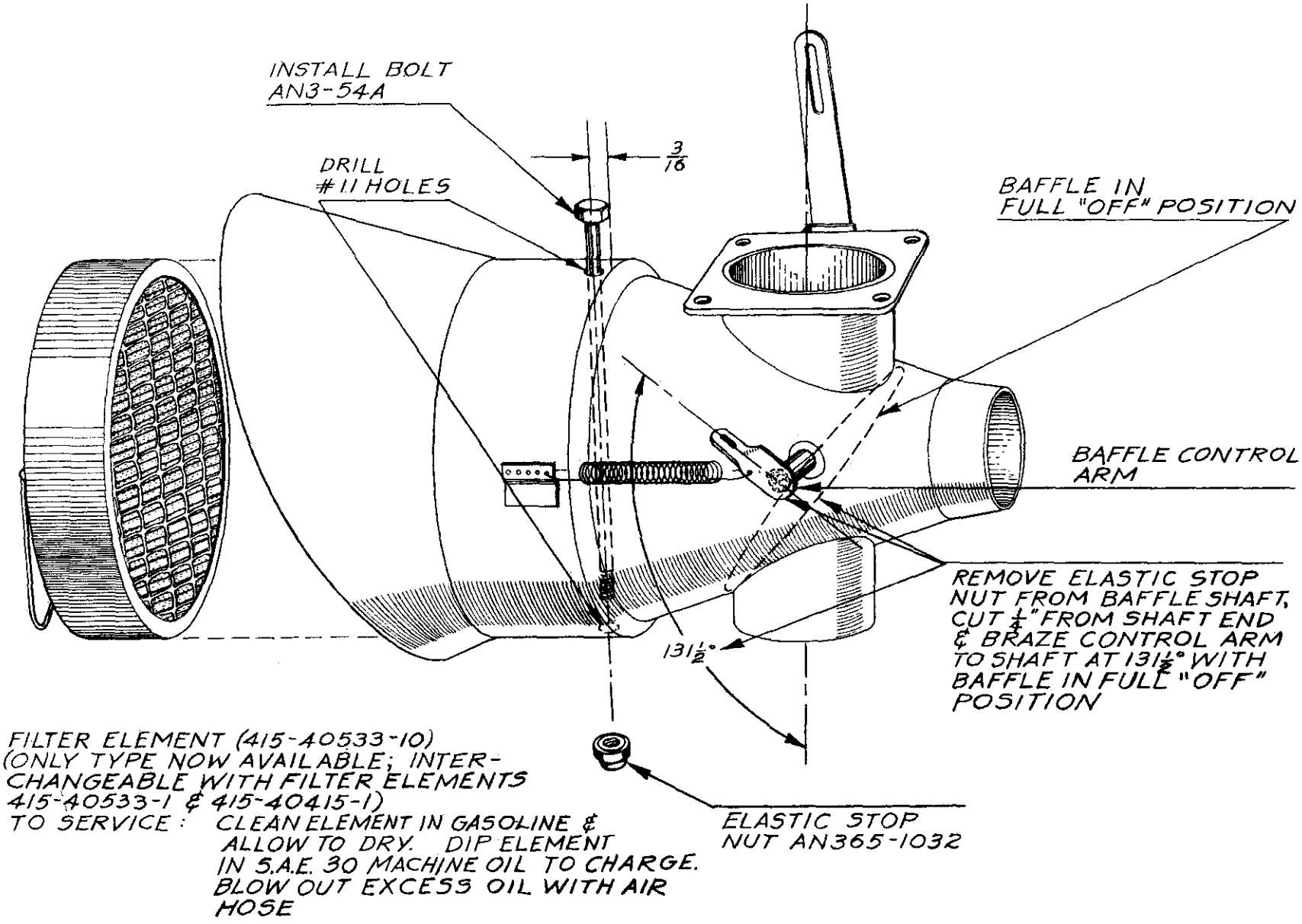
(1) Remove baffle control arm after unscrewing elastic stop nut from baffle shaft.

(2) Cut ¼" off the threaded end of baffle shaft.

(3) Braze baffle control arm to shaft at 90° to baffle. With the baffle in the full off position, the arm is 131½° to the vertical centerline. (See illustration)

4. Reinstallation of Filter Assembly:

a. Reinstall filter assembly in reverse order of Paragraph 1. The brass wire guide used on the hot air manual control should be clear by 1/32" when the throttle is full open. The filter baffle arm on right side of filter assembly must have an over-travel clearance of 1/32" when the throttle is in the full idle position. This clearance is adjusted by relocating the carburetor throttle arm.



MODIFICATION OF FILTER ASSEMBLY

FIG. 1