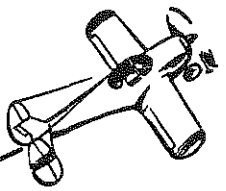
Ercoupe MEMORANDUM

ERCOUPE SERVICE MEMORANDUM No. 31

SUBJECT: Fuel System Operation



1. The fuel system in the Ercoupe was designed to incorporate simplicity and safety in operation, however, due to unforeseen operational difficulties and failures which have occurred in the field, it has now been deemed necessary to redesign certain parts of the system. The basic operation has, however, remained unchanged. In order that there is a complete understanding of changes, operation and maintenance of the fuel system, the following discussion is supplied.

2. The fuel system is entirely automatic as long as the fuel pump is operating. In the event of a fuel pump failure, there is no fuel being transferred from the wing tanks to the fuselage tank. After such a failure, the fuel available for continued engine operation is limited to the capacity of the fuselage tank.

3. Subsequent to Serial Number 2623, fuselage and wing gas tanks constructed of aluminum have been employed in the Ercoupe. This change was made to improve the quality of the tanks, render more satisfactory service, and to save weight. A description of both the ternplate tank and the aluminum, will be discussed in this memorandum. They will be referred to as a "ternplate tank" and "aluminum tank," as the case may be, even though ternplate tanks have been superseded by stainless steel for replacement purposes.

Wing Tanks:

4. The capacity of either type wing tank is nine (9) gallons of fuel. The two sides are inter-connected with aluminum tubing. The fuel pump transfer suction line is connected to that inter-connection with a "tee" fitting. A shut-off valve is provided in the pump suction line above this tee. This valve and tee are located in front of the right hand seat, near the floor. It should be kept in the open position, except for emergencies such as line failure.

5. Tanks fabricated of stainless steel are being shipped on parts orders in lieu of the ternplate tanks. The stainless steel tanks are interchangeable with the ternplate tanks. All Ercoupes Serial Numbers 813 to 2622 inclusive, can be altered by certain modifications to take aluminum wing tanks. This installation will be described in detail, in a separate publication.

6. The fuel quantity gauge on the ternplate tank installations is located in the right wing tank and it consists of a float type indicator, encased in a plastic tube. It is marked full, half full, and empty. This gage may give false readings due to improper venting, chiefly the error is reading half full in flight when more than half full of gas. This can be remedied on Ercoupes Serial Numbers 513 to 2623, by complying with the following procedure:

Affected part—415-48089—Vent Assembly

1. Remove 6 x 32 screw and nut which attaches vent to the right side of the fuselage.
2. Break the vent loose from the gage tube by turning the vent.
3. Realign the vent, by lowering the forward end, until it lies in a position from 40° to 45° with relation to the external longeron.
4. Drill a No. 28 hole through the fuselage skin, using the vent plate as a guide.
5. Insert the same 6 x 32 screw that was removed in operation No. 1.
6. Reseal vent to plastic gage tube by using clear nitrate dope, or any suitable cellulose cement. (See illustration No. 1.)
7. Close the original hole with a rivet.

The vent tube (part No. 415-48089) may be installed on Ercoupes prior to Serial Number 513. The following procedure may be used to make the installation:

1. Mark hole center on fuselage skin and wing tank gage tube.
   a. Locate vertical center line of gage tube. Transfer center line to fuselage skin.
   b. Draw line 1/4" below the top of the gage tube. Transfer it to the fuselage skin.
2. Remove gage from the right wing tank.
3. Drill hole (No. 12 drill) in the fuselage skin at point located in operation No. 1.
4. Drill hole (No. 12 drill) in the gage tube, 1/4" below top.
5. Replace gage tube on tank.
6. Insert vent through outside of ship and follow directions 3, 4, 5, and 6 of the procedure used for aligning the vent.

7. The fuel quantity gage in the aluminum wing tank is different from the one used in the ternplate tank. The new gage is mechanical and is operated by a float resting on the surface of the fuel, which moves a marked dial, showing the amount of fuel in the tank. This gage is located in the left wing tank where it extends into the cabin forward of the seat.

8. Reports from the field state that these gages can become inoperative due to the rusting of the working parts in the gage. It is recommended that all of the new type fuel gages be periodically inspected and if, after such inspection, the gage is found to be rusted, it should be replaced or repaired. If the latter procedure is desirable, the following information is supplied to aid in making repairs.

1. Remove the gage from the tank, which gage is held in place by 12 screws, (AN 520-4-6).
2. Disassemble the gage and remove all of the rust from the affected parts.
3. Paint these parts with zinc chromate or spar varnish, and allow paint to dry thoroughly.
4. Reassemble the gage.
5. Prior to replacing the gage in the tank, remove all traces of the original sealer, (EC-570, product of the Minn. Mining and Mfg. Corp.) from the parting surfaces of the gage and the tank. If the original material used for a sealer is not available, Permatex or similar gasket cement may be used.
6. Replace the gage, using some of the sealing cement to secure screws.

9. It has been the experience of some Ercoupe owners and operators that line mechanics put the wing tank caps on backwards. To prevent malfunctioning of the fuel system, it is imperative that the caps be put on the tanks with the vent hole to the front. This provides venting of each wing tank and will prevent syphoning or unequal flow of the fuel. Unequal flow may result in the fuel pump being unable to transfer all of the fuel from the wing tanks to the fuselage tank.

10. It is recommended that the wing tank cap be marked in a manner to indicate proper positioning. A painted red line on the wing behind the cap to match a painted sector on the cap should be used. The painted sector on the cap should extend from the point of engagement to the locked position, as indicated on accompanying sketch No. 2.

11. On Ercoupes subsequent to Serial Number 2623, the filler neck and cap combination is foolproof and the caps cannot be put on backwards.

12. The sealing of the cap gasket also affects proper venting. If difficulty is experienced in attaining a good seal of the gas cap, which is an unmachined casting, the sealing surface may be filed smooth and the gasket cemented to this surface. Should there be an excessive amount of solder on the filler neck sealing surface, it may also be removed by filing.

13. A more suitable gasket, made from a synthetic rubber "Neoprene" (sponge rubber) will be available soon. The oil sump gage gasket (Continental Motors Corp. Part No. 22404) has also been found to provide a satisfactory substitute for our gas tank cap seal.

14. The capacity of the ternplate fuselage tank is five gallons; the aluminum fuselage tank will hold six gallons of fuel. The fuselage ternplate and aluminum tanks *are not interchangeable.* However, stainless steel tanks can be installed in place of the ternplate fuselage tanks, without modification, and should be so used. (See Service Policy Letter A-4).

15. The line that feeds fuel, by gravity, from the fuselage tank to the carburetor is connected to the fuselage tank through a shut-off valve and tank finger strainer. This valve on the ternplate tank has a position selector on the instrument panel, whereas the valve on the aluminum tank may be turned on or off by reaching under the left side of the instrument panel. This valve is for emergency purposes and should not be used to shut off the engine.

FUEL PUMP, FILTER, AND PLUMBING:

16. The fuel in the wing tanks is transferred to the fuselage tank by a fuel pump that is mounted on the engine. A restricted fitting is located on the outlet side of the fuel pump, and limits the output of fuel to a quantity slightly in excess of the requirements of full throttle operation.

17. A return, or overflow line is provided in the fuselage tank. This line will return to the wing tanks any fuel that is pumped into the fuselage tank in excess of its capacity. Excess fuel is returned to the right wing tank with the ternplate fuselage tank and to the left wing tank with the aluminum fuselage tank.

18. A sediment bowl type filter is located in the gravity fuel feed line. Its function is to accumulate any water or foreign matter that might otherwise enter the carburetor. The bowl is detachable for cleaning. This should be included on the daily inspection sheet. The bowl should be safetied after cleaning.

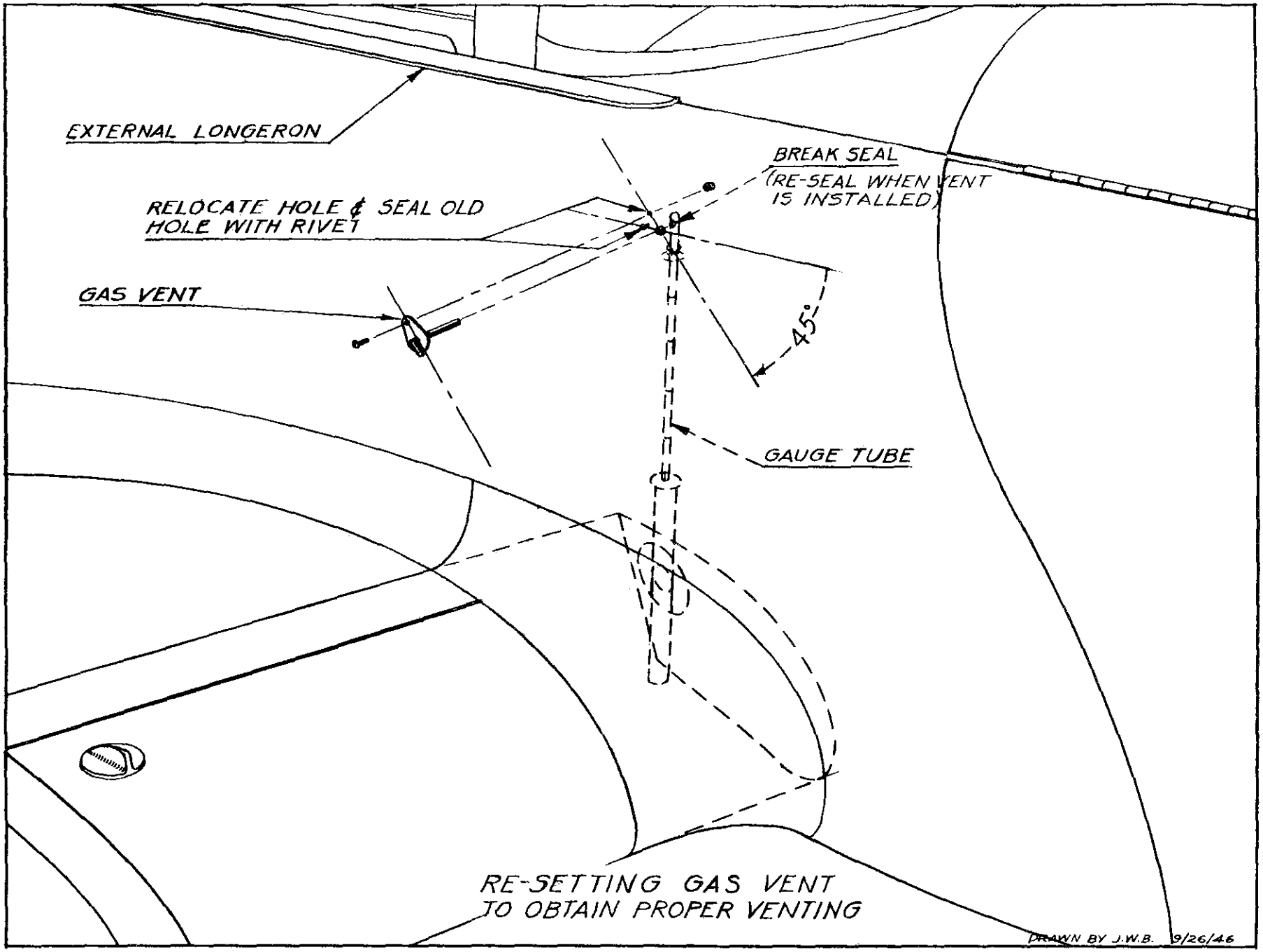

EXTERNAL LONGERON
BREAK SEAL
(RE-SEAL WHEN VENT
IS INSTALLED)
RELOCATE HOLE & SEAL OLD
HOLE WITH RIVET
GAS VENT
45°
GAUGE TUBE
RE-SETTING GAS VENT
TO OBTAIN PROPER VENTING
DRAWN BY J.W.B. 9/26/46

FIG. #1

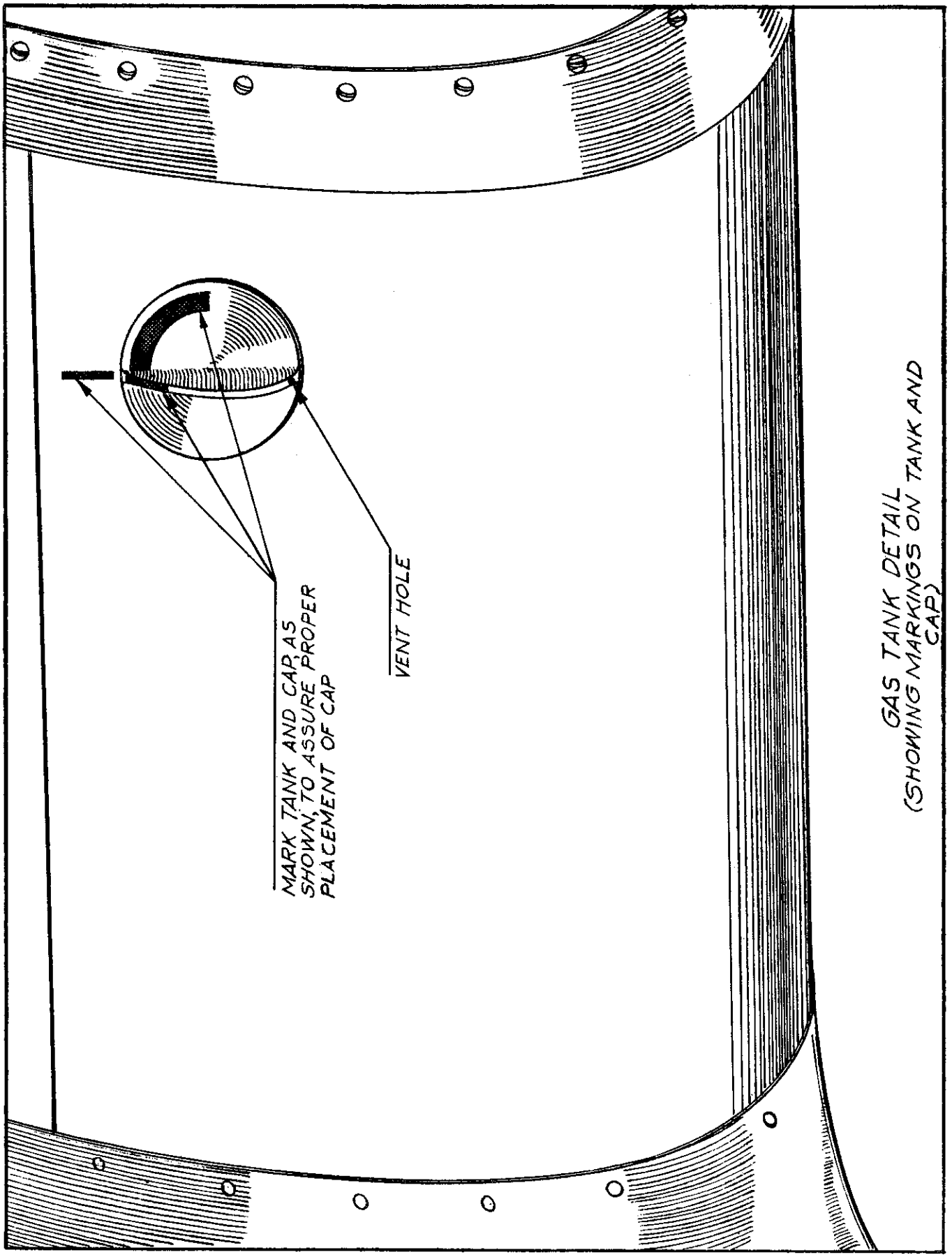

MARK TANK AND CAP, AS SHOWN, TO ASSURE PROPER PLACEMENT OF CAP
VENT HOLE
GAS TANK DETAIL
(SHOWING MARKINGS ON TANK AND CAP)

FIG. # 2

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ERCOUPE SERVICE BULLETIN NO. 36

THROTTLE CABLE INSPECTION

Engineering Aspects of this Bulletin are FAA Approved

DATE: September 1, 2014 Revision None

SUBJECT: Visual inspection of the throttle cable and housing for fatigue and possible cracking.

MODELS AFFECTED: Ercoupe 415-C (s/n 1 – 4423), or other Ercoupe models using a Shakespeare style push-pull throttle assembly.
All Alon A-2, A-2A aircraft
All Mooney M-10 aircraft

COMPLIANCE: Initial inspection required within the next 12 calendar months or annual inspection, whichever occurs first.

Recurrent inspection is required at each annual inspection.

Univair Aircraft Corporation Considers Compliance with this Service Bulletin Mandatory.

PERSONNEL: **IMPORTANT:** All work and inspections required by this Service Bulletin are to be performed by a properly rated and equipped certified mechanic or repair station with experience in the work, use of equipment, inspections, and repairs listed.

STATEMENT OF DIFFICULTY:

There was a single field report of the Ercoupe throttle cable assembly outer housing failing at the point where it is swaged onto the steel tube just behind the instrument panel. This is the Shakespeare type push – pull throttle cable, part number 415-51048.

This Service Bulletin does not apply to the later model Ercoupe and Forney aircraft that use the quadrant style throttle control.

When the integrity of this type of throttle control assembly is compromised, there may be a loss of control to the throttle shaft on the carburetor. This will result in the inability of the pilot to control the carburetor setting and thus, engine output.

Procedure:

The following procedure is used to verify the integrity of the throttle cable assembly:

1. Verify positive movement of the throttle control from the cockpit. i.e. When the throttle is pushed forward, the throttle arm on the carburetor moves accordingly. Likewise, when the throttle is pulled back, the throttle arm on the carburetor moves accordingly.

2. Inspect the throttle cable assembly behind the instrument panel, paying particular attention to that portion of the housing that is swaged, or crimped, onto the flexible housing. Check for any possible wear, cracking, or unusual bends in the housing. Inspect the entire length of the throttle control assembly. Pull on the flexible housing to verify the security of the swaged portion.

3. Insure that the hole where the cable goes through the firewall is properly sealed.

4. Inspect the throttle control assembly where it exits the firewall into the engine compartment. Again, check for any possible wear, cracking, or unusual bends in the housing.

5. If any irregularities are found, Univair recommends replacing the unit with a new one.

6. Insure that the throttle clamp, Ercoupe part number 415-40506 or Alon/Mooney part number A40709-1, is properly attached and retaining the throttle control as designed.

7. Verify that the throttle cable is securely fastened at the throttle arm on the carburetor.

8. When the throttle control assembly inspection has been accomplished, make the appropriate logbook entry stating that Ercoupe Service Bulletin 36 has been complied with.

CONTINUED MAINTENANCE:

Inspect and verify the integrity of the throttle cable assembly per Service Bulletin 36 during each annual inspection.

INFORMATION AND PARTS AVAILABILITY:

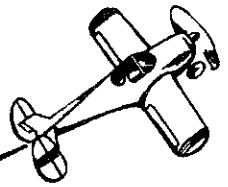
Contact Univair Aircraft Corporation for the following replacement parts:

Ercoupe throttle control assembly, part number 415-51048
Ercoupe throttle clamp, part number 415-40506

Alon throttle control assembly, part number F-51320
Alon throttle clamp, part number A40709-1 (supplied under Mooney part number 600318-001)

Ercoupe BULLETIN

ERCOUPE
SERVICE
BULLETIN
No. 24B



SUBJECT: Replacement of aluminum fittings between carburetor and steel or brass fittings.

January 29, 2002

The Technical aspects of this Service Bulletin are FAA approved.

SERVICE BULLETIN NO. 24B

DATE: January 29, 2002

SUBJECT: Replacement of aluminum fittings between carburetor and gascolator with steel or brass fittings, verification of gascolator braces, and installation of new gascolator.

This Bulletin supercedes Ercoupe Memorandum No. 52 and Ercoupe Bulletins No. 12, No. 24 and No. 24A

MODELS AFFECTED: All Ercoupe 415-C, 415-CD, 415-D, 415-E and 415-G aircraft with gascolator connected to carburetor.
All Forney F-1 and F-1A aircraft with gascolator connected to carburetor.

COMPLIANCE: Mandatory before further flight.

STATEMENT OF DIFFICULTY:

A few failures have been reported of the nipple AN911-2D (aluminum), located between the gascolator and the steel or brass elbow in the carburetor. These failures may have been caused by improper installation of this nipple, either by incorrect alignment or excessive tightening. If the elbow between the gascolator and carburetor is not steel or brass, it may also fail. The elbow in the carburetor inlet should be made of steel or brass. In the intervening years since Ercoupe and Forney aircraft were produced, many aircraft had the factory installed gascolator braces removed without authorization, which can also put appreciable strains on the nipple and elbow.

All Ercoupe and Forney aircraft with the gascolator attached to the carburetor must have double support for the inlet end of the gascolator. This support will overstress the connection between the gascolator and elbow if the system is

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Dear Ercoupe/Forney Owner:

The attached Service Bulletin No. 24B, dated January 29, 2002 supercedes Service Bulletin No. 24A, dated August 22, 1986, Service Bulletin No. 12 and Service Memorandum No. 52. Service Bulletin No. 24B is referenced in AD 2002-16-04. AD 2002-16-04 supercedes AD 46-38-03 and AD 86-22-09.

Service Bulletin No. 24B applies **only** to aircraft with the gascolator attached to the carburetor whether the carburetor is a Marvel-Schebler or a Bendix-Stromberg type. *Aircraft with the fuel gascolator mounted on the firewall are not affected by AD 2002-16-04 or Service Bulletin No. 24B.* Where AD 2002-16-04 lists what airplanes are affected by this AD and says airplanes that "have the gascolator connected to the side of the carburetor", this means either the left side (Marvel carburetor) or the rear side of the carburetor (Stromberg carburetor).

Note: Ercoupe 415-C, 415-CD, 415-D, 415-E, 415-G and Forney F1 and F1A aircraft with gascolators mounted on the firewall were altered from factory original configuration and the approval basis for these alterations should be reviewed.

You can see in AD 2002-16-04 the stated problem that the AD addresses is "because of the current airplane design configuration (aluminum fuel line nipples, aluminum fuel line elbows, and/or no double support tubes on the gascolator)". We must emphatically state that this is not the case. Service Bulletin 24B mandates that the aircraft must comply with the current design configuration which calls for steel or brass fuel line elbows and nipples as well as the installation of the double support tubes. In other words, the aircraft must comply with the current design configuration to meet the requirements of AD 2002-16-04 and Service Bulletin No. 24B. Aluminum fittings used in the Ercoupe/Forney fuel systems outside the carburetor-gascolator attachment position are not affected by AD 2002-16-04 or Service Bulletin No. 24B.

Some Ercoupes have been converted by the installation of C90 or O-200 engines in place of the original C75 or C85 engines through the STC or field approval process. If your aircraft has one of these conversions, you are not exempt from the requirements of the AD or Service Bulletin if it has a carburetor mounted gascolator. You may be able to use one of the gascolator support kits listed in Service Bulletin 24B. If the gascolator is mounted on the carburetor in a manner different from the original method of gascolator installation, a form of gascolator support should be fabricated, installed, and FAA approved per the alternate methods of compliance provision of AD 2002-16-04. It is very important that the gascolator not be allowed to hang off the carburetor without proper support and brass or steel fittings and elbows.

Similarly, some aircraft owners have replaced the Bendix-Stromberg carburetors with Marvel-Schebler carburetors. The early Forney F1 aircraft, Serial Numbers 5600 through 5659, and all the Ercoupe 415 series aircraft were originally supplied with Bendix-Stromberg carburetors. To clarify which fittings and gascolator supports should be used on your aircraft see the following:

Aircraft with Bendix-Stromberg carburetors should use the parts listed in Service Bulletin No. 24B for Service Kit SK-76 or Service Kit SK-76G.

Aircraft with Marvel-Schebler carburetors should use the parts listed in Service Bulletin No. 24B for Service Kit SK-76F or Service Kit SK-76FG.

improperly aligned. The gascolator piping, braces, and bracket or clamp can be properly aligned using the instructions in this bulletin.

Improper alignment, removal of the support braces, and/or use of aluminum fittings between the gascolator and carburetor may lead to a failure of the gascolator, gascolator attach fittings, fuel line fittings, and/or carburetor. Such failure(s) may create a fuel leak leading to engine stoppage and/or fire.

The original gascolators on many Ercoupe and Forney aircraft have glass bowls. Although the glass bowls make it easy to see if any water or contaminants are present, most of them do not have any way of draining the water or contaminants out of them without removing the bowl. Also, replacement parts for the glass bowl gascolators are difficult or impossible to find. Univair therefore strongly recommends that the Univair U14330-002 fuel strainer assembly be installed if the existing gascolator is to be replaced. The U14330-002 fuel strainer assembly incorporates a drain valve to facilitate fuel sampling during aircraft preflight.

INSPECTION:

1. Open the left side cowling to gain access to the fuel gascolator.

2. Check the location of the gascolator. If the gascolator is mounted on the firewall, no further action is required. If the gascolator is connected to the carburetor with an elbow and nipple, turn fuel valves in the cockpit to OFF and continue to step 3.

3. Visually inspect the fuel line nipple and elbow located between the gascolator and the carburetor for cracks or incorrect alignment and replace as necessary. If the nipple is an AN911-2D (aluminum) fitting, replace it with an AN911-2 (brass or steel) fitting. If the elbow is aluminum replace it with a brass or steel elbow. The Ercoupe 415-C, 415-CD, 415-D, 415-E, and 415-G use an AN914-2 90° elbow. The Forney F1 and F1A use an AN915-2 45° elbow.

   DO NOT USE AN ALUMINUM FITTING BETWEEN THE GASCOLATOR AND CARBURETOR.

4. Remove the gascolator bowl and verify that a fine mesh strainer or screen is installed in the cap. Check the gascolator cap for cracks. If cracks are present, replace the gascolator. Check the gasket for condition and replace as necessary.

5. Verify that two support braces are attached to the inlet side of the gascolator. If one or both braces are missing, install the proper support braces before flying the aircraft. Operation of the aircraft without both of the support braces installed

may lead to a failure of the gascolator, gascolator attach fittings, and/or carburetor. Such failure(s) may create a fuel leak leading to engine stoppage and/or fire.

REPLACEMENT OF GASCOLATOR-TO-CARBURETOR FITTINGS:

1. Verify that fuel valves are OFF.

2. Remove fuel line from inlet to gascolator and gascolator support braces. Remove gascolator bowl.

3. Remove the gascolator cap and nipple from the elbow attached to the carburetor with a wrench on the nipple. Support the elbow connected to the carburetor while turning the nipple.

4. If the elbow is being replaced, remove the existing elbow from the carburetor and replace with one of the following: For Ercoupe 415-C, 415-CD, 415-D, 415-E, or 415G install an AN914-2 90° steel or brass elbow. For Forney F1 or F1A install an AN915-2 45° steel or brass elbow. Do not use Teflon tape or RTV on the threads of the elbow. Permatex Form-A-Gasket No. 2 or No. 3 or Titeseal is recommended. Tighten the elbow to 7 to 8 ft. lbs. Continue tightening only enough to properly align the elbow. Note: the carburetor or oil tank may have to be removed to remove and replace the elbow. Carburetor or oil tank removal and reinstallation should be accomplished in accordance with engine manufacturer's maintenance/overhaul manual.

5. If the nipple is being replaced, carefully support the gascolator cap and remove the existing nipple with a wrench. Replace with an AN911-2 steel or brass nipple. See Step 4 above for recommended thread sealant. Tighten the replacement nipple to not more than 7 to 8 ft. lbs.

6. Install the gascolator cap and nipple onto the elbow attached to the carburetor. Tighten to 7 to 8 ft. lbs. If torque is reached before the gascolator is aligned, continue tightening until proper alignment is obtained. Use a wrench on the nipple to align the gascolator. Do not turn the gascolator cap. Support the elbow while tightening the nipple to prevent damaging the elbow or carburetor.

7. Replace the gascolator support braces (see instructions for installation of support braces), gascolator bowl, and fuel line. Tighten the nut on the gascolator bale and safety wire the nut to the bale. Replace any rubber fuel line that appears brittle or cracked. Turn fuel valves ON and check for leaks.

REPLACEMENT OF GASCOLATOR:

1. If the gascolator needs replacement, Univair recommends the use of a Univair U14330-002 fuel strainer assembly in place of the original glass bowl gascolator. The U14330-002 includes a drain valve to check for water and contaminants during each preflight inspection of the aircraft. Univair Kit No. SK-76G includes a U14330-002 all metal fuel strainer assembly for installation on Ercoupe 415-C, 415-CD, 415-D, 415-E, or 415G aircraft. Univair Kit No. SK-76GF includes a U14330-002 all metal fuel strainer assembly for installation on Forney F1 or F1A aircraft. Univair Kits SK-76G and SK-76GF each contain a new gascolator bracket for attaching the gascolator to the gascolator support brackets.

2. Verify that fuel valves are OFF.

3. Remove fuel line from inlet to gascolator and gascolator braces. Remove gascolator bowl.

4. Remove the gascolator cap and nipple from the elbow attached to the carburetor with a wrench on the nipple. Support the elbow connected to the carburetor while turning the nipple.

5. Remove the bowl and the wire bale from the U14330-002 fuel strainer assembly.

6. Install the gascolator bracket (PN 48308-001) on the cap of the gascolator so that the tabs are lined up with the center of the inlet port and the open end of the cut out for the outlet port faces up. Install the bale through the small holes on the gascolator bracket and into the sides of the gascolator cap to support the bracket while tightening the bracket. Use a hose clamp to squeeze the bracket around the gascolator cap. Insert an AN515-8-10 (MS35206-246) screw through the lower tabs and tighten with an AN365-832 (MS21044N08) nut. Remove the hose clamp.

7. Install an AN913-1D pipe plug in the top of the gascolator cap. Install an AN911-2 steel or brass nipple in the outlet port of the gascolator cap. Install an AN914-2 elbow in the inlet port. Do not use Teflon tape or RTV on the threads of the nipple, elbow or plug. Permatex Form-A-Gasket No. 2 or No. 3 or Titeseal is recommended. Tighten the replacement nipple to not more than 7 to 8 ft. lbs. Tighten the elbow to line up with the fuel line.

8. Install the gascolator cap and nipple onto the elbow attached to the carburetor. Tighten to 7 to 8 ft. lbs. If torque is reached before the gascolator is aligned, continue tightening until proper alignment is obtained. Use a wrench on the nipple to align the gascolator. Do not turn the gascolator cap. Support the elbow while tightening the nipple to prevent damaging the elbow or carburetor.

9. Replace the gascolator support braces (see instructions for installation of support braces), gascolator bowl, and fuel line (replace cracked or brittle fuel line). Be sure the drain valve is oriented to point outboard when installing the gascolator bowl. Tighten the nut on the gascolator bale and safety wire the nut to the bale. Turn fuel valves ON and check for leaks.

INSTALLATION OF GASCOLATOR SUPPORT BRACES:

1. For Ercoupe 415-C, 415-CD, 415-D, 415-E, and 415-G, attach forward support brace (PN 48096) to the forward lower stud supporting the push rod housing flange under cylinder #4. Use the existing 1/4-28 nut and washer with a new lockwasher (MS35338-44) to secure the gascolator support in place. The tab on the end of the support may need some filing to achieve a proper fit. Leave the nut loose until final fit has been accomplished. For the Forney F1 and F1A, attach forward support brace (PN 48099) to the forward lower stud supporting the push rod housing flange under cylinder #4. Use the existing 1/4-28 nut and washer with a new lockwasher (MS35338-44) to secure the gascolator support in place. The tab on the end of the support may need some filing to achieve a proper fit. Leave the nut loose until final fit has been accomplished.

2. For Ercoupe 415-C, 415-CD, 415-D, 415-E, and 415-G, attach rear support brace (PN 48076) to the stud on the bottom of the left lower engine mount. Use an AN315-5 nut, AN960-516 washer, and MS35338-45 lockwasher to secure the gascolator support in place. Leave the nut loose until final fit has been accomplished. For the Forney F1 and F1A, attach rear support brace (PN 48098) to the forward lower stud supporting the push rod housing flange under cylinder #2. Use the existing nut and washer with a new lockwasher (MS35338-44) to secure the gascolator support in place. The tab on the end of the support may need some filing to achieve a proper fit. Leave the nut loose until final fit has been accomplished.

3. Turn the elbow in the carburetor and the nipple in the gascolator cap as required to align the upper tab on the gascolator bracket (or the Adel 738-10 clamp if the glass bowl gascolator is being retained) with the gascolator support brackets. Remember to use a wrench on the nipple to turn the gascolator cap; do not twist the gascolator cap. Adjust the gascolator piping so that the 6-32 screw, which connects the braces to the bracket (or clamp), can easily be inserted without force. The bracket support brace tabs may be adjusted with duckbill pliers to provide the proper fit (apply tape to the jaws of the pliers to prevent scratching or marring the tabs). Install an AN365-632 (MS21044N06) nut on the screw and tighten. Tighten the remaining attaching hardware and torque to engine manufacturer's recommended values (7.5 to 9.2 ft. lbs. for 1/4-28 threads, 15.0 to 18.3 ft. lbs. for 5/16-24 threads).

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS:

Drain water, sediment and impurities from the U14330-002 gascolator before each flight.

Continue to maintain the gascolator as detailed in the applicable Ercoupe or Forney Service Manual.

INFORMATION AND PARTS AVAILABILITY:

AN911-2 steel nipples are available from Univair Aircraft Corporation.

The following Univair Aircraft Corporation Service Kits are available from Univair:

Service Kit SK-76 contains forward and rear gascolator support braces, Adel 738-10 clamp, AN515-6-8 screw, and AN365-632 nut for installation of the proper gascolator braces on Ercoupe 415-C, 415-CD, 415-D, 415-E, and 415-G aircraft with the original glass gascolator.

Service Kit SK-76F contains forward and rear gascolator support braces, Adel 738-10 clamp, AN515-6-8 screw, and AN365-632 nut for installation of the proper braces on Forney F1 and F1A aircraft with the original glass gascolator.

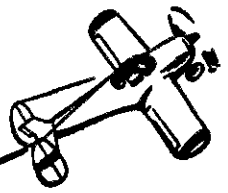
Service Kit SK-76G contains a new all-metal gascolator, gascolator bracket, AN515-8-10 screw, AN365-832 nut, forward and rear gascolator support braces, AN515-6-8 screw, and AN365-632 nut for installation of the proper braces on Ercoupe 415-C, 415-CD, 415-D, 415-E, and 415-G aircraft.

Service Kit SK-76GF contains a new all-metal gascolator, gascolator bracket, AN515-8-10 screw, AN365-832 nut, forward and rear gascolator support braces, AN515-6-8 screw, and AN365-632 nut for installation of the proper braces on Forney F1 and F1A aircraft.

Parts and kits may be ordered from Univair Aircraft Corporation

2500 Himalaya Road
Aurora, CO 80011
phone: 303-375-8882
fax: 303-375-8888
e-mail: info@univair.com
website: www.univair.com

Ercoupe MEMORANDUM



ERCOUPE SERVICE MEMORANDUM No. 66

SUBJECT: Maintenance of Old Style Carburetor Heat Box Assy.

February 14, 1955

We have been notified of malfunctioning of the automatic carburetor heat used on early Ercoupes, Assy. 40533, causing full carburetor heat to be applied with open throttle, due to allowing sufficient wear and play in the pivot of the carburetor throttle arm, Part No. 415-40431, to allow the lug on its lower end to jump over the carburetor heat arm, Part No. 415-40434. This would cause the carburetor heat arm to be held in closed position when the throttle is opened, as well as preventing full throttle opening, resulting in a dangerous condition.

At the next inspection, and at all subsequent 100-hour inspections, we recommend inspection for wear of the 415-40431 arm at this pivot, and of the lug attached to its lower arm. If looseness or play is sufficient to allow any possibility of the lug slipping over the carburetor heat arm, the arm should be repaired or replaced.

The bracket supporting this arm is an integral part of the airscoop housing, and may be repaired by brazing an AN940-10 washer on the back side if the hole is worn.

The cooperation of all Ercoupe distributors and dealers is requested in disseminating this information.

UNIVERSAL AIRCRAFT INDUSTRIES

Engineering Dept.

Ercoupe Service Division