

AERO-TECH SERVICES, INC.  
INSTALLATION INSTRUCTIONS CB-601, REVISION no change

FEBRUARY 19, 1988  
R.I. 600  
PAGE 1 OF 6

REMOVAL OF ORIGINAL SEABEE FUEL CELL AND INSTALLATION  
INSTRUCTIONS FOR AERO-TECH FUEL CELL PART NUMBER CB-600

**REMOVAL OF FUEL CELL**

1. REMOVE FUEL FILLER CAP #1269.
2. OPEN FUEL DRAIN COCK #1259 LOCATED ON PORT SIDE OF MAIN STEP TO DRAIN FUEL.
3. REMOVE FUEL DRAIN COCK #1259.
4. REMOVE AN364 NUT, #1256 WASHER, AND #1257 GASKET.
5. REMOVE THE FLOOR AND TUNNEL ABOVE THE FUEL CELL COMPARTMENT.
6. DISCONNECT FUEL SHUTOFF VALVE OPERATING CABLE AND HOUSING.
7. DISCONNECT FUEL AND VENT LINES FROM COVER ASSEMBLY #1252.
8. LOOSEN THE HOSE CLAMPS AND REMOVE FILLER NECK CONNECTING HOSE #1270 AND FILLER PIPE ASSEMBLY #1181.
9. REMOVE ELECTRICAL WIRE FROM FUEL QUANTITY SENDER #1267, SAFETY WIRE, AN 501A SCREWS, GROUND WIRE, AND REMOVE SENDER ASSEMBLY.
10. REMOVE THE INNER ROW OF NUTS WHICH CLAMP THE FUEL CELL RING #1262 TO THE COVER ASSEMBLY #1252.
11. REMOVE OUTER ROW OF NUTS WHICH HOLD FUEL CELL COVER #1252 TO DECK OF HULL.
12. REMOVE SIX (6) COTTER KEYS WHICH HOLD TANK IN PLACE BELOW DECK OF HULL.
13. LOWER COVER ASSEMBLY #1252 INTO FUEL CELL COMPARTMENT AND SEPARATE RING #1262 AND COVER #1252.
14. REMOVE FUEL CELL HOSE #1263 FROM BOTTOM OF COVER ASSEMBLY #1252.
15. REMOVE COVER AND RING FROM FUEL CELL COMPARTMENT.
16. LOOSEN THE CLIP HOLDING THE TANK TO FLOOR OF FUEL CELL COMPARTMENT, AND REMOVE FUEL CELL.
17. REMOVE FOUR (4) SCREWS HOLDING FUEL DRAIN #1254 AND FUEL CELL HOSE BRACKET IN PLACE ON BOTTOM OF FUEL CELL, AND REMOVE HOSE #1263, SCREEN #1253, BRACKET #1260 ASSEMBLY, WASHER #1265 AND #1254 DRAIN ASSEMBLY. INSPECT THESE PARTS AND REPAIR OR REPLACE AS NECESSARY.

**INSTALLATION OF FUEL CELL**

1. THE FUEL CELL IS FOLDED FOR SHIPPING, AND PRIOR TO INSTALLING IN THE AIRCRAFT SHOULD BE SPREAD OUT SO IT WILL HAVE A CHANCE TO RETURN TO ITS ORIGINAL SHAPE.
2. ATTACH GASKET #1261 TO DRAIN ASSEMBLY WITH PERMATEX "HIGH TACK" PART NUMBER 99 GA, OR EQUIVALENT GASKET ADHESIVE.
3. INSPECT THE FUEL HOSE #1263 AND REPLACE IF REQUIRED.
4. SLIP THE FUEL HOSE #1263 ON THE SMALL END OF THE SCREEN ASSEMBLY #1253 AND CLAMP IN PLACE WITH THE THREE EXISTING CLAMPS, AN3 BOLTS AND AN363 NUTS, TO THE HOSE BRACKET #1260 WITH THE SCREEN TOWARDS BUT JUST SHORT OF THE TWO HOLES FOR ATTACHING TO THE FUEL DRAIN.
5. PLACE THE FUEL DRAIN #1254 ON THE BOTTOM OF THE FUEL CELL FACING AFT. PLACE TWO AN3 BOLTS IN THE BRACKET #1260, ATTACH THE ROUND WASHER #1265 TO THE BOTTOM OF THE BRACKET, INSERT THIS ASSEMBLY INTO THE FUEL CELL, AND USING THE RIGHT (STARBOARD) AND FORWARD HOLES IN THE FUEL CELL, ASSEMBLE TO THE DRAIN ASSEMBLY WITH AN363 SELF LOCKING NUTS. THIS SHOULD PLACE THE FUEL PICKUP SCREEN IN THE CENTER OF THE FUEL CELL WITH THE HOSE ATTACHED TO THE RIGHT (STARBOARD) END AND THE SCREEN ASSEMBLY TOWARDS THE LEFT (PORT) SIDE. INSTALL THE TWO REMAINING AN3 BOLTS AND AN363 NUTS AND TORQUE ALL FOUR NUTS TO 20 TO 30 INCH POUNDS.
6. SEVEN UNITED CARR #295055 CLIPS ARE FURNISHED. INSTALL 6 CLIPS IN THE TOP OF THE FUEL CELL IN THE SPACES PROVIDED. RESHAPE THE REMAINING CLIP SO IT FITS SNUGGLY INTO THE FORWARD CENTER HOLE IN THE BOTTOM OF THE FUEL CELL COMPARTMENT, THEN INSTALL IN THE BOTTOM OF THE FUEL CELL IN THE SPACE PROVIDED.
7. ATTACH .032 SAFETY WIRE ABOUT 36 INCHES LONG TO EACH OF THE CLIPS IN THE TOP OF THE FUEL CELL.
8. DUST THE OUTER SURFACE OF THE BOTTOM AND LOWER PORTION OF THE SIDES OF THE FUEL CELL WITH TALCUM POWDER.
9. PLACE THE FUEL CELL ON A FLAT SURFACE WITH THE BOTTOM DOWN. COLLAPSE THE CELL, FOLDING THE FRONT AND BACK SIDES INWARD, AND THE LEFT AND RIGHT SIDES OUTWARD. MAKE SURE THE BOTTOM OF THE FUEL CELL IS WITHOUT WRINKLES. FOLD THE FRONT ONE THIRD OF THE CELL BACK OVER THE CELL AND THEN FOLD THE REAR ONE THIRD FORWARD TO PRODUCE A LONG NARROW PACKAGE WITH THE DRAIN ON TOP.

10. INSPECT THE AIRCRAFT FUEL CELL CHAMBER IN THE HULL, PAINT AS REQUIRED, AND COVER ALL SEAMS WITH A FABRIC REINFORCED TAPE.
11. WORKING THROUGH THE BAGGAGE COMPARTMENT DOOR, WORK THE FUEL CELL INTO THE OPENING IN THE TOP OF THE FUEL CELL COMPARTMENT WITH THE RIGHT SIDE (STARBOARD) OF THE FUEL CELL FIRST. CENTER THE FUEL CELL AND UNFOLD THE AFT ONE THIRD AND INSERT THE FUEL DRAIN INTO THE HOLE PROVIDED IN THE STEP.
12. INSTALL GASKET #1257, WASHER #1256 AND LOCK IN POSITION WITH A NEW AN364-10 NUT, THEN INSTALL #1259 DRAIN COCK.
13. UNFOLD THE REMAINING ONE THIRD OF THE TANK, AND BY MEANS OF A TAB ON THE INSIDE BOTTOM OF THE TANK ADJACENT TO THE CLIP, SNAP THE CLIP INTO THE CENTER HOLE PROVIDED IN THE FUEL CELL COMPARTMENT FLOOR TO CENTER THE BOTTOM OF THE TANK.
14. FISH THE SIX (6) SAFETY WIRES THROUGH THE CORRESPONDING HOLES IN THE DECK AND FASTEN SOMETHING TO THE UPPER END OF EACH SO IT CANNOT FALL THROUGH.
15. RAISE THE FUEL CELL INTO POSITION AGAINST THE BOTTOM SIDE OF THE DECK AND SLIP A 1/8 X 1 STAINLESS STEEL OR BRASS COTTER KEY INTO EACH OF THE SIX CLIPS. DO NOT INSTALL THE COTTER KEYS PERMANENTLY AT THIS TIME.
16. SMOOTH OUT THE BOTTOM OF THE TANK SO IT LAYS FLAT AGAINST THE COMPARTMENT FLOOR.
17. ATTACH GASKET #1258 TO RING #1262 WITH PERMATEX "HIGH TACK" PART NUMBER 99 GA, OR EQUIVALENT GASKET ADHESIVE
18. REMOVE THE TWO CENTER COTTER KEYS TO FACILITATE INSTALLATION OF THE TANK COVER ASSEMBLY.
19. PLACE THE RING (#1262) AND GASKET (#1258) ASSEMBLY IN POSITION ON THE UNDER SIDE OF THE TOP OF THE FUEL CELL.
20. ATTACH THE FUEL HOSE #1263 TO THE FITTING IN THE UNDERSIDE OF THE COVER ASSEMBLY #1252.
21. CLAMP THE FUEL CELL IN PLACE BETWEEN THE RING #1262 AND COVER #1252 AND INSTALL THE INNER ROW OF AN363 NUTS. TORQUE TO 20 TO 30 INCH POUNDS. MAKE SURE THE FUEL FILLER INLET IS TOWARD THE LEFT (PORT) SIDE OF THE AIRFRAME.
22. RAISE THE CENTER OF THE FUEL CELL INTO POSITION AGAINST THE BOTTOM OF THE DECK AND PERMANENTLY INSTALL THE COTTER KEYS IN THE CENTER CLIPS. THEN FINISH THE INSTALLATION OF THE COTTER KEYS IN THE FOUR CORNER CLIPS.

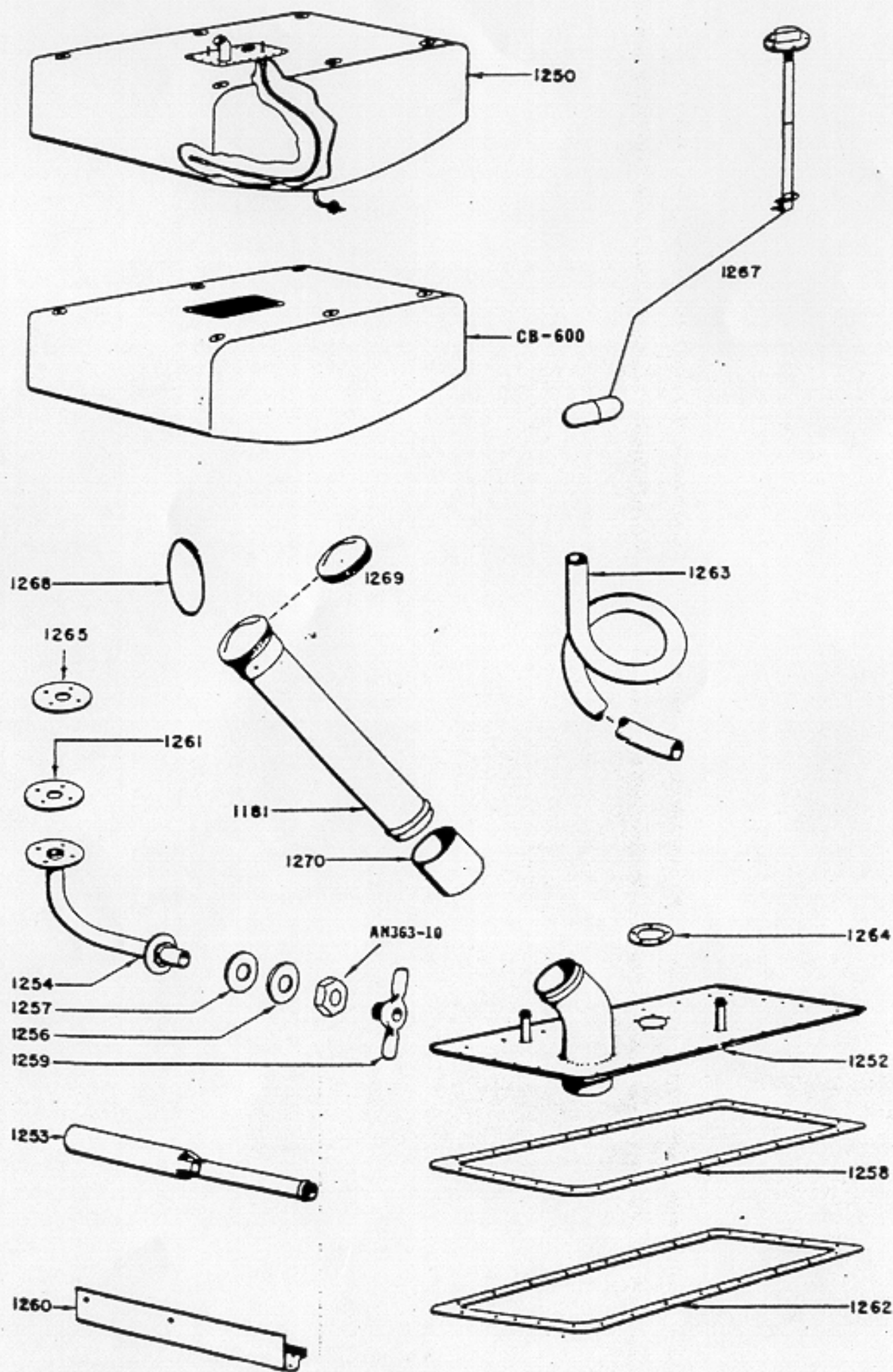
23. POSITION THE COVER ASSEMBLY IN PLACE AGAINST THE DECK AND INSTALL THE OUTER ROW OF AN363 NUTS. TORQUE TO 20 TO 30 INCH POUNDS.
24. REMOVE THE SIX (6) SAFETY WIRES.
25. INSTALL A NEW GASKET #1264 ON THE BOTTOM FACE OF THE FUEL QUANTITY FLOAT AND SENDER ASSEMBLY #1267, INSERT THE ASSEMBLY IN THE HOLE PROVIDED IN THE COVER WITH THE FLOAT POSITIONED TOWARDS THE CENTER OF THE AIRCRAFT AND ATTACH TO THE COVER WITH AN500A-10 DRILLED FILLISTER HEAD SCREWS. TORQUE TO 20 TO 30 INCH POUNDS.
26. REATTACH THE WIRES TO THE FUEL GAGE SENDER AND MAKE SURE THE GROUND WIRE BETWEEN THE SENDER AND HULL IS IN GOOD CONDITION.
27. SAFETY THE FIVE AN500A-10 DRILLED FILLISTER HEAD SCREWS.
28. REATTACH THE VENT LINE, FUEL SUPPLY AND RETURN LINES TO THE COVER ASEMBLY.
29. REATTACH THE FUEL VALVE CONTROL CABLE TO THE FUEL VALVE.
30. FASTEN THE ALUMINIUM TUNNEL COVERING THE CONTROL CABLES IN PLACE AND REINSTALL THE CONTROL CABLE HOUSING CLAMP TO THE SIDE OF THE TUNNEL.
31. CHECK THE ACTION OF THE FUEL VALVE CONTROL.
32. REINSTALL FILLER ASSEMBLY #1181, CONNECTING HOSE #1270, CLAMPS, AND GROMMET #1268.
33. CHECK FOR LEAKS AND FILL TANK 5 GALLONS AT A TIME TO CHECK CALIBRATION OF GAUGE AND FUEL QUANTITY STICK.
34. INSTALL FUEL CAP #1269.
35. CHECK TO SEE THAT FUEL CAPACITY AND WARNING PLACARDS ARE IN CLEAR VIEW AT THE FUEL FILLER, ie; CAPACITY 75 US GALLONS AND WARNING PER REPUBLIC SERVICE BULLETIN No. 23 DATED JUNE 3, 1949 PER COPY PAGE 6.
36. INSTALL THE FLOOR OVER THE FUEL CELL COMPARTMENT.
37. FILE FORM 337 COVERING THE INSTALLATION, AND ENTER A STATEMENT TO THIS EFFECT IN AIRCRAFT LOG BOOK.

## FUEL SYSTEM COMPONENTS

<u>NUMBER</u>	<u>PART NAME</u>
1250	<u>FUEL CELL INSTALLATION</u> . . . . .
<b>CB-600</b>	<u>Fuel Cell</u> . . . . .
1252	<u>Cover Assembly-Fuel Cell</u> . . . . .
1253	<u>Screen Assembly-Fuel Cell</u> . . . . .
1254	<u>Drain Assembly-Fuel Cell</u> . . . . .
1256	<u>Washer-Fuel Drain</u> . . . . .
1257	<u>Gasket-Fuel Drain Lower</u> . . . . .
1261	<u>Gasket-Fuel Drain Upper</u> . . . . .
1265	<u>Washer-Fuel Drain</u> . . . . .
1258	<u>Gasket-Fuel Cell</u> . . . . .
1259	<u>Cock-Fuel Drain</u> . . . . .
1260	<u>Bracket-Fuel Cell Hose</u> . . . . .
1262	<u>Ring-Fuel Cell</u> . . . . .
1263	<u>Hose-Fuel Cell Outlet</u> . . . . .
1264	<u>Gasket-Fuel Measuring Tank Unit</u> . . . . .
1267	<u>Tank Unit-Fuel Measuring</u> . . . . .
1181	<u>PIPE ASSEMBLY-FUEL FILLER NECK WITH CAP</u> . . . . .
1268	<u>GROMMET-FILLER NECK</u> . . . . .
1269	<u>CAP ASSEMBLY-FILLER NECK</u> . . . . .
1270	<u>HOSE-FILLER NECK PIPE CONNECTING</u> . . . . .

EXCEPT FOR CB-600, ALL PART NUMBERS IN THIS FIGURE ARE ORIGINAL PART NUMBERS ISSUED BY REPUBLIC, SEE REFERENCE TO PART NUMBERS CALLED OUT IN REMOVAL INSTRUCTIONS.

Figure 1



# service bulletin



MANDATORY

REPUBLIC AVIATION CORPORATION

FARMINGDALE, LONG ISLAND, NEW YORK

June 3, 1949

Service Bulletin No. 23

## CHECK YOUR FUEL

In order to eliminate the possibility of power failure due to fuel starvation operators are requested to have their fuel quantity gages periodically checked for accuracy and, when using a dip stick to visually check the quantity of fuel in the tank, to do so only when the engine is inoperative.

Disregarding all standard operating procedures and the "EXTERIOR CHECK (PREFLIGHT)" instructions contained in the SEABEE OWNERS MANUAL with reference to visually checking the quantity of fuel in the tank, some operators have checked their fuel with a dip stick while the engine is running. Not only is this an improper procedure from the viewpoint of safety owing to the close proximity of the propeller but it is possible by so violating all normal rules of both airplane operation and common sense, to receive an incorrect reading due to the by-passed fuel which is returned to the tank from the engine driven pumps.

It is also possible, under certain atmospheric conditions, for fuel vapors to condense on the tank cover plate and to result in a false fuel level reading if the dip stick is inserted with the calibrated side appearing on top.

It is suggested that the enclosed decal be applied, in the vicinity of the fuel tank filler neck, which reads as follows:

### "WARNING!

DO NOT CHECK FUEL WITH ENGINE RUNNING OR WITHIN FIVE MINUTES AFTER SHUTDOWN. ALWAYS INSERT STICK WITH CALIBRATED SIDE FACING GROUND."

W. H. Ehmann  
Service Manager

INSTRUCTION SHEET NUMBER 7

FUEL GAGE AND TANK UNIT INSTALLATION

ITEMS 1178, 1518, 1267, and 1529

The present fuel gage tank unit is of very light construction, and the float arm is very easily bent. Normally a Seabee leaving the factory is adjusted in such a manner that the fuel tank contains approximately 5 to 8 gallons of fuel when the fuel gage indicator in the cabin reads empty. If the float arm is bent during a servicing operation, which requires the removal and replacement of the tank unit, it is possible that the bend might be in such a direction that the fuel may be exhausted before the indicator reaches the empty position. This of course creates a hazardous condition. The following action should be taken to minimize the danger, when servicing or replacing the above listed item.

1. After installation, drain the tank and replace the fuel one gallon at a time until the fuel gage indicator begins to move from the empty position. If the quantity of fuel required to start the indicator moving is outside of the 5 to 8 gallon tolerance range, the tank unit should be removed and the float adjusted, being careful not to damage the linkage system, until the indicator does start to move within the specified range. Also check to make sure the float does not bind.
2. Completely fill the tank making sufficient observations to determine that the gage calibration is reasonably accurate.

4/8/47

RC-3-7

Note: The above is a copy of Republic Instruction Sheet No.7