



SUBJECT: Fuel Filler Caps (Shaw Aero), Inspection and Adjustment

**MODELS/
S/N AFFECTED:** M20C S/N 2623 and ON, M20D S/N 201 & ON, ALL M20E, M20F, M20G, M20J, M20K and M22 Aircraft

**TIME OF
COMPLIANCE:** Within next 25 flight hours, and every 100 hour/annual inspection thereafter.

INTRODUCTION: Exposure to weather, fuel fumes, fuel and possibly other elements have a deteriorating effect on O'ring packings and seals. The two O'rings on the Shaw Aero fuel filler cap assembly have been reported to lose their resilience and sealing characteristics after a period of time when exposed to these elements. This S.B. is intended to describe inspection procedures for this deterioration.

INSTRUCTIONS: Fuel filler port cap assemblies should be checked periodically for proper sealing and should be serviced occasionally to prevent hard to open or close conditions.

Refer to Figure S.B. M20-229-1 and the following procedures for these inspections and adjustments:

1. The O'ring seal (1) around the cap assembly should be kept clean and free of dirt or grit that might cause abrasive action on seal or mating flange. Occasional lubrication with petroleum jelly or Tri-Flow will keep the O'ring soft and pliable.
2. The shaft (2) running through the center of the cap housing, that actuated the rotating lock plate (3) should be lubricated occasionally with Tri-Flow, or equivalent, to prevent binding while opening or closing the cap assembly. This should also lubricate the O'ring (4) that seals this shaft.

WARNING

Water can enter the fuel tank through a loose fitting or damaged cap. This should be corrected as soon as possible.

3. The sealing capability of each cap assembly should be checked periodically. This can be accomplished per the following procedures:
 - A. Remove cap assembly from wing filler port and inspect O'ring (1) for any damage or brittleness. Remove and replace if needed.
 - B. Adjust tension of shaft (2) and rotating lock plate (3) by removing cotter pin (5) from nut (6) on threaded portion of shaft (2). Tighten nut (6) so cap assembly handle (7) can be opened, turned and shut with hand pressure and still provide the necessary seal of cap assembly to keep water from entering fuel tank.
 - C. Fuel selector should be in the OFF position prior to pressurizing the fuel tanks.
 - D. Connect rubber hose to each tank's vent line. Apply only one-half pound (1/2 psi) air pressure. Check for fuel cap leaks by soaping circumference of filler cap assembly and observing bubbles. Replace O'rings if bubbles are observed and adjustment of the nut does not stop the leak.

"CAUTION"

Use only one-half pound (0.5 psi) of air pressure in tank. Higher pressure may damage the fuel tank.

"NOTE"

M20K aircraft must have the anti-siphon valve inside filler port propped open during this pressure testing.

REFERENCE DATA: N/A

PARTS LIST: (Parts NOT included in kit - order if needed).

Part Number	Description	Qty. Required
MS29513-010	O'Ring (center)	1
MS29513-338	O'Ring (outer) (for 431-9R and 531-001 cap)	1

FIGURES/TABLES:

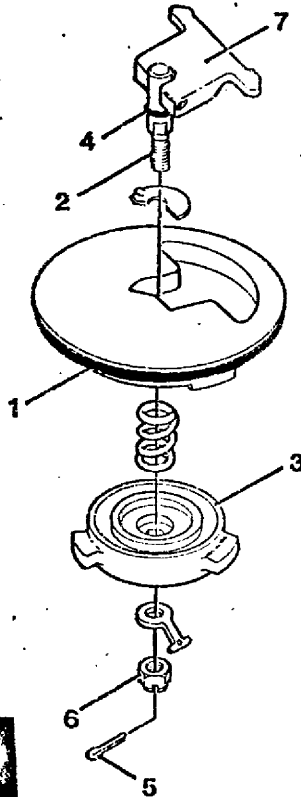


FIGURE
S.B. M20-229-1