

SUBJECT: GEAR WARNING CIRCUIT & THROTTLE SWITCH MODIFICATION

MODEL/S/N

AFFECTED: MOONEY M20J, S/N 24-3201, 24-3218 THRU 24-3402  
MOONEY M20M, S/N 27-0001 THRU 27-0229  
MOONEY M20R, S/N 29-0001 THRU 29-0110

TIME OF

COMPLIANCE: AT NEXT SCHEDULED INSPECTION OR WITHIN NEXT 50 OPERATING HOURS

INTRODUCTION: OPERATIONS IN PRECIPITATION MAY CAUSE GEAR WARNING HORN TO ACTIVATE AT A REDUCED AUDIBLE SIGNAL WHILE AIRCRAFT IS IN LEVEL CRUISE FLIGHT. THIS CAN BE PREVENTED BY ADDING A SECOND RESISTOR TO THE WIRING CIRCUITS AND MODIFICATION OF SWITCH WIRE HARNESS PER INSTRUCTIONS BELOW.

#### INSTRUCTIONS:

1. Locate Tone Generator (WS101A) for M20J, M20M & M20R on cabin side of the firewall above pilots left rudder pedal.
2. Disconnect wire harness plug from Tone Generator; free wire harness to allow sufficient working room to splice in 2nd 1K, 2W resistor.
3. Reference schematic shown in Figure SI M20-103-1 and solder the MIL-R-11-RC42, 1K 2W resistor, (Allen-Bradley P/N RC42-GF102J, included in kit) between the designated pins (16 - ENABLE-GEAR WARNING and 19 - GROUND). The resistor must be positioned so it will not interfere with the connection of the wire harness back to the Tone Generator. Protect resistor with heat shrink or other insulation.
4. Connect wire harness/plug connector to the Tone Generator and secure.
5. Locate Gear Warning Throttle Switch (on M20M & M20R only) on forward part of engine throttle linkage.
6. Inspect wire leads at switch for sealant covering wire/switch connection area. If sealant is found, verify integrity of sealant application over wire and switch connections.
7. If no sealant is found or integrity is compromised, apply Dow Corning 738 RTV Silastic Sealant, covering wire/switch connections completely. Switch is Micro Switch P/N 1SE1-T. Reference Figure SI M20-103-2.
8. Locate 4 Pin Plug, RC04A/PL04A (on rear engine baffle) and replace with 2 each connectors, AMP P/N 1-480351-0 Cap (toward switch) and 1-480349-0 Plug. Reference Figure SI M20-103-3 & -4 for identification of wire numbers to change to AMP connectors. Discard clamp used on this 4 Pin Plug/Receptacle.
9. Secure both new connectors to existing connector/ wire harness with tyraps or equivalent..
10. Place aircraft on jacks in accordance with applicable model S & M manual, Chapter 7.
11. Check operation of gear and gear warning switch in accordance with applicable model S & M, Section 32-30-01, paragraphs 1 through 5. A solid, audible gear warning signal should be heard from inside or outside the aircraft.
12. Make sure wire harnesses are secured. Enter compliance note in logbook and return aircraft to service.

WARRANTY: Warranty information is applicable only to aircraft in warranty on date of this Service Instruction. Mooney Aircraft Corporation will allow up to 1.5 hours labor, and parts credit, to accomplish modification to the wiring harness/connector provided completed warranty paperwork is submitted to Mooney Service Parts Department within 180 days of the date of this Service Instruction. The kit is available through Mooney Service Centers under standard Mooney ordering and credit policies.

REFERENCE  
 DATA: N/A

PARTS LIST: KIT PART NUMBER - SI M20-103-1

ITEM	PART NUMBER	DESCRIPTION	QTY
1	RC42-HB-102-J.	RESISTOR (1K, 2W) (ALLEN BRADLEY)	1
2	1-480351-0.	CAP, CONNECTOR (AMP)	2
3	1-480349-1.	PLUG, CONNECTOR (AMP)	2
4	738 RTV	SEALANT, SILASTIC (3 OZ.) (DOW CORNING)	1
5	61118-1	PINS	2
6	60619-1	SOCKETS	2

FIGURES/  
 TABLES:

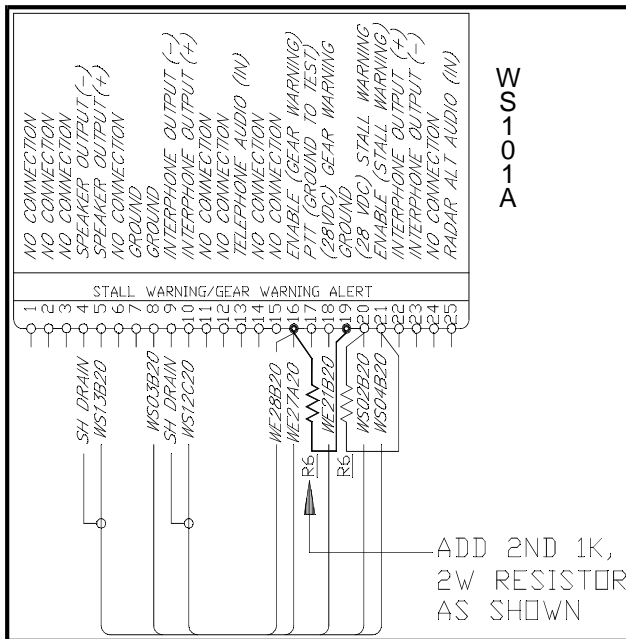


FIGURE SI M20-103-1

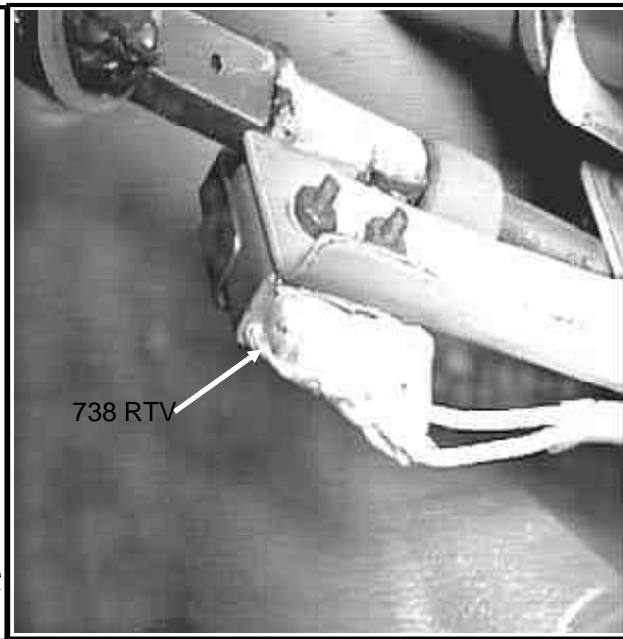


FIGURE SI M20-103-2

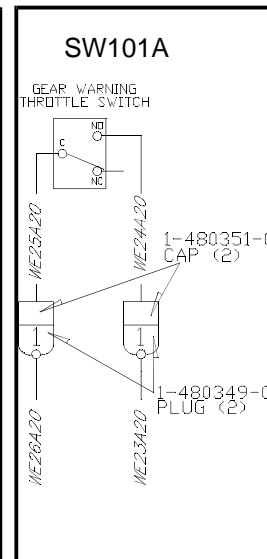


FIG. SW101A