R66 Ammeter Installation Upgrade Kit Instructions

For use when replacing existing G143-2 Ammeter with G143-3 Ammeter (not included in kit), originally installed on R66 S/N 0520 thru 1004 (except 0795 & 0983). Kit provides upgrade for electrical connections.

NOTE

Visit www.robinsonheli.com to verify kit instructions are current revision. Review instructions before installation; contact RHC Technical Support with questions. Verify kit contents match list; contact RHC Customer Service if parts are missing or damaged.

ITEM	PART NUMBER	KIT CONTENTS	QTY
1	KI-283Instr.	Kit Instructions	1
2	B267-5	Solder Sleeve – Splice	1
3	G814-1	Console Harness Assembly – Ammeter	1
4	KI-283-3108	Wire Assembly Includes: [1] B274-422 Wire, 2-conductor jacketed, 16 feet (marked "-3108") [2] M39029/58-360 pins	1
5	M39029/58-360	Pin (qty includes 4 spares)	6
6	MS3367-4-9+	Ty-rap (Note: "+" in part number indicates 20-qty pack)	1
7	MS3367-5-9+	Ty-rap (Note: "+" in part number indicates 20-qty pack)	1
8	MS3367-7-9+	Ty-rap (Note: "+" in part number indicates 10-qty pack)	1

Consumables

Refer to R66 Maintenance Manual (MM) § 20-70 for approved materials list.

- A257-8 Rubber lubricant
- B270-5 Sealant

Special Tools

- Wire stripper
- Pin insertion/extraction tool, Mil spec # M81969/14-01 (green and white)
- 8-impression crimp tool, such as Daniels Manufacturing Corporation (DMC), AF8 M22520/2-01
- Adjustable heat gun with reflector [nozzle] capable of 700°F

Kit Instructions

1. Ensure battery and avionics switches are off. Disconnect negative (ground) cable from lead-acid battery per MM § 96-11A, or lithium-ion battery per MM § 96-12B, as applicable.

2. Remove upper console per MM § 95-50. Remove F444-1 cover assembly per MM § 67-11 A.2. Remove avionic equipment from avionics tray(s), referring to MM Chapter 97, as required. Remove hardware securing avionics tray(s) using 90º offset phillips screwdriver and a 7/32-inch deep socket. Carefully remove avionic tray(s), leaving harness connections attached, setting tray stack aside to access inside console and tunnel area.

Kit Instructions (continued)

3. Remove G040-1 engine cowling assembly per MM § 53-21. Remove aft, right seat back assembly per MM § 25-22. Remove D679 pop-out float cylinder assembly per MM § 32-61, if installed.

4. Refer to Illustrated Parts Catalog (IPC) Figures 6-3, 6-9, and 6-11 (or Figure 6-13, if pop-out floats installed). Remove F467-1 or F467-3 cover, C795-1 cover, F794-1 or F794-3 panel, and F794-2 or F794-4 panel.

5. Refer to Figure 1. Remove G245-4 cover and MS21919WDG clamp.

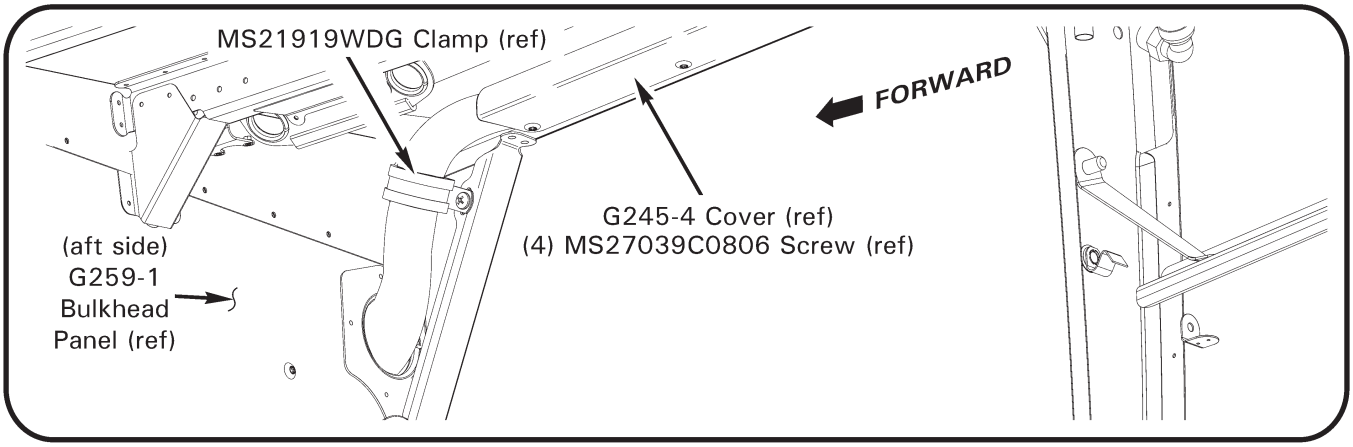

FIGURE 1 G245-4 cover location
(view looking outboard from inside baggage compartment)

6. Remove G143-2 ammeter per MM § 95-42C.

NOTE
Parenthetic dash numbers, such as (-2388), indicate number marked on wiring.

7. Refer to Figure 2A and MM Figure 98-2A. Remove and discard wires (-2312) & (-2313) from console plug #2 locations 43 & 44.

8. Refer to Figure 2B. Install G814-1 harness assembly:
   a. Insert sockets of wires (-3108) to console plug #2, with white (WHT) wire in location 43, and blue (BLU) wire in location 44.
   b. Attach B260-3 terminal to ground on any available terminal of console bus bar.
   c. Splice wire (-2914) into wire (-2018) from instrument cluster, using B267-5 solder sleeve splice. Apply heat using heat gun to solder sleeve splice until indicator ring and solder sleeve are completely melted.

9. Install G143-3 ammeter per MM § 95-42D, connecting G814-1 harness assembly to ammeter.

Kit Instructions (continued)

10. Refer to Figure 2A. Locate and remove wires (-2312) and (-2313) & associated pins from receptacle #2 in lower console, shown in MM Figure 98-2A as “C2-43” and “C2-44”. Install pins of KI-283-3108 wire assembly in vacated receptacle locations, with white (WHT) wire (-3108) in location 43, and blue (BLU) wire (-3108) in location 44.

> NOTE
>
> Wires (-2312) and (-2313) are to be removed from helicopter airframe harness, and removal may be accomplished simultaneously with installation of KI-283-3108 wire assembly.

11. Route KI-283-3018 wire assembly along main harness, using A257-8 lubricant as necessary to ease wires thru clamps; alternately, clamps may be loosened. Continue routing thru firewall, moving B270-5 sealant as required.

12. Refer to Figure 2A. Locate B304-16 fuse assembly secured to main harness wire bundle, aft side of firewall. Cut ty-raps as required to access D269-5 plug. Using pin extractor, remove pins of wires (-2312) and (-2313) from plug pin positions 1 & 3. Discard removed wires.

13. With KI-283-3108 wire assembly secured to main harness and using extracted wires as guide, cut blue and white wires (-3108) to length. Strip ends of wires and crimp (1) M39029/58-360 pin to each wire using 8-impression crimp tool. Verify pin security. Install wires into D269-5 plug per schematic in Figure 2B. Connect plug to B304-16 fuse holder assembly and secure using MS33567-4-9 ty-rap. Secure to wire bundle using appropriately sized ty-raps as required.

14. Ensure seal around wire bundle at firewall is restored, adding B270-5 sealant as required.

15. Refer to Figure 1. Install MS21919WDG clamp and G245-4 cover.

16. Install G040-1 engine cowling assembly per MM § 53-21. Install aft, right seat back assembly per MM § 25-22. Install D679 cylinder assembly per MM § 32-61, if removed.

17. Install avionics tray(s) and secure hardware using 90º offset phillips screwdriver and a 7/32-inch deep socket. Install avionic equipment in avionics tray(s), referring to MM Chapter 97, as required.

18. Install F444-1 cover assembly per MM § 67-11 B.12 & 13. Install upper console per MM § 95-50.

19. Connect negative (ground) cable to lead-acid battery per MM § 96-11B, or lithium-ion battery per MM § 96-12C, as applicable.

20. Install F467-1 or F467-3 cover, C795-1 cover, F794-1 or F794-3 panel, and F794-2 or F794-4 panel.

21. Make appropriate maintenance record entries. No change to Weight and Balance Record is required.

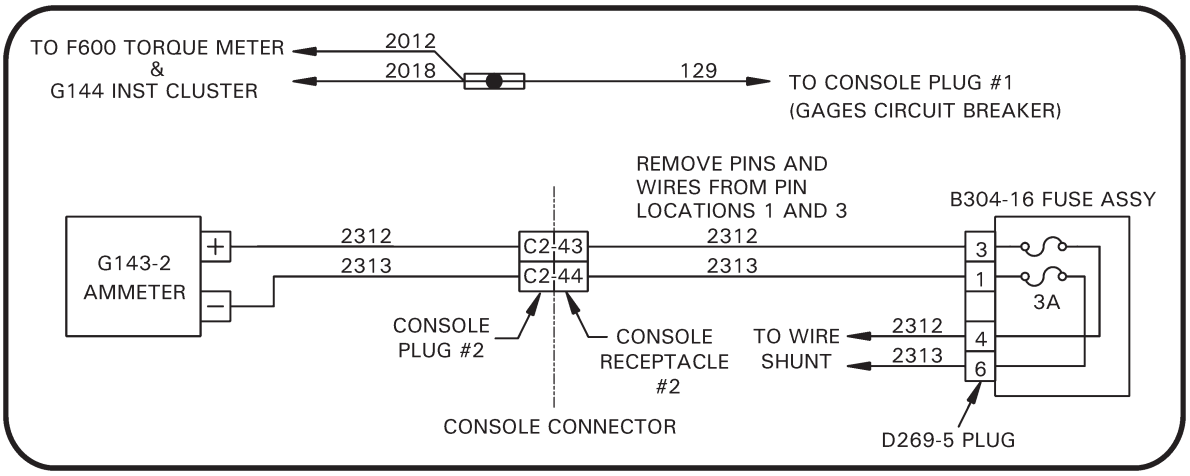

FIGURE 2A Existing schematic

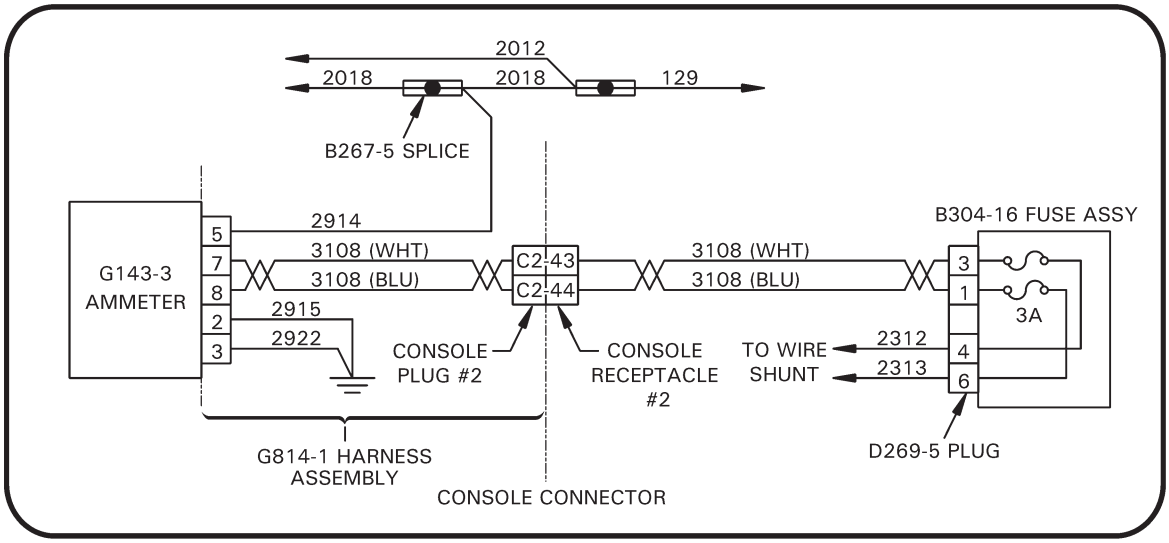

FIGURE 2B Installation schematic