R66 Lead-Acid Battery Installation Upgrade Kit Instructions
KI-262-1 for installation on R66 helicopters S/N 0003 thru 0519;
KI-262-2 for installation on R66 helicopters S/N 0520 thru 0859;
KI-262-3 for installation on R66 helicopters S/N 0860 thru 0915.
(To comply with R66 Service Bulletin SB-28)

NOTE

Visit https://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.

NOTE

Each kit contains parts for B237-7 (RG24-20) and B237-8 (RG-325) lead-acid battery installations.

ITEM	PART NUMBER	KIT CONTENTS	QTY PER KI-262-1	QTY PER KI-262-2	QTY PER KI-262-3
1	KI-262Instr.	Kit Instructions	1	1	1
2	A780-74	Cable Assembly – Battery Power (w/15A fuse)	0	1	0
	A780-76	Cable Assembly – Battery Power (w/30A fuse)	0	0	1
	A780-78	Cable Assembly – Battery Power (w/rectifier)	1	0	0
3	B161-8-12	Spirap – 1/2 inch diameter (12 inches long)	1	1	1
4	B526-6	Screw	14	14	14
5	G131-2	Plate	1	1	1
6	G131-4	Plate	1	1	1
7	G131-5	Terminal Assembly	1	1	1
8	G248-8	Cover Assembly	1	1	1
9	KI-262-1A	G130-4 Angle (Rev D or later, nutplate installed)	1	0	0
10	9589	Decal – “DO NOT OVER...” (Concorde p/n)	1	1	1
11	MS20470AD4-4+	Rivet (Note: “+” in part number indicates 50-qty pack)	1	0	0
12	MS21042L08	Nut	1	1	1
13	MS21075L08E	Nutplate	1	0	0
14	MS21919WDG6	Clamp	1	1	1
15	MS25171-2S	Nipple	2	2	2
16	MS27039C0806	Screw	1	1	1
17	MS27039C0809	Screw	2	2	2
18	MS3367-4-9+	Ty-Rap (Note: “+” in part number indicates 20-qty pack)	1	1	1
19	MS3367-5-9+	Ty-Rap (Note: “+” in part number indicates 20-qty pack)	1	1	1
20	MS35489-13	Grommet	2	2	2
21	NAS1097AD3-4+	Rivet (Note: “+” in part number indicates 50-qty pack)	1	0	0
22	NAS1149FN816P+	Washer (Note: “+” in part number indicates 20-qty pack)	1	1	1

ITEM	PART NUMBER	KIT CONTENTS (continued)	QTY PER KI-262-1	QTY PER KI-262-2	QTY PER KI-262-3
23	NAS1149F0563P+	Washer (Note: "+" in part number indicates 20-qty pack) . .	1	1	1
24	NAS6605-3	Bolt	1	1	1

Kit Instructions

1. Remove optional aux fuel tank per R66 Maintenance Manual (MM) § 28-51A, if installed.

> **CAUTION**
>
> To minimize risk of electrical discharge: when disconnecting battery, disconnect negative (ground) cable from battery first, then the positive cable. When connecting battery, connect positive cable to battery first, then the negative (ground) cable.

2. Remove battery per MM § 96-11A . Discard G248-1 cover assembly (battery compartment). Remove and discard G123-1 or -2 tray and G801-2 pad, if installed. Remove and discard G131-1 shim.

3. Refer to Figure 1. Locate fuse holder inside battery compartment, if installed. Cut ty-raps securing 15A fuse holder wiring (Figure 1A), or 30A fuse holder wiring (Figure 1B) to airframe harness. Disconnect fuse holder from airframe harness connector.

4. Inspect battery compartment for evidence of a battery leak. Sprinkle baking soda on any clear liquid seen in compartment; if effervescence occurs, liquid is electrolyte which has leaked from battery. If a battery leak is detected, wear appropriate personal protective equipment (ref. FAA-H-8083-30A Chapter 1) and neutralize acidic electrolyte using a solution of baking soda and water. Clean up residue. Properly dispose of leaking battery in accordance with local regulations. Assess damage and contact RHC Technical Support for assistance with repairs.

5. Refer to Figure 2, top. If battery ground cable is secured to (helicopter) inboard-side of G130-5 channel:
   a. Remove and retain hardware securing ground cable to channel. Remove cable.
   b. Refer to Figure 2, center. Using appropriately-sized drill bit and newly vacated hole as guide, drill same size hole in channel wall directly opposite. Deburr hole.
   c. Remove paint from around newly drill hole (outboard-side) to promote conductivity. Clean up debris.
   d. Temporarily attach MS21075L08E nutplate, centered over vacated inboard hole. Using scribe, trace rivet hole locations. Remove nutplate.
   e. Refer to Figure 2, bottom. Drill two 0.097 – 0.102-inch diameter rivet holes at marked locations. Deburr holes and on near-side, create 0.145 inch diameter, 100º countersinks. Clean up debris.
   f. Position nutplate on far-side and secure using (2) NAS1097AD3-4 rivets.

Kit Instructions (continued)

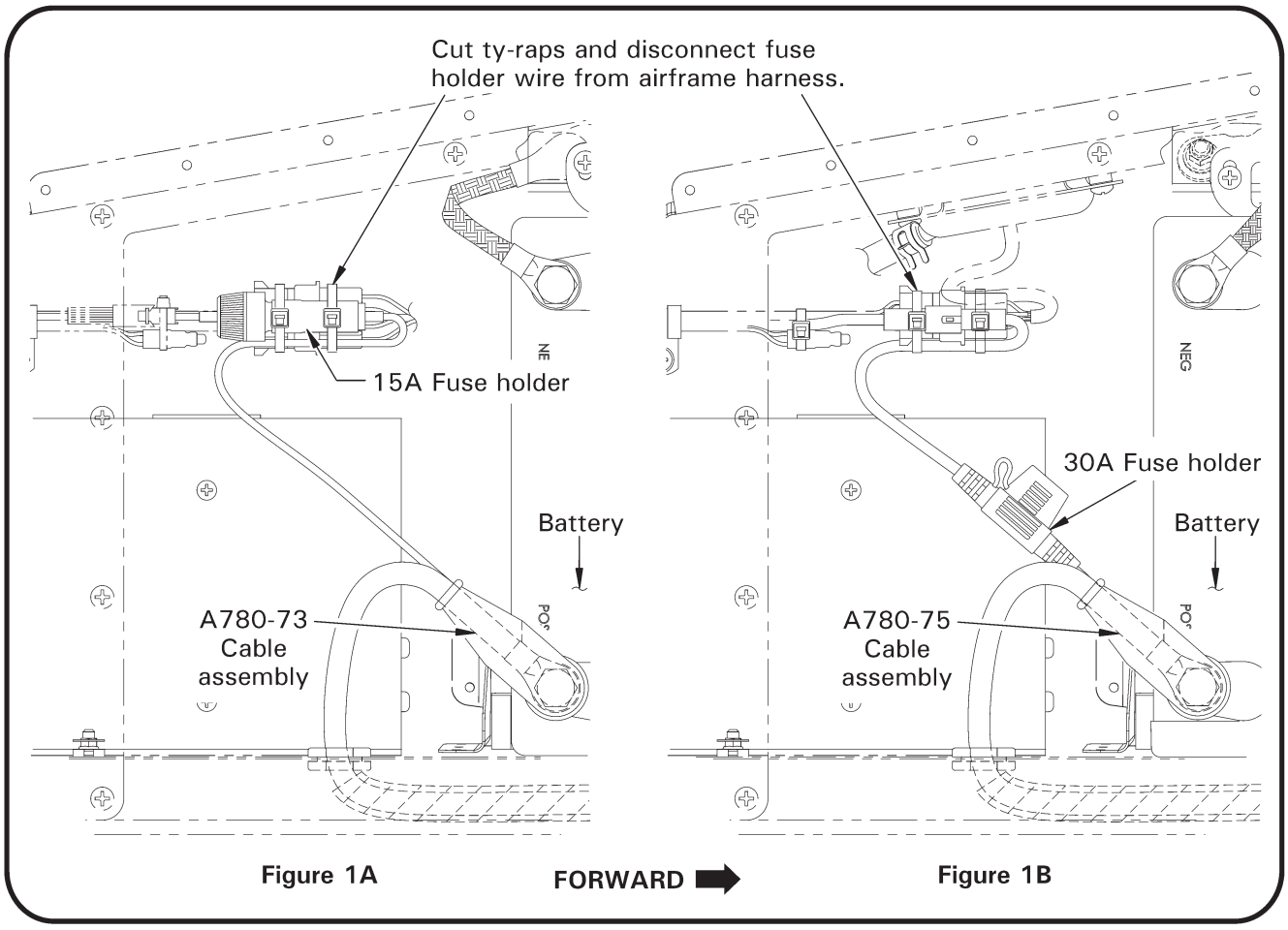


FIGURE 1 Existing installation
(A780 cables with fuse holders shown)

NOTE
Proper rivet length is determined by installer at installation.

6. Remove aft-left seat back assembly (ref. R66 Illustrated Parts Catalog [IPC] Figure 25-1).

7. Refer to Figure 2, top. If G130-4 angle does not have a nutplate:

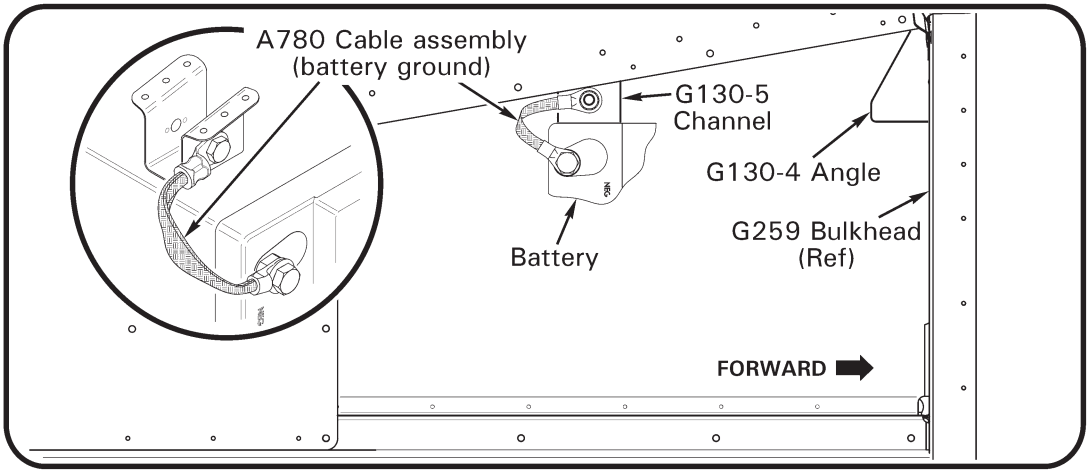
   a. Drill out rivets securing G130-4 angle to G259 bulkhead. Remove and discard angle.

   b. Refer to Figure 3. Layout top hole location for new G130-4 angle (with nutplate installed, provided in kit as p/n KI-262-1A) as shown. Drill one 0.130 inch diameter hole at location marked. Deburr hole.

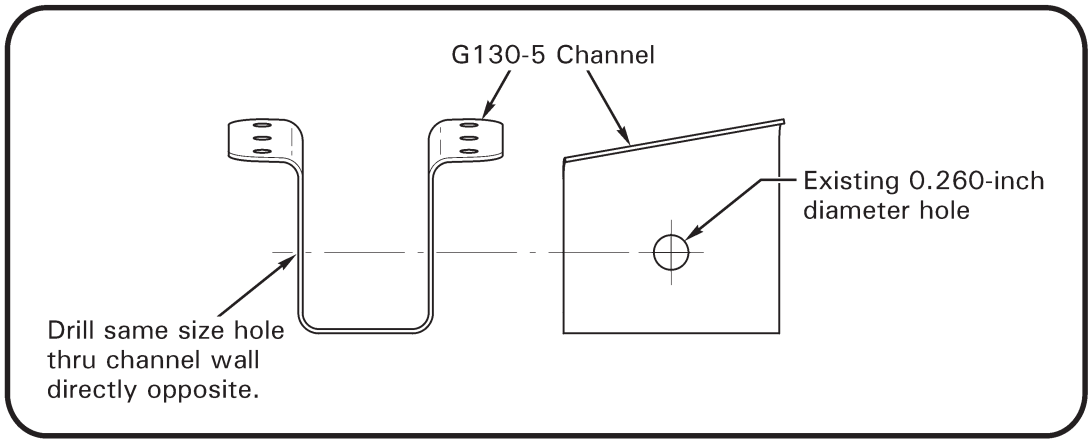
   c. Temporarily secure new G130-4 angle to bulkhead in newly-drilled hole, using appropriately-sized cleco.

   d. With angle positioned vertically, drill two 0.130 inch diameter holes using G130-4 angle as template. Remove angle. Deburr holes and clean up debris.

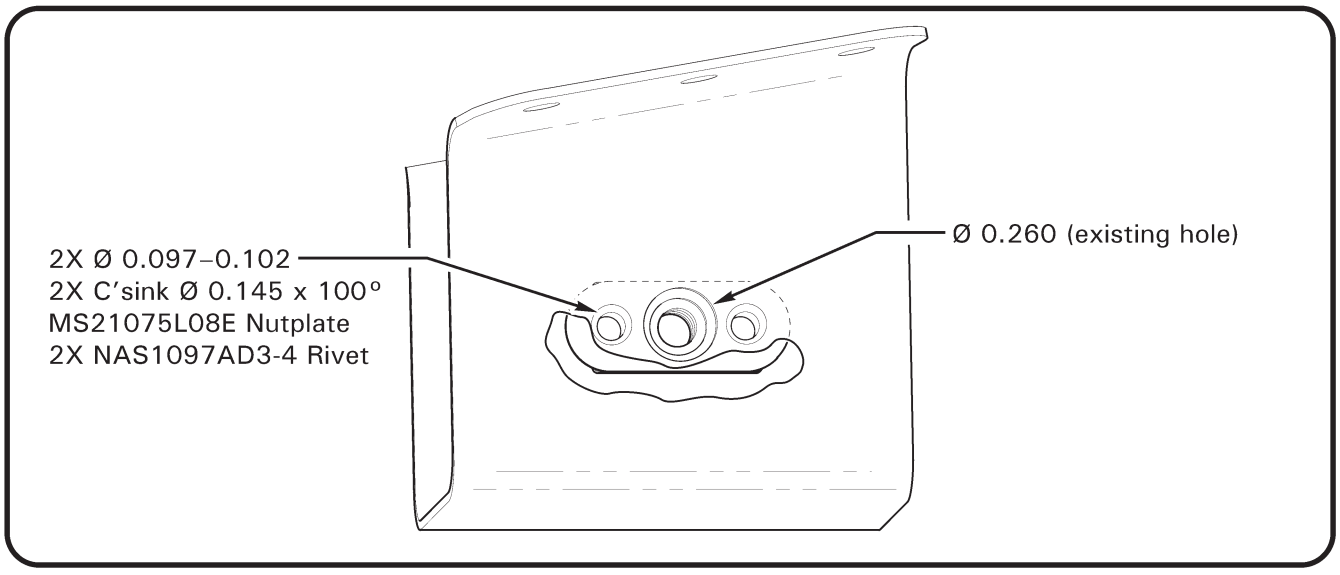
   e. Install new G130-4 angle using (3) MS20470AD4-4 rivets.



(Battery ground cable, inboard-side of channel; G130-4 & G130-5 at Revision C)



(Drill new location of battery ground, outboard-side of channel)



(Locating nutplate at original hole)

FIGURE 2 Early R66 helicopters (S/N 0062 & prior)

Kit Instructions (continued)

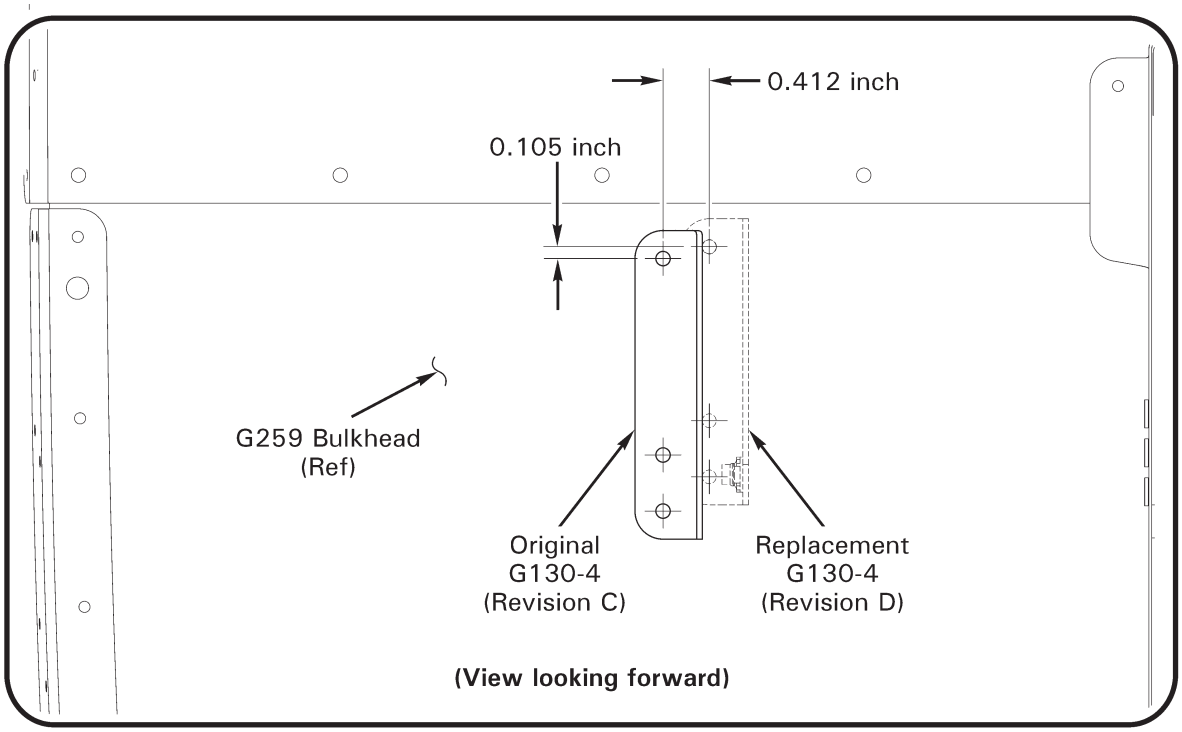


FIGURE 3 Layout location for new G130-4 Angle
(with nutplate installed, provided in kit as p/n KI-262-1A)

8. Refer to IPC Figure 96-5. Remove hardware securing A780 battery power cable to B415-2 battery relay and securing MS21919WDG6 clamp to angle, cutting ty-raps as necessary. Remove hardware securing A780-64 wire to battery relay and remove wire. Remove A780-2242 wire from rectifier, if installed.

NOTE

To aid installation of new A780 cable, measure and record length of existing cable from forward-side of G259 bulkhead to terminal end prior to removing cable from helicopter.

9. Remove A780 battery power cable, spirap, and two MS35489-11 grommets (one at each end) from helicopter and discard. Verify holes for grommets are 0.69 inch diameter; enlarge as required, clean up debris, and apply primer to edges.

10. Refer to Figure 4. Position (1) MS35489-13 grommet on battery-end of new A780-74, -76, or -78 cable assembly, as appropriate to helicopter serial number. Grommet must seat on cable only and not on fuse holder wiring.

11. Refer to Figure 5 (B237-7 battery) or Figure 6 (B237-8 battery), as applicable. Feed relay-end of cable thru hole in G249-1 battery tray and forward thru G920 stiffener toward G259 bulkhead. Pull cable thru bulkhead hole from forward-side, using needle nose pliers or similar tool. Adjust protruding length according to measurement recorded in Step 6 NOTE.

12. Trim B161-8-12 spirap to 11.25 – 11.75 inches. Wrap spirap around A780 cable forward of G259 bulkhead. Slide spirap along cable thru bulkhead hole until full length of spirap is aft of bulkhead, inside stiffener. Slide (1) MS35489-13 grommet on cable and install on bulkhead.

Kit Instructions (continued)

13. Refer to Figure 7 or 8, as applicable. Position MS25171-2S nipple onto relay end of replacement cable. Connect A780 cable to battery relay outboard stud and special torque nut to 80 in.-lb; verify security. Torque stripe per MM Figure 5-1 and position nipple over stud. Connect cable's -64 wire to relay terminal "86 +" and special torque screw to 10 in.-lb; verify security. **For A780-78 cable:** see Figure 8. Connect cable's -2242 wire to rectifier; verify security.

14. Refer to Figure 7. Secure A780 cable to G130-7 angle using (1) MS21919WDG6 clamp, (1) MS27039C0806 screw, (1) NAS1149FN816P washer, and (1) MS21042L08 nut.

15. Refer to Figure 5 or 6, as applicable. Install 9589 decal on battery as indicated, unless previously installed in location shown. Verify battery terminal surfaces are clean to ensure electrical conductivity.

    For B237-8 battery: Refer to Figure 6. Install G131-5 terminal assembly (position as shown) to negative (ground) battery terminal with battery hardware. Special torque battery terminal bolt as noted on battery label and torque stripe per MM Figure 5-1.

16. Verify A780-2 ground cable is positioned as shown in Figure 5 or 6 where it is fastened to the airframe. If required, loosen installation hardware securing A780-2 cable to airframe and position cable assembly terminal aft as shown in Figure 5 or 6. Secure terminal hardware and standard torque per MM 20-30.

17. Carefully install battery with terminals up. Install G131-4 plate (B237-7 battery) or G131-2 plate (B237-8 battery) using two MS27039C0809 screws. Position G131 plate until it just contacts top of battery and tighten screws to secure plate.

18. Slide MS25171-2S nipple onto replacement cable. Connect cable to battery positive terminal with battery hardware. Special torque terminal bolt as noted on battery label and torque stripe per MM Figure 5-1. Slide nipple over terminal.

19.

CAUTION
The use of an insulated tool is highly recommended when connecting terminals to battery.

    For B237-7 battery: Connect A780-2 (negative) cable to battery negative terminal with battery hardware. Special torque terminal bolt as noted on battery label and torque stripe per MM Figure 5-1.

    For B237-8 battery: Connect A780-2 (negative) cable to G131-5 terminal assembly using (1) NAS6605-3 bolt and (1) NAS1149F0563P washer. Special torque bolt to 70 in.-lb and torque stripe per MM Figure 5-1.

20. Refer to Figure 5 or 6, as applicable. Connect A780-74 or -76 cable assembly's fuse holder wiring to airframe harness as shown and secure using appropriately-sized ty-raps.

21. Install new G248-8 cover assembly (battery compartment) and secure using (14) B526-6 screws (see Figure 5).

22. Install aft-left seat back assembly (refer to IPC Figure 25-1).

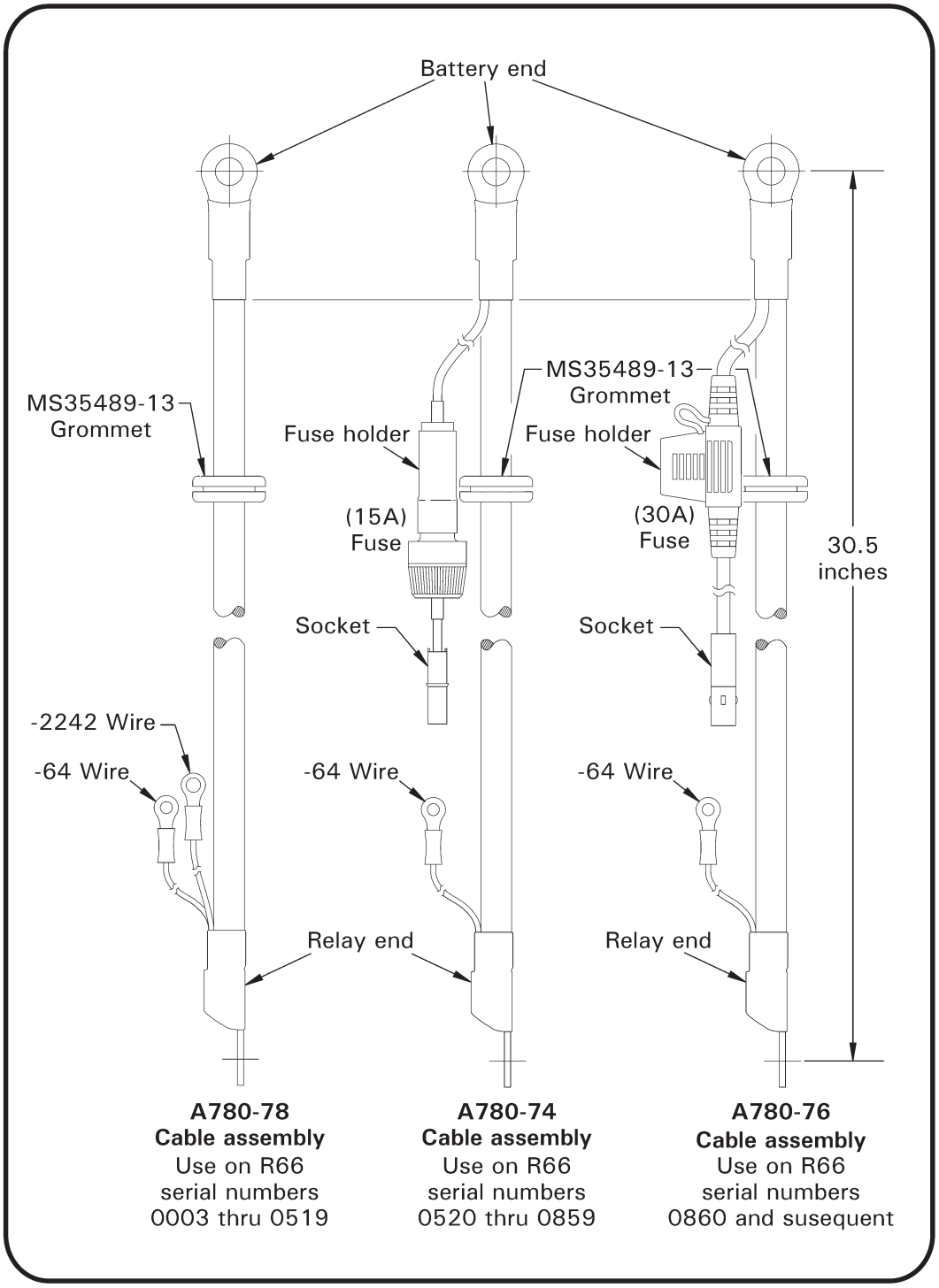


FIGURE 4 Replacement A780 battery power cable assemblies

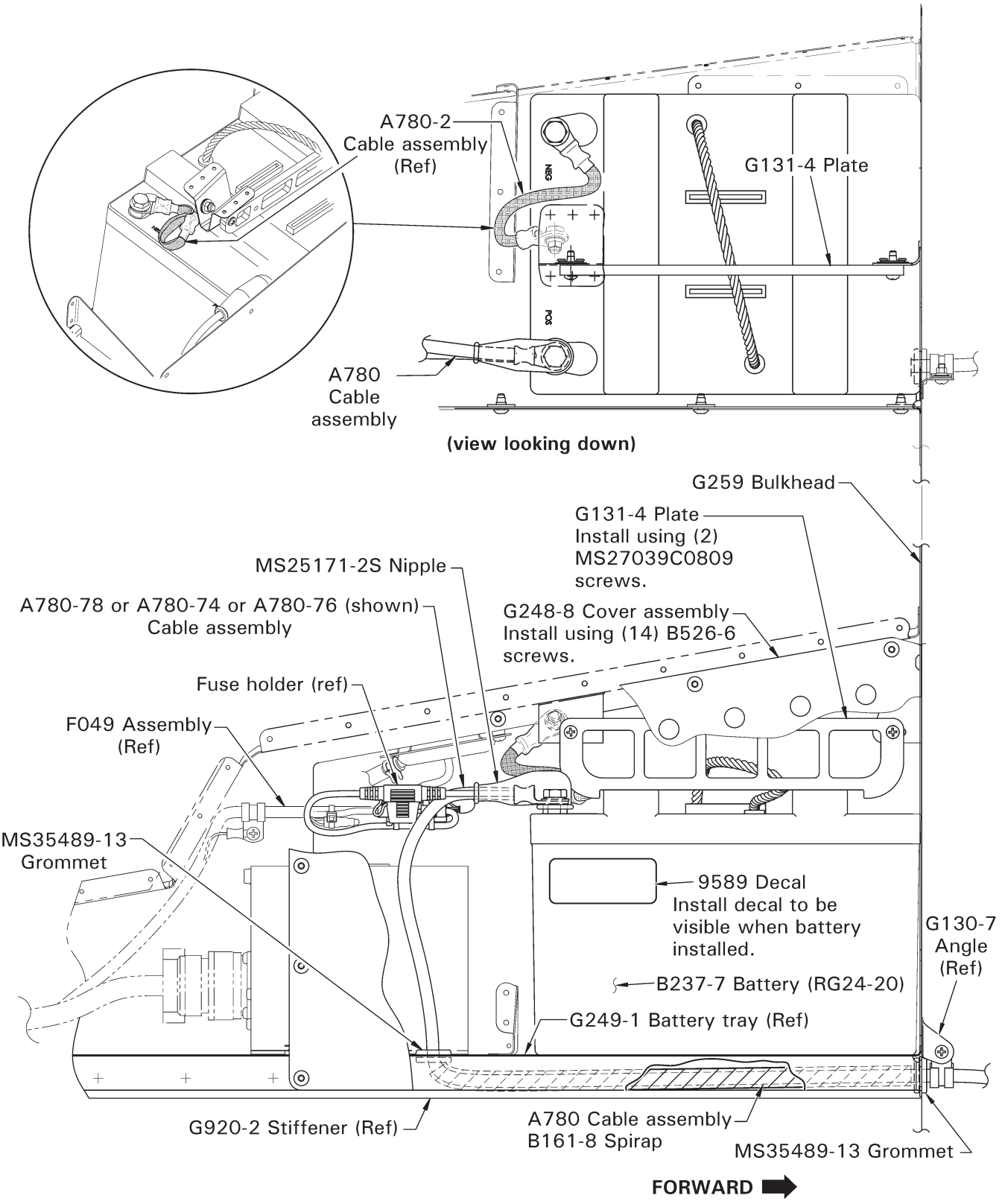


FIGURE 5 B237-7 battery revised installation shown

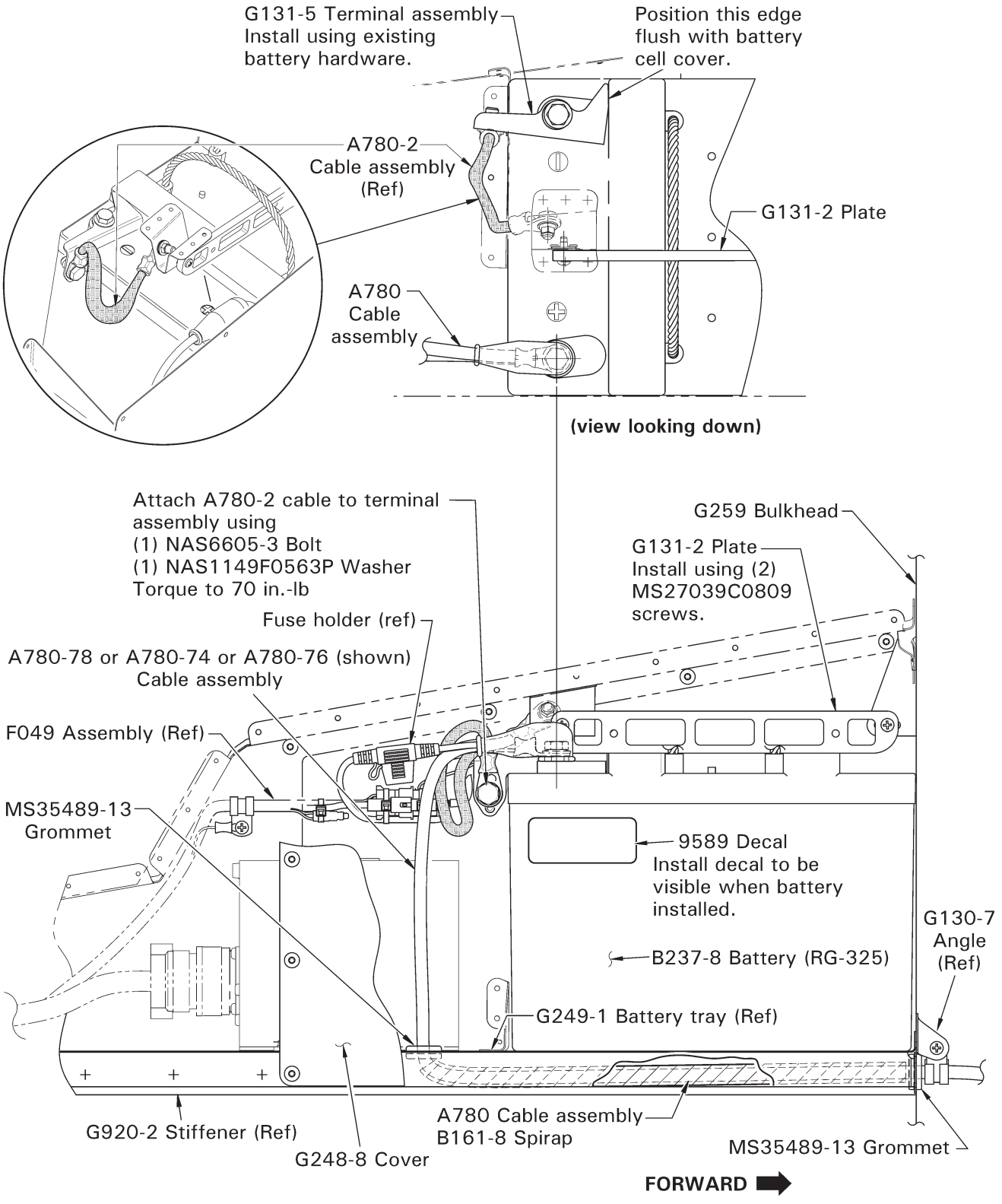


FIGURE 6 B237-8 revised installation shown

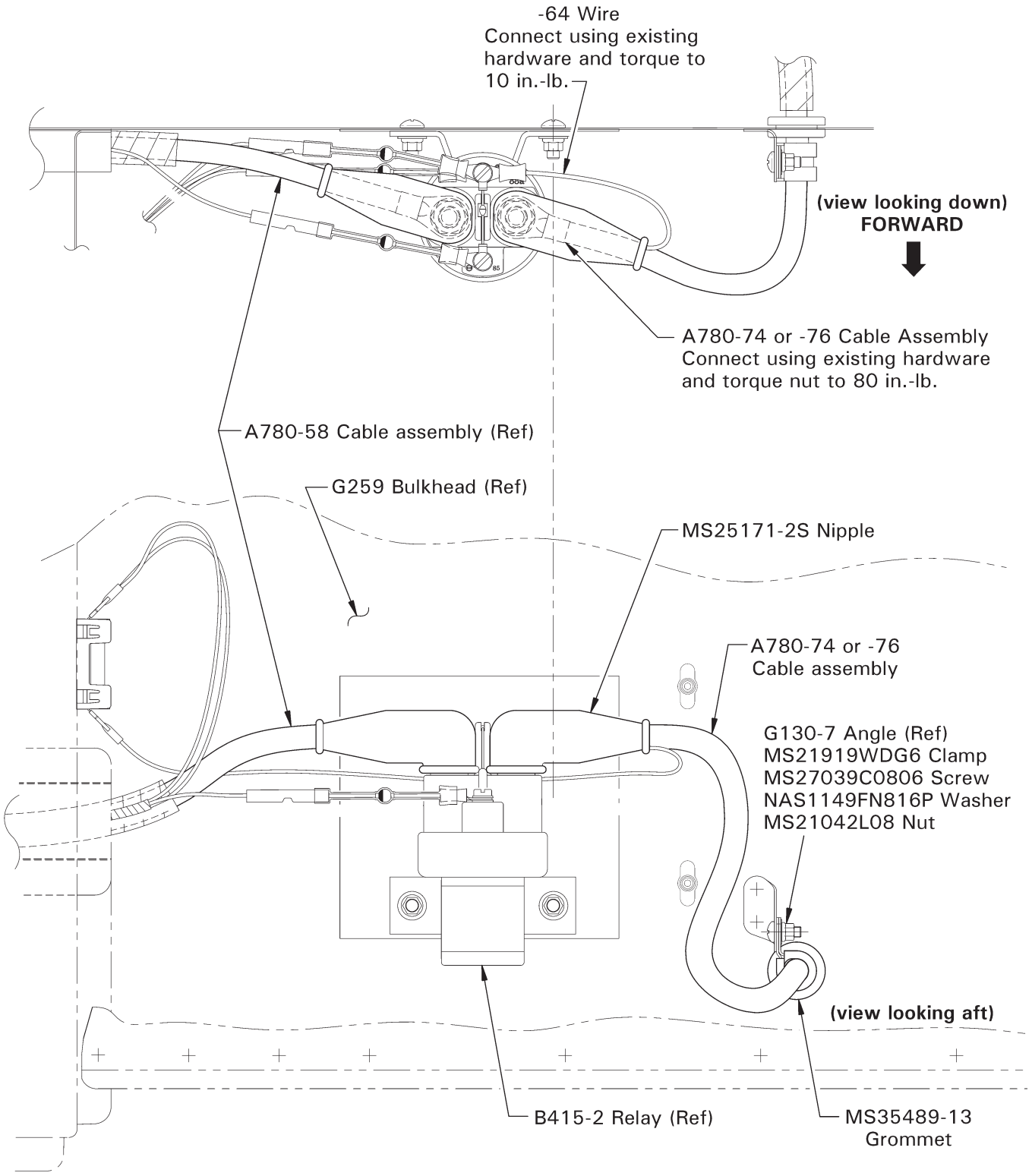


FIGURE 7 Installation of A780 cable assembly with fuse holder
(Aft-left seat back removed)

Kit Instructions (continued)

23. Install auxiliary fuel tank per MM § 28-51, if removed and required. Close baggage compartment door.

24. Perform functional check of battery by switching battery and strobe switches on and verifying strobe function. Turn battery switch off.

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

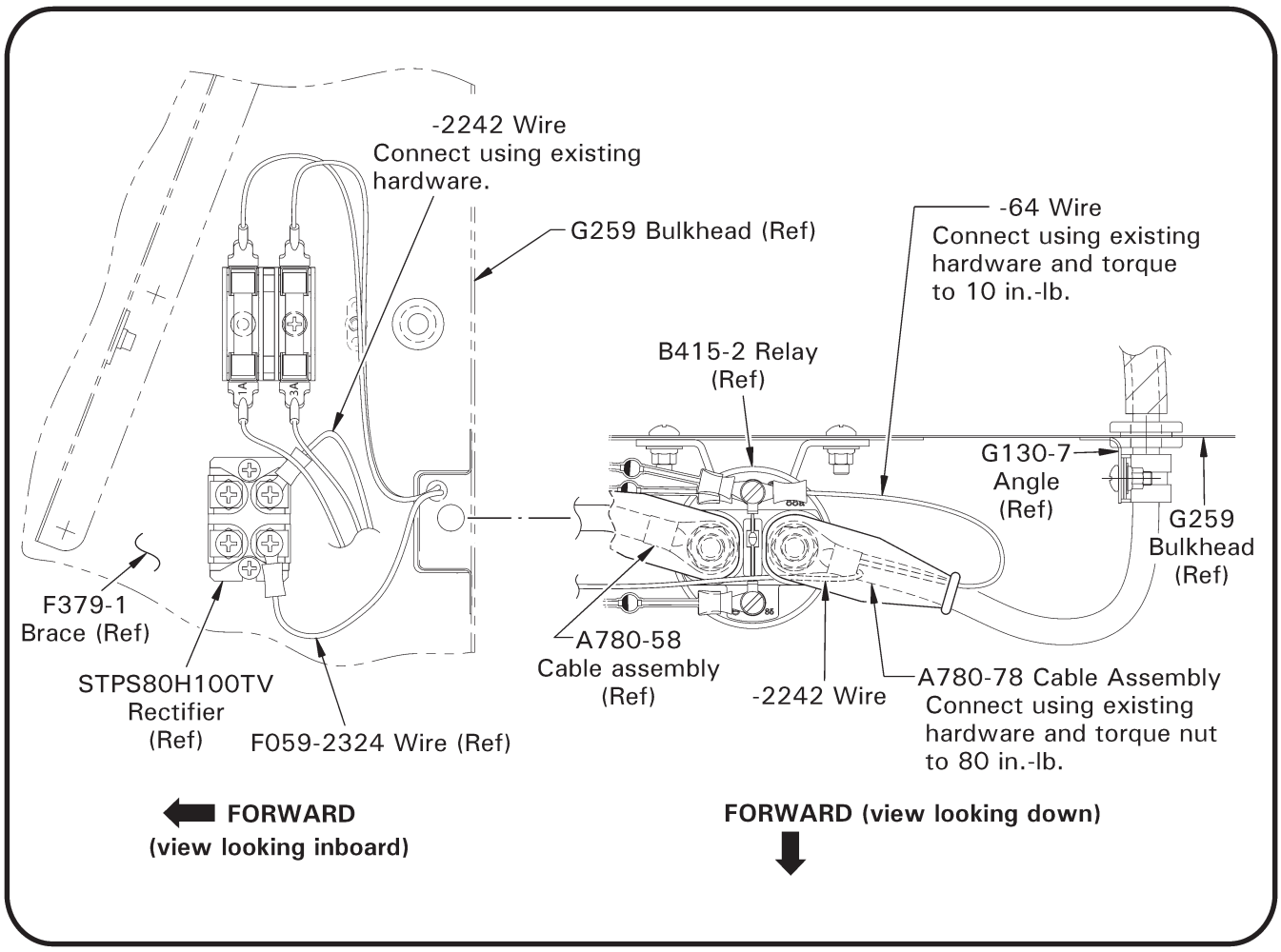


FIGURE 8 Installation of A780-78 cable
(Aft-left seat back removed)